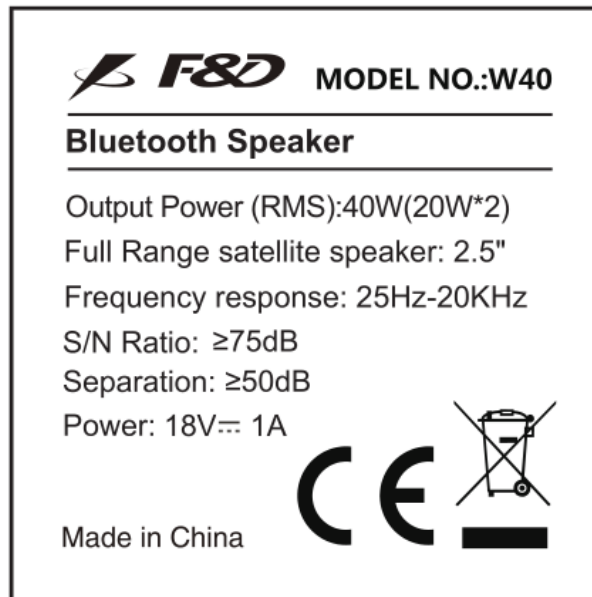


Copy of marking plate:

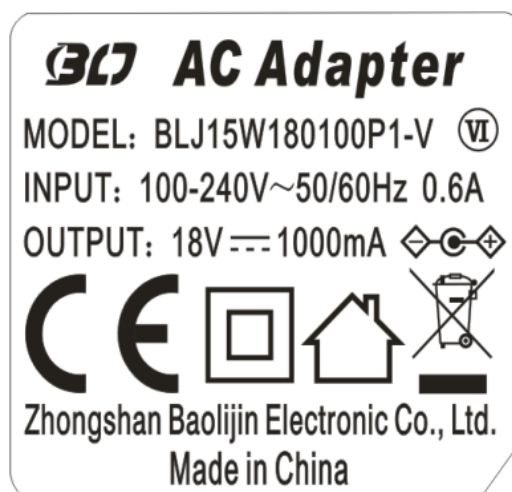
For main unit:



Remarks:

1. 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.
2. The CE marking and WEEE symbol should be at least 5.0mm and 7.0mm respectively in height.
3. Marking label of all models are identical to each other except for model number.
4. The importer information(Name and Address) and manufacturer information (Name and Address) should be marked in product when this product import to European marketing.

For AC Adapter:



Summary of testing:

The submitted samples were found to comply with the above standard.

TEST ITEM PARTICULARS:	
Classification of use by.....:	<input checked="" type="checkbox"/> Ordinary person <input type="checkbox"/> Instructed person <input type="checkbox"/> Skilled person <input checked="" type="checkbox"/> Children likely to be present
Supply Connection	<input type="checkbox"/> AC Mains <input type="checkbox"/> DC Mains <input checked="" type="checkbox"/> External Circuit - not Mains connected - <input checked="" type="checkbox"/> ES1 <input type="checkbox"/> ES2 <input type="checkbox"/> ES3
Supply % Tolerance	<input type="checkbox"/> +10%/-10% <input type="checkbox"/> +20%/-15% <input type="checkbox"/> +____%/ -____% <input checked="" type="checkbox"/> None
Supply Connection – Type	<input type="checkbox"/> pluggable equipment type A - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> direct plug-in <input type="checkbox"/> mating connector <input type="checkbox"/> pluggable equipment type B - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> permanent connection <input type="checkbox"/> mating connector <input checked="" type="checkbox"/> other: <u>Not directly connected to mains</u>
Considered current rating of protective device as part of building or equipment installation.....:	16A; Installation location: <input type="checkbox"/> building; <input type="checkbox"/> equipment
Equipment mobility.....:	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input checked="" type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in <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 <input type="checkbox"/> OVC IV <input checked="" type="checkbox"/> other: <u>Not directly connected to mains</u>
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"/> IPX0 <input type="checkbox"/> IP20
Power Systems	<input type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT - ____ V _{L-L}
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"/> <50 m
Mass of equipment (kg)	1.49Kg
POSSIBLE TEST CASE VERDICTS:	
- test case does not apply to the test object.....:	N (N/A)
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)

GENERAL REMARKS:

"(See Enclosure #)" refers to additional information appended to the report.
 "(See appended table)" refers to a table appended to the report.

Throughout this report a comma / point is used as the decimal separator.

Determination of the test result includes consideration of measurement uncertainty from the test equipment and methods.

GENERAL PRODUCT INFORMATION:

Product Description

1. The product covered by this report is a Bluetooth Speaker used as audio apparatus. Indoor used only.
2. The product is supplied by an approved AC Adapter(PS2 output) or internal Lithium battery.

Object	Manufacturer	Model	Rating	Comply with Efficiency level
AC Adapter	Zhongshan Baolijin Electronic Co., Ltd	BLJ15W180100P1-V	Input: 100-240V~, 50/60Hz, 0.6A; Output: 18Vdc,1000mA	VI

3. Specified battery used in this product, details refers to table 4.1.2.
4. All tests were measured under the most severe condition and the load conditions used during testing are:
 - The product has three signal input modes, "AUX" mode, "TF Card" mode and "Bluetooth" mode, unless other specified, the testing is conducted under "AUX" mode due to larger power consumption.
 - The USB port rated rating is 5Vdc/1A, which used as power output port only.
5. All models covered by this report are identical, except model number and appearance of enclosure (for color and silk-screen only) for marketing purpose. If no otherwise specified, all the tests were conducted on model W20 with AC Adapter(model BLJ15W180100P1-V) to represent other models.

Additional application considerations –

- | | |
|---|--|
| - normal conditions N.C. | - single fault conditions S.F.C |
| - functional insulation FI | - basic insulation BI |
| - double insulation DI | - supplementary insulation SI |
| - between parts of opposite polarity BOP | - reinforced insulation RI |
| - short circuit SC | - open circuit OC |
| - overload O/L | - abnormal conditions A.C. |

Indicate used abbreviations (if any)

- equipment under test **EUT**

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
<p>(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.) (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.)</p>	
<p>Electrically-caused injury (Clause 5): (Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification) Example: +5 V dc input ES1</p>	
Source of electrical energy	Corresponding classification (ES)
All internal circuits	ES1
<p>Electrically-caused fire (Clause 6): (Note: List sub-assembly or circuit designation and corresponding energy source classification) Example: Battery pack (maximum 85 watts): PS2</p>	
Source of power or PIS	Corresponding classification (PS)
Battery pack	PS3
Main board circuits	PS3
Others circuits	PS1
<p>Injury caused by hazardous substances (Clause 7) (Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.) Example: Liquid in filled component Glycol</p>	
Source of hazardous substances	Corresponding chemical
N	N
<p>Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.) Example: Wall mount unit MS2</p>	
Source of kinetic/mechanical energy	Corresponding classification (MS)
Sharp edges and corners	MS1
Equipment mass	MS1
<p>Thermal burn injury (Clause 9) (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.) Example: Hand-held scanner – thermoplastic enclosure TS1</p>	
Source of thermal energy	Corresponding classification (TS)
External accessible enclosure/parts	TS1
<p>Radiation (Clause 10) (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product RS1</p>	
Type of radiation	Corresponding classification (RS)
LED lamp	RS1

OVERVIEW OF EMPLOYED SAFEGUARDS				
Clause	Possible Hazard			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary	ES1: All internal circuits	N	N	N
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
All combustible materials within equipment enclosure	PS3: Battery pack and main board circuits	See clause 6.3	Fire enclosure, Suitable material and component used.	N
	PS1: Others circuits	See clause 6.3	N	N
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
N	N	N	N	N
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary	MS1: Sharp edges and corners	N	N	N
	MS1: Equipment mass	N	N	N
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	TS1: External accessible enclosures/parts	N	N	N
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	RS1: LEDs	N	N	N
Supplementary Information:				

