

# TEST REPORT

**Report No. :** STS200604001001E

**Product :** Mobile Phone

**Model No. :** BV6300Pro

**Applicant :** DOKE COMMUNICATION (HK) LIMITED

**Address :** RM 1902 EASEY COMM BLDG 253-261 HENNESSY ROAD  
WANCHAI HK

**Issued by :** Shenzhen NTEK Testing Technology Co., Ltd.



**Lab** 1/F, Building E, Fenda Science Park, Sanwei Community,

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|  |  |
|--|--|
| <p><b>TEST REPORT</b><br/> <b>IEC/EN 62368-1</b><br/> <b>Audio/video, information and communication technology equipment</b><br/> <b>Part 1: Safety requirements</b></p>                 |  |
| <p><b>Report Number</b>..... : STS200604001001E</p>  |  |
| <p><b>Tested by (name + signature)</b>..... : Keny Fu</p>  |  |
| <p><b>Approved by (name + signature)</b>..... : Helen Lin</p>  |  |
| <p><b>Date of issue</b>..... : 2020-06-24</p>  |  |
| <p><b>Testing Laboratory</b>..... Shenzhen NTEK Testing Technology Co., Ltd.</p>   |  |
| <p><b>Address</b>..... 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China</p>  |  |
| <p><b>Applicant's name</b> ..... : DOKE COMMUNICATION (HK) LIMITED</p>   |  |
| <p><b>Address</b>..... : RM 1902 EASEY COMM BLDG 253-261 HENNESSY ROAD WANCHAI HK</p>  |  |
| <p><b>Test specification:</b></p>  |  |
| <p><b>Standard</b> ..... : <input type="checkbox"/> IEC 62368-1:2014 (Second Edition)<br/> <input checked="" type="checkbox"/> EN 62368-1:2014+A11:2017</p>                              |  |
| <p><b>Test procedure</b>..... : CE Scheme</p>  |  |
| <p><b>Non-standard test method</b>..... : N/A</p>  |  |
| <p><b>Test Report Form No.</b>..... : IEC62368_1B</p>  |  |
| <p><b>Test Report Form(s) Originator</b> ..... : UL(US)</p>  |  |
| <p><b>Master TRF</b>..... : 2014-03</p>  |  |
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| <p><b>Test Item description</b> ..... Mobile Phone</p>   |  |
| <p><b>Trade Mark</b> ..... Blackview</p>   |  |
| <p><b>Manufacturer</b>..... Shenzhen DOKE Electronic Co., Ltd</p>  |  |
| <p><b>Manufacturer address</b>..... 8th floor, building 3, hanhaida science and technology innovation park, yulv village, guangming new district, shenzhen city, guangdong province</p>  |  |
| <p><b>Model/Type reference</b> ..... BV6300Pro</p>   |  |
| <p><b>Ratings</b> ..... Input: 5VDC, 2A</p>  |  |

| TEST ITEM PARTICULARS:   |   |
|--|---|
| Classification of use by .....   | <input checked="" type="checkbox"/> Ordinary person<br><input type="checkbox"/> Instructed person<br><input type="checkbox"/> Skilled person<br><input checked="" type="checkbox"/> Children likely to be present   |
| Supply Connection.....   | <input type="checkbox"/> AC Mains <input type="checkbox"/> DC Mains<br><input checked="" type="checkbox"/> External Circuit - not Mains connected<br>- <input checked="" type="checkbox"/> ES1 <input type="checkbox"/> ES2 <input type="checkbox"/> ES3  |
| Supply % Tolerance .....   | <input type="checkbox"/> +10%/-10%<br><input type="checkbox"/> +20%/-15%<br><input type="checkbox"/> +25%/-15%<br><input checked="" type="checkbox"/> None  |
| Supply Connection – Type .....   | <input type="checkbox"/> pluggable equipment type A -<br><input type="checkbox"/> non-detachable supply cord<br><input type="checkbox"/> appliance coupler<br><input type="checkbox"/> direct plug-in<br><input type="checkbox"/> mating connector<br><input type="checkbox"/> pluggable equipment type B -<br><input type="checkbox"/> non-detachable supply cord<br><input type="checkbox"/> appliance coupler<br><input type="checkbox"/> permanent connection<br><input type="checkbox"/> mating connector <input checked="" type="checkbox"/> other: <u>Type C connector</u> |
| Considered current rating of protective device as part of building or equipment installation ..... | N/A (Not directly connected to mains)<br>Installation location: <input type="checkbox"/> building; <input type="checkbox"/> equipment   |
| Equipment mobility .....   | <input checked="" type="checkbox"/> movable <input checked="" type="checkbox"/> hand-held <input checked="" type="checkbox"/> transportable<br><input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in<br><input type="checkbox"/> rack-mounting <input type="checkbox"/> wall-mounted   |
| Over voltage category (OVC) .....  | <input type="checkbox"/> OVC I <input type="checkbox"/> OVC II <input type="checkbox"/> OVC III<br><input type="checkbox"/> OVC IV <input checked="" type="checkbox"/> other: (Not directly connected to mains)   |
| Class of equipment .....   | <input type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" type="checkbox"/> Class III  |
| Access location .....  | <input type="checkbox"/> restricted access location <input checked="" type="checkbox"/> N/A   |
| Pollution degree (PD) .....  | <input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3  |
| Manufacturer's specified maximum operating ambient:  | 35 °C   |
| IP protection class .....  | <input checked="" type="checkbox"/> IP20 <input type="checkbox"/> IP__  |
| Power Systems .....  | <input type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT - 230 V <sub>L-L</sub>  |
| Altitude during operation (m) .....  | <input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> 5000 m  |
| Altitude of test laboratory (m) .....  | <input type="checkbox"/> 2000 m or less <input checked="" type="checkbox"/> 500 m   |
| Mass of equipment (kg) .....   | <input checked="" type="checkbox"/> approx. 0.229kg   |

|   |                          |
|---|--------------------------|
| <b>POSSIBLE TEST CASE VERDICTS:</b>   |                          |
| - test case does not apply to the test object..... :  | N/A                      |
| - test object does meet the requirement ..... :   | P (Pass)                 |
| - test object does not meet the requirement ..... :   | F (Fail)                 |
| <b>TESTING:</b>   |                          |
| Date of receipt of test item..... :   | 2020-06-15               |
| Date (s) of performance of tests..... :   | 2020-06-15 to 2020-06-22 |
| <b>GENERAL PRODUCT INFORMATION:</b>   |                          |
| <p><b>Product Description –</b></p> <p>-The maximum operating temperature is 35°C.</p> <p>-A power source unit with output rating 5VDC, 2A was used during the tests.</p> <p>The unit shall be charged by approved external approved adapter according to IEC/EN 62368-1 and meet LPS requirements. The external power adapter rated parameter is “input: AC 100V-240V, 50/60Hz, 0.6A; output: DC 5/7/9V, 2A, DC 12V, 1.5A”.</p> <p>-Information of battery pack:</p> <ul style="list-style-type: none"> <li>- Highest specified charging temperature: 60°C</li> <li>- Lowest specified charging temperature: 0°C</li> <li>- Maximum specified charging current: 4.0A</li> <li>- Maximum specified charging voltage: 4.4VDC</li> </ul>  |                          |
| <p><b>Model Differences – Designation model is different only.</b></p> <ul style="list-style-type: none"> <li>- N/A</li> </ul>  |                          |
| <p><b>Additional application considerations – (Considerations used to test a component or sub-assembly) –</b></p> <ul style="list-style-type: none"> <li>- N/A</li> </ul>   |                          |
| <p><b>Copy of marking plate:</b></p> <div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 10px auto;"> <p>Model: BV6300Pro <span style="float: right;">Color:Black</span></p>  <p>IMEI1:5468634634644164131</p>  <p>IMEI2:5468634634644164131</p>  <p>SN:5468634634644164131</p> <p>Shenzhen DOKE Electronic Co., Ltd<br/>801, Building3, 7th Industrial Zone, Yulv Community,<br/>Yutang Road, Guangming District, Shenzhen, China</p> <p>Importer:xxx<br/>Add: xxx</p> <div style="float: right; text-align: center;"> <br/> <br/> <p>Made in PRC</p> </div> </div> |                          |
| <p><b>Remark:</b></p> <p>-The above markings are the minimum requirements required by the safety standard. For the final production samples, the additional markings which do not give rise to misunderstanding may be added.</p> <p>-The CE marking and WEEE symbol (if any) should be at least 5.0 mm and 7.0 mm respectively in height.</p> <p>-The manufacturer and importer detail information are showed in instructions.</p>   |                          |

| <b>ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:</b>   |  |
|---|--|
| (Note 1: Identify the following six (6) energy source forms based on the origin of the energy.)<br>(Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.) |  |
| <b>Electrically-caused injury (Clause 5):</b><br>(Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification)<br>Example: +5 V dc input <span style="float: right;">ES1</span>  |  |
| <b>Source of electrical energy</b>  | <b>Corresponding classification (ES)</b> |
| Internal circuits   | ES1                                      |
| Type C input port   | ES1                                      |
| <b>Electrically-caused fire (Clause 6):</b><br>(Note: List sub-assembly or circuit designation and corresponding energy source classification)<br>Example: Battery pack (maximum 85 watts): <span style="float: right;">PS2</span>  |  |
| <b>Source of power or PIS</b>   | <b>Corresponding classification (PS)</b> |
| Internal circuits   | PS1                                      |
| Battery pack/cell output  | PS2(Resistive PIS)                       |
| <b>Injury caused by hazardous substances (Clause 7)</b><br>(Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.)<br>Example: Liquid in filled component <span style="float: right;">Glycol</span>   |  |
| <b>Source of hazardous substances</b>   | <b>Corresponding chemical</b>            |
| Battery   | Complied with annex M                    |
| <b>Mechanically-caused injury (Clause 8)</b><br>(Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.)<br>Example: Wall mount unit <span style="float: right;">MS2</span>   |  |
| <b>Source of kinetic/mechanical energy</b>  | <b>Corresponding classification (MS)</b> |
| Sharp edges and corners of accessible parts   | MS1                                      |
| Product mass  | MS1                                      |
| <b>Thermal burn injury (Clause 9)</b><br>(Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.)<br>Example: Hand-held scanner – thermoplastic enclosure <span style="float: right;">TS1</span>  |  |
| <b>Source of thermal energy</b>   | <b>Corresponding classification (TS)</b> |
| Accessible parts  | TS1                                      |
| <b>Radiation (Clause 10)</b><br>(Note: List the types of radiation present in the product and the corresponding energy source classification.)<br>Example: DVD – Class 1 Laser Product <span style="float: right;">RS1</span>   |  |
| <b>Type of radiation</b>  | <b>Corresponding classification (RS)</b> |
| LED   | RS1                                      |

**ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:**

|          |     |
|----------|-----|
| Acoustic | RS1 |
|----------|-----|

**ENERGY SOURCE DIAGRAM**

Indicate which energy sources are included in the energy source diagram. Insert diagram below

ES     PS     MS     TS     RS

Remark: N/A

| OVERVIEW OF EMPLOYED SAFEGUARDS                           |  |  |  |                           |
|---|--|--|--|---------------------------|
| Clause  | Possible Hazard                                  |  |  |                           |
| 5.1   | Electrically-caused injury                       |  |  |                           |
| Body Part<br>(e.g. Ordinary)                              | Energy Source<br>(ES3: Primary Filter circuit)   | Safeguards   |  |                           |
|   |  | Basic  | Supplementary  | Reinforced<br>(Enclosure) |
| Ordinary person,<br>Skilled person                        | ES1: Internal circuits<br>ES1: Type C input port | N/A  | N/A  | N/A                       |
| 6.1   | Electrically-caused fire                         |  |  |                           |
| Material part<br>(e.g. mouse enclosure)                   | Energy Source<br>(PS2: 100 Watt circuit)         | Safeguards   |  |                           |
|   |  | Basic  | Supplementary  | Reinforced                |
| Internal combustible material/ internal plastic enclosure | PS1: Internal circuits<br>PS2: Battery pack/cell | 1, No ignition occurred.<br>2, No parts exceeding 90% of its spontaneous ignition temperature. | 1, PCB is complied with V-0 material.<br>2, All other components: at least V-2 except for mounted on V-0 material or small parts of combustible material.<br>3, V-0 enclosure used | N/A                       |
| 7.1   | Injury caused by hazardous substances            |  |  |                           |
| Body Part<br>(e.g., skilled)                              | Energy Source<br>(hazardous material)            | Safeguards   |  |                           |
|   |  | Basic  | Supplementary  | Reinforced                |
| Battery pack  | Complied with annex M                            | N/A  | N/A  | N/A                       |
| 8.1   | Mechanically-caused injury                       |  |  |                           |
| Body Part<br>(e.g. Ordinary)                              | Energy Source<br>(MS3: High Pressure Lamp)       | Safeguards   |  |                           |
|   |  | Basic  | Supplementary  | Reinforced<br>(Enclosure) |
| Ordinary person,<br>Skilled person                        | MS1: Sharp edges and corners of accessible parts | N/A  | N/A  | N/A                       |
| Ordinary person,<br>Skilled person                        | MS1: Product mass                                | N/A  | N/A  | N/A                       |
| 9.1   | Thermal Burn                                     |  |  |                           |
| Body Part<br>(e.g., Ordinary)                             | Energy Source<br>(TS2)                           | Safeguards   |  |                           |
|   |  | Basic  | Supplementary  | Reinforced                |
| Ordinary person,<br>Skilled person                        | TS1: Accessible parts                            | N/A  | N/A  | N/A                       |

| 10.1  | Radiation                                 |            |               |            |
|---|---|------------|---------------|------------|
| Body Part<br>(e.g., Ordinary)   | Energy Source<br>(Output from audio port) | Safeguards |               |            |
|   |   | Basic      | Supplementary | Reinforced |
| Ordinary person,<br>Skilled person  | RS1: LED                                  | N/A        | N/A           | N/A        |
| Ordinary person,<br>Skilled person  | RS1: Acoustic                             | N/A        | N/A           | N/A        |
| Supplementary Information:<br>(1) See attached energy source diagram for additional details.<br>(2) "N" – Normal Condition; "A" – Abnormal Condition; "S" Single Fault. |   |            |               |            |



| IEC/EN 62368-1 |                    |                 |         |
|----------------|--------------------|-----------------|---------|
| Clause         | Requirement + Test | Result - Remark | Verdict |

| 4       | GENERAL REQUIREMENTS   |   | P   |
|---------|--|---|-----|
| 4.1.1   | Acceptance of materials, components and subassemblies                  |   | P   |
| 4.1.2   | Use of components  | (See appended table 4.1.2)                            | P   |
| 4.1.3   | Equipment design and construction                                      |   | P   |
| 4.1.15  | Markings and instructions.....:  | (See Annex F)   | P   |
| 4.4.4   | Safeguard robustness   |   | P   |
| 4.4.4.2 | Steady force tests.....:   | (See Annex T.4)                                       | P   |
| 4.4.4.3 | Drop tests .....   | (See Annex T.7)                                       | P   |
| 4.4.4.4 | Impact tests .....   |   | N/A |
| 4.4.4.5 | Internal accessible safeguard enclosure and barrier tests.....:        | No such enclosure and barrier                         | N/A |
| 4.4.4.6 | Glass Impact tests .....   | Surface area not exceeding 0.1m <sup>2</sup>          | N/A |
| 4.4.4.7 | Thermoplastic material tests .....                                     | (See Annex T.8)                                       | P   |
| 4.4.4.8 | Air comprising a safeguard.....:                                       | Considered, but no such barrier or enclosure provided | N/A |
| 4.4.4.9 | Accessibility and safeguard effectiveness                              | All safeguards remain effective                       | P   |
| 4.5     | Explosion  |   | P   |
| 4.6     | Fixing of conductors   |   | P   |
| 4.6.1   | Fix conductors not to defeat a safeguard                               |   | P   |
| 4.6.2   | 10 N force test applied to .....                                       |   | P   |
| 4.7     | Equipment for direct insertion into mains socket - outlets             | No such apparatus                                     | N/A |
| 4.7.2   | Mains plug part complies with the relevant standard.....:              |   | N/A |
| 4.7.3   | Torque (Nm) .....  |   | N/A |
| 4.8     | Products containing coin/button cell batteries                         | No coin/button cell batteries used                    | N/A |
| 4.8.2   | Instructional safeguard  |   | N/A |
| 4.8.3   | Battery Compartment Construction                                       |   | N/A |
|         | Means to reduce the possibility of children removing the battery ..... |   | —   |
| 4.8.4   | Battery Compartment Mechanical Tests .....                             |   | N/A |
| 4.8.5   | Battery Accessibility  |   | N/A |
| 4.9     | Likelihood of fire or shock due to entry of conductive object.....:    | (See Annex P)   | P   |

