CERTIFICATE OF ACCREDITATION

Korea Testing Laboratory

Accreditation No. : KT009

Corporation Registration No. : 254371-0012187

Address of Laboratory : (Branch site)10 Chungui-ro Jinju-si Gyeongsangnam-do, Republic of Korea

(Branch site-1)87, Digital-ro 26-gil, Guro-gu, Seoul, Republic of Korea
(Branch site-2)723, Haean-ro, Sangnok-gu, Ansan-si, Gyeonggi-do, Republic of Korea
(Branch site-3)122, Jiksan-ro, Jiksan-eup, Seobuk-gu, Cheonan-si, Chungcheognam-do, Republic of Korea
(Branch site-4)199, Techno 2-ro, Yuseong-gu, Daejeon, Republic of Korea
(Branch site-5)10 and 16, Sangdae-ro 72beon-gil, Jinju-si, Gyeongsangnam-do, Republic of Korea
(Branch site-6)200, Gieopdosi-ro, Jijeong-myeon, Wonju-si, Gangwon-do, Republic of Korea
(Branch site-7)755, Taejang-ro, Gimpo-si, Gyeonggi-do, Republic of Korea
(Branch site-8)46, Magokjungang 8-ro 5-gil, Gangseo-gu, Seoul, Republic of Korea
(Satellite facilities-1)57, Saemangeumsandan 3-ro, Gunsan-si, Jeollabuk-do, Republic of Korea
(Satellite facilities-2)136, Jiksan-ro, Jiksan-eup, Seobuk-gu, Cheonan-si, Chungcheongnam-do, Republic of Korea
(Satellite facilities-3)1F, 60-33, Gibae-ro, Hwaseong-si, Gyeonggi-do, Republic of Korea
(Satellite facilities-4)B1~B2, 60-33, Gibae-ro, Hwaseong-si, Gyeonggi-do, Republic of Korea

Date of Initial Accreditation : December 10, 1994

Validity of Accreditation : September 30, 2022 ~ September 29, 2026

Scope of Accreditation : Attached Annex

Date of issue : June 05, 2024

This testing laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to Joint ISO-ILAC-IAF Communiqué).

CHIN CHONGWOOK

Head
Korea Laboratory Accreditation Scheme

No. KT009

01. Mechanical Testing

01.001 Metals and Related Products

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ASTM A370-19e1	Metal and related products	Standard Test Methods and Definitions for Mechanical Testing of Steel Products	Max. 100 kN	BS	N
ASTM B769-11	Metal and related products	Standard Test Method for Shear Testing of Aluminum Alloys	(0 ~ 200) kN	BS-2	N
ASTM E10-18	Metal and related products	Standard Test Method for Brinell Hardness of Metallic Materials	(100 ~ 300) HBW	BS	N
ASTM E1049-85	Metal and related products	Standard Practices for Cycle Counting in Fatigue Analysis	Max. 100 kN	BS	N
ASTM E18-19	Metal and related products	Standard Test Methods for Rockwell Hardness of Metallic Materials	HRA : 24 ~ 86 HRB : 26 ~ 95 HRC : 20 ~ 60	BS	N
ASTM E190-14	Metal and related products	Standard Test Method for Guided Bend Test for Ductility of Welds	Test load : Max.300 kN Bending angle : 180 °	BS	N
ASTM E21-20	Metal and related products	Standard Test Methods for Elevated Temperature Tension Tests of Metallic Materials	Test load : Max. 300 kN	BS	N
ASTM E238-17a	Metal and related products	Standard Test Method for Pin-Type Bearing Test of Metallic Materials	(0 ~ 200) kN	BS-2	N
ASTM E290-14	Metal and related products	Standard Test Methods for Bend Testing of Material for Ductility	Test load : Max.300 kN Bending angle : 180 °	BS	N
ASTM E399-23	Metal and related products	Standard Test Method for Linear-Elastic Plane-Strain Fracture Toughness of Metallic Materials	(0 ~ 100) kN	BS-2	N
ASTM E466-15	Metal and related products	Standard Practice for Conducting Force Controlled Constant Amplitude Axial Fatigue Tests of Metallic Materials	Max. 1.0 MN	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ASTM E466-21	Metal and related products	Standard Test Method for conducting force controlled constant amplitude axial fatigue tests of metallic materials	(0 ~ 200) kN	BS-2	N
ASTM E606/E606M-19e1	Metal and related products	Standard Test Method for Strain-Controlled Fatigue Testing	Max. 1.0 MN	BS	N
ASTM E606/E606M-21	Metal and related products	Standard test method for strain-controlled fatigue testing	(0 ~ 250) kN	BS-2	N
ASTM E647-23	Metal and related products	Standard Test Method for Measurement of Fatigue Crack Growth Rates	(0 ~ 100) kN	BS-2	N
ASTM E739-10	Metal and related products	Standard Practice for Statistical Analysis of Linear or Linearized Stress-Life (S-N)and Strain-Life (ε-N) Fatigue Data	Max. 100 kN	BS	N
ASTM E8/E8M-16a	Metal and related products	Standard Test Methods for Tension Testing of Metallic Materials	Max. 1.0 MN	BS	N
ASTM E8/E8M-24	Metal and related products	Standard test methods for tension testing of metallic materials	(0 ~ 200) kN	BS-2	N
ASTM E9-19	Metal and related products	Standard Test Methods of Compression Testing of Metallic Materials at Room Temperature	(0 ~ 1 000) kN	BS-2	N
ASTM E92-17	Metal and related products	Standard Test Methods for Vickers Hardness and Knoop Hardness of Metallic Materials	HV : 264 ~ 898 HK : 500 ~ 800	BS	N
ASTM F1717-21	Metal and related products	Standard Test Methods for Spinal Implant Constructs in a Vertebrectomy Model	Test load : Max. 10 kN Test torque : Max. 100 Nm	BS	N
ASTM F1798-21	Metal and related products	Standard Test Method for Evaluating the Static and Fatigue Properties of Interconnection Mechanisms and Subassemblies Used in Spinal Arthrodesis Implants	Test load : Max. 10 kN Test torque : Max. 100 Nm	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ASTM F2077-22	Metal and related products	Test Methods For Intervertebral Body Fusion Devices	Test load : Max. 100 kN Test torque : Max. 100 Nm	BS	N
ASTM F2267-22	Metal and related products	Standard Test Method for Measuring Load Induced Subsidence of Intervertebral Body Fusion Device Under Static Axial Compression	Test load : Max. 10 kN	BS	N
ISO 12189:2008	Metal and related products	Implants for surgery — Mechanical testing of implantable spinal devices — Fatigue test method for spinal implant assemblies using an anterior support	Test load : Max. 10 kN	BS	N
ISO 14801:2016	Metal and related products	Dentistry -- Implants -- Dynamic loading test for endosseous dental implants	(0 ~ 10) kN	BS	N
ISO 16573:2020	Metal and related products	Steel-Measurement method for the evaluation of hydrogen embrittlement resistance of high strength steels	Thermal Desorption Temperature : (400 ~ 800) ℃ Force : 250 kN or less	BS	N
ISO 6506-1:2014	Metal and related products	Metallic materials - Brinell hardness test - Part 1 : Test method	(100 ~ 300) HBW	BS	N
ISO 6507-1:2018	Metal and related products	Metallic materials - Vickers hardness test - Part 1 : Test method	(220 ~ 800) HV	BS	N
ISO 6508-1:2016	Metal and related products	Metallic materials - Rockwell hardness test - Part 1 : Test method	(60 ~ 100) HRB (25 ~ 60) HRC	BS	N
ISO 6892-1:2016	Metal and related products	Metallic material - Tensile testing - Part 1 : Method of test at room Temperature	Max. 100 kN	BS	N
ISO 7438:2016	Metal and related products	Metallic materials - Bend test	Max.100 kN Bending angle : 180 °	BS	N
KS B 0802:2003	Metal and related products	Method of tensile test for metallic materials	(0 ~ 1 000) kN	BS-2	N
KS B 0802:2003	Metal and related products	Methods of tensile test for metallic materials	Max. 1.0 MN	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS B 0804:2001	Metal and related products	Metallic materials-Bend test	Max. 100 kN Bending angle : 180 °	BS	N
KS B 0805:2000	Metal and related products	Metallic materials - Test method of brinell hardness	(100 ~ 300) HBW	BS	N
KS B 0806:2000	Metal and related products	Metallic materials - Test method of rockwell hardness	HRA : 24 ~ 86 HRB : 26 ~ 95 HRC : 20 ~ 60	BS	N
KS B 0811:2003	Metal and related products	Metallic materials - Vickers hardness test - Part 1 : Test method	(220 ~ 800) HV	BS	N
KS P ISO 14801:2016	Metal and related products	Dentistry-Implants-Dynamic loading test for endosseous dental implants	(0 ~ 10) kN	BS	N

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01. Mechanical Testing

01.003 Cement and Related Products

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS F 2730:2008	Cement and related products	Testing method for rebound number to conclude compressive strength of concrete	(15 ~ 45) MPa	BS-2	Y

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01. Mechanical Testing

01.010 Plastics and Related Products

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ASTM D1002-10	Plastic and related products	Standard Test Method for Apparent Shear Strength of Single-Lap-Joint Adhesively Bonded Metal Specimens by Tension Loading (Metal-to-Metal)	(0 ~ 200) kN	BS-2	N
ASTM D2344/D2344M-16	Plastic and related products	Standard Test Method for Short-Beam Strength of Polymer Matrix Composite Materials and Their Laminates	(0 ~ 300) kN	BS	N
ASTM D2344/D2344M-22	Plastic and related products	Standard Test Method for Short-Beam Strength of Polymer Matrix Composite Materials and Their Laminates	(0 ~ 200) kN	BS-2	N
ASTM D3039/D3039M-17	Plastic and related products	Standard Test Method for Tensile Properties of Polymer Matrix Composite Materials	(0 ~ 200) kN	BS-2	N
ASTM D3039/D3039M-17	Plastic and related products	Standard Test Method for Tensile Properties of Polymer Matrix Composite Materials	(0 ~ 300) kN	BS	N
ASTM D3165-07-2023	Plastic and related products	Standard Test Method for Strength Properties of Adhesives in Shear by Tension Loading of Single-Lap-Joint Laminated Assemblies	(0 ~ 200) kN	BS-2	N
ASTM D3165-14	Plastic and related products	Standard Test Method for Strength Properties of Adhesives in Shear by Tension Loading of Single-Lap-Joint Laminated Assemblies	(0 ~ 300) kN	BS	N
ASTM D3171-22	Plastic and related products	Standard Test Methods for Constituent Content of Composite Materials	(0 ~ 200) g	BS-2	N
ASTM D3479/D3479M-19	Plastic and related products	Standard Test Method for Tension-Tension Fatigue of Polymer Matrix Composite Materials	(0 ~ 300) kN	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ASTM D3479/D3479M-19(Reapproved 2023)	Plastic and related products	Standard Test Method for Tension-Tension Fatigue of Polymer Matrix Composite Materials	(0 ~ 200) kN	BS-2	N
ASTM D3518/D3518M-18	Plastic and related products	Standard Test Method for In-Plane Shear Response of Polymer Matrix Composite Materials by Tensile Test of a ±45 ° Laminate	(0 ~ 200) kN	BS-2	N
ASTM D3518/D3518M-18	Plastic and related products	Standard Test Method for In-Plane Shear Response of Polymer Matrix Composite Materials by Tensile Test of a ±45 ° Laminate	(0 ~ 300) kN	BS	N
ASTM D3846-08(2015)	Plastic and related products	Standard Test Methods for In-Plane Shear Strength of Reinforced Plastics	(0 ~ 200) kN	BS-2	N
ASTM D5379/D5379M-19	Plastic and related products	Standard Test Method for Shear Properties of Composite Materials by the V-Notched Beam Method	(0 ~ 200) kN	BS-2	N
ASTM D5379/D5379M-19	Plastic and related products	Standard Test Method for Shear Properties of Composite Materials by the V-Notched Beam Method	(0 ~ 300) kN	BS	N
ASTM D5766/D5766M-11	Plastic and related products	Standard Test Method for Open-Hole Tensile Strength of Polymer Matrix Composite Laminates	(0 ~ 300) kN	BS	N
ASTM D5766/D5766M-23	Plastic and related products	Standard Test Method for Open-Hole Tensile Strength of Polymer Matrix Composite Laminates	(0 ~ 200) kN	BS-2	N
ASTM D5961/D5961M-17	Plastic and related products	Standard Test Method for Bearing Response of Polymer Matrix Composite Laminates	(0 ~ 300) kN	BS	N
ASTM D5961/D5961M-23	Plastic and related products	Standard Test Method for Bearing Response of Polymer Matrix Composite Laminates	(0 ~ 200) kN	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ASTM D638-14	Plastic and related products	Standard Test Method for Tensile Properties of Plastics	(0 ~ 300) kN	BS	N
ASTM D6415/D6415M-22	Plastic and related products	Standard Test Method for Measuring the Curved Beam Strength of a Fiber-Reinforced Polymer-Matrix Composite	(0 ~ 200) kN	BS-2	N
ASTM D6484/D6484M-14	Plastic and related products	Standard Test Method for Open-Hole Compressive Strength of Polymer Matrix Composite Laminates	(0 ~ 300) kN	BS	N
ASTM D6484/D6484M-23	Plastic and related products	Standard Test Method for Open-Hole Compressive Strength of Polymer Matrix Composite Laminates	(0 ~ 200) kN	BS-2	N
ASTM D6641/D6641M-16	Plastic and related products	Standard Test Method for Compressive Properties of Polymer Matrix Composite Materials Using a Combined Loading Compression(CLC) Test Fixture	(0 ~ 300) kN	BS	N
ASTM D6641/D6641M-23	Plastic and related products	Standard Test Method for Compressive Properties of Polymer Matrix Composite Materials Using a Combined Loading Compression (CLC) Test Fixture	(0 ~ 200) kN	BS-2	N
ASTM D6742/D6742M-17	Plastic and related products	Standard Practice for Filled-Hole Tension and Compression Testing of Polymer Matrix Composite Laminates	(0 ~ 300) kN	BS	N
ASTM D6742/D6742M-23	Plastic and related products	Standard Practice for Filled-Hole Tension and Compression Testing of Polymer Matrix Composite Laminates	(0 ~ 200) kN	BS-2	N
ASTM D695-15	Plastic and related products	Standard Test Method for Compressive Properties of Rigid Plastics	(0 ~ 300) kN	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ASTM D695-23	Plastic and related products	Standard Test Method for Compressive Properties of Rigid Plastics	(0 ~ 200) kN	BS-2	N
ASTM D7028-07(Reapproved 2024)	Plastic and related products	Standard Test Method for Glass Transition Temperature (DMA Tg) of Polymer Matrix Composites by Dynamic Mechanical Analysis (DMA)	(Room temperature ~ 450) ℃	BS-2	N
ASTM D7078/D7078M-20ε1	Plastic and related products	Standard Test Method for Shear Properties of Composite Materials by V-Notched Rail Shear Method	(0 ~ 200) kN	BS-2	N
ASTM D7136/D7136M-15	Plastic and related products	Standard Test Method for Measuring the Damage Resistance of a Fiber-Reinforced Polymer Matrix Composite to a Drop-Weight Impact Event	(1 ~ 1 800) J	BS	N
ASTM D7136/D7136M-20	Plastic and related products	Standard Test Method for Measuring the Damage Resistance of a Fiber-Reinforced Polymer Matrix Composite to a Drop-Weight Impact Event	(0 ~ 200) kN, (3 ~ 300) J	BS-2	N
ASTM D7137/D7137M-17	Plastic and related products	Standard Test Method for Compressive Residual Strength Properties of Damaged Polymer Matrix Composite Plates	(0 ~ 1 000) kN (1 ~ 1 800) J	BS	N
ASTM D7137/D7137M-23	Plastic and related products	Standard Test Method for Compressive Residual Strength Properties of Damaged Polymer Matrix Composite Plates	(0 ~ 200) kN, (3 ~ 300) J	BS-2	N
ASTM D7264-15	Plastic and related products	Standard Test Method for Flexural Properties of Polymer Matrix Composite Materials	(0 ~ 300) kN	BS	N
ASTM D790-17	Plastic and related products	Standard Test Methods for Flexural Properties of Un-reinforced and Reinforced Plastics and Electrical Insulating Materials	(0 ~ 300) kN	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ASTM D790-17	Plastic and related products	Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials	(0 ~ 200) kN	BS-2	N
ASTM D792-20	Plastic and related products	Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement	(0 ~ 200) g	BS-2	N
SACMA SRM 1R-94	Plastic and related products	Recommended Test Method for Compressive Properties of Oriented Fiber-Resin Composites	(0 ~ 300) kN	BS	N

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01. Mechanical Testing

01.014 Measuring machines and tools

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS I 8001:2009	Measuring machines and tools	General rules for electrical conductivity measuring method	(0.5 ~ 1 000) mS/m	BS	N
KS I 8001:2009	Measuring machines and tools	General rules for measuring conductivity Subclause 8.1	(0.05 ~ 10 000) μS/cm (25 ℃)	BS-2	N
KS M 0011:2013	Measuring machines and tools	Methods for determination of pH of aqueous solution	(4 ~ 10) pH	BS	N
KS M 0011:2013	Measuring machines and tools	Methods for determination of pH of aqueous solutions Subclause 7.1, Clause 8	(4 ~ 10) pH (25 ℃)	BS-2	N

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01. Mechanical Testing

01.015 Industrial Machinery

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS B ISO 10218-1:2011	Industrial robots	Robots and robotic devices - Safety requirements for industrial robots - Part 1 : Robots 5.6.2 Reduced speed control operation	speed : 250 mm/s or less	BS-2	Y
KS B ISO 230-2:2014	Machine tools	Test code for machine tools — Part 2: Determination of accuracy and repeatability of positioning of numerically controlled axes 5.3.2 Linear axes up to 2 000 mm	(0 ~ 2 000) mm	BS-2	Y
KS B ISO 9283:1998	Manipulating industrial robots	Manipulating industrial robots — Performance criteria and related test methods 7.2 Pose accuracy and pose repeatability 7.3 Distance accuracy and repeatability	Measurement range : (0.3 ~ 10) m Horizontal (vertical) measuring angle : -45° ~ 45°	BS-2	N
MOIS Notice No.2019-32(04.04.2019.)	Industrial machinery	Safety Standard for elevator safety components and elevators Appendix 12 Buffers safety standard (KC 1030-11 : 2019) 〈Exception〉 5.1.1 Buffers with non linear characteristics 5.1.2 Beffers with linear characteristics 6.3 Safety tests for energy accumulation buffers	Speed : 5.0 m/s or less Weight: (200 ~ 6 800) kg	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MOIS Notice No.2019-32(04.04.2019.)	Industrial machinery	Safety Standard for elevator safety components and elevators Appendix 5 Safety Gear safety standard (KC 1030-04 : 2019) 〈Exception〉 5.2 instantaneous safety gear	Speed : 5.0 m/s or less Weight: (200 ~ 6 800) kg	BS-2	N
MOIS Notice No.2022-18(02.03.2022.)	Industrial machinery	Safety Standard for elevator safety components and elevators Appendix 12 Buffers safety standard (KC 1030-11 : 2022) 〈Exception〉 5.1.1 Buffers with non linear characteristics 5.1.2 Beffers with linear characteristics 6.3 Safety tests for energy accumulation buffers	Speed : 5.0 m/s or less Weight: (200 ~ 6 800) kg	BS-2	N
MOIS Notice No.2022-18(02.03.2022.)	Industrial machinery	Safety Standard for elevator safety components and elevators Appendix 5 Safety Gear safety standard (KC 1030-04 : 2022) 〈Exception〉 5.2 instantaneous safety gear	Speed : 5.0 m/s or less Weight: (200 ~ 6 800) kg	BS-2	N

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01. Mechanical Testing

01.021 Automobiles and related products

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SAE J 826:2021	Automobiles and related products	Devices for Use in Defining and Measuring Vehicle Seating Accommodation	(0 ~ 1 000) mm 0° ~ 180° (0 ~ 60 000) g	SF-3	N
Title 49 CFR PART 572 Subpart O:2023	Automobiles and related products	Title 49 - Transportation Subtitle B - Other Regulations Relating to Transportation Chapter V - National Highway Traffic Safety Administration Department of Transportation PART 572 - ANTHROPOMORPHIC TEST DEVICES Subpart O - Hybrid III 5th Percentile Female Test Dummy, Alpha Version § 572.132 Head assembly and test procedure	(Head Drop) Resultant Acceleration: (500 ~ 3 000) m/s^2 Lateral Acceleration : (0 ± 150) m/s^2 Unimodal Oscillation : (0 ~ 10) %	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
Title 49 CFR PART 572 Subpart O:2023	Automobiles and related products	Title 49 - Transportation Subtitle B - Other Regulations Relating to Transportation Chapter V - National Highway Traffic Safety Administration Department of Transportation PART 572 - ANTHROPOMORPHIC TEST DEVICES Subpart O - Hybrid III 5th Percentile Female Test Dummy, Alpha Version § 572.132 Head assembly and test procedure § 572.133 Neck assembly and test procedure § 572.134 Thorax assembly and test procedure § 572.135 Upper and lower torso assemblies and torso flexion test procedure § 572.136 Knees and knee impact test procedure	(Head Drop) Resultant Acceleration: (500 ~ 3 000) m/s^2 Lateral Acceleration : (0 ± 150) m/s^2 Unimodal Oscillation : (0 ~ 10) % (Neck Pendulum) Acceleration : (10 ~ 300) m/s^2 Rotation : (0 ~ 120)° Moment : (0 ~ 100) N·m Velocity : (5.95 ~ 7.13) m/s (Thorax Impact) Force : (2 380 ~ 4 600) N Displacement : (0 ~ 60) mm Velocity : (6.59 ~ 6.82) m/s (Torso Flexion) Force : (0 ~ 390) N Rotation : (0 ~ 45.5)° (Knee Impact) Force : (500 ~ 4 100) N Velocity : (2.07 ~ 2.13) m/s	SF-3	N

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02. Chemical Testing

02.008 Other Material and Products

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62321-1 Ed.1.0:2013	Other materials and products	Determination of certain substances in electro technical products - Part 1 : Introduction and overview	-	BS-2	N
IEC 62321-2 Ed.2.0:2021	Other materials and products	Determination of certain substances in electro technical products - Part 2 : Disassembly disjointment and mechanical sample preparation	-	BS-2	N
IEC 62321-3-1:2013	Other materials and products	Determination of certain substances in electro technical products - Part 3-1 : Screening - Lead mercury cadmium total chromium and total bromine using X-ray fluorescence spectrometry	Qualitative method	BS-2	N
IEC 62321-3-2 Ed.1.0:2013	Other materials and products	Determination of certain substances in electrotechnical products - Part 3-2 : Screening - Total bromine in polymers and electronics by Combustion - Ion Chromatography	Br : 30 mg/kg or more	BS-2	N
IEC 62321-4 Ed.1.1:2013+AMD 1:2017	Other materials and products	Determination of certain substances in electrotechnical products - Part 4 : Mercury in polymers, metals and electronics by CV-AAS, CV-AFS, ICP-OES and ICP-MS	Hg : 0.5 mg/kg or more	BS-2	N
IEC 62321-4 Ed.1.0:2013	Other materials and products	Determination of certain substances in electro technical products - Part 4 : Mercury in polymers metals and electronics by CV-AAS CV-AFS ICP-OES and ICP-MS	Hg : 0.5 mg/kg or more	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62321-5 Ed.1.0:2013	Other materials and products	Determination of certain substances in electro technical products - Part 5 : Cadmium lead and chromium in polymers and electronics and cadmium and lead in metals by AAS AFS ICP-OES and ICP-MS	Pb : 6.0 mg/kg or more Cd : 7.0 mg/kg or more Cr : 5.0 mg/kg or more	BS-2	N
IEC 62321-6:2015	Other materials and products	Determination of certain substances in electrotechnical products - Part 6 : Polybrominated biphenyls and polybrominated diphenyl ethers in polymers by gas chromatography-mass spectrometry (GC-MS)	PBBs : 5 mg/kg or more PBDEs : 5 mg/kg or more	BS-2	N
IEC 62321-7-1:2015	Other materials and products	Determination of certain substances in electrotechnical products - Part 7-1 : Hexavalent chromium-Presence of hexavalent chromium_(Cr(VI)) in colourless and coloured corrosion-protected coatings on metals by the colorimetric method	Cr(VI) : 0.10 ug/cm2 or more	BS-2	N
IEC 62321-7-2:2017	Other materials and products	Determination of certain substances in electrotechnical products - Part 7-2 : Hexavalent chromium-Determination of hexavalent chromium (Cr(VI)) in polymers and electronics by the colorimetric method	Cr(VI) : 8 mg/kg or more	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62321-8:2017	Other materials and products	Determination of certain substances in electrotechnical products - Part 8 : Phthalates in polymers by gas chromatography-mass spectrometry (GC-MS), gas chromatography-mass spectrometry using a pyrolyzer/thermal desorption accessory(Py/TD-GC-MS)	50 mg/kg or more	BS-2	N

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02. Chemical Testing

02.021 Water Quality

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS I ISO 10304-1:2007	Water quality	Water quality-Determination of dissolved anions by liquid chromatography of ions-Part1:Determination of bromide, chloride, fluoride, nitrate, nitrite, phosphate and sulfate	Chloride : 0.1 mg/L Fluoride : 0.1 mg/L Nitrate : 0.1 mg/L Nitrite : 0.05 mg/L	BS-2	N
ME Notice No. 2022-247	Water quality	Guideline for hygienic safety of waterworks material & product 52 Amines	(0.01 ~ 0.25) mg/L	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ME Notice No.2022-247 (19.12.2022.)	Water quality	Guideline for hygienic safety of waterworks material & product 14. Fluoride 17. Nitrate-N&Nitrite-N 18. Chloride 22-2. Metals-Inductively Coupled Plasma Atomic Emission Spectrometry 22-3. Metals-Inductively Coupled Plasma Mass Spectrometry 28. Mercury 32. Hexa chromium 6. Potassium permanganate 7. Odor 8. Taste 9. Color 10. Total solids 11. Turbidity 12. Alkyl benzene sulfate 13. Free residual chlorine loss 15. Phenols 16. Cyande 35. Volatile Organic Compounds - Purge & Trap/Gas Chromatography /Mass Spectrometery 53. 2,4-Toluenediamine 54. 2,6-Toluenediamine 55. Formaldehyde 33. Nickel	- 14. Fluoride: 0.02 mg/L or more - 17. Nitrate-N&Nitrite-N Nitrate nitrogen 0.02 mg/L or more Nitrite nitrogen 0.1 mg/L or more - 18. Chloride : 0.4 mg/L or more - 22-2. Metals-Inductively Coupled Plasma Atomic Emission Spectrometry Copper : 0.003 mg/L or more Manganese : 0.001 mg/L or more Zinc : 0.001 mg/L or more Iron : 0.003 mg/L or more Sodium : 0.03 mg/L or more - 22-3. Metals-Inductively Coupled Plasma Mass Spectrometry Lead : 0.000 37 mg/L or more Arsenic : 0.002 9 mg/L or more Selenium : 0.000 49 mg/L or more Cadmium : 0.000 36 mg/L or more - 28. Mercury : 0.01 g/L or more - 32. Hexa chromium : 0.000 3 mg/L or more - 6. Potassium permanganate : 0.3 mg/L or more - 7. Odor : Pass, Fail - 8. Taste : Pass, Fail - 9. Color : 0.1 degree or more - 10. Total solids : (2.0 ~ 2 000) mg/L - 11. Turbidity : (0.2 ~ 400) NTU - 12. Alkyl benzene sulfate : (0.01 ~ 1.0) mg/L - 13. Free residual chlorine loss : - - 15. Phenols : (0.2 ~ 0.8) g/L - 16. Cyande : (1 ~ 100) g/L	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
			- 35. Volatile Organic Compounds - Purge & Trap/Gas Chromatography /Mass Spectrometery Dichloromethane: 0.001 mg/L or more 1,1-dichloroethylene: 0.001 mg/L or more Trichlorethylene: 0.001 mg/L or more 1,1,1-trichloroethane: 0.001 mg/L or more Tetrachlorethylene: 0.4 g/L or more Benzene : 0.4 g/L or more Cis-1-2-dichloroethylene: 0.3 g/L or more 1,1,2-trichloroethane: 0.4 g/L or more 1,2-dichloroethane : 0.3 g/L or more Epichlorohydrin: : 0.4 g/L or more Vinyl acetate : 0.003 3 mg/L or more Styrene : 0.5 g/L or more 1,2-butadiene : 0.001 mg/L or more 1,3-butadiene : 0.7 g/L or more N, N-Dimethylaniline: 0.001 2 mg/L or more Carbon tetrachloride: 0.2 g/L or more - 53. 2,4-Toluenediamine : 0.001 mg/L or more - 54. 2,6-Toluenediamine : 0.9 g/L or more - 55. Formaldehyde : 0.006 2 mg/Lor more - 33. Nickel : 0.000 7 mg/L or more		

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02. Chemical Testing

02.025 Indoor and other environments

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 12219-2:2012	Indoor and other environments	Interior air of road vehicles - Part 2 : Screening method for the determination of the emissions of volatile organic compounds from vehicle interior parts and materials - Bag method	(0.01~300 000) μg/m³	BS-1	N
ISO 12219-4:2013	Indoor and other environments	Interior air of road vehicles - Part 4 : Method for the determination of the emissions of volatile organic compounds from vehicle interior parts and materials - Small chamber method	(0.01~300 000) μg/m³	BS-1	N
ISO 16000-23:2018	Indoor and other environments	Indoor air - Part 23 : Performance test for evaluating the reduction of formaldehyde and other carbonyl compounds concentrations by sorptive building materials	(1~2 000) μg/m³	BS-1	N
ISO 16000-24:2018	Indoor and other environments	Indoor air - Part 24 : Performance test for evaluating the reduction of volatile organic compound concentrations by sorptive building materials	(1~2 000) μg/m³	BS-1	N
ISO 24353:2008/AMD 1:2021	Indoor and other environments	Hygrothermal performance of building materials and products - Determination of moisture adsorption/desorption properties in response to humidity variation — Amendment 1	(0 ~ 400) g/㎡	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO/IEC 28360-1:2021	Indoor and other environments	Information technology - Determination of chemical emission rates from electronic equipment - Part 1: Using-consumables	(0.001~500) mg/h [O3] > 0.6 mg/h [PM] > 0.5 mg/h	BS-1	N
ISO/IEC 28360-2:2018	Indoor and other environments	Information technology - Office equipment - Determination of chemical emission rates from electronic equipment - Part 2: Not using-consumables	(0.001~500) mg/h [O3] > 0.6 mg/h	BS-1	N
KS F 2611:2019	Indoor and other environments	Hygrothermal performance of building materials and products - Determination of moisture adsorption/desorption properties in response to humidity variation	(0 ~ 400) g/㎡	BS-1	N
KS I 2007:2022	Indoor and other environments	Determination of the emission of formaldehyde and volatile organic compounds from furniture and building products - Large chamber method	(0.001 ~ 500) mg/h	BS-1	N
KS I 3546:2022	Indoor and other environments	Performance test methods for evaluating the reduction of volatile organic compound and aldehyde by building material - Solid phase building material	(1 ~ 2 000) μg/m³	BS-1	N
KS I 3547:2022	Indoor and other environments	Performance test methods for evaluating the reduction of volatile organic compound and aldehyde concentrations by building material - Liquid phase building material	(1 ~ 2 000) μg/m³	BS-1	N
KS I ISO 16000-11:2006	Indoor and other environments	Indoor air-Part 11 : Determination of the emission of volatile organic compounds-Sampling, storage of samples and preparation of test specimens	-	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS I ISO 16000-1:2004	Indoor and other environments	Indoor air-Part 1 : General aspects of sampling strategy	-	BS-1	N
KS I ISO 16000-2:2004	Indoor and other environments	Indoor air-Part 2 : Sampling strategy for formaldehyde	-	BS-1	N
KS I ISO 16000-3:2011	Indoor and other environments	Indoor air-Part 3 : Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air - Active sampling method	(0.01 ~ 5 000) μg/㎥	BS-1	N
KS I ISO 16000-6:2011	Indoor and other environments	Indoor air-Part 6 : Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA® sorbent, thermal desorption and gas chromatography using MS or MS/FID	(0.01 ~ 300 000) μg/㎥	BS-1	N
KS I ISO 16000-9:2006	Indoor and other environments	Indoor air-Part 9 : Determination of the emission of volatile organic compounds from building products and furnishing - Emission test chamber method	(0.000 5 ~ 20) mg/(㎡ · h)	BS-1	N
KS M 1998:2022	Indoor and other environments	Determination of the emission rate of formaldehyde and volatile organic compounds in building interior products	(0.000 5 ~ 20) mg/(㎡ · h)	BS-1	N
KS X ISO/IEC 28360-1:2018	Indoor and other environments	Information technology - Office equipment - Determination of chemical emission rates from electronic equipment - Part 1: Using-consumables	(0.001 ~ 500) mg/h [O3] > 0.6 mg/h [PM] > 0.5 mg/h	BS-1	N
KS X ISO/IEC 28360-2:2018	Indoor and other environments	Information technology - Office equipment - Determination of chemical emission rates from electronic equipment - Part 2: Not using-consumables	(0.001 ~ 500) mg/h [O3] > 0.6 mg/h	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
NIER Notice No.2022-37(07.25.2022.)	Indoor and other environments	Test methods for the examination of unintentional persistent organic pollutants - ES 10902.1b Official Method of Unintentionally Produced Persistent Organic Pollutants (UPOPs) in stationary Source Emissions by HRGC/HRMS	1 pg/m³ 이상	BS-1	N
NIER Notice No.2023-75(12.15.2023.)	Indoor and other environments	Test methods for the examination of air pollutants - ES 01801.1 Benzo(a)pyrene in Ambient - Gas Chromatography - ES 01802.1a Polycyclic Aromatic Hydrocarbons in Ambient Air-Gas Chromatography/Mass Spectrometry	(0.1 ~ 10) ng/m³ (0.1 ~ 200) ng/m³	BS-1	N
NIER Notice No.2024-20(02.27.2024.)	Indoor and other environments	Test methods for the examination of indoor air quality - ES 02131.1g Determination of emission of volatile organic compounds and formaldehyde from building materials by small-scale emission test chamber method - ES 02601.1e Determination of formaldehyde in indoor and emitted from building materials by 2,4-DNPH cartridge and high performance liquid chromatograph - ES 02602.1f Determination of volatile organic compounds in indoor and emitted from building materials by sorbent tube and gas chromatograph using MS or FID	(0.000 5 ~ 20) mg/(㎡ · h) (0.01 ~ 5 000) μg/m³ (0.01 ~ 300 000) μg/m³	BS-1	N

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03. Electrical Testing

03.001 Electric cords, cables and circuits

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60227-1:2007	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 1 : General requirements	AC 450/750 V or less	BS	N
IEC 60227-2:2003	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 2 : Test methods	AC 450/750 V or less	BS	N
IEC 60227-3:1997	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 3 : Non-sheathed cables for fixed wiring	AC 450/750 V or less	BS	N
IEC 60227-4:1997	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 4 : Sheathed cables for fixed wiring	AC 450/750 V or less	BS	N
IEC 60227-5:2011	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 5 : Flexible cables (cords)	AC 450/750 V or less	BS	N
IEC 60227-6:2001	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 6 : Lift cables and cables for flexible connections	AC 450/750 V or less	BS	N
IEC 60227-7:2012	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 7 : Flexible cables screened and unscreened with two or more conductors	AC 450/750 V or less	BS	N
IEC 60228:2004	Electric cords, cables and circuits	Conductors of insulated cables	AC 450/750 V or less	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60245-1:2008	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 1 : General requirements	AC 450/750 V or less	BS	N
IEC 60245-2:1998	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 2 : Test methods	AC 450/750 V or less	BS	N
IEC 60245-3:2011	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 3 : Heat resistant silicone insulated cables	AC 450/750 V or less	BS	N
IEC 60245-4:2011	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 4 : Cords and flexible cables	AC 450/750 V or less	BS	N
IEC 60245-8:2012	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 8 : Cords for applications requiring high flexibility	AC 450/750 V or less	BS	N
IEC 60332-1-2:2015	Electric cords, cables and circuits	Tests on electric and optical fibre cables under fire conditions - Part 1-2 : Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame	AC 450/750 V or less	BS	N
IEC 60332-2-2:2004	Electric cords, cables and circuits	Tests on electric and optical fibre cables under fire conditions - Part 2-2 : Test for vertical flame propagation for a single small insulated wire or cable - Procedure for diffusion flame	AC 450/750 V or less	BS	N
KC 10028:2016	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Cross-linked silicone rubber insulated multi-core cable	AC 450/750 V or less	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60227-1:2015	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 1 : General requirements	AC 450/750 V or less	BS	N
KC 60227-2:2015	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 2 : Test methods	AC 450/750 V or less	BS	N
KC 60227-3:2015	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 3 : Non-sheathed cables for fixed wiring	AC 450/750 V or less	BS	N
KC 60227-4:2015	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 4 : Sheathed cables for fixed wiring	AC 450/750 V or less	BS	N
KC 60227-5:2015	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 5 : Flexible cables (cords)	AC 450/750 V or less	BS	N
KC 60227-6:2015	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 6 : Lift cables and cables for flexible connections	AC 450/750 V or less	BS	N
KC 60227-7:2015	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 7 : Flexible cables screened and unscreened with two or more conductors	AC 450/750 V or less	BS	N
KC 60228:2015	Electric cords, cables and circuits	Conductors of insulated cables	(0.5 ~ 2 500) mm^2	BS	N
KC 60245-1:2015	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 1 : General requirements	AC 450/750 V or less	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60245-2:2015	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 2 : Test methods	AC 450/750 V or less	BS	N
KC 60245-3:2015	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 3 : Heat resistant silicone insulated cables	AC 450/750 V or less	BS	N
KC 60245-4:2015	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 4 : Cords and flexible cables	AC 450/750 V or less	BS	N
KC 60245-5:2015	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 5 : Lift cables	AC 450/750 V or less	BS	N
KC 60245-6:2015	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 6 : Arc welding electrode cables	AC 450/750 V or less	BS	N
KC 60245-7:2015	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 7 : Heat resistant ethylene-vinyl acetate rubber insulated cables	AC 450/750 V or less	BS	N
KC 60245-8:2015	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 8 : Cords for applications requiring high flexibility	AC 450/750 V or less	BS	N
KC 60332-1:2015	Electric cords, cables and circuits	Tests on electric cables under fire conditions - Part 1 : Test on a single vertical insulated wire or cable	AC 450/750 V or less	BS	N
KC 60799:2015	Electric cords, cables and circuits	Electrical accessories - Cord sets and interconnection cord sets	AC 1 000 V or less	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60227-1:2019	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 1 : General requirements	AC 450/750 V or less	BS	N
KS C IEC 60227-2:2021	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 2 : Test methods	AC 450/750 V or less	BS	N
KS C IEC 60227-3:2020	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 3 : Non-sheathed cables for fixed wiring	AC 450/750 V or less	BS	N
KS C IEC 60227-4:2020	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 4 : Sheathed cables for fixed wiring	AC 450/750 V or less	BS	N
KS C IEC 60227-5:2021	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 5 : Flexible cables (cords)	AC 450/750 V or less	BS	N
KS C IEC 60227-6:2020	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 6 : Lift cables and cables for flexible connections	AC 450/750 V or less	BS	N
KS C IEC 60227-7:2020	Electric cords, cables and circuits	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 7 : Flexible cables screened and unscreened with two or more conductors	AC 450/750 V or less	BS	N
KS C IEC 60245-1:2019	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 1 : General requirements	AC 450/750 V or less	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60245-2:2021	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 2 : Test methods	AC 450/750 V or less	BS	N
KS C IEC 60245-3:2018	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 3 : Heat resistant silicone insulated cables	AC 450/750 V or less	BS	N
KS C IEC 60245-4:2019	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 4 : Cords and flexible cables	AC 450/750 V or less	BS	N
KS C IEC 60245-5:2018	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 5 : Lift cables	AC 450/750 V or less	BS	N
KS C IEC 60245-8:2019	Electric cords, cables and circuits	Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 8 : Cords for applications requiring high flexibility	AC 450/750 V or less	BS	N
KS C IEC 60332-1-2:2020	Electric cords, cables and circuits	Tests on electric and optical fibre cables under fire conditions - Part 1-2 : Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame	AC 450/750 V or less	BS	N
KS C IEC 60799:2017	Electric cords, cables and circuits	Electrical accessories - Cord sets and interconnection cord sets	1 000 V or less	BS	N

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03. Electrical Testing

03.004 Electrical materials and components

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CEI 23-50:2007	Electrical materials and components	Plugs and socket-outlets for household and similar purposes General requirements	AC 250 V / 16 A or less	BS	N
CEI EN 50075:1998(CEI 23-34)	Electrical materials and components	Non-rewirable two-pole plugs 2.5 A 250 V, with cord, for the connection of class II equipment for household and similar purposes	AC 250 V / 16 A or less	BS	N
IEC 60320-1:2021	Electrical materials and components	Appliance couplers for household and similar general purposes - Part 1 : General requirements	AC 250 V/ 16 A or less	BS	N
IEC 60320-2-1:2018	Electrical materials and components	Appliance couplers for household and similar general purposes - Part 2-1 : Sewing machine couplers	AC 250 V/ 16 A or less	BS	N
IEC 60384-14:2016	Electrical materials and components	Fixed capacitors for use in electronic equipment - Part 14 : Sectional specification : Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	AC 500 V or less	BS	N
IEC 60384-1:2021	Electrical materials and components	Fixed capacitors for use in electronic equipment - Part1 : Generic specification	AC 500 V or less	BS	N
IEC 60730-1:2020	Electrical materials and components	Automatic electrical controls - Part 1 : General Requirements	AC 450 V / 30 A or less	BS	N
IEC 60730-1:2022	Electrical materials and components	Automatic electrical controls - Part 1 : General Requirements	AC 450 V / 30 A or less	BS	N
IEC 60730-2-9:2020	Electrical materials and components	Automatic electrical controls - Part 2-9: Particular requirements for temperature sensing controls	AC 450 V / 30 A or less	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60799:2018	Electrical materials and components	Electrical accessories - Cord sets and interconnection cord sets	AC 250 V / 16 A or less	BS	N
IEC 60884-1:2013	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 1 : General requirements	AC 250 V / 16 A or less	BS	N
IEC 60884-2-1:2006	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 2-1 : Particular requirements for fused plugs	AC 250 V / 16 A or less	BS	N
IEC 60884-2-2:2006	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 2-2 : Particular requirements for socket-outlets for appliances	AC 250 V / 16 A or less	BS	N
IEC 60884-2-3:2006	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 2-3 : Particular requirements for switched socket-outlets without interlock for fixed installations	AC 250 V / 16 A or less	BS	N
IEC 60884-2-4:2007	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 2-4 : Particular requirements for plugs and socket-outlets for SELV	AC 250 V / 16 A or less	BS	N
IEC 60884-2-5:2017	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 2-5 : Particular requirements for adaptors	AC 250 V / 16 A or less	BS	N
IEC 60884-2-6:1997	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 2-6 : Particular requirements for switched socket-outlets with interlock for fixed electrical installations	AC 250 V / 16 A or less	BS	N
IEC 61058-1:2016	Electrical materials and components	Switches for appliances - Part 1 : General requirements	AC 300 V / 20 A or less	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61242:2015	Electrical materials and components	Electrical accessories - Cable reels for household and similar purposes	AC 250 V / 16 A or less	BS	N
IEC 61960-3:2017	Electrical materials and components	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary lithium cells and batteries for portable applications - Part 3: Prismatic and cylindrical lithium secondary cells and batteries made from them	Max. DC 100 V Max. DC 100 A Temperature range : (-40 ~ 160) ℃	BS-3	N
IEC 62133-2:2017+AMD1:2021	Electrical materials and components	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary lithium cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems	Max. DC 100 V Max. DC 100 A Temperature range : (-40 ~ 160) ℃	BS-1	N
IEC 62133:2012	Electrical materials and components	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells and for batteries made from them for use in portable applications.	Max. DC 1 000 V	BS-1	N
IEC 62619: 2017	Electrical materials and components	Secondary cells and batteries containing alkaline or other nonacid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial application	Max. Voltage: DC 1 500 V, Max. Current: DC 1 200 A, Temperature range: (-40 ~ 160) ℃	BS-3	N
IEC 62619:2022	Electrical materials and components	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications	Max. Voltage : DC 1 500 V Max. Current : DC 1 200 A Temperature range : (-40 ~ 160) ℃	BS-3	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62620:2023	Electrical materials and components	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary lithium cells and batteries for use in industrial applications	Max. Voltage : DC 1 500 V Max. Current : DC 1 200 A Temperature range : (-40 ~ 160) ℃	BS-3	N
IEC 62660-3:2022	Electrical materials and components	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 3: Safety requirements	Max. DC 100 V Max. DC 100 A Temperature range : (-40 ~ 160) ℃	BS-3	N
K 10026:2013	Electrical materials and components	Automatic socket-outlet to cut-off standby power	AC 250 V / 16 A or less	BS	N
K 60320-2-2:2006	Electrical materials and components	Appliance couplers for household and similar general purposes - Part 2-2 : Interconnection couplers for household and similar equipment	AC 250 V / 16 A or less	BS	N
K 60730-2-10:2009	Electrical materials and components	Automatic electrical controls for household and similar use - Part 2-10 : Particular requirements for motor-starting relays	AC 450 V / 30 A or less	BS	N
K 60730-2-11:2009	Electrical materials and components	Automatic electrical controls for household and similar use - Part 2-11 : Particular requirements for energy regulators	AC 450 V / 30 A or less	BS	N
K 60730-2-2:2009	Electrical materials and components	Automatic electrical controls for household and similar use - Part 2-2 : Particular requirements for thermal motor protectors	AC 450 V / 30 A or less	BS	N
K 60730-2-6:2009	Electrical materials and components	Automatic electrical controls for household and similar use - Part 2-6 : Particular requirements for automatic electrical pressure sensing controls including mechanical requirements	AC 450 V / 30 A or less	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
K 60730-2-7:2009	Electrical materials and components	Automatic electrical controls for household and similar use - Part 2-7 : Particular requirements for timers and time switches	AC 450 V / 30 A or less	BS	N
K 60730-2-9:2011	Electrical materials and components	Automatic electrical controls for household and similar use - Part 2-9 : Particular requirements for Temperature sensing controls	AC 450 V / 30 A or less	BS	N
K 60799:2006	Electrical materials and components	Electrical accessories - Cord sets and interconnection cord sets	AC 250 V / 16 A or less	BS	N
KC 60320-1:2015	Electrical materials and components	Appliance couplers for household and similar general purposes - Part 1 : General requirements	AC 250 V / 16 A or less	BS	N
KC 60320-2-1:2015	Electrical materials and components	Appliance couplers for household and similar general purposes - Part 2-1 : Sewing machine couplers	AC 250 V / 2.5 A or less	BS	N
KC 60320-2-3:2015	Electrical materials and components	Appliance couplers for household and similar general purposes - Part 2-3 : Appliance couplers with a degree of protection higher than IPX0	AC 250 V / 16 A or less	BS	N
KC 60384-14:2015	Electrical materials and components	Fixed capacitors for use in electronic equipment - Part 14 : Sectional specification : Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	AC 500 V or less	BS	N
KC 60384-1:2015	Electrical materials and components	Fixed capacitors for use in electronic equipment - Part1 : Generic specification 〈Exception〉 4.8.1 Dissipation factor	AC 500 V or less	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60669-1:2015	Electrical materials and components	Switches for household and similar fixed-electrical installations - Part 1 : General requirements	AC 300 V / 20 A or less	BS	N
KC 60669-2-1:2015	Electrical materials and components	Switches for household and similar fixed-electrical installations - Part 2-1 : electronic switches	AC 300 V / 20 A or less	BS	N
KC 60669-2-2:2015	Electrical materials and components	Switches for household and similar fixed-electrical installations - Part 2-2 : electromagnetic remote control switches(RCS)	AC 300 V / 20 A or less	BS	N
KC 60669-2-3:2015	Electrical materials and components	Switches for household and similar fixed-electrical installations - Part 2-3 : time-delay switches(TDS)	AC 300 V / 20 A or less	BS	N
KC 60730-1:2015	Electrical materials and components	Automatic electrical controls for household and similar use - Part 1 : General Requirements	AC 450 V / 30 A or less	BS	N
KC 60884-1:2015	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 1 : General requirements	AC 250 V / 16 A or less	BS	N
KC 60884-2-1:2015	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 2-1 : Particular requirements for fused plugs	AC 250 V / 16 A or less	BS	N
KC 60884-2-2:2015	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 2-2 : Particular requirements for socket-outlets for appliances	AC 250 V / 16 A or less	BS	N
KC 60884-2-3:2015	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 2-3 : Particular requirements for switched socket-outlets without interlock for fixed installations	AC 250 V / 16 A or less	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60884-2-4:2015	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 2-4 : Particular requirements for plugs and socket-outlets for SELV	AC 250 V / 16 A or less	BS	N
KC 60884-2-5:2015	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 2-5 : Particular requirements for adaptors	AC 250 V / 16 A or less	BS	N
KC 60884-2-6:2015	Electrical materials and components	Plugs and socket-outlets for household and similar purposes - Part 2-6 : Particular requirements for switched socket-outlets with interlock for fixed electrical installations	AC 250 V / 16 A or less	BS	N
KC 60939-1:2015	Electrical materials and components	Complete filter units for radio interference suppression - Part 1 : Generic specification	AC 500 V or less	BS	N
KC 60939-2:2015	Electrical materials and components	Complete filter units for radio interference suppression - Part 2 : Sectional specification	AC 500 V or less	BS	N
KC 61048:2015	Electrical materials and components	Auxiliaries for lamps - Capacitors for use in tubular fluorescent and other discharge lamp circuits - General and safety requirements	AC 500 V or less	BS	N
KC 61058-1:2015	Electrical materials and components	Switches for appliances- Part 1 : General requirements	AC 300 V / 20 A or less	BS	N
KC 61058-2-1:2015	Electrical materials and components	Switches for appliances - Part 2-1 : Particular requirements for cord switches	AC 300 V / 20 A or less	BS	N
KC 61058-2-4:2015	Electrical materials and components	Switches for appliances - Part 2-4 : Particular requirements for independently mounted switches	AC 300 V / 20 A or less	BS	N
KC 61058-2-5:2015	Electrical materials and components	Switches for appliances - Part 2-5 : Particular requirements for change-over selectors	AC 300 V / 20 A or less	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 61242:2015	Electrical materials and components	Electrical accessories - Cable reels for household and similar purposes	AC 250 V / 16 A or less	BS	N
KC 62133-2:2020	Electrical materials and components	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary lithium cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems	Max. DC 100 V Max. DC 100 A Temperature range : (-40 ~ 160) ℃	BS-1	N
KC 62133:2019	Electrical materials and components	Secondary cells and batteries containing alkaline or other non-acid electrolyte - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable application	Max. DC 100 V Max. DC 100 A	BS-1	N
KC 62619:2019	Electrical materials and components	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications	Max. Voltage : DC 1 500 V Max. Current : DC 1 200 A Temperature range : (-40 ~ 160) ℃	BS-3	N
KC 62619:2023	Electrical materials and components	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications	Max. Voltage : DC 1 500 V Max. Current : DC 1 200 A Temperature range : (-40 ~ 160) ℃	BS-3	N
KS C IEC 60730-1:2020	Electrical materials and components	Automatic electrical controls - Part 1 : General Requirements	AC 450 V / 30 A or less	BS	N
KS C IEC 60730-2-5 Annex H:2017	Electrical materials and components	IEC 60730-2-5, Automatic electrical controls — Part 2-5: Particular requirements for automatic electrical burner control systems Annex H: Requirements for electronic controls	AC 450 V / 30 A or less	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 61960-3:2021	Electrical materials and components	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary lithium cells and batteries for portable applications - Part 3: Prismatic and cylindrical lithium secondary cells, and batteries made from them	Max. DC 100 V Max. DC 100 A Temperature range : (-40 ~ 160) ℃	BS-3	N
KS C IEC 62133-2:2021	Electrical materials and components	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems	Max. DC 100 V Max. DC 100 A Temperature range : (-40 ~ 160) ℃	BS-1	N
KS C IEC 62619:2022	Electrical materials and components	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications	Max. Voltage : DC 1 500 V Max. Current : DC 1 200 A Temperature range : (-40 ~ 160) ℃	BS-3	N
KS C IEC 62620:2021	Electrical materials and components	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary lithium cells and batteries for use in industrial applications	Max. Voltage : DC 1 500 V Max. Current : DC 1 200 A Temperature range : (-40 ~ 160) ℃	BS-3	N
SPS-C KBIA-10100-02-7487:2022	Electrical materials and components	Secondary lithium batteries for small unmanned aerial vehicle — performance test method	Max. DC 100 V Max. DC 50 A Temperature: (0 ~ 50) ℃	BS-3	N
SPS-C KBIA-10104-03-7312:2022	Electrical materials and components	Secondary lithium-ion battery system for energy storage systems — performance and safety	Max. Voltage : DC 1 500 V Max. Current : DC 1 200 A	BS-3	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
UN Document	Electrical materials and components	The Manual of tests and criteria; Eighth revised edition, section 38.3 : 2023	Max. Voltage : DC 600 V Max. Current : DC 200 A Temperature range : (-40 ~ 75) ℃	BS-3	N

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03. Electrical Testing

03.005 Measuring instruments

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60145:1963	Measuring instruments	Var-hour(reactive energy) meters	AC 600 V or less	BS-2	N
IEC 61869-1:2007	Measuring instruments	Instrument transformers - Part 1: General requirements 7.2.6 Test for accuracy	AC 110 kV, AC 10 kA or less	BS-2	N
IEC 61869-2:2012	Measuring instruments	Instrument transformers - Part 2: Additional requirements for current transformers 7.2.6 Test for accuracy	AC 10 kA or less	BS-2	N
IEC 61869-3:2011	Measuring instruments	Instrument transformers - Part 3: Additional requirements for inductive voltage transformers 7.2.6 Test for accuracy	AC 110 kV or less	BS-2	N
IEC 61869-6:2016	Measuring instruments	Instrument transformers - Part 6: Additional general requirements for low-power instrument transformers 7.2.6 Test for accuracy	AC 230 V, DC 220 V or less	BS-2	N
IEC 62052-11:2003	Measuring instruments	Electricity metering equipment(AC)-General requirements tests and test conditions - Part 11 : Metering equipment <Exception> 5.2 Tests of mechanical requirements 8.3 Tests of the effect of the climatic enviroments 9.3 Tests for electromagnetic compatibility	AC 600 V or less	BS-2	N
IEC 62053-11:2003	Measuring instruments	Electricity metering equipment(a.c.)-Particular requirements - Part 11 : Electro mechanical meters for active energy (classes 0.5 1 and 2)	AC 600 V or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62053-21 Ed.1.0:2003	Measuring instruments	Electricity metering equipment(a.c.)- Particular requirements - Part 21 : Static meters for active energy (classes 1 and 2) <Exception> 5.2 Tests of mechanical requirements 8.3 Tests of the effect of the climatic enviroments 9.3 Tests for electromagnetic compatibility	AC 600 V or less	BS-2	N
IEC 62053-22 Ed.1.0:2003	Measuring instruments	Electricity metering equipment(a.c.) - Particular requirements - Part 22 : Static meters for active(classes 0.2 S and 0.5 S) <Exception> 5.2 Tests of mechanical requirements 8.3 Tests of the effect of the climatic enviroments 9.3 Tests for electromagnetic compatibility	AC 600 V or less	BS-2	N
IEC 62053-23 Ed.1.0:2003	Measuring instruments	Electricity metering equipment(a.c.)- Particular requirements - Part 23 : Static meters for reactive (classes 2 and 3) <Exception> 5.2 Tests of mechanical requirements 8.3 Tests of the effect of the climatic enviroments 9.3 Tests for electromagnetic compatibility	AC 600 V or less	BS-2	N
KS C 1208:2010 <Exception> 6.16 Tests of effect of the vibration 6.17 Tests of effect of the impact	Measuring instruments	Alternating-current watt-hour meters	AC 600 V or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 1214:2010 <Exception> 7.17 Electromagnetic compatibility 7.18 Tests of the effect of the climatic enviroments 7.19 Resistance to vibration 7.20 Impact resistance 7.21 Mechanical strength 7.22 Protection against penetration of dust and water 7.23 Resistance to heat and fire	Measuring instruments	Static meters for active/reactive energy (Class 0.2, 0.5, 1.0, 2.0 for active energy and Class 2.0, 3.0 for reactive energy)	AC 600 V or less	BS-2	N
KS C 1707	Measuring instruments	Instrument transformers for metering service 9.2 Characteristic of Current 9.3 Characteristic of Voltage	AC 110 kV, AC 5 kA or less	BS-2	N
KS C IEC 60044-1:2003	Measuring instruments	Instrument transformers - Part 1 : Current Transformers 11.4 Type tests for accuracy of measuring current transformers	AC 10 kA or less	BS-2	N
KS C IEC 60044-2:2003	Measuring instruments	Instrument transformers - Part 2 : Inductive voltage Transformers 12.3 Type tests for accuracy of measuring voltage transformers	AC 110 kV or less	BS-2	N
KS C IEC 60145:2003	Measuring instruments	Var-hour(reactive energy) meters	AC 600 V or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 62052-11:2005	Measuring instruments	Electricity metering equipment(AC) - General requirements, tests and test conditions-Part 11 : Metering equipment <Exception> 5.2 Tests of mechanical requirements 5.8 Tests of resistance to heat and fire 5.9 Tests of protection against penetration of dust and water 6.3 Tests of the effect of the climatic enviroments 7.5 Tests for electromagnetic compatibility	AC 600 V or less	BS-2	N
KS C IEC 62053-11:2003	Measuring instruments	Electricity metering equipment(AC) - Particular requirements - Part 11 : Electromechanical meters for active energy (Classes 0.5, 1 and 2)	AC 600 V or less	BS-2	N
KS C IEC 62053-21:2003	Measuring instruments	Electricity metering equipment(AC) - Particular requirements - Part 21 : Static meters for active energy (Classes 1 and 2) <Exception> 5.2 Tests of mechanical requirements 5.3 Tests of the effect of the climatic enviroments 5.5 Tests for electromagnetic compatibility	AC 600 V or less	BS-2	N
KS C IEC 62053-22:2003	Measuring instruments	Electricity metering equipment(AC) - Particular requirements - Part 22 : Static meters for active (Classes 0.2 S and 0.5 S) <Exception> 5.2 Tests of mechanical requirements 5.3 Tests of the effect of the climatic enviroments 5.5 Tests for electromagnetic compatibility	AC 600 V or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 62053-23:2005	Measuring instruments	Electricity metering equipment(AC) - Particular requirements - Part 23 : Static meters for reactive (Classes 2 and 3)	AC 600 V or less	BS-2	N
MOTIE Notice No.2016-124(07.01.2016.)	Measuring instruments	Watt - hour meters technical standards 〈Exception〉 7.17 Tests for electromagnetic compatibility 7.18 Tests of the effect of the climatic enviroments 7.19 Resistance to vibration 7.20 Impact resistance 7.21 Mechanical strength 7.22 Protection against penetration of dust and water	AC 600 V or less	BS-2	N
MOTIE Notice No.2020-230(12.28.2020.)	Measuring instruments	Watt - hour meters technical standards 〈Exception〉 5.2 Mechanical strength 8.3 Tests of the effect of the climatic enviroments 9.2 Tests for electromagnetic compatibility 12.5 Resistance to heat and fire 12.6 Protection against penetration of dust and water 13.1 Effect of wetting and SO2 gas 13.4 Effect of outdoor weathering	AC 1 000 V, DC 1 500 V or less	BS-2	N
MOTIE Notice No.2022-164(09.29.2022.)	Measuring instruments	Electric vehicle chargers technical standards 〈Exception〉 8.2.1 Tests for electromagnetic compatibility	AC 600 V, DC 1 000 V or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
Kepco registered purchase standard(GS-5963-0008:2017)	Measuring instruments	Hall Effect Type Current Sensor Modules for Low Voltage 6.3.2 Test of Output error 6.3.3 Test or Insulation Resistance	AC 250 A or less	BS-2	N
Kepco registered purchase standard(GS-6625-0012:2002)	Measuring instruments	Alternating-current Watt-hour Meters for Connection through Instrument Transformer	AC 600 V or less	BS-2	N
Kepco registered purchase standard(GS-6625-0015:2010)	Measuring instruments	Static Meters for Low Voltage 〈Exception〉 7.4.5 Tests for electromagnetic compatibility 7.4.6 Tests of the effect of the climatic enviroments 7.4.7 Tests of mechanical requirements 7.4.8 Tests for functions	AC 600 V or less	BS-2	N
Kepco registered purchase standard(GS-6625-0037:2018)	Measuring instruments	G-Type Static Meters for Low Voltage 〈Exception〉 6.5 Tests for electromagnetic compatibility 6.6 Tests of the effect of the climatic enviroments 6.7 Tests of mechanical requirements 6.8 conformance test for metering/measurement 6.9 Tests for functions, Field Test	AC 600 V or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
Kepco registered purchase standard(GS-6625-0055:2017)	Measuring instruments	Advanced E-Type Static Meters for Low Voltage 〈Exception〉 9.4.5 Tests for electromagnetic compatibility 9.4.6 Tests of the effect of the climatic enviroments 9.4.7 Tests of mechanical requirements 7.3.8 conformance test for metering/measurement 9.4.9 Tests for functions, Field Test	AC 600 V or less	BS-2	N
Kepco registered purchase standard(GS-6625-0060:2016)	Measuring instruments	Solid State Recording Electronic Meter 〈Exception〉 7.3.5 Tests for electromagnetic compatibility 7.3.6 Tests of the effect of the climatic enviroments 7.3.7 Tests of mechanical requirements 7.3.8 Tests for functions, Field Test	AC 600 V or less	BS-2	N
Kepco registered purchase standard(GS-6625-0060:2018)	Measuring instruments	Solid State Recording Electronic Meter 〈Exception〉 7.3.5 Tests for electromagnetic compatibility 7.3.6 Tests of the effect of the climatic enviroments 7.3.7 Tests of mechanical requirements 7.3.8 Tests for functions, Field Test	AC 600 V or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
Kepco registered purchase standard(GS-6625-0061:2017)	Measuring instruments	E-Type Static Meters for Low Voltage 〈Exception〉 7.4.5 Tests for electromagnetic compatibility 7.4.6 Tests of the effect of the climatic enviroments 7.4.7 Tests of mechanical requirements 7.4.8 Tests for functions, Field Test	AC 600 V or less	BS-2	N
Kepco registered purchase standard(GS-6625-0062:2012)	Measuring instruments	Solid Static Watt-hour Meters with CT for Low Voltage 〈Exception〉 7.4.5 Tests for electromagnetic compatibility 7.4.6 Tests of the effect of the climatic enviroments 7.4.7 Tests of mechanical requirements 7.4.8 Tests for functions, Field Test	AC 600 V or less	BS-2	N