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Clause	Requirement + Test	Result - Remark	Verdict
4	GENERAL REQUIREMENTS		P
4.1.1	Acceptance of materials, components and subassemblies	(See appended table 4.1.2)	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	All solid safeguards are compliant with applicable requirements in Annex T.	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
4.4.4.5	Internal accessible safeguard enclosure and barrier tests..... :		N
4.4.4.6	Glass Impact tests..... :	No glass used.	N
4.4.4.7	Thermoplastic material tests :	(See Annex T.8)	P
4.4.4.8	Air comprising a safeguard..... :		N
4.4.4.9	Accessibility and safeguard effectiveness	Complies.	P
4.5	Explosion	No 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 :	Internal components and wiring.	P
4.7	Equipment for direct insertion into mains socket - outlets	Supplied by an approved AC Adapter	N
4.7.2	Mains plug part complies with the relevant standard..... :		N
4.7.3	Torque (Nm) :		N
4.8	Products containing coin/button cell batteries	No coin/button cell batteries used.	N
4.8.2	Instructional safeguard		N
4.8.3	Battery Compartment Construction		N
	Means to reduce the possibility of children removing the battery..... :		—
4.8.4	Battery Compartment Mechanical Tests :		N
4.8.5	Battery Accessibility		N
4.9	Likelihood of fire or shock due to entry of conductive object..... :	(See Annex P)	P

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Clause	Requirement + Test	Result - Remark	Verdict
5	ELECTRICALLY-CAUSED INJURY		P
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.....	No such capacitance	N
5.2.2.4	Single pulse limits	No such single pulses	N
5.2.2.5	Limits for repetitive pulses	No such repetitive pulses	N
5.2.2.6	Ringing signals	No ringing signals.	N
5.2.2.7	Audio signals	(See Annex E.1)	P
5.3	Protection against electrical energy sources	ES1 only	N
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		N
5.3.2.1	Accessibility to electrical energy sources and safeguards		N
5.3.2.2	Contact requirements		N
	a) Test with test probe from Annex V.....		N
	b) Electric strength test potential (V)		N
	c) Air gap (mm)		N
5.3.2.4	Terminals for connecting stripped wire		N
5.4	Insulation materials and requirements		N
5.4.1.2	Properties of insulating material	ES1 only	N
5.4.1.3	Humidity conditioning		N
5.4.1.4	Maximum operating temperature for insulating materials		N
5.4.1.5	Pollution degree	Pollution degree 2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N
5.4.1.5.3	Thermal cycling		N
5.4.1.6	Insulation in transformers with varying dimensions		N
5.4.1.7	Insulation in circuits generating starting pulses	No such circuit.	N
5.4.1.8	Determination of working voltage	ES1 only	N
5.4.1.9	Insulating surfaces		N
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	ES1 only	N
5.4.1.10.2	Vicat softening temperature		N
5.4.1.10.3	Ball pressure		N
5.4.2	Clearances	ES1 only	N

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.2.2	Determining clearance using peak working voltage		N
5.4.2.3	Determining clearance using required withstand voltage		N
	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
5.4.2.5	Multiplication factors for clearances and test voltages		N
5.4.3	Creepage distances.....	ES1 only	N
5.4.3.1	General		N
5.4.3.3	Material Group		—
5.4.4	Solid insulation		N
5.4.4.2	Minimum distance through insulation		N
5.4.4.3	Insulation compound forming solid insulation		N
5.4.4.4	Solid insulation in semiconductor devices		N
5.4.4.5	Cemented joints		N
5.4.4.6	Thin sheet material		N
5.4.4.6.1	General requirements		N
5.4.4.6.2	Separable thin sheet material		N
	Number of layers (pcs)		N
5.4.4.6.3	Non-separable thin sheet material		N
5.4.4.6.4	Standard test procedure for non-separable thin sheet material.....		N
5.4.4.6.5	Mandrel test		N
5.4.4.7	Solid insulation in wound components		N
5.4.4.9	Solid insulation at frequencies >30 kHz		N
5.4.5	Antenna terminal insulation	ES1 only	N
5.4.5.1	General		N
5.4.5.2	Voltage surge test		N
	Insulation resistance (MΩ)		—
5.4.6	Insulation of internal wire as part of supplementary safeguard.....	ES1 only	N
5.4.7	Tests for semiconductor components and for cemented joints		N

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.8	Humidity conditioning	ES1 only	N
	Relative humidity (%)		—
	Temperature (°C)		—
	Duration (h)		—
5.4.9	Electric strength test.....	ES1 only	N
5.4.9.1	Test procedure for a solid insulation type test		N
5.4.9.2	Test procedure for routine tests		N
5.4.10	Protection against transient voltages between external circuit	No connection to external circuits with transient voltage.	N
5.4.10.1	Parts and circuits separated from external circuits		N
5.4.10.2	Test methods		N
5.4.10.2.1	General		N
5.4.10.2.2	Impulse test		N
5.4.10.2.3	Steady-state test		N
5.4.11	Insulation between external circuits and earthed circuitry		N
5.4.11.1	Exceptions to separation between external circuits and earth		N
5.4.11.2	Requirements		N
	Rated operating voltage U_{op} (V)		—
	Nominal voltage U_{peak} (V)		—
	Max increase due to variation U_{sp}		—
	Max increase due to ageing U_{sa}		—
	$U_{op} = U_{peak} + U_{sp} + U_{sa}$		—
5.5	Components as safeguards		
5.5.1	General		N
5.5.2	Capacitors and RC units	No such component used	N
5.5.2.1	General requirement		N
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector		N
5.5.3	Transformers	No such component used	N
5.5.4	Optocouplers	No such component used	N
5.5.5	Relays	No such component used	N
5.5.6	Resistors	No such component used	N
5.5.7	SPD's	No such component used	N
5.5.7.1	Use of an SPD connected to reliable earthing		N

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Clause	Requirement + Test	Result - Remark	Verdict
5.5.7.2	Use of an SPD between mains and protective earth		N
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable..... :		N
5.6	Protective conductor		N
5.6.2	Requirement for protective conductors	Class III equipment.	N
5.6.2.1	General requirements		N
5.6.2.2	Colour of insulation		N
5.6.3	Requirement for protective earthing conductors		N
	Protective earthing conductor size (mm ²) :		—
5.6.4	Requirement for protective bonding conductors		N
5.6.4.1	Protective bonding conductors		N
	Protective bonding conductor size (mm ²)..... :		—
	Protective current rating (A) :		—
5.6.4.3	Current limiting and over current protective devices		N
5.6.5	Terminals for protective conductors		N
5.6.5.1	Requirement		N
	Conductor size (mm ²), nominal thread diameter (mm). :		N
5.6.5.2	Corrosion		N
5.6.6	Resistance of the protective system		N
5.6.6.1	Requirements		N
5.6.6.2	Test Method Resistance (Ω) :		N
5.6.7	Reliable earthing		N
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks		P
5.7.2.1	Measurement of touch current :		N
5.7.2.2	Measurement of prospective touch voltage	(See appended table 5.2)	P
5.7.3	Equipment set-up, supply connections and earth connections		P
	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..... :	Class III equipment.	N
5.7.5	Protective conductor current	Class III equipment.	N
	Supply Voltage (V) :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Measured current (mA)		—
	Instructional Safeguard		N
5.7.6	Prospective touch voltage and touch current due to external circuits		N
5.7.6.1	Touch current from coaxial cables		N
5.7.6.2	Prospective touch voltage and touch current from external circuits		N
5.7.7	Summation of touch currents from external circuits		N
	a) Equipment with earthed external circuits Measured current (mA)		N
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....		N