| IEC/EN 62368-1 |   |  |          |
|----------------|---|--|----------|
| Clause         | Requirement + Test  | Result - Remark  | Verdict  |
| <b>5</b>       | <b>ELECTRICALLY-CAUSED INJURY</b>   |  | <b>P</b> |
| 5.2.1          | Electrical energy source classifications..... :                                       | (See appended table 5.2)   | P        |
| 5.2.2          | ES1, ES2 and ES3 limits   |  | P        |
| 5.2.2.2        | Steady-state voltage and current..... :   | (See appended table 5.2)   | P        |
| 5.2.2.3        | Capacitance limits .....  |  | N/A      |
| 5.2.2.4        | Single pulse limits .....   | No single pulse introduced   | N/A      |
| 5.2.2.5        | Limits for repetitive pulses .....  | No repetitive pulses introduced  | N/A      |
| 5.2.2.6        | Ringing signals .....   | No means for connection to telephone network and no ringing signal generated | N/A      |
| 5.2.2.7        | Audio signals .....   |  | N/A      |
| 5.3            | Protection against electrical energy sources  | All internal circuits considered ES1   | N/A      |
| 5.3.1          | General Requirements for accessible parts to ordinary, instructed and skilled persons |  | N/A      |
| 5.3.2.1        | Accessibility to electrical energy sources and safeguards                             |  | N/A      |
| 5.3.2.2        | Contact requirements  |  | N/A      |
|                | a) Test with test probe from Annex V .....  |  | N/A      |
|                | b) Electric strength test potential (V) .....   |  | N/A      |
|                | c) Air gap (mm) .....   |  | N/A      |
| 5.3.2.4        | Terminals for connecting stripped wire  |  | N/A      |
| 5.4            | Insulation materials and requirements   |  | P        |
| 5.4.1.2        | Properties of insulating material   |  | P        |
| 5.4.1.3        | Humidity conditioning .....   |  | N/A      |
| 5.4.1.4        | Maximum operating temperature for insulating materials .....                          |  | P        |
| 5.4.1.5        | Pollution degree .....  |  | —        |
| 5.4.1.5.2      | Test for pollution degree 1 environment and for an insulating compound                |  | N/A      |
| 5.4.1.5.3      | Thermal cycling   |  | N/A      |
| 5.4.1.6        | Insulation in transformers with varying dimensions                                    |  | N/A      |
| 5.4.1.7        | Insulation in circuits generating starting pulses                                     |  | N/A      |
| 5.4.1.8        | Determination of working voltage  |  | N/A      |
| 5.4.1.9        | Insulating surfaces   |  | N/A      |
| 5.4.1.10       | Thermoplastic parts on which conductive metallic parts are directly mounted           |  | N/A      |
| 5.4.1.10.2     | Vicat softening temperature..... :  |  | N/A      |

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|----------------|---|------------------|---------|
| Clause         | Requirement + Test  | Result - Remark  | Verdict |
| 5.4.1.10.3     | Ball pressure .....   |                  | N/A     |
| 5.4.2          | Clearances  |                  | N/A     |
| 5.4.2.2        | Determining clearance using peak working voltage                        |                  | N/A     |
| 5.4.2.3        | Determining clearance using required withstand voltage .....            |                  | N/A     |
|                | a) a.c. mains transient voltage .....                                   |                  | —       |
|                | b) d.c. mains transient voltage .....                                   |                  | —       |
|                | c) external circuit transient voltage .....                             |                  | —       |
|                | d) transient voltage determined by measurement:                         |                  | —       |
| 5.4.2.4        | Determining the adequacy of a clearance using an electric strength test |                  | N/A     |
| 5.4.2.5        | Multiplication factors for clearances and test voltages .....           |                  | N/A     |
| 5.4.3          | Creepage distances .....  |                  | N/A     |
| 5.4.3.1        | General   |                  | N/A     |
| 5.4.3.3        | Material Group .....  |                  | —       |
| 5.4.4          | Solid insulation  |                  | N/A     |
| 5.4.4.2        | Minimum distance through insulation .....                               |                  | N/A     |
| 5.4.4.3        | Insulation compound forming solid insulation                            |                  | N/A     |
| 5.4.4.4        | Solid insulation in semiconductor devices                               |                  | N/A     |
| 5.4.4.5        | Cemented joints   |                  | N/A     |
| 5.4.4.6        | Thin sheet material   |                  | N/A     |
| 5.4.4.6.1      | General requirements  |                  | N/A     |
| 5.4.4.6.2      | Separable thin sheet material   |                  | N/A     |
|                | Number of layers (pcs) .....  |                  | N/A     |
| 5.4.4.6.3      | Non-separable thin sheet material                                       |                  | N/A     |
| 5.4.4.6.4      | Standard test procedure for non-separable thin sheet material .....     |                  | N/A     |
| 5.4.4.6.5      | Mandrel test  |                  | N/A     |
| 5.4.4.7        | Solid insulation in wound components                                    |                  | N/A     |
| 5.4.4.9        | Solid insulation at frequencies >30 kHz .....                           |                  | N/A     |
| 5.4.5          | Antenna terminal insulation   | No such terminal | N/A     |
| 5.4.5.1        | General   |                  | N/A     |
| 5.4.5.2        | Voltage surge test  |                  | N/A     |
|                | Insulation resistance (MΩ).....   |                  | —       |

| IEC/EN 62368-1 |   |  |         |
|----------------|---|--|---------|
| Clause         | Requirement + Test  | Result - Remark                            | Verdict |
| 5.4.6          | Insulation of internal wire as part of supplementary safeguard.....:            |  | N/A     |
| 5.4.7          | Tests for semiconductor components and for cemented joints                      |  | N/A     |
| 5.4.8          | Humidity conditioning   |  | N/A     |
|                | Relative humidity (%).....:   |  | —       |
|                | Temperature (°C) .....  |  | —       |
|                | Duration (h) .....  |  | —       |
| 5.4.9          | Electric strength test.....:  |  | N/A     |
| 5.4.9.1        | Test procedure for a solid insulation type test                                 |  | N/A     |
| 5.4.9.2        | Test procedure for routine tests  |  | N/A     |
| 5.4.10         | Protection against transient voltages between external circuit                  | No transient voltage from external circuit | N/A     |
| 5.4.10.1       | Parts and circuits separated from external circuits                             |  | N/A     |
| 5.4.10.2       | Test methods  |  | N/A     |
| 5.4.10.2.1     | General   |  | N/A     |
| 5.4.10.2.2     | Impulse test .....  |  | N/A     |
| 5.4.10.2.3     | Steady-state test.....:   |  | N/A     |
| 5.4.11         | Insulation between external circuits and earthed circuitry .....                | No such external circuit                   | N/A     |
| 5.4.11.1       | Exceptions to separation between external circuits and earth                    |  | N/A     |
| 5.4.11.2       | Requirements  |  | N/A     |
|                | Rated operating voltage $U_{op}$ (V).....:                                      |  | —       |
|                | Nominal voltage $U_{peak}$ (V).....:  |  | —       |
|                | Max increase due to variation $U_{sp}$ .....                                    |  | —       |
|                | Max increase due to ageing $\Delta U_{sa}$ .....                                |  | —       |
|                | $U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$ .....                       |  | —       |
| 5.5            | Components as safeguards  |  |         |
| 5.5.1          | General   |  | N/A     |
| 5.5.2          | Capacitors and RC units   |  | N/A     |
| 5.5.2.1        | General requirement   |  | N/A     |
| 5.5.2.2        | Safeguards against capacitor discharge after disconnection of a connector.....: |  | N/A     |
| 5.5.3          | Transformers  |  | N/A     |
| 5.5.4          | Optocouplers  |  | N/A     |

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|----------------|---|-----------------|---------|
| Clause         | Requirement + Test  | Result - Remark | Verdict |
| 5.5.5          | Relays  |                 | N/A     |
| 5.5.6          | Resistors   |                 | N/A     |
| 5.5.7          | SPD's   |                 | N/A     |
| 5.5.7.1        | Use of an SPD connected to reliable earthing  |                 | N/A     |
| 5.5.7.2        | Use of an SPD between mains and protective earth                                      |                 | N/A     |
| 5.5.8          | Insulation between the mains and external circuit consisting of a coaxial cable.....: |                 | N/A     |
| 5.6            | Protective conductor  |                 | N/A     |
| 5.6.2          | Requirement for protective conductors   |                 | N/A     |
| 5.6.2.1        | General requirements  |                 | N/A     |
| 5.6.2.2        | Colour of insulation  |                 | N/A     |
| 5.6.3          | Requirement for protective earthing conductors  |                 | N/A     |
|                | Protective earthing conductor size (mm <sup>2</sup> ) .....                           |                 | —       |
| 5.6.4          | Requirement for protective bonding conductors   |                 | N/A     |
| 5.6.4.1        | Protective bonding conductors   |                 | N/A     |
|                | Protective bonding conductor size (mm <sup>2</sup> ). .....                           |                 | —       |
| 5.6.4.2        | Protective current rating (A) .....   |                 | —       |
| 5.6.4.3        | Current limiting and overcurrent protective devices                                   |                 | N/A     |
| 5.6.5          | Terminals for protective conductors   |                 | N/A     |
| 5.6.5.1        | Requirement   |                 | N/A     |
|                | Conductor size (mm <sup>2</sup> ), nominal thread diameter (mm). .....                |                 | N/A     |
| 5.6.5.2        | Corrosion   |                 | N/A     |
| 5.6.6          | Resistance of the protective system   |                 | N/A     |
| 5.6.6.1        | Requirements  |                 | N/A     |
| 5.6.6.2        | Test Method Resistance (Ω).....:  |                 | N/A     |
| 5.6.7          | Reliable earthing   |                 | N/A     |
| 5.7            | Prospective touch voltage, touch current and protective conductor current             |                 | N/A     |
| 5.7.2          | Measuring devices and networks  |                 | N/A     |
| 5.7.2.1        | Measurement of touch current .....  |                 | N/A     |
| 5.7.2.2        | Measurement of prospective touch voltage  |                 | N/A     |
| 5.7.3          | Equipment set-up, supply connections and earth connections                            |                 | N/A     |

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|----------------|---|---------------------------|---------|
| Clause         | Requirement + Test  | Result - Remark           | Verdict |
|                | System of interconnected equipment (separate connections/single connection) .....             |                           | —       |
|                | Multiple connections to mains (one connection at a time/simultaneous connections) .....       |                           | —       |
| 5.7.4          | Earthed conductive accessible parts .....   |                           | N/A     |
| 5.7.5          | Protective conductor current  |                           | N/A     |
|                | Supply Voltage (V) .....  |                           | —       |
|                | Measured current (mA) .....   |                           | —       |
|                | Instructional Safeguard .....   |                           | N/A     |
| 5.7.6          | Prospective touch voltage and touch current due to external circuits                          |                           | N/A     |
| 5.7.6.1        | Touch current from coaxial cables   |                           | N/A     |
| 5.7.6.2        | Prospective touch voltage and touch current from external circuits                            |                           | N/A     |
| 5.7.7          | Summation of touch currents from external circuits  | No such external circuits | N/A     |
|                | a) Equipment with earthed external circuits Measured current (mA) .....                       |                           | N/A     |
|                | b) Equipment whose external circuits are not referenced to earth. Measured current (mA) ..... |                           | N/A     |

|           |  |   |          |
|-----------|--|---|----------|
| <b>6</b>  | <b>ELECTRICALLY- CAUSED FIRE</b>   |   | <b>P</b> |
| 6.2       | Classification of power sources (PS) and potential ignition sources (PIS)  |   | P        |
| 6.2.2     | Power source circuit classifications   |   | P        |
| 6.2.2.1   | General  |   | P        |
| 6.2.2.2   | Power measurement for worst-case load fault ... :  | (See appended table 6.2.2)                      | P        |
| 6.2.2.3   | Power measurement for worst-case power source fault .....  | (See appended table 6.2.2)                      | P        |
| 6.2.2.4   | PS1 .....  |   | P        |
| 6.2.2.5   | PS2 .....  | (See appended table 6.2.2)                      | P        |
| 6.2.2.6   | PS3 .....  |   | N/A      |
| 6.2.3     | Classification of potential ignition sources   |   | P        |
| 6.2.3.1   | Arcing PIS .....   |   | N/A      |
| 6.2.3.2   | Resistive PIS .....  | (See appended table 6.2.3.2)                    | P        |
| 6.3       | Safeguards against fire under normal operating and abnormal operating conditions   |   | P        |
| 6.3.1 (a) | No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials ..... | (See appended table 5.4.1.5, 6.3.2, 9.0, B.2.6) | P        |

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|----------------|---|---------------------------------------|---------|
| Clause         | Requirement + Test  | Result - Remark                       | Verdict |
| 6.3.1 (b)      | Combustible materials outside fire enclosure  |                                       | N/A     |
| 6.4            | Safeguards against fire under single fault conditions   |                                       | P       |
| 6.4.1          | Safeguard Method  | Method of control fire spread used    | P       |
| 6.4.2          | Reduction of the likelihood of ignition under single fault conditions in PS1 circuits         |                                       | N/A     |
| 6.4.3          | Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits |                                       | N/A     |
| 6.4.3.1        | General   |                                       | N/A     |
| 6.4.3.2        | Supplementary Safeguards  |                                       | N/A     |
|                | Special conditions if conductors on printed boards are opened or peeled                       |                                       | N/A     |
| 6.4.3.3        | Single Fault Conditions..... :  |                                       | N/A     |
|                | Special conditions for temperature limited by fuse  |                                       | N/A     |
| 6.4.4          | Control of fire spread in PS1 circuits  |                                       | N/A     |
| 6.4.5          | Control of fire spread in PS2 circuits  |                                       | P       |
| 6.4.5.2        | Supplementary safeguards..... :   | PCB: V-0;<br>Fire enclosure used: V-0 | P       |
| 6.4.6          | Control of fire spread in PS3 circuit   |                                       | N/A     |
| 6.4.7          | Separation of combustible materials from a PIS  |                                       | P       |
| 6.4.7.1        | General..... :  | Fire enclosure used: V-0              | P       |
| 6.4.7.2        | Separation by distance  |                                       | N/A     |
| 6.4.7.3        | Separation by a fire barrier  |                                       | P       |
| 6.4.8          | Fire enclosures and fire barriers   |                                       | P       |
| 6.4.8.1        | Fire enclosure and fire barrier material properties   | Fire enclosure provided               | P       |
| 6.4.8.2.1      | Requirements for a fire barrier   |                                       | P       |
| 6.4.8.2.2      | Requirements for a fire enclosure   | V-0 used.                             | P       |
| 6.4.8.3        | Constructional requirements for a fire enclosure and a fire barrier                           |                                       | P       |
| 6.4.8.3.1      | Fire enclosure and fire barrier openings  | No openings on the fire enclosure.    | N/A     |
| 6.4.8.3.2      | Fire barrier dimensions   |                                       | N/A     |
| 6.4.8.3.3      | Top Openings in Fire Enclosure: dimensions (mm)..... :  | No opening                            | N/A     |
|                | Needle Flame test   |                                       | N/A     |
| 6.4.8.3.4      | Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm)..... :      |                                       | N/A     |
|                | Flammability tests for the bottom of a fire enclosure..... :                                  |                                       | N/A     |