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03. Electrical Testing

03.006 Electrical machinery for industries

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CHAdeMO 0.9.1:2012	Electrical machinery for industries	Technical Specifications of Quick Charger for the Electric Vehicle CHAdeMO Rev. 0.9.1 6. Communication control 7. Charging control	-	BS-1	N
CHAdeMO 1.2.5 Amendment 1:2023	Electrical machinery for industries	Technical Specifications of Quick Charger for Electric Vehicles CHAdeMO 1.2 5th Edition Amendment 1 5.2 List of CHAdeMO protocol test	-	BS-1	N
CHAdeMO 2.0.2 Amendment 1:2023	Electrical machinery for industries	Technical Specifications of Quick Charger for Electric Vehicles CHAdeMO 2.0.2 Amendment 1 5.2 List of CHAdeMO protocol test	-	BS-1	N
CHAdeMO V2H 2.1:2014	Electrical machinery for industries	Guidelines of Charge/Discharge System for Electric Vehicle V2H DC version EVPS-002 : 2014 Version 2.1 8. Communication control	-	BS-1	N
CHAdeMO V2L 2.1:2014	Electrical machinery for industries	Guidelines of Charge/Discharge System for Electric Vehicle V2L DC version EVPS-004 : 2014 Version 2.1 8. Communication control	-	BS-1	N
DIN SPEC 70121:2014	Electrical machinery for industries	Electromobility - Digital communication between a d.c. EV charging station and an electric vehicle for control of d.c. charging in the Combined Charging System	-	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
DIN SPEC 70122:2018	Electrical machinery for industries	Electromobility - Conformance test for digital communication between a d.c. EV charging station and an electric vehicle for control of d.c. charging in the Combined Charging System 8.2 SECC + PLC bridge test cases 9.2 SECC + PLC bridge test cases 10.2 SECC + PLC bridge test cases 11.2 SECC + PLC bridge test cases 12.2 SECC + PLC bridge test cases 13.5.2 SECC + PLC bridge test cases 13.6.2 SECC + PLC bridge test cases 13.7.2 SECC + PLC bridge test cases	-	BS-1	N
ES-5945-0001:2017	Electrical machinery for industries	Overcurrent Relays 〈Exception〉 Clause 6.5.7: EMC test Clause 6.5.8: Voltage dips, short interruptions and voltage variations immunity tests Clause 6.5.9: Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
ES-5945-0002:2017	Electrical machinery for industries	Overcurrent Relays with Reclosing 〈Exception〉 Clause 6.5.7: EMC test Clause 6.5.8: Voltage dips, short interruptions and voltage variations immunity tests Clause 6.5.9: Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
ES-5945-0003:2013	Electrical machinery for industries	Over Voltage Relays 〈Exception〉 Clause 6.4.7: EMC test Clause 6.4.8: Voltage dips, short interruptions and voltage variations immunity tests Clause 6.4.9: Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ES-5945-0004:2013	Electrical machinery for industries	Under Voltage Relays <Exception> Clause 6.4.7: EMC test Clause 6.4.8: Voltage dips, short interruptions and voltage variations immunity tests Clause 6.4.9: Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
ES-5945-0005:2012	Electrical machinery for industries	Nagative Phase Sequence Relays <Exception> Clause 6.4.10 ~ Clause 6.4.17	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
ES-5945-0006:2017	Electrical machinery for industries	Directional Over-current Relays <Exception> Clause 6.5.7: EMC test Clause 6.5.8: Voltage dips, short interruptions and voltage variations immunity tests Clause 6.5.9: Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
ES-5945-0007:2008	Electrical machinery for industries	Selective Ground Relays	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
ES-5945-0008:2008	Electrical machinery for industries	Current Ratio Differential Relays <Exception> Clause 5.6: Harmonics suppression characteristic test	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
ES-5945-0009:2008	Electrical machinery for industries	Reclosing Relays	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
GS-5895-0066:2022	Electrical machinery for industries	xGrids Transfer Clause 7.4.1: IEC61850 Conformance Testing (Client) Clause 7.4.2: IEC61850 Conformance Testing (Server) Clause 7.4.3: function/performance test	-	BS-1	N
GS-5895-0067:2022	Electrical machinery for industries	SCADA IEC 61850 FEP Clause 7.3.1: IEC61850 Conformance Testing (Client) Clause 7.3.2: function/performance test	-	BS-1	N
GS-5945-0015:2007	Electrical machinery for industries	Digital Current Ratio Differential Relays 〈Exception〉 Clause 6.4.10 ~ Clause 6.4.17	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-5945-0016:2013	Electrical machinery for industries	Digital UnderFrequency Relay 〈Exception〉 Clause 5.4.7: EMC test Clause 5.4.8: Voltage dips, short interruptions and voltage variations immunity tests Clause 5.4.9: Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-5945-0017:2010	Electrical machinery for industries	Over-current Relay to prevent 96P from mal-function 〈Exception〉 Clause 6.2.10 ~ Clause 6.2.17	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-5945-0019:2013	Electrical machinery for industries	IED of Station Power, Disaster Prevention and Security	DC 125 V or less Contact capacity 30 A or less	BS-1	N
GS-5945-0020 : 2013	Electrical machinery for industries	Under frequency Protection Intelligent Electronic Device	DC 125 V or less Contact capacity 30 A or less	BS-1	N
GS-5945-0021:2013	Electrical machinery for industries	Overvoltage Protection Intelligent Electronic Device	DC 125 V or less Contact capacity 30 A or less Time overvoltage element 160 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
GS-5945-0022:2017	Electrical machinery for industries	Control Intellignet Electronic Device for Transformer	DC 125 V or less Contact capacity 30 A or less	BS-1	N
GS-5945-0023:2013	Electrical machinery for industries	Current Ratio Differential Protection Intelligent Electronic Device For Transformer	DC 125 V or less Contact capacity 30 A or less Time overcurrent element 100 A or less	BS-1	N
GS-5945-0024:2017	Electrical machinery for industries	Overcurrent Protection Intelligent Electronic Device with Reclosing	DC 125 V or less Contact capacity 30 A or less Time overcurrent element 80 A or less	BS-1	N
GS-5945-0025:2017	Electrical machinery for industries	Overcurrent Protection Intelligent Electronic Device	DC 125 V or less Contact capacity 30 A or less Time overcurrent element 80 A or less	BS-1	N
GS-5945-0026:2013	Electrical machinery for industries	Undervoltage Protection Intelligent Electronic Device	DC 125 V or less Contact capacity 30 A or less	BS-1	N
GS-5945-0027:2017	Electrical machinery for industries	Directional Overcurrent Protection Intelligent Electronic Device	DC 125 V or less Contact capacity 30 A or less Time overcurrent element 80 A or less	BS-1	N
GS-5945-0028:2017	Electrical machinery for industries	Overcurrent Protection Intelligent Electronic Device	AC 220 V or less, DC 125 V or less Contact capacity 30 A or less Time overcurrent element 80 A or less	BS-1	N
GS-5945-0029:2017	Electrical machinery for industries	Directional Overcurrent Protection Intelligent Electronic Device	AC 220 V or less, DC 125 V or less Contact capacity 30 A or less Time overcurrent element 80 A or less	BS-1	N
GS-5945-0030:2013	Electrical machinery for industries	Digital ILC Panel	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
GS-5945-0031:2017	Electrical machinery for industries	Directional Over-current Relay with Reclosing 〈Exception〉 Clause 6.5.7: EMC test Clause 6.5.8: Voltage dips, short interruptions and voltage variations immunity tests Clause 6.5.9: Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0030:2019	Electrical machinery for industries	345kV Main Transformer Protection Panel 〈Exception〉 Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0033:2016	Electrical machinery for industries	345kV Bus Protection Panel 〈Exception〉 Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0034:2017	Electrical machinery for industries	Under Frequencee Relay Trip Control Device 〈Exception〉 Clause 5.2.(6): EMC test Clause 5.2.(7): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0039:2020	Electrical machinery for industries	154kV T/L Protection Panel 〈Exception〉 Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Voltage dips, short interruptions and voltage variations immunity tests Clause 6.2.2.(8): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0045:2005	Electrical machinery for industries	Direction Comparison and PCM Current Differential Scheme for 345kV T/L Protection Panel 〈Exception〉 Clause 6.2.2.(11) ~ Clause 6.2.2.(18)	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
GS-6110-0046:2019	Electrical machinery for industries	Breaker Failure Protection Panel under 345kV Substation <Exception> Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Voltage dips, short interruptions and voltage variations immunity tests Clause 6.2.2.(8): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0050:2019	Electrical machinery for industries	A Protection Panel Of Under Frequency Relays	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0059:2017	Electrical machinery for industries	Protective Relay Panels for 345kV Transmission Line <Exception> Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0063:2007	Electrical machinery for industries	DOCR PNL-Digital Dual	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0070:2020	Electrical machinery for industries	154kV Short Distance T/L Protection Panel <Exception> Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Voltage dips, short interruptions and voltage variations immunity tests Clause 6.2.2.(8): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0072:2007	Electrical machinery for industries	Directional Overcurrent Relay Scheme for 154kV T/L Protection Panel <Exception> Clause 6.2.2.(8) ~ Clause 6.2.2.(15)	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
GS-6110-0073:2007	Electrical machinery for industries	Nondirectional Overcurrent Relay Scheme for 154kV T/L Protection Panel <Exception> Clause 6.2.2.(8) ~ Clause 6.2.2.(15)	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0074:2018	Electrical machinery for industries	154kV Main Transformer Protection Panel	AC 220 V or less, DC 125 V or less Contact capacity 30 A or less Time overcurrent element 80 A or less Time overvoltage element 160 V or less	BS-1	N
GS-6110-0074:2019	Electrical machinery for industries	154kV Main Transformer Protection Panel <Exception> Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Voltage dips, short interruptions and voltage variations immunity tests Clause 6.2.2.(8): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0078:2020	Electrical machinery for industries	Special Protection Equipment <Exception> Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Voltage dips, short interruptions and voltage variations immunity tests Clause 6.2.2.(8): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0080:2020	Electrical machinery for industries	Protective Relay Panels for 765kV Transmission Line <Exception> Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Voltage dips, short interruptions and voltage variations immunity tests Clause 6.2.2.(8): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
GS-6110-0081:2013	Electrical machinery for industries	765kV Main Transformer Protection Panel 〈Exception〉 Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0082:2020	Electrical machinery for industries	765kV Breaker Failure Protection Panel 〈Exception〉 Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Voltage dips, short interruptions and voltage variations immunity tests Clause 6.2.2.(8): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0083:2020	Electrical machinery for industries	765kV Bus Protection Panel 〈Exception〉 Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Voltage dips, short interruptions and voltage variations immunity tests Clause 6.2.2.(8): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0084:2015	Electrical machinery for industries	154kV Sh.C Bank Protection Panel 〈Exception〉 Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0089:2013	Electrical machinery for industries	154kV T/L IED Panel with PCM Current Differential Scheme	AC 220 V or less, DC 125 V or less Contact capacity 30 A or less	BS-1	N
GS-6110-0090:2013	Electrical machinery for industries	154kV Short Distance T/L IED Panel with PCM Current Differential Scheme	AC 220 V or less, DC 125 V or less Contact capacity 30 A or less Time overcurrent element 80 A or less	BS-1	N
GS-6110-0094:2017	Electrical machinery for industries	154kV Substation Automation Operating System	AC 220 V or less, DC 125 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
GS-6110-0094:2022	Electrical machinery for industries	154kV Substation Automation Operating System Clause 5.4 (2): Insulation resistance test, Clause 5.4 (3): AC or d.c. dielectric voltage test, Clause 5.4 (4): Impulse voltage test, Clause 5.4 (8): Burden test, Clause 5.4 (9): System function/performance test, Clause 5.4 (10): IEC61850 Conformance Testing(Client), Clause 5.4 (13): IEC61850 Conformance Testing(Server)	Clause 5.4 (2): AC 500 V, 60 GΩ, Clause 5.4 (3): AC 2 kV, Clause 5.4 (4): AC 5 kV, Clause 5.4 (8): DC 150 V, AC 275 V, 30 A	BS-1	N
GS-6110-0096:2017	Electrical machinery for industries	OLTC Protective Relay 〈Exception〉 Clause 4.2.5: Vibration and shock tests	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0097:2018	Electrical machinery for industries	154kV Hybrid Substation Automation Operating System	AC 220 V or less, DC 125 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
GS-6110-0097:2022	Electrical machinery for industries	154kV Hybrid Substation Automation Operating System Clause 5.4 (2): Insulation resistance test, Clause 5.4 (3): AC or d.c. dielectric voltage test, Clause 5.4 (4): Impulse voltage test, Clause 5.4 (8): Burden test, Clause 5.4 (9): Overload capatiry test, Clause 5.4 (10): Contact performance test, Clause 5.4 (11): System function/performance test, Clause 5.4 (12): IEC61850 Conformance Testing(Client), Clause 5.4 (15): IEC61850 Conformance Testing(Server)	Clause 5.4 (2): AC 500 V, 60 GΩ, Clause 5.4 (3): AC 2 kV, Clause 5.4 (4): AC 5 kV, Clause 5.4 (8): DC 150 V, AC 275 V, 30 A, Clause 5.4 (9): DC 200 V, 60 A, Clause 5.4 (10): 150 V	BS-1	N
GS-6110-0098:2018	Electrical machinery for industries	345kV Hybrid Substation Automation Operating System	AC 220 V or less, DC 125 V or less	BS-1	N
GS-6110-0239:2019	Electrical machinery for industries	154kV Bus Protection Panel 〈Exception〉 Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Voltage dips, short interruptions and voltage variations immunity tests Clause 6.2.2.(8): Environmental testing	Aux. power rated voltage : DC 300 V or less CT rated current: 500 A or less PT rated voltage: AC 300 V or less	BS-1	N
GS-6110-0247:2012	Electrical machinery for industries	Station Power, Disaster prevention and Security Panel with Intelligent Electronic Devices	DC 125 V or less Contact capacity 30 A or less	BS-1	N
GS-6110-0263:2018	Electrical machinery for industries	On-line Partial Discharge diagnostic System for Under ground Transmission Line	DC 125 V or less Sensor Freq. 300 MHz or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
GS-6110-0265:2017	Electrical machinery for industries	154kV Main Transformer Protection IED Panel	AC 220 V or less, DC 125 V or less Contact capacity 30 A or less Time overcurrent element 80 A or less Time overvoltage element 160 V or less	BS-1	N
GS-6110-0269:2018	Electrical machinery for industries	Substation total diagnostic system	DC 125 V or less Contact capacity 30 A or less	BS-1	N
GS-6110-0270:2016	Electrical machinery for industries	Directional Overcurrent Realy Scheme for 154kV Customer T/L IED Panel	AC 220 V or less, DC 125 V or less Contact capacity 30 A or less Time overcurrent element 80 A or less	BS-1	N
GS-6110-0271:2016	Electrical machinery for industries	Nondirectional Overcurrent Realy Scheme for 154kV Customer T/L IED Panel	AC 220 V or less, DC 125 V or less Contact capacity 30 A or less	BS-1	N
GS-6350-0016:2020	Electrical machinery for industries	The Underground Power Tunnel Operating System based on IEC 61850 〈Exception〉 Clause 8.3.4: Environmental testing Clause 8.3.5: EMC test	IEC 61850 conformance test tool(SW version 1.0) Network Device	BS-1	N
IEC 60079-0:2017	Electrical machinery for industries	Explosive atmosphere - Part 0 : Equipment-General requirements 〈Exception〉 26.11 Resistance to chemical agents for Group I electrical apparatus	Max. 15 600 V, Max. 2 000 A, Surface Temp.: (-60 ~ +1 000) ℃	BS-1	N
IEC 60079-11:2011	Electrical machinery for industries	Explosive atmospheres - Part 11 : Equipment protection by intrinsic safety “i”	Max. 15 600 V, Max. 900 A, Surface Temp.: (-60 ~ +1 000) ℃	BS-1	N
IEC 60079-11:2023	Electrical machinery for industries	Explosive atmospheres - Part 11 : Equipment protection by intrinsic safety “i”	Max. 15 600 V, Max. 900 A, Surface Temp.: (-60 ~ +1 000) ℃	BS-1	N
IEC 60079-13:2017	Electrical machinery for industries	Explosive atmospheres - Part 13: Equipment protection by pressurized room "p" and artificially ventilated room "v"	Surface Temp.: (-60 ~ +500) ℃ Maximum Pressure: 15 kPa Maximum Flow Rate: 300 LPM	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60079-15:2017	Electrical machinery for industries	Explosive atmospheres - Part 15 : Equipment protection by type of protection “n”	Max. 15 000 V, Max. 2 000 A, Surface Temp.: (-60 ~ +1 000) ℃	BS-1	N
IEC 60079-18:2014+AMD1:2017	Electrical machinery for industries	Explosive atmospheres - Part 18 : Equipment protection by encapsulation “m”	Max. 15 000 V, Max. 2 000 A, Surface Temp.: (-60 ~ +1 000) ℃	BS-1	N
IEC 60079-1:2014	Electrical machinery for industries	Explosive atmospheres - Part 1 : Equipment protection by flameproof enclosures “d”	Max. 13 640 V, Max. 2 000 A, Max. Overpressure: 10 MPa, Surface Temp.: (-60 ~ +500) ℃	BS-1	N
IEC 60079-25:2020	Electrical machinery for industries	Explosive atmospheres - Part 25 : intrinsically safe electrical systems	Max. 15 600 V, Max. 900 A, Surface Temp.: (-60 ~ +1 000) ℃	BS-1	N
IEC 60079-26:2021	Electrical machinery for industries	Explosive atmospheres - Part 26 : Equipment With Separation Elements or combined Levels of Protection	Max. 15 600 V, Max. 2 000 A, Surface Temp.: (-60 ~ +500) ℃	BS-1	N
IEC 60079-28:2015	Electrical machinery for industries	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation 〈Exception〉 6.2 Verification of suitability of test set-up for type tests 6.3 Type tests	1 μW ~ 3 W	BS-1	N
IEC 60079-2:2014	Electrical machinery for industries	Explosive atmospheres - Part 2 : Equipment protection by pressurized enclosure “p”	Max. 13 640 V, Max. 2 000 A, Max. Pressure: 15 kPa, Max. Flow Rate: 300 LPM, Surface Temp.: (-60 ~ +500) ℃	BS-1	N
IEC 60079-31:2022	Electrical machinery for industries	Explosive atmospheres - Part 31 : Equipment dust ignition protection by enclosure “t”	Max. 15 600 V, Max. 2 000 A, Surface Temp.: (-60 ~ +500) ℃	BS-1	N
IEC 60079-5:2015+AMD1:2022	Electrical machinery for industries	Explosive atmospheres - Part 5 : Equipment protection by powder filling “q”	Max. 1 000 V, Max. 16 A, Max. Overpressure: 1 MPa, Surface Temp.: (-60 ~ +500) ℃	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60079-6:2015	Electrical machinery for industries	Explosive atmospheres - Part 6 : Equipment protection by liquid immersion “o”	Max. 13 640 V, Max. 2 000 A, Max. Overpressure: 1 MPa, Surface Temp.: (-60 ~ +500) ℃	BS-1	N
IEC 60079-7:2015+AMD1:2017	Electrical machinery for industries	Explosive atmospheres - Part 7 : Equipment protection by increased safety “e” 〈Exception〉 6.2 Rotating electrical machines Annex A Temperature determination of electrical machines	Max. 13 640 V, Max. 2 000 A, Surface Temp.: (-60 ~ +500) ℃	BS-1	N
IEC 60255-1 Edition 1.0 2009-08	Electrical machinery for industries	Measuring Relays and Protection Equipment Part 1 : Common requirements	0.9 ~ 1 A, ≥ 5 ~ 30 A, 500 V ± l0 %, 500 V d.c., 12 V r.ms. ac or 12 V d.c., 30 mV ~ 230 V, 0.1 Ω or less, 10 MΩ or more, 100 MΩ or more, ≥ 30 ~ 1 000 W at L/R = 40 ms, -40 ℃ ~ 70 ℃/ ±3 ℃/ 1 ℃ ± 0.2 ℃/min, 93 ± 3 %, 60 % ± 10 %, 97 %, -2 % +3 %, 45 ~ 75 % RH, 86 ~ 106 kPa, 50 Hz or 60 Hz ±0.2 %	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60255-27 Edition 2.0 2013-10	Electrical machinery for industries	Measuring Relays and Protection Equipment Part 27 : Product safety requirements	0.9 ~ 1 A, ≥ 5 ~ 30 A, 500 V ± l0 %, 500 V d.c., 12 V r.ms. ac or 12 V d.c., 30 mV ~ 230 V, 0.1 Ω or less, 10 MΩ or more, 100 MΩ or more, ≥ 30 ~ 1 000 W at L/R = 40 ms, -40 ℃ ~ 70 ℃, ±3 ℃, 1 ℃ ± 0.2 ℃/min, 93 ± 3 %, 60 % ± 10 %, 97 %, -2 % +3 %, 45 ~ 75 % RH, 86 ~ 106 kPa, 50 Hz or 60 Hz ±0.2 %	BS-1	N
IEC 60529:1989+AMD1:1999+AMD2:2013 CSV/COR2:2015	Electrical machinery for industries	Degrees of protection provided by enclosures (IP Code)	IP1X - IP6X IPX1 - IPX9	BS-1	N
IEC 60745-1:2006	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 1 : General requirements	single phase : 250 V or less three phase : 440 V or less	BS-1	N
IEC 60745-2-14:2010	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-14 : Particular requirements for planers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
IEC 60745-2-1:2008	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-1 : Particular requirements for drills and impact drills	single phase : 250 V or less three phase : 440 V or less	BS-1	N
IEC 60745-2-2:2008	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-2 : Particular requirements for screwdrivers and impact wrenches	single phase : 250 V or less three phase : 440 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60745-2-3:2012	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-3 : Particular requirements for grinders polishers and disk-type sanders	single phase : 250 V or less three phase : 440 V or less	BS-1	N
IEC 60745-2-4:2008	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-4 : Particular requirements for sanders and polishers other than disk type	single phase : 250 V or less three phase : 440 V or less	BS-1	N
IEC 60745-2-5:2010	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-5 : Particular requirements for circular saws	single phase : 250 V or less three phase : 440 V or less	BS-1	N
IEC 60825-1:2014	Electrical machinery for industries	Safety of laser products - Part 1 : Equipment classification and requirements	wavelength : (250 ~ 2 500) nm Optical power : 1 W or less	BS-1	N
IEC 60825-2:2010	Electrical machinery for industries	Safety of laser products - Part 2 : Safety of optical fibre communication systems(OFCS)	wavelength : (250 ~ 2 500) nm Optical power : 1 W or less	BS-1	N
IEC 60974-1:2012	Electrical machinery for industries	Arcwelding equipment - Part 1 : Welding power sources	AC 400 V or less	BS-1	N
IEC 61010-1:2010+AMD1:2016	Electrical machinery for industries	Safety requirements for electrical equipment for measurement control and laboratory use - Part 1 : General requirements	AC 600 V or less	BS-1	N
IEC 61010-2-010:2019	Electrical machinery for industries	Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-010 : Particular requirements for laboratory equipment for the heating of materials	AC 600 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61010-2-011:2016	Electrical machinery for industries	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-011 : Particular requirements for refrigerating equipment	AC 600 V or less	BS-1	N
IEC 61010-2-020:2016	Electrical machinery for industries	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-020 : Particular requirements for laboratory centrifuges	AC 600 V or less	BS-1	N
IEC 61010-2-040:2020	Electrical machinery for industries	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-040 : Particular requirements for sterilizers and Washer-disinfectors used to treat medical materials	AC 600 V or less	BS-1	N
IEC 61010-2-051:2018	Electrical machinery for industries	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-051 : Particular requirements for laboratory equipment for mixing and stirring	AC 600 V or less	BS-1	N
IEC 61010-2-081:2019	Electrical machinery for industries	Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2 - 081 : Particular requirements for automatic and semi-automatic laboratory equipment for analysis and other purposes	AC 600 V or less	BS-1	N
IEC 61010-2-101:2018	Electrical machinery for industries	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2 - 101 : Particular requirements for in vitro diagnostic(IVD) medical equipment	AC 600 V or less	BS-1	N
IEC 61558-1:2009	Electrical machinery for industries	Safety of power transformers power supply units and similar - Part 1 : General requirements and tests	AC 1 kV or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61558-2-16:2013	Electrical machinery for industries	Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2 - 16 : Particular requirements and tests for swtch mode power supply units and transformers for switch mode power supply units	AC 1 kV or less	BS-1	N
IEC 61558-2-1:2007	Electrical machinery for industries	Safety of power transformers power supplies reactors and similar products - Particular requirements and tests for separating transformers and power supplies incorporating separating transformers for general applications	AC 1 kV or less	BS-1	N
IEC 61558-2-2:2007	Electrical machinery for industries	Safety of power transformers power supplies reactors and similar products - Particular requirements and tests for control transformers and power supplies incorporating control transformers	AC 1 kV or less	BS-1	N
IEC 61558-2-4:2009	Electrical machinery for industries	Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2 - 4 : Particular requirements and tests for isolating transformers and power supply units incorporating isolating transformers	AC 1 kV or less	BS-1	N
IEC 61558-2-6:2009	Electrical machinery for industries	Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2 - 6 : Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers	AC 1 kV or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61850-10:2012	Electrical machinery for industries	Communication networks and systems in substations - Part 10 : Conformance testing	- Client(Edition 2 interface, Edition 2 Amendment 1 interface) - Server(Edition 2 interface, Edition 2 Amendment 1 interface)	BS-1	N
IEC 62052-11:2003	Electrical machinery for industries	Electricity metering equipment(AC) - General requirements tests and test conditions - Part 11 : Metering equipment - 5.8. Resistance to heat and fire - 5.9. Protection against penetration of dust and water	AC 600 V or less	BS-1	N
IEC 62053-11:2003	Electrical machinery for industries	Electricity metering equipment(a.c.) - Particular requirements - Part 11 : Electro mechanical meters for active energy (classes 0.5 1 and 2) - 5. Resistance to heat and fire, Protection against penetration of dust and water	AC 600 V or less	BS-1	N
IEC 62053-21:2003	Electrical machinery for industries	Electricity metering equipment(a.c.) - Particular requirements - Part 21 : Static meters for active energy (classes 1 and 2) - 5. Resistance to heat and fire, Protection against penetration of dust and water	AC 600 V or less	BS-1	N
IEC 62053-22:2003	Electrical machinery for industries	Electricity metering equipment(a.c.) - Particular requirements - Part 22 : Static meters for active (classes 0.2 S and 0.5 S) - 5. Resistance to heat and fire, Protection against penetration of dust and water	AC 600 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62053-23:2003	Electrical machinery for industries	Electricity metering equipment(a.c.) - Particular requirements - Part 23 : Static meters for reactive (classes 2 and 3) - 5. Resistance to heat and fire, Protection against penetration of dust and water	AC 600 V or less	BS-1	N
IEC TS 60079-46:2017	Electrical machinery for industries	Explosive atmospheres - Part 46: Equipment assemblies	Surface Temp.: (-60 ~ +500) ℃	BS-1	N
IEC/IEEE 60079-30-1:2015	Electrical machinery for industries	Explosive atmosphere - Part 30-1: Electrical resistance trace heating - General and testing requirements	Dielectric test: (AC/DC) 5 kV or less Start-up Current: 40 A or less Surface Temp.: (-60 ~ +1 000) ℃	BS-1	N
IEEE C37.90:2005	Electrical machinery for industries	IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus	Rated Current Input : 32 A or less Rated Voltage Input : 300 V or less	BS-1	N
IEEE Std 1815-2012	Electrical machinery for industries	IEEE Standard for Electric Power Systems Communications-Distributed Network Protocol (DNP3)	CN-ASE2000K BCOM-USB RTU	BS-1	N
IEEE Std 2030.5-2018	Electrical machinery for industries	IEEE Standard for Smart Energy Profile Application Protocol	All	BS-1	N
ISO 15118-20:2022	Electrical machinery for industries	Road vehicles - Vehicle to grid communication interface - Part 20: 2nd generation network layer and application layer requirements	-	BS-1	N
ISO 20653:2013	Electrical machinery for industries	Road vehicles - Degrees of protection (IP code) - Protection of electrical equipment against foreign objects, water and access 〈Exception〉 IPX4K, IPX6K	IP1X - IP6XK, IPX1 - IPX9K 〈Exception〉 IPX4K, IPX6K	BS-1	N
ISO 80079-36:2019	Electrical machinery for industries	Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic method and requirements	Max. 15 600 V, Max. 2 000 A, Surface Temp.: (-60 ~ +1 000) ℃	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 80079-37:2016	Electrical machinery for industries	Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres - Non-electrical type of protection constructional safety ''c'', control of ignition sources ''b'', liquid immersion ''k''	Max. 15 600 V, Max. 2 000 A, Surface Temp.: (-60 ~ +500) ℃, 1 MPa	BS-1	N
ISO/IEC 15118-3:2015	Electrical machinery for industries	Road vehicles — Vehicle to grid communication interface -- Part 3: Physical and data link layer requirements	-	BS-1	N
ISO/IEC 15118-4:2018	Electrical machinery for industries	Road vehicles — Vehicle to grid communication interface -- Part 4: Network and application protocol conformance test 8.2 SECC test cases 9.2 SECC test cases 10.2 SECC test cases	-	BS-1	N
ISO/IEC 15118-5:2018	Electrical machinery for industries	Road vehicles — Vehicle to grid communication interface -- Part 5: Physical layer and data link layer conformance test 8.3 SECC + PLC bridge test cases	-	BS-1	N
K 60974-11:2009	Electrical machinery for industries	Arc welding equipment - Part 11 : Electrode holders	250 A or less 30 V or less load	BS-1	N
K 60974-12:2009	Electrical machinery for industries	Arc welding equipment - Part 12 : Coupling devices for welding cables	250 A or less 30 V or less load	BS-1	N
K 60974-1:2009	Electrical machinery for industries	Arc welding equipment - Part 1 : Welding power sources	AC 400 V or less	BS-1	N
K 60974-2:2009	Electrical machinery for industries	Arc welding equipment - Part 2 : Liquid cooling systems	250 A or less 30 V or less load	BS-1	N
K 60974-3:2009	Electrical machinery for industries	Arc welding equipment - Part 3 : Arc striking and stabilizing devices	250 A or less 30 V or less load	BS-1	N
K 60974-4:2009	Electrical machinery for industries	Arc welding equipment - Part 4 : In-service inspection and testing	250 A or less 30 V or less load	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
K 60974-5:2009	Electrical machinery for industries	Arc welding equipment - Part 5 : Wire feeders	250 A or less 30 V or less load	BS-1	N
K 60974-7:2009	Electrical machinery for industries	Arc welding equipment - Part 7 : Torches	250 A or less 30 V or less load	BS-1	N
K 60974-8:2009	Electrical machinery for industries	Arc welding equipment - Part 8 : Gas consoles for welding and plasma cutting systems	250 A or less 30 V or less load	BS-1	N
K 61558-2-6:2015	Electrical machinery for industries	Safety of power transformers, power supply units and similar devices - Part 2 : Particular requirements for safety isolating transformers for general use	AC 1 kV or less	BS-1	N
KC 60529:2015	Electrical machinery for industries	Degrees of Protection Provided by Enclosures(IP code)	IP1X - IP6X IPX1 - IPX9	BS-1	N
KC 60745-1:2015	Electrical machinery for industries	Hand-held motor-operated electric tools -Safety - Part 1 : General requirements	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-1:2022	Electrical machinery for industries	Hand-held motor-operated electric tools -Safety - Part 1 : General requirements	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-11:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-11 : particular requirements for hammers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-12:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-12 : particular requirements for concrete vibrators	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-13:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-13 : particular requirements for chain saws	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-13:2022	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-13 : particular requirements for chain saws	single phase : 250 V or less three phase : 440 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60745-2-14:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-14 : Particular requirements for planers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-14:2022	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-14 : Particular requirements for planers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-15:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-15 : particular requirements for hedge trimmers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-15:2022	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-15 : particular requirements for hedge trimmers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-16:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-16 : particular requirements for tackers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-16:2022	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-16 : particular requirements for tackers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-17:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-17 : particular requirements for routers and trimmers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-17:2022	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-17 : particular requirements for routers and trimmers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-1:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-1 : Particular requirements for drills and impact drills	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-1:2022	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-1 : Particular requirements for drills and impact drills	single phase : 250 V or less three phase : 440 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60745-2-2:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-2 : Particular requirements for screwdrivers and impact wrenches	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-2:2022	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-2 : Particular requirements for screwdrivers and impact wrenches	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-3:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-3 : Particular requirements for grinders, polishers and disk-type sanders	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-4:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-4 : Particular requirements for sanders and polishers other than disk type	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-5:2016	Electrical machinery for industries	Hand-held motor-operated electric tools - Safety - Part 2-5 : electricity Particular requirements for circular saws	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-6:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-6 : particular requirements for hammers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-6:2022	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-6 : particular requirements for hammers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-8:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-8 : particular requirements for shears and nibblers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-8:2022	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-8 : particular requirements for shears and nibblers	single phase : 250 V or less three phase : 440 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60745-2-9:2015	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-9 : particular requirements for tappers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60745-2-9:2022	Electrical machinery for industries	Hand-held motor-operated electric tools - Part 2-9 : particular requirements for tappers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 60974-6:2015	Electrical machinery for industries	Arc welding equipment - Part 6 : Limited duty manual metal arc welding power sources	250 A or less 30 V or less load	BS-1	N
KC 61029-1:2015	Electrical machinery for industries	Safety of transportable motor-operated electric tools - Part 1 : general requirements	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 61029-2-10:2015	Electrical machinery for industries	Safety of transportable motor-operated electric tools - Part 2-10 : particular requirements for cutting-off grinders	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 61029-2-1:2015	Electrical machinery for industries	Safety of transportable motor-operated electric tools - Part 2-1 : particular requirements for circular saws	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 61029-2-2:2015	Electrical machinery for industries	Safety of transportable motor-operated electric tools - Part 2-2 : particular requirements for radial arm saws	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 61029-2-3:2015	Electrical machinery for industries	Safety of transportable motor-operated electric tools - Part 2-3 : particular requirements for planers and thicknessers	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 61029-2-4:2015	Electrical machinery for industries	Safety of transportable motor-operated electric tools - Part 2-4 : particular requirements for bench grinders	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 61029-2-5:2015	Electrical machinery for industries	Safety of transportable motor-operated electric tools - Part 2-5 : particular requirements for band saws	single phase : 250 V or less three phase : 440 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 61029-2-6:2015	Electrical machinery for industries	Safety of transportable motor-operated electric tools - Part 2-6 : particular requirements for diamond drills with water supply	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 61029-2-7:2015	Electrical machinery for industries	Safety of transportable motor-operated electric tools - Part 2-7 : particular requirements for diamond saws with water supply	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 61029-2-8:2015	Electrical machinery for industries	Safety of transportable motor-operated electric tools - Part 2-8 : particular requirements for single spindle vertical moulders	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 61029-2-9:2015	Electrical machinery for industries	Safety of transportable motor-operated electric tools - Part 2-9 : particular requirements for mitre saws	single phase : 250 V or less three phase : 440 V or less	BS-1	N
KC 61558-1:2015	Electrical machinery for industries	Safety of power transformers, power supply units and similar - Part 1 : General requirements and tests	AC 1 kV or less	BS-1	N
KC 61558-2-13:2015	Electrical machinery for industries	Safety of power transformers, power supply units and similar devices - Part 2-13 : Particular requirements for auto transformers for general use	AC 1 kV or less	BS-1	N
KC 61558-2-17:2015	Electrical machinery for industries	Safety of power transformers, power supply units and similar - Part 2-17: Particular requirements for transformers for switch mode power supplies	AC 1 kV or less	BS-1	N
KC 61558-2-1:2015	Electrical machinery for industries	Safety of power transformers, power supply units and similar - Part 2 : Particular requirements for separating transformers for general use	AC 1 kV or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 61558-2-2:2015	Electrical machinery for industries	Safety of power transformers, power supply units and similar - Part 2-2 : Particular requirements for control transformers	AC 1 kV or less	BS-1	N
KC 61558-2-4:2015	Electrical machinery for industries	Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-4: Particular requirements and tests for isolating transformers and power supply units incorporating isolating transformers	AC 1 kV or less	BS-1	N
KS C 1214:2010	Electrical machinery for industries	Static meters for active/reactive energy(class 0.2, 0.5, 1.0, 2.0 for active energy and class 2.0, 3.0 for reactive energy) - 7.22. Protection against penetration of dust and water - 7.23. Resistance to heat and fire	AC 600 V or less	BS-1	N
KS C IEC 60079-0:2019	Electrical machinery for industries	Explosive atmosphere - Part 0 : Equipment-General requirements 〈Exception〉 26.11 Resistance to chemical agents	Max. 15 600 V, Max. 2 000 A, Surface Temp.: (-60 ~ +1 000) ℃	BS-1	N
KS C IEC 60079-11:2011	Electrical machinery for industries	Explosive atmospheres - Part 11 : Equipment protection by intrinsic safety “i”	Max. 15 600 V, Max. 2 000 A, Surface Temp.: (-60 ~ +1 000) ℃	BS-1	N
KS C IEC 60079-13:2017	Electrical machinery for industries	Explosive atmospheres - Part 13: Equipment protection by pressurized room "p" and artificially ventilated room "v"	Surface Temp.: (-60 ~ +500) ℃ Maximum Pressure: 15 kPa Maximum Flow Rate: 300 LPM	BS-1	N
KS C IEC 60079-15:2017	Electrical machinery for industries	Explosive atmospheres - Part 15 : Equipment protection by type of protection “n”	Max. 15 000 V, Max. 2 000 A, Surface Temp.: (-60 ~ +500) ℃	BS-1	N
KS C IEC 60079-18:2014	Electrical machinery for industries	Explosive atmospheres - Part 18 : Equipment protection by encapsulation “m”	Max. 15 000 V, Max. 2 000 A, Surface Temp.: (-60 ~ +500) ℃	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60079-1:2019	Electrical machinery for industries	Explosive atmospheres - Part 1 : Equipment protection by flameproof enclosures “d”	Max. 13 640 V, Max. 2 000 A, Max. Overpressure: 10 MPa, Surface Temp.: (-60 ~ +500) ℃	BS-1	N
KS C IEC 60079-26:2021	Electrical machinery for industries	Explosive atmospheres - Part 26 : Equipment With Separation Elements or combined Levels of Protection	Max. 15 600 V, Max. 2 000 A, Surface Temp.: (-60 ~ +500) ℃	BS-1	N
KS C IEC 60079-28:2015	Electrical machinery for industries	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation 〈Exception〉 6.2 Reference test 6.3 Test mixtures	1 μW ~ 3 W	BS-1	N
KS C IEC 60079-2:2014	Electrical machinery for industries	Explosive atmospheres - Part 2 : Equipment protection by pressurized enclosure “p”	Max. 13 640 V, Max. 2 000 A, Max. Pressure: 15 kPa, Max. Flowrate: 300 LPM, Surface Temp.: (-60 ~ +500) ℃	BS-1	N
KS C IEC 60079-30-1:2007	Electrical machinery for industries	Explosive atmosphere - Part 30-1: Electrical resistance trace heating - General and testing requirements	Dielectric test: (AC/DC) 5 kV or less Start-up Current: 40 A or less Surface Temp.: (-60 ~ +1 000) ℃	BS-1	N
KS C IEC 60079-31:2013	Electrical machinery for industries	Explosive atmospheres - Part 31 : Equipment dust ignition protection by enclosure “t”	15 600 V 이하 2 000 A 이하 표면온도: (-60 ~ +500) ℃	BS-1	N
KS C IEC 60079-5:2015	Electrical machinery for industries	Explosive atmospheres - Part 5 : Equipment protection by powder filling “q”	Max. 1 000 V, Max. 16 A, Max. Overpressure: 1 MPa, Surface Temp.: (-60 ~ +500) ℃	BS-1	N
KS C IEC 60079-6:2015	Electrical machinery for industries	Explosive atmospheres - Part 6 : Equipment protection by liquid immersion “o”	Max. 13 640 V, Max. 2 000 A, Max. Overpressure: 1 MPa, Surface Temp.: (-60 ~ +500) ℃	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60079-7:2015	Electrical machinery for industries	Explosive atmospheres - Part 7 : Equipment protection by increased safety "e" 〈Exception〉 6.2 Rotating electrical machines Annex A Temperature determination of electrical machines	Max. 13 640 V, Max. 2 000 A, Surface Temp.: (-60 ~ +500) ℃	BS-1	N
KS C IEC 60255-1:2014	Electrical machinery for industries	Measuring Relays and Protection Equipment Part 1: Common requirements	0.9 ~ 1 A, ≥5 ~ 30 A, 500 V ± 10 %, 500 V d.c., 12 V rms. ac or 12 V d.c., 30 mV ~ 230 V, ≤0.1 Ω, ≥10 MΩ, ≥100 MΩ, ≥30 ~ 1 000 W at L/R = 40 ms, -40 ℃ ~ 70 ℃, ±3 ℃, 1 ℃ ± 0.2 ℃/min, 93 ± 3 %, 60 % ± 10 %, 97 %, -2 % +3 %, 45 ~ 75 % RH, 86 ~ 106 kPa, 50 Hz or 60 Hz ±0.2 %	BS-1	N
KS C IEC 60255-27:2015	Electrical machinery for industries	Measuring Relays and Protection Equipment Part 27: Product safety requirements	0.9 ~ 1 A, ≥5 ~ 30 A, 500 V ± l0 %, 500 V d.c., 12 V rms. ac or 12 V d.c., 30 mV ~ 230 V, ≤0.1 Ω, ≥10 MΩ, ≥100 MΩ, ≥30 ~ 1 000 W at L/R = 40 ms, -40 ℃ ~ 70 ℃, ±3 ℃, 1 ℃ ± 0.2 ℃/min, 93 ± 3 %, 60 % ± 10 %, 97 %, -2 % +3 %, 45 ~ 75 % RH, 86 ~ 106 kPa, 50 Hz or 60 Hz ±0.2 %	BS-1	N
KS C IEC 60529:2017	Electrical machinery for industries	Degrees of Protection Provided by Enclosures(IP code)	IP1X - IP6X IPX1 - IPX9	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60825-1:2017	Electrical machinery for industries	Safety of laser products - Part 1 : Equipment classification and requirements	wavelength : (250 ~ 2 500) nm power : 1 W or less	BS-1	N
KS C IEC 60825-2:2015	Electrical machinery for industries	Safety of laser products -Part 2 : Safety of optical fibre communication systems (OFCS)	wavelength : (250 ~ 2 500) nm Optical power : 1 W or less	BS-1	N
KS C IEC 61850-10:2006	Electrical machinery for industries	Communication networks and systems in substations - Part 10 : Conformance testing	UC Alug Server & Client	BS-1	N
KS C IEC 62052-11:2005	Electrical machinery for industries	Electricity metering equipment(AC)-General requirements, tests and test conditions - Part 11 : Metering equipment - 5.8. Resistance to heat and fire - 5.9. Protection against penetration of dust and water	AC 600 V or less	BS-1	N
KS C IEC 62053-11:2003	Electrical machinery for industries	Electricity metering equipment(AC)-Particular requirements - Part 11 : Electro mechanical meters for active energy (Classes 0.5, 1 and 2) - 5.6. Instrument stacked with insulating case of protection class II - 5.7. nonflammable	AC 600 V or less	BS-1	N
KS C IEC 62053-21:2003	Electrical machinery for industries	Electricity metering equipment(AC)-Particular requirements - Part 21 : Static meters for active energy (Classes 1 and 2) - 5.2.4. Resistance to heat and fire - 5.2.5. Protection against penetration of dust and water	AC 600 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 62053-22:2003	Electrical machinery for industries	Electricity metering equipment(AC)- Particular requirements - Part 22 : Static meters for active (Classes 0.2 S and 0.5 S) - 5.2.4. Resistance to heat and fire - 5.2.5. Protection against penetration of dust and water	AC 600 V or less	BS-1	N
KS C IEC 62053-23:2005	Electrical machinery for industries	Electricity metering equipment(AC)- Particular requirements - Part 23 : Static meters for reactive (Classes 2 and 3) - 5. Resistance to heat and fire, Protection against penetration of dust and water	AC 600 V or less	BS-1	N
KS R ISO 15118-3:2021	Electrical machinery for industries	Road vehicles — Vehicle to grid communication interface -- Part 3: Physical and data link layer requirements	-	BS-1	N
KS R ISO 15118-4:2020	Electrical machinery for industries	Road vehicles — Vehicle to grid communication interface -- Part 4: Network and application protocol conformance test 8.2 SECC test cases 9.2 SECC test cases 10.2 SECC test cases	-	BS-1	N
KS R ISO 15118-5:2020	Electrical machinery for industries	Road vehicles — Vehicle to grid communication interface -- Part 5: Physical layer and data link layer conformance test 8.3 SECC + PLC bridge test cases	-	BS-1	N
OCPP 1.6:2017	Electrical machinery for industries	Open Charge Point Protocol 1.6	-	BS-1	N
OCPP 2.0.1:2022	Electrical machinery for industries	Open Charge Point Protocol 2.0.1	-	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SPS-KEMC 1120-0579:2018	Electrical machinery for industries	Digital protective relay	AC 220 V or less Impulse 5 kV or less Dielectric test 2 kV or less Insulation resistance 100 Mohm or more	BS-1	N
MOTIE Notice No.2018-206(11.20.2018.)	Electrical machinery for industries	Watt-hour meters technical standards 12.5 Heat and fire history 12.6 Protection against penetration of dust / water	AC 600 V or less	BS-1	N
Kepco registered purchase standard (GS-6625-0015:2010)	Electrical machinery for industries	Static Meters for Low Voltage - 7.4.7.4. Resistance to heat and fire - 7.4.7.5. Protect from dust and water penetration	AC 600 V or less	BS-1	N
Kepco registered purchase standard (GS-6625-0060:2018)	Electrical machinery for industries	Solid State Recording Electronic Meter - 7.3.7.4. Resistance to heat and fire - 7.3.7.5. Protect from dust and water penetration	AC 600 V or less	BS-1	N
Kepco registered purchase standard (GS-6625-0061:2017)	Electrical machinery for industries	E-Type Static Meters for Low Voltage - 7.4.7. Heat and fireproof, dustproof and waterproof	AC 600 V or less	BS-1	N

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03. Electrical Testing

03.007 Electrical machinery for households

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ABNT NBR IEC 60065:2009	Electrical machinery for households	Audio Video and similar electronic apparatus - Safety requirements	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
ABNT NBR NM 60335-1: 2010	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 1 : General requirements	Input : (3 ~ 450) V, 50 A	BS-1	N
EN IEC 61851-1:2019	Electric vehicle charging system	Electric vehicle conductive charging system - Part 1: General requirements 12.4 IP degrees	AC 770 V or less DC 2 000 V or less	BS-3	N
EN IEC 61851-23:2014	Electric vehicle charging system	Electric vehicle conductive charging system - Part 23: DC electirc vehicle charging station (EXCEPTION) 101.1.2 IP degrees for ingress of objects	AC 770 V or less DC 2 000 V or less	SF-2	N
EN IEC 61851-23:2014	Electric vehicle charging system	Electric vehicle conductive charging system - Part 23: DC electirc vehicle charging station 101.1.2 IP degrees for ingress of objects	AC 770 V or less DC 2 000 V or less	BS-3	N
EN IEC 61851-24: 2014	Electric vehicle charging system	Electric vehicle conductive charging system - Part 24; Digital communication between a d.c. EV charging station and ac electric vecicle for control of d.c. chatging	AC 770 V or less DC 2 000 V or less	SF-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ES 2501:2016	Electrical machinery for households	Audio, video and similar electronic apparatus - safety requirements	Input : AC (3 ~ 450 V), 50 A or less Temperature : 200 ℃ or less Humidity : 25 ℃, 93 % R.H. Electric strength : 5 kV or less Leakage current : 50 mA	BS-1	N
GS-6130-0053 〈Exception〉 5.2.13 Integrated system functional test	Electrical machinery for households	Charging Stand for Electric Vehicle	Input : (0 ~ 500) V, 80 A Output: (0 ~ 500) V, 80 A Temperature : 200 ℃ Humidity : (5 ~ 95) % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
GS-6130-0054 〈Exception〉 5.2.17 Integrated system functional test	Electrical machinery for households	Quick Charger for Electric Vehicle	Input : (0 ~ 500) V, 400 A Output: DC (0 ~ 1 000) V, DC 250 A / AC (0 ~ 500) V, 80 A Temperature : 200 ℃ Humidity : (5 ~ 95) % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
GS-6130-0057 〈Exception〉 5.2.16 Integrated system functional test	Electrical machinery for households	Quick Charger for Electric Bus	Input : (0 ~ 500) V, 400 A Output: DC (0 ~ 1 000) V, DC 250 A Temperature : 200 ℃ Humidity : (5 ~ 95) % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
GS-6130-0058 〈Exception〉 5.2.12 Integrated system functional test	Electrical machinery for households	Pole Type Charger for Electric Vehicle	Input : (0 ~ 500) V, 80 A Output: (0 ~ 500) V, 80 A Temperature : 200 ℃ Humidity : (5 ~ 95) % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IDMS VERSION 1.2	Display product	INFORMATION DISPLAY MEASUREMENTS STANDARDS 5. Fundamental Measurements 5.3 Full-Screen White 5.6 Full-Screen Black 5.10 Sequential Contrast 5.14 Full-Screen Primary Colors (R, G, and B) 5.18 Chromaticity Gamut Area 5.19 White-Point Accuracy 5.25 Simple Box Measurements 5.26 Checkerboard Luminance and Contrast (nxm) 6. GRAY-& COLOR-SCALE MEASUREMENTS 6.1 GRAY SCALE 8. UNIFORMITY MEASUREMENTS 8.1 SAMPLED UNIFORMITY 9. VIWING-ANGLE MEASUREMENTS 9.1 FOUR-POINT VIEWING ANGLES 20. HIGH DYNAMIC RANGE (HDR)	Horizontal angle(ϕ) : (0 ~ 360) ° Vertical angle(θ) : (0 ~ 180) ° Correlated color temperature(CCT) : (2 580~7 040) K CIE 1931 xy chromaticity Luminance : ≤ 5 000 cd/m2	BS-1	Y
IEC 60065:2014	Electrical machinery for households	Audio Video and similar electronic apparatus - Safety requirements	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃ 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60268-1 Amd 2:1988	Electrical machinery for households	Sound system equipment. - Part 1: General	Sensitivity : 50 mV/Pa Frequency : 6.3 Hz ~ 20 kHz	BS-1	N
IEC 60268-11 Amd 2:1991	Electrical machinery for households	Sound system equipment - Part 11: Application of connectors for the interconnection of sound system components	Sensitivity : 50 mV/Pa Frequency : 6.3 Hz ~ 20 kHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60268-12 Amd 2:1994	Electrical machinery for households	Sound system equipment. - Part 12: Application of connectors for broadcast and similar use.	Sensitivity : 50 mV/Pa Frequency : 6.3 Hz ~ 20 kHz	BS-1	N
IEC 60268-2 Amd 1:1991	Electrical machinery for households	Sound system equipment. - Part 2: Explanation of general terms and calculation methods	Sensitivity : 50 mV/Pa Frequency : 6.3 Hz ~ 20 kHz	BS-1	N
IEC 60268-3:2013	Electrical machinery for households	Sound system equipment - Part 3: Amplifiers	Output power : (0 ~ 5 000) W	BS-1	N
IEC 60335-1:2010	Electrical machinery for households	Safety of household and similar electrical appliances - Safety - Part 1 : General requirements	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-1:2010+A1:2013	Electrical machinery for households	Safety of household and similar electrical appliances - Safety - Part 1 : General requirements	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-1:2016	Electrical machinery for households	Household and similar electrical appliances -Safety - Part 1 : General requirements Annex R Annex U	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS	N
IEC 60335-1:2016	Electrical machinery for households	Safety of household and similar electrical appliances - Safety - Part 1 : General requirements	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-1:2020	Electrical machinery for households	Household and similar electrical appliances -Safety - Part 1 : General requirements Annex R Annex U	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electricstrength : 5 kV Leakagecurrent : 50 mA	BS	N
IEC 60335-1:2020	Electrical machinery for households	Safety of household and similar electrical appliances - Safety - Part 1 : General requirements	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-100:2002	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-100 : Particular requirements for hand-held mains-operated garden blowers, vacuums and blower vacuums	Input : 250 V or less, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-10:2008	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-10 : Particular requirements for floor treatment machines and wet scrubbing machines	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-11: 2000	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-11: Particular requirements for tumble dryers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-11:2008	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-11 : Particular requirements for tumble dryers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2-11:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-11 : Particular requirements for tumble dryers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-11:2024	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-11: Particular requirements for tumble dryers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-13:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-13 : Particular requirements for deep fat fryers, frying pans and similar appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-14:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-14 : Particular requirements for kitchen machines	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-15:2018	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-15 : Particular requirements for appliances for heating liquids	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-17:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-17 : Particular requirements for blankets, pads, clothing and similar flexible heating appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2-21:2018	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-21 : Particular requirements for storage water heaters	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-23:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-23 : Particular requirements for appliances for skin or hair care	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-24:2010+A1:2012	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice makers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-24:2017	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice makers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-24:2020	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice makers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-25:2010	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-25 : Particular requirements for microwave ovens, including combination microwave ovens	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2-25:2020	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-25 : Particular requirements for microwave ovens, including combination microwave ovens	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-29:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-29 : Particular requirements for battery chargers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-2:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-2 : Particular requirements for vacuum cleaners and water-suction cleaning appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-30:2009	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-30 : Particular requirements for room heaters	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-30:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-30 : Particular requirements for room heaters	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-31:2018	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-31 : Particular requirements for range hoods and other cooking fume extractors	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2-32:2013	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-32 : Particular requirements for massage appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-32:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-32 : Particular requirements for massage appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-34:2016	Electrical machinery for households	Household and simila relectrical appliances - Safety - Part 2-34 : Particular requirements for motor-compressors	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-35:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-35 : Particular requirements for instantaneous water heaters	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-35:2020	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-35 : Particular requirements for instantaneous water heaters	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-36:2017	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-36 : Particular requirements for commercial electric cooking ranges, ovens, hobs and hob elements	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2-3:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-3 : Particular requirements for electric iron	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-40:2013	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-40 : Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-40:2018	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-40 : Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-40:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-40 : Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-41:2012	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-41 : Particular requirements for pumps	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-49:2017	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-49 : Particular requirements for commercial electric appliances for keeping food and crockery warm	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2-4: 1993	Electrical machinery for households	Safety of household and similar electrical appliances Part 2-4: Particular requirements for spin extractors	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-4:2017	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-4 : Particular requirements for spin extractors	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-53:2017	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-53 : Particular requirements for sauna heating appliances and infrared cabins	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-55 am1:2008	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-55 : Particular requirements for electrical appliances for use With aquariums and garden ponds	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-59 am1&2:2009	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-59: Particular requirements for insect killers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-5:2018	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-5 : Particular requirements for dish washer	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2-64:2017	Electrical machinery for households	household and similar electrical appliances - Safety - Part 2-64 : Particular requirements for commercial electric kitchen machines	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-65:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-65: Particular requirements for air-cleaning appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-6:2018	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-6 : Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-75:2018	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-75: Particular requirements for commercial dispensing appliances and vending machines	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-7: 2000	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-7: Particular requirements for washing machines	Input : (3 ~ 450) V, 50 ATemperature : 200 ℃Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kVLeakage current : 50 mA	BS-1	N
IEC 60335-2-7:2008	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-7 : Particular requirements for washing machines	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2-7:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-7 : Particular requirements for washing machines	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-7:2024	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-7 : Particular requirements for washing machines	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-80:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-80: Particular requirements for fans	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-84:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-84: Particular requirements for toilet appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-89:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-89: Particular requirements for commercial refrigerating appliances and ice-makers with an incorporated or remote refrigerant unit or motor-compressor	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-8:2018	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-8 : Particular requirements for shavers, hair clippers and similar appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2-90:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-90: Particular requirements for commercial microwave ovens	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-98:2008	Electrical machinery for households	Household and similar electrical appliances - safety - Part 2-98: Particular requirements for humidifiers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 60335-2-9:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-9 : Particular requirements for grills toasters and similar portable cooking appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60529:1989+AMD1:1999+AMD2:2013 CSV/COR2:2015	Electrical machinery for households	Degrees of protection provided by enclosures(IP Code) (EXCEPTION) 14.2.1 Test for second characteristic numerals 1 with the drip box 14.2.2 Test for second characteristic numerals 2 with the drip box 14.2.3 Test for second characteristic numeral 3 with oscillationg tubeor spray nozzle: oscillating tube 14.2.4 Test for second characteristic numeral 4 with oscillating tube or spray nozzle: oscillating tube 14.2.7 Test for second characteristic numeral 7: temporary immersion between 0,15 m and 1 m 14.2.8 Test for second characteristic numeral 8: continuous immersion subject to agreement 14.2.9 Test for second characteristic numerals 9 by high pressure and temperature water jetting	IP1X ~ IP6X IPX3 ~ IPX6	BS-3	N
IEC 60695-10-2:2014	Electrical machinery for households	Fire hazard testing - Part 10-2 : Abnormal heat - Ball pressure test method	AC 1 000 V or less	BS-1	N
IEC 60695-2-11:2014	Electrical machinery for households	Fire hazard testing - Part 2-11 : Glowing/hot-wire based test method - Glow-wire flammability test method for end-products	Test temperature : 960 ℃ or less	BS-1	N
IEC 60695-2-12:2014	Electrical machinery for households	Fire hazard testing - Part 2-12 : Glowing/hot-wire based test methods - Glow-wire flammability index (GWFI) test method for materials	Test temperature : 960 ℃ or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60695-2-13:2014	Electrical machinery for households	Fire hazard testing - Part 2-13 : Glowing/hot-wire based test methods - Glow-wire ignition Temperature (GWIT) test method for materials	Test temperature : 960 ℃ or less	BS-1	N
IEC 60950-1:2013	Electrical machinery for households	Information technology equipment - safety - Part 1: General requirements	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 61851-1:2010	Electrical machinery for households	Electric vehicle conductive charging system - Part 1 : General requirements	Input : below 600 V	BS-1	N
IEC 61851-1:2017	Electric vehicle charging system	Electric vehicle conductive charging system - Part 1: General requirements (EXCEPTION) 12.4 IP degrees	AC 770 V or less DC 2 000 V or less	SF-2	N
IEC 61851-1:2017	Electric vehicle charging system	Electric vehicle conductive charging system - Part 1: General requirements 12.4 IP degrees	AC 770 V or less DC 2 000 V or less	BS-3	N
IEC 61851-22:2001	Electrical machinery for households	Electric vehicle conductive charging system - Part 22 : AC electric vehicle charging system	Input : below 600 V	BS-1	N
IEC 61851-23:2014	Electrical machinery for households	Electric vehicle conductive charging system - Part 23: DC electric vehicle charging station	Input : below 600 V	BS-1	N
IEC 61851-23:2014	Electric vehicle charging system	Electric vehicle conductive charging system - Part 23: DC electirc vehicle charging station (EXCEPTION) 101.1.2 IP degrees for ingress of objects	AC 770 V or less DC 2 000 V or less	SF-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61851-23:2014	Electric vehicle charging system	Electric vehicle conductive charging system - Part 23: DC electirc vehicle charging station 101.1.2 IP degrees for ingress of objects	AC 770 V or less DC 2 000 V or less	BS-3	N
IEC 61851-24:2014	Electrical machinery for households	Electric vehicle conductive charging system - Part 24: Digital communication between a d.c. EV charging station and an electric vehicle for control of d.c. charging	Input : below 600 V	BS-1	N
IEC 61851-24:2014	Electric vehicle charging system	Electric vehicle conductive charging system - Part 24; Digital communication between a d.c. EV charging station and ac electric vecicle for control of d.c. chatging	AC 770 V or less DC 2 000 V or less	SF-2	N
IEC 62040-1:2013	Electrical machinery for households	Uninterruptible power systems (UPS) - Part 1: General and safety requirements for UPS	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
IEC 62196-1:2014	Electrical machinery for households	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1 : General requirements	AC 690 V, 250 A DC 1 500V, 400 A	BS-1	N
IEC 62196-2:2016	Electrical machinery for households	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2 : Dimensional compatibility and interchangeability requirements for a.c. pin and contact-tube accessories	AC 480 V or less three phase 63 A or less single phase 70 A or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62368-1:2010	Electrical machinery for households	Audio/video information and communication technology equipment - Part 1: Safety requirements	AC/DC 600 V or less	BS-1	N
IEC 62368-1:2014	Electrical machinery for households	Audio/video information and communication technology equipment - Part 1: Safety requirements	AC/DC 600 V or less	BS-1	N
IEC 62368-1:2018	Electrical machinery for households	Audio/video information and communication technology equipment - Part 1: Safety requirements <Exception> 10.6.6 Acoustic test	Less than AC/DC 600 V	BS-1	N
IEC 62368-1:2023	Electrical machinery for households	Audio/video information and communication technology equipment - Part 1: Safety requirements (Exception) 10.6.6 Acoustic test	Less than AC/DC 600 V	BS-1	N
IEC 62477-1:2012	Electrical machinery for households	Safety requirements for power electronic converter systems and equipment - Part 1: General	Input : below 600 V	BS-1	N
ISO/IEC 15118-2:2014	Electrical machinery for households	Road vehicles — Vehicle - to - Grid Communication Interface - Part 2: Network and application protocol requirements	L3 ~ L7 Of OSI7-Layer	BS-1	N
K 10002:2006	Electrical machinery for households	Particular requirements for half baths and similar equipment	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 10003:2006	Electrical machinery for households	Particular requirements for foot baths and similar equipment	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
K 10004:2008	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for electrical beds and similar equipment	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 10007:2008	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for water purifier	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 10008:2011	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for water ionizer	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 10009:2008	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for supersonic washers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 10010:2008	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for sprout and bean sprout growing devices	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 10011:2011	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for electrical door look	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
K 10012:2013	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for health appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 10013:2008	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for anti-freezing appliances of a waterworks	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 10015:2008	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for water towel rolling machine and similar equipment	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 10016:2008	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for water towel packing machine and similar equipment	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 10017:2008	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for pet washing machine and similar equipment	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 10018:2009	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for sprout and bean sprout growing devices	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
K 10019:2009	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for electrical door look	Input : (3 ~ 250) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 10020:2010	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for health appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 60335-2-81:2009	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for water towel rolling machine and similar equipment	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 60335-2-85:2007	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for water towel packing machine and similar equipment	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 60335-2-9:2013	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for anti-freezing appliances of a waterworks	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 60950-1:2011	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for pet washing machine and similar equipment	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
K 62040-1:2011	Electrical machinery for households	Uninterruptible power systems (UPS) - Part 1 : General and safety requirements for UPS	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
K 62477-1:2011	Electrical machinery for households	Safety requirements for power electronic converter systems and equipment - Part 1 : General (EXCEPTION) 5.2.2.3 Ingress protection test (IP rating) 5.2.5.2 High current arcing ignition test 5.2.5.3 Glow-wire test 5.2.5.5 Flammability test 5.2.5.6 Flaming oil test 5.2.6.4 Vibration test 5.2.6.5 Salt mist test	전압: AC (0 ~ 765) V, DC (0 ~ 1 500) V	SF-2	N
K 62477-1:2011	Electrical machinery for households	Safety requirements for power electronic converter systems and equipment - Part 1 : General 5.2.2.3 Ingress protection test (IP rating) 5.2.5.2 High current arcing ignition test 5.2.5.3 Glow-wire test 5.2.5.5 Flammability test 5.2.5.6 Flaming oil test 5.2.6.4 Vibration test 5.2.6.5 Salt mist test	전압: AC (0 ~ 765) V, DC (0 ~ 1 500) V	BS-3	N
K 62477-1:2011	Electrical machinery for households	Safety requirements for power electronic converter systems and equipment - Part 1 : General	500 V or less (AC and DC input)	BS-1	N
K 70000:2008	Electrical machinery for households	Safety of household and similar electrical appliances - Particular requirements for electrical sterilizer and similar equipment	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 10018:2021	Electrical machinery for households	Household and similar electrical appliances - Safety -Particular requirements for electrical warm-water mattresses and beds	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 10027:2015	Electrical machinery for households	Household and similar electrical appliances - Safety -Particular requirements for Heating boards	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 10029:2020	Electrical machinery for households	Safety of household and similar electrical appliances- Particular requirements for electrical mosquito swatter	Input : Battery 450 Vdc or less, 50 A	BS-1	N
KC 60065:2015	Electrical machinery for households	Audio, Video and similar electronic apparatus- Safety requirements	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-1:2016	Electrical machinery for households	Safety of household and similar electrical appliances - Part 1 : General requirements	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-1:2022	Electrical machinery for households	Safety of household and similar electrical appliances - Part 1 : General requirements	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-100:2020	Electrical machinery for households	Household and similar electrical appliances - Safety Part 2-100 : Particular requirements for hand-held mains-operated garden blowers, vacuums and blower vacuums	Input : 250 V or less, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-101:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-101 : Particular requirements for vaporizers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-102:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-102 : Particular requirements for gas, oil and solid-fuel burning appliances having electrical connections	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-10:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-10 : Particular requirements for floor treatment machines and wet scrubbing machine	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-11:2021	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-11 : Particular requirements for tumble dryers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-12:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-12 : Particular requirements for warming plates and similar appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-13:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-13 : Particular requirements for electric fryers, electric frying pans and similar appliance	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-14:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-14 : Particular requirements for kitchen machine	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-15:2020	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-15 : Particular requirements for appliances for Heating liquid	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-15:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-15 : Particular requirements for appliances for Heating liquid	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-16:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-16 : Particular requirements for food waste disposers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-17:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-17 : Particular requirements for blankets, pads and similar flexible Heating appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-21:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-21 : Particular requirements for storage water heater	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-21:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-21 : Particular requirements for storage water heater	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-23:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-23 : Particular requirements for appliances for skin or hair care	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-23:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-23 : Particular requirements for appliances for skin or hair care	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-24:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-24 : Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-24:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-24 : Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-25:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-25 : Particular requirements for microwave ovens	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-25:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-25 : Particular requirements for microwave ovens	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-26:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-26 : Particular requirements for clocks	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-27:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-27 : Particular requirements for appliances for skin exposure to ultraviolet and infrared radiation	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-28:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-28 : Particular requirements for sewing machines	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-29:2020	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-29 : Particular requirements for battery chargers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-2:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-2 : Particular requirements for vacuum cleaners and water-suction cleaning appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-30:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-30 : Particular requirements for room heater	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-31:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-31 : Particular requirements for range hood	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-31:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-31 : Particular requirements for range hood	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-32:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-32 : Particular requirements for massage appliance	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-34:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-34 : Particular requirements for motor-compressors	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-35:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-35 : Particular requirements for instantaneous water heaters	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-35:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-35 : Particular requirements for instantaneous water heaters	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-36:2015	Electrical machinery for households	Household and similar electrical appliances -Safety - Part 2-36 : Particular requirements for commercial electric cooking ranges, Ovens, hobs and hob elements	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-37:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2 - 37 : Particular requirements for commercial electric deep fat fryers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-38:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2 - 38 : Particular requirements for commercial electric griddles and griddle grills	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-39:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-39 : Particular requirements for commercial electric multi-purpose cooking pans	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-3:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-3 : Particular requirements for electric iron	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-40:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-40 : Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-40:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-40 : Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-41:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-41 : Particular requirements for pump	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-42:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-42 : Particular requirements for commercial electric forced convection ovens, steam cookers and steam-convection ovens	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-43:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-43 : Particular requirements for clothes dryers and towel rails	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-43:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-43 : Particular requirements for clothes dryers and towel rails	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-44:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-44 : Particular requirements for ironers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-44:2021	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-44 : Particular requirements for ironers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-45:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-45 : particular requirements for portable Heating tools and similar appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-47:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-47 : Particular requirements for commercial electric boiling pans	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-48:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-48 : Particular requirements for commercial electric grillers and toasters	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-49:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-49 : Particular requirements for commercial electric hot cupboards	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-4:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-4 : Particular requirements for spin extractor	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-50:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-50 : Particular requirements for commercial electric bains-marie	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-52:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-52 : Particular requirements for oral hygiene appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-53:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-53 : Particular requirements for sauna Heating appliance	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-54:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-54 : Particular requirements for surface-cleaning appliances for household use employing liquids or steam	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-55:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-55 : Particular requirements for electrical appliances for use with aquariums and garden pond	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-56:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-56 : Particular requirements for projectors and similar appliances	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-58:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-58 : Particular requirements for commercial electric dishwashing machines	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-59:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-59 :Particular requirements for insect killer	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-5:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-5 : Particular requirements for dishwasher	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-60:2022	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-60 : Particular requirements for whirlpool baths and whirlpool spas	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-61:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-61 : Particular requirements for thermal storage room heaters	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-62:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-62 : Particular requirements for commercial electric rinsing sinks	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-63:2014	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-63 : Particular requirements for commercial electric water boilers and liquid heaters	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-64:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-64 : Particular requirements for commercial electric kitchen machines	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-65:2020	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-65 : Particular requirements for air-cleaning appliance	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-65:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-65 : Particular requirements for air-cleaning appliance	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-66:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-66 : Particular requirements for water-bed heaters	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-67:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-67 : Particular requirements for floor treatment and floor cleaning machines, for industrial and commercial use	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-68:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-68 : Particular requirements for spray extraction appliances, for industrial and commercial use	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-69:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2 - 69 : Particular requirements for wet and dry vacuum cleaners, including power brush, for industrial and commercial use	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-6:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-6 : Particular requirements for stationary cooking ranges, hobs, ovens and similar appliance	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-6:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-6 : Particular requirements for stationary cooking ranges, hobs, ovens and similar appliance	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-70:2022	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-70 : Particular requirements for milking machines	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-71:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-71 : Particular requirements for electrical Heating appliances for breeding and rearing animals	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-71:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-71 : Particular requirements for electrical heating appliances for breeding and rearing animals	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-72:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2 - 72 : Particular requirements for automatic machines for floor treatment for commercial and industrial use	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-73:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-73 : Particular requirements for fixed immersion heaters	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-74:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-74 : Particular requirements for portable immersion heaters	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-75:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-75 : Particular requirements for commercial dispensing appliances and vending machine	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-78:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-78 : Particular requirements for outdoor barbecues	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-79:2022	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-79 : Particular requirements for high pressure cleaners and steam cleaner, for industrial and commercial use	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-7:2021	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-7 : Particular requirements for washing machine	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-7:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-7 : Particular requirements for washing machine	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-80:2020	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-80 :Particular requirements for fan	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-80:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-80 :Particular requirements for fan	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-82:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2 - 82 : Particular requirements for amusement machines and personal service machines	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-84:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-84 : Particular requirements for toilet	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-88:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-88 : Particular requirements for humidifiers intended for use with Heating, ventilation, or air-conditioning systems	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-89:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-89 : Particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant unit or compressor	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-8:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-8 : Particular requirements for shavers, hair clippers and similar appliance	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2-90:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-90 : Particular requirements for commercial microwave ovens	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-91:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-91 : Particular requirements for walk-behind and hand-held lawn trimmers and lawn edge trimmers	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-95:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-95 : Particular requirements for drives for vertically moving garage doors for residential use	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-97:2015	Electrical machinery for households	Safety of household and similar electrical appliances - Part 2-97 : Particular requirements for drives for rolling shutters, awnings, blinds and similar equipment	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-98:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-98 : Particular requirements for humidifier	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 60335-2-99:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-99 : Particular requirements for commercial electric hoods	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KC 61851-1:2020	Electrical machinery for households	Electric vehicle conductive charging system - Part 1 : General requirements	AC 600 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 61851-1:2022	Electric vehicle charging system	Electric vehicle conductive charging system - Part 1: General requirements (EXCEPTION) 12.4 IP degrees	AC 770 V or less DC 2 000 V or less	SF-2	N
KC 61851-1:2022	Electric vehicle charging system	Electric vehicle conductive charging system - Part 1: General requirements 12.4 IP degrees	AC 770 V or less DC 2 000 V or less	BS-3	N
KC 61851-1:2022	Electric vehicle charging system	Electric Vehicle Conductive Charging System Part 1: General Requirement	Input Voltage: 3P4W, below 440 V	BS-1	N
KC 61851-22:2015	Electrical machinery for households	Electric vehicle conductive charging system - Part 22 : AC electric vehicle charging system	AC 600 V or less	BS-1	N
KC 61851-23:2018	Electric vehicle charging system	Electric vehicle conductive charging system - Part 23: DC electirc vehicle charging station (EXCEPTION) 12.2 IP degrees for ingress of objects	AC 770 V or less DC 2 000 V or less	SF-2	N
KC 61851-23:2018	Electric vehicle charging system	Electric vehicle conductive charging system - Part 23: DC electirc vehicle charging station 12.2 IP degrees for ingress of objects	AC 770 V or less DC 2 000 V or less	BS-3	N
KC 61851-23:2018	Electrical machinery for households	Electric vehicle conductive charging system - Part 23 : DC electric vehicle charging station	AC 600 V or less	BS-1	N
KC 62196-1:2019	Electrical machinery for households	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1 : General requirements	AC 690 V / 250 A or less DC 600 V / 400 A or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 62196-2:2020	Electrical machinery for households	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2 : Dimensional compatibility and interchangeability requirements for a.c. pin and contact-tube accessories	AC 500 V / 250 A or less	BS-1	N
KC 62368-1:2021	Electrical machinery for households	Audio/video information and communication technology equipment - Part 1: Safety requirements <Exception> 10.6.6 Acoustic test	AC/DC 600 V or less	BS-1	N
KC 62752:2022	IC-CPD	In-cable control and protection device for mode2 charging of electric road vehicle (IC-CPD)	Input Voltage : 3P4W, below 440 V, not including 9.7.3.5 Verificaion of correct operation in case of sudden appearance of residual currents between 5 A and 100 A, 9.8.2 Endurance of the residual current function of the IC-CPD, 9.9 Verification of the behavior of the IC-CPD under overcurrent conditions	BS-1	N
KS C 8565:2023	Electric vehicle charging system	Medium and large size photovotaic inverter (grid-tied type, stand-alone type) (EXCEPTION) 8.3.3 electric shock protection test	2.4 MW or less	SF-2	N
KS C 8565:2023	Electric vehicle charging system	Medium and large size photovotaic inverter (grid-tied type, stand-alone type) 8.3.3 electric shock protection test	2.4 MW or less	BS-3	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9101:2014	Electrical machinery for households	Electric Vacuum Cleaners 〈Exceptions〉 Annex C Sand Removal Capacity Test and Carpet Handling Resistance Test	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃ 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KS C 9304:2002	Electrical machinery for households	Ventilation Fans	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃ 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KS C IEC 60529:2013	Electrical machinery for households	Degrees of protection provided by enclosures(IP Code) (EXCEPTION) 14.2.1 Test for second characteristic numerals 1 with the drip box 14.2.2 Test for second characteristic numerals 2 with the drip box 14.2.3 Test for second characteristic numeral 3 with oscillationg tubeor spray nozzle: oscillating tube 14.2.4 Test for second characteristic numeral 4 with oscillating tube or spray nozzle: oscillating tube 14.2.7 Test for second characteristic numeral 7: temporary immersion between 0,15 m and 1 m 14.2.8 Test for second characteristic numeral 8: continuous immersion subject to agreement 14.2.9 Test for second characteristic numerals 9 by high pressure and temperature water jetting	IP1X ~ IP6X IPX3 ~ IPX6	BS-3	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 62477-1: 2016	Electrical machinery for households	Safety requirements for power electronic converter systems and equipment - Part 1: General (EXCEPTION) 5.2.2.3 Ingress protection test (IP rating) 5.2.5.2 High current arcing ignition test 5.2.5.3 Glow-wire test 5.2.5.5 Flammability test 5.2.5.6 Flaming oil test 5.2.6.4 Vibration test 5.2.6.5 Salt mist test	전압: AC (0 ~ 765) V, DC (0 ~ 1 500) V	SF-2	N
KS C IEC 62477-1: 2016	Electrical machinery for households	Safety requirements for power electronic converter systems and equipment - Part 1: General 5.2.2.3 Ingress protection test (IP rating) 5.2.5.2 High current arcing ignition test 5.2.5.3 Glow-wire test 5.2.5.5 Flammability test 5.2.5.6 Flaming oil test 5.2.6.4 Vibration test 5.2.6.5 Salt mist test	전압: AC (0 ~ 765) V, DC (0 ~ 1 500) V	BS-3	N
KS R 61851-1:2022	Electric vehicle charging system	Electric vehicle conductive charging system - Part 1: General requirements (EXCEPTION) 12.4 IP degrees	AC 770 V or less DC 2 000 V or less	SF-2	N
KS R 61851-1:2022	Electric vehicle charging system	Electric vehicle conductive charging system - Part 1: General requirements 12.4 IP degrees	AC 770 V or less DC 2 000 V or less	BS-3	N
KS R 61851-23:2022	Electric vehicle charging system	Electric vehicle conductive charging system - Part 23: DC electirc vehicle charging station (EXCEPTION) 101.1.2 IP degrees for ingress of objects	AC 770 V or less DC 2 000 V or less	SF-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS R 61851-23:2022	Electric vehicle charging system	Electric vehicle conductive charging system - Part 23: DC electirc vehicle charging station 101.1.2 IP degrees for ingress of objects	AC 770 V or less DC 2 000 V or less	BS-3	N
KS R 61851-24:2014	Electric vehicle charging system	Electric vehicle conductive charging system - Part 24; Digital communication between a d.c. EV charging station and ac electric vecicle for control of d.c. charging	AC 770 V or less DC 2 000 V or less	SF-2	N
KS R IEC 62196-1:2015	Electrical machinery for households	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1 : General requirements	AC 690 V / 250 A or less DC 600 V / 400 A or less	BS-1	N
KS R IEC 62196-2:2019	Electrical machinery for households	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2 : Dimensional compatibility and interchangeability requirements for a.c. pin and contact-tube accessories	AC 500 V / 250 A or less single phase : 70 A or less three phase : 63 A or less	BS-1	N
NBR NM-IEC 335-1:1998	Electrical machinery for households	Safety of household and similar electrical appliances - Part 1: General requirements	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
NTE INEN-IEC 60268-5:2007	Electrical machinery for households	Sound System equipment - Part 5: Loud speakers	Sensitivity : 50 mV/Pa Frequency : 6.3 Hz ~ 20 kHz	BS-1	N
Portaria INMETRO nº 577:2015	Electrical machinery for households	TECHNICAL REGULATION OF QUALITY FOR REFRIGERATORS AND ASSEMBLIES	Input : (3 ~ 450) V, 50 A	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
Portaria INMETRO nº377 : 2021	Electrical machinery for households	Approves the Technical Quality Regulation and Conformity Assessment Requirements for Televisions - Consolidated.	Input : (3 ~ 450) V, 50 A	BS-1	N
Portaria Inmetro nº 185:2005 (Washing Machine)	Electrical machinery for households	Specific regulations for use of label Energy Conservation - ENCE Edition No. 01 - Review 01 Washing Machine <Exception> Projeto de Norma ABNT 03:059.05-025 de 07/1999	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
Portaria Inmetro nº 269:2021 (Air Conditioner)	Electrical machinery for households	Approve Compliance Assessment Requirements for Air Conditioners - Consolidated	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
RTE INEN 083:2013	Electrical machinery for households	TV Tunner ISDB-T International Digital Television Standard	RF : 100 kHz ~ 3 GHz RF power : (-120 ~ 10) dBm	BS-1	N
RTE INEN 114:2013	Electrical machinery for households	Speakers	Sensitivity : 50 mV/Pa Frequency : 6.3 Hz ~ 20 kHz	BS-1	N
RTE INEN 118:2013	Electrical machinery for households	Electric amplifiers	Output power : (0 ~ 5 000) W	BS-1	N
RTE INEN 139:2015	Electrical machinery for households	Electric heaters for domestic use	AC 1-phase or 3-phase Voltage: Max. 480 V Current: Max. 32 A/Phase Frequency: 50 Hz or/and 60 Hz	BS-1	N
RTE INEN 147:2014	Electrical machinery for households	Electric irons	AC 1-phase Voltage: Max. 300 V Current: Max. 32 A/Phase Frequency: 50 Hz or/and 60 Hz	BS-1	N
RTE INEN 179:2014	Electrical machinery for households	Skin or hair care devices	AC 1-phase Voltage: Max. 300 V Current: Max. 32 A/Phase DC Voltage: Max. 30 V Current: Max. 20 A Frequency: 50 Hz or/and 60 Hz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
RTE INEN 191:2014	Electrical machinery for households	Haircutters and similar appliances	AC 1-phase Voltage: Max. 300 V Current: Max. 32 A/Phase DC Voltage: Max. 30 V Current: Max. 20 A Frequency: 50 Hz or/and 60 Hz	BS-1	N
RTE INEN 197:2014	Electrical machinery for households	Vacuum cleaners	AC 1-phase Voltage: Max. 300 V Current: Max. 32 A/Phase DC Voltage: Max. 30 V Current: Max. 20 A Frequency: 50 Hz or/and 60 Hz	BS-1	N
RTE INEN 202	Electrical machinery for households	Equipment Printing and Scanning	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
RTE INEN 203:2014	Electrical machinery for households	Machines with motor for use in the kitchen	AC 1-phase Voltage: Max. 300 V Current: Max. 32 A/Phase DC Voltage: Max. 30 V Current: Max. 20 A Frequency: 50 Hz or/and 60 Hz	BS-1	N
RTE INEN 208:2014	Electrical machinery for households	Commercial kitchens. Security	AC 1-phase or 3-phase Voltage: Max. 480 V Current: Max. 32 A/Phase Frequency: 50 Hz or/and 60 Hz	BS-1	N
RTE INEN 227:2016	Electrical machinery for households	Electrical apparatus for heating liquids, for cooking food and the like	AC 1-phase Voltage: Max. 300 V Current: Max. 32 A/Phase Frequency: 50 Hz or/and 60 Hz	BS-1	N
RTE INEN 277:2015	Electrical machinery for households	Electric Water Dispensers	AC 1-phase or 3-phase Voltage: Max. 480 V Current: Max. 32 A/Phase Frequency: 50 Hz or/and 60 Hz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
RTE INEN 283:2015	Electrical machinery for households	Refrigeration equipment for commercial use	AC 1-phase or 3-phase Voltage: Max. 480 V Current: Max. 32 A DC Voltage: Max. 30 V Current: Max. 20 A Frequency: 50 Hz or/and 60 Hz	BS-1	N
EN IEC 61851-1:2019	Electric vehicle charging system	Electric vehicle conductive charging system - Part 1: General requirements (EXCEPTION) 12.4 IP degrees	AC 770 V or less DC 2 000 V or less	SF-2	N
UL 60335-2-89:2021	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-89: Particular requirements for commercial refrigerating appliances and ice-makers with an incorporated or remote refrigerant unit or motor-compressor (21.103, 22.108, 22.110, 22.111, 22.112, 22.113, 22.114, 22.115, 22.116, 22.117, 22.118, 22.119, 22.120, 22.121, Annex CC)	Input : (3 ~ 450) V, 50 A Temperature : 200 ℃ Humidity : 25 ℃, 95 % R.H. Electric strength : 5 kV Leakage current : 50 mA	BS-1	N
KATS Notice No.2021-0226(08.03.2021.)	Electrical machinery for households	Cosmetic Devices	Spectrum range : (250 ~ 1 600) nm Temperature : Below 200 ℃	BS-1	N

