#### CERTIFICATE OF ACCREDITATION

HCT Co., Ltd.

Accreditation No.:

KT197

Corporation Registration No.:

134411-0015635

Address of (Branch site) 2-6, 73, 74 Seoicheon-ro 578 beon-gil, Majang-

Laboratory: myeon, Icheon-si, Gyeonggi-do, Republic of Korea

(Satellite facilities-1)46-17, Seongseogongdan-ro, Dalseo-gu, Daegu,

Korea

(Satellite facilities-2)37, Cheoldobangmulgwan-ro, Uiwang-si,

Gyeonggi-do, Republic of Korea

(Satellite facilities-3)304, Sinwon-ro, Yeongtong-gu, Suwon-si,

Gyeonggi-do, Republic of Korea

Date of Initial Accreditation: March 28, 2003

Validity of Accreditation:

December 22, 2023 ~ December 21, 2027

Scope of Accreditation:

Attached Annex

Date of issue:

May 27, 2025

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).



Head

**Korea Laboratory Accreditation Scheme** 

No. KT197

#### 03. Electrical Testing

03.004 Electrical materials and components

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ANSI/CAN/UL 1973:2022	Electrical materials and components	Batteries for Use in Stationary, And Motive Auxiliary Power Applicantions	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) ℃	BS	N
ANSI/CAN/UL/ULC 2271:2023	Electrical materials and components	Batteries for Use In Light Electric Vehicle (LEV) Applications	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C	BS	N
E/ECE/324/Rev.2/ Add.135/Amend.1 - E/ECE/TRANS/505 /Rev.2/Add.135/A mend.1	Electrical materials and components	Addendum 135 - Regulation No. 136, Amendment 1 Uniform provisions concerning the approval of vehicles of category L with regard to specific requirements for the electric power train, Annex 9: REESS test procedures [Exception] Annex 9E Fire resistance	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C Frequency:(7 ~ 200) Hz Acceleration:(1 ~ 100) m/s2 Shock Acceleration:(200 ~ 1 962) m/s2	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
E/ECE/324/Rev.2/ Add.99/Rev.3/Am end.3E/ECE/TRAN S/505/Rev.2/Add. 99/Rev.3/Amend.3	Electrical materials and components	Addendum 99 - Regulation No. 100, Revision 3- Amendment 3 Uniform provisions concerning the approval of vehicles with regard to specific requirements for the electric power train, Annex 9: REESS test procedures [Exception] Annex 9C Mechanical shock Annex 9E Fire resistance Annex 9F External short circuit protection 3.1.(d) For testing with a complete vehicle Annex 9G Overcharge protection 3.2.1 ~ 3.2.3 vehicle- based test Annex 9H Overdischarge protection 3.2.1 ~ 3.2.3 vehicle- based test Annex 9H Overdischarge protection 5.2.1 ~ 3.2.3 vehicle- based test Annex 9I Overtemperature protection 5.2.1 ~ 3.2.3 vehicle- based test Annex 9I Overtemperature protection 5.2.1 ~ 3.2.3 vehicle- based test Annex 9I Overtemperature protection 5.2.1 ~ 3.2.3 vehicle- based test Annex 9I Overtemperature protection 5.2.1 ~ 3.2.3 vehicle- based test Annex 9I Overtemperature protection 5.2.1 ~ 3.2.3 vehicle- based test Annex 9I Overtemperature protection 5.2.1 ~ 3.2.3 vehicle- based test Annex 9I Overtemperature protection 5.2.1 ~ 3.2.3 vehicle- based test Annex 9I Overtemperature protection 5.2.3 vehicle- based test Annex 9I Overtemperature protection 5.2.3 vehicle- based test Annex 9I Overtemperature protection 5.2.4 vehicle- based test Annex 9I Overtemperature protection 5.2.5 vehicle- based test Annex 9I Overtemperature protection 5.2.4 vehicle- based test Annex 9I Overtemperature protection 5.2.5 vehicle- based test Annex 9I Overtemperature protection 5.2.6 vehicle- based test Annex 9I Overtemperature protection	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C Frequency:(7 ~ 200) Hz Acceleration:(1 ~ 100) m/s2 Force: Max 195 kN	BS	Z
EN 62133-1:2017	Electrical materials and components	Secondary cells and batteries containing alkaline or other nonacid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 1:Nickel systems	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) °C Pressure: (10.0 ~ 11.6) kPa Vibration:(10 ~ 55) Hz, (Displacement amplitude 0.76 mm, Maximum displacement width 1.52 mm)	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 62133-2:2017	Electrical materials and components	Secondary cells and batteries containing alkaline or other nonacid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 2:Lithium systems	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) °C Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N
EN 62133- 2:2017+A1:2021	Electrical materials and components	Secondary cells and batteries containing alkaline or other nonacid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) ℃ Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N
EN 62133:2013	Electrical materials and components	Secondary cells and batteries containing alkaline or other nonacid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) °C Pressure:(10.0 ~ 11.6) kPa Vibration:(10 ~ 55) Hz, (Displacement amplitude 0.76 mm, Maximum displacement width 1.52 mm)	BS	N
IEC 60086-4:2014	Electrical materials and components	Primary batteries - Part 4: Safety of lithium batteries	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) °C Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N
IEC 60086-4:2019	Electrical materials and components	Primary batteries - Part 4: Safety of lithium batteries	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) °C Pressure: (10.0 ~ 11.6) kPa Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61960-3:2017	Electrical materials and components	Secondary cells and batteries containing alkaline or other nonacid electrolytes - Secondary lithium cells and batteries for portable applications - Part 3: Prismatic and cylindrical lithium secondary cells, and batteries made from them	DC voltage:(-5 ~ 150) V DC current:(-250 ~ 250) A Temperature:(-65 ~ 200) °C	BS	N
IEC 62133-1:2017	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 1:Nickel systems	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) °C Pressure: (10.0 ~ 11.6) kPa Vibration:(10 ~ 55) Hz, (Displacement amplitude 0.76 mm, Maximum displacement width 1.52 mm)	BS	N
IEC 62133-2:2017	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	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) ℃ Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N
IEC 62133- 2:2017/AMD1:202 1	Electrical materials and components	Secondary cells and batteries containing alkaline or other nonacid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) ℃ Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
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	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) °C Pressure: (10.0 ~ 11.6) kPa Vibration:(10 ~ 55) Hz, (Displacement amplitude 0.76 mm, Maximum displacement width 1.52 mm)	BS	N
IEC 62281:2019	Electrical materials and components	Safety of primary and secondary lithium cells and batteries during transport	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C Pressure: (10.0 ~ 11.6) kPa Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N
IEC 62619:2017	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	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C	BS	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	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C	BS	N
IEC 62620:2014	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	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C	BS	N
IEC 62660-1:2018	Electrical materials and components	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 1:Performance testing	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62660-2:2018	Electrical materials and components	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 2: Reliability and abuse testing	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C Vibration:(10 ~ 2 000) Hz, (0.14 ~ 20) (m/s²)2/Hz r.m.s. acceleration 27.8 m/s²	BS	N
IEC 62660-3:2016	Electrical materials and components	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 3: Safety requirements	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C	BS	N
IEC 62660-3:2022	Electrical materials and components	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 3: Safety requirements	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C	BS	N
IEC 63056:2020	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 electrical energy storage systems	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C	BS	N
IEC 63057:2020	Electrical materials and components	Secondary cells and batteries containing alkaline or other non- acid electrolytes - Safety requirements for secondary lithium batteries for use in road vehicles not for the propulsion	DC:(-5 ~ 60) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C Vibration:(7 ~ 50)Hz, (2 ~ 10) m/s²	BS	N
JIS C 62133- 2:2020	Electrical materials and components	Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) °C Pressure: (10.0 ~ 11.6) kPa Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 62133-2:2020	Electrical materials and components	Secondary cells and batteries containing alkaline or other nonacid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 2:Lithium systems	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) °C Pressure:(10.0 ~ 11.6) kPa Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	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	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) ℃	BS	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	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C	BS	N
KS C IEC 61960- 3:2017	Electrical materials and components	Secondary cells and batteries containing alkaline or other nonacid electrolytes - Secondary lithium cells and batteries for portable applications - Part 3:Prismatic and cylindrical lithium secondary cells, and batteries made from them	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) ℃	BS	N
KS C IEC 62133- 1:2017	Electrical materials and components	Secondary cells and batteries containing alkaline or other nonacid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 1:Nickel systems	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) ℃ Pressure:(10.0 ~ 11.6) kPa Vibration:(10 ~ 55) Hz, (Displacement amplitude 0.76 mm, Maximum displacement width 1.52 mm)	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 62133- 2:2017	Electrical materials and components	Secondary cells and batteries containing alkaline or other nonacid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 2:Lithium systems	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) °C Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N
KS C IEC 62133- 2:2021	Electrical materials and components	Secondary cells and batteries containing alkaline or other nonacid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) °C Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	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	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C	BS	N
KS C IEC 62620:2014	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	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C	BS	N
Ministerial Ordinance 1,Appendix 9:2008	Electrical materials and components	Technical requirement by the Ministerial Ordinance for electrical appliance Ministerial Ordinance 1, Appendix 9 Lithium ion secondary batteries	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) © Pressure: (10.0 ~ 11.6) kPa Vibration:(10 ~ 55) Hz, (Displacement amplitude 0.76 mm, Maximum displacement width 1.52 mm)	BS	N
SPS-C KBIA- 10100-02- 7487:2022	Electrical materials and components	Secondary lithium batteries for small unmanned aerial vehicle — performance test method	DC:(0 ~ 80) V DC:(-250 ~ 250) A Temperature:(-50 ~ 100) ℃	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SPS-C KBIA- 10104-03- 7312:2022	Electrical materials and components	Secondary Battery Systems for Battery Energy Storage - Performance and Safety Requirements	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C	BS	N
ST/SG/AC.10/11/R ev.7:2019	Electrical materials and components	Recommendations on the TRANSPORT OF DANGEROUS GOODS -Manual of Tests and Criteria (38.3 Lithium metal and lithium ion batteries)	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C Pressure: (10.0 ~ 11.6) kPa Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N
ST/SG/AC.10/11/R ev.7:Amend.1:202 1	Electrical materials and components	Recommendations on the TRANSPORT OF DANGEROUS GOODS-Manual of Tests and Criteria (38.3 Lithium metal and lithium ion batteries)	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) °C Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N
ST/SG/AC.10/11/R ev.8:2023	Electrical materials and components	Manual of Tests and Criteria (38.3 Lithium metal, lithium ion and sodium ion batteries)	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C Pressure: (10.0 ~ 11.6) kPa Vibration:(7 ~ 200) Hz (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N
UL 1642:2020	Electrical materials and components	Lithium Batteries	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C Pressure: (10.0 ~ 11.6) kPa Vibration:(10 ~ 55) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
UL 1973:2018	Electrical materials and components	Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail (LER) Applications	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C	BS	Z
UL 2054:Edition 3:2022	Electrical materials and components	Household and Commercial Batteries	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) °C Pressure: (10.0 ~ 11.6) kPa Vibration:(7 ~ 200) Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N
UL 2580:2020	Electrical materials and components	Batteries for Use In Electric Vehicles	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) © Vibration:(10 ~ 2 000) Hz, (0.14 ~ 20) (m/s²)2/Hz r.m.s. acceleration 27.8 m/s²	BS	N
UL 2595:2018	Electrical materials and components	General requirements for Battery-Powered Appliances	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) ℃	BS	N
UL 62133-2:2020	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	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~200) °C Vibration:(7 ~ 200)Hz, (Displacement amplitude 0.8 mm, Maximum displacement width 1.6 mm)	BS	N
UL 62133:2017	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 circuit (cells)	DC:(-5 ~ 150) V DC:(-250 ~ 250) A Temperature:(-65 ~ 200) © Pressure: (10.0 ~ 11.6) kPa Vibration:(10 ~ 55) Hz, (Displacement amplitude 0.76 mm, Maximum displacement width 1.52 mm)	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MOLIT Notice No.2025-73 (2.17.2025.)	Electrical materials and components	Performance and standards enforcement regulations for automobiles and automobile parts [Attachment 1] No. 48 Safety test for drive battery [Exception] 48.7.3 Fire resistance 48.7.4.3.4 External short circuit protection for testing with a complete vehicle 48.7.5.3.5.1 ~ 48.7.5.3.5.3 Overcharge protection for testing with a complete vehicle 48.7.6.3.5.3 Overdischarge protection for testing with a complete vehicle 48.7.7.2.2, 48.7.7.3.2 Over-temperature protection for testing with a complete vehicle 48.7.8.3.1 Over-current protection 48.7.10 Mechanical shock 48.8.3 Fire resistance 48.8.9 shock  [Attachment 1] No. 48-2 Safety test of drive battery of two-wheeled vehicle [Exception] 489 2.7.3 Fire resistance 48-2.7.5.3.5.1 Overcharge protection for testing with a complete vehicle 48-2.7.6.3.5.1 Overdischarge protection for testing with a complete vehicle 48-2.7.7.2.2, 48-2.7.7.3.2 Overtemperature protection for testing with a complete vehicle 48-2.7.7.3.2 Overtemperature protection for testing with a complete vehicle 48-2.7.7.3.2 Overtemperature protection for testing with a complete vehicle 48-2.7.7.3.2 Overtemperature protection for testing with a complete vehicle 48-2.7.7.3.2 Overtemperature protection for testing with a complete vehicle 48-2.7.7.3.2 Overtemperature protection for testing with a complete vehicle 48-2.7.7.3.2 Overtemperature protection for testing with a complete vehicle 48-2.7.7.3.2 Overtemperature protection for testing with a complete vehicle	DC:(-5 ~ 1 500) V DC:(-1 000 ~ 1 000) A Temperature:(-65 ~ 200) © Frequency:(7 ~ 200) Hz Acceleration:(1 ~ 100) m/s2 Force: Max 195 kN Salinity:(1 ~ 15) %	BS	Z

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#### 03. Electrical Testing

03.005 Measuring instruments

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 61010-1:2010	Measuring instruments	Safety requirement for electrical equipment for measurement, control and laboratory use - Part 1:General requirements  [Exception] 10.5.3 Insulating materials (Vicat) 11.7 Fluid pressure & leakage 12.2.1 Ionizing radiation 12.3 UV Radiation 12.4 Microwave Radiation 12.5.1 Sound pressure level 12.5.2 Ultrasonic pressure 12.6 Laser sources 13.2.3 High vacuum devices Annex H Qualification of conformal coating for protection against pollution	Single-phase input voltage: Less than AC 300 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 5) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (0 ~ 200)°C Relative humidity: Less than 96 % R.H.	BS	N
EN 61010- 1:2010+A1:2019	Measuring instruments	Safety requirement for electrical equipment for measurement, control and laboratory use - Part 1:General requirements  [Exception] 10.5.3 Insulating materials (Vicat) 11.7 Fluid pressure & leakage 12.2 Equipment producing ionizing radiation 12.3 UV Radiation 12.4 Microwave Radiation 12.5 Sound level 12.6 Laser sources 13.2.3 Implosion of cathode ray tubes Annex H Qualification of conformal coating for protection against pollution	300 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 5) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (0 ~ 200)℃	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61010-1 Edition 3.1(2017)	Measuring instruments	Safety requirement for electrical equipment for measurement, control and laboratory use - Part 1: General requirements  [Exception] 10.5.3 Insulating materials (Vicat) 11.7 Fluid pressure & leakage 12.2 Equipment producing ionizing radiation 12.3 UV Radiation 12.4 Microwave Radiation 12.5 Sound level 12.6 Laser sources 13.2.3 Implosion of cathode ray tubes Annex H Qualification of conformal coating for protection against pollution	Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 5) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature:	BS	N
KS C IEC 61010- 1:2010	Measuring instruments	Safety requirement for electrical equipment for measurement, control and laboratory use - Part 1: General requirements  [Exception] 10.5.3 Insulating materials (Vicat) 11.7 Fluid pressure & leakage 12.2 Equipment producing ionizing radiation 12.3 UV Radiation 12.4 Microwave Radiation 12.5 Sound level 12.6 Laser sources 13.2.3 Implosion of cathode ray tubes Annex H Qualification of conformal coating for protection against pollution	less than AC 300 V Input Current: less than 20 A Frequency: (50 ~ 60) Hz Electric Strength: (0 ~ 5) kV Leakage: less than (0 ~ 10) mA Earth Continuity voltage: less than 12 V Earth Continuity current: less than 45 A Temperature: (0 ~ 200) °C	BS	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
AS/NZS 60950.1:2011	Electrical machinery for households	Information technology equipment - Safety Part 1:General requirements  [Exception] 2.10.8.4 Abrasion resistance test 3.2.5.1 AC power supply cords 4.2.8 Cathode ray tubes 4.3.12 Flammable liquids 4.3.13.2 Ionizing radiation 4.3.13.3 UV 4.3.13.4 Human exposure to ultraviolet (UV) radiation 4.3.13.5 Laser ANNEX A.3 Hot flaming oil test ANNEX H Ionizing radiation ANNEX AA Mandrel test	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
AS/NZS 60950.1:2015	Electrical machinery for households	Information technology equipment - Safety Part 1:General requirements  [Exception] 2.10.8.4 Abrasion resistance test 3.2.5.1 AC power supply cords 4.2.8 Cathode ray tubes 4.3.12 Flammable liquids 4.3.13.2 Ionizing radiation 4.3.13.3 UV 4.3.13.4 Human exposure to ultraviolet (UV) radiation 4.3.13.5 Laser ANNEX A.3 Hot flaming oil test ANNEX H Ionizing radiation ANNEX AA Mandrel test	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
AS/NZS 62368.1:2018		Audio/video, information and communication technology equipment - Part 1:Safety requirements  [Exception] 5.4.1.10 Thermoplastic parts on which conductive metallic parts are directly mounted / Vicat test B 50 of ISO 306 5.4.1.4, 9.2.5 Maximum operating temperatures for materials, components and systems / Three phase voltage supply systems 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 / Mandrel (figure 25 to 28), metal foil, equipment suitable for electrical strength test loads Stop watch, weight 5.4.1.5.3 Thermal cycling test procedure 5.6.4.1 Determination of the overcurrent protective device and	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance	Site	
			Insulation resistance measurement range: 4 000 MΩ		

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
		limiters Annex G.13.6.2 Test method and compliance criteria Annex G.13.6.2 Abrasion resistance test Annex G.15 Hydrostatic pressure Annex G.15 Tubing and fittings compatibility test Annex J Insulated winding wires for use without interleaved insulation Annex M.8.2 Protection against internal ignition from external spark sources - Spark Test Annex S Tests for resistance to heat and fire / Distillate fuel oil as described in Annex S.3.2 Annex U Mechanical strength of CRTs and protection against the effects of implosion			

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
AS/NZS 62368.1:2022		Audio/video, information and communication technology equipment - Part 1:Safety requirements  [Exception] 5.4.1.10 Thermoplastic parts on which conductive metallic parts are directly mounted / Vicat test B 50 of ISO 306 5.4.1.4, 9.2.5 Maximum operating temperatures for materials, components and systems / Three phase voltage supply systems 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than	Site	
		tracking index per IEC 60112 / Mandrel (figure 25 to 28), metal foil, equipment suitable for electrical strength test loads Stop watch, weight 5.4.1.5.3 Thermal cycling test procedure 5.6.4.1 Determination of the overcurrent protective device and circuit (Annex R) / Source with at least 1500A short circuit 10 Radiations / Laser (including laser diodes) 10 Radiations / Light emitting diodes (LEDs) 10 Radiations / X-ray 10 Radiations / Effect of UV radiation on materials (Annex C) 10 Radiations / Human exposure to UV radiation (Annex C)	AC/DC 45 A Temperature: (-40 ~ 850)°C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №		

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CAN/CSA-C22.2 No. 60065:03	Electrical machinery for households	Audio, Video and similar electronic apparatus - Safety requirements  [Exception] 6.1 Ionizing radiation 6.2 Laser radiation 7.2 Softening Temperature 12.3 REMOTE CONTROL devices held in hand 14.2 Capacitor 14.6 Switch 16.1 Flexible cords, not complying with 16.1 etc. 17.7 Coed Torque 18. Mechanical strength of picture tubes and protection against splashing water ANNEX A Additional requirements for apparatus with protection against splashing water ANNEX H Insulation winding wires for use without interleaved insulation	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CAN/CSA-C22.2 No. 60065:16	Electrical machinery for households	Audio, Video and similar electronic apparatus - Safety requirements  [Exception] 6.1 lonizing radiation 6.2 Laser radiation 6.3 Light emitting diodes (LEDs) 7.2 Heat resistance of insulating material 12.3 REMOTE CONTROL device sheldinhand 14.3 Capacitors and RC-units 14.7 Switch 16 External flexible cords 16.1 Flexible cords, not complying with 16.1 etc.) 17.7 Cord Torque 18. Mechanical strength of picture tubes and protection against the effects of implosion ANNEX AA Additional requirements for apparatus with protection against splashing water ANNEX H Insulated winding wires for use without interleaved insulation	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 MQ	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CAN/CSA-C22.2 No. 60950-1A-07	Electrical machinery for households	Information technology equipment - Safety Part1:General requirements  [Exception] 2.10.8.4 Abrasion resistance test 3.2.5.1 AC power supply cords 4.2.8 Cathode ray tubes 4.3.12 Flammable liquids 4.3.13.2 Ionizing radiation 4.3.13.3 UV 4.3.13.4 Human exposure to ultraviolet (UV) radiation 4.3.13.5 Laser ANNEX A.3 Hot flaming oil test ANNEX H Ionizing radiation ANNEX AA Mandrel test	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60335- 1:2012/A11:2014	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 1:General requirements  [Exception] Clause 14 Transient over voltages test Clause 22.32 Rubber aging test Annex F Capacitors Annex H Switches Annex J Coated printed circuit boards Annex R Software evaluation	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335- 1:2012/A2:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 1:General requirements  [Exception] Clause 14 Transient over voltages test Clause 22.32 Rubber aging test Annex F Capacitors Annex H Switches Annex J Coated printed circuit boards Annex R Software evaluation	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60335-2- 11:2010/A11:201 2	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 11:Particular requirements for tumble dryers	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 MQ	BS	Z

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335-2- 11:2010/A1:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 11:Particular requirements for tumble dryers	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60335-2- 14:2006+A1:2008 +A11:2012+A12:2 016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 14:Particular requirements for kitchen machines [Exception] 25.7 Addition test	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335-2- 15:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 15:Particular requirements for appliances for heating liquids  [Exception] 22.103 Durability test of appliance coupler of cordless appliances	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60335-2- 16:2003+A1:2008 +A2:2012	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 16:Particular requirements for food waste disposers	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335-2- 16:2003/A11:201 8	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 16:Particular requirements for food waste disposers	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60335-2- 21:2003+A1:2005 +A2:2008	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 21:Particular requirements for storage water heaters	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 MQ	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335-2- 21:2021	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 21:Particular requirements for storage water heaters	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60335-2- 21:2021/A1:2021	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 21:Particular requirements for storage water heaters	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335-2- 23:2003+A1:2008 +A11:2010	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 23:Particular requirements for appliances for skin or hair care	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60335-2- 23:2003+A2:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 23:Particular requirements for appliances for skin or hair care	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335-2- 2:2010/A11:2012	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-2:Particular requirements for vacuum cleaners and water-suction cleaning appliances  [Exception] 21.101 - Energized hose crushing resistance test 21.102 - Energized hose abrasion resistance test 21.103 - Current-carrying hose bending resistance test 21.104 - Current-carrying hose torsion resistance test 21.105 - Low-temperature condition resistance test for current-carrying hoses	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60335-2- 2:2010/A1:2013	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-2:Particular requirements for vacuum cleaners and water-suction cleaning appliances  [Exception] 21.101 - Energized hose crushing resistance test 21.102 - Energized hose abrasion resistance test 21.103 - Current-carrying hose bending resistance test 21.104 - Current-carrying hose torsion resistance test 21.105 - Low-temperature condition resistance test for current-carrying hoses	\(\rac{12 \rac{1}{2}}{2}\)	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335-2- 32:2003+A1:2008	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 32:Particular requirements for massage appliances	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60335-2- 32:2003+A2:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 32:Particular requirements for massage appliances	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335-2- 4:2010/A1:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 4:Particular requirements for spin extractors	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60335-2- 58:2005	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-58:Particular requirements for commercial electric dishwashing machines  [Exception] Annex BB - Ageing test for elastomeric parts Annex CC - Requirements to avoid backsiphonage	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335-2- 5:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 5:Particular requirements for dishwashers [Exception] Annex BB Ageing test for elastomeric parts	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 MQ	BS	N
EN 60335-2- 5:2015/A11:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 5:Particular requirements for dishwashers [Exception] Annex BB Ageing test for elastomeric parts	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 MQ	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335-2- 5:2015/A1:2020	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 5:Particular requirements for dishwashers [Exception] Annex BB Ageing test for elastomeric parts	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60335-2- 65:2003/A11:201 2	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-65:Particular requirements for aircleaning appliances  [Exception] Clause 32 - Radiation, toxicity and similar hazards	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 MQ	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335-2- 75:2004/A12:201 0	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-75:Particular requirements for commercial dispensing appliances and vending machines  [Exception] Annex AA - Aging test for elastomeric parts	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60335-2- 80:2003+A2:2009	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 80:Particular requirements for fans	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335-2- 80:2003/A1:2004	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 80:Particular requirements for fans	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60335-2- 8:2015/A1:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-8:Particular requirements for shavers, hair clippers and similar appliances [Exception] Annex BB Ageing test for elastomeric parts	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60335-2- 8:2015/A2:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-8:Particular requirements for shavers, hair clippers and similar appliances [Exception] Annex BB Ageing test for elastomeric parts	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
EN 60950- 1:2006+A11:2009 + A1:2010+A12:201 1+A2:2013	Electrical machinery for households	Information technology equipment - Safety Part1:General requirements  [Exception] 2.10.8.4 Abrasion resistance test 3.2.5.1 AC power supply cords 4.2.8 Cathode ray tubes 4.3.12 Flammable liquids 4.3.13.2 Ionizing radiation 4.3.13.3 UV 4.3.13.4 Human exposure to ultraviolet (UV) radiation 4.3.13.5 Laser ANNEX A.3 Hot flaming oil test ANNEX H Ionizing radiation ANNEX AA Mandrel test	voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance	BS	N

No. KT197

Audio/video, information and communication technology equipment - Part 1:Safety requirements  [Exception] 5.4.1.10 Thermoplastic parts on which conductive metallic parts are directly mounted / Vicat test B 50 of ISO 306 5.4.1.4, 9.2.5 Maximum operating temperatures for materials, components and systems / Three phase voltage supply systems 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation  [Instructive metallic parts are directly mounted / Vicat test B 50 of ISO 306 5.4.1.4, 9.2.5 Maximum operating temperatures for materials, components and systems / 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation (Instructive metallic parts are directly mounted in the parts are directly mounted / Vicat test B 50 of ISO 306 5.4.1.4, 9.2.5 Maximum operating temperatures for materials, components and systems / Three phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz	Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
tracking index per IEC 60112 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for  K 62368-  Leakage current range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than ACDC 12.17	Test method  EN 62368- 1:2014+A11:2017	Electrical machinery for	Audio/video, information and communication technology equipment - Part 1:Safety requirements  [Exception] 5.4.1.10 Thermoplastic parts on which conductive metallic parts are directly mounted / Vicat test B 50 of ISO 306 5.4.1.4, 9.2.5 Maximum operating temperatures for materials, components and systems / Three phase voltage supply systems 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 / Mandrel (figure 25 to 28), metal foil, equipment suitable for electrical strength test loads Stop watch, weight 5.4.1.5.3 Thermal cycling test procedure 5.6.4.1 Determination of the overcurrent protective device and circuit (Annex R) / Source with at least 1500A short circuit	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4		testing