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|----------------|---|----------------------------|---------|
| Clause         | Requirement + Test  | Result - Remark            | Verdict |
| 6.4.8.3.5      | Integrity of the fire enclosure, condition met: a), b) or c) .....                                |                            | N/A     |
| 6.4.8.4        | Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating ..... | Fire enclosure used: V-0   | P       |
| 6.5            | Internal and external wiring  |                            | P       |
| 6.5.1          | Requirements  |                            | P       |
| 6.5.2          | Cross-sectional area (mm <sup>2</sup> ) .....   | (See appended table 4.1.2) | —       |
| 6.5.3          | Requirements for interconnection to building wiring .....   |                            | N/A     |
| 6.6            | Safeguards against fire due to connection to additional equipment                                 |                            | P       |
|                | External port limited to PS2 or complies with Clause Q.1  |                            | P       |

| 7   | INJURY CAUSED BY HAZARDOUS SUBSTANCES            |                               | P   |
|-----|--|-------------------------------|-----|
| 7.2 | Reduction of exposure to hazardous substances    | No such hazardous substances  | N/A |
| 7.3 | Ozone exposure                                   | No ozone production           | N/A |
| 7.4 | Use of personal safeguards (PPE)                 |                               | N/A |
|     | Personal safeguards and instructions .....       |                               | —   |
| 7.5 | Use of instructional safeguards and instructions |                               | N/A |
|     | Instructional safeguard (ISO 7010) .....         |                               | —   |
| 7.6 | Batteries .....                                  | (See appended tables Annex M) | P   |

| 8     | MECHANICALLY-CAUSED INJURY  |                    | P   |
|-------|---|--------------------|-----|
| 8.1   | General   |                    | P   |
| 8.2   | Mechanical energy source classifications                                    |                    | P   |
| 8.3   | Safeguards against mechanical energy sources                                |                    | P   |
| 8.4   | Safeguards against parts with sharp edges and corners                       |                    | P   |
| 8.4.1 | Safeguards  | MS1 classification | N/A |
| 8.5   | Safeguards against moving parts   |                    | N/A |
| 8.5.1 | MS2 or MS3 part required to be accessible for the function of the equipment |                    | N/A |
| 8.5.2 | Instructional Safeguard .....   |                    | —   |
| 8.5.4 | Special categories of equipment comprising moving parts                     |                    | N/A |




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|----------------|--|-----------------|---------|
| Clause         | Requirement + Test   | Result - Remark | Verdict |
| 8.5.4.1        | Large data storage equipment                                       |                 | N/A     |
| 8.5.4.2        | Equipment having electromechanical device for destruction of media |                 | N/A     |
| 8.5.4.2.1      | Safeguards and Safety Interlocks .....                             |                 | N/A     |
| 8.5.4.2.2      | Instructional safeguards against moving parts                      |                 | N/A     |
|                | Instructional Safeguard .....                                      |                 | —       |
| 8.5.4.2.3      | Disconnection from the supply                                      |                 | N/A     |
| 8.5.4.2.4      | Probe type and force (N) .....                                     |                 | N/A     |
| 8.5.5          | High Pressure Lamps  |                 | N/A     |
| 8.5.5.1        | Energy Source Classification                                       |                 | N/A     |
| 8.5.5.2        | High Pressure Lamp Explosion Test.....                             |                 | N/A     |
| 8.6            | Stability  | Mass < 7kg      | N/A     |
| 8.6.1          | Product classification   | MS1             | N/A     |
|                | Instructional Safeguard .....                                      |                 | —       |
| 8.6.2          | Static stability   |                 | N/A     |
| 8.6.2.2        | Static stability test  |                 | N/A     |
|                | Applied Force .....  |                 | —       |
| 8.6.2.3        | Downward Force Test  |                 | N/A     |
| 8.6.3          | Relocation stability test  |                 | N/A     |
|                | Unit configuration during 10° tilt .....                           |                 | —       |
| 8.6.4          | Glass slide test   |                 | N/A     |
| 8.6.5          | Horizontal force test (Applied Force).....                         |                 | N/A     |
|                | Position of feet or movable parts .....                            |                 | —       |
| 8.7            | Equipment mounted to wall or ceiling                               |                 | N/A     |
| 8.7.1          | Mounting Means (Length of screws (mm) and mounting surface) .....  |                 | N/A     |
| 8.7.2          | Direction and applied force .....                                  |                 | N/A     |
| 8.8            | Handles strength   |                 | N/A     |
| 8.8.1          | Classification   |                 | N/A     |
| 8.8.2          | Applied Force .....  |                 | N/A     |
| 8.9            | Wheels or casters attachment requirements                          |                 | N/A     |
| 8.9.1          | Classification   |                 | N/A     |
| 8.9.2          | Applied force .....  |                 | —       |
| 8.10           | Carts, stands and similar carriers                                 |                 | N/A     |

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|----------------|--|-----------------|---------|
| Clause         | Requirement + Test                                 | Result - Remark | Verdict |
| 8.10.1         | General  |                 | N/A     |
| 8.10.2         | Marking and instructions                           |                 | N/A     |
|                | Instructional Safeguard.....:                      |                 | —       |
| 8.10.3         | Cart, stand or carrier loading test and compliance |                 | N/A     |
|                | Applied force.....:                                |                 | —       |
| 8.10.4         | Cart, stand or carrier impact test                 |                 | N/A     |
| 8.10.5         | Mechanical stability                               |                 | N/A     |
|                | Applied horizontal force (N).....:                 |                 | —       |
| 8.10.6         | Thermoplastic temperature stability (°C).....:     |                 | N/A     |
| 8.11           | Mounting means for rack mounted equipment          |                 | N/A     |
| 8.11.1         | General  |                 | N/A     |
| 8.11.2         | Product Classification                             |                 | N/A     |
| 8.11.3         | Mechanical strength test, variable <i>N</i> .....: |                 | N/A     |
| 8.11.4         | Mechanical strength test 250N, including end stops |                 | N/A     |
| 8.12           | Telescoping or rod antennas.....:                  |                 | N/A     |
|                | Button/Ball diameter (mm).....:                    |                 | —       |

|          |  |                       |          |
|----------|--|-----------------------|----------|
| <b>9</b> | <b>THERMAL BURN INJURY</b>               |                       | <b>P</b> |
| 9.2      | Thermal energy source classifications    | TS1: accessible parts | P        |
| 9.3      | Safeguard against thermal energy sources |                       | N/A      |
| 9.4      | Requirements for safeguards              |                       | N/A      |
| 9.4.1    | Equipment safeguard                      |                       | N/A      |
| 9.4.2    | Instructional safeguard.....:            |                       | N/A      |

|           |  |                       |          |
|-----------|--|-----------------------|----------|
| <b>10</b> | <b>RADIATION</b>                                       |                       | <b>P</b> |
| 10.2      | Radiation energy source classification                 |                       | P        |
| 10.2.1    | General classification                                 |                       | P        |
| 10.3      | Protection against laser radiation                     |                       | N/A      |
|           | Laser radiation that exists equipment:                 |                       | —        |
|           | Normal, abnormal, single-fault.....:                   | comply with RS1       | P        |
|           | Instructional safeguard.....:                          |                       | —        |
|           | Tool.....:   | By tool               | —        |
| 10.4      | Protection against visible, infrared, and UV radiation | LED system unit used. | P        |

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|----------------|--|--|---------|
| Clause         | Requirement + Test   | Result - Remark  | Verdict |
| 10.4.1         | General  |  | P       |
| 10.4.1.a)      | RS3 for Ordinary and instructed persons .....                    |  | N/A     |
| 10.4.1.b)      | RS3 accessible to a skilled person.....                          |  | N/A     |
|                | Personal safeguard (PPE) instructional safeguard.....            |  | —       |
| 10.4.1.c)      | Equipment visible, IR, UV does not exceed RS1.:                  | LED system unit comply with RS1  | P       |
| 10.4.1.d)      | Normal, abnormal, single-fault conditions .....                  | Exempt group   | P       |
| 10.4.1.e)      | Enclosure material employed as safeguard is opaque.....          |  | N/A     |
| 10.4.1.f)      | UV attenuation.....  |  | N/A     |
| 10.4.1.g)      | Materials resistant to degradation UV .....                      |  | N/A     |
| 10.4.1.h)      | Enclosure containment of optical radiation.....                  |  | N/A     |
| 10.4.1.i)      | Exempt Group under normal operating conditions .....             | Exempt group   | P       |
| 10.4.2         | Instructional safeguard .....                                    |  | N/A     |
| 10.5           | Protection against x-radiation                                   |  | N/A     |
| 10.5.1         | X- radiation energy source that exists equipment:                |  | N/A     |
|                | Normal, abnormal, single fault conditions                        |  | N/A     |
|                | Equipment safeguards.....  |  | N/A     |
|                | Instructional safeguard for skilled person.....                  |  | N/A     |
| 10.5.3         | Most unfavourable supply voltage to give maximum radiation ..... |  | —       |
|                | Abnormal and single-fault condition .....                        |  | N/A     |
|                | Maximum radiation (pA/kg).....                                   |  | N/A     |
| 10.6           | Protection against acoustic energy sources                       |  | P       |
| 10.6.1         | General  |  | P       |
| 10.6.2         | Classification   | RS2  | P       |
|                | Acoustic output, dB(A).....                                      | Maximum volume:<br>Right: 90.1dB; Left: 90.7dB<br>warning: Right: 77.2dB; Left: 77.8 dB  | P       |
|                | Output voltage, unweighted r.m.s.....                            | Maximum volume:<br>Right: 104.3mV; Left: 104.1mV<br>Pre-set: Right: 3.5mV; Left: 3.4mV<br>Warning: Right: 22.6mV; Left: 22.5mV | P       |
| 10.6.4         | Protection of persons  |  | P       |

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|----------------|--|---|---------|
| Clause         | Requirement + Test   | Result - Remark   | Verdict |
|                | Instructional safeguards .....                                       | 1. Symbol  ;<br>2. "high sound pressure" or equivalent wording; 3. "hearing damage risk" or equivalent wording; 4. "do not listen at high volume levels for long periods" or equivalent wording. | P       |
|                | Equipment safeguard prevent ordinary person to RS2 .....             | Automatically return to RS1 level when the power is switched off.   | —       |
|                | Means to actively inform user of increase sound pressure .....       | Warning: hearing damage risk or equivalent wording  | —       |
|                | Equipment safeguard prevent ordinary person to RS2 .....             | After 20h the acoustic output not exceeding RS1   | —       |
| 10.6.5         | Requirements for listening devices (headphones, earphones, etc.)     | No such device  | N/A     |
| 10.6.5.1       | Corded passive listening devices with analog input                   |   | N/A     |
|                | Input voltage with 94 dB(A) $L_{Aeq}$ acoustic pressure output ..... |   | —       |
| 10.6.5.2       | Corded listening devices with digital input                          |   | N/A     |
|                | Maximum dB(A) .....  |   | —       |
| 10.6.5.3       | Cordless listening device  |   | N/A     |
|                | Maximum dB(A) .....  |   | —       |

| <b>B</b> | <b>NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS</b> |   | <b>P</b> |
|----------|--|---|----------|
| B.2      | Normal Operating Conditions  |   | P        |
| B.2.1    | General requirements .....   | (See summary of testing & appended test tables) | P        |
|          | Audio Amplifiers and equipment with audio amplifiers .....   |   | N/A      |
| B.2.3    | Supply voltage and tolerances  | (See appended table B.2.5)                      | P        |
| B.2.5    | Input test .....   | (See appended table B.2.5)                      | P        |
| B.3      | Simulated abnormal operating conditions  |   | P        |
| B.3.1    | General requirements .....   | (See appended table B.3)                        | P        |
| B.3.2    | Covering of ventilation openings   |   | N/A      |
| B.3.3    | D.C. mains polarity test   |   | N/A      |
| B.3.4    | Setting of voltage selector .....  | No such voltage selector.                       | N/A      |

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|----------------|---|-----------------------------|---------|
| Clause         | Requirement + Test  | Result - Remark             | Verdict |
| B.3.5          | Maximum load at output terminals .....  | No such terminals           | N/A     |
| B.3.6          | Reverse battery polarity  | No battery reverse polarity | N/A     |
| B.3.7          | Abnormal operating conditions as specified in Clause E.2.                                 |                             | N/A     |
| B.3.8          | Safeguards functional during and after abnormal operating conditions                      |                             | P       |
| B.4            | Simulated single fault conditions   |                             | P       |
| B.4.2          | Temperature controlling device open or short-circuited .....                              |                             | N/A     |
| B.4.3          | Motor tests   |                             | P       |
| B.4.3.1        | Motor blocked or rotor locked increasing the internal ambient temperature .....           |                             | N/A     |
| B.4.4          | Short circuit of functional insulation  |                             | P       |
| B.4.4.1        | Short circuit of clearances for functional insulation                                     | (See appended table B.4)    | P       |
| B.4.4.2        | Short circuit of creepage distances for functional insulation                             | (See appended table B.4)    | P       |
| B.4.4.3        | Short circuit of functional insulation on coated printed boards                           |                             | N/A     |
| B.4.5          | Short circuit and interruption of electrodes in tubes and semiconductors                  | (See appended table B.4)    | P       |
| B.4.6          | Short circuit or disconnect of passive components   | (See appended table B.4)    | P       |
| B.4.7          | Continuous operation of components  |                             | N/A     |
| B.4.8          | Class 1 and Class 2 energy sources within limits during and after single fault conditions |                             | P       |
| B.4.9          | Battery charging under single fault conditions ... :                                      | (See appended table M)      | P       |

| <b>C</b> | <b>UV RADIATION</b>                                    |                                 | <b>N/A</b> |
|----------|--|---------------------------------|------------|
| C.1      | Protection of materials in equipment from UV radiation | No UV radiation within the EUT. | N/A        |
| C.1.2    | Requirements   |                                 | N/A        |
| C.1.3    | Test method  |                                 | N/A        |
| C.2      | UV light conditioning test                             |                                 | N/A        |
| C.2.1    | Test apparatus   |                                 | N/A        |
| C.2.2    | Mounting of test samples                               |                                 | N/A        |
| C.2.3    | Carbon-arc light-exposure apparatus                    |                                 | N/A        |
| C.2.4    | Xenon-arc light exposure apparatus                     |                                 | N/A        |

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|----------------|--|----------------------------|------------|
| Clause         | Requirement + Test   | Result - Remark            | Verdict    |
| <b>D</b>       | <b>TEST GENERATORS</b>   |                            | <b>N/A</b> |
| D.1            | Impulse test generators  |                            | N/A        |
| D.2            | Antenna interface test generator                                 |                            | N/A        |
| D.3            | Electronic pulse generator                                       |                            | N/A        |
| <b>E</b>       | <b>TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS</b> |                            | <b>N/A</b> |
| E.1            | Audio amplifier normal operating conditions                      | (See appended table B.2.5) | N/A        |
|                | Audio signal voltage (V) .....                                   |                            | —          |
|                | Rated load impedance ( $\Omega$ ) .....                          |                            |            |
| E.2            | Audio amplifier abnormal operating conditions                    |                            | N/A        |

|          |   |  |          |
|----------|---|--|----------|
| <b>F</b> | <b>EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS</b> |  | <b>P</b> |
| F.1      | General requirements  |  | P        |
|          | Instructions – Language .....   | English checked                              | —        |
| F.2      | Letter symbols and graphical symbols                                  |  | P        |
| F.2.1    | Letter symbols according to IEC60027-1                                |  | P        |
| F.2.2    | Graphic symbols IEC, ISO or manufacturer specific                     |  | P        |
| F.3      | Equipment markings  |  | P        |
| F.3.1    | Equipment marking locations   |  | P        |
| F.3.2    | Equipment identification markings                                     |  | P        |
| F.3.2.1  | Manufacturer identification .....                                     | See marking plate                            | —        |
| F.3.2.2  | Model identification .....  | See marking plate                            | —        |
| F.3.3    | Equipment rating markings   |  | N/A      |
| F.3.3.1  | Equipment with direct connection to mains                             |  | N/A      |
| F.3.3.2  | Equipment without direct connection to mains                          | Equipment without direct connection to mains | N/A      |
| F.3.3.3  | Nature of supply voltage .....  |  | —        |
| F.3.3.4  | Rated voltage .....   |  | —        |
| F.3.3.4  | Rated frequency .....   |  | —        |
| F.3.3.6  | Rated current or rated power .....                                    |  | —        |
| F.3.3.7  | Equipment with multiple supply connections                            | No multiple supply connection.               | N/A      |
| F.3.4    | Voltage setting device  | No such device.                              | N/A      |
| F.3.5    | Terminals and operating devices                                       |  | N/A      |
| F.3.5.1  | Mains appliance outlet and socket-outlet markings .....               | No mains appliance outlet.                   | N/A      |