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03. Electrical Testing

03.008 Wired/wireless communication devices

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
3GPP TR 37.901	Wired/wireless communication devices	Technical Specification Group Radio Access Network; User Equipment(UE) application layer data throughput performance	(600 ~ 3 800) MHz	BS-2	N
3GPP TS 31.121	Wired/wireless communication devices	UICC-terminal interface; Universal Subscriber Identity Module(USIM) application tests pecification	(600 ~ 3 800) MHz	BS-2	N
3GPP TS 31.124	Wired/wireless communication devices	Technical Specification Group Core Network and Terminals; Mobile Equipment (ME)conformance test specification; Universal Subscriber Identity Module Application Toolkit (USAT) conformance test specification	(600 ~ 3 800) MHz	BS-2	N
3GPP TS 34.108	Wired/wireless communication devices	Technical Specification Group Radio Access Network; Common test environments for User Equipment(UE); Conformance testing	9 kHz ~ 12.75 GHz	BS-2	N
3GPP TS 34.114	Wired/wireless communication devices	User Equipment (UE) / Mobile Station (MS) Over The Air (OTA) antenna performance ; Conformance testing	(700 ~ 6 000) MHz	BS-2	N
3GPP TS 34.121-1	Wired/wireless communication devices	UMTS; User Equipment (UE) conformance specification; Radio transmission and reception (FDD); Part 1: Conformance Specification	9 kHz ~ 12.75 GHz	BS-2	N
3GPP TS 34.122	Wired/wireless communication devices	Universal Mobile Telecommunications System (UMTS); Terminal conformance specification; Radio transmission and reception (TDD)	9 kHz ~ 12.75 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
3GPP TS 34.123-1	Wired/wireless communication devices	User Equipment (UE) conformance specification; Part 1: Protocol conformance specification	(600 ~ 3 800) MHz	BS-2	N
3GPP TS 34.229-1	Wired/wireless communication devices	Technical Specification Group Radio Access Network; Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); User Equipment (UE) conformance specification ; Part 1: Protocol conformance specification	9 kHz ~ 12.75 GHz	BS-2	N
3GPP TS 36.124	Wired/wireless communication devices	Evoloved Universal Terrestrial Radio Access (E-UTRA); Electromagnetic compatibility(EMC) requirements for mobile terminals and ancillary equipment	30 MHz ~ 18 GHz	BS-2	N
3GPP TS 36.508	Wired/wireless communication devices	Technical Specification Group Radion Access Network; Evolved Universal Terrestrial Radio Access(E-UTRA) and Evolved Packet Core(EPC); Common test environments for User Equipment(UE) conformance testing	9 kHz ~ 12.75 GHz	BS-2	N
3GPP TS 36.521-1	Wired/wireless communication devices	Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification Radio transmission and reception Part 1: Conformance Testing	9 kHz ~ 12.75 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
3GPP TS 36.521-3	Wired/wireless communication devices	Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification; Radio transmission and reception; Part 3: Radio Resource Management (RRM) conformance testing	(600 ~ 3 800) MHz	BS-2	N
3GPP TS 36.523-1	Wired/wireless communication devices	Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC);User Equipment (UE) conformance specification; Part 1: Protocol conformance specification	(600 ~ 3 800) MHz	BS-2	N
3GPP TS 37.544	Wired/wireless communication devices	Universal Terrestrial Radio Access (UTRA) and Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) Over The Air (OTA) performance: Confermance testing	(700 ~ 6 000) MHz	BS-2	N
3GPP TS 38.124	Wired/wireless communication devices	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; NR; ElectroMagnetic Compatibility (EMC) requirements for mobile terminals and ancillary equipment	9 kHz ~ 26 GHz	BS-2	N
3GPP TS 38.508-1	Wired/wireless communication devices	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; 5GS; User Equipment (UE) conformance specification; Part 1: Common test environment	FR1: (410 ~ 7 125) MHz, FR2: (24 250 ~ 43 500) MHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
3GPP TS 38.521-1	Wired/wireless communication devices	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Range 1 Standalone;	FR1: (410 ~ 7 125) MHz	BS-2	N
3GPP TS 38.521-2	Wired/wireless communication devices	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 2: Range 2 Standalone	FR2: (24 250 ~ 43 500) MHz	BS-2	N
3GPP TS 38.521-3	Wired/wireless communication devices	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 3: Range 1 and Range 2 Interworking operation with other radios	FR1: (410 ~ 7 125) MHz, FR2: (24 250 ~ 43 500) MHz	BS-2	N
3GPP TS 38.521-4	Wired/wireless communication devices	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 4: Performance requirements	FR1: (410 ~ 7 125) MHz, FR2: (24 250 ~ 43 500) MHz	BS-2	N
3GPP TS 38.523-1	Wired/wireless communication devices	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; 5GS; User Equipment (UE) conformance specification; Part 1: Protocol	FR1: (410 ~ 7 125) MHz, FR2: (24 250 ~ 43 500) MHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
3GPP TS 38.533	Wired/wireless communication devices	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; NR; User Equipment (UE) conformance specification; Radio Resource Management (RRM)	FR1: (410 ~ 7 125) MHz, FR2: (24 250 ~ 43 500) MHz	BS-2	N
3GPP TS 51.010-1	Wired/wireless communication devices	Digital cellular telecommunications system (Phase 2+); Mobile Station(MS) conformance specification; Part 1: Conformance specification	9 kHz ~ 12.75 GHz	BS-2	N
3GPP TS 51.010-4	Wired/wireless communication devices	Core Network and Terminals; Mobile Station(MS) conformance specification; Part 4:Subscriber Identity Module(SIM) application toolkit Conformance test Specification	(800 ~ 2 200) MHz	BS-2	N
ANSI/USEMCSC C63.27-2021	Wired/wireless communication devices	American National Standard for Evaluation of Wireless Coexistence	Frequency Range : 30 MHz ~ 6 GHz (Exception : Annex C Multiple chamber test method)	BS-1	N
CTIA Battery Life Test Plan:2021	Wired/wireless communication devices	CTIA Battery Life Test Plan	Voltage : 1 V ~ 5 V Current : 1 A ~ 20 A	BS-2	N
CTIA OTA Test Plan:2022	Wired/wireless communication devices	Test Plan for Wireless Device Over-the-Air Performance	600 MHz ~ 6 GHz	BS-2	N
CWG RF Test Plan:2021	Wired/wireless communication devices	Test Plan for RF Performance Evaluation of Wi-Fi Mobile Converged Devices	(600 ~ 6 000) MHz	BS-2	N
EN 100 910:2005	Wired/wireless communication devices	Digital Cellular Telecommunications system (Phase 2+); Radio Transmission and Reception;	(600 ~ 3 800) MHz	BS-2	N
EN 300 220 v2.4.1:2012	Wired/wireless communication devices	Radio equipment to be used in the 25 MHz to 1000 MHz Frequency range With power levels ranging up to 500 mW	(25 ~ 1 000) MHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 300 220-1:2017	Wired/wireless communication devices	Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 1: Technical characteristics and methods of measurement	(25 ~ 1 000) MHz	BS-1	N
EN 300 220-2:2017	Wired/wireless communication devices	Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 2: Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU for non specific radio equipment	(25 ~ 1 000) MHz	BS-1	N
EN 300 328:2015	Wired/wireless communication devices	Data transmission equipment operating in the 2.4 GHz ISM band modulation techniques	(2 400 ~ 2 500) MHz	BS-2	N
EN 300 328:2019	Wired/wireless communication devices	Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz band; Harmonised Standard for access to radio spectrum	30 MHz ~ 18 GHz	BS-1	N
EN 300 328:2019	Wired/wireless communication devices	Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz band; Harmonised Standard for access to radio spectrum	30 MHz ~ 18 GHz	BS-2	N
EN 300 330-2:2015	Wired/wireless communication devices	Technical characteristics and test methods for radio equipment in the Frequency range 9kHz to 25 MHz and inductive loop systems in the Frequency range 9 kHz to 30MHz	9 kHz ~ 30 MHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 300 330:2017	Wired/wireless communication devices	Short Range Devices (SRD);Radio equipment in the Frequency range 9 kHz to 25 MHz and inductive loop systems in the Frequency range 9 kHz to 30 MHz; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	9 kHz ~ 18 GHz	BS-2	N
EN 300 330:2017	Wired/wireless communication devices	Short Range Devices (SRD);Radio equipment in the Frequency range 9 kHz to 25 MHz and inductive loop systems in the Frequency range 9 kHz to 30 MHz; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	9 kHz ~ 18 GHz	BS-1	N
EN 300 440-2:2010	Wired/wireless communication devices	Radio equipment to be used in the 1 GHz to 40 GHz Frequency range	(1 000 ~ 18 000) MHz	BS-2	N
EN 300 440:2017	Wired/wireless communication devices	Short Range Devices (SRD); Radio equipment to be used in the 1 GHz to 40 GHz Frequency range; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	9 kHz ~ 40 GHz	BS-2	N
EN 301 357-2 v1.4.1:2008	Wired/wireless communication devices	Electro magnetic compatibility and Radio spectrum Matters (ERM); Cordless audio devices in the range 25 MHz to 2 000 MHz; - Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive	9 kHz ~ 26.5 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 301 390 v1.3.1 :2013	Wired/wireless communication devices	Fixed Radio Systems ; Point-to-point and Multi point Systems; Unwanted emissions in the spurious domain and receiver immunity limit sat equipment/antenna port of Digital Fixed Radio Systems	9 kHz ~ 26.5 GHz	BS-2	N
EN 301 406:2009	Wired/wireless communication devices	Digital Enhanced Cordless Telecommunications (DECT)	(1 880 ~ 1 900) MHz	BS-2	N
EN 301 511:2017	Wired/wireless communication devices	Global System for Mobile communications (GSM); Mobile Stations (MS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	9 kHz ~ 18 GHz	BS-2	N
EN 301 893:2015	Wired/wireless communication devices	Broadband Radio Access Networks (BRAN); 5 GHz high performance RLAN; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive	9 kHz ~ 26.5 GHz	BS-2	N
EN 301 893:2017	Wired/wireless communication devices	5 GHz RLAN; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	9 kHz ~ 26.5 GHz	BS-2	N
EN 301 908-13:2019	Wired/wireless communication devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE) <Exception> LTE Category : NB1, M1	9 kHz ~ 18 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 301 908-13:2022	Wired/wireless communication devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE) <Exception> LTE Category : NB1, M1	9 kHz ~ 18 GHz	BS-2	N
EN 301 908-2:2020	Wired/wireless communication devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 2: CDMA Direct Spread (UTRA FDD) User Equipment (UE)	9 kHz ~ 18 GHz	BS-2	N
EN 302 208-2 v1.4.1:2011	Wired/wireless communication devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz With power levels up to 2 W; - Part 2 : Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive	9 kHz ~ 26.5 GHz	BS-2	N
EN 302 291-2 v1.1.1:2005	Wired/wireless communication devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD);Close Range Inductive Data Communication equipment operating at 13 56 MHz; - Part 2 : Harmonised EN under article 3.2 of the R&TTE Directive	9 kHz ~ 26.5 GHz	BS-2	N
EN 302 326-3 v1.3.1:2008	Wired/wireless communication devices	Fixed Radio Systems; Multi point Equipment and Antennas; - Part 3 : Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive for Multi point Radio Antennas	9 kHz ~ 26.5 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 303 348:2016	Wired/wireless communication devices	Induction loop systems intended to assist the hearing impaired in the Frequency range 10 Hz to 9 kHz; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU	10 Hz ~ 18 GHz	BS-2	N
EN 50383:2002	Wired/wireless communication devices	Basic standard for the calculation and measurement of electromagnetic field strength and SAR related to human exposure from radio base stations and fixed terminal stations for Wireless telecommunication systems (110 MHz - 40 GHz)	MPE : 110 MHz ~ 40 GHz	BS-2	N
EN 50385:2017	Wired/wireless communication devices	Product standard to demonstrate the compliance of base station equipment with radio frequency electromagnetic field exposure limits (110 MHz - 100 GHz), when placed on the market	MPE : 110 MHz ~ 40 GHz	BS-2	N
EN 62311:2008	Wired/wireless communication devices	Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)	10 MHz ~ 6 GHz	BS-2	N
EN 62479:2010	Wired/wireless communication devices	Assessment of the compliance of Low power electronic and electrical equipment With the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)	SAR : 400 MHz ~ 6 GHz MPE : 10 MHz ~ 300 GHz	BS-2	N
EPC global:2008	Wired/wireless communication devices	Tag Performance Parameters and Test Methods Version 1.1.3	(860 ~ 960) MHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 301 908-15:2017	Wired/wireless communication devices	IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 15: Evolved Universal Terrestrial Radio Access (E-UTRA FDD) Repeaters	Frequency Range : 9 kHz ~ 18 GHz	BS-2	N
ETSI EN 301 908-15:2020	Wired/wireless communication devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 15: Evolved Universal Terrestrial Radio Access (E-UTRA FDD) Repeaters	Frequency Range : 9 kHz ~ 18 GHz	BS-2	N
ETSI EN 301 908-1:2019	Wired/wireless communication devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part1:Introduction and common requirements	30 MHz ~ 12.75 GHz	BS-2	N
ETSI EN 301 908-1:2021	Wired/wireless communication devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 1: Introduction and common requirements Release 15	30 MHz ~ 26 GHz	BS-2	N
ETSI EN 301 908-1:2023	Wired/wireless communication devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 1: Introduction and common requirements Release 15	30 MHz ~ 26 GHz	BS-2	N
ETSI EN 303 345-1:2019	Wired/wireless communication devices	Broadcast Sound Receivers; Part 1: Generic requirements and measuring methods	Frequency Range : Max 6 GHz	BS-2	N
ETSI EN 303 345-3:2021	Wired/wireless communication devices	Broadcast Sound Receivers; Part 3: FM broadcast sound service; Harmonised Standard for access to radio spectrum	Frequency Range : Max 6 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 303 345:2017	Wired/wireless communication devices	Broadcast Sound Receivers; Harmonized Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	Max. 6 GHz	BS-2	N
ETSI EN 303 413:2021	Wired/wireless communication devices	Satellite Earth Stations and Systems (SES); Global Navigation Satellite System (GNSS) receivers; Radio equipment operating in the 1 164 MHz to 1 300 MHz and 1 559 MHz to 1 610 MHz frequency bands; Harmonised Standard for access to radio spectrum	30 MHz ~ 8.3 GHz	BS-2	N
ETSI TS 102 230-1:2016	Wired/wireless communication devices	Smart Cards; UICC-Terminal interface; Physical, electrical and logical test specification; Part 1: Terminal features	(700 ~ 2 600) MHz	BS-2	N
ETSI TS 102 230:2015	Wired/wireless communication devices	Smart cards; UICC-Terminal interface; Physical electrical and logical test specification	(600 ~ 3 800) MHz	BS-2	N
ETSI TS 102 384:2015	Wired/wireless communication devices	Smart cards; UICC-Terminal interface; Card Application Toolkit(CAT) conformance specification	(600 ~ 3 800) MHz	BS-2	N
FCC Part 15:2014	Wired/wireless communication devices	Radio Frequency Devices 〈Exception〉 Subpart B	9 kHz ~ 40 GHz	BS-2	N
FCC Part 2.1091:2014	Wired/wireless communication devices	Radio frequency radiation exposure evaluation :mobile device	10 MHz ~ 6 GHz	BS-2	N
FCC Part 22:2014	Wired/wireless communication devices	Public Mobile Services - Subpart H. Cellular Radiotelephone Service	(800 ~ 900) MHz	BS-2	N
FCC Part 24:2014	Wired/wireless communication devices	Personal Communications Services - Subpart E. Broadband PCS	(1 800 ~ 2 000) MHz	BS-2	N
FCC Part 27 Sub part C:2013	Wired/wireless communication devices	Miscellaneous Wireless communications services	9 kHz ~ 26.5 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
FCC Part 90:2014	Wired/wireless communication devices	Private Land Mobile Radio Services	(70 ~ 5 000) MHz	BS-2	N
FCC Part 95:2014	Wired/wireless communication devices	Personal Radio Services	(200 ~ 1 500) MHz	BS-2	N
GSM Association Official Document TS.11:2016	Wired/wireless communication devices	Device Field and Lab Test Guideline	(600 ~ 3 800) MHz	BS-2	Y
ISO/IEC TR 18046-3:2012	Wired/wireless communication devices	Information technology - Radio frequency identification device performance test methods - Part 3: Test methods for tag performance	(860 ~ 960) MHz	BS-2	N
KS X ISO/IEC 18046-3:2008	Wired/wireless communication devices	Information technology - Automatic identification and data capture techniques - Radio frequency identification device performance test methods	(860 ~ 960) MHz	BS-2	N
OMA-ETS-MMS:2015	Wired/wireless communication devices	Enabler Test Specification for (Conformance) for MMS	(600 ~ 3 800) MHz	BS-2	N
OMA-ETS-MMS_INT:2010	Wired/wireless communication devices	Enabler Test Specification (Interoperability) for MMS	(600 ~ 3 800) MHz	BS-2	N
PTCRB AT-Command Test Specification:2012	Wired/wireless communication devices	AT-Command Test Specification Covering PTCRB RFT 77	9 kHz ~ 12.75 GHz	BS-2	N
RSS-102:2015	Wired/wireless communication devices	Licence-Exempt Low-power Radio Apparatus Operating in the Television Bands (February 2015)	(300 ~ 2 500) MHz	BS-2	N
RSS-119:2011	Wired/wireless communication devices	Land Mobile and Fixed Radio Transmitters and Receivers operating in the frequency 27.41 MHz ~ 960 MHz	(27.41 ~ 960) MHz	BS-2	N
RSS-132:2013	Wired/wireless communication devices	Cellular Telephones Employing New Technologies Operating in the Bands 824 ~ 849 MHz and 864 ~ 894 MHz	(800 ~ 900) MHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
RSS-133 Issue6:2013	Wired/wireless communication devices	2GHz Personal Communications Services	9 kHz ~ 26.5 GHz	BS-2	N
RSS-139 Issue2:2009	Wired/wireless communication devices	Advanced Wireless Services Equipment Operating in the Bands 1710-1755 MHz and 2110-2155 MHz	9 kHz ~ 26.5 GHz	BS-2	N
RSS-199 Issue1:2010	Wired/wireless communication devices	Broadband Radio Service (BRS) Equipment Operating in the Band 2500-2690 MHz 〈Exception〉 Base station	9 kHz ~ 26.5 GHz	BS-2	N
RSS-210 Amendment 1:2015	Wired/wireless communication devices	Licence-Exempt Low-power Radio Apparatus Operating in the Television Bands (February 2015)	9 kHz ~ 18 GHz	BS-2	N
RSS-213:2005	Wired/wireless communication devices	2 GHz License-exempt Personal Communications Service Devices(PCS)	(1 900 ~ 2 000) MHz	BS-2	N
RSS-247 Issue1:2015	Wired/wireless communication devices	Digital Transmission Systems (DTSs) Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices	9 kHz ~ 18 GHz	BS-2	N
RSS-310:2011	Wired/wireless communication devices	Low-power Licence-exempt Radio communication Devices (All Frequency Bands): Category Ⅱ Equipment	9 kHz ~ 18 GHz	BS-2	N

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03. Electrical Testing

03.009 Lighting devices

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CIE 117-1995	Lighting devices	Discomfort glare in interior lighting	AC 1 000 V or less UGR : 10 ~ 28	BS-1	N
CIE 150-2017	Lighting devices	Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations, 2nd Edition	AC 1 000 V or less illuminance in vertical plane : < 25 lx	BS-1	N
IEC 60064:1993/AMD 5:2009	Lighting devices	Amendment 5 - Tungsten filament lamps for domestic and similar general lighting purposes - Performance requirements	AC 1 000 V or less	BS-1	N
IEC 60081:1997/AMD 6:2017	Lighting devices	Amendment 6 - Double-Capped Fluorescent Lamps - Performance Specifications	AC 1 000 V or less	BS-1	N
IEC 60112:2003+AMD 1:2009	Lighting devices	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	AC 1 000 V or less	BS-1	N
IEC 60155:1993+AMD 2:2006	Lighting devices	Amendment 2 - Glow-starters for fluorescent lamps	AC 1 000 V or less	BS-1	N
IEC 60188:2001	Lighting devices	High-Pressure Mercury Vapour Lamps - Performance Specifications	AC 1 000 V or less	BS-1	N
IEC 60192:2001	Lighting devices	Low-Pressure Sodium Vapour Lamps - Performance Specifications	AC 1 000 V or less	BS-1	N
IEC 60238:2016/AMD 2:2020	Lighting devices	Edison Screw Lamp holders	AC 1 000 V or less	BS-1	N
IEC 60357:2002/AMD 3:2011	Lighting devices	Amendment 3 - Tungsten Halogen Lamps(non-vehicle) - Performance Specifications	AC 1 000 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60400:2017/AMD 1:2020	Lighting devices	Lamp holders for Tubular Fluorescent Lamps and Starter holders	AC 1 000 V or less	BS-1	N
IEC 60432-1:1999+AMD1:2005+AMD2:2011	Lighting devices	Incandescent lamps - Safety specifications - Part 1: Tungsten filament lamps for domestic and similar general lighting purposes	AC 1 000 V or less	BS-1	N
IEC 60529:1989+AMD1:1999+AMD2:2013	Lighting devices	Degrees of protection provided by enclosures (IP Code)	AC 1 000 V or less	BS-1	N
IEC 60570:2003+AMD1:2017+AMD2:2019	Lighting devices	Electrical supply track systems for luminaires Fourth Edition	AC 1 000 V or less	BS-1	N
IEC 60598-1:2020	Lighting devices	Luminaires - Part 1: General requirements and tests	AC 1 000 V or less	BS-1	N
IEC 60598-2-11:2013	Lighting devices	Luminaires - Part2-11: Particular requirements - Aquarium luminaires	AC 1 000 V or less	BS-1	N
IEC 60598-2-1:2020	Lighting devices	Luminaires - Part 2-1: Particular requirements - Fixed general purpose luminaires	AC 1 000 V or less	BS-1	N
IEC 60598-2-2:1997	Lighting devices	Luminaires - Part 2: Particular requirements - Section 2: Recessed luminaires	AC 1 000 V or less	BS-1	N
IEC 60598-2-2:2011	Lighting devices	Luminaires - Part 2-2: Particular requirements - Recessed luminaires	AC 1 000 V or less	BS-1	N
IEC 60598-2-3:2002+AMD1:2011	Lighting devices	Luminaires - Part 2-3: Particular requirements - Luminaires for road and street lighting	AC 1 000 V or less	BS-1	N
IEC 60598-2-4:2017	Lighting devices	Luminaires - Part 2-4: Particular requirements - Portable general purpose luminaires	AC 1 000 V or less	BS-1	N
IEC 60598-2-8:2013	Lighting devices	Luminaires - Part2-8: Particular requirements - Hand lamps	AC 1 000 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60662:2011	Lighting devices	High-Pressure Sodium Vapour Lamps - Performance specifications	AC 1 000 V or less	BS-1	N
IEC 60838-1:2016+AMD1:2017+AMD2:2020	Lighting devices	Miscellaneous Lamp holders - Part 1: General Requirements and Tests	AC 1 000 V or less	BS-1	N
IEC 60838-2-1:1994/AMD2:2004	Lighting devices	Amendment 2 - Miscellaneous lamp holders - Part 2-1: Particular requirements - Lamp holders S14	AC 1 000 V or less	BS-1	N
IEC 60838-2-2:2006+AMD1:2012	Lighting devices	Miscellaneous lamp holders - Part 2-2: Particular requirements Connectors for LED-modules	AC 1 000 V or less	BS-1	N
IEC 60901:1996/AMD6:2014	Lighting devices	Amendment 6 - Single-Capped Fluorescent Lamps - Performance Specifications	AC 1 000 V or less	BS-1	N
IEC 60921:2004+AMD1:2006	Lighting devices	Ballasts for tubular fluorescent lamps Performance requirements	AC 1 000 V or less	BS-1	N
IEC 60923:2005+AMD1:2006	Lighting devices	Auxiliaries for lamps-Ballasts for discharge lamps (excluding tubular fluorescent lamps) - Performance requirements	AC 1 000 V or less	BS-1	N
IEC 60927:2007+AMD1:2013	Lighting devices	Auxiliaries for Lamps - Starting Devices (Other Than Glow Starters) - Performance Requirements	AC 1 000 V or less	BS-1	N
IEC 60929:2011+AMD1:2015	Lighting devices	AC and / or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	AC 1 000 V or less	BS-1	N
IEC 60968:2012	Lighting devices	Self-Ballasted Lamps for General Lighting Services - Safety Requirements	AC 1 000 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60968:2015	Lighting devices	Self-ballasted fluorescent lamps for general lighting services - Safety requirements	AC 1 000 V or less	BS-1	N
IEC 60969:2016	Lighting devices	Self-ballasted compact fluorescent lamps for general lighting services - performance requirements	AC 1 000 V or less	BS-1	N
IEC 61047:2004	Lighting devices	D.C. or A.C. supplied electronic step-down convertors for filament lamps - Performance requirements	AC 1 000 V or less	BS-1	N
IEC 61050:1991/AMD 1:1994	Lighting devices	Amendment 1 - Transformers for tubular discharge lamps having a no-load output voltage exceeding 1 000 V(generally called neon-transformers). General and safety requirements	AC 1 000 V or less	BS-1	N
IEC 61167:2018	Lighting devices	Metal halide lamps - Performance specification	AC 1 000 V or less	BS-1	N
IEC 61184:2017/AMD 1:2019	Lighting devices	Bayonet lamp holders	AC 1 000 V or less	BS-1	N
IEC 61195:1999+AMD 1:2012+AMD2:2014	Lighting devices	Double-capped fluorescent lamps - Safety specifications	AC 1 000 V or less	BS-1	N
IEC 61199:2011+AMD 1:2012+AMD2:2014	Lighting devices	Single-capped fluorescent lamps - Safety specifications	AC 1 000 V or less	BS-1	N
IEC 61347-1:2015	Lighting devices	Lamp control gear - Part 1 : General and Safety Requirements	AC 1 000 V or less	BS-1	N
IEC 61347-1:2015+AMD1:2017	Lighting devices	Lamp control gear - Part 1 : General and safety requirements	AC 1 000 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61347-2-10:2000+AMD1:2008	Lighting devices	Lamp control gear - Part 2-10: Particular requirements for electronic invertors and convertors for high-frequency operation of cold start tubular discharge lamps (neon tubes)	AC 1 000 V or less	BS-1	N
IEC 61347-2-12:2005+AMD1:2010	Lighting devices	Lamp control gear - Part 2-12 : Particular requirements for d.c. or a.c. supplied electronic ballasts for discharge lamps(excluding fluorescent lamps)	AC 1 000 V or less	BS-1	N
IEC 61347-2-1:2000+AMD1:2005+AMD2:2013	Lighting devices	Lamp control gear - Part 2-1 : Particular requirements for starting devices (other than glow starters)	AC 1 000 V or less	BS-1	N
IEC 61347-2-2:2000+AMD1:2005+AMD2:2006	Lighting devices	Lamp control gear - Part 2-2 : Particular requirements for d.c. or a.c. supplied electronic step-down converts or for filament lamps	AC 1 000 V or less	BS-1	N
IEC 61347-2-2:2011	Lighting devices	Lamp control gear - Part 2-2 : Particular requirements for d.c. or a.c. supplied electronic step-down convertors for filament lamps	AC 1 000 V or less	BS-1	N
IEC 61347-2-3:2011	Lighting devices	Lamp control gear - Part 2-3 : Particular requirements for a.c. and/or d.c. supplied electronic ballasts for fluorescent lamps	AC 1 000 V or less	BS-1	N
IEC 61347-2-3:2011+AMD1:2016	Lighting devices	Lamp control gear - Part2-3 : Particular requirements for a.c. and/or d.c. supplied electronic control gear for fluorescent lamp	AC 1 000 V or less	BS-1	N
IEC 61347-2-8:2000+AMD1:2006	Lighting devices	Lamp control gear - Part 2-8: Particular requirements for ballasts for fluorescent lamps	AC 1 000 V or less	BS-1	N
IEC 62031:2018	Lighting devices	LED modules for general lighting - Safety specifications	AC 1 000 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62035:2014+AMD 1:2016	Lighting devices	Discharge lamps (excluding fluorescent lamps) - Safety specifications	AC 1 000 V or less	BS-1	N
IEC 62384:2020	Lighting devices	DC or AC supplied electronic control gear for LED modules Performance requirements	AC 1 000 V or less	BS-1	N
IEC 62471:2006	Lighting devices	Photobiological safety of lamps and lamp systems	Spectrum range : (250 ~ 1 600) nm	BS-1	N
IEC PAS 63313:2021	Lighting devices	Position statement on germicidal UV-C irradiation UV-C safety guidelines	Spectrum range : (250 ~ 280) nm	BS-1	N
IEC TR 62778:2014	Lighting devices	Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires	Spectrum range : (380 ~ 780) nm	BS-1	N
IEC 61347-2-13:2014+AMD1:2016	Lighting devices	Lamp control gear - Part 2-13 : Particular requirements for d.c. or a.c. supplied electronic control gear for LED modules	AC 1 000 V or less	BS-1	N
IEC 61347-2-9:2012	Lighting devices	Lamp control gear - Part 2-9: Particular requirements for electromagnetic control gear for discharge lamps (excluding fluorescent lamps)	AC 1 000 V or less	BS-1	N
K 10005:2011	Lighting devices	Safety requirements for electrodeless fluorescent lamp	AC 1 000 V or less	BS-1	N
K 10006:2006	Lighting devices	Safety requirements for induction lamps of PLS type	AC 1 000 V or less	BS-1	N
K 10021:2021	Lighting devices	Tublar LED lamps of luminaires - Safety requirements	AC 1 000 V or less	BS-1	N
K 10026:2013	Lighting devices	Automatic socket-outlet to cut-off standby power	AC 1 000 V or less	BS-1	N
K 20002:2010	Lighting devices	Tublar LED lamps using (external) convertor lampholder	AC 1 000 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
K 60838-1:2011	Lighting devices	Miscellaneous lampholders Part 1 : General requirements	AC 1 000 V or less	BS-1	N
K 61047:2008	Lighting devices	DC or AC supplied electronic step-down convertors for filament lamp - Performance requirements	AC 1 000 V or less	BS-1	N
K 61184:2008	Lighting devices	Bayonet lampholders	AC 1 000 V or less	BS-1	N
K 61347-2-10:2009	Lighting devices	Lamp controlgear - Part 2-10 : Particular requirements for electronic invertors and convertors for high-frequency operation of cold start tubular discharge lamps (neon tubes)	AC 1 000 V or less	BS-1	N
K 61347-2-12:2009	Lighting devices	Lamp controlgear-Part2-12 : Particular requirements for d.c. or a.c. supplied electronic ballasts for discharge lamps (excluding fluorescent lamps)	AC 1 000 V or less	BS-1	N
KC 10023:2020	Lighting devices	Self-ballasted LED lamps for general lighting services	AC 250 V or less	BS-1	N
KC 10023:2022	Lighting devices	Self-ballasted LED lamps for general lighting services	AC 250 V or less	BS-1	N
KC 10025:2018	Lighting devices	LED Lamp for Fluorescent Lamp Retrofit-Internal converter type	AC 250 V or less	BS-1	N
KC 10025:2022	Lighting devices	LED Lamp for Fluorescent Lamp Retrofit-Internal converter type	AC 250 V or less	BS-1	N
KC 10030:2019	Lighting devices	LED Luminaire System Safety Requirements	1 000 W or less	BS-1	N
KC 20001:2015	Lighting devices	Tublar LED lamps using external converter - Safety and Performance Requirements	G13 D12 cap	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60064:2015	Lighting devices	Tungsten filament lamps for domestic and similar general lighting purposes- Performance requirements	AC 1 000 V or less	BS-1	N
KC 60081:2017	Lighting devices	Double-capped fluorescent lamps - Performance specifications	AC 1 000 V or less	BS-1	N
KC 60155:2015	Lighting devices	Glow-starters for fluorescent lamps	AC 1 000 V or less	BS-1	N
KC 60188:2015	Lighting devices	High-Pressure Mercury Vapour Lamps - Performance specifications	AC 1 000 V or less	BS-1	N
KC 60192:2015	Lighting devices	Low-Pressure sodium vapour lamps - Performance specifications	AC 1 000 V or less	BS-1	N
KC 60238:2015	Lighting devices	Edison screw lampholders	AC 1 000 V or less	BS-1	N
KC 60357:2015	Lighting devices	Tungsten halogen lamps (non-vehicle) - Performance specifications	AC 1 000 V or less	BS-1	N
KC 60400:2021	Lighting devices	Lampholders for tubular fluorescent lamps and starterholders	AC 1 000 V or less	BS-1	N
KC 60432-1:2015	Lighting devices	Incandescent lamps - Safety specifications Part 1 : Tungsten filament lamps for domestic and similar general lighting purposes	AC 1 000 V or less	BS-1	N
KC 60432-2:2015	Lighting devices	Incandescent lamps - Safety specifications Part 2 : Tungsten halogen lamps for domestic and similar general lighting purposes	AC 1 000 V or less	BS-1	N
KC 60432-3:2015	Lighting devices	Incandescent lamps - Safety specifications Part 3 : Tungsten halogen lamps (non-vehicle)	AC 1 000 V or less	BS-1	N
KC 60570:2015	Lighting devices	Electrical supply track systems for luminaires	AC 1 000 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60598-1:2015	Lighting devices	Luminaires - Part1 : General requirements and tests	AC 1 000 V or less	BS-1	N
KC 60598-1:2022	Lighting devices	Luminaires - Part1 : General requirements and tests	AC 1 000 V or less	BS-1	N
KC 60598-2-1:2021	Lighting devices	Luminaires - Part2 : Particular requirements. Section One: Fixed general purpose luminaires	AC 1 000 V or less	BS-1	N
KC 60598-2-1:2022	Lighting devices	Luminaires - Part2 : Particular requirements. Section One: Fixed general purpose luminaires	AC 1 000 V or less	BS-1	N
KC 60598-2-20:2021	Lighting devices	Luminaires Part 2-20 : Particular requirements - Lighting chains	AC 250 V 이하	BS-1	N
KC 60598-2-20:2022	Lighting devices	Luminaires Part 2-20 : Particular requirements - Lighting chains	AC 1 000 V or less	BS-1	N
KC 60598-2-2:2021	Lighting devices	Luminaires - Part2-2 : Particular requirements - Recessed luminaires	AC 1 000 V or less	BS-1	N
KC 60598-2-2:2022	Lighting devices	Luminaires - Part2-2 : Particular requirements - Recessed luminaires	AC 1 000 V or less	BS-1	N
KC 60598-2-4:2021	Lighting devices	Luminaires - Part2 : Particular requirements - Section 4: Portable general purpose luminaires	AC 250 V 이하	BS-1	N
KC 60598-2-4:2022	Lighting devices	Luminaires - Part2 : Particular requirements - Section 4: Portable general purpose luminaires	AC 1 000 V or less	BS-1	N
KC 60598-2-5:2021	Lighting devices	Luminaires - Part2-5 : Particular requirements - Floodlights	AC 1 000 V or less	BS-1	N
KC 60598-2-5:2022	Lighting devices	Luminaires - Part2-5 : Particular requirements - Floodlights	AC 1 000 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60598-2-6:2015	Lighting devices	Luminaires - Part2 : Particular requirements - Section 6: Luminaires with built-in transformers for filament lamps	AC 1 000 V or less	BS-1	N
KC 60598-2-8:2021	Lighting devices	Luminaires - Part2-8 : Particular requirements - Handlamps	AC 1 000 V or less	BS-1	N
KC 60662:2015	Lighting devices	High-pressure sodium vapour lamps - Performance specifications	AC 1 000 V or less	BS-1	N
KC 60838-2-1:2015	Lighting devices	Miscellaneous lampholders Part 2 : Particular requirements - Section 1: Lampholders S14	AC 1 000 V or less	BS-1	N
KC 60838-2-2:2015	Lighting devices	Miscellaneous lampholders Part 2-2 : Particular requirements - Connectors for LED-modules	AC 1 000 V or less	BS-1	N
KC 60838-2-2:2022	Lighting devices	Miscellaneous lampholders Part 2-2 : Particular requirements - Connectors for LED-modules	AC 1 000 V or less	BS-1	N
KC 60901:2017	Lighting devices	Single-capped fluorescent lamps - Performance specifications	AC 1 000 V or less	BS-1	N
KC 60921:2015	Lighting devices	Ballasts for tubular fluorescent lamps - Performance requirements	AC 1 000 V or less	BS-1	N
KC 60923:2015	Lighting devices	Auxiliaries for lamps - Ballasts for discharge lamps (excluding tubular fluorescent lamps) - Performance requirements	AC 1 000 V or less	BS-1	N
KC 60927:2015	Lighting devices	Auxiliaries for lamps - Starting devices (other than glow starters) - Performance requirements	AC 1 000 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60927:2022	Lighting devices	Auxiliaries for lamps - Starting devices (other than glow starters) - Performance requirements	AC 1 000 V or less	BS-1	N
KC 60929:2015	Lighting devices	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	AC 1 000 V or less	BS-1	N
KC 60929:2022	Lighting devices	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	AC 1 000 V or less	BS-1	N
KC 60968:2015	Lighting devices	Self-ballasted fluorescent lamps for general lighting services - Safety requirements	AC 1 000 V or less	BS-1	N
KC 60968:2022	Lighting devices	Self-ballasted lamps for general lighting services - Safety requirements	AC 1 000 V or less	BS-1	N
KC 60969:2015	Lighting devices	Self-ballasted lamps for general lighting services - Performance requirements	AC 1 000 V or less	BS-1	N
KC 61050:2015	Lighting devices	Transformers for tubular discharge lamps having a no-load output voltage exceeding 1 000 V (generally called neon-transformers). - General and safety requirements	AC 1 000 V or less	BS-1	N
KC 61050:2022	Lighting devices	Transformer for tubular discharge lamps having a no-load output voltage exceeding 1000 V - General and safety requirements	AC 1 000 V or less	BS-1	N
KC 61167:2015	Lighting devices	Metal halide lamps	AC 1 000 V or less	BS-1	N
KC 61195:2020	Lighting devices	Double-capped fluorescent lamps - Safety specifications	AC 1 000 V or less	BS-1	N
KC 61199:2020	Lighting devices	Single-capped fluorescent lamps - Safety specifications	AC 1 000 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 61347-1:2015	Lighting devices	Lamp controlgear - Part 1 : General and safety requirements	AC 1 000 V or less	BS-1	N
KC 61347-1:2022	Lighting devices	Lamp controlgear - Part 1 : General and safety requirements	AC/DC 1 000 V or less	BS-1	N
KC 61347-2-11:2015	Lighting devices	Lamp controlgear - Part 2-11 : Particular requirements for miscellaneous electronic circuits used with luminaires	AC 1 000 V or less	BS-1	N
KC 61347-2-12:2022	Lighting devices	Lamp controlgear Part 2-12: Particular requirements for d.c. or a.c. supplied electronic ballasts for discharge lamps (excluding fluorescent lamps)	AC 1 000 V or less	BS-1	N
KC 61347-2-13:2015	Lighting devices	Lamp controlgear - Part 2-13 : Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules	AC 1 000 V or less	BS-1	N
KC 61347-2-13:2022	Lighting devices	Lamp controlgear - Part 2 - 13 : Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules	AC/DC 1 000 V or less	BS-1	N
KC 61347-2-1:2015	Lighting devices	Lamp controlgear - Part 2-1 : Particular requirements for starting devices (other than glow starters)	AC 1 000 V or less	BS-1	N
KC 61347-2-2:2015	Lighting devices	Lamp controlgear - Part 2-2 : Particular requirements for d.c. or a.c. supplied electronic step-down convertors for filament lamps	AC 1 000 V or less	BS-1	N
KC 61347-2-3:2015	Lighting devices	Lamp controlgear - Part 2-3 : Particular requirements for a.c. and/or d.c. supplied electronic controlgear for fluorescent lamps	AC 1 000 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 61347-2-8:2015	Lighting devices	Lamp controlgear - Part 2-8 : Particular requirements for ballasts for fluorescent lamps	AC 1 000 V or less	BS-1	N
KC 61347-2-8:2022	Lighting devices	Lamp controlgear - Part 2-8 : Particular requirements for ballasts for fluorescent lamps	AC 1 000 V or less	BS-1	N
KC 61347-2-9:2015	Lighting devices	Lamp controlgear - Part 2-9 : Particular requirements for electromagnetic controlgear for discharge lamps (excluding fluorescent lamps)	AC 1 000 V or less	BS-1	N
KC 61347-2-9:2022	Lighting devices	Lamp controlgear - Part 2 - 9 : Particular requirements for electromagnetic controlgear for discharge lamps	AC 1 000 V or less	BS-1	N
KC 62031:2015	Lighting devices	LED modules for general lighting-Safety specifications	AC 1 000 V or less	BS-1	N
KC 62031:2022	Lighting devices	LED modules for general lighting-Safety specifications	AC 1 000 V or less	BS-1	N
KC 62035:2020	Lighting devices	Discharge lamps (excluding fluorescent lamps) - Safety	AC 1 000 V or less	BS-1	N
KC 62384:2014	Lighting devices	DC or AC supplied electronic control gear for LED modules - Performance requirements	AC 1 000 V or less	BS-1	N
KS C 7651:2021	Lighting devices	LED lamps using internal converter	AC 1 000 V or less	BS-1	N
KS C 7652:2021	Lighting devices	LED lamps using external converter	AC 1 000 V or less	BS-1	N
KS C 7653:2021	Lighting devices	Recessed and Fixed Luminaires	AC 1 000 V or less	BS-1	N
KS C 7655:2021	Lighting devices	Electronic converter for LED modules	AC 1 000 V or less	BS-1	N
KS C 7656:2021	Lighting devices	LED lamps using Portable Luminaires	AC 1 000 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 7657:2021	Lighting devices	Sensor LED luminaires	AC 1 000 V or less	BS-1	N
KS C 7658:2021	Lighting devices	LED Luminaires for Road and Street Lighting - Safety and performance requirements	AC 1 000 V or less	BS-1	N
KS C 7659:2013	Lighting devices	LED module for Channel Letter Signs - Safety and performance requirements	AC 1 000 V or less	BS-1	N
KS C 7711:2021	Lighting devices	LED ground recessed luminaires	AC 1 000 V or less	BS-1	N
KS C 7712:2021	Lighting devices	LED flood-lighting luminaires	AC 1 000 V or less	BS-1	N
KS C 7713:2021	Lighting devices	LED landscape lighting	AC 1 000 V or less	BS-1	N
KS C 7716:2021	Lighting devices	LED tunnel luminaires	400 W or less	BS-1	N
KS C IEC 61167:2019	Lighting devices	Metal halide lamps - Performance specification	AC 1 000 V or less	BS-1	N
KS C IEC 62035:2017	Lighting devices	Discharge lamps (excluding fluorescent lamps) - Safety	AC 1 000 V or less	BS-1	N
National Police Agency, LED traffic light standard guidelines(04. 27. 2022)	Lighting devices	LED traffic signal standard directive [Exception] 2. Controller compatibility test 3. Environmental test (3) Light output fluctuation test (4) Thermal shock resistance test 4. Electrical test (9) On/Off response test (10) Impedance test 5. Optical performance test (2) Luminous intensity distribution test (4) Sun-Phantum test	Below Vac 250 V Below input current 20 A Insulation resistance : (0 ~ 500) MΩ Luminance : (0 ~ 500 000) cd/㎡	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
National Police Agency, Recessed type pedestrian traffic light auxiliary device standard guidelines(07. 20. 2022.)	Lighting devices	Recessed type pedestrian traffic signal auxiliary device standard directive	Skid resistor : (0 ~ 150) BPN Static load : Max. 5 kN Chromaticity : (0.009 ~ 0.720) Luminance : (0 ~ 50 000) cd/㎡	BS-1	N

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03. Electrical Testing

03.010 Medical devices

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601-1-11:2010	Medical devices	Medical electrical equipment - Part 1-11 : General requirements for basic safety and essential performance - Collateral Standard: Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment	Acceleration : (15 ~ 100) g Duration : 6 ms ~ 30 min Acceleration amplitude : (10 ~ 2 000) Hz Fall height : (0.01 ~ 0.25) m	BS-1	N
IEC 60601-1-11:2015	Medical devices	Medical electrical equipment - Part 1-11 : General requirements for basic safety and essential performance - Collateral Standard: Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment	Acceleration : (15 ~ 100) g Duration : 6 ms ~ 30 min Acceleration amplitude : (10 ~ 2 000) Hz Fall height : (0.01 ~ 0.25) m	BS-1	N
IEC 60601-1-3:2008	Medical devices	Medical electrical equipment - Part 1-3 : General requirements for basic safety and essential performance - Collateral Standard: Radiation protection in diagnostic X-ray equipment	Distance : 3 000 ㎜ Tube Voltage : 18 kVp ~ 160 kVp Tube Current : (1 ~ 2 000) mA Illumination : 1 500 lx Radiation dose : 2 uR ~ 100 kR	BS-1	Y
IEC 60601-1-3:2013	Medical devices	Medical electrical equipment - Part 1-3 : General requirements for basic safety and essential performance - Collateral Standard: Radiation protection in diagnostic X-ray equipment	Distance : 3 000 ㎜ Tube Voltage : 18 kVp ~ 160 kVp Tube Current : (1 ~ 2 000) mA Illumination : 1 500 lx Radiation dose : 2 uR ~ 100 kR	BS-1	Y
IEC 60601-1-6:2013	Medical devices	Medical electrical equipment - Part 1-6 : General requirements for basic safety and essential performance - Collateral standard : Usability	Input Voltage : (0 ~ 520) Vac Voltage : (0 ~ 1 000) Vac/Vdc Input Current : 20 A Current : 1 000 A Input Frequency : (45 ~ 66) Hz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601-1-8:2012	Medical devices	Medical electrical equipment - Part 1-8 : General requirements for basic safety and essential performance - Collateral standard: General requirements, tests and guidance for alarm systems in medical electrical and medical electrical systems	Illuminance : (100 ~ 1 500) lx Frequency : (150 ~ 4 000) Hz Sound level : (28 ~ 138) dBA	BS-1	N
IEC 60601-1:2005	Medical devices	Medical electrical equipment - Part 1 : General requirements for basic safety and essential performance	Input Voltage : (0 ~ 520) Vac Voltage : (0 ~ 1 000) Vac/Vdc Input Current : 20 A Current : 1 000 A Input Frequency : (45 ~ 66) Hz Input Temperature : (0 ~ 150) ℃ Temperature : (0 ~ 200) ℃ Input Humidity : 93 % R.H. Humidity : 93 % R.H. Distance : 3 000 ㎜ Resistance : 0.1 Ω Radiation dose : 2 uR ~ 100 kR	BS-1	Y
IEC 60601-1:2012	Medical devices	Medicale electrical equipment - Part 1 : General requirements for basic safety and essential performance	Input Voltage : (0 ~ 520) Vac Voltage : (0 ~ 1 000) Vac/Vdc Input Current : 20 A Current : 1 000 A Input Frequency : (45 ~ 66) Hz Input Temperature : (0 ~ 150) ℃ Temperature : (0 ~ 200) ℃ Input Humidity : 93 % R.H. Humidity : 93 % R.H. Distance : 3 000 ㎜ Resistance : 0.1 Ω Radiation dose : 2 uR ~ 100 kR	BS-1	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601-2-22:2007	Medical devices	Medical electrical equipment - Part 2-22 : Particular requirements for basic safety and essential performance of surgical cosmetic therapeutic and diagnostic laser equipment	Laser power : 1 nW ~ 250 W Laser energy : 100 J ~ 40 J	BS-1	N
IEC 60601-2-22:2019	Medical devices	Medical electrical equipment - Part 2-22 : Particular requirements for basic safety and essential performance of surgical cosmetic therapeutic and diagnostic laser equipment	Laser power : 1 nW ~ 250 W Laser energy : 100 J ~ 40 J	BS-1	N
IEC 60601-2-25:2011	Medical devices	Medical electrical equipment - Part 2-25 : Particular requirements for the basic safety and essential performance of electrocardiographs	Applied voltage : (0.1 ~ 10) mVp-v Frequency : (0.05 ~ 500) Hz Applied pulse duration : (2 ~ 300) ms DC offset : ±1 000 mV	BS-1	N
IEC 60601-2-27:2011	Medical devices	Medical electrical equipment - Part 2-27 : Particular requirements for the basic safety and essential performance of electrocardiographic monitoring equipment	Applied voltage : (0.1 ~ 10) mVp-v Frequency : (0.05 ~ 500) Hz Applied pulse Duration : (2 ~ 300) ms DC offset : ± 300 mV	BS-1	N
IEC 60601-2-28:2017	Medical devices	Medical electrical equipment - Part 2-28 : Particular requirements for the basic safety and essential performance of X-ray tube assemblies for medical diagnosis	Input Voltage : (0 ~ 520) Vac Voltage : (0 ~ 1 000) Vac/Vdc Input Current : 20 A Current : 1 000 A Input Frequency : (45 ~ 66) Hz	BS-1	Y
IEC 60601-2-2:2017	Medical devices	Medical electrical equipment - Part 2-2 : Particular requirements for the basic safety and essential performance of high frequency surgical equipment and high frequency surgical accessories	HF leakage current : (0 ~ 150) mA HF output : (0 ~ 400) W Monitoring voltage : (1 ~ 12) V Force : (11 ~ 50) N AC impedance : (2 001 ~ 1 000 000) Ω	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601-2-34:2011	Medical devices	Medical electrical equipment - Part 2-34 : Particular requirements for the basic safety and essential performance of invasive blood pressure monitoring equipment	Pressure : (0 ~ 400) mmHg Blood pressure : Systolic (120 ~ 130) mmHg / diastolic (80 ~ 90) mmHg	BS-1	N
IEC 60601-2-37:2015	Medical devices	Medical electrical equipment - Part 2-37 : Particular requirements for the basic safety and essential performance of ultrasonic medical diagnostic and monitoring equipment	Input Voltage : (0 ~ 520) Vac Voltage : (0 ~ 1 000) Vac/Vdc Input Current : 20 A Current : 1 000 A Input Frequency : (45 ~ 66) Hz Ultrasonic output power : (1 ~ 30) W Frequency : (1 ~ 40) MHz	BS-1	N
IEC 60601-2-3:2016	Medical devices	Medical electrical equipment - Part 2-3 : Particular requirements for the basic safety and essential performance of short-Wave therapy equipment	Output : (0 ~ 500) W time : (1 ~ 30) min	BS-1	N
IEC 60601-2-49:2011	Medical devices	Medical electrical equipment - Part 2-49 : Particular requirements for the basic safety and essential performance of multifunction patient monitoring equipment	Voltage measure range : (0.001 ~ 1 000) Vac (0.001 ~ 1 000) Vdc Time measure range : (0 ~ 30) S	BS-1	N
IEC 60601-2-4:2018	Medical devices	Medical electrical equipment - Part 2-4: Particular requirements for the basic safety and essential performance of cardiac defibrillators	Energy : (0.1 ~ 360) J Load resistance : (25, 50, 75, 100, 125, 150, 175, 200) Ω Time: (0.1 ~ 100.0) s Voltage (0 ~ 5) kVdc	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601-2-54:2018	Medical devices	Medical electrical equipment - Part 2-54 : Particular requirements for the basic safety and essential performance of X-ray equipment for radiography and radioscopy 〈Exception〉 203.6.3.2.102 Linearity and constancy in RADIOGRAPHY b) Reproducibility of AUTOMATIC EXPOSURE CONTROLS for DIRECT RADIOGRAPHY c) Constancy of AUTOMATIC EXPOSURE CONTROLS for DIRECT RADIOGRAPHY	Distance : 3 000 ㎜ Tube Voltage : 35 kVp ~ 160 kVp Tube Current : 1 mA ~ 2 000 mA Radiation dose : 2 uR ~ 100 kR	BS-1	Y
IEC 60601-2-57:2011	Medical devices	Medical electrical equipment - Part 2-57 : Particular requirements for the basic safety and essential performance of non-laser light source equipment intended for therapeutic, diagnostic, monitoring and cosmetic/aesthetic use	Laser power : 1 nW ~ 250 W Laser energy : 100 J ~ 40 J	BS-1	N
IEC 60601-2-5:2009	Medical devices	Medical electrical equipment - Part 2-5 : Particular requirements for the basic safety and essential performance of ultrasonic physiotherapy equipment	Ultrasonic output power : (1 ~ 30) W Frequency : (1 ~ 10) MHz	BS-1	N
IEC 60601-2-62:2013	Medical devices	Medical electrical equipment - Part 2-62 : Particular requirements for the basic safety and essential performance of high intensity therapeutic ultrasound (HITU) equipment	Frequency : (1 ~ 10) MHz Ultra sound Power : (0 ~ 30) W	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601-2-63:2017	Medical devices	Medical electrical equipment - Part 2-63 : Particular requirements for the basic safety and essential performance of dental extra-oral X-ray equipment	Distance : 3 000 ㎜ Tube Voltage : (35 ~ 105) kVp Tube Current : (1 ~ 2 000) mA Radiation dose : 2 uR ~ 100 kR	BS-1	Y
IEC 62366:2014	Medical devices	Medical devices - Application of usability engineering to medical devices	Input Voltage : (0 ~ 520) Vac Voltage : (0 ~ 1 000) Vac/Vdc Input Current : 20 A Current : 1 000 A Input Frequency : (45 ~ 66) Hz	BS-1	N
IEC 80601-2-30:2018	Medical devices	Medical electrical equipment - Part 2-30 : Particular requirements for the basic safety and essential performance of automated non-invasive sphygmomano meters	Temperature : (10 ~ 40) ℃ Humidity : (15 ~ 85) % Pressure : (0 ~ 360) mmHg Acceleration : (15 ~ 100) g duration : 6 ms ~ 30 min acceleration amplitude : (10 ~ 2 000) Hz Fall height : (0.01 ~ 0.25) m	BS-1	N
ISO 80601-2-61:2017	Medical devices	Medical electrical equipment - Part 2-61 : Particular requirements for basic safety and essential performance of pulse oximeter equipment	Acceleration : (15 ~ 100) g duration : 6 ms ~ 30 min acceleration amplitude : (10 ~ 2000) Hz Fall height : (0.01 ~ 0.25) m	BS-1	N