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
		limiters Annex G.13.6.2 Test method and compliance criteria Annex G.13.6.2 Abrasion resistance test Annex G.15 Hydrostatic pressure Annex G.15 Tubing and fittings compatibility test Annex J Insulated winding wires for use without interleaved insulation Annex M.8.2 Protection against internal ignition from external spark sources - Spark Test Annex S Tests for resistance to heat and fire / Distillate fuel oil as described in Annex S.3.2 Annex U Mechanical strength of CRTs and protection against the effects of implosion			
EN IEC 60335-2- 11:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 11:Particular requirements for tumble dryers	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN IEC 60335-2- 32:2021	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 32:Particular requirements for massage appliances	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN IEC 62368- 1:2020	Electrical machinery for households	Audio/video, information and communication technology equipment - Part 1:Safey requirements [Exception] 5.4.1.10 Thermoplastic parts on which conductive metallic parts are directly mounted / Vicat test B 50 of ISO 306 5.4.1.4, 9.2.5 Maximum operating temperatures for materials, components and systems / Three phase voltage supply systems 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 5.4.2, 5.4.3, 5.4.4, Annex X Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 / Mandrel (figure 25 to 28), metal foil, equipment suitable for electrical strength test loads Stop watch, weight 5.4.1.5.3 Thermal cycling test procedure 5.6.4.1 Determination of the overcurrent protective device and circuit (Annex R) / Source with at least 1500A short circuit 10 Radiation / Laser (including laser diodes) 10 Radiation / Laser (including laser diodes) 10 Radiation / Light emitting diodes (LEDs) 10 Radiation / Image Projector 10 Radiation / Image Projector 10 Radiation / Human exposure to UV radiation / Carbon-arc light-	Single-phase inputvoltage: Less than AC600 VSingle-phase inputcurrent: Less than 20 AFrequency range: (50to 60) HzWithstand voltagerange: (0 ~ 10) kVLeakage current range: (0 ~ 10) mAGround continuityvoltage: Less than AC/DC 12 VGround continuitycurrent: Less than AC/DC 45 ATemperature: (-40 ~850) CRelative humidity: Lessthan 98 % R.H.Insulation resistancereference voltage: Lessthan DC 1 000 VInsulation resistancemeasurement range: 4000 MQ	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
		exposure test Annex C UV radiation / Xenon-arc light- exposure test Annex C UV radiation			
		/Tensile strength, ISO 527 Annex C UV radiation / Flexural strength, ISO			
		178 Annex C UV radiation / Charpy impact, ISO 179 Annex C UV radiation / Izod impact, ISO 180			
		Annex C UV radiation / Tensile impact, ISO 8256 Annex G.5.3.4 / Test for FIW			
		Annex G.7 Mains supply cords / Test equipment according IEC 60227 Annex G.9 / IC current limiters			
		Annex G.13.6.2 / Test method and compliance criteria Annex G.13.6.2 / Abrasion resistance test			
		Annex G.15 / Hydrostatic pressure Annex G.15 / Tubing and fittings compatibility test			
		Annex J / Insulated winding wires for use without interleaved insulation			
		Annex M.7 / Concentration of hydrogen gas Annex M.8.2 / Protection against internal ignition from			
		external spark sources - Spark Test Annex R / Limited Short- circuit test Annex S Tests for			
		resistance to heat and fire / Distillate fuel oil as described in annex S.3.2 Annex U / Mechanical strength of CRTs and			
		protection against the effects of implosion Annex Y.2 (Annex C) / Ultraviolet light			
		conditioning test Annex Y 3 / Resistance to corrosion, water			

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
		borne contaminants Annex Y.3.3 / Water- sulphur dioxide test Annex Y.4.3 / Tensile strength and elongation tests Annex Y.4.4 / Compression test Annex Y.4.5 / Oil resistance Annex Y.5 / Protection from moisture Annex Y.5.3 / Water spray test Annex Y.5.5 / Protection from excessive dust Annex Y.6.2 / Impact test			

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
Test method  EN IEC 62368- 1:2020+A11:2020		Audio/video, information and communication technology equipment - Part 1:Safey requirements  [Exception] 5.4.1.10 Thermoplastic parts on which conductive metallic parts are directly mounted / Vicat test B 50 of ISO 306 5.4.1.4, 9.2.5 Maximum operating temperatures for materials, components and systems / Three phase voltage supply systems 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 5.4.2, 5.4.3, 5.4.4, Annex X Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 / Mandrel (figure 25 to 28), metal foil, equipment suitable for electrical strength test loads Stop watch, weight 5.4.1.5.3 Thermal cycling test procedure 5.6.4.1 Determination of the overcurrent protective device and circuit (Annex R) / Source with at least 1500A short circuit	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	Site	
		5.6.4.1 Determination of the overcurrent protective device and circuit (Annex R) / Source with at least	than DC 1 000 V Insulation resistance measurement range: 4		

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
Test method			Test range	Site	
		effects of implosion Annex Y.2 (Annex C) / Ultraviolet light conditioning test Annex Y 3 / Resistance			

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
		to corrosion, water borne contaminants Annex Y.3.3 / Watersulphur dioxide test Annex Y.4.3 / Tensile strength and elongation tests Annex Y.4.4 / Compression test Annex Y.4.5 / Oil resistance Annex Y.5 / Protection from moisture Annex Y.5.3 / Water spray test Annex Y.5.5 / Protection from excessive dust Annex Y.6.2 / Impact test			

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN IEC 62368- 1:2024+A11:2024	Electrical machinery for households	Audio/video, information and communication technology equipment - Part 1:Safey requirements [Exception] 5.4.1.10 Thermoplastic parts on which conductive metallic parts are directly mounted / Vicat test B 50 of ISO 306 5.4.1.4, 9.2.5 Maximum operating temperatures for materials, components and systems / Three phase voltage supply systems 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 5.4.2, 5.4.3, 5.4.4, Annex X Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 / Mandrel (figure 25 to 28), metal foil, equipment suitable for electrical strength test loads Stop watch, weight 5.4.1.5.3 Thermal cycling test procedure 5.6.4.1 Determination of the overcurrent protective device and circuit (Annex R) / Source with at least 1500A short circuit 10 Radiation / Laser (including laser diodes) 10 Radiation / Laser (including laser diodes) 10 Radiation / Light emitting diodes (LEDs) 10 Radiation / Image Projector 10 Radiation / Effect of UV radiation / Effect of UV radiation (Annex C) 10 Radiation / Annex C UV radiation / Carbon-arc light-	Single-phase inputvoltage: Less than AC600 VSingle-phase inputcurrent: Less than 20 AFrequency range: (50to 60) HzWithstand voltagerange: (0 ~ 10) kVLeakage current range: (0 ~ 10) mAGround continuityvoltage: Less thanAC/DC 12 VGround continuitycurrent: Less thanAC/DC 45 ATemperature: (-40 ~850) CRelative humidity: Lessthan 98 % R.H.Insulation resistancereference voltage: Lessthan DC 1 000 VInsulation resistancemeasurement range: 4000 №	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
Test method		exposure test Annex C UV radiation / Xenon-arc light- exposure test Annex C UV radiation /Tensile strength, ISO 527 Annex C UV radiation / Flexural strength, ISO 178 Annex C UV radiation / Charpy impact, ISO 179 Annex C UV radiation / Izod impact, ISO 180 Annex C UV radiation / Izod impact, ISO 180 Annex C UV radiation / Tensile impact, ISO 8256 Annex G.5.3.4 / Test for FIW Annex G.7 Mains supply cords / Test equipment according IEC 60227 Annex G.9 / IC current limiters Annex G.13.6.2 / Test method and compliance criteria Annex G.13.6.2 / Abrasion resistance test Annex G.15 / Hydrostatic pressure Annex G.15 / Hydrostatic pressure Annex G.15 / Tubing and fittings compatibility test Annex J / Insulated winding wires for use without interleaved insulation Annex M.7 / Concentration of hydrogen gas Annex M.8.2 / Protection against internal ignition from external spark sources - Spark Test Annex R / Limited Short- circuit test Annex S Tests for	Test range	Site	
		resistance to heat and fire / Distillate fuel oil as described in annex S.3.2 Annex U / Mechanical strength of CRTs and protection against the effects of implosion Annex Y.2 (Annex C) / Ultraviolet light conditioning test Annex Y 3 / Resistance to corrosion, water			

Korea Laboratory Accreditation Scheme(KOLAS) is a signatory to the ILAC Mutual Recognition Arrangement

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
		borne contaminants Annex Y.3.3 / Water- sulphur dioxide test Annex Y.4.3 / Tensile strength and elongation tests Annex Y.4.4 / Compression test Annex Y.4.5 / Oil resistance Annex Y.5 / Protection from moisture Annex Y.5.3 / Water spray test Annex Y.5.5 / Protection from excessive dust Annex Y.6.2 / Impact test			
IEC 60065:2001+A1:2 005+A2:2010	Electrical machinery for households	Audio, Video and similar electronic apparatus - Safety requirements  [Exception] 6.1 Ionizing radiation 6.2 Laser radiation 7.2 Softening Temperature 12.3 REMOTE CONTROL devices held in hand 14.2 Capacitor 14.6 Switch 16.1 Flexible cords, not complying with 16.1 etc. 17.7 Cord Torque 18. Mechanical strength of picture tubes and protection againist splashing water ANNEX A Additional requirements for apparatus with protection against splashing water ANNEX H Insulation winding wires for use without interleaved insulation	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 5) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 200)℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 № Vibration frequency range: (10 ~ 55) Hz Amplitude: Less than 0.35 mm	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60065:2014	Electrical machinery for households	Audio, video and similar electronic apparatus - Safety requirements  [Exception] 6.1 Ionizing radiation 6.2 Laserradiation 6.3 Light emitting diodes (LEDs) 7.2 Heat resistance of insulating material 12.3 REMOTE CONTROL devices held in hand 14.3 Capacitors and RC-units 14.7 Switch 16 External flexible cords 16.1 Flexible cords, not complying with 16.1 etc.) 17.7 Cord Torque 18. Mechanical strength of picture tubes and protection against the effects of implosion ANNEX AA Additional requirements for apparatus with protection against splashing water ANNEX H Insulated winding wires for use without interleaved insulation	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 200)°C Relative humidity: Less than 98 % R.H. Insulation resistance measurement range: 4 000 MQ	BS	N
IEC 60335-1:2010	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 1:General requirements  [Exception] Clause 14 Transient overvoltages test Clause 22.32 Rubber aging test Annex F Capacitors Annex H Switches Annex J Coated printed circuit boards Annex R Software evaluation	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850)℃ Relative humidity: Less than 98 % R.H. Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335- 1:2010/AMD1:201 3	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 1:General requirements  [Exception] Clause 14 Transient overvoltages test Clause 22.32 Rubber aging test Annex F Capacitors Annex H Switches Annex J Coated printed circuit boards Annex R Software evaluation	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850)℃ Relative humidity: Less than 98 % R.H. Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335- 1:2010/AMD2:201 6	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 1:General requirements  [Exception] Clause 14 Transient overvoltages test Clause 22.32 Rubber aging test Annex F Capacitors Annex H Switches Annex J Coated printed circuit boards Annex R Software evaluation	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 11:2008	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 11:Particular requirements for tumble dryers	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850)℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 11:2008/AMD1:20 12	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 11:Particular requirements for tumble dryers	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 11:2008/AMD2:20 15	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 11:Particular requirements for tumble dryers	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 11:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 11:Particular requirements for tumble dryers	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 14:2006	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 14:Particular requirements for kitchen machines [Exception] 25.7 Addition test	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 14:2006/AMD1:20 08	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 14:Particular requirements for kitchen machines [Exception] 25.7 Addition test	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 14:2006/AMD2:20 12	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 14:Particular requirements for kitchen machines [Exception] 25.7 Addition test	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 14:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 14:Particular requirements for kitchen machines [Exception] 25.7 Addition test	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 14:2016/AMD1:20 19	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 14:Particular requirements for kitchen machines [Exception] 25.7 Addition test	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 15:2012	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 15:Particular requirements for appliances for heating liquids  [Exception] 22.103 Durability test of appliance coupler of cordless appliances	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 15:2012/AMD1:20 16	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 15:Particular requirements for appliances for heating liquids  [Exception] 22.103 Durability test of appliance coupler of cordless appliances	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 15:2012/AMD2:20 18	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 15:Particular requirements for appliances for heating liquids  [Exception] 22.103 Durability test of appliance coupler of cordless appliances	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	Z

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 16:2002	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 16:Particular requirements for food waste disposers	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 16:2002/AMD1:20 08	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 16:Particular requirements for food waste disposers	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 16:2002/AMD2:20 11	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 16:Particular requirements for food waste disposers	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 16:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 16:Particular requirements for food waste disposers	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 21:2012	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 21:Particular requirements for storage water heaters	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 21:2012/AMD1:20 18	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 21:Particular requirements for storage water heaters	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	Z

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 21:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 21:Particular requirements for storage water heaters	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 23:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 23:Particular requirements for appliances for skin or hair care	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 23:2016/AMD1:20 19	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 23:Particular requirements for appliances for skin or hair care	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	Z
IEC 60335-2- 2:2009	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-2:Particular requirements for vacuum cleaners and water-suction cleaning appliances  [Exception] 21.101 - Energized hose crushing resistance test 21.102 - Energized hose abrasion resistance test 21.103 - Current-carrying hose bending resistance test 21.104 - Current-carrying hose torsion resistance test 21.105 - Low-temperature condition resistance test for current-carrying hosest	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 2:2009/AMD1:201 2	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-2:Particular requirements for vacuum cleaners and water-suction cleaning appliances  [Exception] 21.101 - Energized hose crushing resistance test 21.102 - Energized hose abrasion resistance test 21.103 - Current-carrying hose bending resistance test 21.104 - Current-carrying hose torsion resistance test 21.105 - Low-temperature condition resistance test for current-carrying hosest	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 2:2009/AMD2:201 6	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 2:Particular requirements for vacuum cleaners and water-suction cleaning appliances  [Exception] 21.101 - Energized hose crushing resistance test 21.102 - Energized hose abrasion resistance test 21.103 - Current-carrying hose bending resistance test 21.104 - Current-carrying hose torsion resistance test 21.105 - Low-temperature condition resistance test for current-carrying hosest	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 32:2002	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 32:Particular requirements for massage appliances	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 32:2002/AMD1:20 08	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 32:Particular requirements for massage appliances	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 32:2002/AMD2:20 13	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 32:Particular requirements for massage appliances	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 32:2019	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 32:Particular requirements for massage appliances	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 4:2008	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 4:Particular requirements for spin extractors	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 MQ	BS	N
IEC 60335-2- 4:2008/AMD1:201 2	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 4:Particular requirements for spin extractors	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 MQ	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 4:2008/AMD2:201 7	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 4:Particular requirements for spin extractors	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 4:2021	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 4:Particular requirements for spin extractors	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 MQ	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 58:2002	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-58: Particular requirements for commercial electric dishwashing machines	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 58:2002/AMD1:20 08	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-58: Particular requirements for commercial electric dishwashing machines	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 58:2002/AMD2:20 15	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-58:Particular requirements for commercial electric dishwashing machines  [Exception] Annex BB - Ageing test for elastomeric parts Annex CC - Requirements to avoid backsiphonage	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 58:2017	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-58:Particular requirements for commercial electric dishwashing machines  [Exception] Annex BB - Ageing test for elastomeric parts Annex CC - Requirements to avoid backsiphonage	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 65:2002	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-65:Particular requirements for aircleaning appliances  [Exception] Clause 32 - Radiation, toxicity and similar hazards	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 65:2002/AMD1:20 08	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-65:Particular requirements for aircleaning appliances  [Exception] Clause 32 - Radiation, toxicity and similar hazards	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 65:2002/AMD2:20 15	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 65:Particular requirements for air- cleaning appliances [Exception] Clause 32 - Radiation, toxicity and similar hazards	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 75:2012	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-75:Particular requirements for commercial dispensing appliances and vending machines  [Exception] Annex AA - Aging test for elastomeric parts	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 75:2012/AMD1:20 15	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-75:Particular requirements for commercial dispensing appliances and vending machines  [Exception] Annex AA - Aging test for elastomeric parts	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 75:2012/AMD2:20 18	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-75:Particular requirements for commercial dispensing appliances and vending machines  [Exception] Annex AA - Aging test for elastomeric parts	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	Z

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 80:2002	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 80:Particular requirements for fans	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 80:2002/AMD1:20 04	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 80:Particular requirements for fans	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 MQ	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 80:2002/AMD2:20 08	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 80:Particular requirements for fans	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 80:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 80:Particular requirements for fans	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 8:2012	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 75:Particular requirements for commercial dispensing appliances and vending machines [Exception] Annex AA - Aging test for elastomeric parts	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 8:2012/AMD1:201 5	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-8:Particular requirements for shavers, hair clippers and similar appliances [Exception] Annex BB Ageing test for elastomeric parts	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) °C Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	Z

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60335-2- 8:2012/AMD2:201 8	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 8:Particular requirements for shavers, hair clippers and similar appliances [Exception] Annex BB Ageing test for elastomeric parts	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N
IEC 60335-2- 8:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-8:Particular requirements for shavers, hair clippers and similar appliances [Exception] Annex BB Ageing test for elastomeric parts	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60950- 1:2005+A1:2009+ A2:2013	Electrical machinery for households	Information technology equipment - Safety Part 1:General requirements  [Exception] 2.10.8.4 Abrasion resistance test 3.2.5.1 AC power supply cords 4.2.8 Cathode ray tubes 4.3.12 Flammable liquids 4.3.13.2 Ionizing radiation 4.3.13.3 UV 4.3.13.4 Human exposure to ultraviolet (UV) radiation 4.3.13.5 Laser ANNEX A.3 Hot flaming oil test ANNEX H Ionizing radiation ANNEX AA Mandrel test	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
Test method		Audio/video, information and communication technology equipment - Part 1:Safety requirements  [Exception] 5.4.1.10 Thermoplastic parts on which conductive metallic parts are directly mounted / Vicat test B 50 of ISO 306 5.4.1.4, 9.2.5 Maximum operating temperatures for materials, components and systems / Three phase voltage supply systems 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 / Mandrel (figure 25 to 28), metal foil, equipment suitable for electrical strength test loads Stop watch, weight 5.4.1.5.3 Thermal cycling test procedure 5.6.4.1 Determination of the overcurrent protective device and circuit (Annex R) / Source with at least	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	Site	
		5.6.4.1 Determination of the overcurrent protective device and circuit (Annex R) /	than DC 1 000 V Insulation resistance measurement range: 4		

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
		limiters Annex G.13.6.2 Test method and compliance criteria Annex G.13.6.2 Abrasion resistance test Annex G.15 Hydrostatic pressure Annex G.15 Tubing and fittings compatibility test Annex J Insulated winding wires for use without interleaved insulation Annex M.8.2 Protection against internal ignition from external spark sources - Spark Test Annex S Tests for resistance to heat and fire / Distillate fuel oil as described in Annex S.3.2 Annex U Mechanical strength of CRTs and protection against the effects of implosion			

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
Test method		Audio/video, information and communication technology equipment - Part 1:Safey requirements  [Exception] 5.4.1.10 Thermoplastic parts on which conductive metallic parts are directly mounted / Vicat test B 50 of ISO 306 5.4.1.4, 9.2.5 Maximum operating temperatures for materials, components and systems / Three phase voltage supply systems 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 5.4.2, 5.4.3, 5.4.4, Annex X Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 / Mandrel (figure 25 to 28), metal foil, equipment suitable for electrical strength test loads Stop watch, weight 5.4.1.5.3 Thermal cycling test procedure 5.6.4.1 Determination of the overcurrent protective device and circuit (Annex R) / Source with at least 1500A short circuit 10 Radiation / Laser	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	Site	
		1500A short circuit			

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
rest method	Products	Carbon-arc light-exposure test Annex C UV radiation / Xenon-arc light-exposure test Annex C UV radiation / Tensile strength, ISO 527 Annex C UV radiation / Flexural strength, ISO 178 Annex C UV radiation / Charpy impact, ISO 179 Annex C UV radiation / Charpy impact, ISO 180 Annex C UV radiation / Izod impact, ISO 8256 Annex G UV radiation / Tensile impact, ISO 8256 Annex G T Mains supply cords / Test equipment according IEC 60227 Annex G Test equipment imiters Annex G Test equipment according IEC 60227 Annex G Test equipment according		Jite	testing
		Ultraviolet light conditioning test Annex Y 3 / Resistance			

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
		to corrosion, water borne contaminants Annex Y.3.3 / Watersulphur dioxide test Annex Y.4.3 / Tensile strength and elongation tests Annex Y.4.4 / Compression test Annex Y.4.5 / Oil resistance Annex Y.5 / Protection from moisture Annex Y.5.3 / Water spray test Annex Y.5.5 / Protection from excessive dust Annex Y.6.2 / Impact test			

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 62368-1:2023	Electrical machinery for households	Audio/video, information and communication technology equipment - Part 1:Safey requirements [Exception] 5.4.1.10 Thermoplastic parts on which conductive metallic parts are directly mounted / Vicat test B 50 of ISO 306 5.4.1.4, 9.2.5 Maximum operating temperatures for materials, components and systems / Three phase voltage supply systems 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 5.4.2, 5.4.3, 5.4.4, Annex X Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 / Mandrel (figure 25 to 28), metal foil, equipment suitable for electrical strength test loads Stop watch, weight 5.4.1.5.3 Thermal cycling test procedure 5.6.4.1 Determination of the overcurrent protective device and circuit (Annex R) / Source with at least 1500A short circuit 10 Radiation / Laser (including laser diodes) 10 Radiation / Laser (including laser diodes) 10 Radiation / Light emitting diodes (LEDs) 10 Radiation / Image Projector 10 Radiation / Effect of UV radiation / Sadiation / Effect of UV radiation / Effect of UV radiation / Carbon-arc light-	Single-phase inputvoltage: Less than AC600 VSingle-phase inputcurrent: Less than 20 AFrequency range: (50to 60) HzWithstand voltagerange: (0 ~ 10) kVLeakage current range: (0 ~ 10) mAGround continuityvoltage: Less thanAC/DC 12 VGround continuitycurrent: Less thanAC/DC 45 ATemperature: (-40 ~850) CRelative humidity: Lessthan 98 % R.H.Insulation resistancereference voltage: Lessthan DC 1 000 VInsulation resistancemeasurement range: 4000 MQ	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
		exposure test Annex C UV radiation / Xenon-arc light- exposure test Annex C UV radiation			
		/Tensile strength, ISO 527 Annex C UV radiation / Flexural strength, ISO			
		178 Annex C UV radiation / Charpy impact, ISO 179 Annex C UV radiation / Izod impact, ISO 180			
		Annex C UV radiation / Tensile impact, ISO 8256 Annex G.5.3.4 / Test for FIW			
		Annex G.7 Mains supply cords / Test equipment according IEC 60227 Annex G.9 / IC current limiters			
		Annex G.13.6.2 / Test method and compliance criteria Annex G.13.6.2 / Abrasion resistance test			
		Annex G.15 / Hydrostatic pressure Annex G.15 / Tubing and fittings compatibility test			
		Annex J / Insulated winding wires for use without interleaved insulation			
		Annex M.7 / Concentration of hydrogen gas Annex M.8.2 / Protection against internal ignition from			
		external spark sources - Spark Test Annex R / Limited Short- circuit test Annex S Tests for			
		resistance to heat and fire / Distillate fuel oil as described in annex S.3.2 Annex U / Mechanical strength of CRTs and			
		protection against the effects of implosion Annex Y.2 (Annex C) / Ultraviolet light			
		conditioning test Annex Y 3 / Resistance to corrosion, water			

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
		borne contaminants Annex Y.3.3 / Water- sulphur dioxide test Annex Y.4.3 / Tensile strength and elongation tests Annex Y.4.4 / Compression test Annex Y.4.5 / Oil resistance Annex Y.5 / Protection from moisture Annex Y.5.3 / Water spray test Annex Y.5.5 / Protection from excessive dust Annex Y.6.2 / Impact test			
K 60950-1:2011	Electrical machinery for households	Infortion technology equipment - Safety Part 1:General requirements  [exception] 2.10.8.4 Abrasion resistance test 3.2.5.1 AC power supply cords 4.2.8 Cathode ray tubes 4.3.12 Flamble liquids 4.3.13.2 Ionizing radiation 4.3.13.3 UV 4.3.13.4 Hun exposure to ultraviolet (UV) radiation 4.3.13.5 Laser ANNEX A.3 Hot flaming oil test ANNEX H Ionizing radiation ANNEX AA ndrel test	Single phase Input Voltage:less than AC 300 V Input Current:less than 20 A Frequency:(50 ~ 60) Hz Electric Strength:(0 ~ 5) kV Leakage:less than 10 mA Earth Continuity voltage:less than 12 V Earth Continuity current:less than 45 A Temperature:(0 ~ 200) C Humidity:less than 98 % R.H.	BS	N
KC 60335-1:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 1:General requirements  [exception] Clause 14 Transient overvoltages test Clause 22.32 Rubber aging test Annex F Capacitors Annex H Switches Annex J Coated printed circuit boards Annex R Software evaluation	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Temperature:(- 40 ~ 850) °C Humidity:less than 98 % R.H.	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 60335-2- 11:2021	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 11:Particular requirements for tumble dryers	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Temperature:(- 40 ~ 850) °C Humidity:less than 98 % R.H.	BS	N
KC 60335-2- 14:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 14:Particular requirements for kitchen machines [exception] 25.7 Addition test	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Temperature:(- 40 ~ 850) © Humidity:less than 98 % R.H.	BS	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 liquids  [exception] 22.103 Durability test of appliance coupler of cordless appliances	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Temperature:(- 40 ~ 200) °C Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Insulation Resistance:less than 4 MQ Humidity:less than 98 % R.H.	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
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 Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Temperature:(- 40 ~ 200) °C Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Insulation Resistance:less than 4 MQ Humidity:less than 98 % R.H.	BS	Z
KC 60335-2- 21:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 21:Particular requirements for storage water heaters	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Temperature:(- 40 ~ 200) °C Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Insulation Resistance:less than 4 MQ Humidity:less than 98 % R.H.	BS	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 Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Temperature:(- 40 ~ 850) °C Humidity:less than 98 % R.H.	BS	N

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  [Exception] 21.101 - Energized hose crushing resistance test 21.102 - Energized hose abrasion resistance test 21.103 - Current-carrying hose bending resistance test 21.104 - Current-carrying hose torsion resistance test 21.105 - Low-temperature condition resistance test for current-carrying hosest	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Temperature:(- 40 ~ 850) © Humidity:less than 98 % R.H.	BS	N
KC 60335-2- 32:2015	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 32:Particular requirements for massage appliances	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Temperature:(- 40 ~ 850) °C Humidity:less than 98 % R.H.	BS	N
KC 60335-2- 4:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 4:Particular requirements for spin extractors	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Temperature:(- 40 ~ 850) °C Humidity:less than 98 % R.H.	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
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  [exception] Annex BB - Ageing test for elastomeric parts Annex CC - Requirements to avoid backsiphonage	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Temperature:(- 40 ~ 850) °C Humidity:less than 98 % R.H.	BS	N
KC 60335-2- 5:2016	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 5:Particular requirements for dishwashers [exception] Annex BB Ageing test for elastomeric parts	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Temperature:(- 40 ~ 850) °C Humidity:less than 98 % R.H.	BS	N
KC 60335-2- 65:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2-65:Particular requirements for aircleaning appliances  [exception] Clause 32 - Radiation, toxicity and similar hazards	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Temperature:(- 40 ~ 850) °C Humidity:less than 98 % R.H.	BS	N