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|----------------|---|---|---------|
| Clause         | Requirement + Test  | Result - Remark   | Verdict |
| F.3.5.2        | Switch position identification marking .....  | Not such switch.  | N/A     |
| F.3.5.3        | Replacement fuse identification and rating markings .....                           | Provided the user manual.   | N/A     |
| F.3.5.4        | Replacement battery identification marking .....                                    | Provided the user manual.   | P       |
| F.3.5.5        | Terminal marking location   |   | N/A     |
| F.3.6          | Equipment markings related to equipment classification                              |   | N/A     |
| F.3.6.1        | Class I Equipment   |   | N/A     |
| F.3.6.1.1      | Protective earthing conductor terminal  |   | N/A     |
| F.3.6.1.2      | Neutral conductor terminal  |   | N/A     |
| F.3.6.1.3      | Protective bonding conductor terminals  |   | N/A     |
| F.3.6.2        | Class II equipment (IEC60417-5172)  |   | N/A     |
| F.3.6.2.1      | Class II equipment with or without functional earth                                 |   | N/A     |
| F.3.6.2.2      | Class II equipment with functional earth terminal marking                           |   | N/A     |
| F.3.7          | Equipment IP rating marking .....   | IP20, no marking is needed  | —       |
| F.3.8          | External power supply output marking  |   | N/A     |
| F.3.9          | Durability, legibility and permanence of marking                                    | Marking is considered to be legible and easily discernible. See also the following details.   | P       |
| F.3.10         | Test for permanence of markings   | The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. And then again for 15 sec. With the cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was no curling and lifting of the label edge.<br>After each test, the marking remained legible. | P       |
| F.4            | Instructions  |   | P       |
|                | a) Equipment for use in locations where children not likely to be present - marking |   | N/A     |
|                | b) Instructions given for installation or initial use                               |   | P       |
|                | c) Equipment intended to be fastened in place                                       |   | N/A     |
|                | d) Equipment intended for use only in restricted access area                        | Not used in restricted access area.   | N/A     |

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|----------------|---|-----------------|---------|
| Clause         | Requirement + Test  | Result - Remark | Verdict |
|                | e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1                              |                 | N/A     |
|                | f) Protective earthing employed as safeguard  |                 | N/A     |
|                | g) Protective earthing conductor current exceeding ES2 limits   |                 | N/A     |
|                | h) Symbols used on equipment  |                 | P       |
|                | i) Permanently connected equipment not provided with all-pole mains switch  |                 | N/A     |
|                | j) Replaceable components or modules providing safeguard function   |                 | N/A     |
| F.5            | Instructional safeguards  |                 | P       |
|                | Where "instructional safeguard" is referenced in the test report it specifies the required elements, location of marking and/or instruction |                 | P       |

|               |  |                          |          |
|---------------|--|--------------------------|----------|
| <b>G</b>      | <b>COMPONENTS</b>  |                          | <b>P</b> |
| <b>G.1</b>    | <b>Switches</b>  |                          | N/A      |
| G.1.1         | General requirements   |                          | N/A      |
| G.1.2         | Ratings, endurance, spacing, maximum load  |                          | N/A      |
| <b>G.2</b>    | <b>Relays</b>  |                          | N/A      |
| G.2.1         | General requirements   |                          | N/A      |
| G.2.2         | Overload test  |                          | N/A      |
| G.2.3         | Relay controlling connectors supply power  |                          | N/A      |
| G.2.4         | Mains relay, modified as stated in G.2   |                          | N/A      |
| <b>G.3</b>    | <b>Protection Devices</b>  |                          | N/A      |
| G.3.1         | Thermal cut-offs   | No thermal cut-off used. | N/A      |
| G.3.1.1a) &b) | Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b) |                          | N/A      |
| G.3.1.1c)     | Thermal cut-outs tested as part of the equipment as indicated in c)                              |                          | N/A      |
| G.3.1.2       | Thermal cut-off connections maintained and secure  |                          | N/A      |
| G.3.2         | Thermal links  |                          | N/A      |
| G.3.2.1a)     | Thermal links separately tested with IEC 60691   | No thermal link used.    | N/A      |
| G.3.2.1b)     | Thermal links tested as part of the equipment  |                          | N/A      |
|               | Aging hours (H) .....  | :                        | —        |
|               | Single Fault Condition .....   | :                        | —        |



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|----------------|--|---------------------------------|---------|
| Clause         | Requirement + Test   | Result - Remark                 | Verdict |
|                | Test Voltage (V) and Insulation Resistance ( $\Omega$ ) :                                |                                 | —       |
| G.3.3          | PTC Thermistors  |                                 | N/A     |
| G.3.4          | Overcurrent protection devices   |                                 | N/A     |
| G.3.5          | Safeguards components not mentioned in G.3.1 to G.3.5                                    |                                 | N/A     |
| G.3.5.1        | Non-resettable devices suitably rated and marking provided                               |                                 | N/A     |
| G.3.5.2        | Single faults conditions..... :  |                                 | N/A     |
| <b>G.4</b>     | <b>Connectors</b>  |                                 | N/A     |
| G.4.1          | Spacings   | Not directly connected to mains | N/A     |
| G.4.2          | Mains connector configuration ..... :  |                                 | N/A     |
| G.4.3          | Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely |                                 | N/A     |
| <b>G.5</b>     | <b>Wound Components</b>  |                                 | N/A     |
| G.5.1          | Wire insulation in wound components..... :   |                                 | N/A     |
| G.5.1.2 a)     | Two wires in contact inside wound component, angle between 45° and 90°                   |                                 | N/A     |
| G.5.1.2 b)     | Construction subject to routine testing  |                                 | N/A     |
| G.5.2          | Endurance test on wound components   |                                 | N/A     |
| G.5.2.1        | General test requirements  |                                 | N/A     |
| G.5.2.2        | Heat run test  |                                 | N/A     |
|                | Time (s) ..... :   |                                 | —       |
|                | Temperature (°C) ..... :   |                                 | —       |
| G.5.2.3        | Wound Components supplied by mains   |                                 | N/A     |
| <b>G.5.3</b>   | <b>Transformers</b>  |                                 | N/A     |
| G.5.3.1        | Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1) ..... :              |                                 | N/A     |
|                | Position..... :  |                                 | —       |
|                | Method of protection ..... :   |                                 | —       |
| G.5.3.2        | Insulation   |                                 | N/A     |
|                | Protection from displacement of windings..... :  |                                 | —       |
| G.5.3.3        | Overload test ..... :  |                                 | N/A     |
| G.5.3.3.1      | Test conditions  |                                 | N/A     |
| G.5.3.3.2      | Winding Temperatures testing in the unit   |                                 | N/A     |
| G.5.3.3.3      | Winding Temperatures - Alternative test method   |                                 | N/A     |
| <b>G.5.4</b>   | <b>Motors</b>  |                                 | P       |

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|----------------|---|---------------------------------|---------|
| Clause         | Requirement + Test  | Result - Remark                 | Verdict |
| G.5.4.1        | General requirements  |                                 | P       |
|                | Position .....  |                                 | —       |
| G.5.4.2        | Test conditions   |                                 | N/A     |
| G.5.4.3        | Running overload test   |                                 | N/A     |
| G.5.4.4        | Locked-rotor overload test  |                                 | N/A     |
|                | Test duration (days) .....  |                                 | —       |
| G.5.4.5        | Running overload test for d.c. motors in secondary circuits             |                                 | N/A     |
| G.5.4.5.2      | Tested in the unit  |                                 | N/A     |
|                | Electric strength test (V).....   |                                 | —       |
| G.5.4.5.3      | Tested on the Bench - Alternative test method; test time (h) .....      |                                 | N/A     |
|                | Electric strength test (V).....   |                                 | —       |
| G.5.4.6        | Locked-rotor overload test for d.c. motors in secondary circuits        |                                 | P       |
| G.5.4.6.2      | Tested in the unit  |                                 | P       |
|                | Maximum Temperature .....   | (See appended table B.4)        | N/A     |
|                | Electric strength test (V) .....  |                                 | N/A     |
| G.5.4.6.3      | Tested on the bench - Alternative test method; test time (h) .....      |                                 | N/A     |
|                | Electric strength test (V).....   |                                 | N/A     |
| G.5.4.7        | Motors with capacitors  |                                 | N/A     |
| G.5.4.8        | Three-phase motors  |                                 | N/A     |
| G.5.4.9        | Series motors   |                                 | N/A     |
|                | Operating voltage .....   |                                 | —       |
| <b>G.6</b>     | <b>Wire Insulation</b>  |                                 | N/A     |
| G.6.1          | General   |                                 | N/A     |
| G.6.2          | Solvent-based enamel wiring insulation                                  |                                 | N/A     |
| <b>G.7</b>     | <b>Mains supply cords</b>   |                                 | N/A     |
| G.7.1          | General requirements  | Not directly connected to mains | N/A     |
|                | Type.....   |                                 | —       |
|                | Rated current (A).....  |                                 | —       |
|                | Cross-sectional area (mm <sup>2</sup> ), (AWG) .....                    |                                 | —       |
| G.7.2          | Compliance and test method  |                                 | N/A     |
| G.7.3          | Cord anchorages and strain relief for non-detachable power supply cords |                                 | N/A     |

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|----------------|---|--------------------|---------|
| Clause         | Requirement + Test                                  | Result - Remark    | Verdict |
| G.7.3.2        | Cord strain relief                                  |                    | N/A     |
| G.7.3.2.1      | Requirements  |                    | N/A     |
|                | Strain relief test force (N) .....                  |                    | —       |
| G.7.3.2.2      | Strain relief mechanism failure                     |                    | N/A     |
| G.7.3.2.3      | Cord sheath or jacket position, distance (mm).... : |                    | —       |
| G.7.3.2.4      | Strain relief comprised of polymeric material       |                    | N/A     |
| G.7.4          | Cord Entry .....                                    |                    | N/A     |
| G.7.5          | Non-detachable cord bend protection                 |                    | N/A     |
| G.7.5.1        | Requirements  |                    | N/A     |
| G.7.5.2        | Mass (g) .....                                      |                    | —       |
|                | Diameter (m) .....                                  |                    | —       |
|                | Temperature (°C) .....                              |                    | —       |
| G.7.6          | Supply wiring space                                 |                    | N/A     |
| G.7.6.2        | Stranded wire                                       |                    | N/A     |
| G.7.6.2.1      | Test with 8 mm strand                               |                    | N/A     |
| <b>G.8</b>     | <b>Varistors</b>                                    |                    | N/A     |
| G.8.1          | General requirements                                | No varistors used. | N/A     |
| G.8.2          | Safeguard against shock                             |                    | N/A     |
| G.8.3          | Safeguard against fire                              |                    | N/A     |
| G.8.3.2        | Varistor overload test .....                        |                    | N/A     |
| G.8.3.3        | Temporary overvoltage .....                         |                    | N/A     |
| <b>G.9</b>     | <b>Integrated Circuit (IC) Current Limiters</b>     |                    | N/A     |
| G.9.1 a)       | Manufacturer defines limit at max. 5A.              | No such IC used.   | N/A     |
| G.9.1 b)       | Limiters do not have manual operator or reset       |                    | N/A     |
| G.9.1 c)       | Supply source does not exceed 250 VA .....          |                    | —       |
| G.9.1 d)       | IC limiter output current (max. 5A) .....           |                    | —       |
| G.9.1 e)       | Manufacturers' defined drift .....                  |                    | —       |
| G.9.2          | Test Program 1                                      |                    | N/A     |
| G.9.3          | Test Program 2                                      |                    | N/A     |
| G.9.4          | Test Program 3                                      |                    | N/A     |
| <b>G.10</b>    | <b>Resistors</b>                                    |                    | N/A     |
| G.10.1         | General requirements                                |                    | N/A     |
| G.10.2         | Resistor test                                       |                    | N/A     |

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|----------------|--|-------------------------|---------|
| Clause         | Requirement + Test   | Result - Remark         | Verdict |
| G.10.3         | Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable     |                         | N/A     |
| G.10.3.1       | General requirements   |                         | N/A     |
| G.10.3.2       | Voltage surge test   |                         | N/A     |
| G.10.3.3       | Impulse test   |                         | N/A     |
| <b>G.11</b>    | <b>Capacitor and RC units</b>  |                         | N/A     |
| G.11.1         | General requirements   | No such components used | N/A     |
| G.11.2         | Conditioning of capacitors and RC units  |                         | N/A     |
| G.11.3         | Rules for selecting capacitors   |                         | N/A     |
| <b>G.12</b>    | <b>Optocouplers</b>  |                         | N/A     |
|                | Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results)..... |                         | N/A     |
|                | Type test voltage Vini .....   |                         | —       |
|                | Routine test voltage, Vini,b .....   |                         | —       |
| <b>G.13</b>    | <b>Printed boards</b>  |                         | P       |
| G.13.1         | General requirements   |                         | P       |
| G.13.2         | Uncoated printed boards  |                         | P       |
| G.13.3         | Coated printed boards  |                         | N/A     |
| G.13.4         | Insulation between conductors on the same inner surface  |                         | N/A     |
|                | Compliance with cemented joint requirements (Specify construction).....  |                         | —       |
| G.13.5         | Insulation between conductors on different surfaces  |                         | N/A     |
|                | Distance through insulation.....   |                         | N/A     |
|                | Number of insulation layers (pcs) .....  |                         | —       |
| G.13.6         | Tests on coated printed boards   |                         | N/A     |
| G.13.6.1       | Sample preparation and preliminary inspection  |                         | N/A     |
| G.13.6.2a)     | Thermal conditioning   |                         | N/A     |
| G.13.6.2b)     | Electric strength test   |                         | N/A     |
| G.13.6.2c)     | Abrasion resistance test   |                         | N/A     |
| <b>G.14</b>    | <b>Coating on components terminals</b>   |                         | N/A     |
| G.14.1         | Requirements .....   |                         | N/A     |
| <b>G.15</b>    | <b>Liquid filled components</b>  |                         | N/A     |
| G.15.1         | General requirements   |                         | N/A     |

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|----------------|---|-----------------|---------|
| Clause         | Requirement + Test  | Result - Remark | Verdict |
| G.15.2         | Requirements  |                 | N/A     |
| G.15.3         | Compliance and test methods   |                 | N/A     |
| G.15.3.1       | Hydrostatic pressure test   |                 | N/A     |
| G.15.3.2       | Creep resistance test   |                 | N/A     |
| G.15.3.3       | Tubing and fittings compatibility test  |                 | N/A     |
| G.15.3.4       | Vibration test  |                 | N/A     |
| G.15.3.5       | Thermal cycling test  |                 | N/A     |
| G.15.3.6       | Force test  |                 | N/A     |
| G.15.4         | Compliance  |                 | N/A     |
| <b>G.16</b>    | <b>IC including capacitor discharge function (ICX)</b>  |                 | N/A     |
| a)             | Humidity treatment in accordance with sc5.4.8 – 120 hours   |                 | N/A     |
| b)             | Impulse test using circuit 2 with $U_c =$ to transient voltage .....  |                 | N/A     |
| C1)            | Application of ac voltage at 110% of rated voltage for 2.5 minutes  |                 | N/A     |
| C2)            | Test voltage .....  |                 | —       |
| D1)            | 10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer |                 | N/A     |
| D2)            | Capacitance .....   |                 | —       |
| D3)            | Resistance .....  |                 | —       |

| H       | CRITERIA FOR TELEPHONE RINGING SIGNALS  | N/A |
|---------|---|-----|
| H.1     | General   | N/A |
| H.2     | Method A  | N/A |
| H.3     | Method B  | N/A |
| H.3.1   | Ringling signal   | N/A |
| H.3.1.1 | Frequency (Hz) .....  | —   |
| H.3.1.2 | Voltage (V) .....   | —   |
| H.3.1.3 | Cadence; time (s) and voltage (V) .....                                       | —   |
| H.3.1.4 | Single fault current (mA):.....   | —   |
| H.3.2   | Tripping device and monitoring voltage .....                                  | N/A |
| H.3.2.1 | Conditions for use of a tripping device or a monitoring voltage complied with | N/A |
| H.3.2.2 | Tripping device   | N/A |

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|----------------|------------------------------|-----------------|---------|
| Clause         | Requirement + Test           | Result - Remark | Verdict |
| H.3.2.3        | Monitoring voltage (V) ..... |                 | —       |

| <b>J</b> |   | <b>INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION</b> | <b>N/A</b> |
|----------|---|---|------------|
|          | General requirements  |   | N/A        |
| <b>K</b> |   | <b>SAFETY INTERLOCKS</b>  | <b>N/A</b> |
| K.1      | General requirements  | No safety interlocks inside the EUT                                   | N/A        |
| K.2      | Components of safety interlock safeguard mechanism .....  |   | N/A        |
| K.3      | Inadvertent change of operating mode  |   | N/A        |
| K.4      | Interlock safeguard override  |   | N/A        |
| K.5      | Fail-safe   |   | N/A        |
|          | Compliance .....  |   | N/A        |
| K.6      | Mechanically operated safety interlocks   |   | N/A        |
| K.6.1    | Endurance requirement   |   | N/A        |
| K.6.2    | Compliance and Test method .....  |   | N/A        |
| K.7      | Interlock circuit isolation   |   | N/A        |
| K.7.1    | Separation distance for contact gaps & interlock circuit elements (type and circuit location) ..... |   | N/A        |
| K.7.2    | Overload test, Current (A).....   |   | N/A        |
| K.7.3    | Endurance test  |   | N/A        |
| K.7.4    | Electric strength test .....  |   | N/A        |

| <b>L</b> |                                 | <b>DISCONNECT DEVICES</b> | <b>N/A</b> |
|----------|---------------------------------|---------------------------|------------|
| L.1      | General requirements            |                           | N/A        |
| L.2      | Permanently connected equipment |                           | N/A        |
| L.3      | Parts that remain energized     |                           | N/A        |
| L.4      | Single phase equipment          |                           | N/A        |
| L.5      | Three-phase equipment           |                           | N/A        |
| L.6      | Switches as disconnect devices  |                           | N/A        |
| L.7      | Plugs as disconnect devices     |                           | N/A        |
| L.8      | Multiple power sources          |                           | N/A        |

| <b>M</b> |                      | <b>EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS</b> | <b>P</b> |
|----------|----------------------|---|----------|
| M.1      | General requirements |   | P        |