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03. Electrical Testing

03.011 EMC (Electromagnetic Compatibility)

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
2006/28/EC:2006	Wired/wireless communication devices	Adapting to technical progress Council Directive 72/245/EEC relating to the radio interference (electromagnetic compatibility) of vehicles and amending Directive 70/156/EEC on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers. 〈Exception〉 ANNEX IV Method of measurement of radiated broadband electromagnetic emissions from vehicles ANNEX V Method of measurement of radiated narrowband electromagnetic emissions from vehicles. ANNEX VI Method of testing for immunity of vehicles to electromagnetic radiation	RE : 30 MHz ~ 1 GHz BCI : 20 MHz ~ 400 MHz, 60 mA RI : 80 MHz ~ 2 GHz, 30 V/m TI : -450 V ~ 150 V	BS-2	N
3GPP 34.124:2018	Wired/wireless communication devices	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Electro Magnetic Compatibility(EMC) requirements for mobile terminals and ancillary equipment	CE : 150 kHz ~ 30 MHz RE : Max. 18 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
95/54/EC:1995	Wired/wireless communication devices	Adapting to technical progress Council Directive 72/245/EEC on the approximation of the laws of the Member States relating to the suppression of radio interference produced by spark-ignition engines fitted to motor vehicles and amending Directive 70/156/EEC on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers. 〈Exception〉 ANNEX IV Method of measurement of radiated broadband electromagnetic emissions from vehicles. ANNEX V Method of measurement of radiated narrowband electromagnetic emissions from vehicles. ANNEX VI Method of testing for immunity of vehicles to electromagnetic radiation.	RE : 30 MHz ~ 1 GHz BCI : 20 MHz ~ 400 MHz, 60 mA RI : 80 MHz ~ 2 GHz, 30 V/m TI : -450 V ~ 150 V	BS-2	N
95/56/EC:1995	Wired/wireless communication devices	Adapting to technical progress Council Directive 74/61/EEC relating to devices to prevent the unauthorized use of motor vehicles	RE : 30 MHz ~ 1 GHz BCI : 20 MHz ~ 400 MHz, 60 mA RI : 80 MHz ~ 2 GHz, 30 V/m TI : -450 V ~ 150 V	BS-2	N
ABNT NBR IEC 61000-4-2 (2013)	Wired/wireless communication devices	Electromagnetic compatibility Part 4-2: Testing and measurement techniques — Electrostatic discharge immunity test	Voltage : ±30 kV	BS-2	N
ABNT NBR IEC 61000-4-2:2013	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 4-2: Testing and Measurement Techniques - Electrostatic Discharge Immunity Test	Max. ±30 kV, 150 pF /330 Ω	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ABNT NBR IEC 61000-4-3:2022	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	RS : 80 MHz ~ 6 GHz, 10 V/m	BS-1	N
ABNT NBR IEC 61000-4-4 (2015)	Wired/wireless communicatio n devices	Electromagnetic Compatibility Part 4-4: Testing and Measurement Techniques — Electrical fast transients/burst	Voltage : ±7 kV	BS-2	N
ABNT NBR IEC 61000-4-4:2015	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques -Electrical fast transient/burst immunity test	EFT : ±4 kV	BS-1	N
ABNT NBR IEC 61000-4-5 (2020)	Wired/wireless communicatio n devices	Electromagnetic compatibility Part 4-5: Testing and measurement techniques — Surge immunity test	Voltage : ±7 kV	BS-2	N
ABNT NBR IEC 61000-4-5:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 4-5: Testing and Measurement Techniques - Surge Immunity Test	SURGE : ±6 kV	BS-1	N
ABNT NBR IEC 61000-4-6 (2019)	Wired/wireless communicatio n devices	Electromagnetic compatibility Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	Freq. : 150 kHz ~ 230 MHz Voltage : 30 V	BS-2	N
ABNT NBR IEC 61000-4-6:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances induced by radio-frequency fields	Frequency range : 150 kHz ~ 80 MHz Voltage : Max. 10 Vrms	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ABNT NBR IEC 61000-6-3 (2022)	Wired/wireless communicatio n devices	Electromagnetic compatibility: ac (EMC) Part 6-3: Generic standard - Emission standard for equipment in residential environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz Harmonic, flicker AC luput Current : Max. 75 A (per phase)	BS-2	N
ABNT NBR IEC 61000-6-3:2022	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatability (EMC) - Part 6-3: Generic Standards - Emission Standard for equipment in residential environments	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz	BS-1	N
ABNT NBR IEC/CISPR 11 (2020)	Wired/wireless communicatio n devices	Industrial, scientific and medical equipment - Radio-frequency disturbance charactristics - Limits and methods of measurement	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz	BS-2	N
ABNT NBR IEC/CISPR 11:2020	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement <exception> 6.3.2.3 Table 10 radiation disturbance limits(distance 30 m)	RE : 150 kHz ~ 18 GHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz	BS-1	N
ABNT NBR IEC/CISPR 14-1 (2021)	Wired/wireless communicatio n devices	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus Part 1: Emission	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 6 GHz DCE : 150 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DP : 30 MHz ~ 300 MHz	BS-2	N
ABNT NBR IEC/CISPR 14-1:2021	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances electric tools and similar apparatus - Part 1: Emission	CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DP : 30 MHz ~ 300 MHz RE : 9 kHz ~ 6 GHz	BS-1	N
ABNT NBR IEC/CISPR 15 (2019)	Wired/wireless communicatio n devices	Limits and methods and measurement of radio disturbance characteristics of electrical lighting and similar equipment	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 1 GHz MFE : 9 kHz ~ 30 MHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ABNT NBR IEC/CISPR 15:2019	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment 〈exception〉 4.5.2 Table 8 - Radiated disturbance limits in the frequency range 9 kHz to 30 MHz (loop diameter : 3 m and 4 m)	RE : 9 kHz ~ 1 GHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz	BS-1	N
ABNT NBR IEC/CISPR 25 (2010)	Wired/wireless communication devices	Vehicles, vessels and internal combustion engines - Charateristics of radio frequency disturbances - Limits and measurement methods for protecting on-board receivers	CE-V : 150 kHz ~ 108 MHz CE-S : 150 kHz ~ 108 MHz RE : 150 kHz ~ 2.5 GHz	BS-2	N
ABNT NBR IEC/CISPR 32 (2021)	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Emission requirements	CE(power ports) : 150 kHz ~ 30 MHz CE(signal ports) : 150 MHz ~ 2.15 GHz RE : 30 MHz ~ 6 GHz	BS-2	N
ABNT NBR IEC/CISPR 32:2021	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Emission requirements	CE(power ports) : 150 kHz ~ 30 MHz CE(signal ports) : 150 MHz ~ 2.15 GHz RE : 30 MHz ~ 6 GHz	BS-1	N
ABNT NBR IEC/CISPR 35 (2021)	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Immunity requirements	ESD : ±8 kV RS: 80 MHz ~ 5 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 1 A/m V-DIP : ≤ 75 A SPL : 0.15 MHz ~ 1 GHz	BS-2	N
ABNT NBR IEC/CISPR 35:2021	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Immunity requirements	ESD : ±8 kV RS : 80 MHz ~ 5 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 1 A/m V-DIP : ≤ 75 A SPL : 0.15 MHz ~ 1 GHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ANSI C 63.4a:2017	Electrical machinery for households, Electrical machinery for industries	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 18 GHz	BS-2	Y
ANSI C 63.4a:2017	Electrical machinery for households, Electrical machinery for industries	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 18 GHz	BS-1	N
AS CISPR 11:2017+AMD1:2020	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment -Radio-frequency disturbance characteristics -Limits and methods of measurement	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz	BS-2	N
AS CISPR 15:2017	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment 〈Exception〉 4.2 Insertion loss 4.4.1 Table 3a - Radiated disturbance limits in the frequency range 9 kHz to 30 MHz (loop diameter : 3 m and 4 m)	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 300 MHz MFE : 9 kHz ~ 30 MHz	BS-2	N
AS/NZS CISPR 13:2012	Wired/wireless communication devices	Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement	CE : 150 kHz ~ 2.15 GHz DP : 30 MHz ~ 300 MHz RE : 30 MHz ~ 1 GHz RP : 0.9 GHz ~ 18 GHz	BS-2	N
AS/NZS CISPR 14-1:2021	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1 : Emission	CE : 148.5 kHz ~ 30 MHz DP : 30 MHz ~ 300 MHz RE : 30 MHz ~ 1 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
AS/NZS CISPR 32:2015+AMD1:2020	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Emission requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-2	N
ASTM D4935-18	Electrical materials and components	Standard Test Method for Measuring the Electromagnetic Shielding Effectiveness of Planar Materials	Frequency : Max. 1.5 GHz	BS-2	N
ASTM D4935-18	Electrical materials and components	Standard Test Method for Measuring the Electromagnetic Shielding Effectiveness of Planar Materials	Frequency range : 30 MHz ~ 1.5 GHz	BS-1	N
CISPR 11:2015+AMD1:2016+AMD2:2019	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement 〈Exception〉 6.3.2.3 Table 10 radiation disturbance limits(distance 30 m)	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz	BS-2	N
CISPR 11:2015+AMD1:2016+AMD2:2019	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz (Exclusion : 30 m)	BS-6	N
CISPR 11:2015+AMD1:2016+AMD2:2019 CSV	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement 〈exception〉 6.3.2.3 Table 10 radiation disturbance limits(distance 30 m)	RE : 150 kHz ~ 18 GHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CISPR 12 Ed.6.1:2009	Wired/wireless communicatio n devices	Vehicles, boats and internal combustion engine - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers (Exception) 5.2.1 Outdoor test site (OTS) requirements	30 MHz ~ 1 GHz	BS-5	N
CISPR 13:2015	Wired/wireless communicatio n devices	Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement 5.3 Disturbance voltage at the mains terminals in the frequency range 150 kHz to 30 MHz 5.6 Measurement of disturbance power of associated equipment (video recorders excluded) in the frequency range 30 MHz to 1 GHz 5.7 Measurement of radiation in the frequency range 30 MHz to 1 GHz at 3 m	CE : 0.15 MHz ~ 2.15 GHz DP : 30 MHz ~ 1 GHz RE : 30 MHz ~ 1 GHz RP : 0.9 GHz ~ 18 GHz	BS-2	N
CISPR 14-1:2020	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances electric tools and similar apparatus - Part 1: Emission	CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DP : 30 MHz ~ 300 MHz RE : 9 kHz ~ 6 GHz	BS-1	N
CISPR 14-1:2020	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1 : Emission	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 6 GHz DCE : 150 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DP : 30 MHz ~ 300 MHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CISPR 14-2:2020	Electrical machinery for households	Electromagnetic Compatibility - Requirements for Household Appliances Electric Tools and Similar Apparatus - Part 2: Immunity - Product Family Standard	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 230 MHz, 3 V V-DIP : 16 A per phase or less	BS-1	N
CISPR 14-2:2020	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2 : Immunity - Product family standard	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 230 MHz, 3 V V-DIP : ≤75 A	BS-2	N
CISPR 15:2018	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment 〈exception〉 4.5.2 Table 8 - Radiated disturbance limits in the frequency range 9 kHz to 30 MHz (loop diameter : 3 m and 4 m)	RE : 9 kHz ~ 1 GHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz	BS-1	N
CISPR 15:2018	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment 〈Exception〉 4.5.2 Table 8 - Radiated disturbance limits in the frequency range 9 kHz to 30 MHz (loop diameter : 3 m and 4 m)	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 1 GHz MFE : 9 kHz ~ 30 MHz	BS-2	N
CISPR 15:2018	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment 〈Exception〉 4.2 Insertion loss 4.4.1 Table 3a - Radiated disturbance limits in the frequency range 9 kHz to 30 MHz (loop diameter : 3 m and 4 m)	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 1 GHz MFE : 9 kHz ~ 30 MHz	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CISPR 22:2008	Wired/wireless communication devices	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-2	N
CISPR 24:2015	Wired/wireless communication devices	Information technology equipment - Immunity characteristics - Limits and methods of measurement	ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 3 V/m EFT : ±1 kV Surge : ±4 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 1 A/m V-DIP : ≤75 A SPL : 0.15 MHz ~ 1 GHz	BS-2	N
CISPR 25 Ed.4.0:2016	Wired/wireless communication devices	Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of on-board receivers 〈Exception〉 6 Measurement of components and modules	0.15 MHz ~ 2.5 GHz	BS-5	N
CISPR 25 Ed5.0:2021	Automobile parts	Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limit and methods of measurement for the protection of on-board receivers 〈Exception〉 6.6 Radiated emissions from components/modules - TEM cell method	CE Voltage Method : 0.15 MHz ~ 108 MHz CE Current Method : 0.15 MHz ~ 245 MHz RE(ALSE) : 0.15 MHz ~ 5 925 GHz	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CISPR 25:2016	Wired/wireless communication devices	Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limit and methods of measurement for the protection of on-board receivers 〈Exception〉 5 Measurement of emissions received by an antenna on the same vehicle 6.6 Radiated emissions from components/modules - TEM cell method 6.7 Radiated emissions from components/modules - Strip line method	CE-V : 150 kHz ~ 108 MHz CE-S : 150 kHz ~ 245 MHz RE : 150 kHz ~ 2.5 GHz	BS-2	Y
CISPR 25:2016	Wired/wireless communication devices	Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limit and methods of measurement for the protection of on-board receivers 〈Exceptions〉 5 Measurement of emissions received by an antenna on the same vehicle 6.6 Radiated emissions from components/modules - TEM cell method 6.7 Radiated emissions from components/modules - Strip line method	CE-V : 150 kHz ~ 108 MHz CE-S : 150 kHz ~ 245 MHz RE : 150 kHz ~ 2.5 GHz	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CISPR 25:2021	Wired/wireless communication devices	Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limit and methods of measurement for the protection of on-board receivers 〈Exception〉 5 Measurement of emissions received by an antenna on the same vehicle 6.6 Radiated emissions from components/modules - TEM cell method 6.7 Radiated emissions from components/modules - Strip line method	CE-V : 150 kHz ~ 108 MHz CE-S : 150 kHz ~ 245 MHz RE : 150 kHz ~ 5.925 GHz	BS-2	N
CISPR 32:2012	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Emission requirements	CE(power ports) : 150 kHz ~ 30 MHz CE(signal ports) : 150 MHz ~ 2.15 GHz RE : 30 MHz ~ 6 GHz	BS-1	N
CISPR 32:2015+AMD1:2019	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Emission requirements	CE(power ports) : 150 kHz ~ 30 MHz CE(signal ports) : 150 MHz ~ 2.15 GHz RE : 30 MHz ~ 6 GHz	BS-2	N
CISPR 32:2015+AMD1:2019	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Emission requirements	CE(power ports) : 150 kHz ~ 30 MHz CE(signal ports) : 150 MHz ~ 2.15 GHz RE : 30 MHz ~ 6 GHz	BS-6	N
CISPR 32:2015+AMD1:2019 CSV	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Emission requirements	CE(power ports) : 150 kHz ~ 30 MHz CE(signal ports) : 150 MHz ~ 2.15 GHz RE : 30 MHz ~ 6 GHz	BS-1	N
CISPR 35:2016	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Immunity requirements	ESD : ±8 kV RS: 80 MHz ~ 5 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 1 A/m V-DIP : ≤ 75 A SPL : 0.15 MHz ~ 1 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CISPR 35:2016	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Immunity requirements	ESD : ±8 kV RS : 80 MHz ~ 5 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 1 A/m V-DIP : ≤ 75 A SPL : 0.15 MHz ~ 1 GHz	BS-1	N
CISPR 35:2016	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Immunity requirements	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±4 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 1 A/m V-DIP : < 5 %, 0.5 cycle 70 %, 25/30 cycles (50/60) Hz Voltage interruptions : < 5 %, 250/300 cycles (50/60) Hz SPL : 0.15 MHz ~ 1 GHz	BS-6	N
DMFC 2-20-30:2014	Wired/wireless communication devices	Electromagnetic waves protection facility designing standard 〈Exception〉 Long Pulse PCI test	Frequency range : 10 kHz ~ 1 GHz(SE), 100 kHz ~ 1 GHz(CWI) (PCI) : Short pulse 5 kA, Intermediate pulse 250 A	BS-2	Y
ECE R-10.04:2012+A2:2013	Wired/wireless communication devices	Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility 〈Exception〉 Annex 4 : Method of Measurement of Radiated Broadband Electromagnetic Emissions from Vehicles Annex 5 : Method of Measurement of Radiated Narrowband Electromagnetic Emissions from Vehicles Annex 6 : Method of Testing for Immunity of Vehicles to Electromagnetic Radiation	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz BCI : 20 MHz ~ 400 MHz, 60 mA RI : 80 MHz ~ 2 GHz, 30 V/m TI : -450 V ~ 150 V TE : 1 000 ns ~ 1 000 ms EFT : ±2 KV Surge : ±2 KV H/F : ≤64 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ECE R-10.05:2014	Wired/wireless communication devices	Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility Annex 4 : Method of measuring broadband electromagnetic disturbances generated by vehicles Annex 5 : Method of measuring narrowband electromagnetic disturbances generated by vehicles Annex 6 : Method of testing vehicle immunity to electromagnetic radiation	RE : 30 MHz ~ 1 GHz RI : 80 MHz ~ 2 GHz, 30 V/m	BS-5	N
ECE R-10.05:2014	Wired/wireless communication devices	Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility 〈Exception〉 Annex 4 : Method of measuring broadband electromagnetic disturbances generated by vehicles Annex 5 : Method of measuring narrowband electromagnetic disturbances generated by vehicles Annex 6 : Method of testing vehicle immunity to electromagnetic radiation	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz BCI : 20 MHz ~ 400 MHz, 60 mA RI : 80 MHz ~ 2 GHz, 30 V/m TI : -450 V ~ 150 V TE : 1 000 ns ~ 1 000 ms EFT : ±2 kV Surge : ±2 kV (2-40) Harmonic Flicker : Single phase ≤16 A 3-phase per phase ≤75 A	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ECE R-10.05:2014	Wired/wireless communication devices	Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility 〈Exception〉 Annex 4 : Method of measuring broadband electromagnetic disturbances generated by vehicles Annex 5 : Method of measuring narrowband electromagnetic disturbances generated by vehicles Annex 6 : Method of testing vehicle immunity to electromagnetic radiation	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz BCI : 20 MHz ~ 400 MHz, 60 mA RI : 80 MHz ~ 2 GHz, 30 V/m TI : -450 V ~ 150 V TE : 1 000 ns ~ 1 000 ms EFT : ±2 KV Surge : ±2 KV H/F : ≤64 A	BS-2	N
ECE R-116:2006+A4:2013	Wired/wireless communication devices	Uniform provisions concerning the protection of motor vehicles against unauthorized use	RE : 30 MHz ~ 1 GHz BCI : 20 MHz ~ 400 MHz, 60 mA RI : 80 MHz ~ 2 GHz, 30 V/m TI : -450 V ~ 150 V ESD : ±15 kV	BS-2	N
ECE R-97.01:2007+A3:2013	Wired/wireless communication devices	Uniform provisions concerning the approval for vehicle alarm systems (VAS) and of motor vehicles with regard to their alarm systems (AS)	RE : 30 MHz ~ 1 GHz BCI : 20 MHz ~ 400 MHz, 60 mA RI : 80 MHz ~ 2 GHz, 30 V/m TI : -450 V ~ 150 V ESD : ±15 kV	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ECSS-E-ST-20-07C Rev.1:2012	Wired/wireless communicatio n devices	Space engineering - Electromagenetic compatibility 5.4.2 CE, power leads, differential mode, 30 Hz to 100 kHz 5.4.3 CE, power and signal leads, 100 kHz to 100 MHz 5.4.4 CE, power leads, inrush current 5.4.6 RE, electric field, 30 MHz to 18 GHz 5.4.7 CS, power leads, 30 Hz to 100 kHz 5.4.8 CS, bulk cable injection, 50 kHz to 100 MHz 5.4.9 CS, power leads, transients 5.4.10 RS, magnetic field, 30 Hz to 100 kHz 5.4.11 RS, electric field, 30 MHz to 18 GHz 5.4.12 Susceptibility to electrostatic discharges	5.4.2 30 Hz to 100 kHz 5.4.3 100 kHz to 100 MHz 5.4.6 30 MHz to 18 GHz 5.4.7 30 Hz to 100 kHz 5.4.8 50 kHz to 100 MHz 5.4.10 30 Hz to 100 kHz 5.4.11 30 MHz to 18 GHz 5.4.12 30 A	BS-5	N
EN 12015:2014	Electrical machinery for industries	Electromagnetic compatibility - Product family standard for lifts, escalators and moving walks - Emission 〈Exception〉 Equipment more than rated input current 63 A	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A	BS-2	N
EN 12016:2013	Electrical machinery for industries	Electromagnetic compatibility - Product family standard for lifts, escalators and moving walks - Immunity 〈Exception〉 Equipment more than rated input current 63 A	ESD : ±15 kV RS : 80 MHz ~ 2 GHz, 30 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V V-DIP : ≤75 A	BS-2	N
EN 12895:2015	Wired/wireless communicatio n devices	Industrial trucks - Electromagnetic compatibility 〈Exception〉 5.2.4 Test of the driving system 5.3.4 Test of driving at zero speed 5.3.5 Test of the driving system at Low rotation speed	RE : 30 MHz ~ 1 GHz ESD : ±15 kV RS : 27 MHz ~ 1 GHz, 10 V/m MFS : 1 000 A/m	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 13309:2010	Electrical machinery for industries	Construction machinery - Electromagnetic compatibility of machines with internal power supply 〈Exception〉 4.2 Specifications concerning broadband electromagnetic emission radiated from construction machinery 4.3 Specifications concerning narrowband electromagnetic emission radiated from construction machinery 4.4 Specifications concerning the immunity of construction machinery to electromagnetic radiation 4.7.2 Stripline Test - TEM Cell Test	RE : 30 MHz ~ 1 GHz RI : 20 MHz ~ 2 GHz BCI : 1 MHz ~ 400 MHz ESD : ±25 kV CTI : (-600 ~ 300) V CTE : (-450 ~ 150) V	BS-2	N
EN 301 489-1 V.2.2.3(2019-11)	Wired/wireless communication devices	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for ElectroMagnetic Compatibility	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤ 75 A H/F : ≤ 75 A TI : -600 V ~ 300 V	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 301 489-1 V2.2.3 (2019-11)	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part1 : Common technical requirements; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU and the essential requirements of article 6 of Directive 2014/30/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz (2-40) Harmonic Flicker : Single phase ≤16 A 3-phase per phase ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 %, 0.5 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz TI : -600 V ~ 300 V	BS-6	N
EN 301 489-13 V1.2.1:2002	Wired/wireless communication devices	Part 13 : Specific conditions for Citizens Band (CB) radio and ancillary equipment (speech and non-speech)	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 30 A/m V-DIP : (0 ~ 100) % F/H : ≤16 A	BS-2	N
EN 301 489-15 V1.2.1:2002	Wired/wireless communication devices	Part 15 : Specific conditions for commercially for available amateur radio equipment	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 30 A/m V-DIP : (0 ~ 100) % F/H : ≤16 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 301 489-17 V3.2.4 (2020-09)	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part17 : Specific conditions for Broadband Data Transmission Systems; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz (2-40) Harmonic Flicker : Single phase ≤16 A 3-phase per phase ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 %, 0.5 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz TI : -600 V ~ 300 V	BS-6	N
EN 301 489-17 V3.2.4(2020-09)	Wired/wireless communication devices	lectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems; Harmonised Standard for ElectroMagnetic Compatibility	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤ 75 A H/F : ≤ 75 A TI : -600 V ~ 300 V	BS-1	N
EN 301 489-17:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 301 489-18 V1.3.1:2002	Wired/wireless communication devices	Part 18 : Specific conditions for Terrestrial Trunked Radio (TETRA) equipment	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 30 A/m V-DIP : (0 ~ 100) % F/H : ≤16 A	BS-2	N
EN 301 489-19:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 19: Specific conditions for Receive Only Mobile Earth Stations (ROMES) operating in the 1,5 GHz band providing data communications and GNSS receivers operating in the RNSS band (ROGNSS) providing positioning, navigation, and timing data; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N
EN 301 489-1:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU and the essential requirements of article 6 of Directive 2014/30/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 301 489-2 V2.1.1 (2019-04)	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part2 : Specific conditions for radio paging equipment; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz (2-40) Harmonic Flicker : Single phase ≤16 A 3-phase per phase ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 %, 0.5 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz TI : -600 V ~ 300 V	BS-6	N
EN 301 489-20:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 20: Specific conditions for Mobile Earth Stations (MES)used in the Mobile Satellite Services (MSS)	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N
EN 301 489-23 V1.5.1:2011	Wired/wireless communication devices	Part 23 : Specific conditions for IMT-2000 CDMA, Direct Spread (UTRA and E-UTRA) Base Station (BS) radio, repeater and ancillary equipment	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 30 A/m V-DIP : (0 ~ 100) % F/H : ≤16 A	BS-2	N
EN 301 489-24 V1.5.1:2010	Wired/wireless communication devices	Part 24 : Specific conditions for IMT-2000 CDMA Direct Spread (UTRA and E-UTRA) for Mobile and portable (UE) radio and ancillary equipment	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 30 A/m V-DIP : (0 ~ 100) % F/H : ≤16 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 301 489-25 V2.3.2:2005	Wired/wireless communication devices	Part 25 : Specific conditions for CDMA 1x spread spectrum Mobile Stations and ancillary equipment	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 30 A/m V-DIP : (0 ~ 100) % F/H : ≤16 A	BS-2	N
EN 301 489-26 V2.3.2:2005	Wired/wireless communication devices	Part 26 : Specific conditions for CDMA 1x spread spectrum Base Stations, repeaters and ancillary equipment	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 30 A/m V-DIP : (0 ~ 100) % F/H : ≤16 A	BS-2	N
EN 301 489-27:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 27: Specific conditions for Ultra Low Power Active Medical Implants (ULP-AMI) and related peripheral devices (ULP-AMI-P) operating in the 402 MHz to 405 MHz bands; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N
EN 301 489-2:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 2: Specific conditions for radio paging equipment; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 301 489-3 V2.1.1 (2019-03)	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part3 : Specific conditions for Short - Range Devices(SRD) operating on frequencies between 9 kHz and 246 GHz; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz (2-40) Harmonic Flicker : Single phase ≤16 A 3-phase per phase ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 %, 0.5 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz TI : -600 V ~ 300 V	BS-6	N
EN 301 489-3 V2.1.1(2019-03)	Wired/wireless communication devices	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤ 75 A H/F : ≤ 75 A TI : -600 V ~ 300 V	BS-1	N
EN 301 489-33:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 33: Specific conditions for Ultra-WideBand (UWB) devices; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 301 489-34:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 34: Specific conditions for External Power Supply (EPS) for mobile phones; Harmonised Standard covering the essential requirements of article 6 of Directive 2014/30/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N
EN 301 489-3:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N
EN 301 489-4:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 4: Specific conditions for fixed radio links and ancillary equipment; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N
EN 301 489-50 V2.2.1 (2019-04)	Wired/wireless communication devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 50: Specific conditions for Cellular Communication Base Station (BS), repeater and ancillary equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 301 489-51 V2.1.1 (2019-04)	Wired/wireless communication devices	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 51: Specific conditions for Automotive, Ground based Vehicles and Surveillance Radar Devices using 24,05 GHz to 24,25 GHz, 24,05 GHz to 24,5 GHz, 76 GHz to 77 GHz and 77 GHz to 81 GHz; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	ESD: ±30 kV RS: Max. 10 V/m (80 MHz ~ 6 GHz) EFT/Burst: ±4 kV Surge: ±6 kV CS: Max. 10 V (0.15 MHz ~ 230 MHz) MFS: 30 A/m V-DIP: ≤75 A	BS-2	N
EN 301 489-52:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 52: Specific conditions for Cellular Communication Mobile and portable (UE) radio and ancillary equipment; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±8 kV RS : 80 MHz ~ 6 GHz EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz V-DIP : ≤75 A	BS-2	N
EN 301 489-5:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 5: Specific conditions for Private land Mobile Radio (PMR) and ancillary equipment (speech and non-speech) and Terrestrial Trunked Radio (TETRA); Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 301 489-6:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 6: Specific conditions for Digital Enhanced Cordless Telecommunications (DECT) equipment; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N
EN 301 489-7:2005	Wired/wireless communication devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part7 : Specific conditions for mobile and portable radio and ancillary equipment of digital cellular radio telecommunications systems (GSM and DCS)	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 2.7 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A	BS-2	N
EN 301 489-9:2017	Wired/wireless communication devices	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 9: Specific conditions for wireless microphones, similar Radio Frequency (RF) audio link equipment, cordless audio and in-ear monitoring devices; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A TI : -600 V ~ 300 V	BS-2	N
EN 50121-1:2015	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 1: General	-	BS-2	N
EN 50121-2:2015	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 2: Emission of whole railway system to the outside world	RE : 9 kHz ~ 1 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 50121-3-1:2015	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 3-1: Rolling stock - Train and complete vehicle	RE : 9 kHz ~ 1 GHz	BS-2	N
EN 50121-3-2:2016+A1:2019	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 3-2: Rolling stock - Apparatus	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz CS : 150 kHz ~ 80 MHz EFT : ±2 kV SURGE : ±2 kV	BS-2	N
EN 50121-4:2016+A1:2019	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 4: Emission and immunity of the signalling and telecommunications apparatus	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz CS : 150 kHz ~ 80 MHz EFT : ±2 kV SURGE : ±2 kV MFS : 300 A/m	BS-2	N
EN 50121-5:2017+A1:2019	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 5: Emission and immunity of the fixed power supply installations and apparatus	CE : 150 kHz ~ 30 MHz RE : 150 kHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz CS : 150 kHz ~ 80 MHz Oscillatory waves : 2.5 kV EFT : ±4 kV SURGE : ±4 kV MFS : 300 A/m	BS-2	N
EN 50130-4:2011+A1:2014	Measuring instruments	Alarm systems - Part 4 : Electromagnetic compatibility - Product family standard : Immunity requirements for components of fire, intruder hold up, CCTV, access control and social alarm systems	ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 100 MHz, 10 V V-DIP : ≤75 A	BS-2	N
EN 50130-4:2011+A1:2014	Measuring instruments	Alarm systems - Part 4 : Electromagnetic compatibility - Product family standard : Immunity requirements for components of fire, intruder hold up, CCTV, access control and social alarm systems	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 100 MHz, 10 V V-DIP : 0 %, 250 cycle 40 %, 10 cycles 70 %, 25 cycles 80 %, 250 cycles	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 50155:2017	Electrical machinery for industries	Railway applications - Rolling stock - Electronic equipment 〈Exception〉 13.4.4 Low temperature start-up test 13.4.5 Dry heat test 13.4.6 Low temperature storage test 13.4.7 Cyclic damp heat test 13.4.9 Insulation test 13.4.10 Salt mist test 13.4.11 Vibration and shock test 13.4.12 Enclosure protection test (IP code) 13.4.13 Stress screening test 13.4.14 Rapid Temperature variation test	CE: 150 kHz ~ 30 MHz RE: 9 kHz ~ 18 GHz ESD: ±30 kV RS: 80 MHz ~ 6 GHz EFT: ±4 kV Surge: ±6 kV CS: 150 kHz ~ 230 MHz MFS: 300 A/m V-DIP: ≤75 A	BS-2	N
EN 50270:2015	Measuring instruments	Electromagnetic compatibility - Electrical apparatus for the detection and measurement of combustible gases toxic gases or oxygen	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤ 75 A ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤75 A	BS-2	N
EN 50498:2010	Wired/wireless communication devices	Electromagnetic compatibility (EMC) - Product family standard for after market electronic equipment in vehicles	RE : 30 MHz ~ 1 GHz TI : -450 V ~ 150 V TE : 1 000 ns ~ 1 000 ms	BS-6	N
EN 50498:2010	Wired/wireless communication devices	Electromagnetic compatibility (EMC) - Product family standard for aftermarket electronic equipment in vehicles	RE : 30 MHz ~ 1 GHz TI : -450 V ~ 150 V TE : 1 000 ns ~ 1 000 ms	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 55011:2016+A11:2020	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement 〈exception〉 6.3.2.3 Table 10 radiation disturbance limits(distance 30 m)	RE : 150 kHz ~ 18 GHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz	BS-1	N
EN 55011:2016+A2:2020	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz (Exclusion : 30 m)	BS-6	N
EN 55011:2016+A2:2021	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement 〈Exception〉 6.3.2.3 Table 10 radiation disturbance limits(distance 30 m)	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz	BS-2	N
EN 55011:2016+A2:2021	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement 〈exception〉 6.3.2.3 Table 10 radiation disturbance limits(distance 30 m)	RE : 150 kHz ~ 18 GHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 55013:2016	Wired/wireless communication devices	Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement 5.3 Disturbance voltage at the mains terminals in the frequency range 150 kHz to 30 MHz 5.6 Measurement of the disturbance power of associated equipment (video recorders excluded) in the frequency range 30 MHz to 1 GHz 5.7 Measurement of radiation in the frequency range 30 MHz to 1 GHz at 3 m distance	CE : 150 kHz ~ 2.15 GHz DP : 30 MHz ~ 300 MHz RE : 30 MHz ~ 1 GHz RP : 0.9 GHz ~ 18 GHz	BS-2	N
EN 55014-1:2017+A11:2020	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances electric tools and similar apparatus - Part 1: Emission	CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DP : 30 MHz ~ 300 MHz RE : 9 kHz ~ 6 GHz	BS-1	N
EN 55014-1:2017+A11:2020	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1 : Emission	CE : 148.5 kHz ~ 30 MHz DCE : 148.5 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DP : 30 MHz ~ 1 GHz RE : 9 kHz ~ 1 GHz	BS-6	N
EN 55014-1:2017+A11:2020	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1 : Emission	CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DP : 30 MHz ~ 300 MHz RE : 9 kHz ~ 6 GHz	BS-2	N
EN 55014-1:2021	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances electric tools and similar apparatus - Part 1: Emission	CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DP : 30 MHz ~ 300 MHz RE : 9 kHz ~ 6 GHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 55014-2:2015	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances electric tools and similar apparatus - Part 2: Immunity - Product family standard	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 230 MHz, 3 V/m V-DIP : 16 A per phase or less	BS-1	N
EN 55014-2:2015	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2 : Immunity - Product family standard	ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 230 MHz, 3 V V-DIP : 0 %, 0.5 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz	BS-6	N
EN 55014-2:2021	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances electric tools and similar apparatus - Part 2: Immunity - Product family standard	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 230 MHz, 3 V/m V-DIP : 16 A per phase or less	BS-1	N
EN 55014-2:2021	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2 : Immunity - Product family standard	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 230 MHz, 3 V V-DIP : ≤75 A	BS-2	N
EN 55015:2013+A1:2015	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment 〈Exception〉 4.2 Insertion loss 4.4.1 Table 3a - Radiated disturbance limits in the frequency range 9 kHz to 30 MHz (loop diameter : 3 m and 4 m)	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 1 GHz MFE : 9 kHz ~ 30 MHz	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 55015:2019+A11: 2020	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment <Exception> 4.5.2 Table 8 - Radiated disturbance limits in the frequency range 9 kHz to 30 MHz (loop diameter : 3 m and 4 m)	CE: 9 kHz ~ 30 MHz RE: 9 kHz ~ 1 GHz MFE: 9 kHz ~ 30 MHz	BS-2	N
EN 55015:2019+A11: 2020	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment <exception> 4.5.2 Table 8 - Radiated disturbance limits in the frequency range 9 kHz to 30 MHz (loop diameter : 3 m and 4 m)	RE : 9 kHz ~ 1 GHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz	BS-1	N
EN 55022:2010	Wired/wireless communicatio n devices	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-2	N
EN 55024:2010+A1:2 015	Wired/wireless communicatio n devices	Information technology equipment - Immunity characteristics - Limits and methods of measurement	ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 3 V/m EFT : ±1 kV Surge : ±4 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 1 A/m V-DIP : ≤75 A SPL : 0.15 MHz ~ 1 GHz	BS-2	N
EN 55032:2015	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	CE(power ports) : 150 kHz ~ 30 MHz CE(signal ports) : 150 MHz ~ 2.15 GHz RE : 30 MHz ~ 6 GHz	BS-1	N
EN 55032:2015+A11: 2020	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	CE(power ports) : 150 kHz ~ 30 MHz CE(signal ports) : 150 MHz ~ 2.15 GHz RE : 30 MHz ~ 6 GHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 55032:2015+A1:2020	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	CE(power ports) : 150 kHz ~ 30 MHz CE(signal ports) : 150 MHz ~ 2.15 GHz RE : 30 MHz ~ 6 GHz	BS-6	N
EN 55032:2020	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	CE(power ports) : 150 kHz ~ 30 MHz CE(signal ports) : 150 MHz ~ 2.15 GHz RE : 30 MHz ~ 6 GHz	BS-2	N
EN 55035:2017+A11:2020	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Immunity Requirements	ESD : ±8 kV RS: 80 MHz ~ 5 GHz, 3 V/m EFT: ±1 kV Surge: ±2 kV CS: 150 kHz ~ 80 MHz, 3 V MFS: 1 A/m V-DIP: ≤75 A SPL: 0.15 MHz ~ 1 GHz	BS-2	N
EN 55035:2017+A11:2020	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Immunity Requirements	ESD : ±8 kV RS : 80 MHz ~ 5 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 1 A/m V-DIP : ≤ 75 A SPL : 0.15 MHz ~ 1 GHz	BS-1	N
EN 55035:2017+A11:2020	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Immunity Requirements	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±4 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 1 A/m V-DIP : < 5 %, 0.5 cycle 70 %, 25/30 cycles (50/60) Hz < 5 %, 250/300 cycles (50/60) Hz SPL : 0.15 MHz ~ 1 GHz	BS-6	N
EN 60255-22-7:2003	Measuring instruments	Electrical relays - Part 22-7 : Electrical disturbance tests for measuring relays and protection equipment - Power frequency immunity tests	DM: 150 V CM: 300 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60601-1-2:2015	Medical devices	Medical electrical equipment - Part 1-2 : General requirements for basic safety and essential performance - Collateral standard : Electromagnetic compatibility - Requirements and tests	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 28 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 6 V MFS : 30 A/m V-DIP : 0 %, 0.5 cycle (At 0 °, 45 °, 90 °, 135 °, 180 °, 225 °, 270 °and 315 °) 0 %, 1 cycles (At 0 °) 70 %, 25/30 cycles (50/60) Hz, (At 0 °) Voltage interruptions : 0 %, 250/300 cycles (50/60) Hz	BS-6	N
EN 60601-1-2:2015	Medical devices	Medical electrical equipment - Part 1-2 : General requirements for basic safety and essential performance - Collateral standard : Electromagnetic disturbances - Requirements and tests	RE : 150 kHz ~ 18 GHz CE : 9 kHz ~ 30 MHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 28 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 6 V MFS : 30 A/m V-DIP : 16 A per phase or less	BS-1	N
EN 60601-1-2:2015+A1:2021	Medical devices	Medical electrical equipment - Part 1-2 : General requirements for basic safety and essential performance - Collateral standard : Electromagnetic disturbances - Requirements and tests	RE : 150 kHz ~ 18 GHz CE : 9 kHz ~ 30 MHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 28 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 6 V MFS : 30 A/m V-DIP : 16 A per phase or less PMF : 30 kHz ~ 13.56 MHz (65 A/m)	BS-1	N
EN 60601-1-2:2015+A1:2021	Medical devices	Medical electrical equipment - Part 1-2 : General requirements for basic safety and essential performance - Collateral standard : Electromagnetic disturbances - Requirements and tests	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 28 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 6 V MFS : 30 A/m V-DIP : ≤75 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60945:2002	Electrical machinery for industries	Maritime navigation and radio communication equipment and systems - General requirements - Methods of testing and required test results 9 Electromagnetic emission 10 Immunity to electromagnetic environment	CE : 10 kHz ~ 30 MHz RE : 150 kHz ~ 2 GHz ESD : ±8 kV RS : 80 MHz ~ 2 GHz, 10 V/m EFT : ±2 kV Surge : ±1 kV CS : 150 kHz ~ 80 MHz, 10 V V-DIP : ≤75 A	BS-2	N
EN 60947-1:2014	Measuring instruments	Low-voltage switchgear and control gear - Part 5-1 : Control circuit devices and switching elements - electromechanical control circuit devices 7.3 Electro-Magnetic Compatibility	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 6 GHz MFE : 9 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 30 A/m V-DIP : ≤16 A	BS-2	N
EN 60947-1:2021	Measuring instruments	Low-voltage switchgear and controlgear- Part 1 : General rules 8.3 Electromagnetic compatibility (EMC)	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 18 GHz MFE : 9 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N
EN 61000-3-11:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-11 : Limits - Limitation of voltage change, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤75 A and subject to conditional connection	AC input current : Max. 75 A (per phase)	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61000-3-11:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-11 : Limits - Limitation of voltage change, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤75 A and subject to conditional connection	AC input current : 16 A ~ 75 A 220 V ~ 250 V (L-N)	BS-6	N
EN 61000-3-11:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-11: Limits - Limitation of voltage changes voltage fluctuations and flicker in public Low-voltage supply systems - Equipment With rated current ≤75 A and subject to conditional connection	75 A or less Pst <1.0 Plt <0.65 d(t) <3.3 % dc <3.3 % dMax. : a) <4 % , b) <6 %, c) <7 %	BS-1	N
EN 61000-3-12:2011	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-12 : Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤75 A per phase	AC input current : Max. 75 A (per phase)	BS-2	N
EN 61000-3-12:2011	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-12 : Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤ 75 A per phase	AC input current : 16 A ~ 75 A 220 V ~ 240 V (Single phase) 380 V ~ 690 V (Three phase)	BS-6	N
EN 61000-3-2:2014	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-2: Limits - Limits for Harmonic Current Emissions(equipment input current ≤16 A per phase)	16 A or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61000-3-2:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-2 : Limits - Limits for harmonic current emissions (equipment input current ≤16 A per Phase)	AC input current : ≤16 A (Single phase)	BS-6	N
EN 61000-3-2:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-2: Limits - Limits for Harmonic Current Emissions(equipment input current ≤16 A per phase)	16 A or less	BS-1	N
EN 61000-3-2:2019+A1:2021	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-2 : Limits - Limits for harmonic current emissions (equipment input current ≤16 A per Phase)	AC input current : Max. 16 A (per phase)	BS-2	N
EN 61000-3-2:2019+A1:2021	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-2: Limits - Limits for Harmonic Current Emissions(equipment input current ≤16 A per phase)	16 A or less	BS-1	N
EN 61000-3-3:2013	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-3: Limits - Limitation of voltage changes voltage fluctuations and flicker in public Low-voltage supply systems for equipment With rated current ess than or equal to 16 A per phase and not subject to conditional connection)	16 A or less Pst <1.0 Plt <0.65 d(t) <3.3 % dc <3.3 % dMax. : a) <4 % , b) <6 %, c) <7 %	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61000-3-3:2013+A1:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-3: Limits - Limitation of voltage changes voltage fluctuations and flicker in public Low-voltage supply systems for equipment With rated current ess than or equal to 16 A per phase and not subject to conditional connection)	16 A or less Pst <1.0 Plt <0.65 d(t) <3.3 % dc <3.3 % dMax. : a) <4 % , b) <6 %, c) <7 %	BS-1	N
EN 61000-3-3:2013+A2:2021	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-3: Limits - Limitation of voltage changes voltage fluctuations and flicker in public Low-voltage supply systems for equipment With rated current ess than or equal to 16 A per phase and not subject to conditional connection)	16 A or less Pst <1.0 Plt <0.65 d(t) <3.3 % dc <3.3 % dMax. : a) <4 % , b) <6 %, c) <7 %	BS-1	N
EN 61000-3-3:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-3 : Limits - Limitation of voltage change, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection	AC input current : Max. 16 A (per phase)	BS-2	N
EN 61000-3-3:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-3 : Limits - Limitation of voltage change, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection	AC input current : ≤16 A (Single phase)	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61000-4-11:2004+A1:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-11 : Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	0 %, 0.5 cycle 0 %, 1 cycle 70 %, 25/30 cycles(50/60) Hz 40 %, 10/12 cycles(50/60) Hz 80 %, 250/300 cycles(50/60) Hz 0 %, 250/300 cycles(50/60) Hz	BS-6	N
EN 61000-4-11:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-11 : Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	AC input current : Max. 16 A (per phase)	BS-2	N
EN 61000-4-11:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC). Testing and measurement techniques. Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current up to 16 A per phase.	16 A per phase or less 0 % during 1/2 cycle 0 % during 1 cycle 40 % during 10/12 cycle 70 % during 25/30 cycle 80 % during 250/300 cycle	BS-1	N
EN 61000-4-12:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-12 : Testing and measurement techniques -Ring wave immunity test	Voltage : ±4 kV	BS-2	N
EN 61000-4-13:2002+A2:2016	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-13 : Testing and measurement techniques - Harmonics and interharmonics including mains signalling at a.c. power port, low frequency immunity tests	Freq. : 16 Hz ~ 2.4 kHz Voltage : U1 x 12 %	BS-6	N
EN 61000-4-13:2016	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-13 : Testing and measurement techniques - Harmonics and interharmonics including mains signalling at a.c. power port, low frequency immunity tests	Freq. : 16 Hz ~ 2.4 kHz Voltage : U1 × 12 %	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61000-4-14:1999+A2:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-14 : Testing and measurement techniques - Voltage fluctuation immunity test for equipment with input current not exceeding 16 A per phase	Voltage : ±12 % Un	BS-2	N
EN 61000-4-14:1999+A2:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-14 : Testing and measurement techniques - Voltage fluctuation immunity test for equipment with input current not exceeding 16 A per phase	Voltage : ±12 % Un	BS-6	N
EN 61000-4-16:2016	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-16 : Testing and measurement techniques - Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz	Maximum Voltage : (Continuous field) 30 Vrms (Short persistence) 300 Vrms	BS-2	N
EN 61000-4-19:2014	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-19 : Testing and measurement techniques - Test for immunity to conducted, differential mode disturbances and signalling in the frequency range 2 kHz to 150 kHz at a.c. power ports	LFCS: (2 to 150) kHz, 20 V	BS-2	N
EN 61000-4-27:2000+A1:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-27 : Testing and measurement techniques -Unbalance, immunity test for equipment with input current not exceeding 16 A per phase	AC input current : Max. 16 A (per phase)	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61000-4-28:2000+A2:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-28 : Testing and measurement techniques - Variation of power frequency, immunity test for equipment with input current not exceeding 16 A per phase	AC input current : Max. 16 A (per phase)	BS-2	N
EN 61000-4-29:2000	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-29 : Testing and measurement techniques - Voltage dips, short interruptions and voltage variations on d.c. input power port immunity tests	DC input Voltage : 600 V	BS-2	N
EN 61000-4-2:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-2 : Testing and measurement techniques - Electrostatic discharge immunity test	Voltage : ±30 kV	BS-2	N
EN 61000-4-2:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-2 : Testing and measurement techniques - Electrostatic discharge immunity test	Voltage : ±15 kV	BS-6	N
EN 61000-4-2:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	Max. ±30 kV, 150 ㎊ /330 Ω	BS-1	N
EN 61000-4-39:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-39 : Testing and measurement techniques - Radiated fields in close proximity - immunity test	65 A/m, 300 V/m	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61000-4-3:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	Freq. : 80 MHz ~ 18 GHz E/F : 30 V/m Field Testing : Field Uniformity	BS-2	Y
EN 61000-4-3:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques - Radiated, radio-frequency, electro magnetic field immunity test	Freq. : 80 MHz ~ 18 GHz E/F : 30 V/m	BS-6	N
EN 61000-4-3:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-3: Testing and measurement techniques - Radiated radio-frequency electromagnetic field immunity test	RS : 80 MHz ~ 6 GHz, 10 V/m	BS-1	N
EN 61000-4-4:2012	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-4 : Testing and measurement techniques - Electrical fast transient/burst immunity test	Voltage : ±5.5 kV	BS-2	N
EN 61000-4-4:2012	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-4 : Testing and measurement techniques - Electrical fast transient/burst immunity test	Voltage : ±4 kV	BS-6	N
EN 61000-4-4:2012	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EFT : ±4 kV	BS-1	N
EN 61000-4-5:2014+A1:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-5 : Testing and measurement techniques - Surge immunity test	Surge : ±7 kV	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61000-4-5:2014+A1:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-5 : Testing and measurement techniques - Surge immunity test	Surge : ±4 kV	BS-6	N
EN 61000-4-5:2014+A1:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	SURGE : ±7 kV	BS-1	N
EN 61000-4-6:2014	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-6 : Testing and measurement techniques - Immunity to conducted disturbance, induced by radio-frequency fields	Freq. : 150 kHz ~ 230 MHz Voltage : 10 V	BS-6	N
EN 61000-4-6:2014	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-6 : Testing and measurement techniques - Immunity to conducted disturbance, induced by radio-frequency fields	Freq. : 150 kHz ~ 230 MHz Voltage : 30 V	BS-2	N
EN 61000-4-6:2014	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances induced by radio- frequency fields	Frequency range : 150 kHz ~ 80 MHz Voltage : Max. 10 Vrms	BS-1	N
EN 61000-4-8:2010	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-8 : Testing and measurement techniques - Power frequency magnetic field immunity test	Maximum magnetic field (continuous field) 100 A/m (Short persistence) 1 000 A/m	BS-6	N
EN 61000-4-8:2010	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-8 : Testing and measurement techniques - Power frequency magnetic field immunity test	Maximum Magnetic field : (Continuous field) 100 A/m (Short persistence) 1 000 A/m	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61000-4-8:2010	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-8: Testing and measurement techniques - power frequency magnetic field immunity test	M/F : 100 A/m	BS-1	N
EN 61000-4-9:2016	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-9 : Testing and measurement techniques - Pulse magnetic field immunity test	Pulse MFS : 1 000 A/m	BS-2	N
EN 61000-4-9:2016	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-9 : Testing and measurement techniques - Pulse magnetic field immunity test	Pulse MFS : 1 000 A/m	BS-6	N
EN 61000-4-9:2016	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-9: Testing and measurement techniques - Pulse magnetic field immunity test	Output current range : 100 A/m ~ 1 000 A/m	BS-1	N
EN 61000-6-1:2007	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 6-1: Generic standards - Immunity for residential commercial and light-industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : 16 A per phase or less	BS-1	N
EN 61000-6-1:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-1 : Generic standards - Immunity for residential, commercial and light-industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : ≤75 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61000-6-1:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-1 : Generic standards - Immunity for residential, commercial and light-industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
EN 61000-6-1:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 6-1: Generic standards - Immunity for residential commercial and light-industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : 16 A per phase or less	BS-1	N
EN 61000-6-2:2005	Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 6-2: Generic standards - Immunity for industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : 16 A per phase or less	BS-1	N
EN 61000-6-2:2019	Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-2 : Generic standards - Immunity for industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤75 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61000-6-2:2019	Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-2 : Generic standards - Immunity for industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : 0 %, 0.5 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
EN 61000-6-2:2019	Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 6-2: Generic standards - Immunity for industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : 16 A per phase or less	BS-1	N
EN 61000-6-3:2007+A1:2011	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-3 : Generic standards - Emission standard for residential, commercial and light-industrial environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz (2-40) Harmonic Flicker : Single phase ≤16 A 3-phase per phase ≤75 A RE : Max. 6 GHz	BS-6	N
EN 61000-6-3:2007+A1:2011+AC:2012	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 6-3: Generic standards - Emission standard for residential commercial and light - industrial environments	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz	BS-1	N
EN 61000-6-3:2021	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-3 : Generic standards - Emission standard for residential, commercial and light-industrial environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A RE : Max. 18 GHz	BS-2	N
EN 61000-6-3:2021	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 6-3: Generic standards - Emission standard for residential commercial and light - industrial environments	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61000-6-4:2007+A1:2011	Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 6-4: Generic standards - Emission standard for industrial environments	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz	BS-1	N
EN 61000-6-4:2019	Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-4 : Generic standards - Emission standard for industrial environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-2	N
EN 61000-6-4:2019	Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-4 : Generic standards - Emission standard for industrial environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-6	N
EN 61000-6-4:2019	Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 6-4: Generic standards - Emission standard for industrial environments	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz	BS-1	N
EN 61204-3:2018	Electrical machinery for industries	Low-voltage switch mode power supplies - Part 3: Electromagnetic compatibility(EMC)	ESD: ±8 kV RS: Max 10 V/m(80 MHz ~ 2.7 GHz) EFT/Burst: Max 2 kV Surge: Max 2 kV CS: Max 10 V(0.15 MHz ~ 230 MHz) MFS: 30 A/m V-DIP: ≤75 A	BS-2	N
EN 61326-1:2013	Measuring instruments	Electrical equipment for measurement control and laboratory use - EMC requirements - Part 1: General requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61326-1:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - General requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : Max ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
EN 61326-1:2021	Measuring instruments	Electrical equipment for measurement control and laboratory use - EMC requirements - Part 1: General requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N
EN 61326-1:2021	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - General requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz ESD : Max. ±8 kV RS : 80 MHz ~ 6 GHz, Max. 10 V/m EFT : Max. ±2 kV Surge : Max. ±2 kV CS : 150 kHz ~ 80 MHz, Max. 3 V MFS : Max. 30 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61326-2-1:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-1 : Particular requirements - Test configurations, operational conditions and performance criteria for sensitive test and measurement equipment for EMC unprotected applications	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 3 A/m V-DIP : ≤16 A	BS-2	N
EN 61326-2-1:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-1 : Particular requirements - Test configurations, operational conditions and performance criteria for sensitive test and measurement equipment for EMC unprotected applications	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N
EN 61326-2-1:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-1 : Particular requirements - Test configurations, operational conditions and performance criteria for sensitive test and measurement equipment for EMC unprotected applications	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61326-2-1:2021	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-1 : Particular requirements - Test configurations, operational conditions and performance criteria for sensitive test and measurement equipment for EMC unprotected applications	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N
EN 61326-2-2:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-2 : Particular requirements - Test configurations, operational conditions and performance criteria for portable test, measuring and monitoring equipment used in low-voltage distribution systems	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 3 A/m V-DIP : ≤16 A	BS-2	N
EN 61326-2-2:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-2 : Particular requirements - Test configurations, operational conditions and performance criteria for portable test, measuring and monitoring equipment used in low-voltage distribution systems	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61326-2-2:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-2 : Particular requirements - Test configurations, operational conditions and performance criteria for portable test, measuring and monitoring equipment used in low-voltage distribution systems	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
EN 61326-2-2:2021	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-2 : Particular requirements - Test configurations, operational conditions and performance criteria for portable test, measuring and monitoring equipment used in low-voltage distribution systems	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N
EN 61326-2-3:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3 : Particular requirements - Test configurations, operational conditions and performance criteria for transducers With integrated or remote signal conditioning	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61326-2-3:2021	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3 : Particular requirements - Test configurations, operational conditions and performance criteria for transducers With integrated or remote signal conditioning	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N
EN 61326-2-4:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-4 : Particular requirements - Test configurations, operational conditions and performance criteria for insulation monitoring devices according to IEC 61557-8 and for equipment for insulation fault location according to IEC 61557-9	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 3 A/m V-DIP : ≤16 A	BS-2	N
EN 61326-2-4:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-4 : Particular requirements - Test configurations, operational conditions and performance criteria for insulation monitoring devices according to IEC 61557-8 and for equipment for insulation fault location according to IEC 61557-9	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61326-2-4:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-4 : Particular requirements - Test configurations, operational conditions and performance criteria for insulation monitoring devices according to IEC 61557-8 and for equipment for insulation fault location according to IEC 61557-9	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
EN 61326-2-4:2021	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-4 : Particular requirements - Test configurations, operational conditions and performance criteria for insulation monitoring devices according to IEC 61557-8 and for equipment for insulation fault location according to IEC 61557-9	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N
EN 61326-2-5:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-5 : Particular requirements - Test configurations, operational conditions and performance criteria for field devices with interfaces according to IEC 61784-1	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61326-2-5:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-5 : Particular requirements - Test configurations, operational conditions and performance criteria for field devices with interfaces according to IEC 61784-1	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 3 A/m V-DIP : ≤16 A	BS-2	N
EN 61326-2-5:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-5 : Particular requirements - Test configurations, operational conditions and performance criteria for field devices with interfaces according to IEC 61784-1	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
EN 61326-2-5:2021	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-5 : Particular requirements - Test configurations, operational conditions and performance criteria for field devices with interfaces according to IEC 61784-1	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61326-2-6:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-6 : Particular requirements - In vitro diagnostic(IVD) medical equipment	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N
EN 61326-2-6:2013	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-6 : Particular requirements - In vitro diagnostic(IVD) medical equipment	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
EN 61326-2-6:2021	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-6 : Particular requirements - In vitro diagnostic(IVD) medical equipment	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N
EN 61547:2009	Lighting devices	Equipment for general lighting purposes. EMC immunity requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 3 A/m V-DIP : ≤16 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61547:2009	Lighting devices	Equipment for general lighting purposes. EMC immunity requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 70 %, 10 cycles	BS-6	N
EN 61547:2009	Lighting devices	Equipment for general lighting purposes. EMC immunity requirements	ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 3 A/m V-DIP : ≤16 A	BS-1	N
EN 62040-2:2018	Electrical machinery for industries	Uninterruptible power systems(UPS) - Part 2 : Electromagnetic compatibility (EMC) requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 30 A/m V-DIP : 16 A per phase or less	BS-1	N
EN 62040-2:2018	Electrical machinery for industries	Uninterruptible power systems(UPS) - Part 2 : Electromagnetic compatibility(EMC) requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 30 A/m V-DIP : ≤16 A per phase	BS-2	N
EN 62040-2:2018	Electrical machinery for industries	Uninterruptible power systems(UPS) - Part 2 : Electromagnetic compatibility(EMC) requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 62233:2008	Electrical machinery for households	Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure	Freq. : 1 Hz ~ 10 GHz	BS-2	N
EN 62233:2008	Electrical machinery for households	Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure	Freq. : 1 Hz ~ 10 GHz	BS-6	N
EN IEC 61851-21-2:2021	Electrical machinery for industries	Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems	RE : 2 kHz ~ 6 GHz CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz Harmonic : (2-40) Flicker : Single phas ≤16 A 3-phase per phase ≤75 A ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V M/F : 30 A/m V-DIP : 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz Transient voltage: 0~2 kV	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN IEC 61851-21-2:2021	Electrical machinery for industries	Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems	RE : 2 kHz ~ 6 GHz CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz Harmonic : (2-40) Flicker : Single phas ≤16 A 3-phase per phase ≤75 A ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V M/F : 200 A/m V-DIP : 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz Transient voltage: 0~2 kV	BS-1	N
EPRI Rev.1:1997	Electrical machinery for industries	Guidelines for electromagnetic interference testing in power plants : 7-2 Equipment conducted emissions, 30 Hz to 50 kHz 7-3 Equipment conducted emissions, 50 kHz to 400 MHz 7-4 Equipment radiated magnetic field emissions, 30 Hz to 100 kHz 7-5 Equipment radiated electric field emissions, 10 kHz to 1 GHz B-10 Continuous wave, Radiated B-11 Continuous wave, conducted B-12 Surge tests B-14 Fast transient and impulse tests B-14 Electrostatic Discharge	CE, CS : Max. 1 GHz RE, RS : Max. 18 GHz Electric field : Max. 50 V/m Magnetic field : Max. 180 dBpT Eletrostatic Voltage : Max. 30 kV EFT Voltage : Max. 5.5 kV Surge Voltage : Max. 6.6 kV	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EPRI Rev.2:2000	Electrical machinery for industries	Guidelines for electromagnetic interference testing in power plants : 5-8 Low-frequency conducted susceptibility 5-10 High-frequency conducted susceptibility 5-12 Low-frequency radiated susceptibility 5-14 High-frequency radiated susceptibility 5-15 Surge 5-16 Electrically-Fast Transient/Burst 5-17 Electrostatic Discharge 5-18 Low-frequency conducted emissions 5-20 High-frequency conducted emissions 5-22 Low-frequency radiated emissions 5-24 High-frequency radiated emissions	CE, CS : Max. 1 GHz RE, RS : Max. 18 GHz Electric field : Max. 50 V/m Magnetic field : Max. 180 dBpT Eletrostatic Voltage : Max. 30 kV EFT Voltage : Max. 5.5 kV Surge Voltage : Max. 6.6 kV	BS-2	N
EPRI Rev.3:2004	Electrical machinery for industries	Guidelines for Electromagnetic Interference Testing of Power Plant Equipment : 5-6 Low-frequency conducted susceptibility 5-8 High-frequency conducted susceptibility 5-10 Low-frequency radiated magnetic field susceptibility 5-12 High-frequency radiated electric field susceptibility 5-13 Surge 5-15 Electrically-Fast Transient/Burst 5-17 Electrostatic Discharge 5-19 Low-frequency conducted emissions 5-21 High-frequency conducted emissions 5-23 Low-frequency radiated magnetic field emissions 5-24 High-frequency radiated electric field emissions	CE, CS : Max. 1 GHz RE, RS : Max. 18 GHz Electric field : Max. 50 V/m Magnetic field : Max. 180 dBpT Eletrostatic Voltage : Max. 30 kV EFT Voltage : Max. 5.5 kV Surge Voltage : Max. 6.6 kV	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 300 386:2016	Wired/wireless communication devices	Telecommunication network equipment; ElectroMagnetic Compatibility (EMC) requirements; Harmonised Standard covering the essential requirements of the Directive 2014/30/EU	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 % ~ 100 % H/F : ≤16 A	BS-2	N
FCC part 15:2018	Electrical machinery for households, Electrical machinery for industries	Radio Frequency Device Subpart B - Unintentional Radiators	CE : 150 kHz ~ 30 MHz RE : Max. 18 GHz	BS-6	N
FCC part 15:2021	Electrical machinery for households, Electrical machinery for industries	Radio Frequency Device Subpart B - Unintentional Radiators	CE : 150 kHz ~ 30 MHz RE : Max. 18 GHz	BS-2	N
FCC part 15:2021	Electrical machinery for households, Electrical machinery for industries	Radio Frequency Device Subpart B - Unintentional Radiators 〈Exception〉 15.115 TV interface devices including cable system terminal devices	RE : 30 MHz ~ 18 GHz CE : 150 kHz ~ 30 MHz	BS-1	N
FCC part 18:2018	Electrical machinery for industries, Medical devices	Industrial, scientific and medical device	CE : 150 kHz ~ 30 MHz RE : Max. 18 GHz	BS-2	N
FCC part 18:2018	Electrical machinery for industries, Medical devices	Industrial, scientific and medical device	CE : 150 kHz ~ 30 MHz RE : Max. 18 GHz	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
GMW3097:2015	Wired/wireless communication devices	General Specification for Electrical/ Electronic Components and Subsystems, Electromagnetic Compatibility <Exception> 3.4.3 Immunity, Reverberation, Mode Tuning	BCI : 1 MHz ~ 400 MHz, 106 mA RI : 80 MHz ~ 2 GHz, 300 V/m MI : DC ~ 1 MHz, 1 275 μT CE : 530 kHz ~ 1.71 MHz RE : 530 KHz ~ 1.606 GHz ME : 100 KHz ~ 150 kHz TI : -200 V ~ 100 V TE : 1 000 ns ~ 1 000 ms ESD : ±25 kV	BS-2	N
GMW3100:2003	Wired/wireless communication devices	General Specification for Electrical/ Electronic Components and Subsystems, Electromagnetic Compatibility - Verification	-	BS-2	N
GMW3172:2012	Wired/wireless communication devices	General Specification for Electrical/Electronic Component Analytical/Development/ Validation (A/D/V) Procedures for Conformance to Vehicle Environmental, Reliability, Durability, and Performance Requirements	Freq. : 1 Hz ~ 4 kHz Voltage : -13.5 V ~ 26 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
GSFC-STD-7000A:2013	Wired/wireless communication devices	GENERAL ENVIRONMENTAL VERIFICATION STANDARD (GEVS) For GSFC Flight Programs and Projects 2.5.2.1.1 Conducted Emissions, Power Leads, Differential Mode 2.5.2.1.2 Conducted Emissions, Common Mode, Power and Signal Lines 2.5.2.1.3 Conducted Emissions, Time Domain, Transients 2.5.2.1.4 Conducted Emissions, Antenna Terminal 2.5.2.2.1 Conducted Susceptibility, Power Leads, 30 Hz to 150 kHz 2.5.2.2.2 Conducted Susceptibility, Antenna Terminals 2.5.2.2.3 Conducted Susceptibility, Transients, Power Leads 2.5.2.2.4 Conducted Susceptibility, Bulk Cable Injection, 10 kHz to 200 MHz 2.5.2.2.5 Conducted Susceptibility, Bulk Cable Injection, Impulse Excitation 2.5.2.3.1 Radiated Emissions, Magnetic Field 2.5.2.3.2 Radiated Emissions, Electric Field 2.5.2.4.1 Radiated Susceptibility, Magnetic Field 2.5.2.4.2 Radiated Susceptibility, Electric Field	2.5.2.1.1 30 Hz to 50 MHz 2.5.2.1.2 30 Hz to 200 MHz 2.5.2.1.4 10 kHz to 40 GHz 2.5.2.2.1 30 Hz to 150 kHz 2.5.2.2.2 30 Hz to 20 GHz 2.5.2.2.3 200 V, 150 ns, 10 μs 2.5.2.2.4 10 kHz to 200 MHz 2.5.2.2.5 Impulse 5 A 2.5.2.3.1 30 Hz to 100 kHz 2.5.2.3.2 200 MHz to 18 GHz 2.5.2.4.1 30 Hz to 100 kHz 2.5.2.4.2 2 MHz to 18 GHz	BS-5	N
IEC 60255-26:2013	Measuring instruments	MEASURING RELAYS AND PROTECTION EQUIPMENT - Part 26: Electromagnetic compatibility requirements	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±4 kV Surge : ±4 kV CS : 150 kHz ~ 80 MHz Low CS : 0 kHz ~ 150 kHz MFS : 300 A/m V-DIP : ≤75 A DOW : ±2.5 kV	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60533:2015	Electrical machinery for industries	Electrical and electronic installations in ships - Electromagnetic compatibility (EMC) - Ships with a metallic hull 〈Exception〉 Equipment and installation group F : non - electrical items + equipment	RE : 150 kHz ~ 2 GHz CE : 10 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 Vrms Low CS : 50 Hz ~ 10 kHz V-DIP : ≤75 A	BS-2	N
IEC 60601-1-2:2014	Medical devices	Medical electrical equipment - Part 1-2 : General requirements for basic safety and essential performance - Collateral standard : Electromagnetic disturbances - Requirements and tests	RE : 150 kHz ~ 18 GHz CE : 9 kHz ~ 30 MHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 30 A/m V-DIP : 16 A per phase or less	BS-1	N
IEC 60601-1-2:2014+A1:2020	Medical devices	Medical electrical equipment - Part 1-2 : General requirements for basic safety and essential performance - Collateral standard : Electromagnetic disturbance - Requirements and tests	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 28 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 6 V MFS : 30 A/m V-DIP : ≤75 A	BS-2	N
IEC 60601-1-2:2014+AMD1:2020	Medical devices	Medical electrical equipment - Part 1-2 : General requirements for basic safety and essential performance - Collateral standard : Electromagnetic disturbance - Requirements and tests	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 28 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 6 V MFS : 30 A/m V-DIP : 0 %, 0.5 cycle (At 0 °, 45 °, 90 °, 135 °, 180 °, 225 °, 270 °and 315 °) 0 %, 1 cycles (At 0 °) 70 %, 25/30 cycles (50/60) Hz, (At 0 °) 0 %, 250/300 cycles (50/60) Hz	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601-1-2:2014+AMD1:2020 CSV	Medical devices	Medical electrical equipment - Part 1-2 : General requirements for basic safety and essential performance - Collateral standard : Electromagnetic disturbances - Requirements and tests	RE : 150 kHz ~ 18 GHz CE : 9 kHz ~ 30 MHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 30 A/m V-DIP : 16 A per phase or less PMF : 30 kHz ~ 13.56 MHz (65 A/m)	BS-1	N
IEC 60945:2002	Electrical machinery for industries	Maritime navigation and radio communication equipment and systems - General requirements - Methods of testing and required test results 〈Exception〉 7.1 Extreme power supply 8 Durability and resistance to environmental conditions Methods of testing and required test results 11 Special purpose tests - Methods of testing and required test results 12 Safety precautions - Methods of testing and required test results(all equipment categories)	CE : 150 kHz ~ 30 MHz RE : 150 kHz ~ 2 GHz ESD : ±8 kV RS : 80 MHz ~ 2 GHz, 10 V/m EFT : ±2 kV Surge : ±1 kV CS : 150 kHz ~ 80 MHz, 10 V V-DIP : ≤75 A	BS-2	N
IEC 60947-1:2020	Electrical machinery for households, Electrical machinery for industries	Low-voltage switchgear and control gear - Part 1 : General rules	RE : 9 kHz ~ 18 GHz CE : 9 kHz ~ 30 MHz MFE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ± 2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-3-11:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-11: Limits - Limitation of voltage changes voltage fluctuations and flicker in public Low-voltage supply systems - Equipment With rated current ≤75 A and subject to conditional connection	75 A or less Pst < 1.0 Plt < 0.65 d(t) < 3.3 % dc < 3.3 % dmax : a) < 4 %, b) < 6 %, c) < 7%	BS-1	N
IEC 61000-3-11:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-11 : Limits - Limitation of voltage change, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤75 A and subject to conditional connection	AC input current : Max. 75 A (per phase)	BS-2	N
IEC 61000-3-11:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-11 : Limits - Limitation of voltage change, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤75 A and subject to conditional connection	AC input current : 16 A ~ 75 A 220 V ~ 250 V (L-N)	BS-6	N
IEC 61000-3-12:2011	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-12 : Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤75 A per phase	AC input current : Max. 75 A (per phase)	BS-2	N
IEC 61000-3-12:2011	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-12 : Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤75 A per phase	AC input current : 16 A ~ 75 A 220 V ~ 240 V (Single phase) 380 V ~ 690 V (Three phase)	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-3-2:2018	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-2 : Limits - Limits for harmonic current emissions (equipment input current ≤16 A per Phase)	AC input current : Max. 16 A (per phase)	BS-2	N
IEC 61000-3-2:2018+AMD1:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-2 : Limits - Limits for harmonic current emissions (equipment input current ≤16 A per Phase)	AC input current : ≤16 A (Single phase)	BS-6	N
IEC 61000-3-2:2018+AMD1:2020 CSV	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase)	16 A or less 40th harmonic	BS-1	N
IEC 61000-3-3:2013+A1:2017+A2:2021	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-3 : Limits - Limitation of voltage change, voltage fluctuations and flicker in public low-voltage supply systems for equipment with rated current ≤16 A per phase and not subject to conditional connection	AC input current : Max. 16 A (per phase)	BS-2	N
IEC 61000-3-3:2013+AMD1:2017+AMD2:2021 CSV	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes voltage fluctuations and flicker in public Low-voltage supply systems for equipment With rated current less than or equal to 16 A per phase and not subject to conditional connection.	16 A or less Pst < 1.0 Plt < 0.65 d(t) < 500 ms dc < 3.3 % dmax : a) < 4 %, b) < 6 %, c) < 7 %	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-3-3:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-3 : Limits - Limitation of voltage change, voltage fluctuations and flicker in public low-voltage supply systems for equipment with rated current ≤16 A per phase and not subject to conditional connection	AC input current : ≤16 A (Single phase)	BS-6	N
IEC 61000-4-10:2016	Wired/wireless communication devices	Electromagnetic compatibility (EMC) - Part 4-10 : Testing and measurement techniques - Damped oscillatory magnetic field immunity test	field strength (10 ~ 100) A/M	BS-2	N
IEC 61000-4-11:2004	Wired/wireless communication devices	Electromagnetic Compatibility (EMC): Part 4-11: Test and Measurement Techniques — Voltage dips, short interruptions and voltage variations; immunity tests	AC luput Current : Max. 16 A (per phase)	BS-2	N
IEC 61000-4-11:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-11 : Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	AC input current : Max. 16 A (per phase)	BS-2	N
IEC 61000-4-11:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips short interruptions and voltage variations immunity tests	16 A per phase or less 0 % during 1/2 cycle 0 % during 1 cycle 40 % during 10/12 cycle 70 % during 25/30 cycle 80 % during 250/300 cycle 0 % during 250/300 cycle	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-4-11:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-11 : Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	0 %, 0.5 cycle 0 %, 1 cycle 70 %, 25/30 cycles(50/60) Hz 40 %, 10/12 cycles(50/60) Hz 80 %, 250/300 cycles(50/60) Hz 0 %, 250/300 cycles(50/60) Hz	BS-6	N
IEC 61000-4-12:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-12 : Testing and measurement techniques - Ring wave immunity test	Voltage : ±4 kV	BS-2	N
IEC 61000-4-13:2002+AMD1:2009 +AMD2:2015	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-13 : Testing and measurement techniques - Harmonics and inter-harmonics including mains signalling at a.c. power port, low frequency immunity tests	Freq. : 16 Hz ~ 2.4 kHz Voltage : U1 x 12 %	BS-6	N
IEC 61000-4-13:2002+AMD1:2009+AMD2:2015 CSV	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 4-13: Testing and Measurement Techniques - Harmonics and Inter harmonics Including Mains Signalling at A.C. power Port Low Frequency Immunity Tests	9th harmonic Frequency range : 2 kHz/ 50 Hz, 2.4 kHz/ 60 Hz	BS-1	N
IEC 61000-4-13:2015	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-13 : Testing and measurement techniques - Harmonics and inter-harmonics including mains signalling at a.c. power port, low frequency immunity tests	Freq. : 16 Hz ~ 2.4 kHz Voltage : U1 × 12 %	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-4-14:1999+AMD1:2001 +AMD2:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-14 : Testing and measurement techniques - Voltage fluctuations immunity test for equipment with input current not exceeding 16 A per phase	Voltage : ±12 % Un	BS-6	N
IEC 61000-4-14:1999+AMD1:2001+AMD2:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 4-14: Testing and Measurement Techniques - Voltage Fluctuation Immunity Test	Test level : U(nom), U(nom)-10 % U(nom), U(nom)+10 % U(nom)	BS-1	N
IEC 61000-4-14:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-14 : Testing and measurement techniques - Voltage fluctuations immunity test for equipment with input current not exceeding 16 A per phase	Voltage : ±12 % Un	BS-2	N
IEC 61000-4-16:2015	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-16 : Testing and measurement techniques - Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz	Maximum Voltage : (Continuous field) 30 Vrms (Short persistence) 300 Vrms	BS-2	N
IEC 61000-4-17:1999+AMD1:2001+AMD2:2008	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 4-17: Testing and Measurement Techniques - Ripple on d.c. Input power Port Immunity Test	Output voltage range : 360 V or less	BS-1	N
IEC 61000-4-17:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-17 : Testing and measurement techniques - Ripple on d.c. input power port immunity test	DC input Voltage : 600 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-4-18:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-18 : Testing and measurement techniques -Damped oscillatory wave immunity test	Voltage(slow) : ±2.5 kV Voltage(fast) : ±4 kV	BS-2	N
IEC 61000-4-19:2014	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-19 : Testing and measurement techniques - Test for immunity to conducted, differential mode disturbances and signalling in the frequency range 2 kHz to 150 kHz at a.c. power ports	LFCS: (2 to 150) kHz, 20 V	BS-2	N
IEC 61000-4-27:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-27 : Testing and measurement techniques - Unbalance, immunity test for equipment with input current not exceeding 16 A per phase	AC input current : Max. 16 A (per phase)	BS-2	N
IEC 61000-4-28:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-28 : Testing and measurement techniques - Variation of power frequency, immunity test for equipment with input current not exceeding 16 A per phase	AC input current : Max. 16 A (per phase)	BS-2	N
IEC 61000-4-29:2000	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-29 : Testing and measurement techniques - Voltage dips, short interruptions and voltage variations on d.c. input power port immunity tests	DC input Voltage : 600 V	BS-2	N
IEC 61000-4-2:2008	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 4-2: Testing and Measurement Techniques - Electrostatic Discharge Immunity Test	Max. ±30 kV, 150 pF /330 Ω	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-4-2:2008	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-2 : Testing and measurement techniques - Electrostatic discharge immunity test	Voltage : ±30 kV	BS-2	N
IEC 61000-4-2:2008	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-2 : Testing and measurement techniques - Electrostatic discharge immunity test	Voltage : ±15 kV	BS-6	N
IEC 61000-4-2:2008	Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	Max. ±15 kV	BS-5	N
IEC 61000-4-34:2005+AMD1:2009	Wired/wireless communication devices	Electromagnetic compatibility (EMC) - Part 4-34 : Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with mains current more than 16 A per phase	0 %, 1 cycle 40 %, (10/12) cycles (50/60) Hz 70 %, (25/30) cycles (50/60) Hz 80 %, (250/300) cycles (50/60) Hz 0 %, (250/300) cycles (50/60) Hz	BS-2	N
IEC 61000-4-39:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-39 : Testing and measurement techniques - Radiated fields in close proximity - immunity test	65 A/m, 300 V/m	BS-1	N
IEC 61000-4-3:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques -Radiated radio-frequency, electromagnetic field immunity test	Freq. : 80 MHz ~ 18 GHz E/F : 30 V/m Field Testing : Field Uniformity	BS-2	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-4-3:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	RS : 80 MHz ~ 6 GHz, 10 V/m	BS-1	N