6	ELECTRICALLY- CAUSED FIRE		P
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	(See appended table 6.2.2)	P
6.2.2.5	PS2	(See appended table 6.2.2)	P
6.2.2.6	PS3	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS		N
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	No ignition and no such temperature attained within the equipment. (See appended table 5.4.1.5, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure	(See appended table 4.1.2)	P
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Method by control of fire spread applied.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.3.1	General		N
6.4.3.2	Supplementary Safeguards		N
	Special conditions if conductors on printed boards are opened or peeled		N
6.4.3.3	Single Fault Conditions..... :		N
	Special conditions for temperature limited by fuse		N
6.4.4	Control of fire spread in PS1 circuits		P
6.4.5	Control of fire spread in PS2 circuits		P
6.4.5.2	Supplementary safeguards :	See below	P
6.4.6	Control of fire spread in PS3 circuit	Fire enclosure, suitable material and component used (See appended tables 4.1.2)	P
6.4.7	Separation of combustible materials from a PIS	All combustible materials are enclosed by fire enclosure.	N
6.4.7.1	General..... :		N
6.4.7.2	Separation by distance		N
6.4.7.3	Separation by a fire barrier		N
6.4.8	Fire enclosures and fire barriers		P
6.4.8.1	Fire enclosure and fire barrier material properties		P
6.4.8.2.1	Requirements for a fire barrier	No such part	N
6.4.8.2.2	Requirements for a fire enclosure	The fire enclosure is made of V-0 materials. (See appended table 4.1.2)	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		P
6.4.8.3.2	Fire barrier dimensions		N
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm) :	No top openings	P
	Needle Flame test		N
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) :	No bottom openings	P
	Flammability tests for the bottom of a fire enclosure :		N
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c) :	No such part	N
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating..... :	The fire enclosure is made of V-0 materials.	P
6.5	Internal and external wiring		P
6.5.1	Requirements	VW-1 wires used.	P

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Clause	Requirement + Test	Result - Remark	Verdict
6.5.2	Cross-sectional area (mm ²)	(See appended table 4.1.2)	—
6.5.3	Requirements for interconnection to building wiring		N
6.6	Safeguards against fire due to connection to additional equipment		P
	External port limited to PS2 or complies with Clause Q.1	(See appended table 6.2.2)	P

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES		N
7.2	Reduction of exposure to hazardous substances	No hazardous chemicals.	N
7.3	Ozone exposure		N
7.4	Use of personal safeguards (PPE)		N
	Personal safeguards and instructions		—
7.5	Use of instructional safeguards and instructions		N
	Instructional safeguard (ISO 7010)		—
7.6	Batteries		N

8	MECHANICALLY-CAUSED INJURY		P
8.1	General		P
8.2	Mechanical energy source classifications	MS1: Sharp edges and corners MS1: Equipment mass	P
8.3	Safeguards against mechanical energy sources	No safeguard is required to be interposed between MS1 and ordinary persons (include children)	P
8.4	Safeguards against parts with sharp edges and corners	Edges and corners of the enclosure are rounded.	P
8.4.1	Safeguards		N
8.5	Safeguards against moving parts	No moving parts	N
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N
8.5.2	Instructional Safeguard		—
8.5.4	Special categories of equipment comprising moving parts		N
8.5.4.1	Large data storage equipment		N
8.5.4.2	Equipment having electromechanical device for destruction of media		N
8.5.4.2.1	Safeguards and Safety Interlocks		N
8.5.4.2.2	Instructional safeguards against moving parts		N

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Clause	Requirement + Test	Result - Remark	Verdict
	Instructional Safeguard		—
8.5.4.2.3	Disconnection from the supply		N
8.5.4.2.4	Probe type and force (N)		N
8.5.5	High Pressure Lamps		N
8.5.5.1	Energy Source Classification		N
8.5.5.2	High Pressure Lamp Explosion Test		N
8.6	Stability		P
8.6.1	Product classification	MS1, no stability requirements	P
	Instructional Safeguard		—
8.6.2	Static stability		N
8.6.2.2	Static stability test		N
	Applied Force		—
8.6.2.3	Downward Force Test		N
8.6.3	Relocation stability test		N
	Unit configuration during 10° tilt		—
8.6.4	Glass slide test		N
8.6.5	Horizontal force test (Applied Force)		N
	Position of feet or movable parts		—
8.7	Equipment mounted to wall or ceiling	No such parts.	N
8.7.1	Mounting Means (Length of screws (mm) and mounting surface)		N
8.7.2	Direction and applied force		N
8.8	Handles strength	No such parts.	N
8.8.1	Classification		N
8.8.2	Applied Force		N
8.9	Wheels or casters attachment requirements	No such parts.	N
8.9.1	Classification		N
8.9.2	Applied force		—
8.10	Carts, stands and similar carriers	No such parts.	N
8.10.1	General		N
8.10.2	Marking and instructions		N
	Instructional Safeguard		—
8.10.3	Cart, stand or carrier loading test and compliance		N
	Applied force		—
8.10.4	Cart, stand or carrier impact test		N

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Clause	Requirement + Test	Result - Remark	Verdict
8.10.5	Mechanical stability		N
	Applied horizontal force (N)..... :		—
8.10.6	Thermoplastic temperature stability (°C) :		N
8.11	Mounting means for rack mounted equipment	No such parts.	N
8.11.1	General		N
8.11.2	Product Classification		N
8.11.3	Mechanical strength test, variable <i>N</i> :		N
8.11.4	Mechanical strength test 250N, including end stops		N
8.12	Telescoping or rod antennas.....	No such parts.	N
	Button/Ball diameter (mm)..... :		—

9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications	TS1	P
9.3	Safeguard against thermal energy sources	Measured temperature for external enclosure/parts does not exceed TS1 limit.	P
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard	See above	P
9.4.2	Instructional safeguard :		N

10	RADIATION		P
10.2	Radiation energy source classification		P
10.2.1	General classification	RS1: LED lamp	P
10.3	Protection against laser radiation	No such parts.	N
	Laser radiation that exists equipment:		—
	Normal, abnormal, single-fault :		N
	Instructional safeguard :		—
	Tool..... :		—
10.4	Protection against visible, infrared, and UV radiation		P
10.4.1	General		P
10.4.1.a)	RS3 for Ordinary and instructed persons..... :		N
10.4.1.b)	RS3 accessible to a skilled person :		N
	Personal safeguard (PPE) instructional safeguard :		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1. :		N
10.4.1.d)	Normal, abnormal, single-fault conditions :		N

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Clause	Requirement + Test	Result - Remark	Verdict
10.4.1.e)	Enclosure material employed as safeguard is opaque		N
10.4.1.f)	UV attenuation.....		N
10.4.1.g)	Materials resistant to degradation UV		N
10.4.1.h)	Enclosure containment of optical radiation		N
10.4.1.i)	Exempt Group under normal operating conditions	RS1	P
10.4.2	Instructional safeguard		N
10.5	Protection against x-radiation	No such parts.	N
10.5.1	X- radiation energy source that exists equipment :		N
	Normal, abnormal, single fault conditions		N
	Equipment safeguards		N
	Instructional safeguard for skilled person		N
10.5.3	Most unfavourable supply voltage to give maximum radiation		—
	Abnormal and single-fault condition		N
	Maximum radiation (pA/kg)		N
10.6	Protection against acoustic energy sources	No such parts.	N
10.6.1	General		N
10.6.2	Classification		N
	Acoustic output, dB(A).....		N
	Output voltage, unweighted r.m.s.		N
10.6.4	Protection of persons		N
	Instructional safeguards		N
	Equipment safeguard prevent ordinary person to RS2.....		—
	Means to actively inform user of increase sound pressure		—
	Equipment safeguard prevent ordinary person to RS2		—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N
10.6.5.1	Corded passive listening devices with analog input		N
	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output		—
10.6.5.2	Corded listening devices with digital input		N
	Maximum dB(A).....		—