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|----------------|--|--|---------|
| Clause         | Requirement + Test   | Result - Remark  | Verdict |
| M.2            | Safety of batteries and their cells  |  | P       |
| M.2.1          | Requirements   |  | P       |
| M.2.2          | Compliance and test method (identify method) ... :                                 | Provided by the manufacture  | P       |
| M.3            | Protection circuits  |  | P       |
| M.3.1          | Requirements   |  | P       |
| M.3.2          | Tests  |  | P       |
|                | - Overcharging of a rechargeable battery   |  | P       |
|                | - Unintentional charging of a non-rechargeable battery                             |  | N/A     |
|                | - Reverse charging of a rechargeable battery                                       |  | N/A     |
|                | - Excessive discharging rate for any battery                                       |  | P       |
| M.3.3          | Compliance .....   | After above test have not created a hazard in the meaning of this standard | P       |
| M.4            | Additional safeguards for equipment containing secondary lithium battery           |  | P       |
| M.4.1          | General  |  | P       |
| M.4.2          | Charging safeguards  |  | P       |
| M.4.2.1        | Charging operating limits  |  | P       |
| M.4.2.2a)      | Charging voltage, current and temperature .....                                    | (See appended table M.4)   | —       |
| M.4.2.2 b)     | Single faults in charging circuitry .....  | (See appended table M.4)   | —       |
| M.4.3          | Fire Enclosure   | Fire enclosure provided  | P       |
| M.4.4          | Endurance of equipment containing a secondary lithium battery                      |  | P       |
| M.4.4.2        | Preparation  |  | P       |
| M.4.4.3        | Drop and charge/discharge function tests   |  | P       |
|                | Drop   |  | P       |
|                | Charge   |  | P       |
|                | Discharge  |  | P       |
| M.4.4.4        | Charge-discharge cycle test  |  | P       |
| M.4.4.5        | Result of charge-discharge cycle test  |  | P       |
| M.5            | Risk of burn due to short circuit during carrying                                  | See appended table B.4   | P       |
| M.5.1          | Requirement  |  | P       |
| M.5.2          | Compliance and Test Method (Test of P.2.3)   |  | P       |
| M.6            | Prevention of short circuits and protection from other effects of electric current | See appended table B.4   | P       |

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|----------------|---|---|---------|
| Clause         | Requirement + Test  | Result - Remark   | Verdict |
| M.6.1          | Short circuits  |   | P       |
| M.6.1.1        | General requirements  |   | P       |
| M.6.1.2        | Test method to simulate an internal fault   |   | P       |
| M.6.1.3        | Compliance (Specify M.6.1.2 or alternative method) .....  |   | N/A     |
| M.6.2          | Leakage current (mA) .....  |   | N/A     |
| M.7            | Risk of explosion from lead acid and NiCd batteries   |   | N/A     |
| M.7.1          | Ventilation preventing explosive gas concentration  |   | N/A     |
| M.7.2          | Compliance and test method  |   | N/A     |
| M.8            | Protection against internal ignition from external spark sources of lead acid batteries   |   | N/A     |
| M.8.1          | General requirements  |   | N/A     |
| M.8.2          | Test method   |   | N/A     |
| M.8.2.1        | General requirements  |   | N/A     |
| M.8.2.2        | Estimation of hypothetical volume $V_z$ (m <sup>3</sup> /s).....  |   | —       |
| M.8.2.3        | Correction factors.....   |   | —       |
| M.8.2.4        | Calculation of distance $d$ (mm) .....  |   | —       |
| M.9            | Preventing electrolyte spillage   |   | N/A     |
| M.9.1          | Protection from electrolyte spillage  |   | N/A     |
| M.9.2          | Tray for preventing electrolyte spillage  |   | N/A     |
| M.10           | Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) ..... | Provided the instructions include battery charging, storage and transportation, and disposal and recycling. | P       |

|          |                                   |  |            |
|----------|-----------------------------------|--|------------|
| <b>N</b> | <b>ELECTROCHEMICAL POTENTIALS</b> |  | <b>N/A</b> |
|          | Metal(s) used .....               |  | —          |

|          |   |            |            |
|----------|---|------------|------------|
| <b>O</b> | <b>MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES</b> |            | <b>N/A</b> |
|          | Figures O.1 to O.20 of this Annex applied.....          | Considered | —          |

|          |   |                            |          |
|----------|---|----------------------------|----------|
| <b>P</b> | <b>SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS</b> |                            | <b>P</b> |
| P.1      | General requirements  | No opening                 | P        |
| P.2.2    | Safeguards against entry of foreign object  | No safeguards requirement. | N/A      |



| IEC/EN 62368-1 |   |                 |         |
|----------------|---|-----------------|---------|
| Clause         | Requirement + Test  | Result - Remark | Verdict |
|                | Location and Dimensions (mm) .....  |                 | —       |
| P.2.3          | Safeguard against the consequences of entry of foreign object   |                 | N/A     |
| P.2.3.1        | Safeguards against the entry of a foreign object  |                 | N/A     |
|                | Openings in transportable equipment   |                 | N/A     |
|                | Transportable equipment with metalized plastic parts .....  |                 | N/A     |
| P.2.3.2        | Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) ..... |                 | N/A     |
| P.3            | Safeguards against spillage of internal liquids   |                 | N/A     |
| P.3.1          | General requirements  |                 | N/A     |
| P.3.2          | Determination of spillage consequences  |                 | N/A     |
| P.3.3          | Spillage safeguards   |                 | N/A     |
| P.3.4          | Safeguards effectiveness  |                 | N/A     |
| P.4            | Metallized coatings and adhesive securing parts   |                 | N/A     |
| P.4.2 a)       | Conditioning testing  |                 | N/A     |
|                | Tc (°C).....  |                 | —       |
|                | Tr (°C) .....   |                 | —       |
|                | Ta (°C).....  |                 | —       |
| P.4.2 b)       | Abrasion testing .....  |                 | N/A     |
| P.4.2 c)       | Mechanical strength testing .....   |                 | N/A     |

| Q        | CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING                                      |                              | N/A |
|----------|---|------------------------------|-----|
| Q.1      | Limited power sources   |                              | N/A |
| Q.1.1 a) | Inherently limited output   |                              | N/A |
| Q.1.1 b) | Impedance limited output  |                              | N/A |
|          | - Regulating network limited output under normal operating and simulated single fault condition | See appended table Annex Q.1 | N/A |
| Q.1.1 c) | Overcurrent protective device limited output  |                              | N/A |
| Q.1.1 d) | IC current limiter complying with G.9   |                              | N/A |
| Q.1.2    | Compliance and test method  |                              | N/A |
| Q.2      | Test for external circuits – paired conductor cable   |                              | N/A |
|          | Maximum output current (A) .....  |                              | —   |
|          | Current limiting method.....  |                              | —   |

| IEC/EN 62368-1 |   |                 |            |
|----------------|---|-----------------|------------|
| Clause         | Requirement + Test  | Result - Remark | Verdict    |
| <b>R</b>       | <b>LIMITED SHORT CIRCUIT TEST</b>                                   |                 | <b>N/A</b> |
| R.1            | General requirements  |                 | N/A        |
| R.2            | Determination of the overcurrent protective device and circuit      |                 | N/A        |
| R.3            | Test method Supply voltage (V) and short-circuit current (A). ..... |                 | N/A        |

| <b>S</b> | <b>TESTS FOR RESISTANCE TO HEAT AND FIRE</b>   |  | <b>N/A</b> |
|----------|--|--|------------|
| S.1      | Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W |  | N/A        |
|          | Samples, material .....  |  | —          |
|          | Wall thickness (mm).....   |  | —          |
|          | Conditioning (°C).....   |  | —          |
|          | Test flame according to IEC 60695-11-5 with conditions as set out  |  | N/A        |
|          | - Material not consumed completely   |  | N/A        |
|          | - Material extinguishes within 30s   |  | N/A        |
|          | - No burning of layer or wrapping tissue   |  | N/A        |
| S.2      | Flammability test for fire enclosure and fire barrier integrity  |  | N/A        |
|          | Samples, material .....  |  | —          |
|          | Wall thickness (mm).....   |  | —          |
|          | Conditioning (°C).....   |  | —          |
|          | Test flame according to IEC 60695-11-5 with conditions as set out  |  | N/A        |
|          | Test specimen does not show any additional hole  |  | N/A        |
| S.3      | Flammability test for the bottom of a fire enclosure   |  | N/A        |
|          | Samples, material .....  |  | —          |
|          | Wall thickness (mm).....   |  | —          |
|          | Cheesecloth did not ignite   |  | N/A        |
| S.4      | Flammability classification of materials   |  | N/A        |
| S.5      | Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W |  | N/A        |
|          | Samples, material .....  |  | —          |

| IEC/EN 62368-1 |  |  |          |
|----------------|--|--|----------|
| Clause         | Requirement + Test   | Result - Remark                              | Verdict  |
|                | Wall thickness (mm).....:  |  | —        |
|                | Conditioning (test condition), (°C).....:                          |  | —        |
|                | Test flame according to IEC 60695-11-20 with conditions as set out |  | N/A      |
|                | After every test specimen was not consumed completely              |  | N/A      |
|                | After fifth flame application, flame extinguished within 1 min     |  | N/A      |
| <b>T</b>       | <b>MECHANICAL STRENGTH TESTS</b>                                   |  | <b>P</b> |
| T.1            | General requirements   |  | P        |
| T.2            | Steady force test, 10 N .....                                      |  | P        |
| T.3            | Steady force test, 30 N .....                                      |  | N/A      |
| T.4            | Steady force test, 100 N .....                                     | (See appended table T.4)                     | P        |
| T.5            | Steady force test, 250 N .....                                     |  | N/A      |
| T.6            | Enclosure impact test  |  | N/A      |
|                | Fall test  |  | N/A      |
|                | Swing test   |  | N/A      |
| T.7            | Drop test .....  | (See appended table T.7)                     | P        |
| T.8            | Stress relief test .....   | (See appended table T.8)                     | P        |
| T.9            | Impact Test (glass)  | Surface area not exceeding 0.1m <sup>2</sup> | N/A      |
| T.9.1          | General requirements   |  | N/A      |
| T.9.2          | Impact test and compliance   |  | N/A      |
|                | Impact energy (J).....:  |  | —        |
|                | Height (m) .....   |  | —        |
| T.10           | Glass fragmentation test .....                                     |  | N/A      |
| T.11           | Test for telescoping or rod antennas                               |  | N/A      |
|                | Torque value (Nm) .....  |  | —        |

|          |   |  |            |
|----------|---|--|------------|
| <b>U</b> | <b>MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION</b> |  | <b>N/A</b> |
| U.1      | General requirements  |  | N/A        |
| U.2      | Compliance and test method for non-intrinsically protected CRTs                                       |  | N/A        |
| U.3      | Protective Screen.....:   |  | N/A        |

| IEC/EN 62368-1 |   |                 |          |
|----------------|---|-----------------|----------|
| Clause         | Requirement + Test  | Result - Remark | Verdict  |
| <b>V</b>       | <b>DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)</b> |                 | <b>P</b> |
| V.1            | Accessible parts of equipment   |                 | P        |
| V.2            | Accessible part criterion   |                 | P        |

|            |                    |                 |         |
|------------|--------------------|-----------------|---------|
| EN 62368-1 |                    |                 |         |
| Clause     | Requirement + Test | Result - Remark | Verdict |

|   |                    |
|---|--------------------|
| <b>ATTACHMENT TO TEST REPORT IEC 62368-1</b><br><b>DENMARK NATIONAL DIFFERENCES</b><br><b>Audio/video, information and communication technology equipment –</b><br><b>Part 1: Safety requirements</b> |                    |
| <b>Differences according to</b> .....   | DS/EN 62368-1:2014 |
| <b>Attachment Form No.</b> .....  | DK_ND_IEC62368_1B  |
| <b>Attachment Originator</b> .....  | UL (Demko)         |
| <b>Master Attachment</b> .....  | 2014-10            |
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| <b>National Differences</b> |  | P   |
|-----------------------------|--|-----|
| 4.1.15                      | <p>To the end of the subclause the following is added:</p> <p>Class I pluggable equipment type A intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment shall be connected to an earthed mains socket-outlet.</p> <p>The marking text in the applicable countries shall be as follows:<br/>                     "Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord."</p> | N/A |
| 5.2.2.2                     | <p>After the 2nd paragraph add the following:<br/>                     A warning (marking safeguard) for high touch current is required if the touch current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.</p>   | N/A |
| 5.6.1                       | <p>Add to the end of the subclause:</p> <p>Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment.</p> <p>Justification:<br/>                     In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.</p>  | N/A |

| EN 62368-1 |   |                 |         |
|------------|---|-----------------|---------|
| Clause     | Requirement + Test  | Result - Remark | Verdict |
| 5.7.5      | To the end of the subclause the following is added:<br>The installation instruction shall be affixed to the equipment if the protective conductor current exceeds the limits of 3,5 mA a.c. or 10 mA d.c. |                 | N/A     |
| 5.7.6.2    | To the end of the subclause the following is added:<br>The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA.     |                 | N/A     |

| EN 62368-1 |  |                 |         |
|------------|--|-----------------|---------|
| Clause     | Requirement + Test   | Result - Remark | Verdict |
| G.4.2      | <p>To the end of the subclause the following is added:</p> <p>Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</p> <p>If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.</p> <p>Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a.</p> <p>Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c.</p> <p>Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a</p> <p>Justification:<br/>Heavy Current Regulations, Section 6c</p> |                 | P       |

| EN 62368-1 |                    |                 |         |
|------------|--------------------|-----------------|---------|
| Clause     | Requirement + Test | Result - Remark | Verdict |

|  |  |                   |  |
|--|--|-------------------|--|
| <b>ATTACHMENT TO TEST REPORT IEC 62368-1<br/>EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES<br/>(Audio/video, information and communication technology equipment Part 1: Safety requirements)</b> |  |                   |  |
| <b>Differences according to .....</b>  |  | EN 62368-1:2014   |  |
| <b>Attachment Form No. ....</b>  |  | EU_GD_IEC62368_1B |  |
| <b>Attachment Originator.....</b>  |  | Intertek Semko AB |  |
| <b>Master Attachment .....</b>   |  | Date (2015-08)    |  |
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| CENELEC COMMON MODIFICATIONS (EN) |  |  | P   |
|-----------------------------------|--|--|-----|
| 1                                 | NOTE Z1  |  | N/A |
| 4.Z1                              | Protective devices included as integral parts of the equipment or as parts of the building installation: |  | P   |
|                                   | a) Included as parts of the equipment  |  | P   |
|                                   | b) For components in series with the mains; by devices in the building installation                      |  | N/A |
|                                   | c) For pluggable type B or permanently connected; by devices in the building installation                |  | N/A |
| 5.4.2.3.2.4                       | Interconnection with external circuit  |  | N/A |
| 10.2.1                            | Additional requirements in 10.5.1  |  | N/A |
| 10.5.1                            | RS1 compliance measurement conditions  |  | N/A |
| 10.6.2.1                          | EN 71-1:2011, 4.20 and methods and distances   |  | N/A |
| 10.Z1                             | Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz                                  |  | N/A |
| G.7.1                             | NOTE Z1  |  | N/A |