IEC 61000-4-3:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques - Radiated radio-frequency, electromagnetic field immunity test	Freq. : 80 MHz ~ 18 GHz E/F : 30 V/m	BS-6	N
IEC 61000-4-4:2012	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-4 : Testing and measurement techniques - Electrical fast transient/burst immunity test	Voltage : ±5.5 kV	BS-2	N
IEC 61000-4-4:2012	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques -Electrical fast transient/burst immunity test	EFT : ±4 kV	BS-1	N
IEC 61000-4-4:2012	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-4 : Testing and measurement techniques - Electrical fast transient/burst immunity test	Voltage : ±4 kV	BS-6	N
IEC 61000-4-5:2014+AMD1:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 4-5: Testing and Measurement Techniques - Surge Immunity Test	SURGE : ±6 kV	BS-1	N
IEC 61000-4-5:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-5 : Testing and measurement techniques - Surge Immunity test	Voltage : ±7 kV	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-4-5:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-5 : Testing and measurement techniques - Surge Immunity test	Surge : ±4 kV	BS-6	N
IEC 61000-4-6:2013	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-6 : Testing and measurement techniques - Immunity to Conducted Disturbances, Induced by radio-frequency Fields	Freq. : 150 kHz ~ 230 MHz Voltage : 30 V	BS-2	N
IEC 61000-4-6:2013	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances induced by radio-frequency fields	Frequency range : 150 kHz ~ 80 MHz Voltage : Max. 10 Vrms	BS-1	N
IEC 61000-4-6:2013	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-6 : Testing and measurement techniques - Immunity to Conducted Disturbances, Induced by radio-frequency Fields	Freq. : 150 kHz ~ 230 MHz Voltage : 10 V	BS-6	N
IEC 61000-4-8:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 4-8: Testing and Measurement Techniques - power Frequency Magnetic Field Immunity Test	M/F : 100 A/m	BS-1	N
IEC 61000-4-8:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-8 : Testing and measurement techniques - Power frequency magnetic field immunity test	Maximum magnetic field : (Continuous field) 100 A/m (Short persistence) 1 000 A/m	BS-2	N
IEC 61000-4-8:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-8 : Testing and measurement techniques - Power frequency magnetic field immunity test	Maximum magnetic field (continuous field) 100 A/m (Short persistence) 1 000 A/m	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-4-9:2016	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 4-9: Testing and Measurement Techniques - Pulse Magnetic Field Immunity Test	Output current range 100 A/m ~ 1 000 A/m	BS-1	N
IEC 61000-4-9:2016	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-9 : Testing and measurement techniques - Pulse magnetic field immunity test	Pulse MFS : 1 000 A/m	BS-2	N
IEC 61000-4-9:2016	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-9 : Testing and measurement techniques - Pulse magnetic field immunity test	Pulse MFS : 1 000 A/m	BS-6	N
IEC 61000-6-1:2016	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity standard for residential, commercial and light-industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : ≤75 A	BS-2	N
IEC 61000-6-1:2016	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 6-1: Generic Standards - Immunity for Residential, Commercial and Light-Industrial Environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V M/F : 3 A/m V-DIP : 16 A per phase or less	BS-1	N
IEC 61000-6-1:2016	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-1 : Generic standards - Immunity for residential, commercial and light-industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-6-2:2016	Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 6-2: Generic Standards - Immunity for Industrial Environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V M/F : 30 A/m V-DIP : 16 A per phase or less	BS-1	N
IEC 61000-6-2:2016	Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-2 : Generic standards - Immunity for industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤75 A	BS-2	N
IEC 61000-6-2:2016	Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-2 : Generic standards - Immunity for industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : 0 %, 0.5 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
IEC 61000-6-3:2020	Electrical machinery for households	Electromagnetic compatability (EMC) - Part 6-3: Generic Standards - Emission Standard for equipment in residential environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A	BS-2	N
IEC 61000-6-3:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatability (EMC) - Part 6-3: Generic Standards - Emission Standard for equipment in residential environments	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-6-3:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-3 : Generic standards - Emission standard for residential, commercial and light-industrial environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz (2-40) Harmonic Flicker : Single phase ≤16 A 3-phase per phase ≤75 A RE : Max. 6 GHz	BS-6	N
IEC 61000-6-4:2018	Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-4 : Generic standards - Emission standard for industrial environments	CE : 150 kHz ~ 6 GHz RE : 30 MHz ~ 6 GHz	BS-2	N
IEC 61000-6-4:2018	Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards Emission standard for industrial environments	RE: 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz	BS-1	N
IEC 61000-6-4:2018	Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-4 : Generic standards - Emission standard for industrial environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-6	N
IEC 61000-6-8:2020	Electrical machinery for industries	Electromagnetic Compatability (EMC) - Part 6-8 : Generic Standards - Emission Standard for professional equipment in commercial and light-Industrial locations	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-2	N
IEC 61204-3:2016	Electrical machinery for industries	Low voltage power supplies, d,c. output - Part 3: Electromagnetic Compatibility(EMC)	ESD: ±8 kV RS: Max 10 V/m(80 MHz ~ 2.7 GHz) EFT/Burst: Max 2 kV Surge: Max 2 kV CS: Max 10 V(0.15 MHz ~ 230 MHz) MFS: 30 A/m V-DIP: ≤75 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61326-1:2012	Measuring instruments	Electrical equipment for measurement control and laboratory use - EMC requirements - Part 1: General requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : 16 A per phase or less	BS-1	N
IEC 61326-1:2012	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1 : General requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : Max ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
IEC 61326-1:2020	Measuring instruments	Electrical equipment for measurement control and laboratory use - EMC requirements - Part 1: General requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : 16 A per phase or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61326-1:2020	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1 : General requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz ESD : Max. ±8 kV RS : 80 MHz ~ 6 GHz, Max. 10 V/m EFT : Max. ±2 kV Surge : Max. ±2 kV CS : 150 kHz ~ 80 MHz, Max. 3 V MFS : Max. 30 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-2	N
IEC 61326-2-1:2012	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-1 : Particular requirements - Test configurations, operational conditions and performance criteria for sensitive test and measurement equipment for EMC unprotected applications	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ± 8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N
IEC 61326-2-1:2012	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-1 : Particular requirements - Test configurations, operational conditions and performance criteria for sensitive test and measurement equipment for EMC unprotected applications	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61326-2-1:2020	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-1 : Particular requirements - Test configurations, operational conditions and performance criteria for sensitive test and measurement equipment for EMC unprotected applications	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-2	N
IEC 61326-2-1:2020	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-1 : Particular requirements - Test configurations, operational conditions and performance criteria for sensitive test and measurement equipment for EMC unprotected applications	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ± 8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N
IEC 61326-2-2:2012	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-2 : Particular requirements - Test configurations, operational conditions and performance criteria for portable test, measuring and monitoring equipment used in low-voltage distribution systems	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61326-2-2:2012	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-2 : Particular requirements - Test configurations, operational conditions and performance criteria for portable test, measuring and monitoring equipment used in low-voltage distribution systems	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N
IEC 61326-2-2:2020	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-2 : Particular requirements - Test configurations, operational conditions and performance criteria for portable test, measuring and monitoring equipment used in low-voltage distribution systems	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-2	N
IEC 61326-2-2:2020	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-2 : Particular requirements - Test configurations, operational conditions and performance criteria for portable test, measuring and monitoring equipment used in low-voltage distribution systems	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-1	N
IEC 61326-2-3:2012	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3 : Particular requirements - Test configurations, operational conditions and performance criteria for transducers With integrated or remote signal conditioning	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A per phase	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61326-2-3:2020	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3 : Particular requirements - Test configurations, operational conditions and performance criteria for transducers With integrated or remote signal conditioning	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A per phase	BS-1	N
IEC 61326-2-3 :2012	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3 : Particular requirements - Test configurations, operational conditions and performance criteria for transducers with integrated or remote signal conditioning	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
IEC 61326-2-4:2012	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-4 : Particular requirements - Test configurations, operational conditions and performance criteria for insulation monitoring devices according to IEC 61557-8 and for equipment for insulation fault location according to IEC 61557-9	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61326-2-4:2012	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-4 : Particular requirements - Test configurations, operational conditions and performance criteria for insulation monitoring devices according to IEC 61557-8 and for equipment for insulation fault location according to IEC 61557-9	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A per phase	BS-1	N
IEC 61326-2-4:2020	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-4 : Particular requirements - Test configurations, operational conditions and performance criteria for insulation monitoring devices according to IEC 61557-8 and for equipment for insulation fault location according to IEC 61557-9	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-2	N
IEC 61326-2-4:2020	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-4 : Particular requirements - Test configurations, operational conditions and performance criteria for insulation monitoring devices according to IEC 61557-8 and for equipment for insulation fault location according to IEC 61557-9	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A per phase	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61326-2-5:2012	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-5 : Particular requirements - Test configurations, operational conditions and performance criteria for field devices with interfaces according to IEC 61784-1	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
IEC 61326-2-5:2012	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-5 : Particular requirements - Test configurations, operational conditions and performance criteria for field devices with interfaces according to IEC 61784-1	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A per phase	BS-1	N
IEC 61326-2-5:2020	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-5 : Particular requirements - Test configurations, operational conditions and performance criteria for field devices with interfaces according to IEC 61784-1	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A	BS-2	N
IEC 61326-2-5:2020	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-5 : Particular requirements - Test configurations, operational conditions and performance criteria for field devices with interfaces according to IEC 61784-1	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A per phase	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61326-2-6:2012	Measuring instruments	Electrical equipment for measurement control and laboratory use - EMC requirements - Part 2-6: Particular requirements - In vitro diagnostic (IVD) medical equipment	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 28 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A per phase	BS-1	N
IEC 61326-2-6:2012	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-6 : Particular requirements - In vitro diagnostic(IVD) medical equipment	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
IEC 61326-2-6:2020	Measuring instruments	Electrical equipment for measurement control and laboratory use - EMC requirements - Part 2-6: Particular requirements - In vitro diagnostic (IVD) medical equipment	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 28 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤16 A per phase	BS-1	N
IEC 61547:2020	Lighting devices	Equipment for general lighting purposes - EMC immunity requirements	ESD : ±15 kV RS : 80 MHz ~ 1 GHz EFT : ±1 kV SURGE : ±4 kV CS : 150 kHz ~ 80 MHz M/F : 3 A/m V-DIP : 16 A per phase or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61547:2020	Lighting devices	Equipment for general lighting purposes - EMC immunity requirements	ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : ≤75 A	BS-2	N
IEC 61547:2020	Lighting devices	Equipment for general lighting purposes - EMC immunity requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 70 %, 10 cycles	BS-6	N
IEC 61851-21-2:2018	Electrical machinery for industries	Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems	RE : 2 kHz ~ 6 GHz CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz Harmonic : (2-40) Flicker : Single phas ≤16 A 3-phase per phase ≤75 A ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V M/F : 200 A/m V-DIP : 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz Transient voltage: 0~2 kV	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61851-21-2:2018	Electrical machinery for industries	Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems	RE : 2 kHz ~ 6 GHz CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz Harmonic : (2-40) Flicker : Single phas ≤16 A 3-phase per phase ≤75 A ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V M/F : 30 A/m V-DIP : 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz Transient voltage: 0~2 kV	BS-6	N
IEC 62003:2020	Wired/wireless communication devices	Nuclear power plants - Instrumention, control and electrical power systems - Requirements for electromagnetic compatibility testing	CE :150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±15 kV RS : 10 V/m EFT : ±4 kV Surge : ±2 kV CS : 10 V MFS : 10 A/m Pulse MFS : 100 A/m Damped oscillatory MFS : 10 A/m V-dip ≤16 A or V-dip 〉16 A Ring Wave : ±2 kV Power Frequency harmonics : Fre. 16 Hz ~ 2.4 kHz Voltage U1 × 12 % Voltage fluctuation : ±12 % Low CS : 10 V (continuous) 100 V (short) Ripple : 10 % Damped oscillatory wave : 2 kV (slow) 2 kV (fast) Power freq. variation : ±4 %, -6 %	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62040-2:2016	Electrical machinery for industries	Uninterruptible power systems(UPS) - Part 2 : Electromagnetic compatibility (EMC) requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 30 A/m V-DIP : 16 A per phase or less	BS-1	N
IEC 62040-2:2016	Electrical machinery for industries	Uninterruptible power systems(UPS) - Part 2 : Electromagnetic compatibility(EMC) requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 30 A/m V-DIP : V-DIP : ≤16 A per phase	BS-2	N
IEC 62040-2:2016	Electrical machinery for industries	Uninterruptible power systems(UPS) - Part 2 : Electromagnetic compatibility(EMC) requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m	BS-6	N
IEC 62052-11:2020	Wired/wireless communication devices	Electricity metering equipment - General requirements, tests and test conditions - Part 11 : Metering equipment(9.3 Electromagnetic compatibility (EMC) 〈Except〉 9.3.12 External static magnetic fields	CE :150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±15 kV RS : 30 V/m EFT : ±4 kV Surge : ±4 kV CS : 10 V MFS : 400 A/m V-dip ≤16 A or V-dip 〉16 A Ring Wave : ±4 kV Damped oscillatory wave : ±2.5 kV DM CS : 3 A DC-dip : 100 %, 60 %, 30 %	BS-2	N
IEC 62233:2005	Electrical machinery for households	Measurement methods for electromagnetic fields of household appliances and similar apparatus With regard to human exposure	Frequency range : 10 Hz ~ 400 kHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62233:2005	Electrical machinery for households	Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure	Freq. : 1 Hz ~ 400 kHz	BS-2	N
IEC 62233:2005	Electrical machinery for households	Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure	Freq. : 1 Hz ~ 10 GHz	BS-6	N
IEC 62236-1:2018	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 1: General	-	BS-2	N
IEC 62236-2:2018	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 2: Emission of whole railway system to the outside world	RE : 9 kHz ~ 1 GHz	BS-2	N
IEC 62236-3-1:2018	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 3-1: Rolling stock -Train and complete vehicle	RE : 9 kHz ~ 1 GHz	BS-2	N
IEC 62236-3-2:2018	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 3-2: Rolling stock - Apparatus	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz CS : 150 kHz ~ 80 MHz EFT : ±2 kV SURGE : ±2 kV	BS-2	N
IEC 62236-4:2018	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 4: Emission and immunity of the signalling and telecommunications apparatus	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz CS : 150 kHz ~ 80 MHz EFT : ±2 kV SURGE : ±2 kV MFS : 300 A/m	BS-2	N
IEC 62236-5:2018	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 5: Emission and immunity of the fixed power supply installations and apparatus	CE : 150 kHz ~ 30 MHz RE : 150 kHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz CS : 150 kHz ~ 80 MHz Oscillatory waves : 2.5 kV EFT : ±4 kV SURGE : ±4 kV MFS : 300 A/m	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62920:2017	Electrical machinery for industries	Photovoltaic power generating systems - EMC requirements and test methods for power conversion equipment	CE: 150 kHz ~ 30 MHz RE: 30 MHz ~ 1 GHz ESD: ±8 kV RS: 80 MHz ~ 6 GHz EFT: ±1 kV Surge: ±2 kV CS: 150 kHz ~ 80 MHz MFS: 3 A/m V-DIP: ≤75 A	BS-2	N
IEC CISPR 14-1:2016	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1 : Emission	CE : 148.5 kHz ~ 30 MHz RE : 9 kHz ~ 1 GHz DCE : 150 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DP : 30 MHz ~ 300 MHz	BS-6	N
IEC CISPR 14-2:2015	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2 : Immunity - Product family standard	ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 230 MHz, 3 V V-DIP : 0 %, 0.5 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz	BS-6	N
IEC CISPR 16-1-1:2015	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-1 : Radio disturbance and immunity measuring apparatus - Measuring apparatus	Freq. : 9 kHz ~ 18 GHz	BS-2	N
IEC CISPR 16-1-2:2014	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-2 : Radio disturbance and immunity measuring apparatus - Coupling devices for conducted disturbance measurements	Freq. : 9 kHz ~ 1 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC CISPR 16-1-3:2016	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-3 : Radio disturbance and immunity measuring apparatus - Ancillary equipment - Disturbance power	Freq. : 30 MHz ~ 1 GHz	BS-2	N
IEC CISPR 16-1-4:2019/AMD1:2020	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-4 : Radio disturbance and immunity measuring apparatus - Ancillary equipment - Antennas and test sites for radiated disturbance measurements	Freq. : 9 kHz ~ 18 GHz	BS-2	Y
IEC CISPR 16-1-5:2016	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-5 : Radio disturbance and immunity measuring apparatus - Specifications and validation procedures for CALTS and REFTS from 30 MHz to 1 000 MHz	Freq. : 30 MHz ~ 1 GHz	BS-2	N
IEC CISPR 16-2-1:2017	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-1 : Methods of measurement of disturbances and immunity - Conducted disturbance measurements	Freq. : 9 kHz ~ 1 GHz	BS-2	N
IEC CISPR 16-2-2:2010	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-2 : Methods of measurement of disturbances and immunity - Measurement of disturbance power	Freq. : 30 MHz ~ 1 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC CISPR 16-2-3:2016	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-3 : Methods of measurement of disturbances and immunity - Radiated disturbance measurements	Freq. : 9 kHz ~ 18 GHz	BS-2	N
IEC CISPR 16-2-4:2003	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-4 : Methods of measurement of disturbances and immunity - Immunity measurements	Freq. : 9 kHz ~ 18 GHz	BS-2	N
IEC CISPR 16-3:2015	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 3 : CISPR technical reports	-	BS-2	N
IEC CISPR 16-4-1:2009	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 4-1 : Uncertainty, statistics and limit modeling - Uncertainties in standardized EMC tests	-	BS-2	N
IEC CISPR 16-4-2:2014	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 4-2 : Uncertainty, statistics and limit modeling -Measurement instrumentation uncertainty	-	BS-2	N
IEC CISPR 16-4-3:2007	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 4-3 : Uncertainty, statistics and limit modeling - Statistical considerations in the determination of EMC compliance of mass-produced products	-	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC CISPR 16-4-4:2017	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods - Part 4-4 : Uncertainty, statistics and limit modeling - Statistics of complaints and a model for the calculation of limits for the protection of radio services	-	BS-2	N
IEEE 299:2006	Wired/wireless communication devices	Standard Method for Measuring the Effectiveness of Electromagnetic Shielding Enclosures	Frequency : Max. 40 GHz	BS-2	Y
IEEE 299:2006	Wired/wireless communication devices	Standard Method for Measuring the Effectiveness of Electromagnetic Shielding Enclosures	Frequency range : 9 kHz ~ 18 GHz	BS-1	N
ISO 10605:2008	Wired/wireless communication devices	Road Vehicles - Test Methods for electrical disturbances from electrostatic discharge	Voltage: ±25 kV	BS-5	N
ISO 10605:2008+A1:2014	Wired/wireless communication devices	Road vehicles - Test methods for electrical disturbances from electrostatic discharge	Voltage : ±25 kV	BS-2	N
ISO 10605:2008+A1:2014	Wired/wireless communication devices	Road vehicles - Test methods for electrical disturbances from electrostatic discharge	Voltage : ±25 kV	BS-6	N
ISO 11451-2:2015	Wired/wireless communication devices	Road vehicles — Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy Part 2: Off-vehicle radiation sources 〈Exception〉 TLS Test method 7.3.2 Vehicle in charging mode connected to the power grid 7.3.3 Vehicle in charging mode through wireless power transmission (WPT)	0.01 MHz ~ 18 GHz, 100 V/m	BS-5	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 11452-11:2010	Road vehicles component	Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy Part 11: Reverberation chamber	Freq. : 150 MHz ~ 6 GHz E/F : Max. 100 V/m	BS-2	N
ISO 11452-1:2015	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 1 : General principles and terminology	-	BS-6	N
ISO 11452-1:2015	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 1 : General principles and terminology	-	BS-2	N
ISO 11452-2:2019	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 2 : Absorber-lined shielded enclosure	Freq. : 80 MHz ~ 18 GHz E/F : 100 V/m	BS-6	N
ISO 11452-2:2019	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 2 : Absorber-lined shielded enclosure	Freq. : 80 MHz ~ 18 GHz E/F : 200 V/m	BS-2	N
ISO 11452-3:2016	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 3: Transverse electromagnetic (TEM) cell	Freq. : 10 kHz ~ 200 MHz E/F : 200 V/m	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 11452-4:2020	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 4 : Harness excitation methods	BCI : 1 MHz ~ 400 MHz, 200 mA TWC : 400 MHz ~ 3 GHz, 33 dBm	BS-6	N
ISO 11452-4:2020	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 4 : Harness excitation methods	BCI : 100 kHz ~ 400 MHz, 200 mA TWC : 400 MHz ~ 3 GHz, 33 dBm	BS-2	N
ISO 11452-7:2003+A1:2013	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 7 : Direct radio frequency (RF) power injection	Freq. : 1 MHz ~ 400 MHz Power : 0.5 W	BS-2	N
ISO 11452-8:2015	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 8 : Immunity to magnetic fields	Freq. : DC 15 Hz ~ 150 kHz MFS : DC 3 000 A/m, AC 1 000 A/m	BS-6	N
ISO 11452-8:2015	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 8 : Immunity to magnetic fields	Freq. : DC, 15 Hz ~ 150 kHz MFS : DC 25 mT, AC 3 000 A/m	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 11452-9 Ed2.0:2021	Automobile parts	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 9 : Portable transmitters <Exception> 8.3.3.2 Testing with broadband sleeve antenna 8.3.3.3 Testing with sleeve 8.3.3.6 Testing with HF broadband sleeve antenna	Frequency range : 142 MHz ~ 6 GHz	BS-6	N
ISO 11452-9:2012	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 9 : Portable transmitters	Freq. : 26 MHz ~ 5.85 GHz	BS-6	N
ISO 11452-9:2012	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 9: Portable transmitters	Freq. : 26 MHz ~ 5.85 GHz	BS-2	N
ISO 11452-9:2021	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 9 : Portable transmitters	Freq. : 26 MHz ~ 5.85 GHz	BS-2	N
ISO 16750-2:2012	Wired/wireless communication devices	Road vehicles - Environmental conditions and testing for electrical and electronic equipment - Part 2 : Electrical loads	Freq. : 50 Hz ~ 25 kHz Voltage : -28 V ~ 202 V	BS-2	N
ISO 16750-2:2012	Wired/wireless communication devices	Road vehicles - Environmental conditions and testing for electrical and electronic equipment - Part 2 : Electrical loads	Freq. : 50 Hz ~ 25 kHz Voltage : -28 V ~ 202 V	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 7637-1:2015	Wired/wireless communication devices	Road vehicles - Electrical disturbances from conduction and coupling - Part 1 : Definitions and general considerations	-	BS-6	N
ISO 7637-1:2015	Wired/wireless communication devices	Road vehicles - Electrical disturbances from conduction and coupling - Part 1 : Definitions and general considerations	-	BS-2	N
ISO 7637-2:2004	Wired/wireless communication devices	Road vehicles - Electrical disturbances from conduction and coupling - Part 2 : Electrical transient conduction along supply lines only	TI : -600 V ~ 300 V TE : 1 000 ns ~ 1 000 ms	BS-2	N
ISO 7637-2:2011	Wired/wireless communication devices	Road vehicles - Electrical disturbances from conduction and coupling - Part 2 : Electrical transient conduction along supply lines only	TI : -600 V ~ 300 V TE : 1 000 ns ~ 1 000 ms	BS-2	N
ISO 7637-2:2011	Wired/wireless communication devices	Road vehicles - Electrical disturbances from conduction and coupling - Part 2 : Electrical transient conduction along supply lines only	TI : -600 V ~ 300 V TE : 1 000 ns ~ 1 000 ms	BS-6	N
ISO 7637-3:2016	Wired/wireless communication devices	Road vehicles - Electrical disturbances from conduction and coupling - Part 3 : Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines	TI : -150 V ~ 150 V	BS-6	N
ISO 7637-3:2016	Wired/wireless communication devices	Road vehicles - Electrical disturbances from conduction and coupling - Part 3 : Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines	TI : -150 V ~ 150 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ITU-T K.114 (2022)	Wired/wireless communication devices	Electromagnetic Compatibility Requirements and Measurement Methods for Digital Cellular Mobile Communication Base Station Equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 40 GHz Harmonic, flicker AC Iuput Current : Max. 75 A(per phase) ESD : ±8 kV RS: 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V V-DIP : ≤ 75 A	BS-2	N
ITU-T K.116 (2019)	Wired/wireless communication devices	Electromagnetic compatibility requirements and test methods for radio telecommunications terminal equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz Harmonic, flicker AC Iuput Current : Max. 75 A(per phase) ESD : ±8 kV RS: 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V TI : -600 V ~ 300 V V-DIP : ≤ 75 A	BS-2	N
ITU-T K.123 (2022)	Wired/wireless communication devices	Electromagnetic compatibility requirements for electrical equipment in telecommunications facilities	CE : 9 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz Harmonic, flicker AC Iuput Current : Max. 75 A(per phase)	BS-2	N
ITU-T K.137 (2022)	Wired/wireless communication devices	Electromagnetic Compatibility Requirements and Measurement Methods for wireline Telecommunications Network Equipment	CE : 9 kHz ~ 30 MHz RE : 30 MHz ~ 40 GHz Harmonic, flicker AC Iuput Current : Max. 75 A(per phase) ESD : ±15 kV RS: 80 MHz ~ 6 GHz, 20 V/m EFT : ±2 kV Surge : ±4 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m V-DIP : ≤ 75 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ITU-T K.152 (2022)	Wired/wireless communication devices	Electromagnetic compatibility requirements for power equipment in telecommunications facilities	CE : 9 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz Harmonic, flicker AC luput Current : Max. 75 A(per phase) ESD : ±8 kV RS: 80 MHz ~ 6 GHz, 20 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 3 A/m, V-DIP : ≤ 75 A	BS-2	N
ITU-T Rec. K.44 (10/2019)	Wired/wireless communication devices	Resistivity tests for telecommunications equipment exposed to overvoltages and overcurrents - Basic recommendation	-	BS-2	N
JASO D 001:1994	Wired/wireless communication devices	General rules of environmental testing methods for automotive electronic equipment	CE, BCI : Max. 1 GHz RE, RS : Max. 18 GHz	BS-2	N
KS B 6945:2019	Electrical machinery for industries	Electromagnetic compatibility - Product family standard for lifts, escalators and passenger conveyors - Immunity 〈Exception〉 Equipment more than rated input current 63 A	ESD : ±15 kV RS : 80 MHz ~ 2.675 GHz, 30 V/m EFT : ±4 kV Surge : ±2.5 kV CS : 0.15 MHz ~ 80 MHz, 10 V V-DIP : ≤ 75 A	BS-2	N
KS B 6955:2019	Electrical machinery for industries	Electromagnetic compatibility - Product family standard for lifts, escalators and passenger conveyors - Emission 〈Exception〉 Equipment more than rated input current 63 A	AC input current : Max. 200 A (per phase)	BS-2	N
KS C 0262:2014	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Methods of measurement 〈Exception〉 KS C CISPR 13, KS C CISPR 15, KS C CISPR 20	CE, CS : Max. 1 GHz RE, RS : Max. 18 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 3369:2017	Electrical machinery for households	Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure	Frequency range : 10 Hz ~ 400 kHz	BS-1	N
KS C 9040-2:2017	Electrical machinery for industries	Uninterruptible power systems (UPS) - Part 2: Electromagnetic compatibility (EMC) requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz	BS-2	N
KS C 9040-2:2017	Electrical machinery for industries	Uninterruptible power systems(UPS) - Part2 : Electromagnetic compatibility(EMC) requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V	BS-6	N
KS C 9040-2:2017	Electrical machinery for industries	Uninterruptible power systems(UPS) - Part 2 : Electromagnetic compatibility(EMC) requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 30 A/m	BS-1	N
KS C 9547:2020	Lighting devices	Equipment for general lighting purposes - EMC immunity requirements	ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : 70 %, 12 cycle 0 %, 0.5 cycle	BS-6	N
KS C 9547:2020	Lighting devices	Equipment for general lighting purposes - EMC immunity requirements	ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : ≤75 A	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9547:2020 (MOD IEC 61547:2009)	Lighting devices	Equipment for general lighting purposes - EMC immunity requirements	ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : ≤75 A	BS-2	N
KS C 9610-3-11:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤75 A and subject to conditional connection	AC input current : Max 75 A (per phase)	BS-1	N
KS C 9610-3-11:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤ 75 A and subject to conditional connection	AC input current : 16 A ~ 75 A 220 V ~ 250 V (L-N)	BS-6	N
KS C 9610-3-11:2017 (MOD IEC 61000-3-11:2000)	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤75 A and subject to conditional connection	AC input current : Max. 75 A (per phase)	BS-2	N
KS C 9610-3-12:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤ 75 A per phase	AC input current : 16 A ~ 75 A 220 V ~ 240 V (Single phase) 380 V ~ 690 V (Three phase)	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9610-3-12:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-12 : Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current 〉 16 A and ≤75 A per phase	AC input current : Max. 75 A (per phase)	BS-2	N
KS C 9610-3-2:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase)	AC input current : ≤16 A (Single phase)	BS-6	N
KS C 9610-3-2:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase)	AC input current : Max 16 A (per phase)	BS-1	N
KS C 9610-3-2:2020 (MOD IEC 61000-3-2:2009)	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase)	AC input current : Max. 16 A (per phase)	BS-2	N
KS C 9610-3-3:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection	AC input current : Max 16 A (per phase)	BS-1	N
KS C 9610-3-3:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection	AC input current : ≤16 A (Single phase)	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9610-3-3:2020 (MOD IEC 61000-3-3:2013)	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection	AC input current : Max. 16 A (per phase)	BS-2	N
KS C 9610-4-11:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	0 %, 0.5 cycle 0 %, 1 cycle 70 %, 30 cycle 40 %, 12 cycle 80 %, 300 cycle 0 %, 300 cycle	BS-6	N
KS C 9610-4-11:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	AC input current : Max 16 A (per phase)	BS-1	N
KS C 9610-4-11:2020 (MOD IEC 61000-4-11:2004)	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	AC input current : Max. 16 A (per phase)	BS-2	N
KS C 9610-4-2:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	Voltage : Max. 15 kV	BS-6	N
KS C 9610-4-2:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	Voltage : Max. 30 kV	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9610-4-2:2017 (MOD IEC 61000-4-2:2008)	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	Voltage : Max. 30 kV	BS-2	N
KS C 9610-4-3:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field	Freq. : 80 MHz ~ 6 GHz E/F : 10 V/m	BS-6	N
KS C 9610-4-3:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	Freq. : 80 MHz ~ 6 GHz E/F : 10 V/m	BS-1	N
KS C 9610-4-3:2017 (MOD IEC 61000-4-3:2010)	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	Freq. : 80 MHz ~ 6 GHz E/F : 10 V/m Field Testing : Field Uniformity	BS-2	Y
KS C 9610-4-4:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	Voltage : Max. 5.5 kV	BS-1	N
KS C 9610-4-4:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	Voltage : Max. 4 kV	BS-6	N
KS C 9610-4-4:2020 (MOD IEC 61000-4-4:2012)	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	Voltage : Max. 5.5 kV	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9610-4-5:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	Voltage : ±4 kV	BS-6	N
KS C 9610-4-5:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-5: Testing and measurement techniques - Surge Immunity Test	Voltage : ±7 kV	BS-1	N
KS C 9610-4-5:2020 (MOD IEC 61000-4-5:2014)	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-5: Testing and measurement techniques - Surge Immunity Test	Voltage : ±7 kV	BS-2	N
KS C 9610-4-6:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	Freq. : 150 kHz ~ 230 MHz Voltage : 30 V	BS-1	N
KS C 9610-4-6:2020	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	Freq. : 150 kHz ~ 230 MHz Voltage : 10 V	BS-6	N
KS C 9610-4-6:2020 (MOD IEC 61000-4-6:2013)	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	Freq. : 150 kHz ~ 230 MHz Voltage : 30 V	BS-2	N
KS C 9610-4-8:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	Maximum magnetic field (continuous field) 100 A/m (Short persistence) 1 000 A/m	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9610-4-8:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-8: Testing and measurement techniques -Power frequency magnetic field immunity test	maximum Magnetic field : (continuous field) 100 A/m (short persistence) 1 000 A/m	BS-1	N
KS C 9610-4-8:2017 (MOD IEC 61000-4-8:2009)	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-8: Testing and measurement techniques -Power frequency magnetic field immunity test	Maximum Magnetic field : (Continuous field) 100 A/m (Short persistence) 1 000 A/m	BS-2	N
KS C 9610-4-9:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) — Part 4-9: Testing and measurement techniques — Impulse magnetic field immunity test	Pulse MFS : 1 000 A/m	BS-1	N
KS C 9610-4-9:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-9: Testing and measurement techniques - Impulse magnetic field immunity test	Pulse MFS : 1 000 A/m	BS-2	N
KS C 9610-4-9:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 4-9: Testing and measurement techniques - Impulse magnetic field immunity test	magnetic field : 1 000 A/m	BS-6	N
KS C 9610-6-1:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity standard for residential, commercial and light-industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : ≤75 A	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9610-6-1:2019	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity standard for residential, commercial and light-industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 70 %, 30 cycle 0 %, 300 cycle	BS-6	N
KS C 9610-6-1:2019 (MOD IEC 61000-6-1:2016)	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 6: Generic Standards - Section 1: Immunity for Residential Commercial and Light-Industrial Environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 3 A/m V-DIP : ≤75 A	BS-2	N
KS C 9610-6-2:2019	Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤75 A	BS-1	N
KS C 9610-6-2:2019	Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : 0 %, 1 cycle 40 %, 12 cycle 70 %, 30 cycle 0 %, 300 cycle	BS-6	N
KS C 9610-6-2:2019 (MOD IEC 61000-6-2:2016)	Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 6-2: Generic Standards - Immunity for Industrial Environments	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤75 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9610-6-3:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-6	N
KS C 9610-6-3:2017 (MOD IEC 61000-6-3:2011)	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A	BS-2	N
KS C 9610-6-3:2023	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz H/F : ≤75 A	BS-1	N
KS C 9610-6-4:2017	Electrical machinery for industries	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-6	N
KS C 9610-6-4:2022	Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 6-4: Generic standards - Emission standard for industrial environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-1	N
KS C 9610-6-4:2022 (MOD IEC 61000-6-4:2018)	Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 6-4: Generic standards - Emission standard for industrial environments	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-2	N
KS C 9811:2019	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment — Radio-frequency disturbance characteristics — Limits and methods of measurement	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz (Exclusion : 30 m)	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9811:2019	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment — Radio-frequency disturbance characteristics — Limits and methods of measurement 〈exception〉 6.3.2.3 Table 10 radiation disturbance limits(distance 30 m)	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz MFE : 9 kHz ~ 30 MHz	BS-1	N
KS C 9811:2019	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment — Radio-frequency disturbance characteristics — Limits and methods of measurement 〈Exception〉 6.3.2.3 Table 10 radiation disturbance limits(distance 30 m)	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz MFE : 9 kHz ~ 30 MHz	BS-2	N
KS C 9814-1:2020 (MOD CISPR 14-1:2016)	Electrical machinery for households	Electromagnetic compatibility — Requirements for household appliances, electric tools and similar apparatus — Part 1: Emission	CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DP : 30 MHz ~ 300 MHz RE : 30 MHz ~ 1 GHz	BS-2	N
KS C 9814-1:2022	Electrical machinery for households	Electromagnetic compatibility — Requirements for household appliances, electric tools and similar apparatus — Part 1: Emission	CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DP : 30 MHz ~ 300 MHz RE : 30 MHz ~ 6 GHz	BS-1	N
KS C 9814-1:2022	Electrical machinery for households	Electromagnetic compatibility — Requirements for household appliances, electric tools and similar apparatus — Part 1: Emission	CE : 148.5 kHz ~ 30 MHz DP : 30 MHz ~ 300 MHz RE : 30 MHz ~ 1 GHz	BS-6	N
KS C 9814-2:2020 (MOD CISPR 14-2:2015)	Electrical machinery for households	Electromagnetic compatibility — Requirements for household appliances, electric tools and similar apparatus — Part 2 : Immunity	ESD : ±30 kV RS : 80 MHz ~ 1 GHz, 10 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 230 MHz, 3 V MFS : 10 A/m V-DIP : ≤75 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9814-2:2022	Electrical machinery for households	Electromagnetic compatibility — Requirements for household appliances, electric tools and similar apparatus — Part 2 : Immunity	ESD : ±30 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 230 MHz, 3 V MFS : 10 A/m V-DIP : ≤75 A	BS-1	N
KS C 9814-2:2022	Electrical machinery for households	Electromagnetic compatibility — Requirements for household appliances, electric tools and similar apparatus — Part 2 : Immunity	ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 230 MHz, 3 V V-DIP : 0 %, 0.5 cycle 40 %, 12 cycle 70 %, 30 cycle	BS-6	N
KS C 9815:2019	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment 〈Exception〉 4.5.2 Table 8 - Radiated disturbance limits in the frequency range 9 kHz to 30 MHz (loop diameter : 3 m and 4 m)	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 1 GHz MFE : 9 kHz ~ 30 MHz	BS-2	N
KS C 9815:2019	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment 〈Exception〉 4.2 Insertion loss 4.4.1 Table 3a - Radiated disturbance limits in the frequency range 9 kHz to 30 MHz (loop diameter : 3 m and 4 m)	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 1 GHz MFE : 9 kHz ~ 30 MHz	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9815:2023	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment <Exception> 4.5.2 Table 8 - Radiated disturbance limits in the frequency range 9 kHz to 30 MHz (loop diameter : 3 m and 4 m)	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 1 GHz MFE : 9 kHz ~ 30 MHz	BS-1	N
KS C 9816-1-1:2020 (MOD CISPR 16-1-1:2014)	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods-Part 1-1 : Radio disturbance and immunity measuring apparatus-Measuring apparatus	Frequency range : 9 kHz ~ 18 GHz	BS-2	N
KS C 9816-1-1:2022	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods-Part 1-1 : Radio disturbance and immunity measuring apparatus-Measuring apparatus	Frequency range : 9 kHz ~ 18 GHz	BS-1	N
KS C 9816-1-2:2020 (MOD CISPR 16-1-2:2014)	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods-Part 1-2 : Radio disturbance and immunity measuring apparatus - coupling devices for conducted disturbance measurements	Frequency range : 9 kHz ~ 1.0 GHz	BS-2	N
KS C 9816-1-2:2022	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods-Part 1-2 : Radio disturbance and immunity measuring apparatus - Ancillary equipment - Conducted disturbances	Frequency range : 9 kHz ~ 1.0 GHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9816-1-3:2017 (MOD CISPR 16-1-3:2004)	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 1-3 : Radio disturbance and immunity measuring apparatus - Ancillary equipment - Disturbance power	Frequency range : 30 MHz ~ 1.0 GHz	BS-2	N
KS C 9816-1-3:2022	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 1-3 : Radio disturbance and immunity measuring apparatus - Ancillary equipment - Disturbance power	Frequency range : 30 MHz ~ 1.0 GHz	BS-1	N
KS C 9816-1-4:2020	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 1-4 : Radio disturbance and immunity measuring apparatus - Antennas and test sites for radiated disturbance measurements	Frequency range : 9 kHz ~ 18 GHz	BS-1	N
KS C 9816-1-4:2020 (MOD CISPR 16-1-4:2012)	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 1-4 : Radio disturbance and immunity measuring apparatus - Antennas and test sites for radiated disturbance measurements	Frequency range : 9 kHz ~ 18 GHz	BS-2	Y
KS C 9816-1-5:2020	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 1-5 : Radio disturbance and immunity measuring apparatus - Antenna calibration test sites for 30 MHz to 1 000 MHz	Frequency range : 30 MHz ~ 1.0 GHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9816-1-5:2020 (MOD CISPR 16-1-5:2012)	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 1-5 : Radio disturbance and immunity measuring apparatus - Antenna calibration test sites for 30 MHz to 1 000 MHz	Frequency range : 30 MHz ~ 1.0 GHz	BS-2	N
KS C 9816-2-1:2020	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 2-1 : Methods of measurement of disturbances and immunity - Conducted disturbance measurements	Frequency range : 9 kHz ~ 1.0 GHz	BS-1	N
KS C 9816-2-1:2020 (MOD CISPR 16-2-1:2014)	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 2-1 : Methods of measurement of disturbances and immunity - Conducted disturbance measurements	Frequency range : 9 kHz ~ 1.0 GHz	BS-2	N
KS C 9816-2-2:2020	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 2-2 : Methods of measurement of disturbances and immunity - Measurement of disturbance power	Frequency range : 30 MHz ~ 1.0 GHz	BS-1	N
KS C 9816-2-2:2020 (MOD CISPR 16-2-2:2010)	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 2-2 : Methods of measurement of disturbances and immunity - Measurement of disturbance power	Frequency range : 30 MHz ~ 1.0 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9816-2-3:2020	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 2-3 : Methods of measurement of disturbances and immunity - Radiated disturbance Measurements	Frequency range : 9 kHz ~ 18 GHz	BS-1	N
KS C 9816-2-3:2020 (MOD CISPR 16-2-3:2014)	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 2-3 : Methods of measurement of disturbances and immunity - Radiated disturbance Measurements	Frequency range : 9 kHz ~ 18 GHz	BS-2	N
KS C 9816-2-4:2017	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 2-4 : Methods of measurement of disturbances and immunity - Immunity measurements	Frequency range : 150 kHz ~ 18 GHz	BS-1	N
KS C 9816-2-4:2017 (MOD CISPR 16-2-4:2003)	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 2-4 : Methods of measurement of disturbances and immunity - Immunity measurements	Frequency range : 150 kHz ~ 18 GHz	BS-2	N
KS C 9816-2-5:2020	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 2-5 : In situ measurement of disturbing emissions produced by physically large equipment	Frequency range : 9 kHz ~ 18 GHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9816-2-5:2020 (MOD CISPR/TR 16-2-5:2008)	Electrical machinery for households, Electrical machinery for industries	Specification for radio disturbance and immunity measuring apparatus and methods- Part 2-5 : In situ measurement of disturbing emissions produced by physically large equipment	Frequency range : 9 kHz ~ 18 GHz	BS-2	Y
KS C 9832:2019	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Emission requirements	CE(power ports) : 150 kHz ~ 30 MHz CE(signal ports) : 150 MHz ~ 2.15 GHz RE : 30 MHz ~ 6 GHz	BS-6	N
KS C 9832:2019 (MOD CISPR 32:2015)	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Emission requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-2	N
KS C 9832:2023	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Emission requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-1	N
KS C 9835:2019	Wired/wireless communication devices	Electromagnetic Compatibility of multimedia equipment - Immunity equipments	ESD : ±8 kV RS : 80 MHz ~ 5 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 1 A/m V-DIP : ≤ 75 A SPL : 0.15 MHz ~ 1 GHz	BS-1	N
KS C 9835:2019	Wired/wireless communication devices	Electromagnetic Compatibility of multimedia equipment - Immunity requirements	ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±1 kV Surge : ±4 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 1 A/m V-DIP : < 5 %, 0.5 cycle 70 %, 30 cycle < 5 %, 300 cycle SPL : 0.15 MHz ~ 1 GHz	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9835:2019 (MOD CISPR 35:2016)	Wired/wireless communication devices	Electromagnetic Compatibility of multimedia equipment - Immunity requirements	ESD : ±8 kV RS: 80 MHz ~ 5 GHz, 3 V/m EFT: ±1 kV Surge: ±2 kV CS: 150 kHz ~ 80 MHz, 3 V MFS: 1 A/m V-DIP: ≤ 75 A SPL: 0.15 MHz ~ 1 GHz	BS-2	N
KS C 9974-10:2020	Electrical machinery for industries	Test method of EMC for arc welding equipment	RE : 30 MHz ~ 18 GHz CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V V-DIP : ≤16 A	BS-1	N
KS C 9990:2017	Wired/wireless communication devices	Vehicles and internal combustion engine driven equipment Electromagnetic compatibility (EMC) test method	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz BCI : 20 MHz ~ 400 MHz, 60 mA RI : 80 MHz ~ 2 GHz, 30 V/m TI : -450 V ~ 150 V TE : 1 000 ns ~ 1 000 ms EFT : ±2 kV Surge : ±2 kV HF : ≤ 64 A	BS-2	N
KS C 9990:2017	Wired/wireless communication devices	Vehicles and internal combustion engine driven equipment Electromagnetic compatibility (EMC) test method	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz BCI : 20 MHz ~ 400 MHz, 60 mA RI : 80 MHz ~ 2 GHz, 30 V/m TI : -450 V ~ 150 V TE : 1 000 ns ~ 1 000 ms EFT : ±2 kV Surge : ±2 kV AC input current : ≤16 A (Single phase) 16 A ~ 75 A (Three phase)	BS-6	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C CISPR 13:2011	Wired/wireless communication devices	Sound and television broadcast receivers and associated equipment-radio disturbance characteristics-limits and methods of measurement 5.3 Disturbance voltage at the mains terminals in the frequency range 150 kHz to 30 MHz 5.6 Measurement of the disturbance power of associated equipment (video recorders excluded) in the frequency range 30 MHz to 1 GHz 5.7 Measurement of radiation in the frequency range 30 MHz to 1 GHz at 3 m	CE : Max. 1 GHz RE : Max. 18 GHz	BS-2	N
KS C CISPR 22:2011	Wired/wireless communication devices	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-2	N
KS C CISPR 24:2014	Wired/wireless communication devices	Information technology equipment - Immunity characteristics - Limits and methods of measurement	ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 3 V/m EFT : ±1 kV SURGE : ±4 kV CS : 150 kHz ~ 80 MHz, 3 V MFS : 1 A/m V-DIP : ≤75 A SPL : 0.15 MHz ~ 1 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C CISPR 25:2011	Wired/wireless communication devices	Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limit and methods of measurement for the protection of on-board receivers <Exception> Section 5 : Measurement of emissions received by an antenna on the same vehicle Section 6 : 5 ~ 6. Radiated emissions form components/modules - TEM cell method, Stripline method	CE : 150 kHz ~ 108 MHz RE : 150 kHz ~ 2.5 GHz	BS-2	Y
KS C CISPR 25:2017	Wired/wireless communication devices	Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limit and methods of measurement for the protection of on-board receivers <Exception> Section 5 : Measurement of emissions received by an antenna on the same vehicle Section 6 : 5 ~ 6. Radiated emissions form components/modules - TEM cell method, Stripline method	CE-V : 150 kHz ~ 108 MHz CE-S : 150 kHz ~ 245 MHz RE : 150 kHz ~ 2.5 GHz	BS-6	N
KS C IEC 61000-4-13:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 4-13 : Testing and Measurement Techniques - Harmonics and Interharmonics Including Mains Signalling at A.C. Power Port, Low Frequency Immunity Tests	9th harmonic Frequency range : 2 kHz / 50 Hz, 2.4 kHz / 60 Hz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60255-26:2015	Measuring instruments	Measuring relays and protection equipment - Part 26: Electromagnetic compatibility requirements	RE : 30 MHz~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±4 kV Surge : ±4 kV CS : 150 kHz ~ 80 MHz Low CS : 0 kHz ~ 150 kHz MFS : 300 A/m V-DIP : ≤75 A DOW : ±2.5 kV	BS-2	N
KS C IEC 60533:2003	Electrical machinery for industries	Electrical and electronic installation in ships - Electromagnetic compatibility 〈Exception〉 Equipment and installation group F : non-electrical items + equipment	CE : 10 kHz ~ 30 MHz RE : 150 kHz ~ 2 GHz ESD : ±8 kV RS : 80 MHz ~ 2 GHz, 10 V/m EFT : ±2 kV Surge : ±1 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤75 A Low CS : 50 Hz ~ 10 kHz	BS-2	N
KS C IEC 60601-1-2:2020	Medical devices	Medical electrical equipment - Part 1-2 : General requirements for basic safety and essential performance - Collateral standard : Electromagnetic compatibility - Requirements and tests	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤75 A PMF : 30 kHz ~ 13.56 MHz (65 A/m)	BS-1	N
KS C IEC 60601-1-2:2020	Medical devices	Medical electrical equipment - Part1-2: General requirements for basic safety and essential performance - Collateral standard : Electromagnetic disturbances - Requirements and tests	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤75 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60601-1-2:2021	Medical devices	Medical electrical equipment - Part 1-2 : General requirements for basic safety and essential performance - Collateral standard : Electromagnetic compatibility - Requirements and tests	CE : 9 kHz ~ 30 MHz RE : 150 kHz ~ 18 GHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 28 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 6 V MFS : 30 A/m V-DIP : 0 %, 0.5 cycle (At 0 °, 45 °, 90 °, 135 °, 180 °, 225 °, 270 °and 315 °) 0 %, 1 cycles (At 0 °) 70 %, 25/30 cycles (50/60) Hz, (At 0 °) Voltage interruptions : 0 %, 250/300 cycles (50/60) Hz	BS-6	N
KS C IEC 60947-1:2014	Measuring instruments	Low-voltage switchgear and controlgear - Part 1 : General rules 7.3 Electromagnetic compatibility(EMC)	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 6 GHz MFE : 9 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 30 A/m V-DIP : ≤75 A	BS-2	N
KS C IEC 61000-3-12:2013	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 3 : Limits - Section 12 : Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current ＞16 A and ≤75 A per phase	AC input current : Max. 75 A (per phase)	BS-2	N
KS C IEC 61000-4-12:2006	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 4-12 : Testing and Measurement Techniques - Oscillatory Waves Immunity Test	Voltage oscillation frequency : 100 kHz ± 10 % Open-circuit voltage : 250 to 4 kV Short-circuit Current :333 A ± 10 % 12 Ω	BS-1	N
KS C IEC 61000-4-12:2008	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-12 : Testing and measurement techniques - Ring wave immunity test	Voltage : ±4 kV	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 61000-4-13:2010	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-13 : Testing and measurement techniques - Harmonics and inter harmonics including mains signalling at a.c. power port, low frequency immunity tests	Freq. : 16 Hz ~ 2.4 kHz Voltage : U1 × 12 %	BS-2	N
KS C IEC 61000-4-13:2010	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-13 : Testing and measurement techniques - Harmonics and interharmonics including mains signalling at a.c. power port, low frequency immunity tests	Freq. : 16 Hz ~ 2.4 kHz Voltage : U1 x 12 %	BS-6	N
KS C IEC 61000-4-14:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-14 : Testing and measurement techniques - Voltage fluctuation immunity test for equipment with input current not exceeding 16 A per phase	Test level : U(nom), U(nom)-10 % U(nom), U(nom)+10 % U(nom)	BS-1	N
KS C IEC 61000-4-14:2010	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-14 : Testing and measurement techniques - Voltage fluctuation immunity test for equipment with input current not exceeding 16 A per phase	Voltage : ±12 % Un	BS-6	N
KS C IEC 61000-4-14:2010	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-14 : Testing and measurement techniques - Voltage fluctuation immunity test for equipment with input current not exceeding 16 A per phase	Voltage : ±12 % Un	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 61000-4-16:2011	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 4-16 : Testing and Measurement Techniques - Test for Immunity to Conducted, Common Mode Disturbances in the Frequency Range 0 Hz to 150 kHz	Frequency range : 0 Hz ~ 150 kHz	BS-1	N
KS C IEC 61000-4-17:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic Compatibility (EMC) - Part 4-17 : Testing and Measurement Techniques - Ripple on d.c. Input Power Port Immunity Test	Output voltage range up to 360 V	BS-1	N
KS C IEC 61000-4-17:2010	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-17 : Testing and measurement techniques - Ripple on d.c. input power port immunity test	DC input current : Max. 600 V	BS-2	N
KS C IEC 61000-4-27:2014	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-27 : Testing and measurement techniques - Unbalance, immunity test	AC input current : Max. 16 A (per phase)	BS-2	N
KS C IEC 61000-4-28:2010	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility(EMC) - Part 4-28 : Testing and measurement techniques - Variation of power frequency, immunity test for equipment with input current not exceeding 16 A per phase	AC input current : Max. 16 A (per phase)	BS-2	N
KS C IEC 61326-1:2005	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : Max ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz MF : 30 A/m V-DIP : 16 A per phase or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 61326-1:2008	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : Max ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
KS C IEC 61326-1:2008	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : max. ±8 kV RS : 80 MHz ~ 6 GHz, Max. 10 V/m EFT : Max. ±2 kV Surge : Max. ±2 kV CS : 150 kHz ~ 80 MHz, Max. 3 V MFS : Max. 30 A/m V-DIP : 0 %, 0.5 cycle 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-2	N
KS C IEC 62040-2:2008	Electrical machinery for industries	Uninterruptible power systems (UPS) Part 2: Electromagnetic compatibility (EMC) requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V	BS-6	N
KS C IEC 62236-1:2011	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 1 : General	-	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 62236-2:2011	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 2 : Emission of the whole railway system to the outside world	RE : 9 kHz ~ 1 GHz	BS-2	N
KS C IEC 62236-3-1:2011	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 3 - 1 : Rolling stock - Train and complete vehicle	RE : 9 kHz ~ 1 GHz	BS-2	N
KS C IEC 62236-3-2:2011	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 3 - 2 : Rolling stock - Apparatus	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 2.5 GHz CS : 150 kHz ~ 80 MHz EFT : ±2 kV SURGE : ±2 kV	BS-2	N
KS C IEC 62236-4:2011	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 4 : Emission and immunity of the signalling and telecommunications apparatus	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 2.5 GHz CS : 150 kHz ~ 80 MHz EFT : ±2 kV SURGE : ±2 kV MFS : 300 A/m	BS-2	N
KS C IEC 62236-5:2011	Electrical machinery for industries	Railway applications - Electromagnetic compatibility - Part 5 : Emission and immunity of fixed power supply installations and apparatus	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 2.5 GHz CS : 150 kHz ~ 80 MHz EFT : ±4 kV SURGE : ±4 kV MFS : 300 A/m	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS R IEC 61851-21-2:2018	Electrical machinery for industries	Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems	RE : 2 kHz ~ 6 GHz CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz Harmonic : (2-40) Flicker : Single phas ≤16 A 3-phase per phase ≤75 A ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V M/F : 30 A/m V-DIP : 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz Transient voltage: 0~2 kV	BS-6	N
KS R IEC 61851-21-2:2018	Electrical machinery for industries	Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems	RE : 2 kHz ~ 6 GHz CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz Harmonic : (2-40) Flicker : Single phas ≤16 A 3-phase per phase ≤75 A ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V M/F : 200 A/m V-DIP : 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz Transient voltage: 0~2 kV	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS R IEC 61851-21-2:2019	Electrical machinery for industries	Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems	RE : 150 kHz ~ 6 GHz CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz (2-40) Harmonic Flicker : Single phase ≤16 A 3-phase per phase ≤75 A ESD : ±8 ㎸ RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 ㎸ SURGE : ±2 ㎸ CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz	BS-6	N
KS R ISO 11452-1:2013	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 1 : General principles and terminology	-	BS-6	N
KS R ISO 11452-1:2013	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 1 : General principles and terminology	-	BS-2	N
KS R ISO 11452-2:2013	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 2 : Absorber-lined shielded enclosure	Freq. : 80 MHz ~ 18 GHz E/F : 200 V/m	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS R ISO 11452-2:2013	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 2 : Absorber-lined shielded enclosure	Freq. : 80 MHz ~ 18 GHz E/F : 100 V/m	BS-6	N
KS R ISO 11452-4:2013	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 4 : Bulk current injection (BCI)	BCI : 1 MHz ~ 400 MHz, 200 mA TWC : 400 MHz ~ 3 GHz, 33 dBm	BS-6	N
KS R ISO 11452-4:2013	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 4 : Bulk current injection (BCI)	BCI : 1 MHz ~ 400 MHz, 200 mA TWC : 400 MHz ~ 3 GHz, 33 dBm	BS-2	N
KS R ISO 11452-8:2013	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 8: Immunity to magnetic fields	Freq. : 15 Hz ~ 150 kHz M/F : AC 3 000 A/m	BS-6	N
KS R ISO 11452-9:2012	Wired/wireless communication devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 9: Portable transmitters	Freq. : 26 MHz ~ 5.85 GHz	BS-6	N
KS R ISO 7637-1:2015	Wired/wireless communication devices	Road vehicles - Electrical disturbances from conduction and coupling - Part 1 : Definitions and general considerations	-	BS-6	N
KS R ISO 7637-1:2015	Wired/wireless communication devices	Road vehicles - Electrical disturbances from conduction and coupling - Part 1 : Definitions and general considerations	-	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS R ISO 7637-2:2015	Wired/wireless communication devices	Road vehicles - Electrical disturbances from conduction and coupling - Part 2 : Electrical transient conduction along supply lines only	TI : -600 V ~ 300 V TE : 1 000 ns ~ 1 000 ms	BS-2	N
KS R ISO 7637-2:2015	Wired/wireless communication devices	Road vehicles - Electrical disturbances from conduction and coupling - Part 2 : Electrical transient conduction along supply lines only	TI : -600 V ~ 300 V TE : 1 000 ns ~ 1 000 ms	BS-6	N
KS R ISO 7637-3:2015	Wired/wireless communication devices	Road vehicles - Electrical disturbances from conduction and coupling - Part 3 : Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines	TI : -120 V ~ 80 V	BS-6	N
KS R ISO 7637-3:2015	Wired/wireless communication devices	Road vehicles - Electrical disturbances from conduction and coupling - Part 3 : Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines	TI : -120 V ~ 80 V	BS-2	N
KS X 3124:2020	Wired/wireless communication devices	Test method of common technical EMC for radio equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤ 75 A H/F : ≤ 75 A TI : -600 V ~ 300 V	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X 3124:2020 (MOD EN 301 489-1:2017)	Wired/wireless communication devices	Test method of common technical EMC for radio equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 % ~ 100 % H/F : ≤75 A TI : -600 V ~ 300 V	BS-2	N
KS X 3125:2020	Wired/wireless communication devices	Test method of EMC for radio equipments of short-range	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤16 A TI : -600 V ~ 300 V	BS-1	N
KS X 3125:2020 (MOD EN 301 489-3:2013)	Wired/wireless communication devices	Test method of EMC for radio equipment of short-range	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 % ~ 100 % H/F : ≤75 A TI : -600 V ~ 300 V	BS-2	N
KS X 3126:2020	Wired/wireless communication devices	Test method of EMC for radio equipment of low-output for wireless data transmission system	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤16 A TI : -600 V ~ 300 V	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X 3126:2020 (MOD EN 301 489-17:2009)	Wired/wireless communication devices	Test method of EMC for radio equipment of low-output for wireless data transmission system	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 % ~ 100 % H/F : ≤75 A TI : -600 V ~ 300 V	BS-2	N
KS X 3127:2014	Wired/wireless communication devices	Test method of EMC for private land mobile radio (PMR) and ancillary equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤16 A	BS-1	N
KS X 3127:2014	Wired/wireless communication devices	Test method of EMC for private land mobile radio(PMR) and ancillary equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 % ~ 100 % H/F : ≤75 A TI : -600 V ~ 300 V	BS-2	N
KS X 3128:2014	Wired/wireless communication devices	Test method of EMC for digital enhanced cordless telecommunications(DECT) equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 % ~ 100 % H/F : ≤75 A TI : -600 V ~ 300 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X 3128:2014	Wired/wireless communication devices	Test method of EMC for digital enhanced cordless telecommunications (DECT) equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤16 A TI : -600 V ~ 300 V	BS-1	N
KS X 3130:2014	Wired/wireless communication devices	Test method of EMC for low-output radio equipment for voice and audio signal transmission	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤16 A TI : -600 V ~ 300 V	BS-1	N
KS X 3130:2014	Wired/wireless communication devices	Test method of EMC for low-output radio equipment for voice and audio signal transmission	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 % ~ 100 % H/F : ≤75 A TI : -600 V ~ 300 V	BS-2	N
KS X 3131:2014	Wired/wireless communication devices	Test method of EMC for citizen's band(CB) radio and ancillary equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 % ~ 100 % H/F : ≤75 A TI : -600 V ~ 300 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X 3131:2014	Wired/wireless communication devices	Test method of EMC for citizens' band (CB) radio and ancillary equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤16 A TI : -600 V ~ 300 V	BS-1	N
KS X 3132:2014	Wired/wireless communication devices	Test method of EMC for radio telecommunication equipment using common frequency	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤16 A TI : -600 V ~ 300 V	BS-1	N
KS X 3132:2014	Wired/wireless communication devices	Test method of EMC for radio telecommunication equipment using common frequency	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 % ~ 100 % H/F : ≤75 A TI : -600 V ~ 300 V	BS-2	N
KS X 3134 : 2014	Wired/wireless communication devices	Test method of EMC for medical radio equipment implanted in body	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 % ~ 100 % H/F : ≤75 A TI : -600 V ~ 300 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X 3136:2014	Wired/wireless communication devices	Test method of EMC for amateur radio equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤16 A TI : -600 V ~ 300 V	BS-1	N
KS X 3136:2014	Wired/wireless communication devices	Test method of EMC for amateur radio equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 % ~ 100 % H/F : ≤75 A TI : -600 V ~ 300 V	BS-2	N
KS X 3137:2014	Wired/wireless communication devices	Test method of EMC for radio paging equipment	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤16 A TI : -600 V ~ 300 V	BS-1	N
KS X 3139:2014	Wired/wireless communication devices	Test method of EMC for radio equipment for mobile satellite services	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : ≤16 A TI : -600 V ~ 300 V	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X 3139:2014	Wired/wireless communication devices	Test method of EMC for radio equipment for mobile satellite services	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 3 V/m EFT : ±1 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 3 V V-DIP : 0 % ~ 100 % H/F : ≤75 A TI : -600 V ~ 300 V	BS-2	N
KS X 3143:2020	Electrical machinery for households	Test Methods of radio disturbance for residential wireless power-transmission equipments	CE : 9 kHz ~ 30 MHz RE : 9 kHz ~ 1 GHz	BS-1	N
MIL-PRF-15733 (2007; Rev H)	Electrical materials and components	Filters and Capacitors, Radio Frequency Interference, General Specification for 4.6.8 Voltage Drop 4.6.9 Insertion Loss 4.6.10 Overload	PCI : 5 000 A or less Supply capacity : 200 A or less	BS-2	Y
MIL-STD-188-125-1:2005	Wired/wireless communication devices	High-altitude electromagnetic pulse(HEMP) protection for ground-based C4I facilities performing critical, time-urgent missions Part 1 Fixed facilities 〈Exception〉 Long pulse of Appendix B, Surface current density and Surface charge density of Appendix C in the frequency range <5 MHz	Frequency range : 10 kHz ~ 1 GHz(SE), 100 kHz ~ 1 GHz(CWI) Max applied Current(PCI) : Max. 5 000 A, ≤ 20 ns, 500 ~ 550 ns	BS-2	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-188-125-2:2005	Wired/wireless communication devices	High-altitude electromagnetic pulse(HEMP) protection for ground-based C4I facilities performing critical, time-urgent missions Part 1 Transportable Systems <Exception> Long pulse of Appendix B, AppendixD (THREAT-LEVEL ILLUMINATION TEST PROCEDURES FOR TRANSPORTABLE GROUND-BASED SYSTEMS) Surface current density and Surface charge density of Appendix C in the frequency range <5 MHz	Frequency range : 10 kHz ~ 1 GHz(SE), 100 kHz ~ 1 GHz(CWI) Max applied Current(PCI) : Max. 5 000 A, ≤ 20 ns, 500 ~ 550 ns	BS-2	Y
MIL-STD-220C:2009	Wired/wireless communication devices	Test Method Standard - Method of insertion Loss Measurement	Frequency : Max. 10GHz	BS-2	N
MIL-STD-285:1956	Wired/wireless communication devices	Attenuation Measurements for Enclosures, Electromagnetic Shielding, for Electronic Test Purposes, Method of	Frequency : Max. 10GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-461D:1993	Wired/wireless communication devices	DEPARTMENT OF DEFENSE INTERFACE STANDARD REQUIREMENTS FOR THE CONTROL OF ELECTROMAGNETIC INTERFERENCE EMISSIONS AND SUSCEPTIBILITY 5.3.1 CE101 conducted emissions power leads 30 Hz to 10 kHz 5.3.2 CE102 conducted emissions power leads 10 kHz to 10 MHz 5.3.4 CS101 conducted susceptibility power leads 30 Hz to 50 kHz 5.3.9 CS114 conducted susceptibility bulk cable injection 10 kHz to 400 MHz 5.3.10 CS115 conducted susceptibility bulk cable injection impulse excitation 5.3.11 CS116 conducted susceptibility damped sinusoidal transients 10 kHz to 100 MHz 5.3.12 RE101 radiated emissions magnetic field 30 Hz to 100 kHz 5.3.13 RE102 radiated emissions electric field 10 kHz to 18 GHz 5.3.15 RS101 radiated susceptibility magnetic field 30 Hz to 100 kHz 5.3.16 RS103 radiated susceptibility electric field 10 kHz to 40 GHz 〈Exception〉 10 kHz to 100 MHz, 200 V/m, 1 m distance	30 Hz ~ 10 kHz 10 kHz ~ 10 MHz 30 Hz ~ 50 kHz 10 kHz ~ 400 MHz Impulse 5 A 10 kHz ~ 100 MHz 30 Hz ~ 100 kHz 10 kHz ~ 18 GHz 30 Hz ~ 100 kHz 10 kHz ~ 18 GHz Max. 200 V/m	BS-5	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-461D:1993	Wired/wireless communication devices	Department of Defense Test Method Standard for Measurement 5.3.1 CE101, conducted emissions, power leads, 30 Hz to 10 kHz 5.3.2 CE102, conducted emissions, power leads, 10 kHz to 10 MHz 5.3.4 CS101, conducted susceptibility, power leads, 30 Hz to 150 kHz 5.3.9 CS114, conducted susceptibility, bulk cable injection, 10 kHz to 200 MHz 5.3.10 CS115, conducted susceptibility, bulk cable injection, impulse excitation 5.3.11 CS116, conducted susceptibility, damped sinusoidal transients, 10 kHz to 100 MHz 5.3.12 RE101, radiated emissions, magnetic field, 30 Hz to 100 kHz 5.3.13 RE102, radiated emissions, electric field, 10 kHz to 18 GHz 5.3.15 RS101, radiated susceptibility, magnetic field, 30 Hz to 100 kHz 5.3.16 RS103, radiated susceptibility, electric field, 2 MHz to 18 GHz	CE : 30 Hz ~ 10 MHz CS : 30 Hz ~ 1 GHz RE, RS : Max. 18 GHz Electric Field : Max. 50 V/m Magnetic Field : Max. 183 dBpT	BS-2	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-461E:1999	Wired/wireless communication devices	DEPARTMENT OF DEFENSE INTERFACE STANDARD REQUIREMENTS FOR THE CONTROL OF ELECTROMAGNETIC INTERFERENCE CHARACTERISTICS OF SUBSYSTEMS AND EQUIPMENT 5.4 CE101 conducted emissions power leads 30 Hz to 10 kHz 5.5 CE102 conducted emissions power leads 10 kHz to 10 MHz 5.7 CS101 conducted susceptibility power leads 30 Hz to 150 kHz 5.12 CS114 conducted susceptibility bulk cable injection 10 kHz to 200 MHz 5.13 CS115 conducted susceptibility bulk cable injection impulse excitation 5.14 CS116 conducted susceptibility damped sinusoidal transients cable and power leads 10 kHz to 100 MHz 5.15 RE101 radiated emissions magnetic field 30 Hz to 100 kHz 5.16 RE102 radiated emissions electric field 10 kHz to 18 GHz 5.18 RS101 radiated susceptibility magnetic field 30 Hz to 100 kHz 5.19 RS103 radiated susceptibility electric field 2 MHz to 40 GHz 〈Exception〉 - 2 MHz to 100 MHz, 200 V/m, 1 m distance - 5.19.4 RS103 alternative test procedures -reverberation chamber (mode-tuned)	30 Hz to 10 kHz 10 kHz to 10 MHz 30 Hz to 150 kHz 10 kHz to 200 MHz Impulse 5 A 10 kHz to 100 MHz 30 Hz to 100 kHz 10 kHz to 18 GHz 30 Hz to 100 kHz 2 MHz to 18 GHz Max. 200 V/m	BS-5	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-461E:1999	Wired/wireless communication devices	Department of Defense Interface Standard 5.4 CE101, conducted emissions, power leads, 30 Hz to 10 kHz 5.5 CE102, conducted emissions, power leads, 10 kHz to 10 MHz 5.7 CS101, conducted susceptibility, power leads, 30 Hz to 50 kHz 5.12 CS114, conducted susceptibility, bulk cable injection, 10 kHz to 200 MHz 5.13 CS115, conducted susceptibility, bulk cable injection, impulse excitation 5.14 CS116, conducted susceptibility, damped sinusoidal transients, cable and power leads, 10 kHz to 100 MHz 5.15 RE101, radiated emissions, magnetic field, 30 Hz to 100 kHz 5.16 RE102, radiated emissions, electric field, 10 kHz 18 GHz 5.18 RS101, radiated susceptibility, magnetic field, 30 Hz to 100 kHz 5.19 RS103, radiated susceptibility, electric field, 2 MHz to 18 GHz	CE : 30 Hz ~ 10 MHz CS : 30 Hz ~ 1 GHz RE, RS : Max. 18 GHz Electric Field : Max. 50 V/m Magnetic Field : Max. 183 dBpT	BS-2	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-461F: 2007	Wired/wireless communication devices	DEPARTMENT OF DEFENSE INTERFACE STANDARD REQUIREMENTS FOR THE CONTROL OF ELECTROMAGNETIC INTERFERENCE CHARACTERISTICS OF SUBSYSTEMS AND EQUIPMENT 5.4 CE101 conducted emissions power leads 30 Hz to 10 kHz 5.5 CE102 conducted emissions power leads 10 kHz to 10 MHz 5.7 CS101 conducted susceptibility power leads 30 Hz to 150 kHz 5.11 CS106 conducted susceptibility transients power leads 5.13 CS114 conducted susceptibility bulk cable injection 10 kHz to 200 MHz 5.14 CS115 conducted susceptibility bulk cable injection impulse excitation 5.15 CS116 conducted susceptibility damped sinusoidal transients cable and power leads 10 kHz to 100 MHz 5.16 RE101 radiated emissions magnetic field 30 Hz to 100 kHz 5.17 RE102 radiated emissions electric field 10 kHz to 18 GHz 5.19 RS101 radiated susceptibility magnetic field 30 Hz to 100 kHz 5.20 RS103 radiated susceptibility electric field 2 MHz to 40 GHz 〈Exception〉 - 2 MHz to 100 MHz, 200 V/m, 1 m distance - 5.20.4 RS103 alternative test procedures - reverberation chamber (mode-tuned)	30 Hz to 10 kHz 10 kHz to 10 MHz 30 Hz to 150 kHz 400 Vpeak 4 kHz to 200 MHz Impulse 5 A 10 kHz to 100 MHz 30 Hz to 100 kHz 10 kHz to 18 GHz 30 Hz to 100 kHz 2 MHz to 18 GHz Max. 200 V/m	BS-5	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-461F:2007	Wired/wireless communication devices	Department of Defense Test Method Standard Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment 5.4 CE101, conducted emissions, power leads, 30 Hz to 10 kHz 5.5 CE102, conducted emissions, power leads, 10 kHz to 10 MHz 5.7 CS101, conducted susceptibility, power leads, 30 Hz to 150 kHz 5.11 CS106, conducted susceptibility, transients, power leads 5.13 CS114, conducted susceptibility, bulk cable injection, 10 kHz to 200 MHz 5.14 CS115, conducted susceptibility, bulk cable injection, impulse excitation 5.15 CS116, conducted susceptibility, damped sinusoidal transients, cable and power leads, 10 kHz to 100 MHz 5.16 RE101, radiated emissions, magnetic field, 30 Hz to 100 kHz 5.17 RE102, radiated emissions, electric field, 10 kHz 18 GHz 5.19 RS101, radiated susceptibility, magnetic field, 30 Hz to 100 kHz 5.20 RS103, radiated susceptibility, electric field, 2 MHz to 18 GHz	CE : 30 Hz ~ 10 MHz CS : 30 Hz ~ 1 GHz RE, RS : Max. 18 GHz Electric Field : Max. 50 V/m Magnetic Field : Max. 183 dBpT	BS-2	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-461G:2015	Wired/wireless communication devices	Department of Defense Interface Standard, Requirements for the control of Electromagnetic Interference Characteristics of Subsystems and Equipment 5.4 CE101, conducted emissions, audio frequency currents, power leads 5.5 CE102, conducted emissions, radio frequency potential, power leads 5.7 CS101, conducted susceptibility, power leads 5.12 CS114, conducted susceptibility, bulk cable injection 5.13 CS115, conducted susceptibility, bulk cable injection, impulse excitation 5.14 CS116, conducted susceptibility, damped sinusoidal transients, cables and power leads 5.15 CS117, conducted susceptibility, lightning induced transients, cables and power leads 5.16 CS118, personnel borne electrostatic discharge 5.17 RE101, radiated emissions, magnetic field 5.18 RE102, radiated emissions, electric field 5.20 RS101, radiated susceptibility, magnetic field 5.21 RS103, radiated susceptibility, electric field 〈Exception〉 - 2 MHz ~ 100 MHz, 200 V/m - 5.21.4 RS103 alternative test procedures - reverberation chamber	30 Hz ~ 10 kHz 10 kHz ~ 10 MHz 30 Hz ~ 150 kHz, Max. 136 dBμV 4 kHz ~ 200 MHz, Max. 109 dBμA Max. 5 A 10 kHz ~ 100 MHz, Max. 10 A Waveform: 1, 2, 3, 4, 5A, 6, Multiple Stroke, Multiple Burst Contact/Air, ±15 kV 30 Hz ~ 100 kHz 10 kHz ~ 18 GHz 30 Hz ~ 100 kHz, Max. 183 dBpT 2 MHz ~ 18 GHz, Max. 200 V/m	BS-5	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-461G:2015	Wired/wireless communication devices	Department of Defense Interface Standard, Requirements for the control of Electromagnetic Interference Characteristics of Subsystems and Equipment 5.4 CE101, conducted emissions, audio frequency currents, power leads 5.5 CE102, conducted emissions, radio frequency potential, power leads 5.7 CS101, conducted susceptibility, power leads 5.12 CS114, conducted susceptibility, bulk cable injection 5.13 CS115, conducted susceptibility, bulk cable injection, impulse excitation 5.14 CS116, conducted susceptibility, damped sinusoidal transients, cables and power leads 5.16 CS118, personnel borne electrostatic discharge 5.17 RE101, radiated emissions, magnetic field 5.18 RE102, radiated emissions, electric field 5.20 RS101, radiated susceptibility, magnetic field 5.21 RS103, radiated susceptibility, electric field 〈Exception〉 5.21.4 RS103 alternative test procedures - reverberation chamber	CE101: 30 Hz ~ 10 kHz CE102: 10 kHz ~ 10 MHz CS101: 30 Hz ~ 150 kHz, Max. 136 dBμV CS114: 4 kHz ~ 200 MHz, Max. 109 dBμA CS115: Max. 5 A CS116: 10 kHz ~ 100 MHz, Max. 10 A CS118: Contact/Air, ±15 kV RE101: 30 Hz ~ 100 kHz RE102: 10 kHz ~ 18 GHz RS101: 30 Hz ~ 100 kHz, Max. 183 dBpT RS103: 2 MHz ~ 18 GHz, Max. 50 V/m	BS-2	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-462D:1993	Wired/wireless communication devices	DEPARTMENT OF DEFENSE TEST METHOD FOR MEASUREMENT OF ELECTROMAGNETIC INTERFERENCE CHARACTERISTICS 5. CE101 conducted emissions power leads 30 Hz to 10 kHz 5. CE102 conducted emissions power leads 10 kHz to 10 MHz 5. RE101 radiated emissions magnetic field 30 Hz to 100 kHz 5. RE102 radiated emissions electric field 10 kHz to 18 GHz 5. CS101 conducted susceptibility power leads 30 Hz to 50 kHz 5. CS114 conducted susceptibility bulk cable injection 10 kHz to 400 MHz 5. CS115 conducted susceptibility bulk cable injection impulse excitation 5. CS116 conducted susceptibility damped sinusoidal transients cable and power leads 10 kHz to 100 MHz 5. RS101 radiated susceptibility magnetic field 30 Hz to 100 kHz 5. RS103 radiated susceptibility electric field 10 kHz to 40 GHz	30 Hz to 10 kHz 10 kHz to 10 MHz 30 Hz to 100 kHz 10 kHz to 18 GHz 30 Hz to 50 kHz 10 kHz to 400 MHz Impulse 5 A 10 kHz to 100 MHz 30 Hz to 100 kHz 10 kHz to 18 GHz	BS-5	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-462D:1993	Wired/wireless communication devices	Department of Defense Test Method Standard 5. CE101, conducted emissions, power leads, 30 Hz to 10 kHz 5. CE102, conducted emissions, power leads, 10 kHz to 10 MHz 5. RE101, radiated emissions, magnetic field, 30 Hz to 100 kHz 5. RE102, radiated emissions, electric field, 10 kHz to 18 GHz 5. CS101, conducted susceptibility, power leads, 30 Hz to 150 kHz 5. CS114, conducted susceptibility, bulk cable injection, 10 kHz to 200 MHz 5. CS115, conducted susceptibility, bulk cable injection, impulse excitation 5. CS116, conducted susceptibility, damped sinusoidal transients, cable and power leads, 10 kHz to 100 MHz 5. RS101, radiated susceptibility, magnetic field, 30 Hz to 100 kHz 5. RS103, radiated susceptibility, electric field, 2 MHz to 18 GHz	CE : 30 Hz ~ 10 MHz CS : 30 Hz ~ 1 GHz RE, RS : Max. 18 GHz Electric Field : Max. 50 V/m Magnetic Field : Max. 183 dBpT	BS-2	N
MIL-STD-464C:2010	Wired/wireless communication devices	ELECTROMAGNETIC ENVIRONMENTAL EFFECTS REQUIREMENTS FOR SYSTEMS 5.1 Margins 5.2 Intra-system electromagnetic compatibility(EMC) 5.3 External RF EME 5.9 Electromagnetic radiation hazards(EMRADHAZ) 5.11 Electrical bonding 5.12 External grounds	Margins : 10 kHz ~ 18 GHz External RF EME : 10 kHz ~ 40 GHz (Max Peak Level 3 600 V/m, Max Average Level 490 V/m) EMRADHAZ : 100 kHz ~ 18 GHz Elecrical bonding: Min 0.01 mΩ External grounds: Min 0.01 mΩ	BS-5	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
NRC Reg. Guide 1.180:2000	Electrical machinery for industries	Guidelines for evaluating electromagnetic and radio-frequency interference in safety-related instrumentation and control systems : 4.1 CE101-Conducted emissions, Low Frequency 4.2 CE102-Conducted emissions, High Frequency 4.3 CS101-Conducted susceptibility, Low Frequency 4.4 CS114-Conducted susceptibility, High Frequency 4.5 RE101-Radiated emissions, Magnetic field 4.6 RE102-Radiated emissions, Electric field 4.7 RS101-Radiated susceptibility, MF 4.8 RS103-Radiated susceptibility, EF 6.1 Ring wave 6.2 Combination wave 6.3 Electrically Fast Transients	CE, CS : Max. 1 GHz RE, RS : Max. 18 GHz Electric field : Max. 50 V/m Magnetic field : Max. 180 dBpT	BS-2	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
NRC Reg. Guide 1.180:2003	Electrical machinery for industries	Guidelines for evaluating electromagnetic and radio-frequency interference in safety-related instrumentation and control systems : 3.1 CE101-Conducted emissions, Low Frequency 3.2 CE102-Conducted emissions, High Frequency 3.3 RE101-Radiated emissions, Magnetic field 3.4 RE102-Radiated emissions, Electric field 3.5 IEC Emissions Tests 4.1.1 CS101-Conducted susceptibility, LF 4.1.2 CS114-Conducted susceptibility, HF 4.1.3 IEC Conducted Susceptibility - Power 4.2 EMI/RFI Conducted Susceptibility - Signal 4.3.1 RS101-Radiated susceptibility, MF 4.3.2 RS103-Radiated susceptibility, EF 4.3.3 IEC Radiated Susceptibility Tests 5.1 IEEE C62.41 Ring wave and IEC 61000-4-12 5.2 IEEE C62.41 Combination wave and IEC 61000-4-5 5.3 IEEE C62.41 Electrically Fast Transients and IEC 61000-4-4	CE, CS : Max. 1 GHz RE, RS : Max. 18 GHz Electric field : Max. 50 V/m Magnetic field : Max. 180 dBpT	BS-2	N
Portaria INMETRO nº377:2021	Electrical machinery for households, Electrical machinery for industries	Approves the Technical Quality Regulation and Conformity Assessment Requirements for Televisions-Consolidated.	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-1	N
RS-KTL-2012-0018:2012	Wired/wireless communication devices	HEMP Protection Filter 5.3.1 Performance Test 6.2.4 Overload test 6.3.2 PCI Life Testing	PCI : 5 000 A or less Power capacity : 200 A or less	BS-2	Y