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Clause	Requirement + Test	Result - Remark	Verdict
10.6.5.3	Cordless listening device		N
	Maximum dB(A)..... :		—
B	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements		P
	Audio Amplifiers and equipment with audio amplifiers	(See appended table B.2.5)	P
B.2.3	Supply voltage and tolerances	Supplied by external AC Adapter via DC inlet (18Vdc input only)	N
B.2.5	Input test	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements		P
B.3.2	Covering of ventilation openings	No such parts	N
B.3.3	D.C. mains polarity test	Not directly connected to mains	N
B.3.4	Setting of voltage selector.....	No such parts	N
B.3.5	Maximum load at output terminals	(See appended table B.3 & B.4)	P
B.3.6	Reverse battery polarity	No such parts	N
B.3.7	Abnormal operating conditions as specified in Clause E.2.	(See Annex E.2)	P
B.3.8	Safeguards functional during and after abnormal operating conditions	All safeguards remained effective.	P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited.....	No such parts	N
B.4.3	Motor tests	No motors used.	N
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature		N
B.4.4	Short circuit of functional insulation		P
B.4.4.1	Short circuit of clearances for functional insulation	(See appended table B.3 & B.4)	P
B.4.4.2	Short circuit of creepage distances for functional insulation	(See appended table B.3 & B.4)	P
B.4.4.3	Short circuit of functional insulation on coated printed boards	No such coated printed boards	N
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors	(See appended table B.3 & B.4)	P
B.4.6	Short circuit or disconnect of passive components	(See appended table B.3 & B.4)	P
B.4.7	Continuous operation of components		N

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Clause	Requirement + Test	Result - Remark	Verdict
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions	Complies.	P
B.4.9	Battery charging under single fault conditions	(See Annex M)	P
C	UV RADIATION		N
C.1	Protection of materials in equipment from UV radiation	No UV radiation.	N
C.1.2	Requirements		N
C.1.3	Test method		N
C.2	UV light conditioning test		N
C.2.1	Test apparatus		N
C.2.2	Mounting of test samples		N
C.2.3	Carbon-arc light-exposure apparatus		N
C.2.4	Xenon-arc light exposure apparatus		N
D	TEST GENERATORS		N
D.1	Impulse test generators		N
D.2	Antenna interface test generator		N
D.3	Electronic pulse generator		N
E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		P
E.1	Audio amplifier normal operating conditions		P
	Audio signal voltage (V)	(See appended table 5.2)	—
	Rated load impedance (Ω)	4 Ω x 2pcs	—
E.2	Audio amplifier abnormal operating conditions	(See appended table B.3 & B.4)	P
F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General requirements		P
	Instructions – Language	English version evaluated	—
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	Graphic symbols comply with relevant standards	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	The required marking is located on the enclosure of the equipment and is easily visible.	P
F.3.2	Equipment identification markings		P

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.2.1	Manufacturer identification	(See the marking plate)	—
F.3.2.2	Model identification	(See the marking plate)	—
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains		N
F.3.3.2	Equipment without direct connection to mains	(See the marking plate)	P
F.3.3.3	Nature of supply voltage	(See the marking plate)	—
F.3.3.4	Rated voltage	(See the marking plate)	—
F.3.3.4	Rated frequency.....		—
F.3.3.6	Rated current or rated power	(See the marking plate)	—
F.3.3.7	Equipment with multiple supply connections		N
F.3.4	Voltage setting device	No voltage setting device	N
F.3.5	Terminals and operating devices		N
F.3.5.1	Mains appliance outlet and socket-outlet markings.....		N
F.3.5.2	Switch position identification marking		N
F.3.5.3	Replacement fuse identification and rating markings.....		N
F.3.5.4	Replacement battery identification marking.....		N
F.3.5.5	Terminal marking location		N
F.3.6	Equipment markings related to equipment classification		N
F.3.6.1	Class I Equipment	Class III Equipment	N
F.3.6.1.1	Protective earthing conductor terminal		N
F.3.6.1.2	Neutral conductor terminal		N
F.3.6.1.3	Protective bonding conductor terminals		N
F.3.6.2	Class II equipment (IEC60417-5172)	Class III Equipment	N
F.3.6.2.1	Class II equipment with or without functional earth		N
F.3.6.2.2	Class II equipment with functional earth terminal marking		N
F.3.7	Equipment IP rating marking	None	—
F.3.8	External power supply output marking	(See the marking plate)	P
F.3.9	Durability, legibility and permanence of marking	Marking is considered to be legible and easily discernible.	P
F.3.10	Test for permanence of markings	Comply with the requirements.	P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking	No such equipment	N

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Clause	Requirement + Test	Result - Remark	Verdict
	b) Instructions given for installation or initial use	Provided in the user manual.	P
	c) Equipment intended to be fastened in place	No such equipment	N
	d) Equipment intended for use only in restricted access area	No such equipment	N
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1	No such part	N
	f) Protective earthing employed as safeguard	Class III Equipment	N
	g) Protective earthing conductor current exceeding ES 2 limits	Class III Equipment	N
	h) Symbols used on equipment	No such symbols used	N
	i) Permanently connected equipment not provided with all-pole mains switch	No such equipment	N
	j) Replaceable components or modules providing safeguard function	No such part	N
F.5	Instructional safeguards	Instructional safeguard is not required.	N
	Where "instructional safeguard" is referenced in the test report it specifies the required elements, location of marking and/or instruction		N

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

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Clause	Requirement + Test	Result - Remark	Verdict
G.3.2.1b)	Thermal links tested as part of the equipment		N
	Aging hours (H)		—
	Single Fault Condition		—
	Test Voltage (V) and Insulation Resistance (Ω) ..		—
G.3.3	PTC Thermistors	No PTC thermistors used.	N
G.3.4	Overcurrent protection devices	No such component used.	N
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N
G.3.5.1	Non-resettable devices suitably rated and marking provided		N
G.3.5.2	Single faults conditions		N
G.4	Connectors		P
G.4.1	Spacings		N
G.4.2	Mains connector configuration		N
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely	The connector was designed not insertion into a mains socket-outlet	P
G.5	Wound Components		N
G.5.1	Wire insulation in wound components		N
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°		N
G.5.1.2 b)	Construction subject to routine testing		N
G.5.2	Endurance test on wound components		N
G.5.2.1	General test requirements		N
G.5.2.2	Heat run test		N
	Time (s)		—
	Temperature (°C)		—
G.5.2.3	Wound Components supplied by mains		N
G.5.3	Transformers		N
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1)	No such component used.	N
	Position		—
	Method of protection		—
G.5.3.2	Insulation		N
	Protection from displacement of windings		—
G.5.3.3	Overload test.....		N
G.5.3.3.1	Test conditions		N
G.5.3.3.2	Winding Temperatures testing in the unit		N

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.3.3.3	Winding Temperatures - Alternative test method		N
G.5.4	Motors		N
G.5.4.1	General requirements	No such component used.	N
	Position		—
G.5.4.2	Test conditions		N
G.5.4.3	Running overload test		N
G.5.4.4	Locked-rotor overload test		N
	Test duration (days)		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N
G.5.4.5.2	Tested in the unit		N
	Electric strength test (V)		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h)		N
	Electric strength test (V)		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N
G.5.4.6.2	Tested in the unit		N
	Maximum Temperature		N
	Electric strength test (V)		N
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h)		N
	Electric strength test (V)		N
G.5.4.7	Motors with capacitors		N
G.5.4.8	Three-phase motors		N
G.5.4.9	Series motors		N
	Operating voltage		—
G.6	Wire Insulation		N
G.6.1	General	ES1 only	N
G.6.2	Solvent-based enamel wiring insulation		N
G.7	Mains supply cords		N
G.7.1	General requirements	Not directly connected to mains	N
	Type		—
	Rated current (A)		—
	Cross-sectional area (mm ²), (AWG)		—
G.7.2	Compliance and test method		N