| ZB                   | ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)  | P   |
|----------------------|---|-----|
| 4.1.15               | <b>Denmark, Finland, Norway and Sweden:</b><br>Class I pluggable equipment type A marking | N/A |
| 4.7.3                | <b>United Kingdom:</b><br>Torque test socket-outlet BS 1363, and the plug part BS 1363.   | N/A |
| 5.2.2.2              | <b>Denmark:</b><br>Warning for high touchcurrent  | N/A |
| 5.4.11.1 and Annex G | <b>Finland and Sweden:</b><br>Separation of the telecommunication network from earth      | N/A |
| 5.5.2.1              | <b>Norway:</b><br>Capacitors rated for the applicable line-to-line voltage (230 V).       | N/A |



| EN 62368-1    |  |                 |         |
|---------------|--|-----------------|---------|
| Clause        | Requirement + Test   | Result - Remark | Verdict |
| 5.5.6         | <b>Finland, Norway and Sweden:</b><br>Resistors used as basic safeguard or bridging basic insulation comply with G.10.1 and G.10.2.  |                 | N/A     |
| 5.6.1         | <b>Denmark:</b><br>Protection for pluggable equipment type A; integral part of the equipment   |                 | N/A     |
| 5.6.4.2.1     | <b>Ireland and United Kingdom:</b><br>The protective current rating is taken to be 13 A  |                 | N/A     |
| 5.6.5.1       | <b>Ireland and United Kingdom:</b><br>Conductor sizes of flexible cords to be accepted by terminals for equipment rated 10 A to 13 A   |                 | N/A     |
| 5.7.5         | <b>Denmark:</b><br>The installation instruction affixed to the equipment if high protective conductor current  |                 | N/A     |
| 5.7.6.1       | <b>Norway and Sweden:</b><br>Television distribution system isolation text in user manual  |                 | N/A     |
| 5.7.6.2       | <b>Denmark:</b><br>Warning for high touch current  |                 | N/A     |
| B.3.1 and B.4 | <b>Ireland and United Kingdom:</b><br>Tests conducted using an external miniature circuit breaker or protective devices included as an integral part of the direct plug-in equipment   |                 | N/A     |
| G.4.2         | <b>Denmark:</b><br>Appliances rated $\leq 13$ A provided with a plug according to DS 60884-2-D1:2011.<br>Class I equipment provided with socket-outlets provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.<br>If a single-phase equipment having rated $> 13$ A or poly-phase equipment provided with a supply cord with a plug, plug in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.<br>Mains socket outlets intended for providing power to Class II apparatus rated 2,5 A in accordance with DS 60884-2-D1:2011 standard sheet DKA 1-4a.<br>Other current rating socket outlets in compliance with Standard Sheet DKA 1-3a or DKA 1-1c.<br>Mains socket-outlets with earth in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a |                 | P       |
| G.4.2         | <b>United Kingdom:</b><br>The plug part of direct plug-in equipment assessed to BS 1363  |                 | N/A     |

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|------------|--|-----------------|---------|
| Clause     | Requirement + Test   | Result - Remark | Verdict |
| G.7.1      | <b>United Kingdom:</b><br>Equipment fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768 |                 | N/A     |
| G.7.1      | <b>Ireland:</b><br>Apparatus provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use                    |                 | N/A     |
| G.7.2      | <b>Ireland and United Kingdom:</b><br>A power supply cord for equipment which is rated over 10 A and up to and including 13 A.   |                 | N/A     |

| ZC     | ANNEX ZC, NATIONAL DEVIATIONS (EN)   | P   |
|--------|--|-----|
| 10.5.2 | <b>Germany:</b><br>Cathode ray tube intended for the display of visual images, authorization or application of type approval and marking.                          | N/A |
| F.1    | <b>Italy:</b><br>The power consumption in Watts (W) indicated on TV receiver and in instruction for use  | N/A |
|        | TV receivers provided with an instruction for use, schematic diagrams and adjustments procedure in Italian language.   | N/A |
|        | Marking for controls and terminals in Italian language.  | N/A |
|        | Conformity declaration according to the above requirements in the instruction manual   | N/A |
|        | First importers of TV receivers manufactured outside EEC previous conformity certification to the Italian Post Ministry and Certification number on the backcover. | N/A |

| IEC 62368-1 |                    |                 |         |
|-------------|--------------------|-----------------|---------|
| Clause      | Requirement + Test | Result - Remark | Verdict |

| 4.1.2                          | TABLE: List of critical components               |                               |   |                                      |   | P |
|--------------------------------|--|-------------------------------|---|--------------------------------------|---|---|
| Object / part No.              | Manufacturer/<br>trademark                       | Type / model                  | Technical data  | Standard                             | Mark(s) of<br>conformity <sup>1</sup>                         |   |
| PCB                            | Tripod (Wuxi)<br>Electronic Co Ltd               | 2-9                           | V-0, 130°C  | UL 796                               | UL  |   |
| Alternative                    | Interchangeable                                  | Interchangeable               | V-0, 130°C  | UL 796                               | UL  |   |
| Lithium ion<br>polymer battery | Shenzhen Hua Tian<br>Tong Technology<br>Co., Ltd | DK018                         | 3.85Vdc, 4380mAh  | IEC/EN 62133-<br>2:2017              | ORT Test<br>report No.:<br>ORTSZ200<br>420020002              |   |
| -Cell                          | Shenzhen Hua Tian<br>Tong Technology<br>Co., Ltd | 476279                        | 3.85Vdc, 4380mAh  | IEC/EN 62133-<br>2:2017              | ORT Test<br>report No.:<br>ORTSZ200<br>420020002              |   |
| Switching Adapter              | SHEN ZHEN<br>HUAJIN<br>ELECTRONICS<br>CO., LTD.  | HJ-FC017K7-<br>EU             | Input: 100-240V~,<br>50/60Hz, 0.6A<br>Output:5/7/9VDC,<br>2A, 12VDC, 1.5A | IEC/EN 62368-1                       | TUV SUD<br>CB test<br>report no.:<br>211-<br>21190215-<br>000 |   |
| LCD panel                      | JIANGXI HOLITECH<br>TECHNOLOGY<br>CO., LTD.      | HTF057H238                    | 5.7"  | IEC/EN 62368-1                       | Tested with<br>appliance                                      |   |
| Flash LED                      | Everlight Electronics<br>Co., Ltd.               | ELCH Series                   | DC350mA,<br>Risk Group 1 (EN<br>62471)<br>Exempt Group (IEC<br>62471)     | IEC 62471:<br>2006<br>EN 62471: 2008 | TUV Rheinland<br>Report<br>No.:<br>10031507<br>001            |   |
| Speaker                        | Interchangeable                                  | Interchangeable               | 0.8Watts,<br>8 ohm ± 15% at<br>1000Hz                                     | IEC/EN 62368-1                       | Tested with<br>appliance                                      |   |
| Vibration motor                | Interchangeable                                  | Interchangeable               | Rated Voltage: DC<br>3.0V, 85mA max.<br>Rated Speed<br>10000 rpm Min      | IEC/EN 62368-1                       | Tested with<br>appliance                                      |   |
| Plastic Enclosure              | SABIC<br>INNOVATIVE<br>PLASITCS B V              | EXRL0246 (GG)<br>DMX9455 (GG) | 80°C, V-0, 1.5mm<br>thickness Min.  | UL 94                                | UL E45329   |   |

**Supplementary information:**

1) an asterisk indicates a mark which assures the agreed level of surveillance.

| EN 62368-1 |                    |                 |         |
|------------|--------------------|-----------------|---------|
| Clause     | Requirement + Test | Result - Remark | Verdict |

|   |   |   |                              |
|---|---|---|------------------------------|
| 4.8.4,<br>4.8.5   | <b>TABLE: Lithium coin/button cell batteries mechanical tests</b> |   | <b>N/A</b>                   |
| (The following mechanical tests are conducted in the sequence noted.) |   |   |                              |
| 4.8.4.2   | <b>TABLE: Stress Relief test</b>                                  |   | —                            |
|   | <b>Part</b>   | <b>Material</b>                           | <b>Oven Temperature (°C)</b> |
|   | --  | --  | --                           |
| 4.8.4.3   | <b>TABLE: Battery replacement test</b>                            |   | —                            |
| Battery part no. ....   |   |   | —                            |
| <b>Battery Installation/withdrawal</b>                                |   | <b>Battery Installation/Removal Cycle</b> | <b>Comments</b>              |
|   |   | 1   | --                           |
|   |   | 2   | --                           |
|   |   | 3   | --                           |
|   |   | 4   | --                           |
|   |   | 5   | --                           |
|   |   | 6   | --                           |
|   |   | 8   | --                           |
|   |   | 9   | --                           |
|   |   | 10  | --                           |
| 4.8.4.4   | <b>TABLE: Drop test</b>   |   | —                            |
|   | <b>Impact Area</b>  | <b>Drop Distance</b>                      | <b>Drop No.</b>              |
|   | --  | --  | 1                            |
|   | --  | --  | 2                            |
|   | --  | --  | 3                            |
| 4.8.4.5   | <b>TABLE: Impact</b>  |   | —                            |
|   | <b>Impacts per surface</b>  | <b>Surface tested</b>                     | <b>Impact energy (Nm)</b>    |
|   | --  | --  | --                           |
| 4.8.4.6   | <b>TABLE: Crush test</b>  |   | —                            |
|   | <b>Test position</b>  | <b>Surface tested</b>                     | <b>Crushing Force (N)</b>    |
|   | --  | --  | --                           |
| Supplementary information:  |   |   |                              |

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| Clause | Requirement + Test | Result - Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

| 4.8.5         | TABLE: Lithium coin/button cell batteries mechanical test result |           |                            | N/A |
|---------------|--|-----------|----------------------------|-----|
| Test position | Surface tested   | Force (N) | Duration force applied (s) |     |
| --            | --   | --        | --                         |     |

Supplementary information:

| 5.2   | Table: Classification of electrical energy sources |                                     |                  |                 |                 |    | P                 |
|---|--|-------------------------------------|------------------|-----------------|-----------------|----|-------------------|
| 5.2.2.2 – Steady State Voltage and Current conditions |  |                                     |                  |                 |                 |    |                   |
| No.   | Supply Voltage                                     | Location (e.g. circuit designation) | Test conditions  | Parameters      |                 |    | ES Class          |
|   |  |                                     |                  | U (Vrms or Vpk) | I (Apk or Arms) | Hz |                   |
| 1   | DC5V   | --                                  | Normal           | --              | --              | -- | ES1 (declaration) |
|   |  |                                     | Abnormal: --     | --              | --              | -- |                   |
|   |  |                                     | Single fault: -- | --              | --              | -- |                   |

| 5.2.2.3 - Capacitance Limits |                |                                     |                     |                 |         |          |  |
|------------------------------|----------------|-------------------------------------|---------------------|-----------------|---------|----------|--|
| No.                          | Supply Voltage | Location (e.g. circuit designation) | Test conditions     | Parameters      |         | ES Class |  |
|                              |                |                                     |                     | Capacitance, nF | Upk (V) |          |  |
| --                           | --             | --                                  | Normal:             | --              | --      | --       |  |
|                              |                |                                     | Abnormal: --        | --              | --      |          |  |
|                              |                |                                     | Single fault: SC/OC | --              | --      |          |  |

| 5.2.2.4 - Single Pulses |                |                                     |                      |               |         |          |          |
|-------------------------|----------------|-------------------------------------|----------------------|---------------|---------|----------|----------|
| No.                     | Supply Voltage | Location (e.g. circuit designation) | Test conditions      | Parameters    |         |          | ES Class |
|                         |                |                                     |                      | Duration (ms) | Upk (V) | lpk (mA) |          |
| --                      | --             | --                                  | Normal               | --            | --      | --       | --       |
|                         |                |                                     | Abnormal             | --            | --      | --       |          |
|                         |                |                                     | Single fault – SC/OC | --            | --      | --       |          |

| 5.2.2.5 - Repetitive Pulses |                |                                     |                 |               |         |          |          |
|-----------------------------|----------------|-------------------------------------|-----------------|---------------|---------|----------|----------|
| No.                         | Supply Voltage | Location (e.g. circuit designation) | Test conditions | Parameters    |         |          | ES Class |
|                             |                |                                     |                 | Off time (ms) | Upk (V) | lpk (mA) |          |
| --                          | --             | --                                  | Normal          | --            | --      | --       | --       |

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|------------|--------------------|-----------------|---------|
| Clause     | Requirement + Test | Result - Remark | Verdict |

|  |  |                      |    |    |    |
|--|--|----------------------|----|----|----|
|  |  | Abnormal             | -- | -- | -- |
|  |  | Single fault – SC/OC | -- | -- | -- |

Test Conditions:  
 Normal –  
 Abnormal -  
 Supplementary information: SC=Short Circuit, OC=Open Circuit  
 The prospective touch voltage was measured when the flash device was ignited.

| 5.4.1.4, 6.3.2, 9.0, B.2.6   | TABLE: Thermal requirements         |             |             |             |    | P                             |
|--|-------------------------------------|-------------|-------------|-------------|----|-------------------------------|
|  | Supply voltage (V) .....            | Condition 1 | Condition 2 | Condition 3 | -- | —                             |
|  | Ambient T <sub>min</sub> (°C) ..... | See below   | See below   | See below   | -- | —                             |
|  | Ambient T <sub>max</sub> (°C) ..... | See below   | See below   | See below   | -- | —                             |
|  | T <sub>ma</sub> (°C) .....          | See below   | See below   | See below   | -- | —                             |
| Maximum measured temperature T of part/at.....:  |                                     | T (°C)      |             |             |    | Allowed T <sub>max</sub> (°C) |
| PCB near U100  |                                     | 58.8        | 52.0        | 70.6        | -- | 130                           |
| Battery body   |                                     | 53.2        | 46.1        | 59.8        | -- | Ref.                          |
| Enclosure inside near U100   |                                     | 48.8        | 45.6        | 62.7        | -- | Ref.                          |
| Ambient  |                                     | 35.0        | 35.0        | 35.0        | -- | --                            |
| Touch temperature clause 9.0   |                                     |             |             |             |    |                               |
| Enclosure outside near U100  |                                     | 35.3        | 33.4        | 51.5        | -- | 48 77 (for Wireless Charging) |
| Button   |                                     | 35.0        | 32.4        | 42.3        | -- | 48                            |
| Screen   |                                     | 36.4        | 34.0        | 45.4        | -- | 48                            |
| Adapter enclosure  |                                     | 44.8        | --          | --          | -- | 77                            |
| Ambient  |                                     | 25.0        | 25.0        | 25.0        | -- | --                            |
| Supplementary information:<br>Condition 1: the most unfavorable 5V charging condition.<br>Condition 2: discharging full battery, normal operation.<br>Condition3: Wireless Charging condition. |                                     |             |             |             |    |                               |

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|----------------------------|---------------------|--------------------|---------------------|--------------------|--------|-------------------------------|------------------|
| Clause                     | Requirement + Test  |                    |                     | Result - Remark    |        |                               | Verdict          |
| Temperature T of winding:  | t <sub>1</sub> (°C) | R <sub>1</sub> (Ω) | t <sub>2</sub> (°C) | R <sub>2</sub> (Ω) | T (°C) | Allowed T <sub>max</sub> (°C) | Insulation class |
| --                         | --                  | --                 | --                  | --                 | --     | --                            | --               |
| Supplementary information: |                     |                    |                     |                    |        |                               |                  |

| 5.4.1.10.2                 | TABLE: Vicat softening temperature of thermoplastics |                  |  | N/A |
|----------------------------|--|------------------|--|-----|
| Penetration (mm)..... :    |  |                  |  | —   |
| Object/ Part No./Material  | Manufacturer/t rademark                              | T softening (°C) |  |     |
| --                         | --   | --               |  |     |
| Supplementary information: |  |                  |  |     |

| 5.4.1.10.3                               | TABLE: Ball pressure test of thermoplastics |                       |                          | N/A |
|--|---|-----------------------|--------------------------|-----|
| Allowed impression diameter (mm) ..... : | ≤ 2 mm                                      |                       |                          | —   |
| Object/Part No./Material                 | Manufacturer/trademark                      | Test temperature (°C) | Impression diameter (mm) |     |
| --                                       | --  | --                    | --                       |     |
| Supplementary information:               |   |                       |                          |     |

| 5.4.2.2, 5.4.2.4 and 5.4.3   | TABLE: Minimum Clearances/Creepage distance |              |                  |                  |         |                  | N/A     |
|--|---|--------------|------------------|------------------|---------|------------------|---------|
| Clearance (cl) and creepage distance (cr) at/of/between:   | Up (V)                                      | U r.m.s. (V) | Frequency (kHz)# | Required cl (mm) | cl (mm) | Required cr (mm) | cr (mm) |
| Basic/supplementary insulation   |   |              |                  |                  |         |                  |         |
| --   | --  | --           | --               | --               | --      | --               | --      |
| Reinforced insulation  |   |              |                  |                  |         |                  |         |
| --   | --  | --           | --               | --               | --      | --               | --      |
| Supplementary information:   |   |              |                  |                  |         |                  |         |
| (#) Frequencies above and below 30 kHz   |   |              |                  |                  |         |                  |         |
| Note 2: BI: basic insulation; SI: supplementary insulation; DI: double insulation; RI: reinforced insulation.                          |   |              |                  |                  |         |                  |         |
| *: According to 5.4.1.8.1 i), the working voltage to determine minimum creepage distances was measured after the ignition of the lamp. |   |              |                  |                  |         |                  |         |