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
RTCA DO-160F:2007	Wired/wireless communication devices	Environmental Conditions and Test Procedures for Airborne Equipment Section 15.0 Magnetic Effect Section 16.0 Power Input Section 17.0 Voltage Spike Section 18.0 Audio Frequency Conducted Susceptibility -Power Inputs Section 19.0 Induced Signal Susceptibility Section 20.0 Radio Frequency Susceptibility (Radiated and Conducted) 〈Exception〉 -20.6 Radiated Susceptibility(RS) Test: Alternative Procedure -Reverberation Chamber Section 21.0 Emission of Radio Frequency Energy Section 22.0 Lightning Induced Transient Susceptibility Section 25.0 Electrostatic Discharge (ESD) 〈Exception〉 Section 1.0 Purpose and Applicability Section 2.0 Definitions of Terms - General Section 3.0 Conditions of Tests Section 4.0 Temperature and Altitude Section 5.0 Temperature Variation Section 6.0 Humidity Section 7.0 Operational Shocks and Crash Safety Section 8.0 Vibration Section 9.0 Explosion	Section 15:0 : Dc : 1 degree Section 16:0 : AC : 115 V@ (360-800) Hz, 230 V@ (360-800) Hz DC : 14 V, 28 V, 270 V Section 17.0 : Category A: 600 V Category B: 2 × V (AC RMS AND/OR DC, OR 200 V Whichever Is Less) Section 18.0 : 10 Hz ~ 148.593 6 kHz (Max. 16 Vp-p) Section 19.0 : 350 Hz ~ 32 kHz (Max. 120 A-m, 5 400 V-m) Section 20.0 : CS: 10 kHz ~ 400 MHz RS: 100 MHz ~ 18 GHz (Max Peak Level 3 600 V/m, Max Average Level 490 V/m) Section 21.0 : CE: 150 kHz ~ 152 MHz RE: 100 MHz ~ 6 GHz Section 22.0 : Waveform: 1,2,3,4,5A,5B,6,7,8 Section 25.0 : Max. ±15 kV	BS-5	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
		Proofness Section 10.0 Waterproofness Section 11.0 Fluids Susceptibility Section 12.0 Sand and Dust Section 13.0 Fungus Resistance Section 14.0 Salt Spray Section 16.0 Power Input Section 23.0 Lightning Direct Effects Section 24.0 Icing Section 26.0 Fire, Flammability			

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
RTCA DO-160G:2010	Wired/wireless communication devices	Environmental Conditions and Test Procedures for Airborne Equipment Section 15.0 Magnetic Effect Section 16.0 Power Input Section 17.0 Voltage Spike Section 18.0 Audio Frequency Conducted Susceptibility -Power Inputs Section 19.0 Induced Signal Susceptibility Section 20.0 Radio Frequency Susceptibility (Radiated and Conducted) 〈Exception〉 -20.6 Radiated Susceptibility(RS) Test: Alternative Procedure -Reverberation Chamber Section 21.0 Emission of Radio Frequency Energy Section 22.0 Lightning Induced Transient Susceptibility Section 25.0 Electrostatic Discharge (ESD) 〈Exception〉 Section 1.0 Purpose and Applicability Section 2.0 Definitions of Terms - General Section 3.0 Conditions of Tests Section 4.0 Temperature and Altitude Section 5.0 Temperature Variation Section 6.0 Humidity Section 7.0 Operational Shocks and Crash Safety	Section 15.0 : Dc : 1 degree Section 16.0 : AC : 115 V@ (360-800) Hz, 230 V@ (360-800) Hz DC : 14 V, 28 V, 270 V Section 17.0 : Category A: 600 V Category B: 2 × V (AC RMS AND/OR DC, OR 200 V Whichever Is Less) Section 18.0 : 10 Hz ~ 148.593 6 kHz (Max. 16 Vp-p) Section 19.0 : 350 Hz ~ 32 kHz (Max. 120 A-m, 5 400 V-m) Section 20.0 : CS: 10 kHz ~ 400 MHz RS: 100 MHz ~ 18 GHz (Max Peak Level 3 600 V/m, Max Average Level 490 V/m) Section 21.0 : CE: 150 kHz ~ 152 MHz RE: 100 MHz ~ 6 GHz Section 22.0 : Waveform: 1,2,3,4,5A,5B,6,7,8 Section 25.0 : Max. ±15 kV	BS-5	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
		Section 8.0 Vibration Section 9.0 Explosion Proofness Section 10.0 Water proofness Section 11.0 Fluids Susceptibility Section 12.0 Sand and Dust Section 13.0 Fungus Resistance Section 14.0 Salt Spray Section 16.0 Power Input Section 23.0 Lightning Direct Effects Section 24.0 Icing Section 26.0 Fire, Flammability			
RTQ 427:2014	Electrical machinery for households, Electrical machinery for industries	Technical Regulation for Quality	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz	BS-2	N
SAE ARP5583A:2010	Wired/wireless communication devices	(R) Guide to Certification of Aircraft in a High-Intensity Radiated Field (HIRF) Environment 6.3 Aircraft High-Level Tests(Step 9) 〈Exception〉 6.3.4 High Level Direct Drive Test Methodology 6.3.6 High-Level Tests in a Reverberation Chamber	10 kHz ~ 40 GHz (Max Peak Level 3 600 V/m, Max Average Level 490 V/m)	BS-5	N
SAE J 1113/11:2012	Wired/wireless communication devices	Immunity to Conducted Transients on Power Leads	TI : -600 V ~ 200 V	BS-2	N
SAE J 1113/12:2006	Wired/wireless communication devices	Electrical Interference by Conduction and Coupling - Capacitive and Inductive Coupling via Lines other than Supply Lines	TI : -80 V ~ 80 V	BS-2	N
SAE J 1113/13:2004	Wired/wireless communication devices	Electromagnetic Compatibility Measurement Procedure for Vehicle Components - Part 13 : Immunity to Electrostatic Discharge	ESD : ±25 kV	BS-2	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SAE J 1113/21:2005	Wired/wireless communication devices	Electromagnetic Compatibility Measurement Procedure for Vehicle Components - Part 21 : Immunity to Electromagnetic Fields, 30 MHz to 18 GHz, Absorber-Lined Chamber	Freq. : 30 MHz ~ 18 GHz E/F : 200 V/m	BS-2	N
SAE J 1113/22:2003	Wired/wireless communication devices	Electromagnetic Compatibility Measurement Procedure for Vehicle Components - Part 22 : Immunity to Radiated Magnetic Fields	Freq. : 15 Hz ~ 30 kHz MFS : 80	BS-2	N
SAE J 1113/26:2014	Wired/wireless communication devices	Electromagnetic Compatibility Measurement Procedure for Vehicle Components - Immunity to AC Power Line Electric Fields	E/F : 15 kV/m	BS-2	N
SAE J 1113/27:2012	Wired/wireless communication devices	Electromagnetic Compatibility Measurements Procedure for vehicle Components - Part 27 : Immunity to Radiated Electromagnetic fields - Mode Stir Reverberation Method	Freq. : 500 MHz ~ 2 GHz E/F : 150 V/m	BS-2	N
SAE J 1113/2:2004	Wired/wireless communication devices	Electromagnetic Compatibility Measurement Procedures and Limits for Vehicle Components (Except Aircraft) - Conducted Immunity, 15 Hz to 250 kHz - All Leads	Freq. : 15 Hz ~ 250 kHz Voltage : 3 Vpp	BS-2	N
SAE J 1113/3:2006	Wired/wireless communication devices	Conducted Immunity, 250 kHz to 400 MHz, Direct Injection of Radio Frequency (RF) Power	Freq. : 250 kHz ~ 400 MHz Power : 0.5 W	BS-2	N
SAE J 1113/41:2006	Wired/wireless communication devices	Limits and Methods of Measurement of Radio Disturbance Characteristics of Components and Modules for the Protection of Receivers used on Board Vehicles	CE : 150 kHz ~ 108 MHz RE : 150 kHz ~ 1 GHz	BS-2	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SAE J 1113/42:2006	Wired/wireless communication devices	Electromagnetic Compatibility - Component Test Procedure - Part 42 : Conducted Transient Emissions	TE : 1 000 ns ~ 1 000 ms	BS-2	N
SAE J 1113/4:2014	Wired/wireless communication devices	Immunity to Radiated Electromagnetic Fields - Bulk Current Injection (BCI) Method	Freq. : 1 MHz ~ 400 MHz Current : 200 mA	BS-2	N
SANS 211:2010	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement	RE : 150 kHz ~ 18 GHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz	BS-2	N
SANS 211:2010	Measuring instruments	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement	RE : 150 kHz ~ 18 GHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz	BS-1	N
SANS 213:2011	Wired/wireless communication devices	Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement	CE(mains) : 150 kHz ~ 30 MHz CE(antenna port) : 30 MHz ~ 2.15 GHz CE(RF output port) : 30 MHz ~ 2.15 GHz DP : 30 MHz ~ 300 MHz RE : 30 MHz ~ 1 GHz RP : 0.9 GHz ~ 18 GHz	BS-2	N
SANS 214-1:2020	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus Part 1: Emission	RE: 9 kHz ~ 6 GHz CE: 9 kHz ~ 30 MHz DCE: 150 kHz ~ 30 MHz MFE: 9 kHz ~ 30 MHz DP: 30 MHz ~ 300 MHz	BS-2	N
SANS 214-1:2020	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus Part 1: Emission	RE : 9 kHz ~ 6 GHz CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz DP : 30 MHz ~ 300 MHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 214-2:2009	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus Part 2: Immunity - Product family standard	ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 230 MHz V-DIP : ≤16 A per phase	BS-2	N
SANS 214-2:2009	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus Part 2: Immunity - Product family standard	ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 230 MHz V-DIP : 16 A per phase or less	BS-1	N
SANS 215:2019	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment 〈Exception〉 4.5.2 Table 8 - Radiated disturbance limits in the frequency range 9 kHz to 30 MHz (loop diameter : 3 m and 4 m)	RE : 9 kHz ~ 1 GHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz	BS-2	N
SANS 215:2019	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment 〈exception〉 4.5.2 Table 8 - Radiated disturbance limits in the frequency range 9 kHz to 30 MHz (loop diameter : 3 m and 4 m)	RE : 9 kHz ~ 1 GHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz	BS-1	N
SANS 222:2009	Wired/wireless communicatio n devices	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz	BS-2	N
SANS 224:2010	Wired/wireless communicatio n devices	Information technology equipment - Immunity characteristics - Limits and methods of measurement	ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±1 kV SURGE : ±4 kV CS : 150 kHz ~ 80 MHz M/F : 1 A/m V-DIP : ≤16 A per phase	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 225:2019	Wired/wireless communication devices	Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of on-board receivers	CE : 150 kHz ~ 108 MHz RE : 150 kHz ~ 2.5 GHz	BS-2	N
SANS 232:2017	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Emission requirements	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz	BS-1	N
SANS 235:2018	Wired/wireless communication devices	Electromagnetic compatibility of multimedia equipment - Immunity requirements	ESD : ±8 kV RS : 80 MHz ~ 5 GHz EFT : ±1 kV SURGE : ±4 kV CS : 150 kHz ~ 80 MHz M/F : 1 A/m V-DIP : 16 A per phase or less	BS-1	N
SANS 60601-1-2:2018	Medical devices	Medical electrical equipment Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility - Requirements and tests	RE : 150 kHz ~ 18 GHz CE : 9 kHz ~ 30 MHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 6 V MFS : 30 A/m V-DIP : ≤75 A	BS-2	N
SANS 60601-1-2:2018	Medical devices	Medical electrical equipment Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility - Requirements and tests	RE : 150 kHz ~ 18 GHz CE : 9 kHz ~ 30 MHz ESD : ±15 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 6 V MFS : 30 A/m 16 A per phase or less	BS-1	N
SANS 61000-3-11:2003	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤75 A and subject to conditional connection	75 A or less Pst < 1.0 Plt < 0.65 d(t) < 3.3 % dc < 3.3 % dmax : a) < 4 %, b) < 6 %, c) < 7 %	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 61000-3-11:2003	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤75 A and subject to conditional connection	75 A or less per phase Pst < 1.0 Plt < 0.65 d(t) < 3.3 % dc < 3.3 % dmax : a) < 4 %, b) <6 %, c) < 7 %	BS-1	N
SANS 61000-3-12:2012	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤75 A per phase	AC input current : Max. 75 A (per phase)	BS-2	N
SANS 61000-3-12:2012	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤75 A per phase	AC input current : Max. 75 A (per phase)	BS-1	N
SANS 61000-3-2:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase)	16 A or less	BS-2	N
SANS 61000-3-2:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase)	16 A or less per phase	BS-1	N
SANS 61000-3-3:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection	16 A or less Pst < 1.0 Plt < 0.65 d(t) < 3.3 % dc < 3.3 % dmax : a) < 4 %, b) < 6 %, c) < 7 %	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 61000-3-3:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection	16A or less per phase Pst < 1.0 Plt < 0.65 d(t) < 3.3 % dc < 3.3 % dmax : a) < 4 %, b) <6 %, c) < 7 %	BS-1	N
SANS 61000-4-11:2005	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	16 A or less per phase 0 % during 1/2 cycle 0 % during 1 cycle 40 % during 10/12 cycle 70 % during 25/30 cycle 80 % during 250/300 cycle 0 % during 250/300 cycle	BS-2	N
SANS 61000-4-11:2005	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	16 A or less per phase 0 % during 1/2 cycle 0 % during 1 cycle 40 % during 10/12 cycle 70 % during 25/30 cycle 80 % during 250/300 cycle 0 % during 250/300 cycle	BS-1	N
SANS 61000-4-12:2007	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-12: Testing and measurement techniques - Ring wave immunity test	Voltage oscillation frequency : 100 kHz ± 10 % Open-circuit voltage : 250 to 4 kV Short-circuit Current : 333 A ± 10 % 12 Ω	BS-2	N
SANS 61000-4-13:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-13: Testing and measurement techniques - Harmonics and interharmonics including mains signalling at a.c. power port, low frequency immunity tests	9th harmonic Frequency range: 2 kHz / 50 Hz, 2.4 kHz / 60 Hz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 61000-4-13:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-13: Testing and measurement techniques - Harmonics and interharmonics including mains signalling at a.c. power port, low frequency immunity tests	9th harmonic Frequency range: 2 kHz / 50 Hz 2.4 kHz / 60 Hz	BS-1	N
SANS 61000-4-14:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-14: Testing and measurement techniques - Voltage fluctuation immunity test for equipment with input current not exceeding 16 A per phase	Test level: U(nom) U(nom)-10 % U(nom) U(nom)+10 %U(nom)	BS-2	N
SANS 61000-4-14:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-14: Testing and measurement techniques - Voltage fluctuation immunity test for equipment with input current not exceeding 16 A per phase	Test level: U(nom) U(nom)-10 % U(nom) U(nom)+10 % U(nom)	BS-1	N
SANS 61000-4-16:2011	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-16: Testing and measurement techniques - Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz	Frequency range : 0 Hz ~ 150 kHz	BS-2	N
SANS 61000-4-17:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-17: Testing and measurement techniques - Ripple on d.c. input power port immunity test	Output voltage range up to 360 V	BS-2	N
SANS 61000-4-17:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-17: Testing and measurement techniques - Ripple on d.c. input power port immunity test	Output voltage range up to 360 V	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 61000-4-27:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-27: Testing and measurement techniques - Unbalance, immunity test for equipment with input current not exceeding 16 A per phase	AC input current : Max. 16 A (per phase)	BS-2	N
SANS 61000-4-28:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-28: Testing and measurement techniques - Variation of power frequency, immunity test for equipment with input current not exceeding 16 A per phase	AC input current : Max. 16 A (per phase)	BS-2	N
SANS 61000-4-29:2005	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-29: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations on d.c. input power port immunity tests	DC input Voltage : 600 V	BS-2	N
SANS 61000-4-2:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	Max. ±30 kV, 150 ㎊ /330 Ω	BS-2	N
SANS 61000-4-2:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	Max. ±30 kV, 150 ㎊ /330 Ω	BS-1	N
SANS 61000-4-3:2008	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	RS : 80 MHz ~ 6 GHz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 61000-4-3:2008	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	RS : 80 MHz ~ 6 GHz	BS-1	N
SANS 61000-4-4:2011	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EFT : ±4 kV	BS-2	N
SANS 61000-4-4:2011	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EFT : Max ±4 kV	BS-1	N
SANS 61000-4-5:2006	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-5: Testing and measurement techniques - Surge immunity test	SURGE : ±6 kV	BS-2	N
SANS 61000-4-5:2006	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-5: Testing and measurement techniques - Surge immunity test	SURGE : Max ±6 kV	BS-1	N
SANS 61000-4-6:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	Frequency range : 150 kHz ~ 80 MHz Voltage : 10 Vrms	BS-2	N
SANS 61000-4-6:2017	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	Frequency range : 150 kHz ~ 80 MHz Voltage : 10 Vrms	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 61000-4-8:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	M/F : 100 A/m	BS-2	N
SANS 61000-4-8:2009	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	M/F : Max 100 A/m	BS-1	N
SANS 61000-4-9:2003	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-9: Testing and measurement techniques - Pulse magnetic field immunity test	Output current range : 100 A/m ~ 1 000 A/m	BS-2	N
SANS 61000-4-9:2003	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 4-9: Testing and measurement techniques - Pulse magnetic field immunity test	Output current range : 100 A/m ~ 1 000 A/m	BS-1	N
SANS 61000-6-1:2005	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments	ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 3 A/m V-DIP : ≤16 A per phase	BS-2	N
SANS 61000-6-1:2005	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments	ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 3 A/m V-DIP : 16 A per phase or less	BS-1	N
SANS 61000-6-2:2005	Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 6-2: Generic standards - Immunity for industrial environments	ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 30 A/m V-DIP : ≤16 A per phase	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 61000-6-2:2005	Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 6-2: Generic standards - Immunity for industrial environments	ESD : ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 30 A/m V-DIP : 16 A per phase or less	BS-1	N
SANS 61000-6-3:2011	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments	RE : 30 MHz ~ 1 GHz CE : 150 kHz ~ 30 MHz	BS-2	N
SANS 61000-6-3:2011	Electrical machinery for households, Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments	RE : 30 MHz ~ 1 GHz CE : 150 kHz ~ 30 MHz	BS-1	N
SANS 61000-6-4:2011	Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 6-4: Generic standards - Emission standard for industrial environments	RE : 30 MHz ~ 1 GHz CE : 150 kHz ~ 30 MHz	BS-2	N
SANS 61000-6-4:2011	Electrical machinery for industries	Electromagnetic compatibility (EMC) Part 6-4: Generic standards - Emission standard for industrial environments	RE : 30 MHz ~ 1 GHz CE : 150 kHz ~ 30 MHz	BS-1	N
SANS 61326-1:2007	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements Part 1: General requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : Max ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz MF : 30 A/m V-DIP : ≤16 A per phase	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 61326-1:2007	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements Part 1: General requirements	RE : 150 kHz ~ 18 GHz CE : 150 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : Max ±8 kV RS : 80 MHz ~ 2.7 GHz EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz MF : 30 A/m V-DIP : 16 A per phase or less	BS-1	N
SANS 61326-2-3:2009	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning Use with: SANS 61326-1:2000	ESD : ±8 kV RS : 80 MHz ~ 3 GHz EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 30 A/m V-DIP : ≤16 A per phase	BS-2	N
SANS 61326-2-3:2009	Measuring instruments	Electrical equipment for measurement, control and laboratory use - EMC requirements Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning Use with: SANS 61326-1:2000	ESD : ±8 kV RS : 80 MHz~ 3 GHz EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 30 A/m V-DIP : ≤16 A per phase	BS-1	N
SANS 61547:2021	Lighting devices	Equipment for general lighting purposes - EMC immunity requirements	ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 3 A/m V-DIP : ≤16 A per phase	BS-2	N
SANS 61547:2021	Lighting devices	Equipment for general lighting purposes - EMC immunity requirements	ESD : ±8 kV RS : 80 MHz~ 1 GHz EFT : ±1 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz M/F : 3 A/m V-DIP : 16 A per phase or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 62040-2:2007	Electrical machinery for industries	Uninterruptible power systems (UPS) Part 2: Electromagnetic compatibility (EMC) requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz MFS : 30 A/m V-DIP : ≤16 A per phase	BS-2	N
SANS 62040-2:2007	Electrical machinery for industries	Uninterruptible power systems (UPS) Part 2: Electromagnetic compatibility (EMC) requirements	CE : 150 kHz ~ 30 MHz RE : 30 MHz~ 1 GHz ESD : ± 8 kV RS : 80 MHz~ 1 GHz EFT : ±2 kV SURGE : ±2kV CS : 150 kHz ~ 80 MHz MFS : 30 A/m V-DIP : 16 A per phase or less	BS-1	N
SANS 62233:2006	Electrical machinery for households	Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure	Frequency range : 1 Hz ~ 400 kHz	BS-2	N
SANS 62233:2006	Electrical machinery for households, Electrical machinery for industries	Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure	Frequency range : 1 Hz ~ 400 kHz	BS-1	N
SPS-KEMC 1120-0579:2018	Electrical machinery for industries	Digital protective relay Clause 6.4 : Electromagnetic compatibility test	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : max. ±8 kV RS : 80 MHz ~ 2.7 GHz, Max. 10 V/m EFT : Max. ±4 kV Surge : Max. ±4 kV CS : 150 kHz ~ 80 MHz, Max. 10 V MFS : Max. 300 A/m V-DIP : 0 %, 300 cycle (AC), 5 s (DC) 0 %, 0.5 ~ 25 cycle (AC), 10 ms ~ 1 000 ms (DC) 40 %, 12 cycle (AC), 200 ms(DC) 70 %, 30 cycle (AC), 500 ms(DC) 15 % of Rated DC , 100/120 Hz DOW : max. ±2.5 kV Low CS : max. 300 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SPS-SGSF-025-4-1972:2019	Electrical machinery for industries	General performance requirements of PCS(Power Conversion System) for electrical energy storage system 7.5 EMC(ElectroMagnetic Compatibility) Test	CE: 150 kHz ~ 30 MHz RE: 30 MHz ~ 1 GHz ESD: ±15 kV RS: 80 MHz ~ 2.7 GHz EFT: ±4 kV Surge: ±4 kV CS: 150 kHz ~ 80 MHz MFS: 1,000 A/m	BS-2	N
TCVN 7186:2018	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	RE : 9 kHz ~ 300 MHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz	BS-6	N
TCVN 7186:2018	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	RE : 9 kHz ~ 300 MHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz IL : 150 kHz ~ 1 605 kHz	BS-2	N
TCVN 7186:2018	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	RE : 9 kHz ~ 1 GHz CE : 9 kHz ~ 30 MHz MFE : 9 kHz ~ 30 MHz	BS-1	N
TCVN 7189:2009	Wired/wireless communication devices	Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz	BS-2	N
TCVN 7189:2009	Wired/wireless communication devices	Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz	BS-6	N
TCVN 7189:2009	Wired/wireless communication devices	Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz	BS-1	N
TCVN 7317:2003	Wired/wireless communication devices	Information technology equipment - Immunity characteristics - Limits and methods of measurement	ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±1 kV SURGE : ±4 kV CS : 150 kHz ~ 80 MHz M/F : 1 A/m V-DIP ≤16 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
TCVN 7317:2003	Wired/wireless communication devices	Information technology equipment - Immunity characteristics- Limits and methods of measurement	ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 3 V/m EFT : ±1 kV Surge : ±4 kV CS : 150 kHz ~ 80 MHz, 3 V M/F : 1 A/m V-DIP : 0 %, 0.5 cycle 70 %, 25 cycle 0 %, 250 cycle	BS-6	N
TCVN 7317:2003	Wired/wireless communication devices	Information technology equipment - Immunity characteristics- Limits and methods of measurement	ESD : ±8 kV RS : 80 MHz ~ 1 GHz EFT : ±1 kV SURGE : ±4 kV CS : 150 kHz ~ 80 MHz M/F : 1 A/m V-DIP ≤16 A	BS-1	N
TCVN 7492-1:2018	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus Part 1: Emission	RE : 30 MHz ~ 1 GHz CE : 148.5 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz DP : 30 MHz ~ 1 GHz	BS-2	N
TCVN 7492-1:2018	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus Part 1: Emission	RE : 30 MHz ~ 1 GHz CE : 148.5 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz DP : 30 MHz ~ 1 GHz	BS-6	N
TCVN 7492-1:2018	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus Part 1: Emission	RE : 30 MHz ~ 1 GHz CE : 148.5 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz DP : 30 MHz ~ 1 GHz	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
U.S. Nuclear Regulatory Commission, Regulatory Guide 1.180, Revison 2, 2019	Electrical machinery for industries	Guidelines for evaluating electromagnetic and radio-frequency interference in safety-related instrumentation and control systems : 3.1 CE101-Conducted emissions, Low Frequency 3.2 CE102-Conducted emissions, High Frequency 3.3 RE101-Radiated emissions, Magnetic Field 3.4 RE102-Radiated emissions, Electric Field 3.5 IEC Emissions Tests 4.1.1 CS101-Conducted susceptibility, Low Frequency 4.1.2 CS114-Conducted susceptibility, High Frequency 4.1.3 IEC Conducted Susceptibility Tests - Power Leads 4.2 EMI/RFI Conducted Susceptibility - Signal 4.3.1 RS101-Radiated susceptibility, Magnetic Field 4.3.2 RS103-Radiated susceptibility, Electric Field 4.3.3 IEC Radiated Susceptibility Tests 5.1 IEEE C62.41 Ring wave and IEC 61000-4-12 5.2 IEEE C62.41 Combination wave and IEC 61000-4-5 5.3 IEEE C62.41 Electrically Fast Transients and IEC 61000-4-4 6. Electrostatic Discharge Testing	CE, CS : Max. 1 GHz RE, RS : Max. 10 GHz Electric field : Max. 10 V/m Magnetic field : Max. 183 dBpT SWC : Max. ±4 kV ESD : Max. ±15 kV	BS-2	N
KATS Notice No.2009-746(12.01.2009.)	Electrical machinery for households	Quality-certification standard for a household cleaning robot QCR-1A001 6.5 Electromagnetic compatibility (EMC)	RE : 30 MHz ~ 1 GHz ESD : ±8 kV RS : 80 MHz ~ 1 GHz, 3 V/m	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
RRA Notification No. 2021-24 (10.12.2021)	Wired/wireless communicatio n devices	RRA Notification - Safety Evaluate standard and Method for High Power & Leakage EMC	Standard and Method for Protection Performane(Radiation) : 10kHz ~ 18 GHz Standard and Method for Protection Performane(Conductio n) - Pulsed Current Injection(PCI) : Short Pulse 5 kA MAX, Intermediate Pulse 250 A MAX - Insertion Loss : 10 kHz ~ 18GHz	BS-2	Y
MOTIE Notice No.2018-206(11.20.2018.)	Measuring instruments	Technical standards for electricity meters 1-1 Normal requirements for electricity meters 9.2 electromagnetic compatibility : EMC 1-2 Type approval standard for AC induced electricity meters 9.2 electromagnetic compatibility : EMC 1-3 Type approval standard for AC electronic electricity meters 9.2 electromagnetic compatibility : EMC 1-4 Type approval standard for DC electronic electricity meters 9.2 electromagnetic compatibility : EMC	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±15 kV RS : 80 MHz ~ 2 GHz, 30 V/m EFT : ±4 kV Surge : ±4 kV Ring wave : ±2.5 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 0.5 mT V-DIP : ≤75 A	BS-2	N
MOTIE Notice No.2020-017(02.19.2020.)	Electrical machinery for industries	Electric vehicle chargers technical standards 8.2.1 Electromagnetic Compatibility	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : ≤75 A	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MOTIE Notice No.2020-017(02.19.2020.)	Electrical machinery for industries	Electric vehicle chargers technical standards 8.2.1 Electromagnetic Compatibility	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 30 A/m V-DIP : 0 %, 1 cycle 40 %, 12 cycle 70 %, 30 cycle 0 %, 300 cycle	BS-6	N
MOTIE Notice No.2020-230(12.28.2020.)	Measuring instruments	Watt-hour meters technical standards 9.2 electromagnetic compatibility : EMC	CE : 150 kHz ~ 30 MHz RE : 30 MHz ~ 6 GHz ESD : ±15 kV RS : 80 MHz ~ 2 GHz, 30 V/m EFT : ±4 kV Surge : ±4 kV Ringwave : ±2.5 kV CS : 150 kHz ~ 80 MHz, 10 V MFS : 0.5 mT V-DIP : 0 %, 1 cycle 40 %, 12 cycle 70 %, 30 cycle 0 %, 300 cycle	BS-6	N
MOTIE Notice No.2022-164(09.29.2022.)	Electrical machinery for industries	Electric vehicle chargers technical standards 8.2.1 Electromagnetic Compatibility	RE : 2 kHz ~ 6 GHz CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz Harmonic : (2-40) 고주파 Flicker : 단상 ≤16 A 삼상 각 상당 ≤75 A ESD : ±8 kV RS : 80 MHz ~ 6 GHz, 10 V/m EFT : ±2 kV SURGE : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V M/F : 200 A/m V-DIP : 0 %, 1 cycle 40 %, 10/12 cycles (50/60) Hz 70 %, 25/30 cycles (50/60) Hz 0 %, 250/300 cycles (50/60) Hz Transient voltage: 0~2 kV	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MFDS Notice No.2020-29(05.01.2020)	Medical devices	Common Standards and Specifications on Electromagnetic Safety of Medical Devices	RE : 150 kHz ~ 1 GHz CE : 9 kHz ~ 30 MHz DCE : 150 kHz ~ 30 MHz ESD : ±8 kV RS : 80 MHz ~ 2.5 GHz, 10 V/m EFT : ±2 kV Surge : ±2 kV CS : 150 kHz ~ 80 MHz, 10 V M/F : 3 A/m V-DIP : < 5 %, 0.5 cycle 40 %, 5 cycle 70 %, 25 cycle < 5 %, 300 cycle	BS-6	N
General Technical Specifications of KEPCO(GS-6110-0039:2022)	Electrical machinery for industries	154kV T/L Protection Panel Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Voltage dips, short interruptions and voltage variations immunity tests	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : max. ±8 kV RS : 80 MHz ~ 2.7 GHz, Max. 10 V/m EFT : Max. ±4 kV Surge : Max. ±4 kV CS : 150 kHz ~ 80 MHz, Max. 10 V MFS : Max. 300 A/m V-DIP : 0 %, 300 cycle (AC), 5 s (DC) 0 %, 0.5 ~ 25 cycle (AC), 10 ms ~ 1 000 ms (DC) 40 %, 12 cycle (AC), 200 ms (DC) 70 %, 30 cycle (AC), 500 ms (DC) 15 % of Rated DC, 100/120 Hz DOW : max. ±4.0 kV Low CS : max. 300 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
General Technical Specifications of KEPCO(GS-6110-0074:2022)	Electrical machinery for industries	154kV Main Transformer Protection Panel Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Voltage dips, short interruptions and voltage variations immunity tests	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : max. ±8 kV RS : 80 MHz ~ 2.7 GHz, max. 10 V/m EFT : max. ±4 kV Surge : max. ±4 kV CS : 150 kHz ~ 80 MHz, max. 10 V MFS : max. 300 A/m V-DIP :0 %, 300 cycle (AC), 5 s (DC) 0 %, 0.5 ~ 25 cycle (AC), 10 ms ~ 1 000 ms (DC) 40 %, 12 cycle (AC), 200 ms(DC) 70 %, 30 cycle (AC), 500 ms(DC) 15 % of Rated DC, 100/120 Hz DOW : max. ±4.0 kV Low CS : max. 300 V	BS-2	N
General Technical Specifications of KEPCO(GS-6110-0094:2022)	Electrical machinery for industries	154kV Substation Automation Operating System Clause 5.4 (5): EMC test	RE : 30 MHz ~ 1 GHz CE : 150 kHz ~ 30 MHz ESD : max. ±8 kV RS : 80 MHz ~ 1.0 GHz, Max. 10 V/m EFT : Max. ±4 kV Surge : Max. ±4 kV CS : 150 kHz ~ 80 MHz, Max. 10 V MFS : Max. 1000 A/m V-DIP : 0 %, 5 cycle (AC), 0.05 s(DC) 40 %, 1 cycle(AC), 100 ms(DC) 70 %, 100 ms(DC) -20 % ~ +10 % Variations of Rated DC, 10 s 10 % of Rated DC,60 Hz DOW : max. ±1.5 kV Low CS : max. 30 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
General Technical Specifications of KEPCO(GS-6110-0097:2022)	Electrical machinery for industries	154kV Hybrid Substation Automation Operating System Clause 5.4 (5): EMC test	RE : 30 MHz ~ 1 GHz CE : 150 kHz ~ 30 MHz ESD : max. ±8 kV RS : 80 MHz ~ 1.0 GHz, Max. 10 V/m EFT : Max. ±4 kV Surge : Max. ±4 kV CS : 150 kHz ~ 80 MHz, Max. 10 V MFS : 1000 A/m V-DIP : 0 %, 5 cycle (AC), 0.05 s (DC) 40 %, 1 cycle (AC), 100 ms (DC) 70 %, 100 ms (DC) -20 % ~ +10 % Variations of Rated DC, 10 s 10 % of Rated DC, 60 Hz DOW : max. ±1.5 kV Low CS : max. 30 V	BS-2	N
General Technical Specifications of KEPCO(GS-6110-0098:2018)	Electrical machinery for industries	345kV Hybrid Substation Automation Operating System Clause 5.4 (5): EMC test	RE : 30 MHz ~ 1 GHz CE : 150 kHz ~ 30 MHz ESD : Max. ±8 kV RS : 80 MHz ~ 1.0 GHz, max. 10 V/m EFT : max. ±4 kV Surge : max. ±4 kV CS : 150 kHz ~ 80 MHz, max. 10 V MFS : max. 1000 A/m V-DIP : 0 %, 5 cycle (AC), 0.05 s (DC) 40 % 1 cycle (AC), 100 ms (DC) 70 %, 100 ms (DC) 10 % of Rated DC,60 Hz DOW : max. ±1.5 kV Low CS : max. 30 V	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
General Technical Specifications of KEPCO(GS-6110-0265:2022)	Electrical machinery for industries	154kV Main Transformer Protection IED Panel Clause 6.2.2.(6): EMC test Clause 6.2.2.(7): Voltage dips, short interruptions and voltage variations immunity tests	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : max. ±8 kV RS : 80 MHz ~ 2.7 GHz, Max. 10 V/m EFT : Max. ±4 kV Surge : Max. ±4 kV CS : 150 kHz ~ 80 MHz, Max. 10 V MFS : Max. 300 A/m V-DIP : 0 %, 300 cycle (AC), 5 s (DC) 0 %, 0.5 ~ 25 cycle (AC), 10 ms ~ 1 000 ms (DC) 40 %, 12 cycle (AC), 200 ms (DC) 70 %, 30 cycle (AC), 500 ms (DC) 15 % of Rated DC, 100/120 Hz DOW : max. ±4.0 kV Low CS : max. 300 V	BS-2	N
General Technical Specifications of KEPCO(GS-6625-0086:2020)	Electrical machinery for industries	Testing Methods of Static Meters 6.5 Tests for electromagnetic compatibility	RE : 30 MHz ~ 6 GHz CE : 150 kHz ~ 30 MHz ESD : Max. ±15 kV RS : 80 MHz ~ 2.7 GHz, Max. 30 V/m 2.7 GHz ~ 6 GHz, Max. 10 V/m EFT : Max. ±4 kV Surge : Max. ±6 kV CS : 150 kHz ~ 80 MHz, Max. 20 V Ring wave : Max. 4 kV Damped oscillatory wave : Max. 4 kV	BS-2	N

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03. Electrical Testing

03.012 Software

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
Cybersecurity Certification Test Plan for IoT Devices Version 2.1	Software	Cybersecurity Certification Test Plan for IoT Devices	-	BS-1	Y
EN 50128:2011	Software	Railway Applications- Communications, signalling and processing systems- Software for railway control and protection systems 7.5.4.7. b), Table A.12, Table A.13, Table A.19, Table A.21 1,2,	-	BS-1	Y
EN 81-50:2020	Software	Safety rules for the construction and installation of lifts - Examinations and tests Part 50: Design rules, calculations, examinations and tests of lift components - 5.6 Type examination of safety circuits containing electronic components and/or programmable electronic systems (PESSRAL) - Annex B (normative) Programmable electronic systems in safety related applications for lifts (PESSRAL)	-	BS-4	Y
ETSI EN 303 645 V2.1.1	Software	Cyber Security for Consumer Internet of Things: Baseline Requirements	-	BS-1	Y
IEC 60335-1:2020	Software	Household and similar electrical appliances - Safety - Part 1: General requirements Annex R Software evaluation	-	BS-4	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60730-1:2022	Software	Automatic electrical controls-Part1:General requirements - Annex H : Requirements related to functional safety	-	BS-4	Y
IEC 61508-1:2010	Software	Functional safety of electrical / electronic / programmable electronic safety-related systems - Part 1: General requirements	-	BS-4	Y
IEC 61508-2:2010	Software	Functional safety of electrical / electronic / programmable electronic safety - related systems - Part 2: Requirements for electrical / electronic / programmable electronic safety-related systems	-	BS-4	Y
IEC 61508-3:2010	Software	Functional safety of electrical / electronic / programmable electronic safety related systems - Part 3 : Software requirements 7.4.7, 7.4.8 Table B.1, Table B.2, Table B.8 1,2,3,4,5,9	-	BS-1	Y
IEC 61508-3:2010	Software	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 3: Software requirements	-	BS-4	Y
IEC 62061:2021	Software	Safety of machinery - Functional safety of safety-related control systems	-	BS-4	Y
IEC 62279:2015	Software	Railway Applications-Communications, signalling and processing systems-Software for railway control and protection systems 7.5.4.7 a), b), 7.5.4.8, Table A.12, Table A.13 6, Table A.19 3,4	-	BS-1	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62304:2006	Software	Medical device software - Software life cycle processes	-	BS-1	N
IEC 62304:2006/AMD 1:2015	Software	Medical device software - Software life cycle processes	-	BS-1	N
IEC 62443-2-4:2015+AMD1:2017	Software	Security for industrial automation and control systems - Part 2-4: Security program requirements for IACS service providers	-	BS-1	Y
IEC 62443-3-3:2013	Software	Industrial communication networks - Network and system security - Part 3-3: System security requirements and security levels	-	BS-1	Y
IEC 62443-4-1:2018	Software	Security for industrial automation and control systems - Part 4-1: Secure product development lifecycle requirements	-	BS-1	Y
IEC 62443-4-2:2019	Software	Security for industrial automation and control systems - Part 4-2: Technical security requirements for IACS components	-	BS-1	Y
IEC 62619:2017	Software	Secondary cells and batteries containing alkaline or other nonacid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial application - 8. Battery system safety (Considering functional safety)	-	BS-4	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62619:2022	Software	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications - 8. Battery system safety (considering functional safety)	-	BS-4	Y
IEC 62990-1:2019	Software	Workplace atmospheres - Part 1: Gas detectors - Performance requirements of detectors for toxic gases 4.2.9 Software-controlled equipment 5.4.10 Software-controlled equipment	-	BS-1	Y
IEC 81001-5-1:2021	Software	Health software and health IT systems safety, effectiveness and security Part 5-1: Security Activities in the product life cycle	-	BS-1	N
IEC 82304-1:2016	Software	Health software - Part 1 : General requirements for product safety	-	BS-1	N
IEC TR 60601-4-5:2021	Software	Medical electrical equipment - Part 4-5: Guidance and interpretation - Safety-related technical security specifications	-	BS-1	N
ISO/IEC 15408-1:2009	Software	Information technology - Security techniques - Evaluation criteria for IT security - Part 1 : Introduction and general model	-	BS-1	N
ISO/IEC 15408-2:2008	Software	Information technology - Security techniques - Evaluation criteria for IT security - Part 2 : Security functional components	-	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO/IEC 15408-3:2008	Software	Information technology - Security techniques - Evaluation criteria for IT security - Part 3 : Security assurance components	-	BS-1	N
ISO/IEC 18045:2008	Software	Information technology - Security techniques - Methodology for IT security evaluation	-	BS-1	N
ISO/IEC 25021:2012	Software	Systems and software engineering - Systems and software Quality Requirements and Evaluation(SQuaRE) - Quality measure elements	-	BS-1	Y
ISO/IEC 25023:2016	Software	Systems and software engineering - Systems and software Quality Requirements and Evaluation (SQuaRE) - Measurement of system and software product quality	-	BS-1	Y
ISO/IEC 25023:2016	Software	Systems and software engineering - Systems and software Quality Requirements and Evaluation(SQuaRE) - Measurement of system and software product quality	-	BS-7	Y
ISO/IEC 25023:2016	Software	Systems and software engineering - Systems and software Quality Requirements and Evaluation(SQuaRE) - Measurement of system and software product quality	-	BS-4	Y
ISO/IEC 25024:2015	Software	Systems and software engineering - Systems and software Quality Requirements and Evaluation (SQuaRE) - Measurement of data quality	-	BS-7	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO/IEC 25024:2015	Software	Systems and software engineering - Systems and software Quality Requirements and Evaluation(SQuaRE) - Measurement of data quality	-	BS-1	Y
ISO/IEC 25051:2014	Software	Software engineering - Systems and software Quality Requirements and Evaluation (SQuaRE) - Requirements for quality of Ready to Use Software Product (RUSP) and instructions for testing	-	BS-1	Y
ISO/IEC 25051:2014	Software	Software engineering —Systems and software Quality Requirements and Evaluation(SQuaRE) - Requirements for quality of Ready to Use Software Product (RUSP) and instructions for testing	-	BS-7	Y
ISO/IEC 25051:2014	Software	Software engineering —Systems and software Quality Requirements and Evaluation(SQuaRE) - Requirements for quality of Ready to Use Software Product (RUSP) and instructions for testing	-	BS-4	Y
ISO/IEC TS 4213:2022	Software	Information technology - Artificial intelligence - Assessment of machine learning classification performance	-	BS-7	Y
KC 62619:2019	Software	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary Lithium cells and batteries, for use in industrial applications - 8. Battery System safety (considering functional safety) - Annex D	-	BS-4	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 62619:2023	Software	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications - 8. Battery system safety (considering functional safety) - Annex E	-	BS-4	Y
KS C 5078:2015	Software	Video data recording systems for road vehicle accidents - 7.2.4.2 Verification of integrity function for recoded events	-	BS-1	N
KS C IEC 61508-1:2010	Software	Functional safety of electrical / electronic / programmable electronic safety-related systems - Part 1: General requirements	-	BS-4	Y
KS C IEC 62990-1:2019	Software	Workplace atmospheres - Part 1: Gas detectors - Performance requirements of detectors for toxic gases 4.2.9 Software-controlled equipment 5.4.10 Software-controlled equipment	-	BS-1	Y
KS X IEC 62443-4-2:2019	Software	Security for industrial automation and control systems - Part 4-2: Technical security requirements for IACS components	-	BS-1	Y
KS X ISO/IEC 15408-1:2005	Software	Information technology - Security techniques - Evaluation criteria for IT security - Part 1 : Introduction and general model	-	BS-1	N
KS X ISO/IEC 15408-2:2008	Software	Information technology - Security techniques - Evaluation criteria for IT security - Part 2 : Security functional components	-	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X ISO/IEC 15408-3:2008	Software	Information technology - Security techniques - Evaluation criteria for IT security - Part 3 : Security assurance components	-	BS-1	N
KS X ISO/IEC 18045:2010	Software	Information technology - Security techniques - Methodology for IT security evaluation	-	BS-1	N
KS X ISO/IEC 25023:2016	Software	Systems and software engineering - Systems and software Quality Requirements and Evaluation (SQuaRE) - Measurement of system and software product quality	-	BS-1	Y
KS X ISO/IEC 25023:2016	Software	Systems and software engineering - Systems and software Quality Requirements and Evaluation(SQuaRE) - Measurement of system and software product quality	-	BS-7	Y
KS X ISO/IEC 25023:2016	Software	Systems and software engineering — Systems and software Quality Requirements and Evaluation(SQuaRE) — Measurement of system and software product quality	-	BS-4	Y
KS X ISO/IEC 25051:2014	Software	Software engineering - Systems and software Quality Requirements and Evaluation(SQuaRE) - Requirements for quality of Ready to Use Software Product (RUSP) and instructions for testing	-	BS-4	Y
KS X ISO/IEC 25051:2014	Software	Software engineering —Systems and software Quality Requirements and Evaluation(SQuaRE) - Requirements for quality of Ready to Use Software Product (RUSP) and instructions for testing	-	BS-7	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X ISO/IEC 25051:2014	Software	Software engineering - Systems and software Quality Requirements and Evaluation (SQuaRE) - Requirements for quality of Ready to Use Software Product (RUSP) and instructions for testing	-	BS-1	Y
KS X ISO/IEC TR 9126-2:2003	Software	Information technology - Software engineering - product quality - Part 2 : External metrics	-	BS-1	N
KS X ISO/IEC TR 9126-2:2008	Software	Information technology - Software engineering - Product quality - Part 2 : External metrics	-	BS-4	N
MISRA C:2004	Software	Guidelines for the use of the C language in critical systems	-	BS-1	Y
MISRA-C:2004	Software	Guidelines for the use of the C language in critical systems	-	BS-4	Y
MSIT Notice No.2021-101 (12.30.2021.)	Software	Guidelines for the operation of software quality certification	-	BS-7	Y
MSIT Notice No.2021-101(12.30.2021.)	Software	Guidelines for the operation of software quality certification	-	BS-1	Y
MSIT Notice No.2021-101(12.30.2021.)	Software	Guidelines for the operation of software quality certification	-	BS-4	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MOIS Notice No.2022-18(03.02.2022.)	Software	Safety code for elevator safety components and safety code for lifts Safety code for elevators under Article 4 subparagraph 1 : Appendix 22 -15.2.6 Programmable Electronic Systems in Safety Related Applications(PESSRAL) - Annex Ⅰ List of electrical safety circuits - Annex XIII (Normative) Programmable Electronic Systems in Safety Related Applications for Lifts(PESSRAL)	-	BS-4	Y