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 machines  [exception] Annex AA - Aging test for elastomeric parts	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Temperature:(- 40 ~ 850) °C Humidity:less than 98 % R.H.	BS	N
KC 60335-2- 80:2022	Electrical machinery for households	Household and similar electrical appliances - Safety - Part 2- 80:Particular requirements for fans	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Temperature:(- 40 ~ 850) °C Humidity:less than 98 % R.H.	BS	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 appliances  [exception] Annex BB Ageing test for elastomeric parts	Input Voltage:less than AC 600 V Input Current:less than 20 A Leakage Current:less than 10 mA Earth Continuity Voltage:less than 8 V Earth Continuity Current:less than 45 A Electric strength Voltage:less than 10 kV Temperature:(- 40 ~ 850) °C Humidity:less than 98 % R.H.	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
Test method  KC 62368-1:2021		Audio/video, information and communication technology equipment - Part 1:Safey requirements  [Exception] 5.4.1.10 Thermoplastic parts on which conductive metallic parts are directly mounted / Vicat test B 50 of ISO 306 5.4.1.4, 9.2.5 Maximum operating temperatures for materials, components and systems / Three phase voltage supply systems 5.4.2, 5.4.3, 5.4.4 Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 5.4.2, 5.4.3, 5.4.4, Annex X Clearances, creepage distance, solid insulation / Test equipment for tracking index per IEC 60112 / Mandrel (figure 25 to 28), metal foil, equipment suitable for electrical strength test loads Stop watch, weight 5.4.1.5.3 Thermal cycling test procedure 5.6.4.1 Determination of the overcurrent protective device and circuit (Annex R) / Source with at least 1500A short circuit	Single phase Input Voltage:less than AC 300 V Input Current:less than 20 A Frequency: (50 ~ 60) Hz Electric Strength: (0 ~ 5) kV Leakage:less than 10 mA Earth Continuity voltage:less than 12 V Earth Continuity current:less than 45 A Temperature: (0 ~ 200) °C Humidity:less than 98 % R.H.	Site	
		Source with at least			

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Annex C UV radiation/ Carbon-arc lightexposure test Annex C UV radiation/ Xenon-arc lightexposure test Annex C UV radiation/Tensile strength, ISO 527 Annex C UV radiation/ Flexural strength, ISO 178 Annex C UV radiation/ Charpy impact, ISO 179 Annex C UV radiation/ Izod impact, ISO 180 Annex C UV radiation/ Tensile impact, ISO 8256 Annex G.5.3.4 / Test for FIW Annex G.7 Mains supply cords / Test equipment according IEC 60227 Annex G.9 / IC current limiters Annex G.13.6.2 / Test method and compliance criteria	Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
Annex G.13.6.2 / Abrasion resistance test Annex G.15 / Hydrostatic pressure Annex G.15 / Tubing and fittings compatibility test Annex J / Insulated winding wires for use without interleaved insulation Annex M.7 / Concentration of hydrogen gas Annex M.8.2 / Protection against internal ignition from external spark sources - Spark Test Annex R / Limited Short- circuit test Annex S Tests for resistance to heat and fire / Distillate fuel oil as described in annex S.3.2 Annex U / Mechanical strength of CRTs and protection against the effects of implosion Annex Y .2 (Annex C) / Ultraviolet light			Annex C UV radiation/Carbon-arc lightexposure test Annex C UV radiation/Xenon-arc lightexposure test Annex C UV radiation/Tensile strength, ISO 527 Annex C UV radiation/Flexural strength, ISO 178 Annex C UV radiation/Charpy impact, ISO 179 Annex C UV radiation/Charpy impact, ISO 180 Annex C UV radiation/Izod impact, ISO 8256 Annex G.5.3.4 / Test for FIW Annex G.7 Mains supply cords / Test equipment according IEC 60227 Annex G.9 / IC current limiters Annex G.13.6.2 / Test method and compliance criteria Annex G.15 / Hydrostatic pressure Annex G.15 / Hydrostatic pressure Annex G.15 / Tubing and fittings compatibility test Annex J / Insulated winding wires for use without interleaved insulation Annex M.7 / Concentration of hydrogen gas Annex M.8.2 / Protection against internal ignition from external spark sources - Spark Test Annex S Tests for resistance to heat and fire / Distillate fuel oil as described in annex S.3.2 Annex U / Mechanical strength of CRTs and protection against the effects of implosion Annex Y.2 (Annex C) /			