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N
G.7.3.2	Cord strain relief		N
G.7.3.2.1	Requirements		N
	Strain relief test force (N) :		—
G.7.3.2.2	Strain relief mechanism failure		N
G.7.3.2.3	Cord sheath or jacket position, distance (mm) ... :		—
G.7.3.2.4	Strain relief comprised of polymeric material		N
G.7.4	Cord Entry :		N
G.7.5	Non-detachable cord bend protection		N
G.7.5.1	Requirements		N
G.7.5.2	Mass (g) :		—
	Diameter (m) :		—
	Temperature (°C) :		—
G.7.6	Supply wiring space		N
G.7.6.2	Stranded wire		N
G.7.6.2.1	Test with 8 mm strand		N
G.8	Varistors		N
G.8.1	General requirements	No such component used.	N
G.8.2	Safeguard against shock		N
G.8.3	Safeguard against fire		N
G.8.3.2	Varistor overload test :		N
G.8.3.3	Temporary overvoltage :		N
G.9	Integrated Circuit (IC) Current Limiters		N
G.9.1 a)	Manufacturer defines limit at max. 5A.	No such component used.	N
G.9.1 b)	Limiters do not have manual operator or reset		N
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
G.9.3	Test Program 2		N
G.9.4	Test Program 3		N
G.10	Resistors		N
G.10.1	General requirements	No such component used.	N
G.10.2	Resistor test		N

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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
G.10.3.1	General requirements		N
G.10.3.2	Voltage surge test		N
G.10.3.3	Impulse test		N
G.11	Capacitor and RC units		N
G.11.1	General requirements	No such component used.	N
G.11.2	Conditioning of capacitors and RC units		N
G.11.3	Rules for selecting capacitors		N
G.12	Optocouplers		N
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results)..... :	No such component used.	N
	Type test voltage Vini :		—
	Routine test voltage, Vini,b :		—
G.13	Printed boards		P
G.13.1	General requirements		P
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards	No coated printed board or multilayer board applied for within the equipment.	N
G.13.4	Insulation between conductors on the same inner surface		N
	Compliance with cemented joint requirements (Specify construction)..... :		—
G.13.5	Insulation between conductors on different surfaces		N
	Distance through insulation..... :		N
	Number of insulation layers (pcs) :		—
G.13.6	Tests on coated printed boards		N
G.13.6.1	Sample preparation and preliminary inspection		N
G.13.6.2a)	Thermal conditioning		N
G.13.6.2b)	Electric strength test		N
G.13.6.2c)	Abrasion resistance test		N
G.14	Coating on components terminals		N
G.14.1	Requirements :	No such component used.	N
G.15	Liquid filled components		N

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Clause	Requirement + Test	Result - Remark	Verdict
G.15.1	General requirements	No such component used.	N
G.15.2	Requirements		N
G.15.3	Compliance and test methods		N
G.15.3.1	Hydrostatic pressure test		N
G.15.3.2	Creep resistance test		N
G.15.3.3	Tubing and fittings compatibility test		N
G.15.3.4	Vibration test		N
G.15.3.5	Thermal cycling test		N
G.15.3.6	Force test		N
G.15.4	Compliance		N
G.16	IC including capacitor discharge function (ICX)		N
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours	No such component used.	N
b)	Impulse test using circuit 2 with $U_c =$ to transient voltage		N
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N
C2)	Test voltage		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N
D2)	Capacitance		—
D3)	Resistance		—
H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N
H.1	General	No telephone ringing signal generated within the equipment.	N
H.2	Method A		N
H.3	Method B		N
H.3.1	Ringling signal		N
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
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N
H.3.2.2	Tripping device		N

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Clause	Requirement + Test	Result - Remark	Verdict
H.3.2.3	Monitoring voltage (V)		—
J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		N
	General requirements		N
K	SAFETY INTERLOCKS		N
K.1	General requirements	No such component used.	N
K.2	Components of safety interlock safeguard mechanism		N
K.3	Inadvertent change of operating mode		N
K.4	Interlock safeguard override		N
K.5	Fail-safe		N
	Compliance		N
K.6	Mechanically operated safety interlocks		N
K.6.1	Endurance requirement		N
K.6.2	Compliance and Test method		N
K.7	Interlock circuit isolation		N
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location)		N
K.7.2	Overload test, Current (A)		N
K.7.3	Endurance test		N
K.7.4	Electric strength test		N
L	DISCONNECT DEVICES		N
L.1	General requirements	Supplied by an approved AC Adapter	N
L.2	Permanently connected equipment		N
L.3	Parts that remain energized		N
L.4	Single phase equipment		N
L.5	Three-phase equipment		N
L.6	Switches as disconnect devices		N
L.7	Plugs as disconnect devices		N
L.8	Multiple power sources		N
M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		P
M.1	General requirements		P
M.2	Safety of batteries and their cells		P
M.2.1	Requirements	(See appended table 4.1.2)	P

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Clause	Requirement + Test	Result - Remark	Verdict
M.2.2	Compliance and test method (identify method) .. :	Approved internal battery used	P
M.3	Protection circuits		P
M.3.1	Requirements	Complies.	P
M.3.2	Tests	See below	P
	- Overcharging of a rechargeable battery	(See appended table B.3 & B.4)	P
	- Unintentional charging of a non-rechargeable battery		N
	- Reverse charging of a rechargeable battery		N
	- Excessive discharging rate for any battery	(See appended table B.3 & B.4)	P
M.3.3	Compliance	Complies.	P
M.4	Additional safeguards for equipment containing secondary lithium battery		P
M.4.1	General	See below	P
M.4.2	Charging safeguards		P
M.4.2.1	Charging operating limits	The charging voltage, current and temperature no more than the maximum specified value under normal, abnormal or single fault conditions	P
M.4.2.2a)	Charging voltage, current and temperature		—
M.4.2.2 b)	Single faults in charging circuitry		—
M.4.3	Fire Enclosure		P
M.4.4	Endurance of equipment containing a secondary lithium battery	The fire enclosure is made of V-0 materials.	P
M.4.4.2	Preparation		P
M.4.4.3	Drop and charge/discharge function tests	Complies.	P
	Drop		P
	Charge		P
	Discharge		P
M.4.4.4	Charge-discharge cycle test	Complies.	P
M.4.4.5	Result of charge-discharge cycle test	Complies.	P
M.5	Risk of burn due to short circuit during carrying	No such battery with exposed bare conductive terminals	N
M.5.1	Requirement		N
M.5.2	Compliance and Test Method (Test of P.2.3)		N
M.6	Prevention of short circuits and protection from other effects of electric current		N
M.6.1	Short circuits		N

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Clause	Requirement + Test	Result - Remark	Verdict
M.6.1.1	General requirements		P
M.6.1.2	Test method to simulate an internal fault		N
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method)	Approved internal battery used (See appended table 4.1.2)	P
M.6.2	Leakage current (mA)		P
M.7	Risk of explosion from lead acid and NiCd batteries	No such battery	N
M.7.1	Ventilation preventing explosive gas concentration		N
M.7.2	Compliance and test method		N
M.8	Protection against internal ignition from external spark sources of lead acid batteries	No such battery	N
M.8.1	General requirements		N
M.8.2	Test method		N
M.8.2.1	General requirements		N
M.8.2.2	Estimation of hypothetical volume V_z (m^3/s)		—
M.8.2.3	Correction factors.....		—
M.8.2.4	Calculation of distance d (mm)		—
M.9	Preventing electrolyte spillage		N
M.9.1	Protection from electrolyte spillage		N
M.9.2	Tray for preventing electrolyte spillage		N
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing)		P
N	ELECTROCHEMICAL POTENTIALS		N
	Metal(s) used		—
O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		N
	Figures O.1 to O.20 of this Annex applied.....		—
P	SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS		P
P.1	General requirements		P
P.2.2	Safeguards against entry of foreign object	No openings	P
	Location and Dimensions (mm)		—
P.2.3	Safeguard against the consequences of entry of foreign object		N
P.2.3.1	Safeguards against the entry of a foreign object		N