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03. Electrical Testing

03.013 Energy Efficiency

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
AHRI 1060:2014	Air exchanger	Performance Rating of Airto-Air Exchangers for Energy Recovery Ventilation Equipment	3 000 Nm3/h or less	BS-2	N
AHRI 1230:2009	Air conditioner	Performance rating of Variable Refrigerant Flow(VRF) Multi-Split Air-conditioning and Heatpump equipment	(1 160 ~ 87 000) W	BS-2	N
AHRI 1230:2010	Air conditioner	Performance rating of Variable Refrigerant Flow(VRF) Multi-Split Air-conditioning and Heatpump equipment	(1 160 ~ 87 000) W	BS-2	N
AHRI 1230:2021	Air-conditioner and heat pump	Standard for Performance rating of Variable Refrigerant Flow(VRF) Multi-Split Air-conditioning and Heat pump equipment	(3 000 ~ 320 000) W	SF-4	N
AHRI 1300:2013	heat pump	Standard for performance rating of commercial heatpump water heaters	(1 160 ~ 87 000) W	BS-2	N
AHRI 1301:2013	heat pump	Performance Rating of Commercial Heat Pump Water Heaters	(1 160 ~ 87 000) W	BS-2	N
AHRI 210/240:2017	Air conditioner	Methods of testing for room air conditioners and packaged terminal air conditioner	(1 160 ~ 87 000) W	BS-2	N
AHRI 210/240:2017	Air-conditioner, heat pump	Performance Rating of Unitary Air - conditioning & Air-source Heat Pump Equipment	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
AHRI 210/240:2023(2020)	heat pump	Standard for Performance Rating of Unitary Air-conditioning & Air-source Heat Pump Equipment	(500 ~ 320 000) W	SF-4	N
AHRI 440:2019	Air handling unit	Standard for Performance Rating of Room Fan-Coils	(500 ~ 320 000) W	SF-4	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
AHRI Standard 340/360:2015	Air conditioner	Performance rating of Commercial and Industrial Unitary Air - conditioning and Heat pump equipment	(1 160 ~ 87 000) W	BS-2	N
AHRI Standard 340/360:2022	Air-conditioner and heat pump	Standard for Performance Rating of Commercial and Industrial Unitary Air-conditioning and Heat Pump Equipment	(3 000 ~ 320 000) W	SF-4	N
AHRI Standard 870:2016	heat pump	Direct Geoexchange Heats pumps	(1 160 ~ 87 000) W	BS-2	N
AHRI Standard 870:2016	heat pump	Standard for Performance Rating of Direct Geoexchange Heat Pumps	(3 000 ~ 320 000) W	SF-4	N
ANSI-ASHRAE 37:2009	Air-conditioner, heat pump	Methods of testing for rating Unitary Air - conditioning and heat pump equipment	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
ANSI/AHAM PAC-1-2015	Air conditioner	Portable Air Conditioners	(500 ~ 20 000) W	SF-4	N
ANSI/AHRI 1300:2013	heat pump	Standard for Performance Rating of Commercial Heat Pump Water Heaters	(3 000 ~ 320 000) W	SF-4	N
ANSI/AHRI 1301:2013	heat pump	Standard for Performance Rating of Commercial Heat Pump Water Heaters	(3 000 ~ 320 000) W	SF-4	N
ANSI/AHRI 440-2008	Room fan coils	Performance Rating of Room Fan-Coils	(1 160 ~ 87 000) W	BS-2	N
ANSI/ASHARE 16-2016	Air-conditioner and heat pump	Method of Testing for Rating Room Air Conditioners, Packaged Terminal Air Conditioners, and Packaged Terminal Heat Pumps for Cooling and Heating Capacity	(500 ~ 320 000) W	SF-4	N
ANSI/ASHARE 16-2016	heat pump	Method of Testing for Rating Room Air Conditioners, Packaged Terminal Air Conditioners, and Packaged Terminal Heat Pumps for Cooling and Heating Capacity	1 160 ~ 87 000) W	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ANSI/ASHRAE 16:1983 (R2014)	Air-conditioner	Methods of testing for room air conditioners and packaged terminal air conditioner:	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
ANSI/ASHRAE 16:1983(R 2014)	heat pump	Method Of Testing For Rating Room Air Conditioners, Packaged Terminal Air Conditioners and Packaged Terminal Heat Pumps for Cooling and Heating Capacity	(1 160 ~ 87 000) W	BS-2	N
ANSI/ASHRAE 37-2009(RA2019)	heat pump	Methods of testing for rating Unitary Air - conditioning and heat pump equipment	(500 ~ 320 000) W	SF-4	N
ANSI/ASHRAE 37:2009	Air conditioner	Methods of testing for rating Electrically driven Unitary Air conditioning and heat pumps equipments	(1 160 ~ 87 000) W	BS-2	N
ANSI/ASHRAE Standard 128-2018	Air conditioner	Methods Of Rating Portable Air Conditioners	(500 ~ 20 000) W	SF-4	N
AS-NZS 3823.1.1-2012	Air conditioner	Non ducted air conditions and geat pumps-Testing and rating for performance	(1 160 ~ 87 000) W	BS-2	N
AS-NZS 3823.1.1.:2012	Air-conditioner, heat pump	Nonducted air conditions and geat pumps-Testing and rating for performance	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
AS-NZS 3823.1.2-2012	Air conditioner	Ducted air conditioners and air-to-air heat pumps Testing and rating for performance	(1 160 ~ 87 000) W	BS-2	N
AS-NZS 3823.1.2.:2012	Air-conditioner, heat pump	Ducted air conditioners and air-to-air heat pumps Testing and rating for performance	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
AS-NZS 3823.3-2002	Air conditioner	Performance of electrical appliances-Air conditioners and heat pumps-performance of electrical appliances-Air conditioners and heat pumps(MEPS) requirements	(1 160 ~ 87 000) W	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
AS-NZS 3823.3:2002	Air-conditioner, heat pump	Calculation of performance for minimum energy performance standard requirements	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
AS-NZS 4474.1:2007 Amdt2:2011	Household refrigerating appliances	Performance of household electrical appliances - Refrigerating appliances - Energy consumption and performance	(0 ~ 600) V (0 ~ 20) A	BS-1	N
AS/NZS 2040.1:2005	Electric appliances for households	Performance of household electrical appliances - Clothes washing machines- Part 1 : Methods for measuring performance energy and water consumption	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
AS/NZS 2040.2:2005	Electric appliances for households	Performance of household electrical appliances - Clothes washing machines- Part 2 : Energy efficiency labelling requirements	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
AS/NZS 2442.1:1996	Electric appliances for households	Performance of household electrical appliances- Rotary clothes dryers- Part 1 : Energy Consumption and Performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
AS/NZS 2442.2:2000	Electric appliances for households	Performance of household electrical appliances - Rotary clothes dryers- Part 2 : Energy labelling requirements	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
AS/NZS 3823.1.3.:2005/Amdt1:2011	Air conditioners and heat pumps Water-source heat pumps	Performance of electrical appliances - Air conditioners and heat pumps Water-source heat pumps - Water-to-air and brine-to-air heat pumps - Testing and rating of performance (ISO 13256-1, Ed. 01 (1998) MOD)	(1 160 ~ 87 000) W	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
AS/NZS 3823.1.4:2012	Air conditioners and heat pumps Multiple split-system air conditioners and air-to-air heat pumps	Performance of electrical appliances - Air conditioners and heat pumps Multiple split-system air conditioners and air-to-air heat pumps - Testing and rating for performance (ISO 15042 : 2011, MOD)	(1 160 ~ 87 000) W	BS-2	N
AS/NZS 3823.2:2013	Air-conditioner, heat pump	Performance of electrical appliances - Air conditioners and heat pumps Energy labelling and minimum energy performance standards (MEPS) requirements	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
AS/NZS 3823.2:2013	Air conditioners and heat pumps	Performance of electrical appliances - Air conditioners and heat pumps Energy labelling and minimum energy performance standards (MEPS) requirements	(1 160 ~ 87 000) W	BS-2	N
AS/NZS 4234:2008/Amdt2:2011	Heated water systems	Heated water systems - calculation of energy consumption	(1 160 ~ 87 000) W	BS-2	N
AS/NZS 4234:2008/Amdt3:2014	Heated water systems	Heated Water systems - calculation of energy consumption	(1 160 ~ 87 000) W	BS-2	N
AS/NZS 4474.1:2007/Amdt2:2011	Electrical machinery for households	Performance of household electrical appliances - Refrigerating appliances - Energy consumption and performance	10 kW or less	BS-2	N
AS/NZS 4474.2:2009/Amdt1:2011	Household refrigerating appliances	Performance of household electrical appliances - Refrigerating appliances energy labelling and minimum energy performance standard requirements	(0 ~ 600) V (0 ~ 20) A	BS-1	N
AS/NZS 4474.2:2009/Amdt2:2014	Household refrigerating appliances	Performance of household electrical appliances - Refrigerating appliances Energy labelling and minimum energy performance standard requirements	(1 160 ~ 87 000) W	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
AS/NZS 4692.1:2005(R2016)/Amdt2:2015	Electric water heaters	Electric water heaters - energy consumption, performance and general requirements	(1 160 ~ 87 000) W	BS-2	N
AS/NZS 5125	Heat Pump Water Heaters	Heat Pump Water Heaters - Performance Assessment	(1 160 ~ 87 000) W	BS-2	N
AS/NZS 5125.1:2014	Heat Pump Water Heaters	HeatPump Water Heaters-performance Assessment	(1 160 ~ 87 000) W	BS-2	N
AS/NZS 6400:2016	Electric appliances for households	Water efficient products - Rating and labelling	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
BS EN 14511-1:2018	Air conditioner	Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space Heating and cooling. Terms, definitions and classification	(1 160 ~ 87 000) W	BS-2	N
BS EN 14511-2:2018	Air conditioner	Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space Heating and cooling. Test conditions	(1 160 ~ 87 000) W	BS-2	N
BS EN 14511-3:2018	Air conditioner	Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space Heating and cooling. Test methods	(1 160 ~ 87 000) W	BS-2	N
BS EN 14511-4:2018	Air conditioner	Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space Heating and cooling. Operating requirements, marking and instructions	(1 160 ~ 87 000) W	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
BS EN 14825:2018	Air conditioner	Air conditioners, liquid chilling packages and heat pumps, with electrically driven compressors, for space Heating and cooling. Testing and rating at part load conditions and calculation of seasonal performance	(1 160 ~ 87 000) W	BS-2	N
BS EN 15218:2013	Air conditioner	Air conditioners and liquid chilling packages with evaporatively cooled condenser and with electrically driven compressors for space cooling. Terms, definitions, test conditions, test methods and requirements	(1 160 ~ 87 000) W	BS-2	N
BS EN 16147:2017	heat pump	Heat pumps with electrically driven compressors - Testing, performance rating and requirements for marking of domestic hot water units	(1 160 ~ 87 000) W	BS-2	N
CAN/CSA 370-13(R2018)	Air conditioner	Cooling performance of portable air conditioners	(500 ~ 20 000) W	SF-4	N
DECRETO SUPREMO Nº 009-2017-em_ANEXO 6 Lavadoras	Electric appliances for households	On labeling of energy efficiency for washing machines deomestic use clothes	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
DGNTI COPANIT506:2017	Air conditioner	Energy efficiency of central, package or split type air conditioners. Limits, test methods.	(500 ~ 20 000) W	SF-4	N
DGNTI COPANIT507:2017	Air conditioner	Energy efficiency for room air conditioners. Limits, test methods.	(500 ~ 20 000) W	SF-4	N
DGNTICOPANIT508: 2017	Air conditioner	Energy efficiency for separated assemblies, free discharge and non-ducted air conditioners. limits and test methods	(500 ~ 20 000) W	SF-4	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
DGNTICOPANIT509: 2017	Air conditioner	Energy efficiency in split-type air conditioners with variable refrigerant flow, free discharge and without air ducts. Limits, test methods.	(500 ~ 20 000) W	SF-4	N
DGNTI-COPANIT506:2017	Air conditioner	Energy efficiency of central, package or split type air conditioners. Limits, test methods.	(1 160 ~ 87 000) W	BS-2	Y
DGNTI-COPANIT507:2017	Air conditioner	Energy efficiency for room air conditioners. Limits, test methods.	(1 160 ~ 87 000) W	BS-2	Y
DGNTI-COPANIT508:2017	Air conditioner	Energy efficiency for separated assemblies, free discharge and non-ducted air conditioners. limits and test methods	(1 160 ~ 87 000) W	BS-2	Y
DGNTI-COPANIT509:2017	Refrigerator	Energy efficiency in split-type air conditioners with variable refrigerant flow, free discharge and without air ducts. Limits, test methods.	(1 160 ~ 87 000) W	BS-2	Y
DGNTI-COPANIT511:2017	Refrigerator	Energy efficiency of refrigerator and freezer appliances. Limits, test methods.	10 kW or less	BS-2	Y
EN 14511-1:2018	Air-conditioner and heat pump	Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers, with electrically driven compressors - Part 1: Terms and definitions	(500 ~ 320 000) W	SF-4	N
EN 14511-1:2022	Air-conditioner and heat pump	Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers, with electrically driven compressors - Part 1: Terms and definitions	(500 ~ 320 000) W	SF-4	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 14511-1:2022	Air conditioner	Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers,with electrically driven compressors- Part 1 : Terms and definitions	(1 160 ~ 87 000) W	BS-2	N
EN 14511-2:2018	Air-conditioner and heat pump	Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers, with electrically driven compressors - Part 2: Test conditions	(500 ~ 320 000) W	SF-4	N
EN 14511-2:2022	Air-conditioner and heat pump	Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers, with electrically driven compressors - Part 2: Test conditions	(500 ~ 320 000) W	SF-4	N
EN 14511-2:2022	Air conditioner	Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers,with electrically driven compressors- Part 2 : Test conditions	(1 160 ~ 87 000) W	BS-2	N
EN 14511-3:2018	Air-conditioner, chiller, heat pump	Air conditioners liquid chilling packages and heat pumps With electrically driven compressors for space heating and cooling - Part 3: Test methods	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
EN 14511-3:2018	Air-conditioner and heat pump	Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers, with electrically driven compressors - Part 3: Test methods	(500 ~ 320 000) W	SF-4	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 14511-3:2022	Air-conditioner and heat pump	Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers, with electrically driven compressors - Part 3: Test methods	(500 ~ 320 000) W	SF-4	N
EN 14511-3:2022	Air conditioner	Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers,with electrically driven compressors- Part 3 : Test methods	(1 160 ~ 87 000) W	BS-2	N
EN 14511-4:2018	Air-conditioner and heat pump	Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers, with electrically driven compressors - Part 4: Requirements	(500 ~ 320 000) W	SF-4	N
EN 14511-4:2022	Air-conditioner and heat pump	Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers, with electrically driven compressors - Part 4: Requirements	(500 ~ 320 000) W	SF-4	N
EN 14511-4:2022	Air conditioner	Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers,with electrically driven compressors- Part 4 : Requirements	(1 160 ~ 87 000) W	BS-2	N
EN 14825:2018	Air-conditioner, chiller, heat pump	Air conditioners liquid chilling packages and heat pumps With electrically driven compressors for space heating and cooling - Testing and rating at part load conditions and calculation of seasonal performance	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 14825:2018	Air-conditioner and heat pump	Air conditioners, liquid chilling packages and heat pumps, with electrically driven compressors, for space heating and cooling, commercial and process cooling. Testing and rating at part load conditions and calculation of seasonal performance	(500 ~ 320 000) W	SF-4	N
EN 14825:2022	Air-conditioner and heat pump	Air conditioners, liquid chilling packages and heat pumps, with electrically driven compressors, for space heating and cooling, commercial and process cooling. Testing and rating at part load conditions and calculation of seasonal performance	(500 ~ 320 000) W	SF-4	N
EN 15218:2013	Air-conditioner and heat pump	Air conditioners and liquid chilling packages with evaporatively cooled condenser and with electrically driven compressors for space cooling. Terms, definitions, test conditions, test methods and requirements	(500 ~ 320 000) W	SF-4	N
EN 15218:2022	Air-conditioner and heat pump	Air conditioners and liquid chilling packages with evaporatively cooled condenser and with electrically driven compressors for space cooling. Terms, definitions, test conditions, test methods and requirements	(500 ~ 320 000) W	SF-4	N
EN 16147:2017	Air-conditioner and heat pump	Heat pumps with electrically driven compressors - Testing, performance rating and requirements for marking of domestic hot water units	(500 ~ 320 000) W	SF-4	N
EN 26:2015	Electric water heater	Electric instantaneous water heaters. General requirements	(1 160 ~ 87 000) W	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 50229:2007	Electric appliances for households	Electric Clothes Washer-Dryers For Household Use - Methods Of Measuring The Performance <Exception> 9.5 Determination of airborne acoustical noise	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
EN 50229:2015	Electric appliances for households	Electric Clothes Washer-Dryers For Household Use - Methods Of Measuring The Performance <Exception> 9.5 Determination of airborne acoustical noise	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
EN 60456:2011	Electric appliances for households	Clothes washing machines for household use - Methods for measuring the performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
EN 60456:2016	Electric appliances for households	Clothes washing machines for household use - Methods for measuring the performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
EN 61121:2005	Electric appliances for households	Tumble dryers for household use - Methods for measuring the performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
EN 61121:2013	Electric appliances for households	Tumble dryers for household use - Methods for measuring the performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
ES 4814:2018	Non-ducted air conditioners and heat pumps	Non-ducted air conditioners and heat pumps - Testing and rating for performance	(1 160 ~ 87 000) W	BS-2	Y
ES 7993:2018	Televisions And Displays	Energy Efficiency Label For Televisions And Displays	Power: (0 ~ 2 200) W	BS-1	N
ES : 3795-1/2016	Air conditioner	Energy Efficiency Label requirements for Air Conditions Part 1 : Room Air Conditioner window -Split) with fixed Capacity &fixed Compressor	(1 160 ~ 87 000) W	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ES : 3795-2/2017	Air conditioner	Requirements of energy efficiency card for air conditioners second pard : Room Air conditioner(window -split) with variable capacity and variable speed compressor	(1 160 ~ 87 000) W	BS-2	N
ES : 3795-5/2018	Air conditioner	Energy Efficiency Label Requirements for Air Conditioner - Part 5: Fixed Capacity Ducted Room Air Conditioner with Fixed Speed Compressor	(1 160 ~ 87 000) W	BS-2	N
GB/T 21362-2008	Energy Efficiency	Heat pump water heater for commercial &industrial and similar application	(3 000 ~ 320 000) W	SF-4	N
GB/T 21362-2008	heat pump	Heatpump Water Heater for Commercial & Industrial and Similar Uses	(1 160 ~ 87 000) W	BS-2	N
GB/T 23137-2008	heat pump	Heatpump Water Heater for Household and Similar Uses	(1 160 ~ 87 000) W	BS-2	N
GB/T 23137-2020	Energy Efficiency	Heat pump water heater forhousehold and similar application	(500 ~ 320 000) W	SF-4	N
GSO 1589:2002	Air conditioner	Air Ducts For Air Conditions - Part1: Definitions, Classification And Terminology.	(500 ~ 320 000) W	SF-4	N
GSO 2530:2016	Air conditioner	Energy Labelling And Minimum Energy Performance Requirements For Air-Conditioners	(500 ~ 20 000) W	SF-4	N
GSO 2531:2016	Air conditioner	Saftey And Performance Requirements For Air-Conditioners And Methods Of Test Including MEPS	(500 ~ 20 000) W	SF-4	N
GSO ISO 13253:2021	Air-conditioner and heat pump	Ducted Air-Conditioners And Air-To-Air Heat Pumps - Testing And Rating For Performance	(500 ~ 320 000) W	SF-4	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
GSO ISO 13256-1:2013	Air-conditioner and heat pump	Water-Source Heat Pumps -- Testing And Rating For Performance -- Part 1: Water-To-Air And Brine-To-Air Heat Pumps	(500 ~ 320 000) W	SF-4	N
GSO ISO 13256-2:2013	Air-conditioner and heat pump	Water-Source Heat Pumps -- Testing And Rating For Performance -- Part 2: Water-To-Water And Brine-To-Water Heat Pumps	(3 000 ~ 200 000) W	SF-4	N
GSO ISO 15042:2013	Air-conditioner and heat pump	Multiple Split-System Air-Conditioners And Air-To-Air Heat Pumps - Testing And Rating For Performance	(3 000 ~ 320 000) W	SF-4	N
GSO ISO 16358-1:2016	Air-conditioner and heat pump	Air-Cooled Air Conditioners And Air-To-Air Heat Pumps -- Testing And Calculating Methods For Seasonal Performance Factors -- Part 1: Cooling Seasonal Performance Factor	(500 ~ 320 000) W	SF-4	N
GSO ISO 16358-2:2016	Air-conditioner and heat pump	Air-Cooled Air Conditioners And Air-To-Air Heat Pumps -- Testing And Calculating Methods For Seasonal Performance Factors -- Part 2: Heating Seasonal Performance Factor	(500 ~ 320 000) W	SF-4	N
GSO ISO 16358-3:2016	Air-conditioner and heat pump	Air-Cooled Air Conditioners And Air-To-Air Heat Pumps -- Testing And Calculating Methods For Seasonal Performance Factors -- Part 3: Annual Performance Factor	(500 ~ 320 000) W	SF-4	N
GSO ISO 5151:2021	Air-conditioner and heat pump	Non-Ducted Air Conditioners And Heat Pumps — Testing And Rating For Performance	(500 ~ 320 000) W	SF-4	N
GSO ISO/TS 16491:2015	Air-conditioner and heat pump	Guidelines for the evaluation of uncertainty of measurement in air conditioner and heat pump cooling and heating capacity tests	(500 ~ 320 000) W	SF-4	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60034-1:2010	Rotating electrical machines	Rotating electrical machines - Part 1: Rating and performance	single phase: 400 V or less three phase: 600 V or less Power: 375 kW or less	BS-2	Y
IEC 60034-1:2022	Rotating electrical machines	Rotating electrical machines - Part 1: Rating and performance	single phase: 400 V or less three phase: 600 V or less Power: 375 kW or less	BS-2	Y
IEC 60034-2-1:2014	Rotating electrical machines	Rotating electrical machines - Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)	single phase: 400 V or less three phase: 600 V or less Power: 375 kW or less	BS-2	Y
IEC 60034-30-1:2014	Rotating electrical machines	Rotating electrical machines - Part 30-1: Efficiency classes of line operated AC motors (IE code)	single phase: 400 V or less three phase: 600 V or less Power: 375 kW or less	BS-2	Y
IEC 60312-1: 2010 +AMD1:2011 CSV	Cordless dry vacuum cleaners	Vacuum cleaners for household use - Part 1: Dry vacuum cleaners - Methods for measuring the performance	Suction power : (0 ~500) W	BS-1	N
IEC 60456:2003	Electric appliances for households	Clothes washing machines for household use Methods for measuring the performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
IEC 60456:2010	Electric appliances for households	Clothes washing machines for household use - Methods for measuring the performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
IEC 60456:2010+AMD 1:2022 CSV	Electric appliances for households	Clothes washing machines for household use - Methods for measuring the performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
IEC 60705:2010	Electric appliances for households	Household microwave ovens - Methods for measuring performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60705:2010/AMD 1:2014	Electric appliances for households	Household microwave ovens - Methods for measuring performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
IEC 60904-1-1:2017	Photovoltaic (PV) module	Photovoltaic devices - Part 1-1: Measurement of current-voltage characteristics of multi-junction photovoltaic (PV) devices	voltage : 40 V or less current : 10 A or less	BS-2	N
IEC 60904-1:2020	Photovoltaic (PV) module	Photovoltaic devices - Part 1: Measurement of photovoltaic current-voltage characteristics	voltage : 40 V or less current : 10 A or less	BS-2	N
IEC 61121:2002+AMD 1:2005	Electric appliances for households	Tumble dryers for household use - Methods for measuring the performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
IEC 61121:2012	Electric appliances for households	Tumble Dryers For Household Use - Methods For Measuring The Performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
IEC 61215 Ed. 2.0b:2005	Crystalline Silicon Terrestrial Photovoltaic (PV) Modules	Crystalline Silicon Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval	10 A / 120 V or less 20 A / 60 V or less 5 A / 150 V or less 2.5 A / 300 V or less	BS-2	N
IEC 61215-1 Ed.2:2021	Photovoltaic (PV) module	Terrestrial photovoltaic (PV) modules-Design qualification and type approval-Part 1:Test requirements	40 A / 500 V or less	SF-1	Y
IEC 61215-1-1 Ed.2:2021	Photovoltaic (PV) module	Terrestrial photovoltaic (PV) modules-Design qualification and type approval-Part 1-1:Special requirements for testing of crystalline silicon photovoltaic (PV) modules	40 A / 500 V or less	SF-1	Y
IEC 61215-2 Ed.2:2021	Photovoltaic (PV) module	Terrestrial photovoltaic (PV) modules-Design qualification and type approval - Part 2:Test procedures	40 A / 500 V or less	SF-1	Y
IEC 61701 Ed.3:2020	Photovoltaic (PV) module	Photovoltaic (PV) modules - Salt mist corrosion testing	40 A / 500 V or less	SF-1	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61730-1:2023	Photovoltaic (PV) module	Photovoltaic (PV) module safety qualification-part 1: Requirements for construction	40 A / 100 V or less	SF-1	Y
IEC 61730-2:2023	Photovoltaic (PV) module	Photovoltaic (PV) module safety qualification-part 2 : Requirements for testing	40 A / 100 V or less	SF-1	Y
IEC 62087-1:2015	Audio, video, and related equipment	Audio, video, and related equipment - Determination of power consumption - Part 1: General	(0 ~ 2 200) W	BS-1	N
IEC 62087-2:2015	Audio, video, and related equipment	Audio, video, and related equipment - Determination of power consumption - Part 2: Signals and media	(0 ~ 2 200) W	BS-1	N
IEC 62087-3:2015	Audio, video, and related equipment	Audio, video, and related equipment - Determination of power consumption - Part 3: Television sets	(0 ~ 2 200) W	BS-1	N
IEC 62087-4:2015	Audio, video, and related equipment	Audio, video, and related equipment - Determination of power consumption - Part 4: Video recording equipment	(0 ~ 2 200) W	BS-1	N
IEC 62087-5:2015	Audio, video, and related equipment	Audio, video, and related equipment - Determination of power consumption - Part 5: Set top boxes(STB)	(0 ~ 2 200) W	BS-1	N
IEC 62087-6:2015	Audio, video, and related equipment	Audio, video, and related equipment - Determination of power consumption - Part 6: Audio equipment	(0 ~ 2 200) W	BS-1	N
IEC 62087:2011	Audio, video, and related equipment	Methods of measurement for the power consumption of audio video and related equipment	(0 ~ 2 200) W	BS-1	N
IEC 62301 Ed. 2.0:2011	Household Electrical Appliances	Household Electrical Appliances - Measurement of Standby Power	100 W or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62301:2011	Household electrical appliances	Household electrical appliances - Measurement of standby power	500 W or less	BS-1	N
IEC 62301:2011	Electric appliances for households	Household electrical appliances - Measurement of standby power	Input Power : Max. 500 W Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
IEC 62512:2012	Electric appliances for households	Electric clothes washer - dryers for household use - Methods for measuring the performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
IEC 62552-1:2015	Household Refrigerating appliances	Household Refrigerating Appliances - Characteristics And Test Methods Part 1 : General Requirements	10 kW or less	BS-2	Y
IEC 62552-1:2015	Household refrigerating appliances	Household Refrigerating Appliances - Characteristics and Test Methods Part 1 : General Requirements	(0 ~ 600) V (0 ~ 20) A	BS-1	N
IEC 62552-1:2015+AMD1:2020	Refrigerating Appliances	Household Refrigerating Appliances - Characteristics And Test Methods Part 1 : General Requirements	10 kW or less	BS-2	Y
IEC 62552-1:2015+AMD1:2020	Refrigerating Appliances	Household Refrigerating Appliances - Characteristics And Test Methods Part 1 : General Requirements	10 kW or less	BS-1	N
IEC 62552-2:2015	Household Refrigerating appliances	Household Refrigerating Appliances - Characteristics And Test Methods Part 2 : Performance requirements	10 kW or less	BS-2	Y
IEC 62552-2:2015	Household refrigerating appliances	Household Refrigerating Appliances - Characteristics and Test Methods Part 2 : Performance requirements	(0 ~ 600) V (0 ~ 20) A	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62552-2:2015+AMD1:2020	Refrigerating Appliances	Household Refrigerating Appliances - Characteristics And Test Methods Part 2 : Performance requirements	10 kW or less	BS-1	N
IEC 62552-2:2015+AMD1:2020	Refrigerating Appliances	Household Refrigerating Appliances - Characteristics And Test Methods Part 2 : Performance requirements	10 kW or less	BS-2	Y
IEC 62552-3:2015	Household Refrigerating appliances	Household Refrigerating Appliances - Characteristics And Test Methods Part 3 : Energy consumption and volume	10 kW or less	BS-2	Y
IEC 62552-3:2015	Household refrigerating appliances	Household Refrigerating Appliances - Characteristics and Test Methods Part 3 : Energy consumption and volume	(0 ~ 600) V (0 ~ 20) A	BS-1	N
IEC 62552-3:2015+AMD1:2020	Refrigerating Appliances	Household Refrigerating Appliances - Characteristics And Test Methods Part 3 : Energy consumption and volume	10 kW or less	BS-1	N
IEC 62552-3:2015+AMD1:2020	Refrigerating Appliances	Household Refrigerating Appliances - Characteristics And Test Methods Part 3 : Energy consumption and volume	10 kW or less	BS-2	Y
IEC 62552:2007	Household refrigerating appliances	Household refrigerating appliances - Characteristics and test methods	10 kW or less	BS-1	N
IEC 62552:2007	Household refrigerating appliances	Household refrigerating appliances - Characteristics and test methods	10 kW or less	BS-2	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62885-4:2020	Cordless dry vacuum cleaners	Surface cleaning appliances - Part 4: Cordless dry vacuum cleaners for household or similar use - Methods for measuring the performance	Suction power : (0 ~ 500) W	BS-1	N
ISO 13253:2017	Ducted air conditioners and heat pumps	Ducted air conditioners and heat pumps - Testing and rating for performance	(1 160 ~ 87 000) W	BS-2	N
ISO 13253:2017	Air-conditioner, heat pump	Ducted air-conditioners and air-to-air heat pumps - Testing and rating for performance	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
ISO 13253:2017	Air-conditioner and heat pump	Ducted air-conditioners and air-to-air heat pumps - Testing and rating for performance	(500 ~ 320 000) W	SF-4	N
ISO 13253:2017/Amd. 1:2020	Ducted air conditioners and heat pumps	Ducted air conditioners and heat pumps - Testing and rating for performance	(1 160 ~ 87 000) W	BS-2	N
ISO 13253:2017/Amd 1:2020	Air-conditioner, heat pump	Ducted air-conditioners and air-to-air heat pumps - Testing and rating for performance	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
ISO 13253:2017/Amd 1:2020	Air-conditioner and heat pump	Ducted air-conditioners and air-to-air heat pumps - Testing and rating for performance	(500 ~ 320 000) W	SF-4	N
ISO 13256-1:1998	Water-source heat pumps	Water-source heat pumps - Testing and rating for performance - Part 1 : Water-to-air and brine-to-air heat pumps	(1 160 ~ 87 000) W	BS-2	N
ISO 13256-1:2021	heat pump	Water-Source Heat Pumps - Testing And Rating For Performance - Part 1: Water-To-Air And Brine-To-Air Heat Pumps	(500 ~ 320 000) W	SF-4	N
ISO 13256-2:1998	Water-source heat pumps	Water-source heat pumps - Testing and rating for performance - Part 2 : Water-to-water and brine-to-water heat pumps	(1 160 ~ 87 000) W	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 13256-2:2021	heat pump	Water-source heat pumps - Testing and rating for performance - Part 2 : Water-to water and brine-to-water heat pumps	(3 000 ~ 200 000) W	SF-4	N
ISO 15042:2011	heat pump	Multiple split-system air conditioners and air-to-air heat pumps - Testing and rating for performance	(3 000 ~ 320 000) W	SF-4	N
ISO 15042:2011	Multiple split-system air-conditioners and air-to-air heat pumps	Multiple split-system air-conditioners and air-to-air heat pumps - Testing and rating for performance	(1 160 ~ 87 000) W	BS-2	Y
ISO 15042:2017	heat pump	Multiple split-system air conditioners and air-to-air heat pumps - Testing and rating for performance	(3 000 ~ 320 000) W	SF-4	N
ISO 15042:2017	Multiple split-system air-conditioners and air-to-air heat pumps	Multiple split-system air-conditioners and air-to-air heat pumps - Testing and rating for performance	(1 160 ~ 87 000) W	BS-2	N
ISO 15042:2017/AMD 1:2020	heat pump	Multiple split-system air conditioners and air-to-air heat pumps -Testing and rating for performance - Amendment 1	(3 000 ~ 320 000) W	SF-4	N
ISO 15042:2017/Amd. 1:2020	Multiple split-system air-conditioners and air-to-air heat pumps	Multiple split-system air-conditioners and air-to-air heat pumps - Testing and rating for performance	(1 160 ~ 87 000) W	BS-2	N
ISO 16358-1:2013	Air-conditioner, heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 1 : Cooling seasonal performance factor	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 16358-1:2013	Air-conditioner and heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 1 : Cooling seasonal performance factor	(500 ~ 320 000) W	SF-4	N
ISO 16358-1:2013	Air-cooled air conditioners and air-to-air heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part1 : Cooling seasonal performance factor	(1 160 ~ 87 000) W	BS-2	N
ISO 16358-1:2013/Amd 1:2019	Air-conditioner, heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 1 : Cooling seasonal performance factor	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
ISO 16358-1:2013/Amd 1:2019	Air-conditioner and heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 1 : Cooling seasonal performance factor	(500 ~ 320 000) W	SF-4	N
ISO 16358-1:2013/Amd.1:2019	Air-cooled air conditioners and air-to-air heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part1 : Cooling seasonal performance factor	(1 160 ~ 87 000) W	BS-2	N
ISO 16358-1:2013/Cor 1:2013	Air-cooled air conditioners and air-to-air heat pumps	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 1 : Cooling seasonal performance factor	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 16358-1:2013/Cor 1:2013	Air-conditioner and heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 1 : Cooling seasonal performance factor	(500 ~ 320 000) W	SF-4	N
ISO 16358-2:2013	Air-conditioner, heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 2 : Heating seasonal performance factor	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
ISO 16358-2:2013	Air-conditioner and heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 2 : Heating seasonal performance factor	(500 ~ 320 000) W	SF-4	N
ISO 16358-2:2013	Air-cooled air conditioners and air-to-air heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part2 : Heating seasonal performance factor	(1 160 ~ 87 000) W	BS-2	N
ISO 16358-2:2013/Cor 1:2013	Air-conditioner and heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 2 : Heating seasonal performance factor	(500 ~ 320 000) W	SF-4	N
ISO 16358-3:2013	Air-conditioner, heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 3 : Annual performance factor	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 16358-3:2013	Air-conditioner and heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 3 : Annual performance factor	(500 ~ 320 000) W	SF-4	N
ISO 16358-3:2013	Air-cooled air conditioners and air-to-air heat pump	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part3 : Annual performance factor	(1 160 ~ 87 000) W	BS-2	N
ISO 16494:2014	Heat recovery ventilators and energy recovery ventilators	Heat recovery ventilators and energy recovery ventilators -Method of test for performance	5 000 Nm3/h or less	BS-2	N
ISO 18326:2018	Air-conditioner and heat pump	Non-ducted portable air-cooled air conditioners and air-to-air heat pumps having a single exhaust duct - Testing and rating for performance	(500 ~ 320 000) W	SF-4	N
ISO 18326:2018/Amd 1:2021	Air-conditioner and heat pump	Non-ducted portable air-cooled air conditioners and air-to-air heat pumps having a single exhaust duct - Testing and rating for performance	(500 ~ 320 000) W	SF-4	N
ISO 5151:2010	Air-conditioner and heat pump	Non-ducted air conditioners and heat pumps - Testing and rating for performance	(500 ~ 320 000) W	SF-4	N
ISO 5151:2010	Non-ducted air conditioners and heat pumps	Non-ducted air conditioners and heat pumps - Testing and rating for performance	(1 160 ~ 87 000) W	BS-2	Y
ISO 5151:2010	Air-conditioner, heat pump	Non-ducted air conditioners and heat pumps - Testing and rating for performance	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 5151:2017	Non-ducted air conditioners and heat pumps	Non-ducted air conditioners and heat pumps - Testing and rating for performance	(1 160 ~ 87 000) W	BS-2	Y
ISO 5151:2017	Air-conditioner and heat pump	Non-ducted air conditioners and heat pumps - Testing and rating for performance	(500 ~ 320 000) W	SF-4	N
ISO 5151:2017	Air-conditioner, heat pump	Non-ducted air conditioners and heat pumps - Testing and rating for performance 5. Cooling tests 6. Heating tests	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
ISO 5151:2017/Amd 1:2020	Air-conditioner, heat pump	Non-ducted air conditioners and heat pumps - Testing and rating for performance 5. Cooling tests 6. Heating tests	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
ISO 5151:2017/Amd.1 :2020	Non-ducted air conditioners and heat pumps	Non-ducted air conditioners and heat pumps - Testing and rating for performance	(1 160 ~ 87 000) W	BS-2	Y
ISO 5151:2017/Amd 1:2020	Air-conditioner and heat pump	Non-ducted air conditioners and heat pumps - Testing and rating for performance	(500 ~ 320 000) W	SF-4	N
ISO/TS 16491:2012	Air-conditioner and heat pump	Guidelines for the evaluation of uncertainty of measurement in air conditioner and heat pump cooling and heating capacity tests	(500 ~ 320 000) W	SF-4	N
ISO/TS 16491:2012	Air-conditioner, heat pump	Guidelines for the evaluation of uncertainty of measurement in air conditioner and heat pump cooling and heating capacity tests	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
JIS C 9220:2011	Electric water heater	Residential Heatpump Water Heaters	(1 160 ~ 87 000) W	BS-2	N
JIS C 9220:2018	Energy Efficiency	Residential heat pump water heaters	(500 ~ 320 000) W	SF-4	N
JIS C 9612-1994	Air conditioner	Room air conditioner	(1 160 ~ 87 000) W	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
JIS C 9612-2013	Air conditioner	Room air conditioners	(1 160 ~ 87 000) W	BS-2	N
JIS C 9612:2013	Air conditioner	Room air conditioner	(500 ~ 320 000) W	SF-4	N
JIS C 9612:2013	Air-conditioner	Room air conditioners	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
Jordanian Technical Regulation 2107:2013	Air conditioner	Technical Regulation on eco-design requirements for Air Conditioners and Comfort Fans	(1 160 ~ 87 000) W	BS-2	N
Jordanian Technical Regulation 2107:2013	Air conditioner	Technical Regulation on eco-design requirements for Air Conditioners and Comfort Fans	(500 ~ 320 000) W	SF-4	N
Jordanian Technical Regulation 2108:2013	Air conditioner	Energy efficiency labeling of air conditioners	(500 ~ 320 000) W	SF-4	N
Jordanian Technical Regulation 2108:2013	Air conditioner	Energy efficiency labeling of air conditioners	(1 160 ~ 87 000) W	BS-2	N
KS 2449-1:2013	Rotating electrical machines	Rotating electrical machines - General requirements Part 1: Three-phase cage induction motors - Minimum energy performance standards (MEPS)	three phase : 600 V or less Power : 185 kW or less	BS-2	Y
KS 2463:2013	Non-ducted air conditioners	Non - ducted air conditioners - Testing and rating performance	(1 160 ~ 87 000) W	BS-2	N
KS 2463:2019	Air conditioner	Non-ducted air conditioners - Testing and rating performance	(500 ~ 320 000) W	SF-4	N
KS 2464-1:2013	Household electrical appliances-Refrigeration appliances	Performance of household electrical appliances-Refrigeration appliances Part 1: Energy consumption and performance	10 kW or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS 2464-2:2013	Household electrical appliances-Refrigeration appliances	Performance of household electrical appliances-Refrigerating appliances Part 2: Minimum energy performances standard requirements	10 kW or less	BS-2	N
KS B 6275:2018	Water chilling unit	Reciprocating water-chillers	(1 160 ~ 87 000) W	BS-2	N
KS B 6275:2018	Air handling unit	Water-chilling unit	(500 ~ 320 000) W	SF-4	N
KS B 6311:2022	Centrifugal fan	Testing methods for fans	3 600 m2/h or less	BS-2	N
KS B 6311:2022	Air handling unit	Testing methods for industrial fans	48 000 m3/h or less	SF-4	N
KS B 6377:2008	Air handling unit	Fancoil units	(500 ~ 320 000) W	SF-4	N
KS B 6377:2008	Fan coil unit	Fancoil units	(1 160 ~ 30 000) W	BS-2	N
KS B 6879:2020	Heat recovery ventilatiors	Heat recovery ventilatiors	3 000 m3/h less	BS-2	N
KS B 8052:2011	Gas engine heat pump, Non-ducted air conditioners	Gas engine driven heat pump air conditioners - Non-ducted gas engine driven heat pump air conditioners - Testing and rating for performance	(1 160 ~ 87 000) W	BS-2	N
KS B 8052:2022	heat pump	Gas heat pumps-Non-ducted appliances - Testing and rating for performance	(3 000 ~ 320 000) W	SF-4	N
KS B 8053:2015	Gas engine heat pump, Ducted air conditioners	Gas engine driven heat pump - ducted cooling and Heating appliances - Performance testing for rating and operating	(1 160 ~ 87 000) W	BS-2	N
KS B 8053:2022	heat pump	Gas heat pump-Ducted appliances - Testing and rating for performance	(3 000 ~ 320 000) W	SF-4	N
KS B 8292:2015	Water-to-water source heat pump	Water-to-water ground source heat pump unit	(1 160 ~ 30 000) W	BS-2	N
KS B 8292:2015	heat pump	Water-to-water ground source heat pump unit	(3 000 ~ 200 000) W	SF-4	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS B 8293:2016	Water-to-air source heat pump	Water-to-air and brine-to-air heat pumps unit	(1 160 ~ 87 000) W	BS-2	N
KS B 8293:2016	heat pump	Water-to-air and brine-to-air heat pumps unit	(500 ~ 320 000) W	SF-4	N
KS B 8294:2016	Water-to-air source multi-type heat pump	Water-to-air ground source multi heat pump unit	(1 160 ~ 87 000) W	BS-2	N
KS B 8294:2016	heat pump	Water-to-air ground source multi heat pump unit	(500 ~ 320 000) W	SF-4	N
KS B ISO 15042:2017	heat pump	Multiple split-system air conditioners and air-to-air heat pumps - Testing and rating for performance	(3 000 ~ 320 000) W	SF-4	N
KS B ISO 15042:2017	Multi-type air conditioners, heat pump	Multiple split-system air-conditioners and air-to-air heat pumps - Testing and rating for performance	(1 160 ~ 87 000) W	BS-2	N
KS B ISO 15042:2018	Multiple air-conditioner, heat pump	Multiple split-system air-conditioners and air-to-air heat pumps - Testing and rating for performance	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
KS C 8561:2020	Photovoltaic (PV) module	Crystalline silicone photovoltaic(PV) module(performance)	40 A / 500 V or less	SF-1	Y
KS C 8561:2020	Crystalline silicon solar power module	Crystalline silicone photovoltaic(PV) module(performance)	10 A / 120 V or less 20 A / 60 V or less 5 A / 150 V or less 2.5 A / 300 V or less	BS-2	N
KS C 8562:2015	Thin film silicon solar power module	Thin film photovoltaic(PV) module(performance)	10 A / 120 V or less 20 A / 60 V or less 5 A / 150 V or less 2.5 A / 300 V or less	BS-2	N
KS C 8565:2023	Mid-large solar power inverter(system-linked type, stand-alone type)	Photovoltaic inverter (grid-tied type, stand-alone type)	1 kW or more 250 kW or less (DC 1 500 V or less, AC 500 V or less)	BS-2	N
KS C 8567:2019	Solar power junction box	Photovoltaic combiner box	DC 1 500 V or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 8571:2015	Small wind turbine inverter	Inverter for small wind turbines	30 kW or less (DC 1 000 V, AC 500 V)	BS-2	N
KS C 8577:2022	Building Integrated Photovoltaic Module	Building integrated photovoltaics(BIPV) modules-The requirement of performance evaluation <Exception> 6.15 Ball drop test 6.20 Fire test	10 A / 120 V or less 20 A / 60 V or less 5 A / 150 V or less 2.5 A / 300 V or less	BS-2	N
KS C 8577:2022	Photovoltaic (PV) module	Building integrated photovoltaics(BIPV) modules-The requirement of performance evaluation	40 A / 100 V or less	SF-1	Y
KS C 9301:2019	Electric fan	Electric fans and ceiling fans 12 Test Procedures 12.6 Temperature rise test 12.7 Insulation Resistance Test 12.17 Air flow Test	(20 ~ 41) cm	SF-4	N
KS C 9304:2020	Ventilation fan	Ventilating fans	3 600 m3/h or less	BS-2	N
KS C 9306:2017	Airconditioner	Air-conditioner	(1 160 ~ 35 000) W	BS-2	N
KS C 9306:2017	Air-conditioner	Air-conditioner 9.3 Cooling Capacity tests 9.4 Energy consumption test for Cooling 9.7 Heating Capacity tests 9.8 Energy consumption test for Heating	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
KS C 9306:2017	Air conditioner	Air conditioners <Exception> 6. Performance 6.22 Electromagnetic compatibility performance 9. Test 9.2 Structure test, Material test 9.20 Electromagnetic compatibility performance test	(500 ~ 320 000) W	SF-4	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9317:2013	Electric dehumidifier	Electric dehumidifier 6.1 Refrigerant Leaks 6.2 Dehumidifying capacity 6.3 Power Consumption 6.4 Temperature 6.5 Overload performance 6.6 Insulation Resistance 6.7 Withstand voltage 6.8 Low temperature performance 6.9 Dehumidifying water treatment 6.10 Insulation performance of overflowing water	500 W or less	BS-2	N
KS C 9317:2013	dehumidifier	Dehumidifiers 〈Exception〉 6. Performance 6.4 Temperature 6.11 Electro Magnetic Interference 9. Test 9.2 Structure test 9.13 Electro Magnetic Interference test	Input Power : Max . 500 W	SF-4	N
KS C 9608:2013	Electric appliances for households	Electric washing machine	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
KS C IEC 60034-1:2019	Rotating electrical machines	Rotating electrical machines - Part 1: Rating and performance	single phase: 400 V or less three phase: 600 V or less Power: 375 kW or less	BS-2	Y
KS C IEC 60034-2-1:2019	Rotating electrical machines	Rotating electrical machines - Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)	single phase: 400 V or less three phase: 600 V or less Power: 280 kW or less	BS-2	Y
KS C IEC 60456:2015	Electric appliances for households	Clothes washing machines for household use - methods for measuring the performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 61215:2005	Crystalline Silicon Terrestrial Photovoltaic (PV) Module	Crystalline Silicon Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval	10 A / 120 V or less 20 A / 60 V or less 5 A / 150 V or less 2.5 A / 300 V or less	BS-2	N
KS C IEC 61646:2008	Thin-film terrestrial photovoltaic (PV) modules	Thin-film terrestrial photovoltaic (PV) modules - Design qualification and type approval	10 A / 120 V or less 20 A / 60 V or less 5 A / 150 V or less 2.5 A / 300 V or less	BS-2	N
KS C IEC 61730-1:2013	Photovoltaic power module	Photovoltaic (PV) module safety qualification - Part 1 : Requirements for construction	10 A / 120 V or less 20 A / 60 V or less 5 A / 150 V or less 2.5 A / 300 V or less	BS-2	N
KS C IEC 61730-2:2012	Photovoltaic module	Photovoltaic (PV) module safety qualification - Part 2 : Requirements for testing 10.8 Fire test	10 A / 120 V or less 20 A / 60 V or less 5 A / 150 V or less 2.5 A / 300 V or less	SF-1	N
KS C IEC 61730-2:2012	Photovoltaic power module	Photovoltaic (PV) module safety qualification - Part 2 : Requirements for testing 〈Exception〉 10.8 Fire test	10 A / 120 V or less 20 A / 60 V or less 5 A / 150 V or less 2.5 A / 300 V or less	BS-2	N
KS C IEC 62109-2:2011	Inverter	Safety of power converters for use in photovoltaic power systems-Part 2: Particular requirements for inverters 4.8 Additional tests for grid-interactive inverters	1 kW or more 250 kW or less (DC 1 500 V, AC 500 V)	BS-2	N
KS C IEC 62301:2017	Household electrical appliances	Household electrical appliances - Measurement of standby power	500 W or less	BS-1	N
KS C IEC 62552:2014	Household Refrigerating appliances	Household refrigerating appliances - Characteristics and test methods	10 kW or less	BS-2	N
KS C IEC 62552:2014	Household refrigerating appliances	Household refrigerating appliances - Characteristics and test methods	(0 ~ 600) V (0 ~ 20) A	BS-1	N
MS IEC 60456:2012	Electric appliances for households	Clothes Washing machines for household use - Methods for measuring the performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MS IEC 62301:2012	Household electrical appliances	Household electrical appliance - Measurement of standby power	500 W or less	BS-1	N
MS IEC 62552:2011	Household refrigerating appliances	Household refrigerating appliances - Characteristic and test methods	(0 ~ 600) V (0 ~ 20) A	BS-1	N
MS ISO 5151:2012	Air-conditioner and heat pump	Non-ducted air conditioners and heat pumps - testing and rating for performance	(500 ~ 320 000) W	SF-4	N
MS ISO 5151:2012	Air-conditioner, heat pump	Non-ducted air conditioners and heat pumps - testing and rating for performance	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
NMX-J-585-ANCE-2007	Electric appliances for households	HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES-TEST METHODS FOR ENERGY PERFORMANCE, WATER CONSUMPTION, AND CAPACITY OF HOUSEHOLD CLOTHES WASHERS	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
NMX-J-585-ANCE-2014	Electric appliances for households	HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES-TEST METHODS FOR ENERGY PERFORMANCE, WATER CONSUMPTION, AND CAPACITY OF HOUSEHOLD CLOTHES WASHERS	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
NOM-005-ENER:2012	Electric appliances for households	Energy efficiency of household washing machines. Limits, test method and labelling	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
NOM-005-ENER:2016	Electric appliances for households	Energy efficiency of household washing machines. Limits, test method and labelling	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
NOM-011-ENER-2006	Air conditioner	Energy efficiency of central, package or split type air conditioners. Limits, test methods and labeling	(500 ~ 20 000) W	SF-4	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
NOM-011-ENER-2006	Air conditioner	Energy efficiency of central. package or split type air conditioners. limited, test methods and labeling	(1 160 ~ 87 000) W	BS-2	Y
NOM-015-ENER-2012	Refrigerator	Energy efficiency of refrigerator and freezer appliances. limits, test methods and labeling	10 kW or less	BS-2	Y
NOM-021-ENER-SCFI-2017	Air conditioner	Energy efficiency and user safety requirements for room air conditioners limts, test methods and labelling	(1 160 ~ 87 000) W	BS-2	Y
NOM-023-ENER-2010	Air conditioner	Energy efficiency for separated assmbilies, free delivery and non-ducted air conditioners. limits, test methods and labelling	(1 160 ~ 87 000) W	BS-2	Y
NOM-026-ENER-2015	Air conditioner	Energy efficiency in split type (Inverter) air conditioners with variable refrigerant flow, free download and without air ducts. limits, test methods and labelling	(1 160 ~ 87 000) W	BS-2	Y
NOM-026-ENER-2015	Air conditioner	Energy efficiency in split-type(Inverter) air conditioners with variable refrigerant flow, free download and without air ducts. Limits, test methods and labelling	(500 ~ 20 000) W	SF-4	N
NTC 5913:2012	Electric appliances for households	HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES. ELECTRIC WASHING MACHINES. TEST METHODS FOR ENERGY CONSUMPTION, WATER CONSUMPTION AND VOLUME CAPACITY	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
NTE INEN 2206:2011	Refrigerator	Household refrigerating appliances with or without frosting. Refrigerators with or without low Temperature compartment. Inspection Requirements	10 kW or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
NTE INEN 2206:2019	Household refrigerating appliances	Household refrigerating appliances Requirements and test methods	(0 ~ 600) V (0 ~ 20) A	BS-1	N
NTE INEN 2495:2012	Air conditioner	Energy efficiency of non-ducted air conditioners. Requirements	(1 160 ~ 87 000) W	BS-2	Y
NTE INEN 2495:2012	Air conditioner	Energy efficiency of non-ducted air conditioners. Requirements	(500 ~ 20 000) W	SF-4	N
NTE INEN 2659:2013	Electric appliances for households	Appliances and similar. Clothes washing machine. Test methods for energy Consumption Water consumption and volumetric capacity.	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
OS 1651/2022	Electric appliances for households	Electrical Clothes Washing Machines - Energy and Water Performance Requirements and Consumption Efficiency Labeling	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50 Hz	BS	N
Portaria INMETRO No.121/2022	Electrical machinery for households	Portaria INMETRO No.121/2022 (ANEXO B-ENSAIOS DE DESEMPENHO-METODOLOGIA)	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
RTCA 23.01.78:20 /2021	Air conditioner	E L E C T R I C A L PRODUCTS. INVERTER SPLIT TYPE AIR CONDITIONERS, WITH V A R I A B L E REFRIGERANT FLOW, FREE DISCHARGE AND WITHOUT AIR DUCTS. ENERGY EFFICIENCY SPECIFICATIONS.	(1 160 ~ 87 000) W	BS-2	N
RTE INEN 035:2009	Household refrigerating appliances	Energy efficiency in refrigeration appliances for household use. Report power consumption test methods and labeling	(0 ~ 600) V (0 ~ 20) A	BS-1	N
RTE INEN 035:2009	Air conditioner	Energy efficiency in refrigeration appliances for household use. Report power consumption, test methods and labeling	10 kW or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
RTE INEN 072:2012	Air conditioner	Energy efficiency for non-ducted air conditioners	(1 160 ~ 87 000) W	BS-2	Y
RTE INEN 072:2012	Air conditioner	Energy efficiency for non-ducted air conditioners	(500 ~ 20 000) W	SF-4	N
RTE INEN 077:2013	Electric appliances for households	Energy efficiency clothes washers household electric. limits test method and labeling	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
RTE INEN 111:2013	Electric appliances for households	Energy efficiency and labeling of clothes dryers	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
RTE INEN 111:2014	Electric appliances for households	Energy efficiency and labeling of clothes dryers	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
RTE INEN 117:2014	Television	Energy efficiency in Television. Energy report test method and labeling	(0 ~ 5) kW	BS-1	N
RTE INEN 123:2014	Electric appliances for households	Energy efficiency for microwave ovens	Input Power : Max. 3 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
RTE INEN 124:2014	Electric appliances for households	Energy efficiency and labeling of washer dryer machine	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
Resolution 41012 of 2015 RETIQ	Electric appliances for households	TECHNICAL LABELING REGULATIONS	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
SANS 50229:2010	Electric appliances for households	Electric Clothes Washer-Dryers For Household Use - Methods Of Measuring The Performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 54511-3:2016	Air-conditioner, heat pump	Air conditioners liquid chilling packages and heat pumps With electrically driven compressors for space heating and cooling Part 3: Test methods	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
SANS 54511-3:2016 (Ed 2.00)	Air handling unit	Air conditioners liquid chilling packages and heat pumps With electrically driven compressors for space heating and cooling Part 3: Test methods	(500 ~ 320 000) W	SF-4	N
SANS 54511-3:2016 (Ed 2.00)	Air conditioner	Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space Heating and cooling Part 3 : Test methods	(1 160 ~ 87 000) W	BS-2	N
SANS 61121:2015	Electric appliances for households	Tumble Dryers For Household Use - Methods for Measuring The Performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
SANS 62552:2008	Household refrigerating appliances	Household Refrigerating Appliances - Characteristics and Test Methods	(0 ~ 600) V (0 ~ 20) A	BS-1	N
SASO 2663:2014	Air conditioner	Energy labelling and minimum energy performance requirements for air-conditioners	(1 160 ~ 87 000) W	BS-2	N
SASO 2663:2018	Air-conditioner	Air conditioners - minimum energy performance, labelling and testing requirements for low capacity	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
SASO 2663:2021	Air conditioner	Air Conditioners - Minimum Energy Performance, Labelling and Testing Requirements for Low Capacity Window and Single-Split Types	(500 ~ 20 000) W	SF-4	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SASO 2663:2021	Air-conditioner	Air conditioners - minimum energy performance, labelling and testing requirements for low capacity	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
SASO 2663:2021/AMD 1: 2023	Air conditioner	Air Conditioners - Minimum Energy Performance, Labelling and Testing Requirements for Low Capacity Window and Single-Split Types	(500 ~ 20 000) W	SF-4	N
SASO 2664:2013	Refrigerator	Energy Performance and Capacity of Household Refrigerators, Refrigerators-Freezers, and Freezers	1 100 L or less	BS-2	N
SASO 2664:2017	Household refrigerating appliances	Energy Performance and Capacity of Household Refrigerators, Refrigerators - Freezers and Freezers	(0 ~ 600) V (0 ~ 20) A	BS-1	N
SASO 2681:2013	Air conditioner	Non-ducted air conditioners and heat pumps - testing and rating for performance	(500 ~ 320 000) W	SF-4	N
SASO 2681:2013	Air-conditioner, heat pump	Non-ducted air conditioners and heat pumps- testing and rating performance	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
SASO 2681:2013	Air conditioner	Non-ducted air conditioners and heat pumps- testing and rating performance	(1 160 ~ 87 000) W	BS-2	N
SASO 2682:2013	Air-conditioner, heat pump	Ducted air - conditioners and air-to-air heat pumps-testing and rating for performance	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
SASO 2682:2013	Air conditioner	Ducted air-conditioners and air-to-air heat pumps-testing and rating for performance	(1 160 ~ 87 000) W	BS-2	N
SASO 2682:2013	Air-conditioner and heat pump	Ducted air-conditioners and air-to-air heat pumps-testing and rating for performance	(500 ~ 320 000) W	SF-4	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SASO 2683:2007	Electric appliances for households	Clothes washing machines for household use - Methods for measuring the performance	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
SASO 2692:2013	Electric appliances for households	Energy Labelling Requirement of Clothes Washing Machines for Household Use	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
SASO 2693:2007	Electric appliances for households	Method for Measuring the Performance of Clothes Washing for Household Use	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
SASO 2763:2008	Air conditioner	Safety and performance requirements for Window air conditioners and their method of test	(500 ~ 20 000) W	SF-4	N
SASO 2763:2008	Air-conditioner	Safety and performance requirements for Window air-conditioners and their method of test	Cooling/Heating capacity (2 900 ~ 18 600) W	BS-1	N
SASO 2763:2008	Air conditioner	Safety and performance requirements for window air-conditioners and their method of test	(1 160 ~ 20 000) W	BS-2	N
SASO 2870:2018	Lamps	ENERGY EFFICIENCY, FUNCTIONALITY AND LABELLING REQUIREMENTS FOR LIGHTING PRODUCTS - PART 1	Indirect and direct general light sources having a luminous flux above 60 lumens or below 12 000 lumens of the following technologies: · Incandescent lamps · Compact fluorescent lamps with integrated ballast(CFLi) · Halogen lamps · Light-emitting diode(LED) lamps (Incandescent retrofit types) · Light-emitting diode(LED) lamps (Halogen retrofit types)	BS-1	N
SASO 2874:2016	Air conditioner	Commercial Air Conditioners - Minimum Energy Performance Requirements and Testing Requirements	(1 160 ~ 87 000) W	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SASO 2874:2016	Air conditioner	Commercial Air Conditioners - Minimum Energy Performance Requirements and Testing Requirements	(3 000 ~ 320 000) W	SF-4	N
SASO 2883:2017	Electric appliances for households	Electrical Clothes Dryers - Energy Performance Requirements and Labelling	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
SASO 2885:2018	Electric appliances for households	Electrical Clothes Washing Machines - Energy and Water Performance Requirements and Labelling	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
SASO 2893:2018	Rotating electrical machines	ROTATING ELECTRICAL MACHINES - Part 30-1: Efficiency classes of line operated AC motors (IE code) (IEC 60034-30-1:2014 Ed 1.0, MOD)	three phase: 600 V or less Power: 280 kW	BS-2	N
SASO 2902:2018	Control gear, Luminaries	ENERGY EFFICIENCY, FUNCTIONALITY AND LABELLING REQUIREMENTS FOR LIGHTING PRODUCTS PART 2	Lamps and luminaires with a luminous flux above 60 lumens, and control gears(ballasts) · Incandescent lamps with a luminous flux above 12 000 lumens · Halogen lamps with a luminous flux above 12 000 lumens · Compact fluorescent lamps with integrated ballast(CLFi) with a luminous flux above 12 000 Lumens · Compact fluorescent lamps without integrated ballast(CFLni) · Fluorescent Lamps(all types) · High Intensity Discharge Lamps, such as: Mercury Vapour Lamps, High/Low Pressure Sodium Lamps, Quartz Metal Halide Lamps, Ceramic Metal Halide Lamps · LED Lamps (including retrofit LED lamps with a luminous flux above 12 000 Lumens))	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SIST EN 14825:2022	Air conditioner	Air conditioners, liquid chilling packages and heat pumps, with electrically driven compressors, for space Heating and cooling - Testing and rating at part load conditions and calculation of seasonal performance	(1 160 ~ 87 000) W	BS-2	N
TCVN 7540-1:2013	Rotating electrical machines	High efficiency three-phase asynchronous squirrel cage electrical motors - Part 1: Minimum energy performance	single phase: 400 V or less three phase: 600 V or less Power: 375 kW or less	BS-2	Y
TCVN 7540-2:2013	Rotating electrical machines	High efficiency three-phase asynchronous squirrel cage electrical motors - Part 2: Methods for determination of performance	single phase: 400 V or less three phase: 600 V or less Power: 375 kW or less	BS-2	Y
TCVN 7627:2007	Refrigerator	Refrigerating Equipment appliances - Characteristics and test methods	(0 ~ 600) V (0 ~ 20) A	BS-1	N
TCVN 7828:2016	Refrigerator	Refrigerator refrigerator - freezer - Energy Efficiency	(0 ~ 600) V (0 ~ 20) A	BS-1	N
TCVN 7828:2016	Refrigerator	Refrigerator, refrigerator-freezer - Energy Efficiency	1 000 L or less	BS-2	N
TCVN 7829:2016	Refrigerator	Refrigerator refrigerator - freezer - Method for determination of energy Efficiency	(0 ~ 600) V (0 ~ 20) A	BS-1	N
TCVN 7829:2016	Refrigerator	Refrigerator, refrigerator-freezer - Method for determination of energy Efficiency	1 000 L or less	BS-2	N
TCVN 7830:2007	Air conditioner	Air - conditioners - Energy efficiency Ratio	(1 160 ~ 14 000) W	BS-2	N
TCVN 7830:2012	Air conditioner	Non-Ducted air conditioner-Energy efficiency	(1 160 ~ 14 000) W	BS-2	N
TCVN 7830:2015	Air conditioner	Non - ducted air conditioners - Energy efficiency	(1 160 ~ 14 000) W	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
TCVN 7830:2015	Air conditioner	Non-ducted air conditioners - Energy efficiency	(500 ~ 20 000) W	SF-4	N
TCVN 7831:2012	Air conditioner	Non-Ducted air conditioner- Method for determination of energy efficiency	(500 ~ 20 000) W	SF-4	N
TCVN 7831:2012	Air conditioner	Non-Ducted air conditioner-Method for determination of energy efficiency	(1 160 ~ 87 000) W	BS-2	N
TCVN 8526:2013	Electric appliances for households	Electric washing machine -Minimum energy performance and method for determination of energy efficiency	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
TCVN 9508:2012	Computer monitors	Computer monitors. Energy Efficiency Ratio	Input Voltage : 230 V, Input Power : Max. 1 000 W, Frequency : 50 Hz	BS-1	N
TCVN 9536:2012	Television sets	Television sets. Energy efficiency	Input Voltage : 230 V, Input Power : Max. 1 000 W, Frequency : 50 Hz	BS-1	N
TCVN 9537:2012	Television sets	Television sets. Method for determination of energy efficiency	Input Voltage : 230 V, Input Power : Max. 1 000 W, Frequency : 50 Hz	BS-1	N
UAE.S 5010 2:2013	Electric appliances for households	Labeling- Energy efficiency label for electrical appliances Part 2 : Washing machines and dryers	Input Power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
UAE.S 5010-1:2016	Electrical machinery	Labeling-Energy efficiency label for electrical appliances Part : 1 : household air conditioners	(1 160 ~ 87 000) W	BS-2	N
UAE.S 5010-1:2019	Air conditioner	Labeling - Energy Efficiency Label for Electrical Appliances- Part 1: household air conditioners	500 ~ 200 000) W	SF-4	N
UAE.S 5010-5:2019	Air conditioner	Labeling - Energy Efficiency Label for Electrical Appliances - Part five: Commercial and Central Air Conditioners	(3 000 ~ 320 000) W	SF-4	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MOTIE Notice No.2017-91(06.27.2017.)	Home & Office appliances	e-Standby Program Application Regulation Annex 1-1 Computer Annex 1-2 Monitor Annex 1-3 Printer Annex 1-4 Fax Annex 1-5 Duplicator Annex 1-6 Scanner Annex 1-7 combination color printer, scanner, and fax machine Annex 1-8 Automatic power-saving control system Annex 1-10 Audio Annex 1-11 DVD player Annex 1-12 Radio Cassette Annex 1-13 Microwave Annex 1-15 Door Phone Annex 1-16 Wired and wireless telephone Annex 1-17 Bidet	500 W or less 153 cm or less 3 000 W or less 3 000 W or less 5 000 W or less 1 000 W or less 5 000 W or less - 1 000 W or less 150 W or less 1 000 W or less 4 000 W or less 100 W or less 150 W or less 2 000 W or less	BS-1	N
MOTIE Notice No.2021-166호 (2021.10.25)	Energy Efficiency	Regulation on Promotion and Dissemination of High Energy Efficiency Appliances Annex 1.10 Thermo-hygrostat Annex1.11 Gas Heat Pump	6 kW or more ~ 35 kW or less 23 kW or more	SF-4	N
MOTIE Notice No.2021-166(10.25.2022.)	Thermo-hygrostat	Regulation on Promotion and Dissemination of High Energy Efficiency Appliances Annex 1.10. Thermo-hygrostat Annex 1.12. Gas Heat Pump	6 kW or more ~ 35 kW or less 23 kW or more	BS-2	N
MOTIE Notice No.2021-166(10.25.2022.)	Electric power storage system	Regulation on Promotion and Dissemination of High Energy Efficiency Appliances Annex 1.12 ESS	The ESS must be capable of continuously supplying loads at rated power (kW) for 2 hours or more	BS-2	Y
MOTIE Notice No.2022-166(10.25.2022.)	Inverter	Regulation on Promotion and Dissemination of High Energy Efficiency Appliances Annex 1.5. Inverter	220 kW or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MOTIE Notice No.2021-69(04.20.2021.)	Home appliances	Operating rules of management efficiency machine materials Annex 1-1 Electric refrigerator Annex 1-3 Electric refrigerating appliance for KIM-CHI Annex 1-4 Electric air conditioner Annex 1-9 Electric hot and cold water dispenser Annex 1-10 Electric rice cooker Annex 1-11 Electric vacuum cleaner Annex 1-12 Electric fan Annex 1-14 Incandescent Lamp Annex 1-15 Fluorescent lamp Annex 1-17 Self-ballasted lamp Annex 1-20 Adaptorharger Annex 1-21 Electric heat pump Annex 1-22 Commercial electric refrigerator Annex 1-26 Televisions Annex 1-28 Electric stove Annex 1-36 Electric Range Annex 1-37 Set top box Annex 1-38 Self-ballasted LED lamps Annex 1-39 Non-ballasted LED lamps	1 000 L or less 1 000 L or less 7.5 kW or less 1 000 W or less 20 cabins or less 800 W or more ~ 2 500 W or less 20 cm or more ~ 41 cm or less 25 W or more ~ 150 W or less 13 W or more ~ 55 W or less 5 W or more ~ 60 W or less 150 W or less 30 kW or less 300 L or more ~ 2 000 L or less 50 cm or more ~ 180 cm or less 500 W or more ~ 10 kW or less 1 kW or more ~ 10 kW or less 150 W or less AC 1 000 V or less AC 1 000 V or less	BS-1	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MOTIE Notice No.2022-64 (2022.04.27)	Energy Efficiency Appliances	Regulation on Energy Efficiency Labeling and Standards Annex1.4 Electric air conditioner Annex 1.9 Electric hot and cold water dispenser Annex 1.12 Electric fan Annex 1.21 Electric heat pump Annex1. 28 Electric stove Annex1.29 Electric multi-split air-conditioning and heat pump system Annex1.30 Dehumidifiers	7.5 kW or less 3 000 W or less (20 ~41) cm 30 kW or less (500 ~ 10 000) W 1 kW or more ~ 70 kW less 1 000 W or less	SF-4	N
MOTIE Notice No.2023-170(08.21.2023.)	Three-phase induction motor	Regulation on Energy Efficiency Labeling and Standards Annex 1.18 Three-phase induction motor	0.75 kW or more ~ 375 kW or less	BS-2	N
MOTIE Notice No.2024-001(01.02.2024.)	Electrical machinery for households	Regulation on Energy Efficiency Labeling and Standards Annex 1.1 Electric refrigerator Annex 1.3 Electric refrigerating appliance for KIM-CHI Annex 1.4 Electric air conditioner Annex 1.21 Electric heat pump Annex 1.27 Electric fan heater Annex 1.28 Eletric stove Annex 1.29 Electric multi-split air-conditioning and heat pump system Annex 1.30 Dehumidifiers Annex 1.46 Portable air conditioners	storage volume: 1 000 L or less storage volume: 1 000 L or less rated power consumption: 7.5 kW or less rated power consumption: 30 kW or less rated power consumption: 500 W or more ~ 10 kW or less rated power consumption: (500 ~ 10 000) W cooling and heating capacities: 1 kW or more ~ 70 kW or less rated power consumption: 1 000 W or less rated cooling capacity: (500 ~ 23 000) W	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MOTIE Notice No.2024-001(01.02.2024.)	Electric appliances for households	Operating rules of management efficiency machine materials Annex 1-5 Electric washing machine Annex 1-28 Electric stove Annex 1-36 Electric Range Annex 1-43 Clothes dryer	2 kg or more ~ 25 kg or less 500 W or more ~ 10 kW or less 1 kW or more ~ 10 kW or less Input power : Max. 5 kW Input Voltage : Single Phase Max. 250 V Frequency : 50/60 Hz	BS	N
MOTIE Notice No.2021-68(04.20.2021.)	Lighting products	Regulation on Promotion and Dissemination of High Energy Efficiency Appliances Annex 1-9. LED Guide light Annex 1-15. LED module for channel letter signs Annex 1-20. LED Lighting fixtures Annex 1-21. LED lamp	5 W or less DC 50 V or less AC 220 V, 60 Hz(Indoor,Outdoor) AC 1 000 V or less, 700 W or 1 000 W (PLS Light fixture) AC 220 V, 60 Hz, 150 W or less(Ultra Constant Discharge (UCD) Lamp lighting) AC 220 V, 60 Hz(Induction fluorescent lamp lighting) 22 W or less(Intuitive LED lamp) 55 W or less(Fluorescent Lamp Replacement Type LED Lamp)	BS-1	N