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
		Annex Y 3 / Resistance to corrosion, water borne contaminants Annex Y.3.3 / Watersulphur dioxide test Annex Y.4.3 / Tensile strength and elongation tests Annex Y.4.4 / Compression test Annex Y.4.5 / Oil resistance Annex Y.5 / Protection from moisture Annex Y.5.3 / Water spray test Annex Y.5.5 / Protection from excessive dust Annex Y.6.2 / Impact test			
UL 60950-1:2011	Electrical machinery for households	Information technology equipment - Safety Part 1:General requirements  [Exception] 2.10.8.4 Abrasion resistance test 3.2.5.1 AC power supply cords 4.2.8 Cathode ray tubes 4.3.12 Flammable liquids 4.3.13.2 Ionizing radiation 4.3.13.3 UV 4.3.13.4 Human exposure to ultraviolet (UV) radiation 4.3.13.5 Laser ANNEX A.3 Hot flaming oil test ANNEX H Ionizing radiation ANNEX AA Mandrel test	Single-phase input voltage: Less than AC 600 V Single-phase input current: Less than 20 A Frequency range: (50 to 60) Hz Withstand voltage range: (0 ~ 10) kV Leakage current range: (0 ~ 10) mA Ground continuity voltage: Less than AC/DC 12 V Ground continuity current: Less than AC/DC 45 A Temperature: (-40 ~ 850) ℃ Relative humidity: Less than 98 % R.H. Insulation resistance reference voltage: Less than DC 1 000 V Insulation resistance measurement range: 4 000 №	BS	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
1999/519/EC	communicatio	Council recommendation of 12 july 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 健 )	0 Hz ~ 40 GHz	BS	N
3GPP TS 25.144 V11.2:2012	Wired/wireless communicatio n devices	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; User Equipment(UE) and Mobile Station(MS) over the air performance requirements	700 MHz ~ 6 GHz	SF-3	N
3GPP TS 34.114 V12.2:2016	Wired/wireless communicatio n devices	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; User Equipment(UE)/Mobile Station(MS) Over The Air(OTA) antenna performance; Conformance testing	700 MHz ~ 6 GHz	SF-3	N
3GPP TS 37.544 V16.3:2024	Wired/wireless communicatio n devices	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Universal Terrestrial Radio Access (UTRA) and Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) Over The Air (OTA) performance; Conformance testing	700 MHz ~ 6 GHz	SF-3	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
3GPP TS 51 010-1 V13.12.0 Section 12.2	Wired/wireless communicatio n devices	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification (Release 13)	30 MHz ~ 4 GHz	BS	N
3GPP TS 51 010-1 V13.13.0 Section 12.2		3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification (Release 13)	30 MHz ~ 4 GHz	BS	N
3GPP TS 51 010-1 V13.14.0 Section 12.2	Wired/wireless communicatio n devices		30 MHz ~ 4 GHz	BS	N
ACMA Radio communications 2003	Wired/wireless communicatio n devices	AUSTRALIA Radio communications(Electro magnetic Radiation - Human Exposure) Standard 2003	30 MHz ~ 6 GHz	BS	N
ACMA Radio communications 2014	Wired/wireless communicatio n devices	AUSTRALIA Radio communications(Electro magnetic Radiation - Human Exposure) Standard 2014	30 MHz ~ 6 GHz	BS	N
ACMA Radiocommunicati ons: 2021	Wired/wireless communicatio n devices	AUSTRALIA Radiocommunications Equipment (General) Rules 2021	30 MHz ~ 6 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ANSI C63.10:2013		American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices	9 kHz ~ 243 GHz	BS	N
ANSI C63.10:2020	Wired/wireless communicatio n devices	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices	9 kHz ~ 243 GHz	BS	N
ANSI C63.19:2019		American National Standard Methods of Measurements of Compatability between wireless Communications devices and Hearing Aids	H Field:10 mA/m ~ 2 A/m E Field:2 V/m ~ 1 000 V/m	BS	N
ANSI C63.26:2015	Wired/wireless communicatio n devices	American National Standard for Compliance Testing of Transmitters Use in Licensed Radio Services	9 kHz - 325 GHz	BS	N
ANSI C63.4:2009	Wired/wireless communicatio n devices	American National Standard for Methods of Measurement of Radio- Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 써 to 40 砒	9 kHz ~ 40 GHz	BS	N
ANSI C63.4:2014	Wired/wireless communicatio n devices	American National Standard for Methods of Measurement of Radio- Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 써 to 40 砒	9 kHz ~ 40 GHz	BS	N
ANSI/TIA- 5050:2018	Wired/wireless communicatio n devices	Telecommunications Communications Products Receive Volume Control Requirements for Wireless (Mobile) Devices	100 Hz ~ 8 kHz	BS	N
ANSI/TIA-603- D:2010	Wired/wireless communicatio n devices	Land Mobile FM or PM - Communications Equipment - Measurement and Performance Standards	9 kHz ~ 40 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ANSI/TIA-603- E:2016	Wired/wireless communicatio n devices	Land Mobile FM or PM - Communications Equipment - Measurement and Performance Standards	9 kHz ~ 40 GHz	BS	N
ARIB STD-T56 3.3:2015	Wired/wireless communicatio n devices	SPECIFIC ABSORPTION RATE (SAR) ESTIMATION FOR CELLULAR PHONE	30 MHz ~ 6 GHz	BS	N
ARPANSA Radiation Protection Standard: 2021	Wired/wireless communicatio n devices	Standard for Limiting Exposure to Radiofrequency Fields - 100 kHz to 300 GHz	3 kHz ~ 40 GHz	BS	N
AS/ACIF S031:2015	Wired/wireless communicatio n devices	Telecommunications Technical Standard (Requirements for ISDN Basic Access Interface)	Loop feed channel output Voltage:DC:below 110 V Current limit:below 200 mA Voltage resolution:30 mV Voltage accuracy:200 mV Polarity switching time:under 0.2 ms Series resistance:below 300 k\Omega Ring generator Output voltage:AC:(0 ~ 150) V Frequency:(15 ~ 100) Hz	BS	N
AS/ACIF S038:2015	Wired/wireless communicatio n devices	Telecommunications Technical Standard (Requirements for ISDN Primary Rate Access Interface)	Loop feed channel output Voltage:DC:below 110 V Current limit:below 200 mA Voltage resolution:30 mV Voltage accuracy:200 mV Polarity switching time:under 0.2 ms Series resistance:below 300 k\Omega Ring generator Output voltage:AC:(0 ~ 150) V Frequency:(15 ~ 100) Hz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
AS/ACIF S041:2015	Wired/wireless communicatio n devices	Telecommunications Technical Standard (Requirements for DSL Customer Equipment for connection to the Public Switched Telephone Network)	Loop feed channel output Voltage:DC:below 110 V Current limit:below 200 mA Voltage resolution:30 mV Voltage accuracy:200 mV Polarity switching time:under 0.2 ms Series resistance:below 300 k\Omega Ring generator Output voltage:AC:(0 ~ 150) V Frequency:(15 ~ 100) Hz	BS	N
AS/CA S002:2015	Wired/wireless communicatio n devices	Telecommunications Technical Standard (Analogue Interworking and Non-interference Requirements for Customer Equipment for Connection to the Public Switched Telephone Network	Loop feed channel output Voltage:DC:below 110 V Current limit:below 200 mA Voltage resolution:30 mV Voltage accuracy:200 mV Polarity switching time:under 0.2 ms Series resistance:below 300 k\Omega Ring generator Output voltage:AC:(0 ~ 150) V Frequency:(15 ~ 100) Hz	BS	Z
AS/CA S003:2015	Wired/wireless communicatio n devices	Telecommunications Technical Standard (Requirements for Customer Access Equipment for Connection to a Telecommunications Network)	Loop feed channel output Voltage:DC:below 110 V Current limit:below 200 mA Voltage resolution:30 mV Voltage accuracy:200 mV Polarity switching time:under 0.2 ms Series resistance:below 300 k\Omega Ring generator Output voltage:AC:(0 ~ 150) V Frequency:(15 ~ 100) Hz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
AS/CA S004:2015	Wired/wireless communicatio n devices		SPL:below 100 dB Frequency Range:100 Hz ~ 8 kHz Output Impedance:4 Ω Output level:below 10 W Input Impedance:1 kΩ	BS	N
AS/CA S042.1:2022	Wired/wireless communicatio n devices	Requirements for connection to an air interface of a Telecommunications Network — Part 1:General	SPL:below 162 dB Frequency Range:100 Hz ~ 8 kHz Output Impedance:4 Ω Output level:below 10 W Input Impedance:1 kΩ	BS	N
AS/CA S043:2015	Wired/wireless communicatio n devices	Telecommunications Technical Standard (Requirements for Customer Equipment for connection to a metallic local loop interface of a Telecommunications Network)	Loop feed channel output Voltage:DC:below 110 V Current limit:below 200 mA Voltage resolution:30 mV Voltage accuracy:200 mV Polarity switching time:under 0.2 ms Series resistance:below 300 k\Omega Ring generator Output voltage:AC:(0 ~ 150) V Frequency:(15 ~ 100) Hz	BS	N
AS/NZS 2772.2:2016	Wired/wireless communicatio n devices	SPECIFIC ABSORPTION RATE (SAR) ESTIMATION FOR CELLULAR PHONE	100 MHz ~ 6 GHz	BS	N
AS/NZS 2772.2:2016 Amd 1:2018	Wired/wireless communicatio n devices	Principles and methods of measurement and computation - 3 kHz to 300 GHz	100 MHz ~ 6 GHz	BS	N
CS-03 Part II Issue 9 Amendment 1:2012	Wired/wireless communicatio n devices	Part II:Requirements for Terminal Equipment Intended for Connection to 1.544 Mbps (DS-1) Digital Interfaces	Digital signal source:1.544 Mbps (DS-1) Termination impedance:100 Ω	BS	N
CS-03 Part V Issue 9 Amendment 3:2021	Wired/wireless communicatio n devices	Requirements and Test Methods for Magnetic Output from Handset Telephones for Hearing Aid Coupling and for Receive Volume Control	Frequency range: (200 ~ 4 000) Hz DC resistance: 900 Ω Inductance: 150 mH Sensitivity: -60 dB V/(A/m)	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CS-03 Part VI Issue 9 Amendment1:201 2	Wired/wireless communicatio n devices	Part VI:Requirements for Integrated Services Digital Network Terminal Equipment	Digital signal source:1.544 Mbps (DS-1) Termination impedance:100 Ω	BS	N
CS-03 Part VII Issue 9 Amendment 4:2012		Part VII:Requirements for Limited-Distance Modem and Digital Subrate Terminal Equipment	Input impedance: 1 MΩ Termination impedance: (141.75 ~ 128.25) Ω	BS	N
CS-03 Part I Issue 9, Amendment 5:2016		Part I:Requirements for Terminal Equipment(TE) and Related Access Arrangements Intended for Direct Connection to Analogue Wireline Facilities	Input impedance:600 Ω Frequency range:100 Hz ~ 30 Mz	BS	N
CS-03, Part VIII Issue 9, Amendment 6:2022		Part VIII:Requirements and Test Methods for Digital Subscriber Line (xDSL) Terminal Equipment	Frequency range:200 Hz ~ 30 Mz Balun Termination impedance:100 Ω, 600 Ω	BS	N
CTIA 01.01 v6.0.3:2024		Test Scope, Requirements, and Applicability [Exception] A-GPS L5 for LTE, A- GALILEO E1 for LTE, A- GPS L1 for NR FR1 EN- DC, A-GPS L1 for NR FR1, NR FR1 SA 2DL CA, NR FR1 SA 3DL CA, NR FR1 EN-DC with 2 LTE carriers and 1 NR carrier	600 MHz ~ 6 GHz	SF-3	N
CTIA 01.01:2022	Wired/wireless communicatio n devices	Test Scope, Requirements, and Applicability	600 MHz ~ 6 GHz	SF-3	N
CTIA 01.20 v6.0.2:2024	Wired/wireless communicatio n devices	Test Methodology, SISO, Anechoic Chamber	600 MHz ~ 6 GHz	SF-3	N
CTIA 01.20:2022	Wired/wireless communicatio n devices	Test Methodology, SISO, Anechoic Chamber	600 MHz ~ 6 GHz	SF-3	N
CTIA HAC Test Plan:2003	Wired/wireless communicatio n devices	Test Plan for Hearing Aid Compatibility	H Field:10 mA/m ~ 2 A/m E Field:2 V/m ~ 1 000 V/m	BS	N
CTIA OTA Test Plan:2021		CTIA Test Plan for Wireless Device Over- the Air Performance	600 MHz ~ 6 GHz	SF-3	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CWG Test Plan v6.0.1:2024		Test Plan for RF Performance Evaluation of Wi-Fi Mobile Converged Devices [Exception] 802.11ax	600 MHz ~ 6 GHz	SF-3	N
EN 50360:2001	Wired/wireless communicatio n devices	Product standard to demonstrate the compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields	100 MHz ~ 6 GHz	BS	N
EN 50360:2001 +A1:2012	Wired/wireless communicatio n devices	Product standard to demonstrate the compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields	100 MHz ~ 6 GHz	BS	N
EN 50360:2017	Wired/wireless communicatio n devices	Product standard to demonstrate the compliance of wireless communication devices, with the basic restrictions and exposure limit values related to human exposure to electromagnetic fields in the frequency range from 300 MHz to 6 GHz:devices used next to the ear	100 MHz ~ 6 GHz	BS	N
EN 50360:2017+A1:2 023	Wired/wireless communicatio n devices	Product standard to demonstrate the compliance of wireless communication devices, with the basic restrictions and exposure limit values related to human exposure to electromagnetic fields in the frequency range from 300 MHz to 6 GHz:devices used next to the ear	100 MHz ~ 6 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 50385:2002		Product standard to demonstrate the compliance of radio basestations and fixed terminal stations for wireless Telecommunication systems with the basic restrictions or the reference levels related to human exposure to radiofrequency electromagnetic fields(110 Mz - 40 Gtz)-General Public	110 MHz ~ 40 GHz	BS	N
EN 50385:2017	Wired/wireless communicatio n devices	Product standard to demonstrate the compliance of base station equipment with radiofrequency electromagnetic field exposure limits (110 MHz - 100 GHz), when placed on the market	110 MHz ~ 40 GHz	BS	N
EN 50566:2013	Wired/wireless communicatio n devices	Product standard to demonstrate compliance of radio frequency fields from handheld and body-mounted wireless communication devices used by the general public (30 版 - 6 版)	100 MHz ~ 6 GHz	BS	N
EN 50566:2017	Wired/wireless communicatio n devices	Product Standard to demonstrate the compliance of wireless communication devices with the basic restrictions and exposure limit values related to human exposure to electromagnetic fields in the frequency range from 30 MHz to 6 GHz:hand-held and body mounted devices in close proximity to the human body	100 MHz ~ 6 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 50566:2017+A1:2 023	Wired/wireless communicatio n devices	Product Standard to demonstrate the compliance of wireless communication devices with the basic restrictions and exposure limit values related to human exposure to electromagnetic fields in the frequency range from 30 MHz to 6 GHz:hand-held and body mounted devices in close proximity to the human body	100 MHz ~ 6 GHz	BS	N
EN 50663:2017	Wired/wireless communicatio n devices	Generic standard for assessment of low power electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (10 MHz - 300 GHz)	10 MHz ~ 40 GHz	BS	N
EN 62209-1:2006	Wired/wireless communicatio n devices	Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 1:Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 \( \mathbb{M}\mathcal{t} \) to 3 \( \mathcal{M}\mathcal{t} \))	100 MHz ~ 6 GHz	BS	N
EN 62209-1:2016	Wired/wireless communicatio n devices	Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Part 1:Devices used next to the ear (Frequency range of 300 Mz to 6 Gz)	100 MHz ~ 6 GHz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 62209-2:2010	Wired/wireless communicatio n devices	Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures Part 2:Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 Mt to 6 Gt)	100 MHz ~ 6 GHz	BS	N
EN 62209- 2:2010/A1:2019		Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures Part 2:Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 附 to 6 段)	100 MHz ~ 6 GHz	BS	N
EN 62232:2017	Wired/wireless communicatio n devices	DETERMINATION OF RF FIELD STRENGTH, POWER DENSITY AND SAR IN THE VICINITY OF RADIOCOMMUNICATIO N BASE STATIONS FOR THE PURPOSE OF EVALUATING HUMAN EXPOSURE	100 MHz ~ 6 GHz	BS	N
EN 62311:2008	Wired/wireless communicatio n devices	Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 @z)		BS	N
EN 62311:2020	Wired/wireless communicatio n devices	Assessment of electronic and electrical equipmentrelated to human exposure restrictions for electromagnetic fields (0 Hz to 300 GHz)	0 Hz ~ 40 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 62479:2010		Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 Mz to 300 Mz)	10 MHz ~ 40 GHz	BS	Z
EN IEC/IEEE 62209-1528:2021	Wired/wireless communicatio n devices	Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Part 1528: Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz)	100 MHz ~ 6 GHz	BS	N
EN IEC/IEEE 63195-1:2023	Wired/wireless communicatio n devices	Assessment of power density of human exposure to radio frequency fields from wireless devices in close proximity to the head and body (frequency range of 6 GHz to 300 GHz) - Part 1: Measurement procedure	6 GHz ~ 110 GHz	BS	N
ETSI EN 300 220-1 V2.3.1:2010	communicatio	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 Mz to 1 000 Mz frequency range with power levels ranging up to 500 mW; Part 1:Technical characteristics and test methods	25 MHz ∼ 6 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 300 220-1 V2.4.1:2012	Wired/wireless communicatio n devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 Mz to 1 000 Mz frequency range with power levels ranging up to 500 mW; Part 1:Technical characteristics and test methods	25 Mz ~ 6 GHz	BS	N
ETSI EN 300 220-1 V3.1.1:2017	Wired/wireless communicatio n devices	Short Range Devices (SRD) operating in the frequency range 25 Mz to 1 000 Mz; Part 1:Technical characteristics and methods of measurement	25 MHz ~ 6 GHz	BS	N
ETSI EN 300 220-2 V2.3.1:2010		Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 Mz to 1 000 Mz frequency range with power levels ranging up to 500 mW; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive	25 MHz ~ 6 GHz	BS	N
ETSI EN 300 220-2 V2.4.1:2012		Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 Mz to 1 000 Mz frequency range with power levels ranging up to 500 mW; Part 2:Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive	25 Mtz ~ 6 Gtz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 300 220-2 V3.1.1:2017	Wired/wireless communicatio n devices	Short Range Devices (SRD) operating in the frequency range 25 Mz to 1 000 Mz; Part 2:Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU for non specific radio equipment	25 MHz ~ 6 GHz	BS	N
ETSI EN 300 220-2 V3.2.1:2018	Wired/wireless communicatio n devices	Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 2: Harmonised Standard for access to radio spectrum for non specific radio equipment	25 MHz ~ 6 GHz	BS	N
ETSI EN 300 328 V1.7.1:2006	Wired/wireless communicatio n devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2.4 ½ ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive	30 Mz ~ 12.75 Gbz	BS	N
ETSI EN 300 328 V1.8.1:2012	Wired/wireless communicatio n devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2.4 dt ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive	30 Mz ~ 12.75 Gbz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 300 328 V1.9.1:2015	Wired/wireless communicatio n devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2.4 % ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive	30 Mtz ∼ 12.75 Gtz	BS	N
ETSI EN 300 328 V2.1.1:2016	Wired/wireless communicatio n devices	Wideband transmission systems; Data transmission equipment operating in the 2,4 % ISM band and using wide band modulation techniques; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	30 Mtz ∼ 12.75 Gtz	BS	N
ETSI EN 300 328 V2.2.2:2019	Wired/wireless communicatio n devices	Wideband transmission systems; Data Transmission equipment operating in the 2,4 他 band; Harmonised Standard for access to radio spectrum	30 MHz ~ 12.75 GHz	BS	N
ETSI EN 300 330 V2.1.1:2017	Wired/wireless communicatio n devices	Short Range Devices (SRD); Radio equipment in the frequency range 9 ktz to 25 ktz and inductive loop systems in the frequency range 9 ktz to 30 ktz; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	9 kHz ~ 1 000 MHz	BS	N
ETSI EN 300 330-1 V1.7.1:2010	Wired/wireless communicatio n devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); 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; Part 1:Technical characteristics and test methods	9 kHz ~ 1 000 MHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 300 330-1 V1.8.1:2015		Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 9 Hz to 25 Mz and inductive loop systems in the frequency range 9 Hz to 30 Mz; Part 1:Technical characteristics and test methods	9 kHz ~ 1 000 MHz	BS	N
ETSI EN 300 330-2 V1.5.1:2010		Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 9 ½ to 25 ½ and inductive loop systems in the frequency range 9 ½ to 30 ½; Part 2:Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive	9 kHz ~ 1 000 MHz	BS	N
ETSI EN 300 330-2 V1.6.1:2015	Wired/wireless communicatio n devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); 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; Part 2:Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive	9 kHz ~ 1 000 MHz	BS	N
ETSI EN 300 440 V2.1.1:2017	Wired/wireless communicatio n devices	Short Range Devices (SRD); Radio equipment to be used in the 1 做 to 40 ൻ frequency range; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	25 Mz ∼ 66 Gtz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 300 440-1 V1.6.1:2010	Wired/wireless communicatio n devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short range devices; Radio equipment to be used in the 1 % to 40 % frequency range; Part 1:Technical characteristics and test methods	25 MHz ~ 40 GHz	BS	N
ETSI EN 300 440-2 V1.4.1:2010	communicatio	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short range devices; Radio equipment to be used in the 1 % to 40 % frequency range; Part 2:Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive	25 MHz ~ 40 GHz	BS	N
ETSI EN 301 091-1 V2.1.1 2017	Wired/wireless communicatio n devices	Short Range Devices; Transport and Traffic Telematics (TTT); Radar equipment operating in the 76 to 77 to range; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 1:Ground based vehicular radar	30 № ~ 154 ₩	BS	N
ETSI EN 301 406 V2.2.2:2016	Wired/wireless communicatio n devices	Digital Enhanced Cordless Telecommunications (DECT); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU	30 MHz ~ 12.75 GHz	BS	N
ETSI EN 301 502 V10.2.1:2012	Wired/wireless communicatio n devices	Global System for Mobile communications (GSM); Harmonized EN for Base Station Equipment covering the essential requirements of article 3.2 of the R&TTE Directive	100 妣 ~ 12.75 砒	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 301 502 V12.5.2:2017	Wired/wireless communicatio n devices	Global System for Mobile communications (GSM); Base Station (BS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	100 妣 ~ 12.75 砒	BS	N
ETSI EN 301 511 V12.5.1:2017	Wired/wireless communicatio n 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 ~ 12.75 GHz	BS	N
ETSI EN 301 511 V9.0.2:2003	Wired/wireless communicatio n devices	Global System for Mobile communications (GSM); Harmonized EN for mobile stations in the GSM 900 and GSM 1800 bands covering essential requirements under article 3.2 of the R&TTE directive (1999/5/EC)	9 kHz ~ 12.75 GHz	BS	N
ETSI EN 301 893 V1.6.1:2011	Wired/wireless communicatio n devices	Broadband Radio Access Networks (BRAN); 5 分 high performance RLAN; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive	30 MHz ~ 26 GHz	BS	N
ETSI EN 301 893 V1.7.1:2012	Wired/wireless communicatio n devices	Broadband Radio Access Networks (BRAN); 5 分 high performance RLAN; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive	30 Mz ~ 26 GHz	BS	N
ETSI EN 301 893 V1.8.1:2015	Wired/wireless communicatio n devices	Broadband Radio Access Networks (BRAN); 5 分 high performance RLAN; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive	30 MHz ~ 26 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 301 893 V2.1.1:2017	Wired/wireless communicatio n devices	5 GHz RLAN; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	30 MHz ~ 26 GHz	BS	N
ETSI EN 301 893 V2.2.1:2024	Wired/wireless communicatio n devices	5 GHz WAS/RLAN; Harmonised Standard for access to radio spectrum	30 MHz ~ 26 GHz	BS	N
ETSI EN 301 908-1 V11.1.1:2016	Wired/wireless communicatio n devices	IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 1:Introduction and common requirements	30 MHz ~ 12.75 GHz	BS	N
ETSI EN 301 908-1 V13.1.1:2019	Wired/wireless communicatio n devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 1:Introduction and common requirements	30 MHz ~ 12.75 GHz	BS	N
ETSI EN 301 908-1 V15.1.1:2021	Wired/wireless communicatio n devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 1: Introduction and common requirements	30 MHz ~ 12.75 GHz	BS	N
ETSI EN 301 908-1 V15.2.1:2023	communicatio	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 1: Introduction and common requirements; Release 15	RSE: 30 Mbz ~ 26 Gbz	BS	N
ETSI EN 301 908-1 V7.1.1:2015	Wired/wireless communicatio n devices	IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 1:Introduction and common requirements	30 MHz ~ 12.75 GHz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 301 908- 11 V11.1.2:2017	Wired/wireless communicatio n devices	Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 11:CDMA Direct Spread (UTRA FDD) Repeaters	9 kHz ~ 12.75 GHz	BS	N
ETSI EN 301 908- 11 V5.2.1:2011	Wired/wireless communicatio n devices	IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 11:CDMA Direct Spread (UTRA FDD) (Repeaters)	9 kHz ~ 12.75 GHz	BS	N
ETSI EN 301 908- 13 V13.3.1:2024	Wired/wireless communicatio n devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE) 4.2.13 Receiver Total Radiated Sensitivity (TRS) 4.2.14 Total Radiated Power (TRP)	600 MHz ~ 6 GHz	SF-3	N
ETSI EN 301 908- 13 V13.3.1:2024	Wired/wireless communicatio n devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE) [Exception] 4.2.13 Receiver Total Radiated Sensitivity (TRS) 4.2.14 Total Radiated Power (TRP)	9 kHz ~ 26.5 GHz	BS	N
ETSI EN 301 908- 14 V15.1.1:2021		IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 14: Evolved Universal Terrestrial Radio Access (E-UTRA) Base Stations (BS) Release 15	9 kHz ~ 26.5 GHz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 301 908- 15 V11.1.2:2017		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	9 kHz ~ 12.75 GHz	BS	N
ETSI EN 301 908- 15 V15.1.1:2020		IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 15:Evolved Universal Terrestrial Radio Access (E-UTRA FDD) Repeaters	9 kHz ~ 12.75 GHz	BS	N
ETSI EN 301 908- 15 V5.2.1:2011	Wired/wireless communicatio n devices	IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 15: Evolved Universal Terrestrial Radio Access (E-UTRA FDD) (Repeaters)	9 kHz ~ 12.75 GHz	BS	N
ETSI EN 301 908- 18 V15.1.1:2021		IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 18: E- UTRA, UTRA and GSM/EDGE Multi- Standard Radio (MSR) Base Station (BS) Release 15	9 kHz ~ 26.5 GHz	BS	N
ETSI EN 301 908-2 V13.1.1:2020	Wired/wireless communicatio n devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 2: CDMA Direct Spread (UTRA FDD) User Equipment (UE) 4.2.14 Receiver Total Radiated Sensitivity (TRS) 4.2.15 Total Radiated Power (TRP)	600 MHz ~ 6 GHz	SF-3	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 301 908-2 V13.1.1:2020	Wired/wireless communicatio n devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 2: CDMA Direct Spread (UTRA FDD) User Equipment (UE) [Exception] 4,2.14 Receiver Total Radiated Sensitivity (TRS) 4,2.15 Total Radiated Power (TRP)	9 kHz ~ 26.5 GHz	BS	N
ETSI EN 301 908- 20 V6.2.1:2013	Wired/wireless communicatio n devices	IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 20:OFDMA TDD WMAN (Mobile WiMAX) TDD Base Stations (BS)	9 kHz ~ 26.5 GHz	BS	N
ETSI EN 301 908- 20 V6.3.1:2016		IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 20:OFDMA TDD WMAN (Mobile WiMAXTM) TDD Base Stations (BS)	9 kHz ~ 26.5 GHz	BS	N
ETSI EN 301 908- 22 V5.2.1:2011	communicatio	IMT cellular networks;Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 22:OFDMA TDD WMAN (Mobile WiMAX) FDD Base Stations (BS)	9 kHz ~ 12.75 GHz	BS	N
ETSI EN 301 908- 22 V6.1.1:2016		IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 22:OFDMA TDD WMAN (Mobile WiMAXTM) FDD Base Stations (BS)	9 kHz ~ 12.75 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 301 908- 24 V15.1.1:2023	Wired/wireless communicatio n devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 24: New Radio (NR) Base Stations (BS) Release 15	9 kHz ~ 60 GHz	BS	N
ETSI EN 301 908-3 V11.1.3:2017	Wired/wireless communicatio n devices	IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 3:CDMA Direct Spread (UTRA FDD) Base Stations (BS)	9 kHz ~ 26.5 GHz	BS	N
ETSI EN 301 908-3 V13.1.1:2019	Wired/wireless communicatio n devices	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 3:CDMA Direct Spread (UTRA FDD) Base Stations (BS)	9 kHz ~ 26.5 GHz	BS	N
ETSI EN 301 908-3 V6.2.1:2013	Wired/wireless communicatio n devices	IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 3:CDMA Direct Spread (UTRA FDD) Base Stations (BS)	9 kHz ~ 26.5 GHz	BS	N
ETSI EN 302 065-1 V2.1.1:2016	Wired/wireless communicatio n devices	Short Range Devices (SRD) using Ultra Wide Band technology (UWB); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 1:Requirements for Generic UWB applications	30 Mz ~ 40 Gtz	BS	N
ETSI EN 302 065-2 V2.1.1:2016	Wired/wireless communicatio n devices	Short Range Devices (SRD) using Ultra Wide Band technology (UWB); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 2:Requirements for UWB location tracking	30 Mtz ~ 40 Gtz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 302 065-3 V2.1.1:2016	Wired/wireless communicatio n devices	Short Range Devices (SRD) using Ultra Wide Band technology (UWB); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 3:Requirements for UWB devices for ground based vehicular applications	30 Mz ~ 40 Gtz	BS	N
ETSI EN 302 065-4 V1.1.1:2016	Wired/wireless communicatio n devices	Short Range Devices (SRD) using Ultra Wide Band technology (UWB); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 4:Material Sensing devices using UWB technology below 10,6 GHz	30 Mz ~ 40 Gtz	BS	N
ETSI EN 302 065-5 V1.1.1:2017		Short Range Devices (SRD) using Ultra Wide Band technology (UWB); Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 5:Devices using UWB technology onboard aircraft	30 Mz ~ 40 Gtz	BS	N
ETSI EN 302 208 V3.1.1:2016		Radio Frequency Identification Equipment operating in the band 865 Mz to 868 Mz with power levels up to 2 W and in the band 915 Mz to 921 Mz with power levels up to 4 W; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU	25 Mz ~ 12.75 Gtz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 302 208 V3.3.1:2020	Wired/wireless communicatio n devices	Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W and in the band 915 MHz to 921 MHz with power levels up to 4 W; Harmonised Standard for access to radio spectrum	30 Mtz ~ 12.75 Gtz	BS	N
ETSI EN 302 208-1 V1.4.1:2011	Wired/wireless communicatio n devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 Mz to 868 Mz with power levels up to 2 W; Part 1:Technical requirements and methods of measurement	25 Mtz ∼ 12.75 Gtz	BS	N
ETSI EN 302 208-2 V1.4.1:2011		Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 Mz to 868 Mz with power levels up to 2 W; Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive	25 Mz ~ 12.75 Gbz	BS	N
ETSI EN 302 264 V2.1.1 2017	Wired/wireless communicatio n devices	Short Range Devices; Transport and Traffic Telematics (TTT); Short Range Radar equipment operating in the 77 战 to 81 战 band; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	30 MHz ~ 162 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 302 288 V2.1.1:2017	Wired/wireless communicatio n devices	Short Range Devices; Transport and Traffic Telematics (TTT); Ultra- wideband radar equipment operating in the 24,25 GHz to 26,65 GHz range; Harmonised Standard covering the essential requirements of article 3.2 of Directive 014/53/EU	30 Mtz ∼ 50 Gtz	BS	N
ETSI EN 302 291-1 V1.1.1:2005	Wired/wireless communicatio n devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Close Range Inductive Data Communication equipment operating at 13.56 Mz; Part 1:Technical characteristics and test methods	9 kHz ~ 1 GHz	BS	N
ETSI EN 302 291-2 V1.1.1:2005	Wired/wireless communicatio n devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Close Range Inductive Data Communication equipment operating at 13.56 Mz; Part 2:Harmonized EN under article 3.2 of the R&TTE Directive	9 kHz ~ 1 GHz	BS	N
ETSI EN 302 502 V1.2.1:2008	Wired/wireless	Broadband Radio Access Networks (BRAN); 5.8 db fixed Broadband data transmitting systems; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive		BS	N
ETSI EN 302 502 V2.1.1:2017	Wired/wireless communicatio n devices	Wireless Access Systems (WAS); 5,8 战 fixed broadband data transmitting systems; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	9 kHz ~ 26.5 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 302 567 V2.2.1:2021	Wired/wireless communicatio n devices	Multiple-Gigabit/s radio equipment operating in the 60 GHz band	30 Mz ~ 142 Gtz	BS	N
ETSI EN 302 858 V2.1.1:2016	Wired/wireless communicatio n devices	Short Range Devices; Transport and Traffic Telematics (TTT); Radar equipment operating in the 24,05 GHz to 24,25 GHz or 24,05 GHz to 24,50 GHz range; Harmonised Standard covering the essential equirements of article 3.2 of the Directive 2014/53/EU	30 MHz ~ 50 GHz	BS	N
ETSI EN 303 340 V1.2.1:2020		Digital Terrestrial TV Broadcast Receivers; Harmonised Standard for access to radio spectrum	(174 ~ 240) MHz, (470 ~ 854) MHz	BS	N
ETSI EN 303 345-1 V1.1.1:2019	Wired/wireless communicatio n devices	Broadcast Sound Receivers; Part 1:Generic requirements and measuring methods	148.5 kHz ~ 240 MHz	BS	N
ETSI EN 303 345-2 V1.2.1:2021	Wired/wireless communicatio n devices	Broadcast Sound Receivers; Part 2:AM broadcast sound service; Harmonised Standard for access to radio spectrum	148.5 kHz ~26.1 MHz	BS	N
ETSI EN 303 345-3 V1.1.1:2021		Broadcast Sound Receivers; Part 3:FM broadcast sound service; Harmonised Standard for access to radio spectrum	87.5 ~ 108 MHz	BS	N
ETSI EN 303 345-4 V1.1.1:2021	Wired/wireless communicatio n devices	Broadcast Sound Receivers; Part 4:DAB broadcast sound service; Harmonised Standard for access to radio spectrum	174 ~ 240 MHz	BS	N
ETSI EN 303 345-5 V1.2.1:2021	Wired/wireless communicatio n devices	Broadcast Sound Receivers; Part 5:DRM broadcast sound service; Harmonised Standard for access to radio spectrum	148.5 kHz ~ 240 MHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 303 360 V1.1.1:2017		Short Range Devices; Transport and Traffic Telematics (TTT); Radar equipment operating in the 76 GHz to 77 GHz range; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Obstacle Detection Radars for Use on Manned Rotorcraft	30 № ~ 154 ₩	BS	N
ETSI EN 303 372-2 V1.2.1:2021	Wired/wireless communicatio n devices	Satellite Earth Stations and Systems (SES); Satellite broadcast reception equipment; Part 2: Indoor unit; Harmonised Standard for access to radio spectrum	(950 ~2,150) MHz	BS	N
ETSI EN 303 396 V1.1.1:2016	Wired/wireless communicatio n devices	Short Range Devices; Measurement Techniques for Automotive and Surveillance Radar Equipment	30 ₩z ~ 162 ₩z	BS	N
ETSI EN 303 413 V1.1.1:2017	Wired/wireless communicatio n 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 covering the essential requirements of article 3.2 of Directive 2014/53/EU	30 MHz ~ 8.3 GHz	BS	N
ETSI EN 303 413 V1.2.1:2021	Wired/wireless communicatio n 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	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 303 417 V1.1.1:2017		Wireless power transmission systems, using technologies other than radio frequency beam in the 19 - 21 kb, 59 - 61 kb, 79 - 90 kb, 100 - 300 kb, 6 765 - 6 795 kb ranges	9 kHz - 1 GHz	BS	N
ETSI EN 303 609 V12.5.1:2016	Wired/wireless communicatio n devices	Global System for Mobile communications (GSM); GSM Repeaters; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU	9 kHz ~ 12.75 GHz	BS	N
ETSI EN 303 687 V1.1.1:2023	Wired/wireless communicatio n devices	6 GHz WAS/RLAN; Harmonised Standard for access to radio spectrum	30 Mz ~ 26 GHz	BS	N
ETSI EN 303 883 V1.1.1:2016	Wired/wireless communicatio n devices	Short Range Devices (SRD) using Ultra Wide Band (UWB); Measurement Techniques	30 Mtz ~ 40 Gtz	BS	N
ETSI EN 305 550-1 V1.2.1:2014	Wired/wireless communicatio n devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 40 GHz to 246 GHz frequency range; Part 1: Technical characteristics and test methods	30 Mb ∼ 128 Gb	BS	N
ETSI EN 305 550-2 V1.2.1:2014		Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 40 GHz to 246 GHz frequency range; Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive	30 MHz ~ 128 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI ES 203 021-1 V2.1.1:2005	Wired/wireless communicatio n devices	Access and Terminals (AT); Harmonized basic attachment requirements for Terminals for connection to analogue interfaces of the Telephone Networks; Update of the technical contents of TBR 021, EN 301 437, TBR 015, TBR 017; Part 1: General aspects	Loop feed channel output Voltage:DC:below 110 V Current limit:below 200 mA Voltage resolution:30 mV Voltage accuracy:200 mV Polarity switching time:under 0.2 ms Series resistance:below 300 k\Omega Ring generator Output voltage:AC:(0 ~ 150) V Frequency:(15 ~ 100) Hz	BS	N
ETSI ES 203 021-2 V2.1.2:2006		Access and Terminals (AT); Harmonized basic attachment requirements for Terminals for connection to analogue interfaces of the Telephone Networks; Update of the technical contents of TBR 021, EN 301 437, TBR 015, TBR 017; Part 2: Basic transmission and protection of The network from harm	Loop feed channel output Voltage:DC:below 110 V Current limit:below 200 mA Voltage resolution:30 mV Voltage accuracy:200 mV Polarity switching time:under 0.2 ms Series resistance:below 300 kΩ Ring generator Output voltage:AC:(0 ~ 150) V Frequency:(15 ~ 100) Hz	BS	Z
ETSI ES 203 021-3 V2.1.2:2006	Wired/wireless communicatio n devices	Part 3:Basic Interworking with the Public Telephone Networks	Loop feed channel output Voltage:DC:below 110 V Current limit:below 200 mA Voltage resolution:30 mV Voltage accuracy:200 mV Polarity switching time:under 0.2 ms Series resistance:below 300 k\Omega Ring generator Output voltage:AC:(0 ~ 150) V Frequency:(15 ~ 100) Hz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI ES 203 038 V1.2.1:2013	Wired/wireless communicatio n devices	Speech and multimedia Transmission Quality (STQ); Requirements and tests methods for terminal equipment incorporating a handset when connected to the analogue interface of the PSTN	SPL:below 100 dB Frequency Range:100 Hz ~ 8 kHz Output Impedance:4 \Omega Output level:below 10 W Input Impedance:1 k\Omega	BS	N
ETSI TBR3 A1:1997	Wired/wireless communicatio n devices	Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment to connect to an ISDN using ISDN basic access	Load impedance:50 Ω, 400 Ω Frequency range:100 Hz ~ 10 Mz	BS	N
ETSI TBR4 A1:1997	Wired/wireless communicatio n devices	Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment to connect to an ISDN using ISDN primary rate access	Input impedance: 120 Ω Load impedance: 120 Ω Frequency range: (51 ~ 3072) Hz	BS	N
ETSI TS 136 141 V15.21.0 (2025- 01)	Wired/wireless communicatio n devices	LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Base Station (BS) conformance testing (3GPP TS 36.141 version 15.21.0 Release 15) [Exception] Clauses 6.3, 6.3.2, 6.4, 6.5, 7.3, 7.4, 8	9 kHz ~ 26.5 GHz	BS	N
ETSI TS 137 141 V16.21.0 (2024- 05)	Wired/wireless communicatio n devices	Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; NR, E-UTRA, UTRA and GSM/EDGE; Multi-Standard Radio (MSR) Base Station (BS) conformance testing (3GPP TS 37.141 version 16.21.0 Release 16) [Exception] Clauses 6.3, 6.4, 6.5, 6.6.3, 7.3, 7.8, 8	9 kHz ~ 26.5 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI TS 137 145-1 V16.16.0 (2025- 04)	Wired/wireless communicatio n devices	Universal Mobile Telecommunications System (UMTS); LTE; 5G; Active Antenna System (AAS) Base Station (BS) conformance testing; Part 1: conducted conformance testing (3GPP TS 37.145-1 version 16.16.0 Release 16) [Exception] Clauses 6.3, 6.4, 6.5, 7.3, 7.8, 8	9 kHz ~ 26.5 GHz	BS	N
ETSI TS 137 145-2 V16.19.0 (2024- 10)	Wired/wireless communicatio n devices	Universal Mobile Telecommunications System (UMTS); LTE; 5G; Active Antenna System (AAS) Base Station (BS) conformance testing; Part 2: radiated conformance testing (3GPP TS 37.145-2 version 16.19.0 Release 16) [Exception] Clauses 6.3, 6.4, 6.5, 6.7, 6.8, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 8	9 kHz ~ 26.5 GHz	BS	N
ETSI TS 138 141-1 V16.20.0 (2025- 01)	communicatio	5G; NR; Base Station (BS) conformance testing Part 1: Conducted conformance testing (3GPP TS 38.141-1 version 16.20.0 Release 16) [Exception] Clauses 6.3, 6.4, 6.5, 7.3, 7.8, 8	9 kHz ~ 26.5 GHz	BS	N
ETSI TS 138 141-2 V16.20.0 (2025- 04)	Wired/wireless communicatio n devices	5G; NR; Base Station (BS) conformance testing Part 2: Radiated conformance testing (3GPP TS 38.141-2 version 16.20.0 Release 16) [Exception] Clauses 6.4, 6.5, 6.6, 6.7.2, 7.4, 7.9, 8	30 MHz ~ 60 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI TS 145 005 V17.0.0:2022		Digital cellular telecommunications system (Phase 2+) (GSM); GSM/EDGE Radio transmission and reception (3GPP TS 45.005 version 17.0.0 Release 17) [Exception] Clauses 4.1.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 5, 6	100 ₩z ~ 12.75 ₩z	BS	N
ETSI TS 151 021 V17.0.0:2022		Digital cellular telecommunications system (Phase 2+) (GSM); Base Station System (BSS) equipment specification; Radio aspects (3GPP TS 51.021 version 17.0.0 Release 17) [Exception] Clauses 6.1, 6.2, 6.4, 6.9, 6.10, 6.11, 7.1, 7.2, 7.4, 9	100 ₩z ~ 12.75 ₩z	BS	N
FCC Part 101:2019	Wired/wireless communicatio n devices	FIXED MICROWAVE SERVICES	9 kHz - 325 GHz	BS	N
FCC Part 15:2018 subpart C	Wired/wireless communicatio n devices	Intentional Radiators	9 kHz ~ 243 GHz	BS	Z
FCC Part 15:2018 subpart E	Wired/wireless communicatio n devices	Unlicensed National Information Infrastructure Devices	9 kHz ~ 40 GHz	BS	Z
FCC Part 15F:2019	Wired/wireless communicatio n devices	ULTRA-WIDEBAND OPERATION	9 kHz - 200 GHz	BS	N
FCC Part 15H:2019	Wired/wireless communicatio n devices	WHITE SPACE DEVICES	9 kHz - 7 GHz	BS	N
FCC Part 2.1046:2018		Measurements required:RF power output	9 kHz ~ 40 GHz	BS	N
FCC Part 2.1049:2018		Measurements required:Occupied bandwidth	9 kHz ~ 40 GHz	BS	N
FCC Part 2.1051:2018	Wired/wireless communicatio n devices	Measurements required:Spurious emissions at antenna terminals	9 kHz ~ 40 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
FCC Part 2.1053:2018		Measurements required:Field strength of spurious radiation	9 kHz ~ 40 GHz	BS	N
FCC Part 2.1055:2018		Measurements required:Frequency stability	9 kHz ~ 40 GHz	BS	N
FCC Part 2.1091:2018	Wired/wireless communicatio n devices	Radio frequency radiation exposure evaluation; mobile devices	10 MHz ~ 40 GHz	BS	N
FCC Part 2.1093:2018	Wired/wireless communicatio n devices	Radio frequency radiation exposure evaluation; portable devices	3 kHz ~ 40 GHz	BS	N
FCC Part 20.19:2006	Wired/wireless communicatio n devices	Hearing aid - compatible mobile handsets [exception] (g) Enforcement	H Field:10 mA/m ~ 2 A/m E Field:2 V/m ~ 1 000 V/m	BS	N
FCC Part 20.21:2019	Wired/wireless communicatio n devices	Signal Boosters	9 kHz - 40 GHz	BS	N
FCC Part 22:2018	Wired/wireless communicatio n devices	Public mobile services	9 kHz ~ 26.5 GHz	BS	N
FCC Part 24:2018	Wired/wireless communicatio n devices	Personal communications services	9 kHz ~ 26.5 GHz	BS	N
FCC Part 25:2019	Wired/wireless communicatio n devices	SATELLITE COMMUNICATIONS	9 kHz - 100 GHz	BS	N
FCC Part 27:2018		Miscellaneous Wireless Communications Services	9 kHz ~ 26.5 GHz	BS	N
FCC Part 30:2019	Wired/wireless communicatio n devices	UPPER MICROWAVE FLEXIBLE USE SERVICE	9 kHz - 325 GHz	BS	N
FCC Part 68 (TIA- 968-B-3):2016	Wired/wireless communicatio n devices	Telecommunications Telephone Terminal Equipment Technical Requirements for Connection of Terminal Equipment to the Telephone Network	Input impedance:600 Ω Frequency range:100 Hz ~ 10 Mz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
FCC Part 74:2019	Wired/wireless communicatio n devices	EXPERIMENTAL RADIO, AUXILIARY, SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTIONAL SERVICES	9 kHz - 100 GHz	BS	N
FCC Part 90:2018	Wired/wireless communicatio n devices	Private Land Mobile Radio Services	9 kHz ~ 26.5 GHz	BS	Z
FCC Part 95:2019	Wired/wireless communicatio n devices	PERSONAL RADIO SERVICES	9 kHz - 325 GHz	BS	N
FCC Part 96:2019	Wired/wireless communicatio n devices	CITIZENS BROADBAND RADIO SERVICE	9 kHz - 40 GHz	BS	N
ICASA TE - 001:2006	Wired/wireless communicatio n devices	Standard Specification for TLTE for Connection to the Public Switched Telephone Network	Loop feed channel output Voltage:DC:below 110 V Current limit:below 200 mA Voltage resolution:30 mV Voltage accuracy:200 mV Polarity switching time:under 0.2 ms Series resistance:below 300 k\(\Omega\) Ring generator Output voltage:AC:(0 ~ 150) V Frequency:(15 ~ 100) Hz	BS	N
IEC 62209-2 Ed.1.0b:2010	Wired/wireless communicatio n devices	Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures Part 2:Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 Mtz to 6 Gtz)	100 MHz ~ 6 GHz	BS	N
IEC PAS 63083:2017	Wired/wireless communicatio n devices	Specific absorption rate (SAR) measurement procedure for long term evolution (LTE) devices	100 MHz ~ 6 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC/IEEE 63195- 1:2022	Wired/wireless communicatio n devices	Assessment of power density of human exposure to radio frequency fields from wireless devices in close proximity to the head and body (frequency range of 6 GHz to 300 GHz) - Part 1: Measurement procedure	6 GHz ~ 110 GHz	BS	N
IEEE Std1528:2003	Wired/wireless communicatio n devices	IEEE Recommended Practice for Determining the Peak Special Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices	100 MHz ~ 6 GHz	BS	N
IEEE Std1528:2013	Wired/wireless communicatio n devices	IEEE Recommended Practice for Determining the Peak Special Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques	100 MHz ~ 6 GHz	BS	N
ISO 11904-2:2021	Wired/wireless communicatio n devices	Acoustics - Determination of sound immission from sound sources placed close to ear - Part 2:Technique using a manikin	Frequency range:100 Hz ~ 20 kHz Output voltage:(20 ~ 200) mV	BS	N
ONGO-TS-9001 V1.3.0	Wired/wireless communicatio n devices	OnGo Release 1 Certification Test Plan	3550 Mz ~ 3700 Mz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
PTC 200:2019	Wired/wireless communicatio n devices	Requirements for Connection of Customer Equipment to Analogue Lines	Loop feed channel output Voltage:DC:below 110 V Current limit:below 200 mA Voltage resolution:30 mV Voltage accuracy:200 mV Polarity switching time:under 0.2 ms Series resistance:below 300 k\Omega Ring generator Output voltage:AC:(0 ~ 150) V Frequency:(15 ~ 100) Hz	BS	N
PTC 220:2019	Wired/wireless communicatio n devices	Requirements for Private Voice Networks connected to the PSTN/ISDN	SPL:below 100 dB Frequency Range:100 Hz ~ 8 ktz Output Impedance:4 Ω Output level:below 10 W Input Impedance:1 kΩ	BS	N
RSS-102 Issue 5:2015	Wired/wireless communicatio n devices	Radio Frequency Exposure Compliance of Radio communications Apparatus (All Frequency Bands)	100 MHz ~ 40 GHz	BS	N
RSS-119 Issue 12 Amendment:2022	Wired/wireless communicatio n devices	Land Mobile and Fixed Equipment Operating in the Frequency Range 27.41-960 MHz	9 kHz ~ 10 GHz	BS	N
RSS-130:2019	Wired/wireless communicatio n devices	Equipment Operating in the Frequency Bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz	9 kHz - 8 GHz	BS	N
RSS-131 Issue 2:2003	Wired/wireless communicatio n devices	Zone Enhancers for the Land Mobile Service	9 kHz ~ 26.5 GHz	BS	N
RSS-131 Issue 4:2022	Wired/wireless communicatio n devices		9 kHz ~ 40 GHz	BS	N
RSS-132 Issue 4:2023	Wired/wireless communicatio n devices	Cellular Telephone Systems Operating in the Bands 824-849 Mz and 869-894 Mz	9 kHz ~ 26.5 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
RSS-133 Issue 7:2024	Wired/wireless communicatio n devices	Personal Communications Service Equipment Operating in the Bands 1850-1915 MHz and 1930-1995 MHz	9 kHz ~ 26.5 GHz	BS	N
RSS-139 Issue4 Amendment:2022	Wired/wireless communicatio n devices	Advanced Wireless Services Equipment Operating in the Bands 1710 - 1755 Wz and 2110 - 2155 Wz	9 kHz ~ 26.5 GHz	BS	N
RSS-140 Issue 1:2018	Wired/wireless communicatio n devices	Equipment Operating in the Public Safety Broadband Frequency Bands 758-768 MHz and 788-798 MHz	9 kHz ~ 8 GHz	BS	N
RSS-170 Issue 4:2022	Wired/wireless communicatio n devices	Mobile Earth Stations and Ancillary Terrestrial Component Equipment Operating in the Mobile- Satellite Service Bands	9 kHz ~ 26.5 GHz	BS	N
RSS-192 Issue 5:2023	Wired/wireless communicatio n devices	Flexible Use Broadband Equipment Operating in the Band 3450-3900 MHz	9 kHz ~ 40 GHz	BS	N
RSS-195 Issue 2:2014	Wired/wireless communicatio n devices	Wireless Communication Service (WCS) Equipment Operating in the Bands 2305-2320 MHz and 2345-2360 MHz	9 kHz ~ 26.5 GHz	BS	N
RSS-198 Issue 1:2023	Wired/wireless communicatio n devices	Flexible Use Broadband Equipment Operating in the Band 3900-3980 MHz	9 kHz ~ 40 GHz	BS	N
RSS-199 Issue 4:2023	Wired/wireless communicatio n devices	Broadband Radio Service (BRS) Equipment Operating in the Band 2500-2690 MHz	9 kHz ~ 40 GHz	BS	N
RSS-210 Issue 11:2024	Wired/wireless communicatio n devices	Licence-Exempt Radio Apparatus: Category I Equipment	9 kHz ~ 325 GHz	BS	N
RSS-216 Issue 3:2024	Wired/wireless communicatio n devices	Wireless Power Transfer Devices	9 kHz ~ 200 GHz	BS	N
RSS-220:2018		Devices Using Ultra- Wideband (UWB) Technology	9 kHz - 200 GHz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
RSS-222 Issue 4:2024	Wired/wireless communicatio n devices	White Space Devices (WSDs)	9 kHz - 7 GHz	BS	N
RSS-247 Issue 3:2023	Wired/wireless communicatio n devices	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices	9 kHz ~ 40 GHz	BS	N
RSS-248 Issue 3:2024	Wired/wireless communicatio n devices	Radio Local Area Network (RLAN) Devices Operating in the 5925- 7125 MHz Band	9 kHz ~ 40 GHz	BS	N
RSS-251:2018	Wired/wireless communicatio n devices	Vehicular Radar and Airport Fixed or Mobile Radar in the 76-81 GHz Frequency Band	9 kHz - 325 GHz	BS	N
RSS-252 Issue 2:2023	Wired/wireless	Intelligent Transportation Systems' (ITS) On-Board Units (OBUs) in the 5895- 5925 MHz Band	9 kHz ~ 40 GHz	BS	N
RSS-GEN Issue 5:2018	Wired/wireless communicatio n devices	General Requirements for Compliance of Radio Apparatus	F	BS	N
RSS-Gen Issue 5, Amendment 2:2021	Wired/wireless communicatio n devices	General Requirements for Compliance of Radio Apparatus	9 kHz ~ 200 GHz	BS	N
SKMM MTSFB TC T001:2013	Wired/wireless communicatio n devices	SPECIFICATION FOR TERMINAL EQUIPMENT CONNECTING TO THE PUBLIC SWITCHED TELEPHONE NETWORK (PSTN)	Loop feed channel output Voltage:DC:below 110 V Current limit:below 200 mA Voltage resolution:30 mV Voltage accuracy:200 mV Polarity switching time:under 0.2 ms Series resistance:below 300 kΩ	BS	N
WINNF-TS-0122 V1.0.2	Wired/wireless communicatio n devices	Test and Certification for Citizens Broadband Radio Service (CBRS); Conformance and Performance Test Technical Specification; CBSD/DP as Unit Under Test (UUT)	3 550 MHz ~ 3 700 MHz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MSIT Notification No.2018- 1(01.19.2018.)	Wired/wireless communicatio n devices	Notification for Installation requirements of Intergrated Reception System	Frequency range:(5.75 ~ 2 150) Mb Input Impedance:75 Ω	BS	N
MSIT Notification No.2019- 4(01.16.2019.)	Wired/wireless communicatio n devices	Technical Requirements for the Human Protection against Electromagnetic Waves	30 MHz ~ 6 GHz	BS	N
MSIT Notification No.2023- 18(06.20.2023.)		Technical requirements for unlicensed radio equipment	9 kHz ~ 40 GHz	BS	N
MSIT Notification No.2022-63 (11.09.2022.)	Wired/wireless communicatio n devices	Technical Requirements for CATV Equipment	Frequency range:(5.75 ~ 1 002) ₩z Input Impedance:75 Ω	BS	N
MSIT Act No.86(01.04.2022 .)	Wired/wireless communicatio n devices	Rules on Radio equipment	9 kHz ~ 40 GHz	BS	N
RRA Notification No.2018- 18(12.07.2018.)	Wired/wireless communicatio n devices	Technical Requirements for Measurements of Specific Absorption Rate (SAR)	100 MHz ~ 6 GHz	BS	N
RRA Notification No.2022- 15(07.29.2022.)	Wired/wireless communicatio n devices	Technical Requirements for the Radio Equipment of Telecommunications Service	9 kHz ~ 26.5 GHz	BS	N
RRA Notice No.2022- 16(09.05.2022.)	Wired/wireless communicatio n devices	Technical Requirements for Telecommunications Terminal Equipment	Input impedance:600 Ω Frequency range:100 Hz ~ 10 Mz	BS	N
RRA Notification No.2022-19 (10.17.2022.)	Wired/wireless communicatio n devices	Technical Requirements for Broadcasting and Communication Equipment of Internet multimedia broadcasting business	Input impedance:above 1 MΩ Termination resistance:(95 ~ 105) Ω	BS	N
RRA Notification No.2023- 12(06.30.2023.)	Wired/wireless communicatio n devices	Conformity Assessment Procedure for Electromagnetic Field Strength and Specific Absortion Rate (SAR)	30 MHz ~ 6 GHz	BS	N
RRA Notification No.2023- 5(04.03.2023.)	Wired/wireless communicatio n devices	Technical Requirements for the Radio equipment for Simplified Service, Space station, Earth station, Sensors for Detecting and other equipments	9 kHz ~ 26.5 GHz	BS	N