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|--|---|----------------------------|------------------|
| Clause   | Requirement + Test  | Result - Remark            | Verdict          |
| 5.4.2.3  | <b>TABLE: Minimum Clearances distances using required withstand voltage</b> |                            | <b>N/A</b>       |
|  | <b>Overvoltage Category (OV):</b>   |                            | --               |
|  | <b>Pollution Degree:</b>  |                            | --               |
| Clearance distanced between:   |   | Required withstand voltage | Required cl (mm) |
| Basic / supplementary insulation   |   |                            |                  |
| --   |   | --                         | --               |
| Reinforced insulation  |   |                            |                  |
| --   |   | --                         | --               |
| Supplementary information:<br>1. BI: basic insulation; SI: supplementary insulation; DI: double insulation; RI: reinforced insulation; |   |                            |                  |

|   |  |                  |                                       |                    |
|---|--|------------------|---------------------------------------|--------------------|
| 5.4.2.4   | <b>TABLE: Clearances based on electric strength test</b> |                  |                                       | <b>N/A</b>         |
| Test voltage applied between:   |  | Required cl (mm) | Test voltage (Kv) peak/ r.m.s. / d.c. | Breakdown Yes / No |
| --  |  | --               | --                                    | --                 |
| Supplementary information: Not used the alternative method to determine the clearances. |  |                  |                                       |                    |

|                                       |  |                |          |                   |          |            |
|---------------------------------------|--|----------------|----------|-------------------|----------|------------|
| 5.4.4.2, 5.4.4.5 c) 5.4.4.9           | <b>TABLE: Distance through insulation measurements</b> |                |          |                   |          | <b>N/A</b> |
| Distance through insulation di at/of: | Peak voltage (V)                                       | Frequency (Hz) | Material | Required DTI (mm) | DTI (mm) |            |
| --                                    | --   | --             | --       | --                | --       |            |
| Supplementary information:            |  |                |          |                   |          |            |

|                               |                                       |                        |                  |                  |
|-------------------------------|---------------------------------------|------------------------|------------------|------------------|
| 5.4.9                         | <b>TABLE: Electric strength tests</b> |                        |                  | <b>N/A</b>       |
| Test voltage applied between: |                                       | Voltage shape (AC, DC) | Test voltage (V) | Breakdown Yes/No |
| Functional:                   |                                       |                        |                  |                  |
| --                            |                                       | --                     | --               | --               |
| Basic/supplementary:          |                                       |                        |                  |                  |
| --                            |                                       | --                     | --               | --               |
| Reinforced:                   |                                       |                        |                  |                  |
| --                            |                                       | --                     | --               | --               |



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|------------|--------------------|-----------------|---------|
| Clause     | Requirement + Test | Result - Remark | Verdict |

| 5.4.9                         | TABLE: Electric strength tests |                  |                  | N/A |
|-------------------------------|--------------------------------|------------------|------------------|-----|
| Test voltage applied between: | Voltage shape (AC, DC)         | Test voltage (V) | Breakdown Yes/No |     |
| Routine Tests:                |                                |                  |                  |     |
| --                            | --                             | --               | --               |     |
| Supplementary information:    |                                |                  |                  |     |

| 5.5.2.2  | TABLE: Stored discharge on capacitors |                            |                           |                                    |                   | N/A |
|--|---------------------------------------|----------------------------|---------------------------|------------------------------------|-------------------|-----|
| Supply Voltage (V), Hz   | Test Location                         | Operating Condition (N, S) | Switch position On or off | Measured Voltage (after 2 seconds) | ES Classification |     |
| --   | --                                    | --                         | --                        | --                                 | --                |     |
| Supplementary information:   |                                       |                            |                           |                                    |                   |     |
| X-capacitors installed for testing are: --   |                                       |                            |                           |                                    |                   |     |
| <input type="checkbox"/> bleeding resistor rating: --  |                                       |                            |                           |                                    |                   |     |
| <input type="checkbox"/> ICX:  |                                       |                            |                           |                                    |                   |     |
| Notes:   |                                       |                            |                           |                                    |                   |     |
| A. Test Location:  |                                       |                            |                           |                                    |                   |     |
| Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth                        |                                       |                            |                           |                                    |                   |     |
| B. Operating condition abbreviations:  |                                       |                            |                           |                                    |                   |     |
| N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition |                                       |                            |                           |                                    |                   |     |
| OC- Opened circuit   |                                       |                            |                           |                                    |                   |     |

| 5.6.6.2                    | TABLE: Resistance of protective conductors and terminations |                |                  |                | N/A |
|----------------------------|---|----------------|------------------|----------------|-----|
| Accessible part            | Test current (A)  | Duration (min) | Voltage drop (V) | Resistance (Ω) |     |
| --                         | --  | --             | --               | --             |     |
| Supplementary information: |   |                |                  |                |     |

| 5.7.2.2, 5.7.4       | TABLE: Earthed accessible conductive part   |                    | N/A |
|----------------------|---|--------------------|-----|
| Supply voltage ..... | --  |                    | --  |
| Location             | Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7 | Touch current (mA) |     |
| Measured to PE       | 1   |                    | N/A |

| EN 62368-1  |                    |                 |         |
|---|--------------------|-----------------|---------|
| Clause  | Requirement + Test | Result - Remark | Verdict |
|   |                    | 2*              | N/A     |
|   |                    | 3               | N/A     |
|   |                    | 4               | N/A     |
|   |                    | 5               | N/A     |
|   |                    | 6               | N/A     |
|   |                    | 8               | N/A     |
| Supplementary Information:  |                    |                 |         |
| Notes:  |                    |                 |         |
| [1] Supply voltage is the anticipated maximum Touch Voltage   |                    |                 |         |
| [2] Earthed neutral conductor [Voltage differences less than 1% or more]  |                    |                 |         |
| [3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3  |                    |                 |         |
| [4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable.   |                    |                 |         |
| [5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided. |                    |                 |         |
| N: Normal condition, R: Reverse condition.  |                    |                 |         |

| 6.2.2  | Table: Electrical power sources (PS) measurements for classification |                      |                     |                                    |                   | P |
|--|--|----------------------|---------------------|------------------------------------|-------------------|---|
| Source   | Description  | Measurement          | Max Power after 3 s | Max Power after 5 s <sup>*</sup> ) | PS Classification |   |
| A <sup>&amp;</sup>   | Battery pack output  | Power (W) :          | --                  | --                                 | PS2 (declaration) |   |
|  |  | V <sub>A</sub> (V) : | --                  | --                                 |                   |   |
|  |  | I <sub>A</sub> (A) : | --                  | --                                 |                   |   |
| B <sup>#</sup>   | Battery pack output (B- to P-short circuit)                          | Power (W) :          | --                  | --                                 | PS2 (declaration) |   |
|  |  | V <sub>A</sub> (V) : | --                  | --                                 |                   |   |
|  |  | I <sub>A</sub> (A) : | --                  | --                                 |                   |   |
| C <sup>#</sup>   | Battery cell   | Power (W) :          | --                  | --                                 | PS2 (declaration) |   |
|  |  | V <sub>A</sub> (V) : | --                  | --                                 |                   |   |
|  |  | I <sub>A</sub> (A) : | --                  | --                                 |                   |   |
| Supplementary Information: SC: short circuit                           |  |                      |                     |                                    |                   |   |
| (*) Measurement taken only when limits at 3 seconds exceed PS1 limits. |  |                      |                     |                                    |                   |   |
| (&) Power measurement for worst-case fault.                            |  |                      |                     |                                    |                   |   |
| (#) Power measurement for worst-case power source fault.               |  |                      |                     |                                    |                   |   |

| EN 62368-1 |                    |                 |         |
|------------|--------------------|-----------------|---------|
| Clause     | Requirement + Test | Result - Remark | Verdict |

| 6.2.3.1  | Table: Determination of Potential Ignition Sources (Arcing PIS) |  |   |                      | N/A |
|----------|---|--|---|----------------------|-----|
| Location | Open circuit voltage After 3 s (V <sub>p</sub> )                | Measured r.m.s current (I <sub>rms</sub> ) | Calculated value (V <sub>p</sub> x I <sub>rms</sub> ) | Arcing PIS? Yes / No |     |
| --       | --  | --   | --  | --                   |     |

Supplementary information:  
 An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V<sub>p</sub>) and normal operating condition rms current (I<sub>rms</sub>) is greater than 15.

| 6.2.3.2                | Table: Determination of Potential Ignition Sources (Resistive PIS) |   |  |  | P                     |
|------------------------|--|---|--|--|-----------------------|
| Circuit Location (x-y) | Operating Condition (Normal / Describe Single Fault)               | Measured wattage or VA During first 30 s (W / VA) | Measured wattage or VA After 30 s (W / VA) | Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment) | Resistive PIS? Yes/No |
| --                     | --   | <100  | >15  | --   | --                    |

Supplementary Information:  
 All internal circuits were considered as resistive PIS.  
 A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter.  
 If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification.  
 A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, or (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.

| 8.5.5  | TABLE: High Pressure Lamp |                              | N/A |
|--|---------------------------|------------------------------|-----|
| Description                                    | Values                    | Energy Source Classification |     |
| Lamp type .....                                |                           | —                            |     |
| Manufacturer .....                             |                           | —                            |     |
| Cat no. ....                                   |                           | —                            |     |
| Pressure (cold) (MPa) .....                    |                           | MS_                          |     |
| Pressure (operating) (MPa) .....               |                           | MS_                          |     |
| Operating time (minutes) .....                 |                           | —                            |     |
| Explosion method .....                         |                           | —                            |     |
| Max particle length escaping enclosure (mm) .: |                           | MS_                          |     |
| Max particle length beyond 1 m (mm).....:      |                           | MS_                          |     |
| Overall result .....                           |                           |                              |     |

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|------------|--------------------|-----------------|---------|
| Clause     | Requirement + Test | Result - Remark | Verdict |

Supplementary information:

| B.2.5 | TABLE: Input test |                        |       |                        |         |                       |   | P |
|-------|-------------------|------------------------|-------|------------------------|---------|-----------------------|---|---|
| U (V) | I (A)             | I <sub>rated</sub> (A) | P (W) | P <sub>rated</sub> (W) | Fuse No | I <sub>fuse</sub> (A) | Condition/status  |   |
| 5.0   | 0.456             | 2                      | 2.28  | --                     | --      | --                    | Supply by external power source, full discharge battery                         |   |
| 5     | 1.294             | 2                      | 6.47  | --                     | --      | --                    | Charging by wireless charger, full discharge battery                            |   |
| 4.4   | 0.567             | --                     | 3.20  | --                     | --      | --                    | Discharging condition, supplied by fully charged battery with normal operation. |   |

Supplementary information: the most unfavorable charging condition was considered.

| B.3  | TABLE: Abnormal operating condition tests |                     |                |          |                            |          |            | P           |
|--|---|---------------------|----------------|----------|----------------------------|----------|------------|-------------|
| Ambient temperature (°C) .....                                   |   |                     |                |          | See below                  |          |            | —           |
| Power source for EUT: Manufacturer, model/type, output rating .. |   |                     |                |          | See cover page for details |          |            | —           |
| Component No.  | Abnormal Condition                        | Supply voltage, (V) | Test time (ms) | Fuse no. | Fuse current, (A)          | T-couple | Temp. (°C) | Observation |
| --   | --  | --                  | --             | --       | --                         | --       | --         | --          |

Supplementary information: SC = short circuit.

| B.4  | TABLE: Fault condition tests |                     |                |          |                            |          |            | P   |
|--|------------------------------|---------------------|----------------|----------|----------------------------|----------|------------|---|
| Ambient temperature (°C) .....                                   |                              |                     |                |          | 25.0                       |          |            | —   |
| Power source for EUT: Manufacturer, model/type, output rating .. |                              |                     |                |          | See cover page for details |          |            | —   |
| Component No.  | Fault Condition              | Supply voltage, (V) | Test time (ms) | Fuse no. | Fuse current, (A)          | T-couple | Temp. (°C) | Observation                                       |
| Charging with empty battery                                      |                              |                     |                |          |                            |          |            |   |
| Battery  | Overcharge                   | 5Vdc                | 7hrs           | --       | --                         | --       | --         | Unit was normal operation, no damaged, no hazard. |

| EN 62368-1                            |                               |               |        |    |                 |    |    |  |
|---------------------------------------|-------------------------------|---------------|--------|----|-----------------|----|----|--|
| Clause                                | Requirement + Test            |               |        |    | Result - Remark |    |    | Verdict  |
| Battery B- to P- (battery)            | Short circuit, Overcharge     | 5Vdc          | 7hrs   | -- | --              | -- | -- | Unit was normal operation, no damaged, no hazard.                                |
| C1 (battery)                          | Short circuit                 | 5Vdc          | 7hrs   | -- | --              | -- | -- | Unit shut down immediately, no damaged, no hazard.                               |
| R1 (battery)                          | Short circuit                 | 5Vdc          | 7hrs   | -- | --              | -- | -- | EUT work as normal, no damage, no hazards.                                       |
| Battery + to -                        | Short circuit                 | 5Vdc          | 10mins | -- | --              | -- | -- | After SC, battery no fire, no explosion and no leakage, no hazard.               |
| Speaker                               | Short circuit                 | 5Vdc          | 10mins | -- | --              | -- | -- | Speaker shut down and other function as normal operation. No damaged, no hazards |
| Motor                                 | Locked                        | 5Vdc          | 7hrs   | -- | --              | -- | -- | EUT no ignition of the wrapping cheesecloth.                                     |
| Discharging with full charged battery |                               |               |        |    |                 |    |    |  |
| Battery                               | Over-discharge                | Fully battery | 7hrs   | -- | --              | -- | -- | Unit was normal operation, no damaged, no hazard.                                |
| Battery B- to P- (battery)            | Short circuit, Over-discharge | Fully battery | 7hrs   | -- | --              | -- | -- | Unit was normal operation, no damaged, no hazard.                                |
| C1 (battery)                          | Short circuit                 | Fully battery | 7hrs   | -- | --              | -- | -- | Unit shut down immediately, no damaged, no hazard.                               |
| R1 (battery)                          | Short circuit                 | Fully battery | 7hrs   | -- | --              | -- | -- | EUT work as normal, no damage, no hazards.                                       |
| Battery + to -                        | Short circuit                 | Fully battery | 10mins | -- | --              | -- | -- | After SC, battery no fire, no explosion and no leakage, no hazard.               |

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|---|--------------------|---------------|--------|----|----|-----------------|----|--|
| Clause  | Requirement + Test |               |        |    |    | Result - Remark |    | Verdict  |
| Speaker   | Short circuit      | Fully battery | 10mins | -- | -- | --              | -- | Speaker shut down and other function as normal operation. No damaged, no hazards |
| Motor   | Locked             | Fully battery | 7hrs   | -- | -- | --              | -- | EUT no ignition of the wrapping cheesecloth.                                     |
| Supplementary information:<br>CD - Components damaged (list damaged components)<br>NB - No indication of dielectric breakdown.<br>NC - Cheesecloth remained intact.<br>NT - Tissue paper remained intact. |                    |               |        |    |    |                 |    |  |

| Annex M   | TABLE: Batteries           |               |                         |                        |               |               |               |                   | P             |         |
|---|----------------------------|---------------|-------------------------|------------------------|---------------|---------------|---------------|-------------------|---------------|---------|
| The tests of Annex M are applicable only when appropriate battery data is not available |                            |               |                         |                        |               |               |               |                   | --            |         |
| Is it possible to install the battery in a reverse polarity position?..... :            |                            |               |                         |                        |               |               |               | No                | --            |         |
|   | Non-rechargeable batteries |               |                         | Rechargeable batteries |               |               |               |                   |               |         |
|   | Discharging                |               | Un-intentional charging | Charging               |               | Discharging   |               | Reversed charging |               |         |
|   | Meas. current              | Manuf. Specs. |                         | Meas. current          | Manuf. Specs. | Meas. current | Manuf. Specs. | Meas. current     | Manuf. Specs. |         |
| Max. current during normal condition  | --                         | --            | --                      | 369mA                  | 4000mA        | 567mA         | 4000mA        | --                | --            |         |
| Max. current during fault condition   | --                         | --            | --                      | 1458mA                 | 4000mA        | 1620mA        | 4000mA        | --                | --            |         |
| Test results:   |                            |               |                         |                        |               |               |               |                   | --            | Verdict |
| - Chemical leaks  |                            |               |                         |                        |               |               |               | --                | NO            |         |
| - Explosion of the battery  |                            |               |                         |                        |               |               |               | --                | NO            |         |
| - Emission of flame or expulsion of molten metal  |                            |               |                         |                        |               |               |               | --                | NO            |         |
| - Electric strength tests of equipment after completion of tests                        |                            |               |                         |                        |               |               |               | --                | --            |         |
| Supplementary information:  |                            |               |                         |                        |               |               |               |                   |               |         |

| Annex M.4 | Table: Additional safeguards for equipment containing secondary lithium batteries |  |  |  |  |  |  | P |
|-----------|---|--|--|--|--|--|--|---|
|           |   |  |  |  |  |  |  |   |

| EN 62368-1 |                    |                 |         |
|------------|--------------------|-----------------|---------|
| Clause     | Requirement + Test | Result - Remark | Verdict |

| Battery/Cell No. | Test conditions            | Measurements |       |  | Observation            |
|------------------|----------------------------|--------------|-------|--|------------------------|
|                  |                            | U (V)        | I (A) | Temp (°C)                              |                        |
| 1                | Normal                     | 4.4          | 0.369 | Battery surface: 53.2<br>Ambient: 35.0 | No damaged, no hazard. |
| 2                | Abnormal (after drop test) | 4.4          | 0.369 | Battery surface: 53.2<br>Ambient: 35.0 | No damaged, no hazard. |
| 3                | Single fault: C1 SC        | 4.4          | 1.458 | Battery surface: 55.8<br>Ambient: 35.0 | No damaged, no hazard. |

Supplementary Information: SC = short circuit.