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03. Electrical Testing

03.014 Environmental and Reliability

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ECSS-E-10-03A:2002	space & military equipment and part, satellite material	Space Engineering - Testing 5.1.15 Thermal vacuum test, equipment qualification 5.1.16 Thermal cycling test, equipment qualification 5.3.5 Thermal qualification tests 6.1.10 Thermal vacuum test 6.1.11 Thermal cycling test, equipment acceptance 6.3.5 Thermal acceptance tests 5.1.10 Sinusoidal vibration test, equipment qualification 5.1.11 Random vibration test, equipment qualification 6.1.7 Random vibration test, equipment acceptance 5.1.13 Shock test, equipment qualification	(1.33×10^-5 ~ 101 325) Pa (-70 ~ 120) ℃ (5 ~ 2 000) Hz (100 ~ 10 000) Hz	BS-5	N
ECSS-E-ST-10-03C:2012	satellite & military related equipment, parts, and materials	Space Engineering - Testing 5.5.4 Thermal tests 6.5.4 Thermal tests 5.5.2.3 Random vibration test 5.5.2.5 Sinusoidal vibration test 6.5.2.7 Random vibration test 6.5.2.8 Sinusoidal vibration test 5.5.2.6 Shock test 6.5.2.9 Shock test	(1.33×10^-5 ~ 101 325) Pa (-70 ~ 120) ℃ (5 ~ 2 000) Hz (100 ~ 10 000) Hz	BS-5	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
GMW14872:2013	Automobile parts (General Motors products)	Cyclic Corrosion Laboratory Test	Salt solution : 0.9 % NaCl, 0.1 % CaCl2, 0.075 % NaHCO3 Conditions : Ambient (25 ± 3) ℃, 45 % R.H. Humid (49 ± 2) ℃, ~ 100 % R.H. Dry (60 ± 2) ℃, ≤30 % R.H.	BS-2	N
IACS UR E10:2018	electrical, electronic, programmable equipment intended, and other articles	Test specification for type approval 1. Visual inspection 2. Performance test 5. Dry heat 6. Damp heat 7. Vibration 8. Inclination 11. Cold	High Temperature : (55 ~ 70) ℃ Low Temperature : (-25 ~ 5) ℃ Temperature range : (55 ~ 90) ℃ Humidity range : (92 ~ 98) % R.H. Vibration Waveform : sine Frequency : (2 ~ 100) Hz Amplitude(p-p) : 1.6 mm Acceleration : 40 m/s² Max tilt angle : 22.5 °	BS-2	N
IEC 60068-2-11:2021	Electric and electronic product	Basic environmental testing procedures Part 2 : Tests Test Ka : Salt mist	Salt concentration : (5 ± 1) % Exposure zone : (35 ± 2) ℃ PH : 6.5 ~ 7.2 (1.0 ~ 2.0) ㎖/h	BS-2	N
IEC 60068-2-13:1983	components, equipment or other articles	Environmental testing - Part 2 : Tests. Test M : Low air pressure	Altitude : 0 km ~ 30.48 km	BS-2	N
IEC 60068-2-13:1983	Electronic components and electronic devices	Environmental testing - Part 2 : Tests - Test M : Low air pressure	Altitude : (0 ~ 21) km	BS	N
IEC 60068-2-14:2009	Electronic components and electronic devices	Environmental testing - Part 2 : Tests - Test N : Change of Temperature 〈Exception〉 7. Test Na 9. Test Nc	Temperature range: : (-40 ~ 125) ℃	BS-8	N
IEC 60068-2-14:2009	Electronic components and electronic devices	Environmental testing - Part 2 : Tests - Test N : Change of Temperature	High Temperature : (60 ~ 180) ℃ Low Temperature : (-85 ~ 0) ℃	BS	N
IEC 60068-2-14:2009	components, equipment or other articles	Environmental testing - Part 2-14: Tests - Test N: Change of temperature	High Temperature : (60 ~ 175) ℃ Low Temperature : (-65 ~ 0) ℃	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60068-2-18:2017	components, equipment or other articles	Environmental testing - Part 2 : Tests Test R and guidance : Water - Method Ra2 : Drip box - Method Rb1 : Oscillating tube and spray nozzle - Method Rc1 : Water tank	Ra2 : IPX1, IPX2 Rb1 : IPX3, IPX4 Rc1 : 1 000 mm	BS-2	N
IEC 60068-2-1:2007	Electronic components and electronic devices	Environmental testing - Part 2 : Tests. Tests A : Cold 〈Exception〉 5.3 Test Ad 5.4 Test Ae	Temperature(min) : -40 ℃	BS-8	N
IEC 60068-2-1:2007	Electronic components and electronic devices	Environmental testing - Part 2 : Tests. Tests A : Cold 〈Exception〉 Testing of heat-dissipating specimens, Ad and Ae	Temperature : -60 ℃	BS	N
IEC 60068-2-1:2007	components, equipment or other articles	Environmental testing - Part 2-1: Tests - Test A: Cold	Low Temperature : (-65 ~ 0) ℃	BS-2	N
IEC 60068-2-27:2008	components, equipment or other articles	Environmental testing. Part 2 : Tests. Test Ea and guidance : Shock	Pulse shape : half-sine/trapezoidal pulse Maximum peak acceleration : 1 500 g Minimum pulse duration : 0.5 ms	BS-2	N
IEC 60068-2-2:2007	Electronic components and electronic devices	Environmental testing - Part 2 : Tests. Tests B : Dry heat 〈Exception〉 5.3 Test Bd 5.4 Test Be	Temperature(max) : 125 ℃	BS-8	N
IEC 60068-2-2:2007	Electronic components and electronic devices	Environmental testing - Part 2 : Tests. Tests B : Dry heat 〈Exception〉 Testing of heat-dissipating specimens, Bd and Be	Temperature : 200 ℃	BS	N
IEC 60068-2-2:2007	components, equipment or other articles	Environmental testing - Part 2-2: Tests - Test B: Dry heat	High Temperature : 300 ℃	BS-2	N
IEC 60068-2-30:2005	components, equipment or other articles	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)	Temperature range : (10 ~ 90) ℃ Humidity range: (20 ~ 98) % R.H.	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60068-2-31:2008	components, equipment or other articles	Environmental testing - Part 2-31: Tests - Test Ec: Rough handling shocks, primarily for equipment-type specimens	Test surface : steel Fall height : 1.83 m or less	BS-2	N
IEC 60068-2-38:2009	Electronic components and electronic devices	Environmental testing - Part 2 : Tests - Test Z/AD : Composite Temperature/humidity cyclic test	Temperature range : (10 ~ 90) ℃ Humidity range : (20 ~ 95) % R.H.	BS	N
IEC 60068-2-38:2009	components, equipment or other articles	Environmental testing - Part 2 : Tests. Test Z/AD : Composite Temperature/humidity cyclic test	Temperature range : (10 ~ 90) ℃ Humidity range: (20 ~ 98) % R.H.	BS-2	N
IEC 60068-2-52:2017	Electric and electronic product	Environmental testing - Part 2-52 : Tests - Test Kb : Salt mist, cyclic (sodium chloride solution)	Salt concentration : (5 ± 1) % Exposure zone : (35 ± 2) ℃ PH : 6.5 ~ 7.2 (1.0 ~ 2.0) ㎖/h	BS-2	N
IEC 60068-2-5:2018	components, equipment or other articles	Environmental testing - Part 2-5: Tests - Test S: Simulated solar radiation at ground level and guidance for solar radiation testing and weathering	Temperature range : (-40 ~ 150) ℃ Humidity range: (10 ~ 98) % R.H. Irradiance : (0 ~ 1 090) W/m^2	BS-2	N
IEC 60068-2-64:2008	Electronic components and electronic devices	Environmental testing - Part 2 : Test methods - Test Fh : Vibration, broad-band random and guidance	Frequency : 5 Hz ~ 2.5 kHz Maximum Amplitude : 100 mm(p-p) Maximum Acceleration : 300 m/s^2	BS	N
IEC 60068-2-64:2008	components, equipment or other articles	Environmental testing - Part 2-64: Tests - Test Fh: Vibration, broadband random and guidance	Frequency : 5 Hz ~ 3 kHz Peak amplitude(P-P) : 50.8 mm Peak acceleration : 735 m/s^2	BS-2	N
IEC 60068-2-66:1994	components, equipment or other articles	Environmental testing - Part 2 : Test methods - Test Cx : Damp heat, steady state (unsaturated pressurized vapour)	Temperature : (110, 120, 130) ℃ Humidity : 85 % R.H.	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60068-2-67:1995	components, equipment or other articles	Environmental testing - Part 2 : Tests - Test Cy : Damp heat, steady state, accelerated test primarily intended for components	Temperature : (10 ~ 90) ℃ Humidity : (20 ~ 98) % R.H.	BS-2	N
IEC 60068-2-6:2007	Electronic components and electronic devices	Environmental testing - Part 2 : Tests - Test Fc : Vibration (sinusoidal)	Frequency : 5 Hz ~ 2.5 kHz Maximum Amplitude : 100 mm(p-p) Maximum Acceleration : 300 m/s^2	BS	N
IEC 60068-2-6:2007	components, equipment or other articles	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	Frequency : 2 Hz ~ 3 kHz Peak amplitude(P-P) : 50.8 mm Peak acceleration : 735 m/s^2	BS-2	N
IEC 60068-2-78:2012	components, equipment or other articles	Environmental testing - Part 2-78 : Tests - Test Cab : Damp heat, steady state	Temperature : (10 ~ 90) ℃ Humidity : (20 ~ 98) % R.H.	BS-2	N
IEC 60068-2-78:2012	components, equipment or other articles	Environmental testing - Part 2-78 : Tests - Test Cab : Damp heat, steady state	Temperature range : (30 ± 2) ℃ (40 ± 2) ℃ Humidity range : (85 ± 3) % R.H.	BS-8	N
IEC 60068-2-80:2005	components, equipment or other articles	Environmental testing - Part 2-80 : Tests - Test Fi : Vibration - Mixed mode	Frequency : 5 Hz ~ 3 kHz Peak amplitude(P-P) : 50.8 mm Peak acceleration : 735 m/s^2	BS-2	N
IEC 60255-21-1:1988	relays and protection equipment	Electrical relays - Part 21: Vibration, shock, bump and seismic tests on measuring relays and protection equipment - Section One: Vibration tests (sinusoidal)	Frequency: (10 ~ 150) Hz Amplitude(z-p): Max 0.075 mm Acceleration: Max 19.6 m/s^2	BS-2	N
IEC 60255-21-2:1988	relays and protection equipment	Electrical relays - Part 21: Vibration, shock, bump and seismic tests on measuring relays and protection equipment - Section Two: Shock and bump tests	Acceleration : Max 294 m/s^2 Duration : Max 16 ms	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60255-21-3:1993	relays and protection equipment	Electrical relays - Part 21: Vibration, shock, bump and seismic tests on measuring relays and protection equipment - Section 3: Seismic tests 4 Requirements for single axis sine sweep seismic test(method A)	Frequency : (1 ~ 35) Hz Acceleration : (0.5 ~ 2.0) gn	BS-2	N
IEC 61373:2010	equipment intended for use on railway vehicles	Railway applications — Rolling stock equipment — Shock and vibration tests	Functional random test Vertical: (0.750 ~ 38.0) m/s^2 Transverse: (0.370 ~ 34.0) m/s^2 Longitudinal: (0.500 ~ 17.0) m/s^2 Simulated long-life test (5-hour test) Vertical: (4.25 ~ 144) m/s^2 Transverse: (2.09 ~ 129) m/s^2 Longitudinal: (2.83 ~ 64.3) m/s^2 Shock test Vertical: (30 ~ 1,000) m/s^2 Transverse: (30 ~ 1,000) m/s^2 Longitudinal: (50 ~ 1,000) m/s^2	BS-2	N
IEC 61850-3: 2013	utility communication and automation IEDs and systems	Communication networks and systems for power utility automation - Part 3: General requirements 6.9.3 Climatic environmental tests 6.10.1 Vibration response and endurance(sinusoidal) 6.10.2 Shock response, shock withstand and bump	High Temperature : Max 200 ℃ Low Temperature : Min -65 ℃ Humidity: Max 97 % Frequency: (10 ~ 150) Hz Amplitude(z-p): Max 0.075 mm Acceleration: Max 19.6 m/s^2 Acceleration: Max 294 m/s^2 Duration: Max 16 ms	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 4892-2:2013	components, equipment or other articles	Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps	Irradiation(Artificial weathering) : (300 ~ 400) nm (60 ± 2) W/㎡ : 340 nm (0.51 ± 0.02) W(/㎡·nm) Irradiation(Window glass filters) : (300 ~ 400) nm (50 ± 2) W/㎡ : 340 nm (1.10 ± 0.02) W(/㎡·nm) BPT : (40 ~ 110) ℃ BST : (40 ~ 120) ℃ Humidity : (10 ~ 75) % RH	BS-2	N
JESD22-A101D:2015	electronic components	Steady State Temperature Humidity Bias Life Test	Temperature : (10 ~ 90) ℃ Humidity : (20 ~ 98) % R.H.	BS-2	N
JESD22-A102E:2015	electronic components	Accelerated Moisture Resistance-Unbiased Autoclave	Temperature : 121 ℃	BS-2	N
JESD22-A103E:2015	electronic components	High Temperature Storage Life Condition A Condition B Condition C Condition D	Temperature : (30 ~ 200) ℃	BS-2	N
JESD22-A104E:2014	electronic components	Temperature Cycling	High Temperature : (60 ~ 180) ℃ Low Temperature : (-75 ~ 0) ℃	BS-2	N
JESD22-A105D:2020	electronic components	Power and Temperature Cycling	Temperature : (-40 ~ 125) ℃	BS-2	N
JESD22-A108F:2017	electronic components	Temperature, Bias, and Operating Life	Temperature : (-40 ~ 160) ℃	BS-2	N
JESD22-A110E:2015	electronic components	Highly Accelerated Temperature and Humidity Stress Test (HAST)	Temperature : (110 ~ 130) ℃ Humidity : (85 ~ 100) % R.H.	BS-2	N
JESD22-A118B:2015	electronic components	Accelerated Moisture Resistance - Unbiased HAST	Temperature : (110 ~ 130) ℃ Humidity : (85 ~ 100) % R.H.	BS-2	N
JESD22-A119A:2015	electronic components	Low Temperature Storage Life	Temperature : (-40 ~ -65) ℃	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60068-2-13:1983	Electronic components and electronic devices	Environmental testing - Part 2-13 : Tests - Test M : Low air pressure	Altitude : (0 ~ 21) km	BS	N
KS C IEC 60068-2-13:1983	components, equipment or other articles	Environmental testing - Part 2-13 : Tests - Test M : Low air pressure	Height : 0 km ~ 30.48 km	BS-2	N
KS C IEC 60068-2-14:2009	Electronic components and electronic devices	Environmental testing - Part 2-14 : Tests - Test N : Change of Temperature	High Temperature : (60 ~ 180) ℃ Low Temperature : (-85 ~ 0) ℃	BS	N
KS C IEC 60068-2-14:2009	Electronic components and electronic devices	Environmental testing - Part 2-14 : Tests - Test N : Change of Temperature 〈Exception〉 7. Test Na 9. Test Nc	Temperature range: : (-40 ~ 125) ℃	BS-8	N
KS C IEC 60068-2-14:2009	components, equipment or other articles	Environmental testing - Part 2-14 : Tests - Test N : Change of Temperature	High Temperature : (60 ~ 175) ℃ Low Temperature : (-65 ~ 0) ℃	BS-2	N
KS C IEC 60068-2-1:2007	Electronic components and electronic devices	Environmental testing - Part 2-1 : Tests - Tests A : Cold 〈Exception〉 5.3 Test Ad 5.4 Test Ae	Temperature(min) : -40 ℃	BS-8	N
KS C IEC 60068-2-1:2007	Electronic components and electronic devices	Environmental testing - Part 2-1 : Tests - Tests A : Cold 〈Exception〉 Testing of heat-dissipating specimens, Ad and Ae	Temperature : -60 ℃	BS	N
KS C IEC 60068-2-1:2007	components, equipment or other articles	Environmental testing - Part 2-1 : Tests - Test A : Cold	Temperature : (-65 ~ 0) ℃	BS-2	N
KS C IEC 60068-2-27:2008	components, equipment or other articles	Basic Environmental testing - Part 2-27 : Tests - Test Ea and guidance : Shock	Pulse shape : half-sine/sine Peak acceleration : 1 500 g Duration : 0.5 ms	BS-2	N
KS C IEC 60068-2-2:2007	Electronic components and electronic devices	Environmental testing - Part 2 : Tests. Tests B : Dry heat 〈Exception〉 5.3 Test Bd 5.4 Test Be	Temperature(max) : 125 ℃	BS-8	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60068-2-2:2007	Electronic components and electronic devices	Environmental testing - Part 2 : Tests. Tests B : Dry heat <Exception> Testing of heat-dissipating specimens, Bd and Be	Temperature : 200 ℃	BS	N
KS C IEC 60068-2-2:2007	components, equipment or other articles	Environmental testing - Part 2-2 : Tests - Test B : Dry heat	High Temperature : 300 ℃	BS-2	N
KS C IEC 60068-2-30:2005	components, equipment or other articles	Environmental testing - Part 2-30: Tests - Test Db : Damp heat, cyclic (12 h+12 h cycle)	Temperature : (10 ~ 55) ℃ Humidity : (20 ~ 98) % R.H.	BS-2	N
KS C IEC 60068-2-30:2005	Electronic components and electronic devices	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)	Temperature range:(10 ~ 90) ℃ Humidity range:(20 ~ 95) % R.H.	BS	N
KS C IEC 60068-2-31:2008	components, equipment or other articles	Environmental testing - Part 2-31 : Tests - Test Ec : Rough handling shocks, primarily for equipment-type specimens	Floor : Iron plate Height : 1.83 m or less	BS-2	N
KS C IEC 60068-2-38:2008	Electronic components and electronic devices	Environmental testing - Part 2-38 : Tests - Test Z/AD : Composite Temperature/humidity cyclic test	Temperature range : (10 ~ 90) ℃ Humidity range : (20 ~ 95) % R.H.	BS	N
KS C IEC 60068-2-38:2008	components, equipment or other articles	Environmental testing - Part 2-38 : Tests - Test Z/AD : Composite Temperature/humidity cyclic test	Temperature : (10 ~ 55) ℃ Humidity : (20 ~ 98) % R.H.	BS-2	N
KS C IEC 60068-2-52:2017	Electric and electronic product	Environmental testing - Part 2-52 : Tests - Test Kb : Salt mist, cyclic (sodium chloride solution)	Salt concentration : (5 ± 1) % Exposure zone : (35 ± 2) ℃ PH : 6.5 ~ 7.2	BS-2	N
KS C IEC 60068-2-5:2017	components, equipment or other articles	Environmental testing - Part 2-5 : Tests - Test Sa : Simulated solar radiation at ground level	Temperature : (-40 ~ 150) ℃ Solar Radiation : 1 120 W/m^2	BS-2	N
KS C IEC 60068-2-64:2008	Electronic components and electronic devices	Environmental testing - Part 2-64 : Test methods - Test Fh : Vibration, broad-band random and guidance	Frequency : 5 Hz ~ 2.5 kHz Maximum Amplitude : 100 mm(p-p) Maximum Acceleration : 300 m/s^2	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60068-2-64:2008	components, equipment or other articles	Environmental testing - Part 2-64 : Tests - Test Fh: Vibration, broadband random and guidance	Frequency : 5 Hz ~ 3 kHz Amplitude(P-P) : 50.8 mm Acceleration : 735 m/s^2	BS-2	N
KS C IEC 60068-2-66:1994	components, equipment or other articles	Environmental testing - Part 2-66 : Test methods - Test Cx : Damp heat, steady state(unsaturated pressurized vapour)	Temperature : (110, 120, 130) ℃ Humidity : 85 % R.H.	BS-2	N
KS C IEC 60068-2-67:1995	components, equipment or other articles	Environmental testing - Part 2-67 : Tests - Test Cy : Damp heat, steady state, accelerated test primarily intended for components	Temperature : (10 ~ 90) ℃ Humidity : (20 ~ 98) % R.H.	BS-2	N
KS C IEC 60068-2-6:2015	Electronic components and electronic devices	Environmental testing - Part 2-6 : Tests - Test Fc : Vibration (sinusoidal)	Frequency : 5 Hz ~ 2.6 kHz Maximum Amplitude : 100 mm(p-p) Maximum Acceleration : 300 m/s^2	BS	N
KS C IEC 60068-2-6:2015	components, equipment or other articles	Environmental testing - Part 2-6 : Tests - Test Fc : Vibration(sinusoidal)	Frequency : 2 Hz ~ 3 kHz Amplitude(P-P) : 50.8 mm Acceleration : 735 m/s^2	BS-2	N
KS C IEC 60068-2-78:2012	components, equipment or other articles	Environmental testing - Part 2-78 : Tests - Test Cab : Damp heat, steady state	Temperature : (10 ~ 90) ℃ Humidity : (20 ~ 98) % R.H.	BS-2	N
KS C IEC 60068-2-78:2012	Electronic components and electronic devices	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state	Temperature range:(10 ~ 90) ℃ Humidity range:(20 ~ 95) % R.H.	BS	N
KS C IEC 60068-2-78:2012	Electronic components and electronic devices	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state	Temperature range : (30 ± 2) ℃ (40 ± 2) ℃ Humidity range : (85 ± 3) % R.H.	BS-8	N
KS C IEC 60068-2-80:2005	components, equipment or other articles	Environmental testing - Part 2-80 : Tests - Test Fi : Vibration - Mixed mode	Frequency : 5 Hz ~ 3 kHz Amplitude(P-P) : 50.8 mm Acceleration : 735 m/s^2	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60255-21-1:1988	relays and protection equipment	Electrical relays - Part 21 : Vibration, shock, bump and seismic tests on measuring relays and protection equipment - Section One: Vibration tests (sinusoidal)	Frequency : (10 ~ 150) Hz Amplitude(z-p): Max 0.075 mm Acceleration : Max 19.6 m/s^2	BS-2	N
KS C IEC 60255-21-2:1988	relays and protection equipment	Electrical relays - Part 21 : Vibration, shock, bump and seismic tests on measuring relays and protection equipment - Section Two: Shock and bump tests	Acceleration : Max 294 m/s^2 Duration : Max 16 ms	BS-2	N
KS C IEC 60255-21-3:1993	relays and protection equipment	Electrical relays - Part 21: Vibration, shock, bump and seismic tests on measuring relays and protection equipment - Section 3: Seismic tests 4 Requirements for single axis sine sweep seismic test(method A)	Frequency : (1 ~ 35) Hz Acceleration : (0.5 ~ 2.0) gn	BS-2	N
KS C IEC 61373:2010	equipment intended for use on railway vehicles	Railway applications — Rolling stock equipment — Shock and vibration tests	Functional random test Vertical: (0.750 ~ 38.0) m/s^2 Transverse: (0.370 ~ 34.0) m/s^2 Longitudinal: (0.500 ~ 17.0) m/s^2 Simulated long-life test (5-hour test) Vertical: (4.25 ~ 144) m/s^2 Transverse: (2.09 ~ 129) m/s^2 Longitudinal: (2.83 ~ 64.3) m/s^2 Shock test Vertical: (30 ~ 1,000) m/s^2 Transverse: (30 ~ 1,000) m/s^2 Longitudinal: (50 ~ 1,000) m/s^2	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 61850-3:2013	utility communication and automation IEDs and systems	Communication networks and systems for power utility automation - Part 3: General requirements 6.9.3 Climatic environmental tests 6.10.1 Vibration response and endurance(sinusoidal) 6.10.2 Shock response, shock withstand and bump	High Temperature: Max 200 ℃ Low Temperature: Min -65 ℃ Humidity: Max 97 % Frequency: (10 ~ 150) Hz Amplitude(z-p): Max 0.075 mm Acceleration: Max 19.6 m/s² Acceleration: Max 294 m/s² Duration: Max 16 ms	BS-2	N
KS D 9502:2020	metallic materials	Neutral, acetic acid and copper- accelerated actic acid salt spray	Salt concentration : (5 ± 1) % Exposure zone : (35 ± 2) ℃ PH : 6.5 ~ 7.2 (1.5 ± 0.5) ㎖/h	BS-2	N
KS M ISO 4892-2:2013	components, equipment or other articles	Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps	Irradiation(Artificial weathering) : (300 ~ 400) nm (60 ± 2) W/㎡ : 340 nm (0.51 ± 0.02) W(/㎡·nm) Irradiation(Window glass filters) : (300 ~ 400) nm (50 ± 2) W/㎡ : 340 nm (1.10 ± 0.02) W(/㎡·nm) BPT : (40 ~ 110) ℃ BST : (40 ~ 120) ℃ Humidity : (10 ~ 75) % RH	BS-2	N
KS R 9144:2021	equipment intended for use on railway vehicles	Test methods for vibration of parts of railway rolling stock	Frequency : 1 Hz ~ 3 kHz Amplitude(P-P) : 50.8 mm Acceleration : 735 m/s²	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-1540C:1994	satellite & military related equipment, parts, and materials	TEST REQUIREMENTS FOR LAUNCH, UPPER-STAGE, AND SPACE VEHICLES 6.1.3 Thermal Vacuum and Thermal Cycle Tests 6.2.7 Thermal Cycle Test, Vehicle Qualification 6.2.9 Thermal Vacuum Test, Vehicle Qualification 6.3.4 Thermal Vacuum Test, Subsystem Qualification 6.4.2 Thermal Cycle Test, Electrical and Electronic Unit Qualification 6.4.3 Thermal Vacuum Test, Unit Qualification 7.2.7 Thermal Cycle Test, Vehicle Acceptance 7.2.8 Thermal Vacuum Test, Vehicle Acceptance 7.4.2 Thermal Cycle Test, Electrical and Electronic Unit Acceptance 7.4.3 Thermal Vacuum Test, Unit Acceptance	(1.33×10^-5 ~ 101 325) Pa (-70 ~ 120) ℃	BS-5	N
		6.2.5 Vibration Test, Vehicle Qualification 6.3.2 Vibration Test, Subsystem Qualification 6.4.4 Vibration Test, Unit Qualification 7.2.5 Vibration Test, Vehicle Acceptance 7.4.4 Vibration Test, Unit Acceptance	(5 ~ 2 000) Hz (100 ~ 10 000) Hz		
		6.2.3 Shock Test, Vehicle Qualification 6.4.6 Shock Test, Unit Qualification 7.2.3 Shock Test, Vehicle Acceptance 7.4.6 Shock Test, Unit Acceptance			

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-167-1A:2005	Shipboard Equipment	DEPARTMENT OF DEFENSE TEST METHOD STANDARD: MECHANICAL VIBRATIONS OF SHIPBOARD EQUIPMENT (TYPE I-ENVIRONMENTAL AND TYPE II-INTERNALLY EXCITED) Type I - environmental vibration	Frequency : (4 ~ 33) Hz Maximum Amplitude : (0.1 ± 0.01) inch	BS	N
MIL-STD-202H:2015	Electrical, electronic and electro-mechanical components	107 Thermal shock Condition A Condition B Condition C Condition F	(-55 ~ 93) ℃ (-65 ~ 90) ℃ (-65 ~ 205) ℃ (-65 ~ 153) ℃	BS-5	N
MIL-STD-750-1A:2019	Electrical, electronic and electro-mechanical components	1051 Temperature cycling (air to air) Condition A Condition B Condition C Condition D Condition F Condition G	(-55 ~ 95) ℃ (-55 ~ 140) ℃ (-55 ~ 190) ℃ (-65 ~ 215) ℃ (-65 ~ 165) ℃ (-55 ~ 165) ℃	BS-5	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810D:1983	materiel	Environmental test methods and engineering guidelines 500.2 Low Pressure (Altitude) Procedure I - Storage Procedure II - Operation 501.2 High Temperature 502.2 Low Temperature 503.2 Temperature Shock 505.2 Solar Radiation(Sunshine) 507.2 Humidity 509.2 Salt Fog 512.2 Leakage(Immersion) Procedure I - Basic leakage 514.3 Vibration Procedure I - General vibration 516.3 Shock Procedure I - Functional Shock Procedure IV - Transit drop	Altitude : 4 572 m (57.2 kPa) or less Maximum Temperature : 71 ℃ Minimum Temperature : -50 ℃ Temperature : (-75 ~ 180) ℃ Maximum Temperature : 49 ℃ Maximum total solar radiation : 1 120 W/m² Maximum Temperature : 71 ℃ Humidity : 98 % R.H. Salt solution concentration : (5 ± 1) % Test chamber temperature in the exposure zone : (35 ± 2) ℃ Depth of immersion : Up to 1 000 mm Frequency : 5 Hz ~ 3 kHz Maximum amplitude(p-p) : 50.8 mm Maximum acceleration : 200 m/s² Shock wave : Sawtooth, Trapezoidal Maximum amplitude(p-p) : 50.8 mm Maximum acceleration : 200 m/s² Maximum duration : 20 ms Fall height : 1.83 m or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810E:1989	materiel	Environmental test methods and engineering guidelines 500.3 Low Pressure(Altitude) Procedure I - Storage Procedure II - Operation 501.3 High Temperature 502.3 Low Temperature 503.3 Temperature Shock 505.3 Solar Radiation(Sunshine) 507.3 Humidity 509.3 Salt Fog 512.3 Leakage(Immersion) Procedure I - Basic leakage 514.4 Vibration Procedure I - General vibration 516.4 Shock Procedure I - Functional Shock Procedure II - Equipment to be packaged Procedure III - Fragility Procedure IV - Transit drop	Altitude : 4 572 m (57.2 kPa) or less Maximum Temperature : 71 ℃ Minimum Temperature : -50 ℃ Temperature : (-75 ~ 180) ℃ Maximum Temperature : 49 ℃ Maximum total solar radiation : 1 120 W/m² Maximum Temperature : 71 ℃ Humidity : 98 % R.H. Salt solution concentration : (5 ± 1) % Test chamber temperature in the exposure zone : (35 ± 2) ℃ Depth of immersion : Up to 1 000 mm Frequency : 5 Hz ~ 3 kHz Maximum amplitude(p-p) : 50.8 mm Maximum acceleration : 200 m/s² Shock wave : Sawtooth, Trapezoidal Maximum amplitude(p-p) : 50.8 mm Maximum acceleration : 200 m/s² Maximum duration : 20 ms Fall height : 1.83 m or less	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810F:2000	Military equipment	DEPARTMENT DEFENCE TEST METHOD STANDARD FOR ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS 500 Low Pressure (Altitude) Procedure I - Storage/Air transport Procedure II - Operation/Air carriage 501 High Temperature 502 Low Temperature 503 Temperature Shock 507 Humidity 514 Vibration 〈Exception〉 Category 4 - Truck/trailer/tracked - restrained cargo Category 5 - Truck/trailer/tracked - loose cargo 516 Shock Procedure I - Functional Shock Procedure II - Materiel to be packaged Procedure III - Fragility	Altitude : (0 ~ 21) km High possible temperature : 200 ℃ Low possible temperature : -70 ℃ High temperature : (60 ~ 180) ℃ Low temperature : (-70 ~ 0) ℃ Temperature : (10 ~ 90) ℃ Humidity : (10 ~ 95) % R.H. Frequency : 5 Hz ~ 2.5 kHz Maximum Amplitude : 100 mm(p-p) Maximum Acceleration : 300 m/s² Wave form : Sawtooth waveform Maximum Amplitude : 116 mm(p-p) Maximum Acceleration : 300 m/s² Duration : 20 ms	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810F:2000	satellite & military related equipment, parts, and materials	DEPARTMENT OF DEFENSE TEST METHOD STANDARD FOR ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS METHOD 500.4 Low Pressure (Altitude) 〈Exception〉 Procedure III, Procedure IV METHOD 501.4 High Temperature METHOD 502.4 Low Temperature METHOD 514.5 VIBRATION 〈Exception〉 Category 4 - Truck/trailer/tracked - restrained cargo Category 5 - Truck/trailer/tracked - loose cargo	(4 488 ~ 101 325) Pa (-70 ~ 120) ℃ (5 ~ 2 000) Hz	BS-5	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810F:2000	materiel	Environmental engineering considerations and laboratory tests 500.4 Low Pressure(Altitude) Procedure I - Storage/Air transport Procedure II - Operation/Air carriage 501.4 High Temperature 502.4 Low Temperature 503.4 Temperature Shock 505.4 Solar Radiation(Sunshine) 507.4 Humidity 509.4 Salt Fog 512.4 Immersion Procedure I - Immersion 514.5 Vibration Procedure I - General vibration 516.5 Shock Procedure I - Functional Shock Procedure IV - Transit drop	Altitude : 4 572 m (57.2 kPa) or less Maximum Temperature : 71 ℃ Minimum Temperature : -50 ℃ Temperature : (-75 ~ 180) ℃ Maximum Temperature : 49 ℃ Maximum total solar radiation : 1 120 W/m² Maximum Temperature : 71 ℃ Humidity : 98 % R.H. Salt solution concentration : (5 ± 1) % Test chamber temperature in the exposure zone : (35 ± 2) ℃ Depth of immersion : Up to 1 000 mm Frequency : 5 Hz ~ 3 kHz Maximum amplitude(p-p) : 50.8 mm Maximum acceleration : 200 m/s² Shock wave : Sawtooth, Trapezoidal Maximum amplitude(p-p) : 50.8 mm Maximum acceleration : 200 m/s² Maximum duration : 20 ms Fall height : 1.83 m or less	BS-2	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810G:(w/Change 1):2014	Military equipment	DEPARTMENT DEFENCE TEST METHOD STANDARD FOR ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS 500 Low Pressure (Altitude) Procedure I - Storage/Air transport Procedure II - Operation/Air carriage 501 High Temperature 502 Low Temperature 503 Temperature Shock 507 Humidity 514 Vibration 〈Exception〉 Category 4 - Truck/Trailer - Secured Cargo Category 5 - Truck/trailer - loose cargo 516 Shock Procedure I - Functional Shock Procedure II - Transportation Shock Procedure III - Fragility Procedure V - Crash hazard	Altitude : (0 ~ 21) km High possible temperature : 200 ℃ Low possible temperature : -60 ℃ High temperature : (60 ~ 180) ℃ Low temperature : (-75 ~ 0) ℃ Temperature : (10 ~ 90) ℃ Humidity : (10 ~ 95) % R.H. Frequency : 5 Hz ~ 2.5 kHz Maximum Amplitude : 100 mm(p-p) Maximum Acceleration : 300 m/s^2 Wave form : Sawtooth waveform Maximum Amplitude : 116 mm(p-p) Maximum Acceleration : 300 m/s^2 Duration : 20 ms	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810G:(w/Change 1):2014	materiel	Environmental engineering considerations and laboratory tests 500.6 Low Pressure(Altitude) Procedure I - Storage/Air transport Procedure II - Operation/Air carriage 501.6 High Temperature 502.6 Low Temperature 503.6 Temperature Shock 505.6 Solar Radiation(Sunshine) 507.6 Humidity 509.6 Salt Fog 512.6 Immersion Procedure I - Immersion 514.7 Vibration Procedure I - General vibration 516.7 Shock Procedure I - Functional Shock Procedure IV - Transit drop 528.1 Mechanical Vibrations of Shipboard Materiel 5.1 Procedure I (Type I) - Environmental Vibration	Altitude : 4 572 m (57.2 kPa) or less Maximum Temperature : 71 ℃ Minimum Temperature : -51 ℃ Temperature : (-75 ~ 180) ℃ Maximum Temperature : 49 ℃ Maximum total solar radiation : 1 120 W/m² Maximum Temperature : 71 ℃ Humidity : 98 % R.H. Salt solution concentration : (5 ± 1) % Test chamber temperature in the exposure zone : (35 ± 2) ℃ Depth of immersion : Up to 1 000 mm Frequency : 5 Hz ~ 3 kHz Maximum acceleration : 200 m/s² Maximum acceleration : 200 m/s² Maximum duration : 20 ms Fall height : 1.83 m or less (4 ~ 33) Hz	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810G:2008	Military equipment	DEPARTMENT DEFENCE TEST METHOD STANDARD FOR ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS 500 Low Pressure (Altitude) Procedure I - Storage/Air transport Procedure II - Operation/Air carriage 501 High Temperature 502 Low Temperature 503 Temperature Shock 507 Humidity 514 Vibration 〈Exception〉 Category 4 - Truck/Trailer - Secured Cargo Category 5 - Truck/trailer - loose cargo 516 Shock Procedure I - Functional Shock Procedure II - Transportation Shock Procedure III - Fragility Procedure V - Crash hazard	Altitude : (0 ~ 21) km High possible temperature : 200 ℃ Low possible temperature : -60 ℃ High temperature : (60 ~ 180) ℃ Low temperature : (-75 ~ 0) ℃ Temperature : (10 ~ 90) ℃ Humidity : (20 ~ 98) % R.H. Frequency : 5 Hz ~ 2.6 kHz Maximum Amplitude : 100 mm(p-p) Maximum Acceleration : 857 m/s^2 Wave form : Sawtooth waveform Maximum Amplitude : 116 mm(p-p) Maximum Acceleration : 1 714 m/s^2 Duration : 20 ms	BS	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810G:2008	satellite & military related equipment, parts, and materials	DEPARTMENT OF DEFENSE TEST METHOD STANDARD FOR ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS METHOD 500.5 Low Pressure (Altitude) 〈Exception〉 Procedure III, Procedure IV METHOD 501.5 High Temperature METHOD 502.5 Low Temperature METHOD 514.6 VIBRATION 〈Exception〉 Category 4 - Truck/Trailer - Secured cargo Category 5 - Truck/trailer - loose cargo	(4 488 ~ 101 325) Pa (-70 ~ 120) ℃ (5 ~ 2 000) Hz	BS-5	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810G:2008	Military equipment	Environmental engineering considerations and laboratory tests 500 Low Pressure(Altitude) Procedure I - Storage/Air transport Procedure II - Operation/Air carriage 501 High Temperature 502 Low Temperature 503 Temperature Shock 505 Solar Radiation(Sunshine) 507 Humidity 509 Salt Fog 512 Immersion Procedure I - Immersion 514 Vibration Procedure I - General vibration 516 Shock Procedure I - Functional Shock Procedure II - Materiel to be packaged Procedure III - Fragility Procedure IV - Transit drop Procedure V - Crash hazard Procedure VI - Bench handling 528 Mechanical Vibrations of Shipboard Materiel (Type I - Environmental And Type II- Internally Excited)	Altitude : 0 km to 21 km -Temperature Maximum possible temperature : 200 ℃ Minimum possible temperature : -75 ℃ -Sunlight Temperature : (-40 ~ 150) ℃ Maximum total solar radiation : 1 120 W/m² Temperature & Humidity : (10 ~ 90) ℃, (20 ~ 98) % R.H. -Salt water Salt solution concentration : (5 ± 1) % Test chamber temperature in the exposure zone : (35 ± 2) ℃ -Flooding Depth of immersion : Up to 1 000 mm -Vibration Frequency: 5 Hz~3 kHz Maximum amplitude(p-p) : 50.8 mm Maximum acceleration : 750 m/s² -Shock Shock wave : Sawtooth, Trapezoidal Maximum amplitude(p-p) : 50.8 mm Maximum acceleration : 750 m/s² Maximum duration : 20 ms -Fall Bottom: Steel plate Fall Height: Up to 1.83 m	BS-2	N

No. KT009

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810H:2019	Military equipment	DEPARTMENT DEFENCE TEST METHOD STANDARD FOR ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS 500 Low Pressure (Altitude) Procedure I - Storage/Air transport Procedure II - Operation/Air carriage 501 High Temperature 502 Low Temperature 503 Temperature Shock 507 Humidity 514 Vibration 〈Exception〉 Category 4 - Truck/Trailer - Secured Cargo Category 5 - Truck/trailer - loose cargo 516 Shock Procedure I - Functional Shock Procedure II - Transportation Shock Procedure III - Fragility	Altitude : (0 ~ 21) km High possible temperature : 200 ℃ Low possible temperature : -70 ℃ High temperature : (60 ~ 180) ℃ Low temperature : (-70 ~ 0) ℃ Temperature : (10 ~ 95) ℃ Humidity : (20 ~ 98) % R.H. Frequency : 5 Hz ~ 2.5 kHz Maximum Amplitude : 100 mm(p-p) Maximum Acceleration : 300 m/s^2 Wave form : Sawtooth waveform Maximum Amplitude : 116 mm(p-p) Maximum Acceleration : 300 m/s^2 Duration : 20 ms	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810H:2019	satellite & military related equipment, parts, and materials	DEPARTMENT OF DEFENSE TEST METHOD STANDARD FOR ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS METHOD 500.6 Low Pressure (Altitude) 〈Exception〉 Procedure III, Procedure IV METHOD 501.7 High Temperature METHOD 502.7 Low Temperature METHOD 514.8 VIBRATION 〈Exception〉 Category 4 - Truck/Trailer - Secured cargo Category 5 - Truck/trailer - loose cargo	(4 488 ~ 101 325) Pa (-70 ~ 120) ℃ (5 ~ 2 000) Hz	BS-5	N
MIL-STD-883L:2019	Electrical, electronic and electro-mechanical components	1010 Temperature cycling Condition A Condition B Condition C Condition D Condition F	(-65 ~ 90) ℃ (-65 ~ 140) ℃ (-75 ~ 165) ℃ (-75 ~ 215) ℃ (-75 ~ 190) ℃	BS-5	N
NTE INEN 1173:2013	Metal coatings	Metal coatings. Determinations of corrosion resistance. Salt spray testing for neutral	Salt concentration : (50 ± 5) g/L Exposure zone : (35 ± 2) ℃ pH : 6.5 ~ 7.2 (1.5 ± 0.5) ㎖/h	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
RTCA DO-160G:2010	Airborne Equipment	Environmental Conditions and Test Procedures for Airborne Equipment Section 4 Temperature and Altitude 4.5.1 Ground Survival Low Temperature Test and Short-Time operating Low temperature Test 4.5.2 Operating Low Temperature Test 4.5.3 Ground Survival High Temperature Test and Short-Time operating High temperature Test 4.5.4 Operating High Temperature Test 4.5.5 In-Flight Loss of Cooling Test 4.6.1 Altitude Test Section 5 Temperature Variation Section 6 Humidity Section 7 Operational shocks and Crash Safety 7.2 Operational Shock Section 8 Vibration	Altitude : (0 ~ 21) km High possible temperature : 200 ℃ Low possible temperature : -60 ℃ High temperature : (60 ~ 180) ℃ Low temperature : (-75 ~ 0) ℃ Temperature : (10 ~ 90) ℃ Humidity : (10 ~ 95) % R.H. Frequency : 5 Hz ~ 2.5 kHz Maximum Amplitude : 100 mm(p-p) Maximum Acceleration : 300 m/s^2 Wave form : Sawtooth waveform Maximum Amplitude : 116 mm(p-p) Maximum Acceleration : 300 m/s^2 Duration : 20 ms	BS	N
RTCA DO-160G:2010	airborne equipment	Environmental Conditions and Test Procedures for Airborne Equipment Section 4 Temperature and Altitude 4.5.1 Ground Survival Low Temperature Test and Short-Time operating Low Temperature Test 4.5.2 Operating Low Temperature Test 4.5.3 Ground Survival High Temperature Test and Short-Time operating High Temperature Test 4.5.4 Operating High Temperature Test 4.5.5 In-Flight Loss of Cooling Test 4.6.1 Altitude Test Section 5 Temperature Variation Section 6 Humidity	Altitude : 0 km ~ 21 km Max Temperature : 200 ℃ Min Temperature : -60 ℃ High Temperature : (60 ~ 180) ℃ Low Temperature : (-75 ~ 0) ℃ Temperature: (-40 ~ 150) ℃ Temperature range : (10 ~ 90) ℃ Humidity range : (20 ~ 98) % R.H.	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SMC-S-016:2008	satellite & military related equipment, parts, and materials	TEST REQUIREMENTS FOR LAUNCH, UPPER-STAGE AND SPACE VEHICLES 6.3.8 Unit Thermal Cycle Test, Electrical and Electronic 6.3.9 Unit Thermal Vacuum Test 7.3.7 Subsystem Thermal Vacuum Test 8.3.8 Vehicle Thermal Vacuum Test 6.3.5 Unit Vibration Test 7.3.4 Subsystem Vibration Test 8.3.6 Vehicle Vibration Test 6.3.4 Unit Shock Test 7.3.6 Subsystem Shock Test 8.3.4 Vehicle Shock Test	(1.33×10^-5 ~ 101 325) Pa (-70 ~ 120) ℃ (5 ~ 2 000) Hz (100 ~ 10 000) Hz	BS-5	N
MOTIE Notice No.2018-206(11.20.2018.)	electricity metering equipment	Watt-hour meters technical standards 5.2.1 Resistance to vibration 5.2.2 Impact resistance 8.3.2 Heat Resistance 8.3.3 Cold resistance 8.3.4 Temperature and humidity cycle 8.3.5 Solar Radiation	Max Temp : 200 ℃ Min Temp : -60 ℃ Temperature : (10 ~ 55) ℃ Humidity : (20 ~ 98) % R.H. Temperature : (-45 ~ 180) ℃ Maximum solar light : 1 120 W/m^2 Frequency : (10 ~ 150) Hz Amplitude : 0.075 mm Acceleration: 9.8 m/s^2 Waveform : Half sine wave Maximum impact acceleration : 300 m/s^2 Pulse duration : 18 ms	BS-2	N

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04. Heat and Temperature Measurement

04.001 Temperature and Humidity

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
JTM K 07:2022	Temperature chambers	Temperature chambers- Test and indication method for performance 4.5.2 Temperature fluctuation 4.5.4 Temperature variation in space	Temperature (-70 ~ 315) ℃	BS	Y
JTM K 09:2023	Temperature/ Humidity chambers	Temperature/Humidity chambers - Test and indication method for performance 5.5.3 Temperature/Humidity fluctuation 5.5.4 Humidity fluctuation 5.5.6 Humidity variation in space	Humidity : (5 ~ 98) % R.H. Temperature : (-70 ~ 200) ℃	BS	Y
KS B 4003:1990	Heating Equipment for metals Heat Treatment Use	Test methods for Effective Working Zone of Heating Equipment for meta1s Heat Treatment Use	Max. 1 500 ℃	BS	Y

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04. Heat and Temperature Measurement

04.002 Fire

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS F 2271:2021	Finish materials of buildings	Testing method for gas toxicity of finish materials of buildings	Stop time : (1 ~ 15) min	BS-2	N
KS F ISO 1182:2020	Finish materials of buildings	Test method of non-combustibility of building products	Temp : (50 ~ 900) ℃ Mass loss rate : (0 ~ 100) %	BS-2	N
KS F ISO 5660-1:2015	Finish materials of buildings	Reaction to fire tests - Heat release, smoke production and mass loss rate - Part 1:Heat release rate(cone calorimeter method)and smoke production rate(dynamic measurement)	Heat release (0.1 ~ 100) MJ/m^2 Heat release rate (1~1 000) kW/m^2	BS-2	N
MOLIT Notice No.2023-24(01.09.2023.)	Finish materials of buildings	Criteria for flame retardant performance and fire spread prevention for finish materials of buildings	Stop time : (1 ~ 15) min Temp : (50 ~ 900) ℃ Mass loss rate : (0 ~ 100) % Heat release : (0.1 ~ 100) MJ/m^2 Heat release rate : (1~1 000) kW/m^2	BS-2	N

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06. Sound and Vibration Testing

06.001 Sound characteristics

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ASTM E1050-19	Acoustic absorbing materials	Standard Test Method for Impedance and Absorption of Acoustical Materials Using a Tube, Two Microphones and a Digital Frequency Analysis System	63 Hz ~ 6.4 kHz	BS	N
IEC 60704-1:2021	Household and similar electrical appliances	HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - TEST CODE FOR THE DETERMINATION OF AIRBORNE ACOUSTICAL NOISE - Part 1:General requirements 〈Applicable〉 ISO 3744:2010	Sound pressure level, below 137 dB	BS	Y
IEC 60704-2-1:2000	Vacuum cleaners	HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - TEST CODE FOR THE DETERMINATION OF AIRBORNE ACOUSTICAL NOISE - Part 2-1:Particular requirements for vacuum cleaners 〈Applicable〉 ISO 3744:2010	Sound pressure level, below 137 dB	BS	Y
ISO 10140-2:2021	Building elements	Acoustics — Laboratory measurement of sound insulation of building elements — Part 2: Measurement of airborne sound insulation	100 Hz ~ 5 kHz	BS	N
ISO 10534-2:1998	Acoustic absorbing materials	Acoustics — Determination of sound absorption coefficient and impedance in impedance tubes — Part 2 : Transfer-function method	63 Hz ~ 6.4 kHz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 10847:1997	Outdoor noise barriers	Acoustics — In-situ determination of insertion loss of outdoor noise barriers of all types	100 Hz ~ 10 kHz	BS	Y
ISO 11202:2010	machinery, equipment	Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions applying approximate environmental corrections	Sound pressure level, below 137 dB	BS	Y
ISO 11203:1995	machinery, equipment	Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions from the sound power level	Sound pressure level, below 137 dB	BS	Y
ISO 1996-1:2016	Road traffic, Railroad, Aircraft	Acoustics — Description, measurement and assessment of environmental noise — Part 1 : Basic quantities and assessment procedures	Sound pressure level, below 137 dB	BS	Y
ISO 3382-1:2009	Room space	Acoustics — Measurement of room acoustic parameters — Part 1 : Performance spaces	RT, D50, STI etc	BS	Y
ISO 3382-2:2008	Room space	Acoustics — Measurement of room acoustic parameters — Part 2 : Reverberation time in ordinary rooms	RT	BS	Y
ISO 354:2003	Acoustic absorbing materials	Acoustics — Measurement of sound absorption in a reverberation room	100 Hz ~ 5 kHz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 3741:2010	machinery, equipment	Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Precision methods for reverberation test rooms	Sound pressure level, below 137 dB	BS	N
ISO 3744:2010	machinery, equipment	Acoustics — Determenation of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane	Sound pressure level, below 137 dB	BS	Y
ISO 3745:2012	machinery, equipment	Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Precision methods for anechoic rooms and hemi-anechoic rooms	Sound pressure level, below 137 dB	BS	N
KS F 10140-2:2010	Building elements	Acoustics — Laboratory measurement of sound insulation of building elements — Part 2: Measurement of airborne sound insulation	100 Hz ~ 5 kHz	BS	N
KS F 2805:2014	Acoustic absorbing materials	Measurement of sound absorption in a reverberation room	100 Hz ~ 5 kHz	BS	N
KS F 2809:2011	Building elements	Field measurements of airborne sound insulation of buildings	100 Hz ~ 3 150 Hz	BS	Y
KS F 2810-1:2015	Building elements	Field measurements of impact sound insulation of floors — Part 1: Method using standard light impact source	100 Hz ~ 3 150 Hz	BS	Y
KS F 2810-2:2012	Building elements	Field measurements of floor impact sound insulation of buildings — Part 2 : Method using standard heavy impact sources	50 Hz ~ 630 Hz	BS	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS F 2814-2:2002	Acoustic absorbing materials	Acoustics—determination of sound absorption coefficient and impedance in impedance tubes — Part 2 : Transfer-function method	63 Hz ~ 6.4 kHz	BS	N
KS F 2862:2017	Building elements	Rating of airborne sound insulation in buildings and of building elements	100 Hz ~ 3 150 Hz	BS	Y
KS F 2863-1:2017	Building elements	Rating of floor impact sound insulation for impact source in buildings and of building elements — Part 1: Floor impact sound insulation against standard light impact source	100 Hz ~ 3 150 Hz	BS	Y
KS F 2863-2:2017	Building elements	Rating of floor impact sound insulation for impact source in buildings and of building elements — Part 2: Floor impact sound insulation against standard heavy impact source	63 Hz ~ 2 000 Hz	BS	Y
KS F 2864:2012	Room space	Measurement of the reverberation time of rooms with reference to the other acoustical parameters	RT, D50, STI etc	BS	Y
KS F ISO 16283-1:2014	Building elements	Acoustics — Field measurement of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation	100 Hz ~ 3 150 Hz	BS	Y
KS F ISO 16283-2:2015	Building elements	Acoustics — Field measurement of sound insulation in buildings and of building elements — Part 2: Impact sound insulation	100 Hz ~ 3 150 Hz	BS	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS F ISO 717-2:2020	Building elements	Acoustics - Rating of sound insulation in buildings and of building elements - Part 2: Impact sound insulation	The tapping machine impact sound: One-third octave bands (100 ~ 3 150) Hz The rubber ball impact sound: One-third octave bands (50 ~ 630) Hz	BS	Y
KS I ISO 10847:1997	Outdoor noise barriers	Acoustics — In-situ determination of insertion loss of outdoor noise barriers of all types	100 Hz ~ 10 kHz	BS	Y
KS I ISO 11202:2010	machinery, equipment	Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions applying approximate environmental corrections	Sound pressure level, below 137 dB	BS	Y
KS I ISO 1996-1:2016	Road traffic, Railroad, Aircraft	Acoustics — Description, measurement and assessment of environment noise — Part 1: Basic quantities and assessment procedures	Sound pressure level, below 137 dB	BS	Y
KS I ISO 3741:2010	machinery, equipment	Acoustics — Determination of sound power levels of noise sources using sound pressure — Precision methods for reverberation rooms	Sound pressure level, below 137 dB	BS	N
KS I ISO 3744:2010	machinery, equipment	Acousitcs — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane	Sound pressure level, below 137 dB	BS	Y

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS I ISO 3745:2012	machinery, equipment	Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Precision methods for anechoic rooms and hemi-anechoic rooms	Sound pressure level, below 137 dB	BS	N
KS I ISO 7779:2010	machinery, equipment	Acoustics — Measurement of airborne noise emitted by information technology and telecommunications equipment	Sound pressure level, below 137 dB	BS	N
KS I ISO 9614-2:1996	machinery, equipment	Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 2: Measurement by scanning	Sound pressure level, below 162 dB	BS	Y
MIL-STD-740-1(SH):1986	Shipboard equipment	AIRBORNE SOUND MEASUREMENTS AND ACCEPTANCE CRITERIA OF SHIPBOARD EQUIPMENT	Sound pressure level, below 137 dB	BS	Y

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06. Sound and Vibration Testing

06.002 Vibration characteristics

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ICC-ES AC156:2010	Vibration characteristics	Acceptance Criteria for Seismic Certification by Shake-table Testing of Nonstructural Components	Frequency Range : (1 ~ 50) Hz	BS-2	N
IEC 60255-21-3:1993	Relays	Electrical relays - Part 21 : Vibration, shock, bump and seismic tests on measuring relays and protection equipment - Section 3 : Seismic tests.	Frequency : (1 ~ 35) Hz Sweep Rate : 1 octave/min	BS-2	N
IEC 61587-2:2011	Cabinets and racks	Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 - Part 2 : Seismic tests for cabinets and racks	Frequency : (1 ~ 50) Hz Max. Deflection : ≥ 40 mm Damping : 2 %	BS-2	N
IEEE C37.98:2013	Relays	IEEE Standard for Seismic Qualification Testing of Protective Relays and Auxilaries for Facilities	Frequency : (1 ~ 100) Hz	BS-2	N
IEEE Std 344:2013	Class 1E Equipment	IEEE Standard for Seismic Qualification of Equipment for Nuclear Power Generating Stations - 8. Testing - 8.1 Introduction - 8.2 Proof and generic testing - 8.4 Device testing - 8.5 Assembly testing - 8.6 Test methods - 8.6.1 Introduction - 8.6.2 Single-frequency test - 8.6.3 Multiple-frequency tests - 8.6.3.1 Derivation of test input motion - 8.6.3.2 Time history test - 8.6.3.3 Random-motion test - 8.6.6 Multiaxis tests	Frequency : (1 ~ 50) Hz TRS analysis : 1/6 octave Bandwidth Analysis	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEEE Std 382:2006	Actuator	IEEE Standard for Qualification of Safety-Related Actuators for Nuclear Power Generating Stations and Other Nuclear Facilities - 5. Identification of the generic actuator group - 6. Qualification testing of selected actuators in generic actuator group	Frequency : (1 ~ 50) Hz Sine Beat : (12 ~ 15) oscillations per beat	BS-2	N
IEEE Std 693:2018	Electrical Substation Equipment	IEEE Recommended Practice for Seismic Design of Substations - 5. Seismic criteria for qualification of electrical substation equipment	Frequency : (1 ~ 50) Hz	BS-2	N
KS C IEC 60068-3-3:2020	Relays	Environmental Testing Part 3-3 : Supporting documentation and guidance - Seismic test methods for equipment - 13.2 Multi frequency wave testing - 13.3 Single frequency testing	Frequency : (1 ~ 50) Hz	BS-2	N
KS C IEC 60255-21-3:2012	Relays	Electrical relays - Part 21 : Vibration, shock, bump and seismic tests on measuring relays and protection equipment - Section 3 : Seismic tests.	Frequency : (1 ~ 35) Hz Sweep Rate : 1 octave/min	BS-2	N
Telcordia GR-63-CORE Issue5:2017	Vibration characteristics	NEBS Requirements: Physical Protection 4.4.1 Earthquake Environment and Criteria 5.4.1 Earthquake Test Methods 〈Exception〉 5.4.1.4 Static Test Procedure)	Earthquake Level : Zone 4, Zone 3, Zone 1 and 2 Frequency Range : (1 ~ 50) Hz	BS-2	N
RRA Notification No.2020-92(11.17.2020.)	Telecommunication Equipment	Conformity Assessment Procedure for Seismic of Telecommunication Equipment 〈Exception〉 Article 14 Analysis application conditions Article 16 Analysis result report Article 18 Analysis result judgment condition Appendix 2 Summary of seismic analysis results	Frequency : (1 ~ 50) Hz TRS analysis : 1/6 octave Bandwidth Analysis	BS-2	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
RRA Notification No.2022-7(2.15.2022.)	Vibration characteristics	Conformity Assessment Procedure for Seismic test of Telecommunication Equipment <Exception> Article 14 Analysis application conditions Article 16 Analysis result report Article 18 Analysis result judgment condition Appendix 2 Summary of seismic analysis results	Frequency : (0.5 ~ 50) Hz TRS analysis : 1/6 octave interval Analysis	BS-2	N
KEPCO DS-0050(2021.04.14.)	Substation equipment, Relays	Earthquake Resistant Design Standard of Transmission, Substation and Distribution Facilities - Earthquake Resistant Design Guideline of Transmission, Substation and Distribution Facilities (2021.05) (2.7 Seismic Qualification Test)	Frequency Range : (1 ~ 50) Hz	BS-2	N

End.