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#### 03. Electrical Testing

03.010 Medical devices

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60601-1- 10:2008+A1:2015	Medical devices	Medical electrical equipment - Part 1- 10:General requirements for basic safety and essential performance - Collateral Standard:Requirements for the development of physiologic closed-loop controllers	-	BS	N
EN 60601-1- 10:2008+A2:2021	Medical devices	Medical electrical equipment - Part 1-10: General requirements for basic safety and essential performance - Collateral Standard: Requirements for the development of physiologic closed-loop controllers	-	BS	N
EN 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	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
EN 60601-1- 11:2015+A2:2021	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	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c./ 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60601-1- 6:2010+A1:2015	Medical devices	Medical electrical equipment - Part 1-6:General requirements for basic safety and essential performance - Collateral standard:Usability	-	BS	N
EN 60601-1- 6:2010+A2:2021	Medical devices	Medical electrical equipment - Part 1-6: General requirements for basic safety and essential performance - Collateral standard:Usability	-	BS	N
EN 60601-1- 8:2007+A1:2013	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 equipment and medical electrical systems	Sound pressure level:Max. 140 dB	BS	N
EN 60601-1- 8:2007+A2:2021	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 equipment and medical electrical systems	Sound pressure level:Max. 140 dB	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60601- 1:2006+A1:2013	Medical devices	Medical electrical equipment - Part 1:General requirements for basic safety and essential performance  [exception] 8.8.4.2 Resistance to environmental stress - Requirements of insulating material for rubber 8.9.1.7 Material groups classification 9.5.2 Cathode ray tubes 10.3 Microwave radiation 11.2.2 ME EQUIPMENT and ME SYSTEMS used in conjunction with OXYGEN RICH ENVIRONMENTS 11.2.3 SINGLE FAULT CONDITIONS related to OXYGEN RICH ENVIRONMENTS in conjunction with ME EQUIPMENT and ME SYSTEMS 11.6.7 Sterilization of ME EQUIPMENT and ME SYSTEMS 11.6.7 Sterilization of ME EQUIPMENT and ME SYSTEMS 15.4.2.1 f) Application 15.4.3.4 Lithium batteries Annex G Protection against HAZARDS of ignition of flammable anaesthetic mixtures Annex L Insulated winding wires for use without interleaved insulation	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency: (50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature: (-40 ~ 150) °C Measuring temperature: Max. 200 °C Humidity:Max. 98 % R.H.	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60601- 1:2006+A2:2021	Medical devices	Medical electrical equipment - Part 1:General requirements for basic safety and essential performance  [exception] 8.8.4.2 Resistance to environmental stress - Requirements of insulating material for rubber 8.9.1.7 Material groups classification 9.5.2 Cathode ray tubes 10.3 Microwave radiation ME EQUIPMENT and ME SYSTEMS used in conjunction with OXYGEN RICH ENVIRONMENTS SINGLE FAULT CONDITIONS related to OXYGEN RICH ENVIRONMENTS in conjunction with ME EQUIPMENT and ME SYSTEMS 11.6.7 Sterilization of ME EQUIPMENT and ME SYSTEMS 15.4.2.1 f) Application 15.4.3.4 Lithium batteries Annex G Protection against HAZARDS of ignition of flammable anaesthetic mixtures Annex L Insulated winding wires for use without interleaved insulation	Applied voltage: Max. 10 kV a.c./ 10 kV d.c. Applied temperature:(-40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
EN 60601-2- 10:2015+A1:2016	Medical devices	Medical electrical equipment - Part 2- 10:Particular requirements for the basic safety and essential performance of nerve and muscle stimulators	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency: (50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature: (-40 ~ 150) °C Measuring temperature: Max. 200 °C Humidity:Max. 98 % R.H.	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60601-2- 18:2015	Medical devices	Medical electrical equipment - Part 2- 18:Particular requirements for the basic safety and essential performance of endoscopic equipment	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
EN 60601-2- 22:2013	Medical devices	Medical electrical equipment - Part 2- 22:Particular requirements for basic safety and essential performance of surgical, cosmetic, therapeutic and diagnostic laser equipment	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency: (50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature: (-40 ~ 150) °C Measuring temperature: Max. 200 °C Humidity:Max. 98 % R.H Laser power: Max. 120 W / 100 J Laser wavelength: Max. 11 µm	BS	Z
EN 60601-2- 25:2015	Medical devices	Medical electrical equipment - Part 2- 25:Particular requirements for the basic safety and essential performance of electrocardiographs	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency: (50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature: (- 40 ~ 150) °C Measuring temperature: Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
EN 60601-2- 27:2014	Medical devices	Medical electrical equipment - Part 2-27:Particular requirements for the basic safety and essential performance of electrocardiographic monitoring equipment	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60601-2- 47:2015	Medical devices	Medical electrical equipment - Part 2-47:Particular requirements for the basic safety and essential performance of ambulatory electrocardiographic systems	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
EN 60601-2- 49:2015	Medical devices	Medical electrical equipment - Part 2-49:Particular requirements for the basic safety and essential performance of multifunction patient monitoring equipment	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(-40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
EN 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	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
EN 60601-2- 5:2015	Medical devices	Medical electrical equipment - Part 2-5: Particular requirements for the basic safety and essential performance of ultrasonic physiotherapy equipment		BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60601-2- 62:2015	Medical devices	Medical electrical equipment - Part 2-62: Particular requirements for the basic safety and essential performance of high intensity therapeutic ultrasound (HITU) equipment	Voltage: Max 300 Va.c. Current: Max, 30 A Frequency: (50 ~ 60) Hz Applied voltage: Max 10 kVa.c. / 10 kVd.c. Applied temperature: (-40 ~ 150) °C Measuring temperature: Max, 200 °C Humidity: Max, 98 % R.H.	BS	N
EN 60601-2- 66:2015	Medical devices	Medical electrical equipment - Part 2- 66:Particular requirements for the basic safety and essential performance of hearing instruments and hearing instrument systems	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(-40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
EN 80601-2- 60:2015	Medical devices	Medical electrical equipment - Part 2- 60:Particular requirements for the basic safety and essential performance of dental equipment	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(-40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
EN IEC 60601-2- 22:2020	Medical devices	Medical electrical equipment - Part 2- 22:Particular requirements for basic safety and essential performance of surgical, cosmetic, therapeutic and diagnostic laser equipment	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency: (50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature: (-40 ~ 150) °C Measuring temperature: Max. 200 °C Humidity:Max. 98 % R.H Laser power: Max. 120 W / 100 J Laser wavelength: Max. 11 µm	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN IEC 60601-2- 2:2018	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  [exception] 201.15.101.5 NE thermal performance	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
EN IEC 60601-2- 66:2020	Medical devices	Medical electrical equipment - Part 2-66: Particular requirements for the basic safety and essential performance of hearing aids and hearing aid systems	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(-40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	Z
EN IEC 80601-2- 60:2020	Medical devices	Medical electrical equipment - Part 2- 60:Particular requirements for the basic safety and essential performance of dental equipment	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(-40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
IEC 60601-1- 10:2007+A1:2013	Medical devices	Medical electrical equipment - Part 1- 10:General requirements for basic safety and essential performance - Collateral Standard:Requirements for the development of physiologic closed-loop controllers	-	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601-1- 10:2007+A2:2020	Medical devices	Medical electrical equipment - Part 1-10: General requirements for basic safety and essential performance - Collateral Standard: Requirements for the development of physiologic closed-loop controllers	-	BS	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	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	Z
IEC 60601-1- 11:2015+A1:2020	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	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage: Max. 10 kV a.c./ 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
IEC 60601-1- 6:2010+A1:2013	Medical devices	Medical electrical equipment - Part 1-6:General requirements for basic safety and essential performance - Collateral standard:Usability	-	BS	N
IEC 60601-1- 6:2010+A2:2020	Medical devices	Medical electrical equipment - Part 1-6: General requirements for basic safety and essential performance - Collateral standard:Usability	-	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601-1- 8:2006+A1:2012	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 equipment and medical electrical systems	Sound pressure level:Max. 140 dB	BS	N
IEC 60601-1- 8:2006+A2:2020	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 equipment and medical electrical systems	Sound pressure level:Max. 140 dB	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601- 1:2005+A1:2012	Medical devices	Medical electrical equipment - Part 1:General requirements for basic safety and essential performance  [exception] 8.8.4.2 Resistance to environmental stress - Requirements of insulating material for rubber 8.9.1.7 Material groups classification 9.5.2 Cathode ray tubes 10.3 Microwave radiation 11.2.2 ME EQUIPMENT and ME SYSTEMS used in conjunction with OXYGEN RICH ENVIRONMENTS 11.2.3 SINGLE FAULT CONDITIONS related to OXYGEN RICH ENVIRONMENTS in conjunction with ME EQUIPMENT and ME SYSTEMS 11.6.7 Sterilization of ME EQUIPMENT and ME SYSTEMS 11.6.7 Sterilization of ME EQUIPMENT and ME SYSTEMS 15.4.2.1 f) Application 15.4.3.4 Lithium batteries Annex G Protection against HAZARDS of ignition of flammable anaesthetic mixtures Annex L Insulated winding wires for use without interleaved insulation	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(-40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601- 1:2005+A2:2020	Medical devices	Medical electrical equipment - Part 1:General requirements for basic safety and essential performance [exception] 8.8.4.2 Resistance to environmental stress - Requirements of insulating material for rubber 8.9.1.7 Material groups classification 9.5.2 Cathode ray tubes 10.3 Microwave radiation ME EQUIPMENT and ME SYSTEMS used in conjunction with OXYGEN RICH ENVIRONMENTS SINGLE FAULT CONDITIONS related to OXYGEN RICH ENVIRONMENTS in conjunction with ME EQUIPMENT and ME SYSTEMS 11.6.7 Sterilization of ME EQUIPMENT and ME SYSTEMS 11.6.7 Sterilization of ME EQUIPMENT and ME SYSTEMS 15.4.2.1 f) Application 15.4.3.4 Lithium batteries Annex G Protection against HAZARDS of ignition of flammable anaesthetic mixtures Annex L Insulated winding wires for use without interleaved insulation	Applied voltage: Max. 10 kV a.c./ 10 kV d.c. Applied temperature: (-40 ~ 150) °C Measuring temperature: Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
IEC 60601-2- 10:2012+A1:2016	Medical devices	Medical electrical equipment - Part 2- 10:Particular requirements for the basic safety and essential performance of nerve and muscle stimulators	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(-40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601-2- 10:2012+AMD1:2 016+AMD2:2023	Medical devices	Medical electrical equipment - Part 2-10: Particular requirments for the basic safety and essential performance of nerve and muscle stimulators	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
IEC 60601-2- 18:2009	Medical devices	Medical electrical equipment - Part 2- 18:Particular requirements for the basic safety and essential performance of endoscopic equipment	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(-40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
IEC 60601-2- 22:2007+A1:2012	Medical devices	Medical electrical equipment - Part 2-22:Particular requirements for basic safety and essential performance of surgical, cosmetic, therapeutic and diagnostic laser equipment	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency: (50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature: (-40 ~ 150) °C Measuring temperature: Max. 200 °C Humidity:Max. 98 % R.H Laser power: Max. 120 W / 100 J Laser wavelength: Max. 11 µm	BS	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	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency: (50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature: (-40 ~ 150) °C Measuring temperature: Max. 200 °C Humidity:Max. 98 % R.H Laser power: Max. 120 W / 100 J Laser wavelength: Max. 11 µm	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601-2- 25:2011	Medical devices	Medical electrical equipment - Part 2- 25:Particular requirements for the basic safety and essential performance of electrocardiographs	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	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	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(-40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
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  [exception] 201.15.101.5 NE	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
IEC 60601-2- 47:2012	Medical devices	Medical electrical equipment - Part 2-47:Particular requirements for the basic safety and essential performance of ambulatory electrocardiographic systems	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency: (50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature: (-40 ~ 150) °C Measuring temperature: Max. 200 °C Humidity:Max. 98 % R.H.	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
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:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
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	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(-40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	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	Voltage: Max 300 Va.c. Current: Max. 30 A Frequency: (50 ~ 60) Hz Applied voltage: Max 10 kVa.c. / 10 kVd.c. Applied temperature: (- 40 ~ 150) °C Measuring temperature: Max. 200 °C Humidity: Max. 98 % R.H.	BS	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	Voltage: Max 300 Va.c. Current: Max. 30 A Frequency: (50 ~ 60) Hz Applied voltage: Max 10 kVa.c. / 10 kVd.c. Applied temperature: (- 40 ~ 150) °C Measuring temperature: Max. 200 °C Humidity: Max. 98 % R.H.	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601-2- 66:2015	Medical devices	Medical electrical equipment - Part 2- 66:Particular requirements for the basic safety and essential performance of hearing instruments and hearing instrument systems	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
IEC 60601-2- 66:2019	Medical devices	Medical electrical equipment - Part 2-66: Particular requirements for the basic safety and essential performance of hearing aids and hearing aid systems		BS	N
IEC 80601-2- 49:2018	Medical devices	Medical electrical equipment - Part 2-49:Particular requirements for the basic safety and essential performance of multifunction patient monitors	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(- 40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
IEC 80601-2- 49:2018+AMD1:2 024	Medical devices	Medical electrical equipment - Part 2-49: Particular requirements for the basic safety and essential performance of multifuction patient monitors	Voltage: Max. 300 Va.c. Current: Max. 30 A Frequency: (50 ~ 60) Hz Applied voltage: Max. 10 kVa.c. / 10 kVd.c. Applied temperature: (-40 ~ 150) °C Temperature: Max. 200 °C Humidity: Max. 98 %R.H.	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 80601-2- 60:2012	Medical devices	Medical electrical equipment - Part 2- 60:Particular requirements for the basic safety and essential performance of dental equipment	Voltage:Max. 300 Va.c. Current:Max. 30 A Frequency:(50 ~ 60) Hz Applied voltage:Max. 10 kV a.c. / 10 kV d.c. Applied temperature:(-40 ~ 150) °C Measuring temperature:Max. 200 °C Humidity:Max. 98 % R.H.	BS	N
IEC 80601-2- 60:2019	Medical devices	Medical electrical equipment - Part 2-60: Particular requirements for the basic safety and essential performance of dental equipment	Voltage: Max. 300 Va.c. Current: Max. 30 A Frequency: (50 ~ 60) Hz Applied voltage: Max. 10 kVa.c. / 10 kVd.c. Applied temperature: (-40 ~ 150) °C Temperature: Max. 200 °C Humidity: Max. 98 %R.H.	BS	N

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#### 03. Electrical Testing

03.011 EMC (Electromagnetic Compatibility)

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
47 CFR PART 15 Subpart B:2022	Electrical machinery for households, Electrical machinery for Industries	Unintentional Radiators	RE:9 kHz ~ 40 GHz, CE:9 kHz ~ 30 MHz	BS	N
ANSI C63.4:2014	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 Range of 9 ktz ~ 40 Gtz	9 kHz ~ 40 GHz	BS	Y
ANSI C63.4a: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 Range of 9 kHz ~ 40 GHz Amendment 1: Test Site Validation	9 kHz ~ 40 GHz	BS	Y
AS/NZS CISPR 32:2015	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	RE:30 MHz ~ 6 GHz, CE:150 kHz ~ 30 MHz Differential voltage:30 MHz ~ 2 150 MHz	BS	N
AS/NZS CISPR 32:2015 Amd 1:2020	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	RE:30 MHz ~ 6 GHz, CE:150 kHz ~ 30 MHz Differential voltage:30 MHz ~ 2 150 MHz	BS	N
CAN/CSA-CISPR 32:17	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	RE:30 Mtz ~ 6 Gtz, CE:150 ktz ~ 30 Mtz Differential voltage:30 Mtz ~ 2 150 Mtz	BS	N
CAN/CSA-CISPR 32:17(R2022)/A1: 24	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	RE:30 Mb ~ 6 db, CE:150 kb ~ 30 Mb Differential voltage:30 Mb ~ 2 150 Mb	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CISPR 11:2015+AMD1:2 016+AMD2:2019	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement [exception] 8 Special provisions for test site measurements	RE:9 kHz ~ 18 GHz, CE:9 kHz ~ 30 MHz	BS	N
CISPR 11:2024	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement [Exception] 8 Special provisions for test site measurements	RE:9 kHz ~ 18 GHz, CE:9 kHz ~ 30 MHz	BS	N
CISPR 13:2009+AMD1:2 015 CSV	Wired/wireless communicatio n devices	Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement	RE:30 Mbz ~ 6 Gbz, CE:150 kbz ~ 30 Mbz Differential voltage:30 Mbz ~ 2 150 Mbz	BS	N
CISPR 14-1:2016	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus Part 1:Emission	RE:9 kHz ~ 1 GHz, CE:9 kHz ~ 30 MHz DCE:150 kHz ~ 30 MHz Disturbance Power: 30 MHz ~ 300 MHz	BS	N
CISPR 14-1:2020	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 Disturbance Power: 30 MHz ~ 300 MHz	BS	Z
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(Air) ±4 kV(Contact) RS:80 Mz ~ 1 份 EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 230 Mb V-DIP:(0 ~ 100) %	BS	N

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(Air) ±4 kV(Contact) RS:80 Mt ~ 6 0t EFT:±1 kV SURGE:±2 kV CS:150 kt ~ 230 Mt V-DIP:(0 ~ 100) %	BS	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	RE:9 kHz ~ 1 GHz CE:9 kHz ~ 30 kHz	BS	N
CISPR 15:2018+AMD1:2 024	lighting equipment	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment [Exception] 4.2 Insertion loss	RE:9 써z ~ 6 애z CE:9 써z ~ 30 Mz	BS	N
CISPR 16-1-4:2019	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	RE:9 kHz ~ 18 GHz	BS	Υ
CISPR 16-1- 4:2019+AMD1:20 20	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	RE: 9 kHz ~ 18 GHz	BS	Y

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CISPR 16-1- 4:2019+AMD1:20 20+AMD2:2023	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	RE:9 kHz ~ 18 GHz	BS	Y
CISPR 25:2021	Wired/wireless communicatio n devices	Vehicle, boats and internal combustion engines - Radio disturbances characteristics - Limits and methods of measurement for the protection of on-board receivers.  [exception] 5.4 Test setup of vehicle in charging mode 5.5 Example of limits for vehicle radiated disturbances Annex A, B, C, D, E, F, H	RE: 150 版 ~ 2.5 版 CE(Voltage method): 150 版 ~ 108 版 CE(Current method): 150 版 ~ 245 版	SF-2	N
CISPR 25:2021	Wired/wireless communicatio n devices		RE:150 kHz ~ 2.5 GHz CE(VOLTAGE METHOD):150 kHz ~ 108 MHz CE(CURRENT METHOD):150 kHz ~ 245 MHz	BS	Y
CISPR 32:2015	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	RE:30 Mt ~ 6 Gt, CE:150 ktz ~ 30 Mtz Differential voltage:30 Mtz ~ 2 150 Mtz	BS	N
CISPR 32:2015+AMD1:2 019	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	RE:30 Mz ~ 6 Gb, CE:150 Mz ~ 30 Mz Differential voltage:30 Mz ~ 2 150 Mb	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
CISPR 35:2016	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Immunity requirements [exception] Table 2 - Immunity requirements for analogue/digital data ports: 2.2 Broadband impulse noise disturbances repetitive 2.3 Broadband impulse noise disturbances, isolated	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 6.0 Gz EFT:±1 kV SURGE:±2 kV CS:150 ktz ~ 80 Mz M/F:1 A/m V-DIP:(0 ~ 100) %	BS	N
CSA CISPR 11: 19	Electrical machinery for industries, Medical devices	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement	RE:9 kHz ~ 18 GHz, CE:9 kHz ~ 30 MHz	BS	N
ECE Regulation No.10 Revision 6:2019	Wired/wireless communicatio n devices	Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility.  Annex 7 - Method of measurement of radiated broadband electromagnetic emissions from electrical/electronic subassemblies (ESAs)  Annex 8 - Method of measurement of radiated narrowband electromagnetic emissions from electrical/electronic subassemblies  Annex 9 - Method(s) of testing for immunity of electrical/electronic subassemblies to electromagnetic radiation [exception]  1.2.1(b) TEM cell  1.2.1(d) Stripline  1.2.1(e) 800 mm stripline	RE:30 MHz ~ 1 GHz ALSE:80 MHz ~ 2 GHz BCI:20 MHz ~ 400 MHz TI: -600 V ~ 200 V TE:12 V, 24 V System	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 50121-3- 2:2016+A1:2019	Electrical machinery for Industries	Railway applications - Electromagnetic compatibility Part3-2:Rolling stock - Apparatus [exception] [Table 1] Emission 1.2 AC Power outlet port for public use	RE: 30 Mtz ~ 6 Gtz CE: 150 ktz~ 30 Mtz CS: 150 ktz ~ 80 Mtz EFT: ±2 kV SURGE: ±1 kV, ±2 kV RS: 80 Mtz ~ 6 Gtz ESD:±8 kV (Air) ±4 kV (Contact)	BS	Z
EN 50121- 4:2016+A1:2019	Electrical machinery for Industries	Railway applications- Electromagnetic compatibility Part4:Emission and immunity of the signalling and telecommunications apparatus	RE:30 Mb ~ 6 Gb CE:150 kb ~ 30 Mb DCE:150 kb ~ 30 Mb ESD:±8 kV (Air) ±6 kV (Contact) RS:80 Mb ~ 6 Gb EFT:±2 kV SURGE:±2 kV CS:150 kb ~ 80 Mb M/F: 300 A/m	BS	N
EN 50130- 4:2011+A1:2014	Electrical machinery for Industries	Alarm systems - Part 4: electromagnetic compatibility - Product family standard: immunity requirements for components of fire, intruder, hold up, CCTV, acess control and social alarm systems	ESD:±8 kV (Air) ±6 kV (Contact) RS:80 Mz ~ 2.7 Gt EFT:±2 kV SURGE:±2 kV CS:150 ktz ~ 100 Mz V- DIP:(0 ~ 100) %	BS	N
EN 50155:2017	Electrical machinery for Industries	Railway applications - Rolling stock - Electronic equipment 13.4.8 Electromagnetic compatibility test	RE:30 Mbz ~ 6 Gbz CE:150 kbz ~ 30 Mbz CS:150 kbz ~ 80 Mbz EFT:±2 kV SURGE:±1 kV,±2 kV RS:80 Mbz ~ 6 Gbz ESD:±8 kV (Air) ±4 kV (Contact)	BS	N
EN 55011:2016 +A11:2020	Electrical machinery for households, Electrical machinery for Industries	Industrial, scientific and medical equipment — Radio-frequency disturbance characteristics — Limits and methods of measurement	RE:9 kHz ~ 18 GHz, CE:9 kHz ~ 30 MHz	BS	N
EN 55011:2016 +A2:2021	Electrical machinery for households, Electrical machinery for Industries	Industrial, scientific and medical equipment — Radio-frequency disturbance characteristics — Limits and methods of measurement	RE:9 kHz ~ 18 GHz, CE:9 kHz ~ 30 MHz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 55013 : 2013+A1:2016	Electrical machinery for households	Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement	RE:30 Mbz ~ 6 Gbz, CE:150 kbz ~ 30 Mbz Differential voltage:30 Mbz ~ 2 150 Mbz	BS	N
EN 55014-1:2017	Electrical machinery for households	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus Part 1:Emission	RE:9 kHz ~ 1 GHz, CE:9 kHz ~ 30 MHz DCE:150 kHz ~ 30 MHz Disturbance Power: 30 MHz ~ 300 MHz	BS	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	RE:9 kHz ~ 1 GHz, CE:9 kHz ~ 30 MHz DCE:150 kHz ~ 30 MHz Disturbance Power: 30 MHz ~ 300 MHz	BS	N
EN 55014-2:2015	Electrical machinery for households	Electromagnetic compatibility — Requirements for household appliances, electric tools and similar apparatus — Part 2:Immunity	ESD:±8 kV(Air) ±4 kV(Contact) RS:80 Mz ~ 1 份 EFT:±1 kV SURGE:±2 kV CS:150 Mz ~ 230 Mz V-DIP:(0 ~ 100) %	BS	N
EN 55015:2019	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment [exception] 4.2 Insertion loss	RE:9 kHz ~ 1 GHz, CE:9 kHz ~ 30 MHz	BS	N
EN 55024:2010	Wired/wireless communicatio n devices	Information technology equipment - Immunity characteristics - Limits and methods of measurement	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 1 (地 EFT:±1 kV SURGE:±2 kV CS:150 ktz ~ 80 Mz M/F:1 A/m V-DIP:(0 ~ 100) %	BS	N
EN 55032:2015	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	RE:30 Mz ~ 6 Gz, CE:150 ktz ~ 30 Mz Differential voltage:30 Mz ~ 2 150 Mz	BS	N
EN 55032:2015+A11: 2020	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	RE:30 Mz ~ 6 Gz, CE:150 kz ~ 30 Mz Differential voltage:30 Mz ~ 2 150 Mz	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 55032:2015+A1:2 020	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	RE:30 Mz ~ 6 Gz, CE:150 kz ~ 30 Mz Differential voltage:30 Mz ~ 2 150 Mz	BS	N
EN 55035:2017		Electromagnetic compatibility of multimedia equipment - Immunity Requirements [exception] Table 2 - Immunity requirements for analogue/digital data ports: 2.2 Broadband impulse noise disturbances repetitive 2.3 Broadband impulse noise disturbances, isolated	ESD:±8 kV(Air) ±4 kV(Contact) RS:80 Mt ~ 6.0 Gt EFT:±1 kV SURGE:±2 kV CS:150 kt ~ 80 Mt M/F:1 A/m V-DIP:(0 ~ 100) %	BS	N
EN 55035:2017+A11: 2020	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Immunity Requirements [exception] Table 2 - Immunity requirements for analogue/digital data ports: 2.2 Broadband impulse noise disturbances repetitive 2.3 Broadband impulse noise disturbances, isolated	ESD:±8 kV(Air) ±4 kV(Contact) RS:80 Mt ~ 6.0 Gt EFT:±1 kV SURGE:±2 kV CS:150 kt ~ 80 Mt M/F:1 A/m V-DIP:(0 ~ 100) %	BS	N
EN 60601-1-2: 2015	Medical devices	Medical electrical equipment -Part 1- 2:General requirementsfor basic safety and essential performance - Collateral Standard:Electromagnet ic disturbances - Requirements and tests	RE:30 Mb ~ 18 Gb CE:9 kb ~ 30 Mb Harmonics: below 16 A Flicker: below 16 A ESD:±15 kb (Air) ±8 kb (Contact) RS:80 Mb ~ 6 Gb EFT:±2 kb SURGE:±2 kb CS:150 kb ~ 80 Mb MF:30 A/m V-DIP:(0 ~ 100) % TI:-600 V ~ 200 V	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 60601-1- 2:2007	Medical devices	Medical electrical equipment - Part 1- 2:General requirements for basic safety and essential performance - Collateral Standard:Electromagnet ic compatibility - Requirements and tests	RE:30 Mz ~ 18 Gt CE:9 ktz ~ 30 Mz Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±6 kV (Contact) RS:80 Mtz ~ 2.5 Gt EFT:±2 kV SURGE:±2 kV CS:150 ktz ~ 80 Mt MF:3 A/m V-DIP:(0 ~ 100) %	BS	N
EN 60601-1- 2:2015+A1:2021	Medical devices	Medical electrical equipment -Part 1- 2:General requirementsfor basic safety and essential performance - Collateral Standard:Electromagnet ic disturbances - Requirements and tests	RE:30 Mtz ~ 18 Gtz CE:9 ktz ~ 30 Mtz Harmonics: below 16 A Flicker: below 16 A ESD:±15 kV (Air) ±8 kV (Contact) RS:80 Mtz ~ 6 Gtz EFT:±2 kV SURGE:±2 kV CS:150 ktz ~ 80 Mtz MF:30 A/m V-DIP:(0 ~ 100) % TI:-600 V ~ 200 V PMF:10 ktz ~ 13.56 Mtz	BS	N
EN 60601-2- 24:2015	Medical devices	Medical electrical equipment - Part 2-24:Particular requirements for the basic safety and essential performance of infusion pumps and controllers (Accept Only) 201.17 Electromagnetic compatibility of ME EQUIPMENT and ME SYSTEMS 202 Electromagnetic compatibility - Requirements and tests	RE:30 Mtz ~ 18 Gtz CE:9 ktz ~ 30 Mtz Harmonics: below 16 A Flicker: below 16 A ESD:±15 kV (Air) ±8 kV (Contact) RS:80 Mtz ~ 6 Gtz EFT:±2 kV SURGE:±2 kV CS:150 ktz ~ 80 Mtz MF:30 A/m V-DIP:(0 ~ 100) % TI:-600 ~ 200V	BS	N
EN 61000-3- 3:2013	Electrical machinery for households	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	below 16 A	BS	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	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	below 16 A	BS	N
EN 61000-3- 3:2013+AMD2:20 21	Electrical machinery for households	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	below 16 A	BS	N
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	V-DIP:(0 ~ 100) %	BS	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	below ±30 kV	BS	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	PMF: 10 kHz ~ 13.56 MHz	BS	N
EN 61000-4- 3:2006 +A1:2008 +A2:2010	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	RS:80 MHz ~6 GHz	BS	Υ