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Openings in transportable equipment		N
	Transportable equipment with metalized plastic parts		N
P.2.3.2	Openings in transportable equipment in relation to metalized parts of a barrier or enclosure (identification of supplementary safeguard)		N
P.3	Safeguards against spillage of internal liquids		N
P.3.1	General requirements		N
P.3.2	Determination of spillage consequences		N
P.3.3	Spillage safeguards		N
P.3.4	Safeguards effectiveness		N
P.4	Metallized coatings and adhesive securing parts		N
P.4.2 a)	Conditioning testing		N
	Tc (°C).....		—
	Tr (°C)		—
	Ta (°C)		—
P.4.2 b)	Abrasion testing		N
P.4.2 c)	Mechanical strength testing		N
Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		N
Q.1	Limited power sources		N
Q.1.1 a)	Inherently limited output		N
Q.1.1 b)	Impedance limited output		N
	- Regulating network limited output under normal operating and simulated single fault condition		N
Q.1.1 c)	Overcurrent protective device limited output		N
Q.1.1 d)	IC current limiter complying with G.9		N
Q.1.2	Compliance and test method		N
Q.2	Test for external circuits – paired conductor cable		N
	Maximum output current (A)		—
	Current limiting method.....		—
R	LIMITED SHORT CIRCUIT TEST		N
R.1	General requirements		N
R.2	Determination of the overcurrent protective device and circuit		N
R.3	Test method Supply voltage (V) and short-circuit current (A).		N

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
S	TESTS FOR RESISTANCE TO HEAT AND FIRE		N
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W	Approved fire enclosure with V-0 material used.	N
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (°C)		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N
	- Material not consumed completely		N
	- Material extinguishes within 30s		N
	- No burning of layer or wrapping tissue		N
S.2	Flammability test for fire enclosure and fire barrier integrity		N
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (°C)		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N
	Test specimen does not show any additional hole		N
S.3	Flammability test for the bottom of a fire enclosure		N
	Samples, material		—
	Wall thickness (mm).....		—
	Cheesecloth did not ignite		N
S.4	Flammability classification of materials		N
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
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (test condition), (°C).....		—
	Test flame according to IEC 60695-11-20 with conditions as set out		N
	After every test specimen was not consumed completely		N
	After fifth flame application, flame extinguished within 1 min		N

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
T	MECHANICAL STRENGTH TESTS		P
T.1	General requirements		P
T.2	Steady force test, 10 N	(See appended table T.2, T.3, T.4, T.5)	P
T.3	Steady force test, 30 N		N
T.4	Steady force test, 100 N	(See appended table T.2, T.3, T.4, T.5)	P
T.5	Steady force test, 250 N		N
T.6	Enclosure impact test		N
	Fall test		N
	Swing test		N
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)		N
T.9.1	General requirements		N
T.9.2	Impact test and compliance		N
	Impact energy (J)		—
	Height (m)		—
T.10	Glass fragmentation test		N
T.11	Test for telescoping or rod antennas		N
	Torque value (Nm)		—
U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N
U.1	General requirements		N
U.2	Compliance and test method for non-intrinsically protected CRTs		N
U.3	Protective Screen		N
V	DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)		N
V.1	Accessible parts of equipment		N
V.2	Accessible part criterion		N

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

ATTACHMENT TO TEST REPORT IEC 62368-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES (Audio/video, information and communication technology equipment Part 1: Safety requirements)	
Differences according to	EN 62368-1:2014+A11:2017
Attachment Form No.	EU_GD_IEC62368_1B_II
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	CENELEC COMMON MODIFICATIONS (EN)	--																																				
	Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2014 are prefixed "Z".	--																																				
CONTENTS	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations Annex ZD (informative) IEC and CENELEC code designations for flexible cords	--																																				
	Delete all the "country" notes in the reference document (IEC 62368-1:2014) according to the following list: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>0.2.1</td> <td>Note</td> <td>1</td> <td>Note 3</td> <td>4.1.15</td> <td>Note</td> </tr> <tr> <td>4.7.3</td> <td>Note 1 and 2</td> <td>5.2.2.2</td> <td>Note</td> <td>5.4.2.3.2.2 Table 13</td> <td>Note c</td> </tr> <tr> <td>5.4.2.3.2.4</td> <td>Note 1 and 3</td> <td>5.4.2.5</td> <td>Note 2</td> <td>5.4.5.1</td> <td>Note</td> </tr> <tr> <td>5.5.2.1</td> <td>Note</td> <td>5.5.6</td> <td>Note</td> <td>5.6.4.2.1</td> <td>Note 2 and 3</td> </tr> <tr> <td>5.7.5</td> <td>Note</td> <td>5.7.6.1</td> <td>Note 1 and 2</td> <td>10.2.1 Table 39</td> <td>Note 2, 3 and 4</td> </tr> <tr> <td>10.5.3</td> <td>Note 2</td> <td>10.6.2.1</td> <td>Note 3</td> <td>F.3.3.6</td> <td>Note 3</td> </tr> </table>	0.2.1	Note	1	Note 3	4.1.15	Note	4.7.3	Note 1 and 2	5.2.2.2	Note	5.4.2.3.2.2 Table 13	Note c	5.4.2.3.2.4	Note 1 and 3	5.4.2.5	Note 2	5.4.5.1	Note	5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3	5.7.5	Note	5.7.6.1	Note 1 and 2	10.2.1 Table 39	Note 2, 3 and 4	10.5.3	Note 2	10.6.2.1	Note 3	F.3.3.6	Note 3	--
0.2.1	Note	1	Note 3	4.1.15	Note																																	
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10.5.3	Note 2	10.6.2.1	Note 3	F.3.3.6	Note 3																																	
	For special national conditions, see Annex ZB.	--																																				
1	Add the following note: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.	P																																				
4.Z1	Add the following new subclause after 4.9: To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. mains, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):	N																																				
	a) except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment;	N																																				

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;		N
	c) it is permitted for pluggable equipment type B or permanently connected equipment, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.		N
	If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for pluggable equipment type A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		N
5.4.2.3.2.4	Add the following to the end of this subclause: The requirement for interconnection with external circuit is in addition given in EN 50491-3:2009.		N
10.2.1	Add the following to ^{c)} and ^{d)} in table 39: For additional requirements, see 10.5.1.		--
10.5.1	Add the following after the first paragraph: For RS 1 compliance is checked by measurement under the following conditions: In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or presets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1h, at the end of which the measurement is made. NOTE Z1 Soldered joints and paint lockings are examples of adequate locking. The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm ² , at any point 10 cm from the outer surface of the apparatus. Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made. For RS1, the dose-rate shall not exceed 1μ Sv/h taking account of the background level. NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.		N
10.6.2.1	Add the following paragraph to the end of the subclause: EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.		N

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
10.Z1	<p>Add the following new subclause after 10.6.5.</p> <p>10.Z1 Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz</p> <p>The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz).</p> <p>For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand-held and body-mounted devices, attention is drawn to EN 50360 and EN 50566</p>		N
G.7.1	<p>Add the following note:</p> <p>NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.</p>		N
Bibliography	<p>Add the following standards:</p> <p>Add the following notes for the standards indicated:</p> <p>IEC 60130-9 NOTE Harmonized as EN 60130-9. IEC 60269-2 NOTE Harmonized as HD 60269-2. IEC 60309-1 NOTE Harmonized as EN 60309-1. IEC 60364 NOTE some parts harmonized in HD 384/HD 60364 series. IEC 60601-2-4 NOTE Harmonized as EN 60601-2-4. IEC 60664-5 NOTE Harmonized as EN 60664-5. IEC 61032:1997 NOTE Harmonized as EN 61032:1998 (not modified). IEC 61508-1 NOTE Harmonized as EN 61508-1. IEC 61558-2-1 NOTE Harmonized as EN 61558-2-1. IEC 61558-2-4 NOTE Harmonized as EN 61558-2-4. IEC 61558-2-6 NOTE Harmonized as EN 61558-2-6. IEC 61643-1 NOTE Harmonized as EN 61643-1. IEC 61643-21 NOTE Harmonized as EN 61643-21. IEC 61643-311 NOTE Harmonized as EN 61643-311. IEC 61643-321 NOTE Harmonized as EN 61643-321. IEC 61643-331 NOTE Harmonized as EN 61643-331.</p>		--