For battery cell:

- Highest specified charging temperature: 60°C
- Lowest specified charging temperature: 0°C
- Maximum specified charging current: 4.0A
- Maximum specified charging voltage: 4.4V

| Battery identification | Charging at $T_{lowest}$ (°C) | Observation              | Charging at $T_{highest}$ (°C) | Observation          |
|------------------------|-------------------------------|--------------------------|--------------------------------|----------------------|
| Li-ion battery         | 0                             | Charging current: 0.369A | 60                             | Charging current: 0A |

Supplementary Information: The battery's ambient temperature did not exceed the highest and lowest specified charging temperature under normal operating conditions, abnormal operating conditions or single fault conditions.

|                  |  |            |
|------------------|--|------------|
| <b>Annex Q.1</b> | <b>TABLE: Circuits intended for interconnection with building wiring (LPS)</b> | <b>N/A</b> |
|------------------|--|------------|

Note: Measured UOC (V) with all load circuits disconnected:

| Output Circuit | Components | U <sub>oc</sub> (V) | I <sub>sc</sub> (A) |       | S (VA) |       |
|----------------|------------|---------------------|---------------------|-------|--------|-------|
|                |            |                     | Meas.               | Limit | Meas.  | Limit |
| --             | --         | --                  | --                  | --    | --     | --    |
| --             | --         | --                  | --                  | --    | --     | --    |
| --             | --         | --                  | --                  | --    | --     | --    |

Supplementary Information:

|                           |                                 |  |  |  |  |          |
|---------------------------|---------------------------------|--|--|--|--|----------|
| <b>T.2, T.3, T.4, T.5</b> | <b>TABLE: Steady force test</b> |  |  |  |  | <b>P</b> |
|---------------------------|---------------------------------|--|--|--|--|----------|

| Part/Location | Material | Thickness (mm) | Force (N) | Test Duration (sec) | Observation |
|---------------|----------|----------------|-----------|---------------------|-------------|
|---------------|----------|----------------|-----------|---------------------|-------------|

| EN 62368-1                 |                    |    |      |                 |                       |         |
|----------------------------|--------------------|----|------|-----------------|-----------------------|---------|
| Clause                     | Requirement + Test |    |      | Result - Remark |                       | Verdict |
| Top of enclosure           | --                 | -- | 100N | 5               | No damaged, no hazard |         |
| Bottom of enclosure        | --                 | -- | 100N | 5               | No damaged, no hazard |         |
| Side of enclosure          | --                 | -- | 100N | 5               | No damaged, no hazard |         |
| Supplementary information: |                    |    |      |                 |                       |         |

| T.6, T.9                   | TABLE: Impact tests |                |                        |             | N/A |
|----------------------------|---------------------|----------------|------------------------|-------------|-----|
| Part/Location              | Material            | Thickness (mm) | Vertical distance (mm) | Observation |     |
| --                         | --                  | --             | --                     | --          |     |
| Supplementary information: |                     |                |                        |             |     |

| T.7                        | TABLE: Drop tests |                |                  |                       | P |
|----------------------------|-------------------|----------------|------------------|-----------------------|---|
| Part/Location              | Material          | Thickness (mm) | Drop Height (mm) | Observation           |   |
| Top                        | Plastic           | --             | 1000             | No damage, no hazard. |   |
| Side                       | Plastic           | --             | 1000             | No damage, no hazard. |   |
| Bottom                     | Plastic           | --             | 1000             | No damage, no hazard. |   |
| Supplementary information: |                   |                |                  |                       |   |

| T.8                        | TABLE: Stress relief test |                |                       |              |                        | P |
|----------------------------|---------------------------|----------------|-----------------------|--------------|------------------------|---|
| Part/Location              | Material                  | Thickness (mm) | Oven Temperature (°C) | Duration (h) | Observation            |   |
| Plastic enclosure          | Plastic                   | --             | 70                    | 7            | No damaged, no hazard. |   |
| Supplementary information: |                           |                |                       |              |                        |   |



Attachment 1 – Photo Documentation



Fig.1



Fig.2



Fig.3

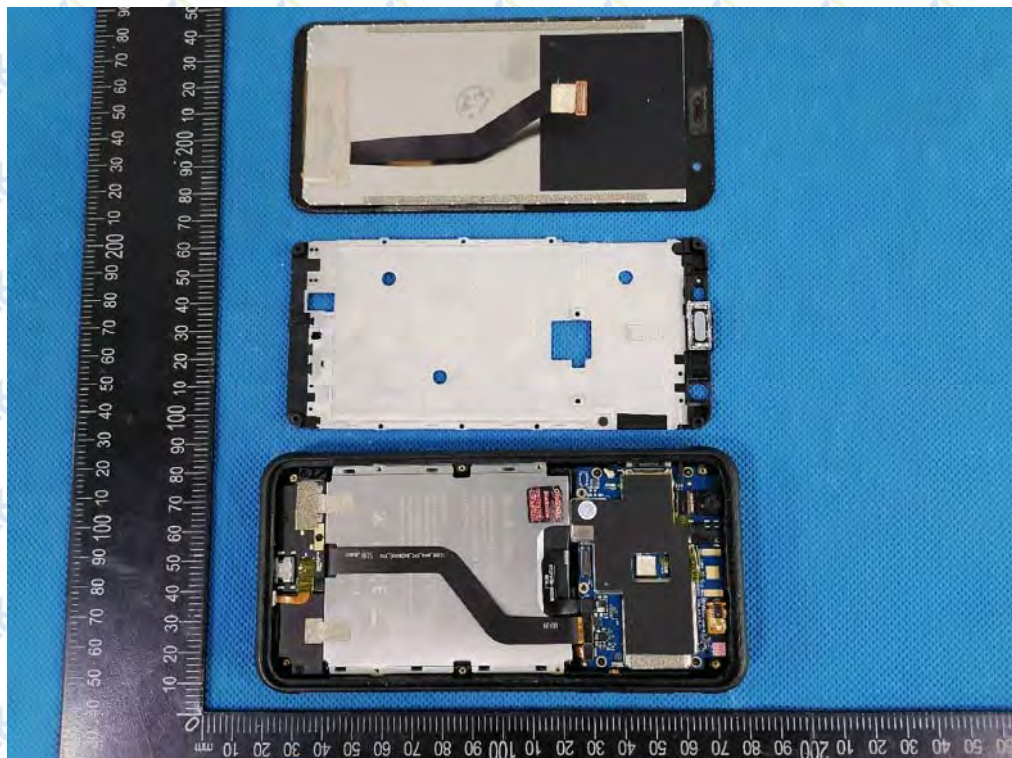


Fig.4



Fig.5

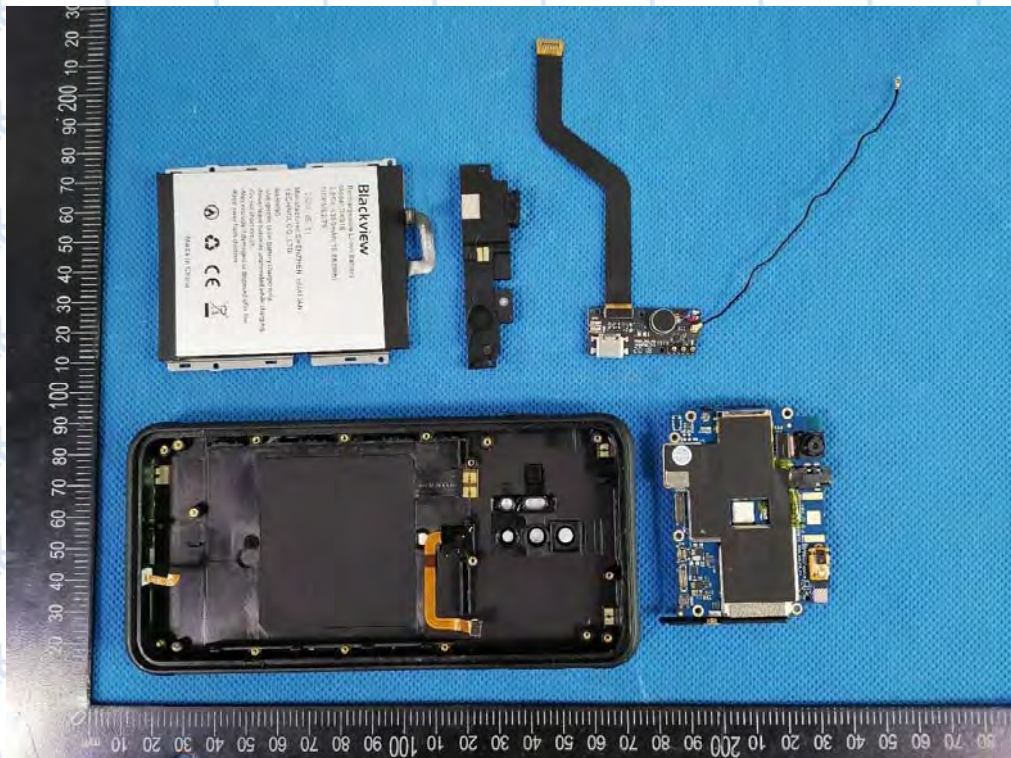


Fig.6

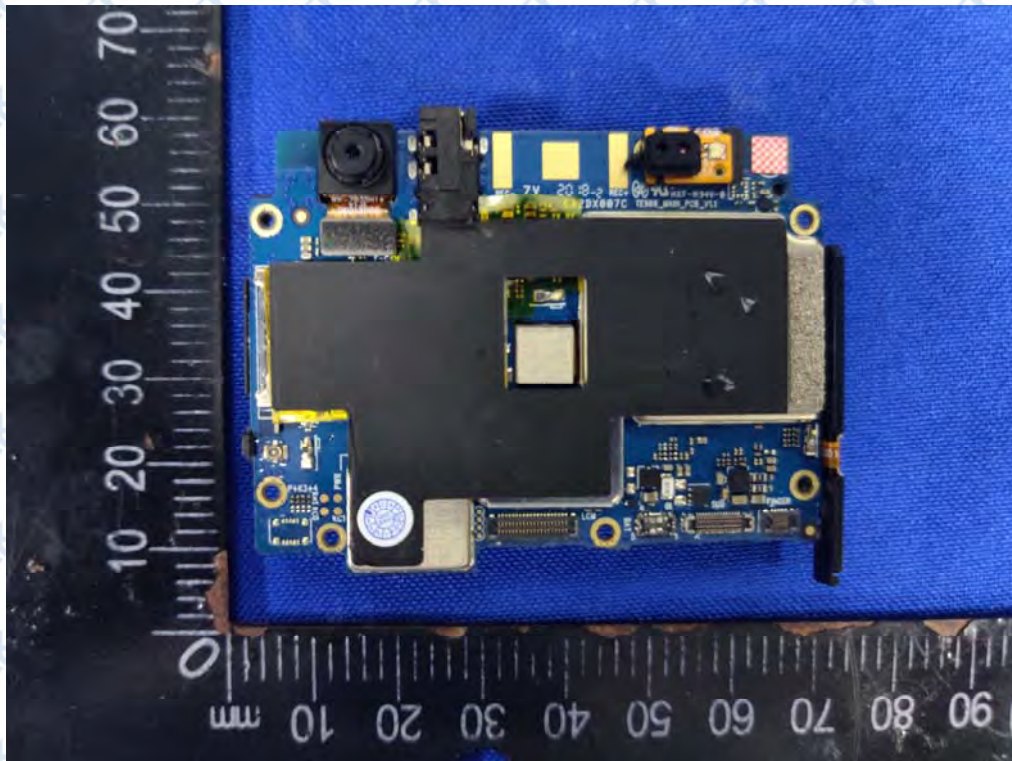


Fig.7

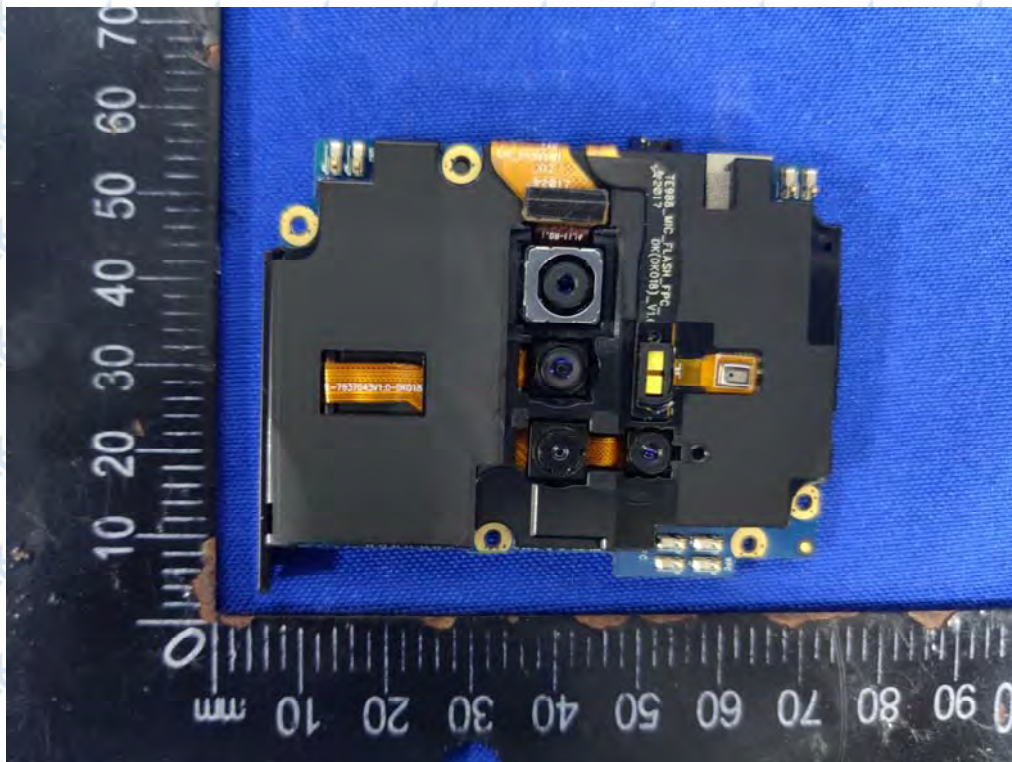


Fig.8



Fig.9

\*\*\*END OF REPORT\*\*\*