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
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: below ±4 kV	BS	N
EN 61000-4- 5:2014	Electrical machinery for households, Electrical machinery for Industries	Electromagnetic compatibility (EMC) — Part 4-5:Testing and measurement techniques- Electrostatic discharge immunity test	SURGE: below ±6 kV	BS	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- Electrostatic discharge immunity test	SURGE: below ±6 kV	BS	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	CS:150 kHz ~ 230 MHz	BS	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	M/F: below 100 A/m	BS	N
EN 61204-3:2000	Electrical machinery for households	Low voltage power supplies, d.c. output - Part 3:Electromagnetic compatibility (EMC)	RE:30 Mz ~ 1 Gt CE:150 ktz ~ 30 Mtz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mtz ~ 1 Gtz EFT:±1 kV SURGE:±2 kV CS:150 ktz ~ 80 Mtz M/F:1 A/m V-DIP:(0 ~ 100) %	BS	N
EN 62040-2:2018	Electrical machinery for households	Uninterruptible power systems (UPS) - Part 2:Electromagnetic compatibility (EMC) requirements [exception] Immunity to Low- frequency signals IEC 61000-2-2	RE:30 Mbz ~ 1 Gbz CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 1 Gbz EFT:±2 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz M/F:≤ 30 A/m	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN IEC 55014- 1:2021	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 Disturbance Power: 30 MHz ~ 300 MHz	BS	N
EN IEC 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 (Air) ±4 kV (Contact) RS:80 Mt ~ 6 Gt EFT:±1 kV SURGE:±2 kV CS:150 kt ~ 230 Mt V-DIP:(0 ~ 100) %	BS	N
EN IEC 55015:2019+A11: 2020	Lighting devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment [exception] 4.2 Insertion loss	RE:9 kHz ~ 1 GHz, CE:9 kHz ~ 30 MHz	BS	N
EN IEC 61000-3- 2:2019	Electrical machinery for households	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase)	below 16 A	BS	N
EN IEC 61000-3- 2:2019+A1:2021	Electrical machinery for households	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase)	below 16 A	BS	N
EN IEC 61000-3- 2:2019+A1:2021+ A2:2024	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)	below 16 A	BS	N
EN IEC 61000-4- 11:2020	Electrical machinery for households, Electrical machinery for Industries	Testing and measurement techniques — Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current up to 16 A per phase	V-DIP:(0 ~ 100) %	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 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	BS	Y
EN IEC 61000-4- 6:2023	Household electrical appliances, Industrial electrical appliances	Electromagnetic compatibility(EMC) - Part 4-6:Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	CS:150 kHz ~ 230 MHz	BS	N
EN IEC 61000-6- 1:2019	Electrical machinery for households	Electromagnetic compatibility (EMC) - Part 6-1:Generic standards - Immunity for residential, commercial and light-industrial environments	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 6 Mz EFT:±1 kV SURGE:±2 kV CS:150 ktz ~ 80 Mtz M/F:30 A/m V-DIP:(0 ~ 100) %	BS	N
EN IEC 61000-6- 2:2019	Electrical machinery for Industries	Electromagnetic compatibility (EMC) - Part 6-2:Generic standards - Immunity for industrial environments	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 6 Mz EFT:±2 kV SURGE:±2 kV CS:150 kHz ~ 80 Mhz M/F:30 A/m V-DIP:(0 ~ 100) %	BS	N
EN IEC 61000-6- 3:2021	Electrical machinery for households	Electromagnetic compatibility (EMC) —Part 6-3: Generic standards — Emission standard for equipment in residential environments	RE:30 Mtz ~ 6 Gtz CE:150 ktz ~ 30 Mtz DCE:150 ktz ~ 30 Mtz Harmonics: below 16 A Flicker: below 16 A	BS	N
EN IEC 61000-6- 4:2019	Electrical machinery for Industries	Electromagnetic compatibility (EMC) — Part 6-4:Generic standards — Emission standard for industrial environments	RE:30 Mt ~ 6 Gt CE:150 ktz ~ 30 Mt DCE:150 ktz ~ 30 Mt Harmonics: below 16 A Flicker: below 16 A	BS	N
EN IEC 61326- 1:2021	Electrical machinery for Industries	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements [exception] IEC 61000-3-11:2017 IEC 61000-3-12:2011	ESD:±8 kV(Air) ±4 kV(Contact) RS:80 Mb ~ 6 0b EFT:±2 kV SURGE:±2 kV CS:150 kb ~ 80 Mb M/F:≤30 A/m V-DIP:(0 ~ 100) %	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN IEC 61326-2- 1:2021	Electrical machinery for Industries	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	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 6 Mz EFT:±2 kV SURGE:±2 kV CS:150 kHz ~ 80 Mhz M/F:≤30 A/m V-DIP:(0 ~ 100) %	BS	N
EN IEC 61326-2- 2:2021	Electrical machinery for Industries	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-2:Particular requirements - Test configurations, operational conditions and performance criteria for portable testing, measuring and monitoring equipment used in low-voltage distribution systems	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 6 Mz EFT:±2 kV SURGE:±2 kV CS:150 kHz ~ 80 MHz M/F:≤30 A/m V-DIP:(0 ~ 100) %	BS	N
EN IEC 61326-2- 3:2021	Electrical machinery for Industries	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	RS:80 Mb ~ 6 db EFT:±2 kV SURGE:±2 kV CS:150 kb ~ 80 Mb	BS	N
EN IEC 61326-2- 4:2021	Electrical machinery for Industries	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	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 M½ ~ 6 0½ EFT:±2 kV SURGE:±2 kV CS:150 k½ ~ 80 M½ M/F:≤30 A/m V-DIP:(0 ~ 100) %	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN IEC 61326-2- 5:2021	Electrical machinery for Industries	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 field bus interfaces according to IEC 61784-1	ESD:±8 kV(Air) ±4 kV(Contact) RS:80 Mz ~ 6 份 EFT:±2 kV SURGE:±2 kV CS:150 kb ~ 80 Mb M/F:≤30 A/m V-DIP:(0 ~ 100) %	BS	N
EN IEC 61547:2023	Lighting devices	Equipment for general lighting purposes - EMC immunity requirements	ESD:±8 kV (Air) , ±4 kV (Contact) RS:80 Mz ~ 1 Gz EFT:±1 kV SURGE:±2 kV CS:150 k/z ~ 80 Mz M/F:3 A/m V-DIP:(0 ~ 100) %	BS	N
ETSI EN 301 489-1 V2.2.3:2019	Wired/wireless communicatio n devices	Electro Magnetic Compatibility (EMC) standard for radio equipment and services Part1:Common technical requirements; Harmonised Standard for ElectroMagnetic Compatibility	RE:30 Mz ~ 6 Gb CE:150 kbz ~ 30 Mbz Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V 12 V, 24 V SYSTEM(ISO 7637-2)	BS	N
ETSI EN 301 489- 17 V3.2.4:2020		ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17:Specific conditions for Broadband Data Transmission Systems; Harmonised Standard for ElectroMagnetic Compatibility	RE:30 Mz ~ 6 Gb CE:150 kb ~ 30 Mb Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mb ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % 12 V, 24 V SYSTEM(ISO 7637-2)	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 301 489- 17 V3.3.1:2024	Wired/wireless communicatio n devices	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband and Wideband Data Transmission Systems; Harmonised Standard for ElectroMagnetic Compatibility	RE:30 Mb ~ 6 Gb CE:150 kb ~ 30 Mb Harmonics: below 16 A Flicker: below 16 A ESD:±8 kb (Air) ±4 kb (Contact) RS:80 Mb ~ 6 Gb EFT:±1 kb SURGE:±2 kb CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % 12 V, 24 V SYSTEM(ISO 7637-2)	BS	N
ETSI EN 301 489- 19 V2.1.1:2019	Wired/wireless communicatio n 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 % 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	RE:30 Mb ~ 6 db CE:150 kb ~ 30 Mb Harmonics: below 16 A Flicker: below 16 A ESD:±8 kb (Air) ±4 kb (Contact) RS:80 Mb ~ 6 db EFT:±1 kb SURGE:±2 kb CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
ETSI EN 301 489- 19 V2.2.1 (2022- 09)	Wired/wireless communicatio n 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 for ElectroMagnetic Compatibility	RE:30 Mb ~ 6 db CE:150 kb ~ 30 Mb Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mb ~ 6 db EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 301 489-2 V2.1.1:2019	Wired/wireless communicatio n 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	RE:30 Mz ~ 6 Gz CE:150 Mz ~ 30 Mz Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 6 Gz EFT:±1 kV SURGE:±2 kV CS:150 Mz ~ 80 Mz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
ETSI EN 301 489- 20 V2.2.1 (2021- 11)	Wired/wireless communicatio n 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); Harmonised Standard for ElectroMagnetic Compatibility	RE:30 Mtz ~ 6 Gtz CE:150 ktz ~ 30 Mtz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mtz ~ 6 Gtz EFT:±1 kV SURGE:±2 kV CS:150 ktz ~ 80 Mtz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
ETSI EN 301 489- 27 V2.2.1:2019	Wired/wireless communicatio n 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	RE:30 Mz ~ 6 Gz CE:150 klz ~ 30 Mz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 6 Gz EFT:±2 kV SURGE:±2 kV CS:150 klz ~ 80 Mz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
ETSI EN 301 489-3 V2.3.2 (2023-01)		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 for ElectroMagnetic Compatibility	RE:30 Mz ~ 6 Ghz CE:150 khz ~ 30 Mhz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mhz ~ 6 Ghz EFT:±1 kV SURGE:±2 kV CS:150 khz ~ 80 Mhz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 301 489- 33 V2.2.1:2019	Wired/wireless communicatio n devices	Electromagnetic compatibility (EMC) standard for radio equipment and services; Part 33:Specific conditions for Ultra-Wide Band (UWB) communications devices; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	RE:30 Mz ~ 6 Gb CE:150 kbz ~ 30 Mbz Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
ETSI EN 301 489- 34 V2.1.1:2019		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 3.1(b) of Directive 2014/53/EU	RE:30 Mz ~ 6 Gz CE:150 kz ~ 30 Mz Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 6 Gz EFT:±1 kV SURGE:±2 kV CS:150 kz ~ 80 Mz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
ETSI EN 301 489-4 V3.3.1:2021	Wired/wireless communicatio n devices	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 4:Specific conditions for fixed radio links and ancillary equipment; Harmonised Standard for ElectroMagnetic Compatibility	RE:30 Mtz ~ 6 Gtz CE:150 ktz ~ 30 Mtz Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mtz ~ 6 Gtz EFT:±1 kV SURGE:±2 kV CS:150 ktz ~ 80 Mtz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
ETSI EN 301 489-5 V2.2.1:2019	Wired/wireless communicatio n 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	RE:30 Mbz ~ 6 Gbz CE:150 kbz ~ 30 Mbz Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 301 489- 50 V2.3.1:2021	Wired/wireless communicatio n devices	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 50:Specific conditions for Cellular Communication Base Station (BS), repeater and ancillary equipment; Harmonised Standard for ElectroMagnetic Compatibility	RE:30 Mz ~ 6 Gz CE:150 kz ~ 30 Mz Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 6 Gz EFT:±1 kV SURGE:±2 kV CS:150 kz ~ 80 Mz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
ETSI EN 301 489- 51 V2.1.1:2019	Wired/wireless communicatio n 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 战 to 24,25 战, 76 战 to 77 战 and 77 战 to 81 战; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	RE:30 Mt ~ 6 Gt CE:150 kt ~ 30 Mt Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mt ~ 6 Gt EFT:±1 kV SURGE:±2 kV CS:150 kt ~ 80 Mt V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
ETSI EN 301 489- 52 V1.2.1:2021	Wired/wireless communicatio n devices	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 52: Specific conditions for Cellular Communication User Equipment (UE) radio and ancillary equipment; Harmonised Standard for ElectroMagnetic Compatibility	RE:30 Mtz ~ 6 Gtz CE:150 ktz ~ 30 Mtz Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mtz ~ 6 Gtz EFT:±1 kV SURGE:±2 kV CS:150 ktz ~ 80 Mtz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
ETSI EN 301 489- 52 V1.3.1:2024	Wired/wireless communicatio n devices	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 52: Specific conditions for Cellular Communication User Equipment (UE) radio and ancillary equipment; Harmonised Standard for ElectroMagnetic Compatibility	RE:30 Mbz ~ 6 Gbz CE:150 kbz ~ 30 Mbz Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ETSI EN 301 489-6 V2.2.1:2019	Wired/wireless communicatio n devices	Electromagnetic compatibility (EMC) standard for radio equipment and services; Part6: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	RE:30 Mb ~ 6 Gb CE:150 kb ~ 30 Mb Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV(Air) ±4 kV(Contact) RS:80 Mb ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
ETSI EN 301 489-7 V1.3.1:2005	Wired/wireless communicatio n devices	Electromagnetic compatibility and Radio spectrum Matters (ERM); Electro Magnetic Compatibility (EMC) standard for radio equipment and services; Part 7:Specific conditions for mobile and portable radio and ancillary equipment of digital cellular radio telecommunications systems (GSM and DCS)	RE:30 Mbz ~ 6 Gbz CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 2.7 Gbz EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
ETSI EN 301 489-9 V2.1.1:2019	Wired/wireless communicatio n 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 inear monitoring devices; Harmonised Standard covering the essential requirements of article 3.1 (b) of Directive 2014/53/EU	RE:30 Mb ~ 6 Gb CE:150 kb ~ 30 Mb Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV(Air) ±4 kV(Contact) RS:80 Mb ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
ICES-003 Issue 7:2020	Electrical machinery for households, Electrical machinery for Industries	Information Technology Equipment (including Digital Apparatus)	RE:30 Mz ~ 6 dz, CE:150 ktz ~ 30 Mz Disturbance Voltage:9 ktz ~ 2.15 dz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60601-1- 2:2007	Medical devices	Medical electrical equipment - Part 1- 2:General requirements for basic safety and essential performance - Collateral standard:Electromagneti c compatibility - Requirements and tests	RE:30 Mz ~ 18 Gb CE:9 Mz ~ 30 Mz Harmonics: below 16 A Flicker: below 16 A ESD:±8 kV (Air) ±6 kV (Contact) RS:80 Mz ~ 2.5 Gb EFT:±2 kV SURGE:±2 kV CS:150 kb ~ 80 Mb MF:3 A/m V-DIP:(0 ~ 100) %	BS	N
IEC 60601-1- 2:2014	Medical devices	Medical electrical equipment - Part 1- 2:General requirements for basic safety and essential performance - Collateral Standard:Electromagnet ic disturbances - Requirements and tests	RE:30 Mz ~ 18 Gt CE:9 ktz ~ 30 Mz Harmonics: below 16 A Flicker: below 16 A ESD:±15 kV (Air) ±8 kV (Contact) RS:80 Mtz ~ 6 Gt EFT:±2 kV SURGE:±2 kV CS:150 ktz ~ 80 Mt MF:30 A/m V-DIP:(0 ~ 100) % TI:-600 V ~ 200 V	BS	N
IEC 60601-1- 2:2014+AMD1:20 20 CSV	Medical devices	Medical electrical equipment -Part 1- 2:General requirementsfor basic safety and essential performance - Collateral Standard:Electromagnet ic disturbances - Requirements and tests	RE:30 Mz ~ 18 Gbz CE:9 kbz ~ 30 Mbz Harmonics: below 16 A Flicker: below 16 A ESD:±15 kV (Air) ±8 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±2 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz MF:30 A/m V-DIP:(0 ~ 100) % TI:-600 V ~ 200 V PMF:10 kbz ~ 13.56 Mbz	BS	N
IEC 60601-2- 24:2012	Medical devices	Medical electrical equipment - Part 2-24:Particular requirements for the basic safety and essential performance of infusion pumps and controllers (Accept Only) 201.17 Electromagnetic compatibility of ME EQUIPMENT and ME SYSTEMS 202 Electromagnetic compatibility - Requirements and tests	RE:30 Mb ~ 18 Gb CE:9 kb ~ 30 Mb Harmonics: below 16 A Flicker: below 16 A ESD:±15 kV (Air) ±8 kV (Contact) RS:80 Mb ~ 6 Gb EFT:±2 kV SURGE:±2 kV CS:150 kb ~ 80 Mb MF:30 A/m V-DIP:(0 ~ 100) % TI:-600 V ~ 200 V	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-3- 2:2005+AMD1+A MD2:2009	Electrical machinery for households Electrical machinery for Industrial	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase)	below 16 A	BS	N
IEC 61000-3- 2:2018+AMD1:20 20	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)	below 16 A	BS	N
IEC 61000-3- 2:2018+AMD1:20 20+AMD2:2024	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)	below 16 A	BS	N
IEC 61000-3- 3:2013+AMD1:20 17+AMD2:2021	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 ≤16 A per phase and not subject to conditional connection	below 16 A	BS	N
IEC 61000-4- 11:2004+AMD1:2 017	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	V-DIP:(0 ~ 100) %	BS	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 for equipment with input current up to 16 A per phase	V-DIP:(0 ~ 100) %	BS	N

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	below ±30 kV	BS	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	PMF: 10 kHz ~ 13.56 MHz	BS	N
IEC 61000-4- 3:2006+AMD1+A MD2:2010	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	RS:80 MHz ∼ 6 GHz	BS	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	RS:80 M地 ~ 6 础	BS	Y
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: below ±4 kV	BS	N
IEC 61000-4- 5:2014+AMD1:20 17	Electrical machinery for households, Electrical machinery for Industries	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	SURGE: below ±6 kV	BS	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	CS:150 kHz ~ 230 MHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61000-4- 6:2023	Household electrical appliances, Industrial electrical appliances	Electromagnetic compatibility(EMC) - Part 4-6:Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	CS:150 kHz ~ 230 MHz	BS	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: below 100 A/m	BS	N
IEC 61000-6- 1:2016	Electrical machinery for households	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity standard for residential, commercial and light-industrial environments	ESD:±8 kV(Air) ±4 kV(Contact) RS:80 Mb ~ 6 db EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mb M/F:3 A/m V-DIP:(0 ~ 100) %	BS	N
IEC 61000-6- 2:2016	Electrical machinery for Industries	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments	ESD:±8 kV(Air) ±4 kV(Contact) RS:80 Mb ~ 6 份 EFT:±2 kV SURGE:±2 kV CS:150 kb ~ 80 Mb M/F:30 A/m V-DIP:(0 ~ 100) %	BS	N
IEC 61000-6- 3:2020	Electrical machinery for households	Electromagnetic compatibility (EMC)-Part 6-3:Generic standards - Emission standard for equipment in residential environments	RE:30 Mz ~ 6 Gz CE:150 ktz ~ 30 Mz DCE:150 ktz ~ 30 Mz Harmonics: below 16 A Flicker: below 16 A	BS	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 Mt ~ 6 Gt CE:150 kt ~ 30 Mt DCE:150 kt ~ 30 Mt Harmonics: below 16 A Flicker: below 16 A	BS	N
IEC 61326-1:2020	Electrical machinery for Industries	Electrical equipment for measurement, control and laboratory use - EMC requirements Part 1:General requirements [exception] IEC 61000-3-11:2017 IEC 61000-3-12:2011	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mb ~ 6 db EFT:±2 kV SURGE:±2 kV CS:150 kb ~ 80 Mb M/F:30 A/m V-DIP:(0 ~ 100) %	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61326-2- 1:2020	Electrical machinery for Industries	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 (IEC 61326-2-1:2012)	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 6 0t EFT:±2 kV SURGE:±2 kV CS:150 ktz ~ 80 Mt M/F:30 A/m V-DIP:(0 ~ 100) %	BS	N
IEC 61326-2- 2:2020	Electrical machinery for Industries	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	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 6 Mz EFT:±2 kV SURGE:±2 kV CS:150 kMz ~ 80 MMz M/F:30 A/m V-DIP:(0 ~ 100) %	BS	N
IEC 61326-2- 3:2020	Electrical machinery for Industries	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	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 M½ ~ 6 M½ EFT:±2 kV SURGE:±2 kV CS:150 k½ ~ 80 M½ M/F:30 A/m V-DIP:(0 ~ 100) %	BS	N
IEC 61326-2- 4:2020	Electrical machinery for Industries	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 IEC61557-8 and for equipment for insulation fault location according to IEC 61557-9	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 6 Mz EFT:±2 kV SURGE:±2 kV CS:150 kMz ~ 80 MMz M/F:≤30 A/m V-DIP:(0 ~ 100) %	BS	N