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		--
4.1.15	<p>Denmark, Finland, Norway and Sweden</p> <p>To the end of the subclause the following is added 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. The marking text in the applicable countries shall be as follows:</p> <p>In Denmark: "Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord." In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway: "Apparatet må tilkoples jordet stikkontakt" In Sweden: "Apparaten skall anslutas till jordat uttag"</p>		N
4.7.3	<p>United Kingdom</p> <p>To the end of the subclause the following is added The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex</p>		N
5.2.2.2	<p>Denmark:</p> <p>After the 2nd paragraph add the following: 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

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.11.1 and Annex G	<p>Finland and Sweden SEK Svensk Elstandard Downloaded by [se-fre_wennersten] [2014-11-20] For SEK internal use only Copyright SEK Svensk Elstandard 2014 - 15 - EN 62368-1:2014</p> <p>Clause Special national condition To the end of the subclause the following is added: For separation of the telecommunication network from earth the following is applicable: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> • two layers of thin sheet material, each of which shall pass the electric strength test below, or • one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> • passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), and • is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5 kV. <p>It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> • the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11; • the additional testing shall be performed on all the test specimens as described in EN 60384-14; the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14. 		N
5.5.2.1	<p>Norway: After the 3rd paragraph the following is added: Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).</p>		N

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.6	Finland, Norway and Sweden: To the end of the subclause the following is added Resistors used as basic safeguard or bridging basic insulation in class I pluggable equipment type A shall comply with G.10.1 and the test of G.10.2.		N
5.6.1	Denmark: Add to the end of the subclause 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. Justification: In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.		N
5.6.4.2.1	Ireland and United Kingdom: After the indent for pluggable equipment type A , the following is added: – the protective current rating is taken to be 13A, this being the largest rating of fuse used in the mains plug.		N
5.6.5.1	Ireland and United Kingdom: To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm ² to 1,5 mm ² in cross-sectional area.		N
5.7.5	Denmark: To the end of the subclause the following is added 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

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.1	<p>Norway and Sweden:</p> <p>To the end of the subclause the following is added The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation needs to be isolated from the screen of a cable distribution system.</p> <p>It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)”</p> <p>NOTE In Norway, due to regulation for CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.</p> <p>Translation to Norwegian (the Swedish text will also be accepted in Norway): “Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet.”</p> <p>Translation to Swedish: “Apparater som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet.”</p>		N

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.2	<p>Denmark: To the end of the subclause the following is added The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5mA .</p>		N
B.3.1 and B.4	<p>Ireland and United Kingdom: The following is applicable: To protect against excessive currents and short-circuits in the primary circuit of direct plug-in equipment, tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the direct plug-in equipment, until the requirements of Annexes B.3.1 and B.4 are met</p>		N
G.4.2	<p>Denmark: To the end of the subclause the following is added Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS60884-2-D1:2011. 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. 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. 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. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. 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 Justification: Heavy Current Regulations, Section 6c</p>		N

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	<p>United Kingdom: To the end of the subclause the following is added The plug part of direct plug-in equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16, and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.</p>		N
G.7.1	<p>United Kingdom: To the first paragraph the following is added: Equipment which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord shall be fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No.1768, unless exempted by those regulations. NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>		N
G.7.1	<p>Ireland: To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I.525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard</p>		N
G.7.2	<p>Ireland and United Kingdom: To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm² is allowed for equipment which is rated over 10 A and up to and including 13 A.</p>		N
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N
10.5.2	<p>Germany: The following requirement applies: For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40kV, authorization is required, or application of type approval (Bauartzulassung) and marking. Justification: German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM. NOTE Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int+49-531-592-6320, Internet: http://www.ptb.de</p>		N

4.1.2	TABLE: List of critical components					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
AC Adapter	Zhongshan Baolijin Electronic Co., Ltd	BLJ15W180100 P1-V	Input: 100-240V~, 50/60Hz, 0.6A; Output: 18Vdc, 1000mA	IEC/EN 62368-1	TUV Rheinland: CB Certif.No.: JPTUV-091904 CB Report No.: 50188804 001	
Plastic enclosure and all plastic parts outside enclosure	LOTTE ADVANCED MATERIALS CO LTD	VH-0810(+)	V-0, 60°C, Min. thickness: 2.5mm	UL94	UL E115797	
All PCB	SHENZHEN YINGHAIXINGYE ELECTRONIC CO LTD	YH-1	V-0, 130°C	UL94 UL796	UL E487319	
(Alternate)	Interchangeable	Interchangeable	V-0, 105°C or better	UL94 UL796	UL	
Battery pack	GREAT POWER BATTERYCO., LTD	ICR18650	14.8Vd.c., 1800mAh, 26.64Wh	IEC 62133-2: 2017	Report No.: NTC1809124SV 00 issued by Dongguan Nore Testing Center Co., Ltd.	
LED lamp	Y.LIN ELECTRONICS CO.,LTD.	S5050GRB21-MTH, YL3528/DG/70/7/3/P2/20-L	I F =20-25mA, V R =5V	IEC/EN 62471	Report No.: NTC1810235SV 00 issued by Dongguan Nore Testing Center Co., Ltd.	
Internal wire	Interchangeable	Interchangeable	Min. 80°C, VW-1 Min. 60V Min. 22AWG	UL 758	UL	
Speakers	Interchangeable	Interchangeable	2pcs provided , rated 4Ω, 15W	EN 62368-1	Tested with appliance	
Supplementary information: ¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.						

5.2	Table: Classification of electrical energy sources	P
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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 or Vdc)	I (Apk or Arms)	Hz	
1.	18Vdc	DC1 Pin 1 - 2	Normal	18Vdc	--	--	ES1
			Abnormal	--	--	--	
			Single fault – <u>C62</u> SC	0	--	--	
2.	18Vdc/ Battery*	USB “+” to “-”	Normal	5.14Vdc	--	--	ES1
			Abnormal	--	--	--	
			Signal fault <u>U9</u> Pin 2-3 SC	0	--	--	
3.	18Vdc/ Battery*	Speaker “+” to “-”	Normal	2.72Vrms	--	1K	ES1
			Abnormal	6.43Vrms	--	1K	
			Signal fault <u>IC1</u> Pin 46-40 SC	0	--	--	
4.	Battery*	Battery connector “+” to “-”	Normal	16.8Vdc	--	--	ES1
			Abnormal	--	--	--	
			Signal fault <u>EC205</u> SC	0	--	--	

Note: * Supplied by internal fully charged battery

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)	Ipk (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)	Ipk (mA)	
--	--	--	Normal	--	--	--	--
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	

Test Conditions: Normal – Test with rated output current.
Abnormal – Test with max. output current.