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	Materials/	Standard			Field
Test method	Products	designation	Test range	Site	testing
IEC 61326-2- 5:2020	Electrical machinery for Industries	Electrical equipment for measurement, control and laboratory use — EMC requirements Part 2-5:Particular requirements —Test configurations, operational conditions and performance criteria for devices with field bus interfaces according to IEC61784-1	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mb ~ 6 6b EFT:±2 kV SURGE:±2 kV CS:150 kb ~ 80 Mb M/F:≤30 A/m V-DIP:(0 ~ 100) %	BS	N
IEC 61547:2020	Lighting devices	Equipment for general lighting purposes - EMC immunity requirements	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mt ~ 1 Gt EFT:±1 kV SURGE:±2 kV CS:150 kt ~ 80 Mt M/F:3 A/m V-DIP:(0 ~100) %	BS	N
IEC 62040-2:2016	Electrical machinery for households	Uninterruptible power systems (UPS) - Part 2:Electromagnetic compatibility (EMC) requirements [exception] Immunity to Lowfrequency signals IEC 61000-2-2	E:150 kHz ~ 30 MHz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 MHz ~ 1 GHz EFT:±2 kV SURGE:±2 kV CS:150 kHz ~ 80 MHz M/F:30 A/m	BS	N
IEC 62236-3- 2:2018	Electrical machinery for Industries	Electromagnetic compatibility - Part3-2: Rolling stock - Apparatus [exception] [Table 1] Emission	RE: 30 Mb ~ 6 Gb CE: 150 kbz ~ 30 Mbz CS: 150 kbz ~ 80 Mbz EFT: ±2 kV Surge: ±1 kV, ±2 kV RS: 80 Mb ~ 6 Gbz ESD: ±6 kV (Contact discharge), ±8 kV (Air discharge)	BS	N
IEC 62236-4:2018	Electrical machinery for Industries	Railway applications - Electromagnetic compatibility - Part 4: Emission and immunity of the signalling and telecommunications apparatus	RE: 30 Mb ~ 6 Gb CE: 150 kb ~ 30 Mb DCE: 150 kb ~ 30 Mb ESD: ±6 kV(Contact discharge), ±8 kV(Air discharge) RS: 80 Mb ~ 6 Gb Magnetic field: ≤300 A/m CS: 150 kb ~ 80 Mb EFT: ±2 kV SURGE: ±2 KV	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEEE Std 299:2006	Electrical machinery for households, Electrical machinery for Industries	IEEE Standard Method for Measuring the Effectiveness of Electromagnetic Shielding Enclosures	Measurement frequency:9 kHz ~ 18 GHz	BS	Υ
ISO 10605:2008	Wired/wireless communicatio n devices	Road vehicles — Test methods for electrical disturbances from electrostatic discharge	ESD: below ±25 kV(Air) below ±25 kV(Contact)	SF-2	N
ISO 10605:2023	Wired/wireless communicatio n devices	Road vehicles — Test methods for electrical disturbances from electrostatic discharge	ESD: below ±25 kV (Air), below ±25 kV (Contact)	BS	N
ISO 11452-2:2019	Wired/wireless communicatio n devices	Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 2:Absorber-lined shielded enclosure	80 Mz ~ 18 Gb, ≤ 200 V/m	BS	N
ISO 11452-2:2019	Wired/wireless communicatio n devices	Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 2:Absorber-lined shielded enclosure	20 MHz ~ 6 GHz	SF-2	N
ISO 11452-4:2020	Wired/wireless communicatio n devices	Road Vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 4:Harness excitation methods  [exception] 6.2 TWC Test Method	100 kHz ~ 400 MHz	SF-2	N
ISO 11452-4:2020	Wired/wireless communicatio n devices	Road Vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 4:Harness excitation methods [exception] 6.2 TWC Test Method	100 kHz ~ 400 MHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 11452-8:2015	Wired/wireless communicatio n devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 8:Immunity to magnetic fields	DC, 15 Hz ~ 150 kHz	BS	N
ISO 11452-8:2015	Wired/wireless communicatio n devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 8:Immunity to magnetic fields	DC 15 Hz ~ 150 kHz	SF-2	N
ISO 11452-9:2021	Wired/wireless communicatio n devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy Part 9:Portable transmitters	26 Mz ~ 5 850 Mz	BS	N
ISO 11452-9:2021	Wired/wireless communicatio n devices	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy Part 9:Portable transmitters	26 Mz ~ 5 850 Mz	SF-2	N
ISO 16750-2:2012	Wired/wireless communicatio n devices	Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part2:Electrical loads	Power voltage: 0 V ~ 230 V	SF-2	N
ISO 16750-2:2012	Wired/wireless communicatio n devices	Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part2:Electrical loads	Power voltage: 0 V ~ 230 V	BS	N
ISO 7637-2:2011	Wired/wireless communicatio n devices	Road vehicles — Electrical disturbances from conduction and coupling — Part 2:Electrical transient conduction along supply lines only	TI:-600 V ~ 200 V	SF-2	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 7637-2:2011		Road vehicles — Electrical disturbances from conduction and coupling — Part 2:Electrical transient conduction along supply lines only	TI:-600 V ~ 200 V	BS	N
ISO 7637-3:2016	Wired/wireless communicatio n 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 signal lines: - 150 V ~ 150 V	SF-2	N
ISO 7637-3:2016	Wired/wireless communicatio n 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 signal lines:- 150 V ~ 150 V,	BS	N
KS C 9040-2:2017	Electrical machinery for Industries	Uninterruptible power systems (UPS) - Part 2:Electromagnetic compatibility (EMC) requirements	RE:30 Mbz ~ 1 Gbz, CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 1 Gbz EFT:±2 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz M/F:30 A/m	BS	N
KS C 9547:2020	Lighting devices	Equipment for general lighting purposes - EMC immunity requirements	ESD:±8 kV(Air), ±4 kV(Contact) RS:80 Mt ~ 1 0t EFT:±1 kV SURGE:±2 kV CS:150 kt ~ 80 Mt M/F:3 A/m V-DIP:(0 ~ 100) %	BS	N
KS C 9610-3- 2:2023	Household electrical appliances, Industrial electrical appliances	Electromagnetic compatibility (EMC) - Part 3-2:Limit for harmonics current emissions (equipment input current up to and including 16 A per phase)	below 16 A	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9610-3- 3:2023	Household electrical appliances, Industrial electrical appliances	Electromagnetic compatibility (EMC) - Part 3-3:Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase	below 16 A	BS	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 [exception] above 16 A equipment	V-DIP:(0 ~ 100) %	BS	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	ESD: below ±30 kV	BS	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	RS:80 MHz ~ 6 GHz	BS	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	EFT: below ±4 kV	BS	N
KS C 9610-4- 5:2023	Household electrical appliances, Industrial electrical appliances	Electromagnetic compatibility (EMC) - Part 4-5:Testing and measurement techniques - Surge immunity test	SURGE: below ±6 kV	BS	N
KS C 9610-4- 6:2020	Electrical machinery for households, Electrical machinery for Industries	Test method of Immunity to conducted disturbances, induced by radiofrequency fields	CS:150 kHz ~ 230 MHz,	BS	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	MF: below100 A/m	BS	N
KS C 9610-6- 1:2019	Electrical machinery for households	Electromagnetic compatibility(EMC) - Part 6-1:Generic standards - Immunity for residential, commercial and light-industrial environments	ESD:±8 kV (Air), ±4 kV (Contact) RS:80 M½ ~ 6 0½ EFT:±1 kV SURGE:±2 kV CS:150 k½ ~ 80 M½ M/F:3 A/m V-DIP:(0 ~ 100) %	BS	N
KS C 9610-6- 2:2019	Electrical machinery for Industries	Electromagnetic compatibility (EMC) - Part 6-2:Generic standards - Immunity for industrial environments	ESD:±8 kV (Air), ±4 kV (Contact) RS:80 Mt ~ 6 6t EFT:±2 kV SURGE:±2 kV CS:150 kt ~ 80 Mt M/F:30 A/m V-DIP:(0 ~ 100) %	BS	N
KS C 9610-6- 3:2023	Electrical machinery for households	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 DCE:150 kHz ~ 30 MHz	BS	N
KS C 9610-6- 4:2022	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 DCE:150 kHz ~ 30 MHz	BS	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] 7.6.10 Power converter for solar power generation (Above16A equipment and 3 phase connection equipment)	RE:9 kHz ~ 18 GHz CE:9 kHz ~ 30 MHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9814-1:2022	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 Disturbance Power: 30 MHz ~ 300 MHz	BS	N
KS C 9814-2:2022	Electrical machinery for households	Electromagnetic compatibility — Requirements for household appliances, electric tools and similar apparatus — Part 2:Immunity - Product family standard	ESD:±30 kV(Air) ±25 kV(Contact) RS:80 Mz ~ 6 份 EFT:±1 kV SURGE:±2 kV CS:150 Mz ~ 230 Mz V-DIP:(0 ~ 100) %	BS	N
KS C 9815:2023	Wired/wireless communicatio n devices	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment [exception] 4.2 Insertion loss	RE:9 kHz ~ 1000 MHz CE:9 kHz ~ 30 MHz	BS	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		BS	Υ
KS C 9832:2023	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	RE:30 Mz ~ 6 Gz, CE:150 kz ~ 30 Mz Disturbance Voltage:30Mz ~ 2 150 Mz	BS	N
KS C 9832:2024	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment — Emission requirements	RE:30 Mz ~ 6 Gtz, CE:150 ktz ~ 30 Mtz Disturbance Voltage:30Mtz ~ 2 150 Mtz	BS	N
KS C 9835:2019	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Immunity Requirements	ESD:±8 kV (Air), ±4 kV (Contact) RS:80 Mz ~ 6 dz EFT:±1 kV SURGE:±4 kV CS:150 ktz ~ 80 Mz MF:60 Hz, 1 A/m V-DIP:(0 ~ 100) %	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C 9990:2017	Wired/wireless communicatio n devices	Electromagnetic compatibility of automobiles and internal combustion engines [exception] 6.5 Radiated emissions from components/modules. TEM cell method 6.6 Radiated emissions from components/module. Strip line method	Transitional conduction resistance voltage on the power line: - 600 V ~ 200 V RE:30 Mz ~ 1 GHz CE:0.15 Mz ~ 30 Mz Harmonic Current Emission: below 16 A Voltage Fluctuation and Flicker: below 16 A EFT:±2 kV RS:20 Mz ~ 2 000 Mz SURGE:±2 kV	BS	N
KS C 9995:2021	Wired/wireless communicatio n devices		RE:30 Mb ~ 6 Gb CE:150 kb ~ 30 Mb ESD:±8 kV (Air), ±4 kV (Contact) RS:80 Mb ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI:-600 V ~ 200 V	BS	N
KS C IEC 60601-1- 2:2014	Medical devices	Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard:Electromagneti c compatibility - Requirements and tests	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 2.5 Gz EFT:±2 kV SURGE:±2 kV CS:150 ktz ~ 80 Mz V-DIP:(0 ~ 100) % MF:3 A/m	BS	N
KS C IEC 60601-1- 2:2020	Medical electrical equipment	Medical electrical equipment -Part 1- 2:General requirementsfor basic safety and essential performance - Collateral Standard:Electromagnet ic disturbances - Requirements and tests	RE:30 Mb ~ 18 Gb CE:9 kb ~ 30 Mb Harmonics:16 A 이하 Flicker:16 A 이하 ESD:±15 kV (Air) ±8 kV (Contact) RS:80 Mb ~ 6 Gb EFT:±2 kV SURGE:±2 kV CS:150 kb ~ 80 Mb MF:30 A/m V-DIP:(0 ~ 100) % TI:-600 V ~ 200 V PMF:10 kb ~ 13.56 Mb	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60947- 1:2017	Industrial electrical appliances	Low-voltage switchgear and control gear -Part 1:General rules	RE:30 Mtz ~ 1 Gtz CE:150 ktz ~ 30 Mtz ESD:±8 kV(Air) ±4 kV(Contact) RS:80 Mtz ~ 2.7 Gtz EFT:±2 kV SURGE:±2 kV CS:150 ktz ~ 80 Mtz V-DIP:(0 ~ 100) % MF:30 A/m	BS	N
KS C IEC 60947- 2:2022	Industrial electrical appliances	Low-voltage switchgear and controlgear - Part 2: Circuit-breakers	RE:30 Mz ~ 1 Gtz CE:150 ktz ~ 30 Mtz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mtz ~ 6 Gtz EFT:±4 kV SURGE:±4 kV CS:150 ktz ~ 80 Mtz V- DIP:(0~100) % MF:30 A/m	BS	N
KS C IEC 60947-4- 1:2022	Industrial electrical appliances	Low-voltage switchgear and controlgear - Part 4- 1: Contactors and motor-starters - Electromechanical contactors and motor- starters	RE:30 M/z ~ 1 G/z CE:150 k/z ~ 30 M/z ESD:±8 kV (Air) ±4 kV (Contact) RS:80 M/z ~ 2.7 G/z EFT:±4 kV SURGE:±4 kV CS:150 k/z ~ 80 M/z V-DIP:(0 ~ 100) % MF:30 A/m	BS	N
KS C IEC 62236-3- 2:2018	Electrical machinery for Industries	Railway applications - Electromagnetic compatibility - Part 3-2: Rolling stock - Apparatus	CE:150 版 ~ 30 Mb RE:30 Mb ~ 6 db ESD:±8 kV(Air) ±4 kV(Contact) RS:80 Mb ~ 6 db, EFT:±2 kV CS:150 kb ~ 80 Mb SURGE:±4 kV	BS	N
KS C IEC 62236- 4:2018	Electrical machinery for Industries	Railway applications - Electromagnetic compatibility - Part 4: Emission and immunity of the signalling and telecommunications apparatus	RE:30 Mz ~ 6 Gbz CE:150 kbz ~ 30 Mb ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±2 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz MF:100 A/m Impulse MF:300 A/m	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X 3124:2020		Common EMC test methods for radio equipment	RE:30 Mbz ~ 6 Gbz CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V 12 V, 24 V SYSTEM (ISO 7637-2)	BS	N
KS X 3124:2024		Common EMC test methods for radio equipment	RE:30 Mtz ~ 6 Gtz CE:150 ktz ~ 30 Mtz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mtz ~ 6 Gtz EFT:±1 kV SURGE:±2 kV CS:150 ktz ~ 80 Mtz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V 12 V, 24 V SYSTEM (ISO 7637-2)	BS	N
KS X 3125:2020		EMC test methods for specific low power radio equipment	RE:30 Mz ~ 6 Gb CE:150 kb ~ 30 Mb ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mb ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3125:2024		EMC test methods for specific low power radio equipment	RE:30 Mb ~ 6 Gb CE:150 kb ~ 30 Mb ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mb ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3126:2020	Wired/wireless communicatio n devices	EMC test methods for specific low power radio equipment for wireless data communication systems	RE:30 Mb ~ 6 Gb CE:150 kb ~ 30 Mb ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mb ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X 3126:2024		EMC test methods for specific low power radio equipment for wireless data communication systems	RE:30 Mbz ~ 6 Gbz CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3127:2014		EMC test methods for Simple Radio Station Equipment	RE:30 Mbz ~ 6 Gbz CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3127:2024		EMC test methods for Simple Radio Station Equipment and TETRA	RE:30 Mbz ~ 6 Gbz CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3128:2014	Wired/wireless communicatio n devices	EMC Test Methods for Digital Cordless Phone	RE:30 Mz ~ 6 Gz CE:150 kz ~ 30 Mz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 6 Gz EFT:±1 kV SURGE:±2 kV CS:150 kz ~ 80 Mz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3128:2024	Wired/wireless communicatio n devices	EMC Test Methods for Digital Cordless Phone	RE:30 Mz ~ 6 Gb CE:150 kb ~ 30 Mb ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mb ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X 3129:2020	Wired/wireless communicatio n devices	EMC Test Methods for Cellular Communication Mobile and Ancillary Equipment	RE:30 Mbz ~ 6 Gbz CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3130:2014		EMC Test Methods for Specific Low Power Radio Equipment for Transmission of Audio and Sound Signal	RE:30 Mbz ~ 6 Gbz CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3130:2024		EMC Test Methods for Specific Low Power Radio Equipment for Transmission of Audio and Sound Signal	RE:30 Mbz ~ 6 Gbz CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3131:2014		EMC Test Methods for Citizens' Band(CB) Radio Equipment	RE:30 Mz ~ 6 Gb CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3131:2024	Wired/wireless communicatio n devices	EMC Test Methods for Citizens' Band(CB) Radio Equipment	RE:30 Mbz ~ 6 Gbt CE:150 kbt ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbt EFT:±1 kV SURGE:±2 kV CS:150 kbt ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X 3132:2014		EMC Test Methods for Trunked Radio System(TRS) Equipment	RE:30 Mz ~ 6 Gb CE:150 kb ~ 30 Mb ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mb ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3134:2014		EMC Test Methods for Implantable Radio Equipment	RE:30 Mb ~ 6 Gb CE:150 kb ~ 30 Mb ESD:±8 kV (Air) ±6 kV (Contact) RS:80 Mb ~ 2.5 Gb EFT:±2 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3134:2024		EMC Test Methods for Implantable Radio Equipment	RE:30 Mbz ~ 6 Ghz CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±6 kV (Contact) RS:80 Mbz ~ 6 Ghz EFT:±2 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3135:2020	Wired/wireless communicatio n devices	EMC test methods for cellular communication base station, repeater and ancillary equipment	RE:30 Mz ~ 6 Gb CE:150 kb ~ 30 Mb ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mb ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3136:2014		EMC Test Methods for Amateur Radio Station Equipment	RE:30 Mb ~ 6 Gb CE:150 kb ~ 30 Mb ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mb ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X 3136:2024		EMC Test Methods for Amateur Radio Station Equipment	RE:30 Mbz ~ 6 Gbz CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3137:2014	Wired/wireless communicatio n devices	EMC Test Methods for Radio Paging Equipment	RE:30 Mbz ~ 6 Gbt CE:150 kbt ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbt EFT:±1 kV SURGE:±2 kV CS:150 kbt ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3137:2024	Wired/wireless communicatio n devices	EMC Test Methods for Radio Paging Equipment	RE:30 Mbz ~ 6 Gbz CE:150 kbz ~ 30 Mbz ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mbz ~ 6 Gbz EFT:±1 kV SURGE:±2 kV CS:150 kbz ~ 80 Mbz V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3139:2014	Wired/wireless communicatio n devices	EMC Test Methods for Mobile Satellite Service Equipment Wall Probing Radar Equipment	RE:30 Mb ~ 6 Gb CE:150 kb ~ 30 Mb ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mb ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N
KS X 3139:2024	Wired/wireless communicatio n devices	EMC Test Methods for Mobile Satellite Service Equipment Wall Probing Radar Equipment	RE:30 Mb ~ 6 Gb CE:150 kb ~ 30 Mb ESD:±8 kV(Air) ±4 kV(Contact) RS:80 Mb ~ 6 Gb EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 80 Mb V-DIP:(0 ~ 100) % TI: -600 V ~ 200 V	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS X 3143:2020	Wired/wireless communicatio n devices, Electrical machinery for households	EMI test methods for residential wireless power transfer	RE:9 ktz ~ 1 Gtz CE:150 ktz ~ 30 Mtz	BS	N
MIL-STD-188-125- 1:1998	Household electrical appliances, Industrial electrical appliances	HIGH-ALTITUDE ELECTROMAGNETIC PULSE (HEMP) PROTECTION FOR GROUND-BASED C4I FACILITIES PERFORMING CRITICAL, TIME-URGENT MISSIONS PART 1 FIXED FACILITIES [Exception] Appendix B PULSED CURRENT INJECTION (PCI) TEST PROCEDURES	Measurement frequency: 10 kHz ~ 1 GHz	BS	Y
MIL-STD-188-125- 1:2005	Household electrical appliances, Industrial electrical appliances	HIGH-ALTITUDE ELECTROMAGNETIC PULSE (HEMP) PROTECTION FOR GROUND-BASED C4I FACILITIES PERFORMING CRITICAL, TIME-URGENT MISSIONS PART 1 FIXED FACILITIES [Exception] Appendix B PULSED CURRENT INJECTION (PCI) TEST PROCEDURES	Measurement frequency : 10 kHz ~ 1 GHz	BS	Y
MIL-STD-188-125- 2:1999	Household electrical appliances, Industrial electrical appliances	HIGH-ALTITUDE ELECTROMAGNETIC PULSE (HEMP) PROTECTION FOR GROUND-BASED C4I FACILITIES PERFORMING CRITICAL, TIME-URGENT MISSIONS PART 2 TRANSPORTABLE SYSTEMS [Exception] Appendix B PULSED CURRENT INJECTION (PCI) TEST PROCEDURES	Measurement frequency: 10 kHz ~ 1 GHz	BS	Y

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-188-125- 2:2005	Household electrical appliances, Industrial electrical appliances	HIGH-ALTITUDE ELECTROMAGNETIC PULSE (HEMP) PROTECTION FOR GROUND-BASED C4I FACILITIES PERFORMING CRITICAL, TIME-URGENT MISSIONS PART 2 TRANSPORTABLE SYSTEMS [Exception] Appendix B PULSED CURRENT INJECTION (PCI) TEST PROCEDURES	Measurement frequency : 10 kHz ~ 1 GHz	BS	Y
MIL-STD- 461D:1993	Electrical machinery for Industries	Requirements for the Control of Electromagnetic Interference emissions and susceptibility [exception] 5.3.8 CS109, 5.3.14 RE103, 5.3.16 RS103(10 kHz to 100 MHz, 200 V/m), 5.3.17 RS105	RE:30 Hz ~ 18 GHz CE:30 Hz ~ 40 GHz RS:30 Hz ~ 40 GHz CS:30 Hz ~ 20 GHz	BS	N
MIL-STD- 461E:1999	Electrical machinery for Industries	Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment [exception] 5.11 CS109 5.17 RE103 5.19 RS103 (2 Mz to 100 Mz, 200 V/m) 5.20 RS105	RE:30 Hz ~ 18 GHz CE:30 Hz ~ 40 GHz RS:30 Hz ~ 40 GHz CS:30 Hz ~ 20 GHz	BS	N
MIL-STD- 461F:2007	Electrical machinery for Industries	Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment [exception] 5.12 CS109 5.18 RE103 5.20 RS103 (2 Mz to 100 Mz, 200 V/m) 5.21 RS105	RE:30 Hz ~ 18 GHz CE:30 Hz ~ 40 GHz RS:30 Hz ~ 40 GHz CS:30 Hz ~ 20 GHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-	Electrical	REQUIREMENTS FOR THE CONTROL OF ELECTROMAGNETIC INTERFERENCE CHARACTERISTICS OF SUBSYSTEMS AND EQUIPMENT	RE:30 Hz ~ 18 GHz CE:30 Hz ~ 40 GHz	BS	N
461G:2015	machinery for Industries	[exception] 5.11 CS109, 5.15 CS117, 5.19 RE103, 5.21 RS103(2 Mb to 100 Mb, 200 V/m), 5.22 RS105	RS:30 Hz ~ 40 础 CS:30 Hz ~ 20 础 CS118: ±15 W	D3	IV
MIL-STD- 462D:1993	Electrical machinery for Industries	Measurement of electromagnetic interference characteristics  [exception] CS109, RE103 RS105	RE:30 Hz ~ 18 db CE:30 Hz ~ 40 db RS:30 Hz ~ 40 db CS:30 Hz ~ 20 db	BS	N
MIL-STD- 704F:2016	Industrial electrical appliances	DEPARTMENT OF DEFENSE INTERFACE STANDARD AIRCRAFT ELECTRIC POWER CHARACTERISTICS	SAC:400 Hz, 115 V TAC:400 Hz, 115 V SVF, TVF:Variable Frequency, 115 V SXF:60 Hz, 115 V LDC:DC 28 V HDC:DC 270 V	BS	N
SANS 211:2010	Household electrical appliances, Industrial electrical appliances	Industrial, scientific and medical equipment — Radio-frequency disturbance characteristics — Limits and methods of measurement	RE:9 kHz ~ 18 GHz, CE:9 kHz ~ 30 MHz	BS	N
SANS 213:2011	Wired/wireless communicatio n devices	Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement	RE:30 Mz ~ 1 Gt, Differential voltage: 30 Mz ~ 2 150 Mt Radiated Power: 0.9 Gt ~ 18 Gt	BS	N
SANS 214-1:2020	Household electrical appliances	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus Part 1:Emission	RE:9 kHz ~ 1 GHz, CE:9 kHz ~ 30 MHz DCE:150 kHz ~ 30 MHz Disturbance Power: 30 MHz ~ 300 MHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 214-2:2009	Household electrical appliances	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus Part 2:Immunity - Product family standard	ESD:±8 kV(Air) ±4 kV(Contact) RS:80 Mb ~ 1 份 EFT:±1 kV SURGE:±2 kV CS:150 kb ~ 230 Mb V- DIP:(0~ 100) %	BS	N
SANS 215:2019	lighting equipment	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment [exception] 4.2 Insertion loss	RE:9 kHz ~ 1 GHz, CE:9 kHz ~ 30 kHz	BS	N
SANS 224:2010		Information technology equipment - Immunity characteristics - Limits and methods of measurement [exception] 3 phase connection equipment	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mz ~ 1.0 Gz EFT:±1 kV SURGE:±2 kV CS:150 k/z ~ 80 Mz M/F:1 A/m V-DIP:(0 ~ 100) %	BS	N
SANS 225:2019	Wired/wireless communicatio n devices	Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits 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/module. Strip line method	RE:150 kHz ~ 2.5 GHz CE(VOLTAGE METHOD):150 kHz ~ 108 kHz CE(CURRENT METHOD):150 kHz ~ 245 kHz	BS	Y
SANS 2332:2017	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	RE:30 MHz ~ 6 GHz, CE:150 kHz ~ 30 MHz, Differential voltage:30 MHz ~ 2 150 MHz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
SANS 2335:2018	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment — Immunity requirements [exception] 3 phase connection equipment Table 2 - Immunity requirements for analogue/digital data ports: 2.2 Broadband impulse noise disturbances repetitive 2.3 Broadband impulse noise disturbances, isolated	ESD:±8 kV(Air)	BS	N
SANS 61000-3- 2:2009	Electrical machinery for households	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase)	below 16 A	BS	N
SANS 61000-3- 3:2009	Electrical machinery for households	Electromagnetic compatibility (EMC) - Part 3-3: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	below 16 A	BS	N
SANS 61000-4- 11:2005	households, Electrical	Electromagnetic compatibility(EMC) - Part 4-11:Testing and measurement techniques-Voltage dips, short interruptions and voltage variations immunity tests	V-DIP:(0 ~ 100) %	BS	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	below ±30 kV	BS	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	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: below ±4 kV	BS	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: below ±6 kV	BS	N
SANS 61000-4- 6:2009	Electrical machinery for households, Electrical machinery for Industries	Electromagnetic compatibility(EMC) - Part 4-6:Testing and measurement techniques-Immunity to conducted disturbances, induced by radiofrequency fields	CS:150 kHz ~ 230 MHz	BS	N
SANS 61000-4- 6:2017	households, Electrical machinery for	Electromagnetic compatibility(EMC) - Part 4-6:Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	CS:150 kHz ~ 230 MHz	BS	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: below 100 A/m	BS	N
SANS 61000-6- 1:2005	Electrical machinery for households	Electromagnetic compatibility (EMC)- Part 6-1:Generic standards - Immunity for residential, commercial and light-industrial environments [exception] 3 phase connection equipment	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mt ~ 2.7 Gt EFT:±1 kV SURGE:±2 kV CS:150 kt ~ 80 Mt M/F:3 A/m V-DIP:(0 ~ 100) %	BS	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 residential, commercial and light-industrial environments [exception] 3 phase connection equipment	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 Mt ~ 2.7 Gt EFT:±2 kV SURGE:±2 kV CS:150 kt ~ 80 Mt M/F:30 A/m V-DIP:(0 ~ 100) %	BS	N
SANS 61000-6- 3:2011	Electrical machinery for households	Electromagnetic compatibility (EMC)- Part 6-3: Generic standards - Emission standard for residential, commercial and light - industrial environments	RE:30 Mz ~ 6 Gz CE:150 ktz ~ 30 Mz DCE:150 ktz ~ 30 Mz Harmonics: below 16 A Flicker: below 16 A	BS	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 Mtz ~ 6 Gtz CE:150 ktz ~ 30 Mtz DCE:150 ktz ~ 30 Mtz Harmonics: below 16 A Flicker: below 16 A	BS	N
SANS 61547:2012	Lighting devices	Equipment for general lighting purposes - EMC immunity requirements	ESD:±8 kV (Air) ±4 kV (Contact) RS:80 M½ ~ 1 (½ EFT:±2 kV SURGE:±2 kV CS:150 k½ ~ 80 M½ M/F:3 A/m V-DIP:(0 ~ 100) %	BS	N
VCCI 32-1-2:2016	households, Electrical	VALIDATION OF TEST SITES FOR RADIATED EMISSION MEASUREMENTS	RE:30 MHz ~ 18 GHz	BS	Y
VCCI-CISPR 32:2016	Wired/wireless communicatio n devices	Electromagnetic compatibility of multimedia equipment - Emission Requirements	RE:30 Mz ~ 6 Gb, CE:150 kb ~ 30 Mz Differential voltage: 30 Mz ~ 2 150 Mb	BS	N

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#### 03. Electrical Testing

03.012 Software

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
EN 50716:2023	Software	Railway Applications. Requirements for software development Table A.12	-	BS	Y
IEC 60335- 1:2010+AMD1:20 13+AMD2:2016	Software	Household and similar electrical appliances - Safety - Part 1: General requirements Annex R Software evaluation	-	BS	Y
IEC 60335-1:2020	Software	Household and similar electrical appliances - Safety - Part 1: General requirements Annex R Software evaluation	-	BS	Y
IEC 60730-1:2013	Software	Automatic electrical controls - Part 1: General requirements Annex H Requirements for electronic controls	-	BS	Y
IEC 60730- 1:2013/AMD1:201 5	Software	Automatic electrical controls - Part 1: General requirements Annex H Requirements for electronic controls	-	BS	Y
IEC 60730- 1:2013/AMD2:202 0	Software	Automatic electrical controls - Part 1: General requirements Annex H Requirements for electronic controls	-	BS	Υ
IEC 60730-1:2022	Software	Automatic electrical controls - Part 1: General requirements, Annex H Requirements related to functional safety	-	BS	Y

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 61508-3:2010	Software	Functional safety of electrical/electronic/pro grammable electronic safety-related systems - Part3: Software requirements	-	BS	Y
		Table B.1			
IEC 62279:2015	Software	Railway applications - Communication, signalling and processing systems - Software for railway control and protection systems	-	BS	Y
		Table A.12			
IEC 62304:2006/AMD 1:2015	Software	Medical device software - Software life cycle processes	-	BS	Y
ISO 26262-6:2018	Software	Road vehicles - Functional safety - Part 6: Product development at the software level 8.4.5, 9.4.2, Table 6	-	BS	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	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	Y
KC 60335-1:2022	Software	Household and similar electrical appliances - Safety - Part 1: General requirements Annex R Software evaluation	-	BS	Y

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KC 62619:2019	Software	Safety requirements for secondary lithium cells and batteries  Annex D Consideration of functional safety for battery management system	-	BS	Y
KC 62619:2023	Software	Safety requirements for secondary Lithium cells and batteries for use in industrial applications  Annex E Battery management system (considering functional safety)	-	BS	Y
KS C IEC 60730- 1:2015	Software	Automatic electrical controls - Part 1: General requirements Annex H Requirements for electronic controls	-	BS	Y
KS C IEC 60730- 1:2020	Software	Automatic electrical controls - Part 1: General requirements Annex H Requirements for electronic controls	-	BS	Y
KS C IEC 60730- 1:2022	Software	Automatic electrical controls - Part 1: General requirements, Annex H Requirements related to functional safety	-	BS	Y
KS P IEC 62304:2015	Software	Medical device software - Software life cycle processes	-	BS	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	Y

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	Y
MISRA C++:2008	Software	Guidelines for the use of the C++ language in critical systems	-	BS	Y
MISRA C:2012	Software	Guidelines for the use of the C language in critical systems		BS	Y

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#### 03. Electrical Testing

03.013 Energy Efficiency

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MOTIE Notice No. 2022-33 (2022.02.15.)	Electrical/elect ronics appliances	Regulation of standby program  [Accept only] 3. Printer 4. Facsimile 5. Copy machine 6. Scanner 7. Official replicator 10. Audio 11. DVD Player 12. Radiocassette 13. Microwave(oven) 15. Door phone 16. Wired or wireless telephones 17. Bdet 20. Hand dryers 21. Server 22. Digital converter	Input Voltage:Max. 300 V a.c., Input Current:Max. 20 A, Rated Input Frequency:(50 ~ 60) Hz, Temperature:(0 ~ 200) °C	BS	N
MOTIE Notification No.2024-169 (2024.10.29.)	Electrical/elect ronics appliances	Regulation of efficiency product [Accept only] 20. Adapter charger 26. TV monitor 42. Signage display 44. Monitor 49. Computer 50. Official repicator	Input Voltage:Max. 300 V a.c., Input Current:Max. 20 A a.c., Rated Input Frequency: (50 ~ 60) Hz, Temperature: (0 ~ 200) °C Adapter charger: 150 W or less, TV set:screen 47 cm ~ 216 cm or less, Signage display: screen 30.48 cm ~ 154.94 cm or less, Monitor: 153 cm or less	BS	N

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#### 03. Electrical Testing

03.014 Environmental and Reliability

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ES 95400-10:2013	Electrical materials and components	Environment Reliability test for Electronic Equipment for Vehicle [exception] 3.5.14 Ozone resistance test	Temperature: (-70 ~ 200) °C Humidity: (10 ~ 98) % R.H. Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 1 500) m/s² Temprature: 35 °C NaCl concentration: 5%	BS	N
ES 96100-02:2007	Electrical materials and components	CAR AUDIO (RADIO/CDC/CDP/AV) Reliability test standard	Temperature: (-70 ~ 200) °C Humidity: (10 ~ 98) % R.H. Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 1 500) m/s²	BS	N
IEC 60068-2- 11:2021	Electrical materials and components	Environmental testing - Part 2-11: Tests - Test Ka: Salt mist	Temprature: 35 °C NaCl concentration: 5 %	BS	N
IEC 60068-2- 13:2021	Electrical materials and components	Environmental testing procedures - Part 2-13: Tests - Test M: Low air pressure	Air Pressure : (7.1 ~ 101.33) kPa	BS	N
IEC 60068-2- 14:2023	Electrical materials and components	Environmental testing -Part2-14:Tests-Test N:Change of temperature  [Exception] 9. Test Nc:Rapid change of temperature, two- fluid-bath method	Temperature : (-70 ~ 150) ℃	BS	N
IEC 60068-2- 1:2007	Electrical materials and components	Environmental testing - Part 2-1:Tests - Tests A:Cold	Temperature : (-70 ~ 5) °C	BS	N
IEC 60068-2- 27:2008	Electrical materials and components	Environmental testing - Part2-27:Tests - Test Ea and guidance:Shock	Shock Acceleration: (1.1 ~ 1 500) m/s²	BS	N
IEC 60068-2- 2:2007	Electrical materials and components	Environmental testing - Part 2-2:Tests - Test B:Dry heat	Temperature : (30 ~ 200) ℃	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60068-2- 30:2005	Electrical materials and components	Environmental testing - Part 2-30:Tests - Test Db:Damp heat, cyclic (12 h + 12 h cycle)	Temperature : (10 ~ 90) °C Humidity : (10 ~ 98) % R.H.	BS	N
IEC 60068-2- 31:2008	Electrical materials and components	Environmental testing - Part 2-31:Tests - Test Ec:Rough handling shock, primarily for equipment- type specimens	Drop Height: (25 ~ 1 500) mm	BS	N
IEC 60068-2- 52:2017	Electrical materials and components	Environmental testing - Part 2-52:Tests - Test Kb:Salt mist, cyclic (sodium chloride solution)	Temprature: (15 ~ 35) °C, 40 °C NaCl concentration: 5 % Humidity: (45 ~ 55) % R.H., 93 % R.H.	BS	N
IEC 60068-2- 53:2010	Electrical materials and components	Environmental testing - Part 2-53:Tests and guidance - Combined climatic (temperature/humidity) and dynamic (vibration/shock) tests	Temperature: (-40 ~ 150) °C Humidity: (20 ~ 98) % R.H. Vibration Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 909) m/s²	BS	N
IEC 60068-2- 57:2013	Electrical materials and components	Environmental testing - Part 2-57:Tests - Test Ff:Vibration - Time- history and sine-beat method	Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s²	BS	N
IEC 60068-2- 64:2008+AMD1:2 019	Electrical materials and components	Environmental Testing - Part 2-64:Tests methods - Test Fh:Vibration, broad- band random and guidance	Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s²	BS	N
IEC 60068-2- 66:1994	Electrical materials and components	Environmental testing - Part 2:Test methods - Test Cx:Damp heat, steady state (unsaturated pressurized vapour)	Temperature : 110 ℃, 120 ℃, 130 ℃ Humidity : 85 % R.H.	BS	N
IEC 60068-2- 67:1995+AMD1:2 019	Electrical materials and components	Environmental testing - Part 2-67:Tests - Test Cy:Damp heat, steady state, accelerated test primarily intended for components	Temperature: (10 ~ 90) °C Humidity: (10 ~ 98) % R.H.	BS	N
IEC 60068-2- 6:2007	Electrical materials and components	Environmental testing - Part 2-6:Tests - Test Fc:Vibration (sinusoidal)	Frequency : (5 ~ 2 000) Hz Vibration Acceleration : (1.1 ~ 147) m/s²	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
IEC 60068-2- 78:2012	Electrical materials and components	Environmental testing - Part 2-78:Tests - Test Cab:Damp heat, steady state	Temperature: 30 ℃, 40℃ Humidity: (10 ~ 98) % R.H.	BS	N
IEC 60529:1989+A1:1 999+A2:2013	Electrical materials and components	Degrees of protection provided by enclosures (IP Code)	IPX1, IPX2, IPX3, IPX4, IPX5, IPX6, IPX7, IPX8, IPX9, IP1X, IP2X, IP3X ,IP4X ,IP5X ,IP6X	BS	N
IEC 60571:2012	Electrical materials and components	Railway applications - Electronic equipment used on rolling stock [exception] 12.2.7 Supply overvoltages 12.2.8 Surges, electrostatic discharge and transient burst susceptibility tests 12.2.9 Radio frequency test	Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 1 500) m/s² Temperature: (-70 ~ 150) °C Humidity: (10 ~ 98) % R.H. Temperature: 35 °C NaCl concentration: 5 %	BS	N
IEC 61373:2010	Electrical materials and components	Railway applications - Rolling stock equipment - Shock and vibration tests	Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s <sup>2</sup> Shock Acceleration: (1.1 ~ 1 500) m/s <sup>2</sup>	BS	N
ISO 16750-3:2023	Electrical materials and components	Road vehicles - Environmental conditions and testing for electrical and electronic equipment - Part 3:Mechanical loads [Exception] Test X — Passenger car, components on fuel rail (gasoline engine with GDI-system)	Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 1 500) m/s² Drop Height: (25 ~ 1 500) mm	BS	N
ISO 16750-4:2023	Electrical materials and components	Road vehicles - Environmental conditions and testing for electrical and electronic equipment- Part4: Climatic loads  [Exception] 5.4 Ice water shock test, 5.8 Corrosion test with flow of mixed gas, 5.9 Solar radiation	Temperature: (-70 ~ 200) °C Humidity: (10 ~ 98) % R.H. Temprature: 35 °C NaCl concentration: 5	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
ISO 20653:2023	Electrical materials and components	Road vehicles — Degrees of protection(IP code) — Protection of electrical equipment against foreign objects, water and access	IPX1, IPX2, IPX3, IPX4, IPX4K, IPX5, IPX6, IPX6K, IPX7, IPX8, IPX9K, IP1X, IP2X, IP3X, IP4X ,IP5KX, IP6KX	BS	N
KS C 7620:2003	Electrical materials and components	Railway car luminaries for fluorescent lamps  [exception] 7.2 Characteristic test 7.8 Life cycle test 7.11 Luminous flux rate test 7.13 Noise strength test	Voltage: DC 24 V, DC 100 V Current: (0 ~ 200) A Temperature: (0 ~ 200) °C	BS	N
KS C IEC 60068-2- 11:2021	Electrical materials and components	Basic environmental testing procedures - Part 2-11:Tests - Test Ka:Salt mist	Temprature: 35 °C NaCl concentration: 5 %	BS	N
KS C IEC 60068-2- 13:2021	Electrical materials and components	Basic environmental testing procedures - Part 2-13:Tests - Test M: Low air pressure	Air Pressure : (7.1 ~ 101.33) kPa	BS	N
KS C IEC 60068-2- 14:2023	Electrical materials and components	Environmental testing - Part2-14:Tests - Test N:Change of temperature [Exception] 9. Test Nc:Rapid change of temperature, two- fluid-bath method	Temperature : (-70 ~ 150) ℃	BS	N
KS C IEC 60068-2- 1:2007	Electrical materials and components	Environmental testing - Part 2-1:Tests - Tests A:Cold	Temperature : (-70 ~ 5) ℃	BS	N
KS C IEC 60068-2- 27:2008	Electrical materials and components	Environmental testing - Part2-27:Tests - Test Ea and guidance:Shock	Shock Acceleration : (1.1 ~ 1 500) m/s²	BS	N
KS C IEC 60068-2- 2:2007	Electrical materials and components	Environmental testing - Part 2-2:Tests - Test B:Dry heat	Temperature : (30 ~ 200) ℃	BS	N
KS C IEC 60068-2- 30:2005	Electrical materials and components	Environmental testing - Part 2-30:Tests - Test Db:Damp heat, cyclic (12 h + 12 h cycle)	Temperature : (10 ~ 90) °C Humidity : (10 ~ 98) % R.H.	BS	N
KS C IEC 60068-2- 31:2008	Electrical materials and components	Environmental testing - Part 2-31:Tests - Test Ec:Rough handling shock, primarily for equipment - type specimens	Drop hight: (25 ~ 1 500) mm	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60068-2- 38:2021	Electrical materials and components	Environmental testing - Part 2-38: Tests - Test Z/AD: Composite temperature/humidity cyclic test	Temperature : (-10 ~ 90) °C Humidity : (10 ~ 98) % R.H.	BS	N
KS C IEC 60068-2- 52:2017	Electrical materials and components	Environmental testing - Part 2-52:Tests - Test Kb:Salt mist, cyclic (sodium chloride solution)	Temprature: (15 ~ 35) °C, 40 °C NaCl concentration: 5 % Humidity: (45 ~ 55) % R.H., 93 % R.H.	BS	N
KS C IEC 60068-2- 53:2010	Electrical materials and components	Environmental testing - Part 2-53:Tests and guidance - Combined climatic (temperature/humidity) and dynamic (vibration/shock) tests	Temperature: (-40 ~ 150) °C Humidity: (20 ~ 98) % R.H Vibration Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 909) m/s²	BS	N
KS C IEC 60068-2- 57:2013	Electrical materials and components	Environmental testing - Part 2-57:Tests - Test Ff:Vibration - Time- history and sine-beat method	Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s²	BS	N
KS C IEC 60068-2- 64:2019	Electrical materials and components	Environmental Testing - Part 2-64:Tests methods - Test Fh:Vibration, broad-band random and guidance	Frequency : (5 ~ 2 000) Hz Vibration Acceleration : (1.1 ~ 147) m/s²	BS	N
KS C IEC 60068-2- 67:2019	Electrical materials and components	Environmental testing - Part 2-67:Tests - Test Cy:Damp heat, steady state, accelerated test primarily intended for components	Temperature: (10 ~ 90) °C Humidity: (10 ~ 98) % R.H.	BS	N
KS C IEC 60068-2- 6:2015	Electrical materials and components	Environmental testing - Part 2-6:Tests - Test Fc:Vibration (sinusoidal)	Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s²	BS	N
KS C IEC 60068-2- 78:2012	Electrical materials and components	Environmental testing - Part 2-78:Tests - Test Cab:Damp heat, steady state	Temperature : 30 ℃, 40 ℃ Humidity : (10 ~ 98) % R.H.	BS	N
KS C IEC 60068-3- 4:2001	Electrical materials and components	Environmental testing - Part 3-4:Supporting documentation and guidance - Damp heat tests	Temperature: (10 ~ 90) °C Humidity: (10 ~ 98) % R.H.	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
KS C IEC 60255- 21-1:1988	Electrical materials and components	Electrical relays - Part 21:Vibration, shock, bump and seismic tests on measuring relays and protection equipment - section one:Vibration test (sinusoidal)	Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s²	BS	N
KS C IEC 60255- 21-2:1988	Electrical materials and components	Electrical relays - Part 21:Vibration, shock, bump and seismic tests on measuring relays and protection equipment - section two:Shock and bump tests	Frequency: (5 ~ 2 000) Hz Shock Acceleration: (1.1 ~ 1 500) m/s²	BS	N
		[exception] Bump test	IPX1, IPX2, IPX3, IPX4,		
KS C IEC 60529:2013	Electrical materials and components	Degrees of protection provided by enclosures (IP Code)	IPX5, IPX6, IPX7, IPX8, IPX9, IP1X, IP2X, IP3X, IP4X, IP5X, IP6X	BS	N
KS C IEC 60571:2012	Electrical materials and components	Railway applications - Electronic equipment used on rolling stock  [exception] 12.2.7 Supply overvoltages 12.2.8 Surges, electrostatic discharge and transient burst susceptibility tests 12.2.9 Radio frequency test	Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 1 500) m/s² Temperature: (-70 ~ 150) °C Humidity: (10 ~ 98) % R.H. Temperature: 35 °C NaCl concentration: 5 %	BS	N
KS C IEC 61373:2010	Electrical materials and components	Railway applications - Rolling stock equipment - Shock and vibration tests	Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 1 500) m/s²	BS	N
KS R 1034:2023	Electrical materials and components	Vibration testing methods for automobile parts	Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s²	BS	N
KS R 9144:2021	Electrical materials and components	Test methods for vibration of parts of railway rolling stock	Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s²	BS	N
KS R 9186:2021	Electrical materials and components	Parts for railway signal - Vibration test methods	Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s²	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-PRF- 28800F:1996	Electrical materials and components	PERFORMANCE SPECIFICATION TEST EQUIPMENT FOR USE WITH ELECTRICAL AND ELECTRONIC EQUIPMENT, GENERAL SPECIFICATION FOR 4.5.3.1 c. Environmental Stress Screening (random vibration) 4.5.3.1 d. Environmental Stress Screening (temperature cycling) 4.5.5.1 Temperature and Humidity Tests 4.5.5.2 Altitude Test 4.5.5.3.1 Random Vibration Test 4.5.5.3.2 Sinusoidal Vibration Test 4.5.5.4.1 Functional Shock Test 4.5.5.4.2 Transit drop test 4.5.5.4.3 Bench handling test 4.5.5.5.1 Watertight Test, Class 1 and air tight transit case 4.5.6.2 Salt Fog Tests	Frequency: (10 ~ 2 000) Hz Temperature: (-51 ~ 71) °C Humidity: (10 ~ 98) % R.H. Altitude: 4 600 m Shock Acceleration: 294 % Depth of Immersion: 0.9 m Temprature:35 °C, NaCl concentration:5	BS	Z
MIL-STD-167- 1:1974	Electrical materials and components	MECHANICAL VIBRATIONS OF SHIPBOARD EQUIPMENT (TYPE I - ENVIRONMENTAL VIBRATION)	Frequency: (4 ~ 50) Hz	BS	N
MIL-STD-167- 1A:2005	Electrical materials and components	MECHANICAL VIBRATIONS OF SHIPBOARD EQUIPMENT (TYPE I - ENVIRONMENTAL VIBRATION)	Frequency: (4 ~ 33) Hz	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD- 202G:2002	Electrical materials and components	TEST METHOD STANDARD ELECTRONIC AND ELECTRICAL COMPONENT PARTS 101E Salt Atmosphere (Corrosion) 103B Humidity (Steady State) 105C Barometric Pressure (Reduced) 106G Moisture Resistance 107G Thermal Shock Table 107-I 108A LIFE (At Elevated Ambient Temperature) 201A Vibration 204D Vibration, High Frequency 213B Shock (Specified Pulse) 214A Random Vibration	Air Pressure: (11.6 ~ 101.33) kPa Temperature: (-70 ~ 200) °C Humidity: (10 ~ 98) % R.H. NaCl concentration: 5 % Frequency: (4 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 980) m/s²	BS	N
MIL-STD- 202H:2015	Electrical materials and components	TEST METHOD STANDARD ELECTRONIC AND ELECTRICAL COMPONENT PARTS 101 Salt Atmosphere (Corrosion) 103 Humidity (Steady State) 105 Barometric Pressure (Reduced) 106 Moisture Resistance 107 Thermal Shock Table 107-I 108 LIFE (At Elevated Ambient Temperature) 201 Vibration 204 Vibration, High Frequency 213 Shock (Specified Pulse) 214 Random Vibration	Air Pressure: (11.6 ~ 101.33) kPa Temperature: (-70 ~ 200) °C Humidity: (10 ~ 98) % R.H. NaCl concentration: 5 % Frequency: (4 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 980) m/s²	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD- 810C:1975	Electrical materials and components	Environmental Test Methods 501.1 High Temperature 502.1 Low Temperature 503.1 Temperature Shock 507.1 Humidity 514.2 Vibration 516.2 Shock 519.2 Gunfire Vibration, AIRCRAFT	Temperature: (-70 ~ 150) °C Temperature: (60 ~ 200) °C Temperature: (-65 ~ 0) °C Temperature: (10 ~ 90) °C Humidity: (10 ~ 98) % R.H. Frequency: (5 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 980) m/s²	BS	N
MIL-STD- 810E:1989	Electrical materials and components	ENVIRONMENTAL TEST METHODS AND ENGINEERING GUIDELINES 500.3 Low Pressure (Altitude) Procedure I - Operation 501.3 High temperature 502.3 Low temperature 502.3 Low temperature 503.3 Temperature 509.3 Salt Fog 514.4 Vibration [Exception] Category 2 - Large Assembly Transport Category 3 - Loose Cargo Transport 516.4 Shock [Exception] Procedure VIII - Pyrotechnic shock Procedure VIII - Rail impact Procedure IX - Catapult launch/arrested landing 519.4 GUNFIRE VIBRATION, AIRCRAFT	Air Pressure: (7.1 ~ 101.33) kPa Temperature: (-70 ~ 150) °C Temperature: (60 ~ 200) °C Temperature: (-65 ~ 0) °C Temperature: (10 ~ 90) °C, Humidity: (10 ~ 98) % R.H. Temperature: 35 °C, NaCl concentration: 5%, Frequency: (5 ~ 2 000) Hz, Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 980) m/s²	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD- 810F:2000	Electrical materials and components	TEST METHOD STANDARD FOR 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 503.4 Temperature 503.4 Immersion Procedure I - Immersion 514.5 Vibration [Exception] Category 5 - Truck/trailer/tracked - loose cargo 516.5 Shock [Exception] Procedure VIII - Rail impact Procedure VIII - Catapult Launch/Arrested Landing 519.5 Gunfire Vibration 520.2 Temperature, Humidity, Vibration, and Altitude	Air Pressure: (7.1 ~ 101.33) kPa Temperature: (-70 ~ 150) °C Temperature: (60 ~ 200) °C Temperature: (-65 ~ 0) °C Temperature: (10 ~ 90) °C, Humidity: (10 ~ 98) % R.H. Temperature: 35 °C, NaCl concentration: 5%, Frequency: (5 ~ 2 000) Hz, Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 980) m/s² Depth of Immersion: 1000 mm	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD- 810F:2003	Electrical materials and components	TEST METHOD STANDARD FOR 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 503.4 Temperature 509.4 Salt Fog 512.4 Immersion Procedure I - Immersion 514.5 Vibration [Exception] Category 5 - Truck/trailer/tracked - loose cargo 516.5 Shock [Exception] Procedure VIII - Rail impact Procedure VIII - Catapult Launch/Arrested Landing 519.5 Gunfire Vibration 520.2 Temperature, Humidity, Vibration, and Altitude	Air Pressure: (7.1 ~ 101.33) kPa Temperature: (-70 ~ 150) °C Temperature: (60 ~ 200) °C Temperature: (-65 ~ 0) °C Temperature: (10 ~ 90) °C, Humidity: (10 ~ 98) % R.H. Temperature: 35 °C, NaCl concentration: 5%, Frequency: (5 ~ 2 000) Hz, Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 980) m/s² Depth of Immersion: 1000 mm	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810G CHG1:2014	Electrical materials and components	TEST METHOD STANDARD 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 502.6 Low temperature 503.6 Temperature 509.6 Salt Fog 512.6 Immersion Procedure I - Immersion 514.7 Vibration [Exception] Category 5 - Truck/trailer - Loose Cargo 516.7 Shock [Exception] Procedure VI - Bench Handling Procedure VII - Pendulum Impact Procedure VII - Pendulum Impact Procedure VIII - Catapult Lanch/Arrested Landing 519.7 Gunfire Shock 520.4 Temperature, Humidity, Vibration, and Altitude 528.1 Mechanical Vibrations Of Shipboard Materiel (Type I - ENVIRONMENTAL VIBRATION)	Air Pressure: (7.1 ~ 101.33) kPa Temperature: (-70 ~ 150) °C Temperature: (60 ~ 200) °C Temperature: (-65 ~ 0) °C Temperature: (10 ~ 90) °C, Humidity: (10 ~ 98) % R.H. Temperature: 35 °C, NaCl concentration: 5%, Frequency: (4 ~ 2 000) Hz, Vibration Acceleration: (1.1 ~ 147) m/s °Shock Acceleration: (1.1 ~ 980) m/s °Depth of Immersion: 1000 mm	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD- 810G:2008	Electrical materials and components	TEST METHOD STANDARD ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS  500.5 Low Pressure (Altitude) Procedure I - Storage/Air Transport. Procedure II - Operation/Air Carriage. 501.5 High temperature 502.5 Low temperature 503.5 Temperature 503.5 Temperature shock 507.5 Humidity 509.5 Salt Fog 512.5 Immersion Procedure I - Immersion 514.6 Vibration [Exception] Category 5 - Truck/Trailer/Tracked - Loose Cargo 516.6 Shock [Exception] Procedure VIII - Pendulum Impact Procedure VIII - Catapult Launch/Arrested Landing 519.6 Gunfire Shock 520.3 Temperature, Humidity, Vibration, and Altitude 528 MECHANICAL VIBRATIONS OF SHIPBOARD EQUIPMENT (TYPE I - ENVIRONMENTAL VIBRATION)	101.33) kPa  Temperature: (-70 ~  150) ℃	BS	Z

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD-810H w/Change 1:2022	Electrical materials and components	TEST METHOD STANDARD ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS 500.6 Low Pressure (Altitude) Procedure I - Storage/Air Transport. Procedure II - Operation/Air Carriage. 501.7 High temperature 502.7 Low temperature 503.7 Temperature 503.7 Temperature 509.8 Salt Fog / Corrosive Environments [Exception] Procedure III - Natural Environment 512.6 Immersion Procedure I - Immersion 514.8 Vibration [Exception] Category 5 - Truck/trailer - Loose Cargo 516.8 Shock [Exception] Procedure VIII - Pendulum Impact Procedure VIII - Pendulum Impact Procedure VIII - Stapple	Air Pressure: (7.1 ~ 101.33) kPa Temperature: (-70 ~ 150) °C Temperature: (60 ~ 200) °C Temperature: (-65 ~ 0) °C Temperature: (10 ~ 90) °C, Humidity: (10 ~ 98) % R.H. Temperature: 35 °C, NaCl concentration: 5%, Frequency: (4 ~ 2 000) Hz, Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 980) m/s² Depth of Immersion: 1000 mm	BS	N

Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
MIL-STD- 810H:2019	Electrical materials and components	TEST METHOD STANDARD ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS 500.6 Low Pressure (Altitude) Procedure I - Storage/Air Transport. Procedure II - Operation/Air Carriage. 501.7 High temperature 502.7 Low temperature 503.7 Temperature 503.7 Temperature shock 507.6 Humidity 509.7 Salt Fog 512.6 Immersion Procedure I - Immersion 514.8 Vibration [Exception] Category 5 - Truck/trailer - Loose Cargo 516.8 Shock [Exception] Procedure VII - Pendulum Impact Procedure VIII - Pendulum Impact Procedure VIII - Stapple Shock (Procedure III) 520.5 Combined Environments 528.1 MECHANICAL VIBRATIONS OF SHIPBOARD EQUIPMENT (TYPE I - ENVIRONMENTAL VIBRATION)	Air Pressure: (7.1 ~ 101.33) kPa Temperature: (-70 ~ 150) °C Temperature: (60 ~ 200) °C Temperature: (-65 ~ 0) °C Temperature: (10 ~ 90) °C, Humidity: (10 ~ 98) % R.H. Temperature: 35 °C, NaCl concentration: 5%, Frequency: (4 ~ 2 000) Hz, Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 980) m/s² Depth of Immersion: 1000 mm	BS	N

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Test method	Materials/ Products	Standard designation	Test range	Site	Field testing
RTCA DO- 160G:2010	Electrical materials and components	ENVIRONMENTAL CONDITIONS AND TEST PROCEDURES FOR AIRBORNE EQUIPMENT Section 4 Temperature and Altitude [Exception] 4.6.2 Decompression Test 4.6.3 Overpressure Test Section 5 Temperature Variation Section 6 Humidity Section 7 Operational Shocks and Crash Safety [Exception] 7.3.3 Test Procedure 2 (Sustained) Section 8 Vibration Section 14 Salt Fog	Air Pressure: (9.12 ~ 101.33) kPa Temperature: (-55 ~ 85) °C Humidity: (10 ~ 98) % R.H. NaCl concentration: 5 % Frequency: (4 ~ 2 000) Hz Vibration Acceleration: (1.1 ~ 147) m/s² Shock Acceleration: (1.1 ~ 400) m/s²	BS	N

End.