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements (Included Touch Temperatures)						P	
	Supply voltage (V)	18Vdc	Battery*	—				
	Ambient T _{min} (°C)	25.0	25.0	—				
	Ambient T _{max} (°C)	25.0	25.0	—				
	T _{ma} (°C)	35.0	35.0	—				
Maximum measured temperature T of part/at:		T (°C)			Allowed T _{max} (°C)			
PCB near DC inlet		31.1	30.0	105-(35-25)=95				
PCB near USB		33.2	31.6	105-(35-25)=95				
PCB near IC1		51.3	46.4	105-(35-25)=95				
PCB near U2		60.0	34.3	105-(35-25)=95				
PCB near Q2		49.3	39.4	105-(35-25)=95				
E-capacitor (EC205)		45.1	43.3	105-(35-25)=95				
PCB near U19		41.0	38.4	105-(35-25)=95				
PCB of BT module		40.7	38.5	105-(35-25)=95				
Internal wire		32.2	31.6	80-(35-25)=70				
PCB of LED board		27.5	28.8	105-(35-25)=95				
Internal battery		30.4	30.1	45-(35-25)=35				
Plastic enclosure inside		32.9	30.9	60-(35-25)=50				
Plastic enclosure outside		30.7	29.9	60				
Metal enclosure outside		27.4	29.8	51				
Button surface		27.4	29.5	77				
Ambient		25.0	25.0	--				
Temperature T of winding:		t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
--		--	--	--	--	--	--	--

Supplementary information:
Note 1: Tma should be considered as directed by applicable requirement
Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9)

5.4.1.8	TABLE: Working voltage measurement			N
Location	RMS voltage (V)	Peak voltage (V)	Comments	
--	--	--	--	
--	--	--	--	

Supplementary information:
Test voltage: ___V, Test frequency: ___Hz

5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics		N
Penetration (mm)	--	---	
Object/Part No./Material	Manufacturer/trademark	T softening (°C)	
--	--	--	
--	--	--	

Supplementary information:

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

Supplementary information:

5.4.2& 5.4.3	TABLE: Minimum Clearances/Creepage distance						N
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz) ¹	Required cl (mm)	cl (mm)	Required ² cr (mm)	cr (mm)
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--

Supplementary information:
Note 1: Only for frequency above 30 kHz
Note 2: Provide Material group IIIb

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements					N
Distance through insulation di at/of:	Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)	
--	--	--	--	--	--	
--	--	--	--	--	--	

Supplementary information:

5.4.9	TABLE: Electric strength tests			N
Test voltage applied between:	Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No	
Basic/supplementary insulation:				
--	--	--	--	
--	--	--	--	
Reinforced insulation:				
--	--	--	--	
--	--	--	--	
Supplementary information:				

5.5.2.2	TABLE: Stored discharge on capacitors				N
Supply Voltage (V)/ Hz	Test Location	Operating Condition	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification
--	--	--	--	--	--
--	--	--	--	--	--
Supplementary information:					
[1]X-capacitors installed for testing are:					
[2]Bleeding resistor rating:					
Notes:					
a) Test Location: Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth					

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

5.7.2.1, 5.7.4	TABLE: Earthed accessible conductive part		N
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)	
--	--	--	
--	--	--	
Supplementary information:			
[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 4.34) IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable.			
[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.			
a) Not considered IT power system.			
b) Not three phase equipment.			
c) Not IT power system or three phase delta system.			
d) Not three-phase for use on centre-earthed delta supply system.			
e) Not such parts.			

6.2.2	Table: Electrical power sources (PS) measurements for classification				P
Source	Description	Measurement	Max Power after 3s	Max Power after 5s ¹⁾	PS Classification
DC1 inlet Pin 1 - 2 [#]	N.C.	Power (W) :	21.2	21.2	PS2
		V _A (V) :	17.64	17.64	
		I _A (A) :	1.20	1.20	
USB output	N.C.	Power (W) :	6.70	--	PS1
		V _A (V) :	3.21	--	
		I _A (A) :	2.10	--	
USB output	S.F.C	Power (W) :	0	--	PS1
		V _A (V) :	0	--	
		I _A (A) :	0	--	
Battery output *	N.C.	Power (W) :	108.9	108.9	PS3
		V _A (V) :	13.83	13.83	
		I _A (A) :	7.90	7.90	
Battery output *	S.F.C	Power (W) :	0	--	PS1
		V _A (V) :	0	--	
		I _A (A) :	0	--	

CN6 output for 5Vdc	N.C.	Power (W) :	0	--	PS1
		V _A (V) :	5.0	--	
		I _A (A) :	0	--	
CN6 output for 5Vdc	S.F.C	Power (W) :	0	--	PS1
		V _A (V) :	5.0	--	
		I _A (A) :	0	--	
Speaker	N.C.	Power (W) :	1.22	--	PS1
		V _A (V) :	2.21	--	
		I _A (A) :	0.55	--	
Speaker	S.F.C	Power (W) :	9.79	--	PS1
		V _A (V) :	6.26	--	
		I _A (A) :	1.56	--	

Supplementary Information:

*) Measurement taken only when limits at 3 seconds exceed PS1 limits

#Supplied by external AC Adapter

* Supplied by internal fully charged battery

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)				N
Location	Open circuit voltage After 3 s (V _p)	Measured r.m.s current (I _{rms})	Calculated value (V _p x I _{rms})	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_p) and normal operating condition rms current (I_{rms}) 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 30s (W / VA)	Measured wattage or VA After 30 s (W /VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No
DC1 inlet Pin 1 - 2	Normal	21.2	21.2	No	Yes
Battery output	Normal	95.2	95.2	No	Yes

Supplementary information:
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.

B.2.5		TABLE: Input test					P
U (V/Hz)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
18Vdc [#]	0.855	1.0	15.4	--	--	--	AUX mode 1KHz Sine waves input, adjust volume to 1/8 of Max. Non-clipped output power on speaker. USB output: 5Vdc, 1.0A
Battery*	0.590	--	8.70	--	--	--	

Supplementary information:
Supplied by external 18V DC source and internal fully discharged battery was charging.
* Supplied by internal fully charged battery.

B.3 & B.4		TABLE: Abnormal operating and fault condition tests					P
Ambient temperature (°C)					24.5~25.7 if not specified		—
Power source for EUT: Manufacturer, model/type, output rating :					See appended table 4.1.2		—
Component No.	Abnormal Condition	Supply voltage(V)	Fuse No.	Fuse current (mA)	T-couple	Temp. (°C)	Observation
Speaker	Max	18Vdc	--	--	--	--	Input power form 15.4W increase to 16.2W immediately, until steady conditions, no damage, no hazard I/P: 18Vdc, 0.90A, 16.2W. Test time: 2hr Ambient: 25.0°C
Speaker	SC	18Vdc	--	--	--	--	Input power form 15.4W increase to 15.8W immediately, until steady conditions, no damage, no hazard I/P: 18Vdc, 0.88A, 15.4W. Test time: 2hr Ambient: 25.0°C
USB	SC	18Vdc	--	--	--	--	Unit shut down immediately, unit can be recovery when the fault removed, no damage, no hazard I/P: 18Vdc, 0.13A, 2.34W Test time:10mins

USB	O/L	18Vdc	--	--	--	--	Temperature reached stable when USB output overloaded to 1.9A, USB output shut down when USB load 2.0A, no damage, no hazards. I/P:18Vdc, 0.95A, 17.1W Test time: 4hrs10min Ambient: 25.0°C
Component No.	Fault Condition	Supply voltage(V)	Fuse No.	Fuse current (mA)	T-couple	Temp. (°C)	Observation
U2 Pin 1-15	SC	18Vdc	--	--	--	--	Unit shut down immediately, unit can be recovery when the fault removed, no damage, no hazard I/P: 18Vdc, 0.18A, 3.24W Test time:7hrs
U9 Pin 2-3	SC	18Vdc	--	--	--	--	Unit shut down immediately, unit can be recovery when the fault removed, no damage, no hazard I/P: 18Vdc, 0.19A, 3.42W Test time:10mins
EC205	SC	Battery*	--	--	--	--	Unit shut down immediately, unit can be recovery when the fault removed, no damage, no hazard Test time:7hrs

Supplementary information:

[1]Max=max non-clipped output power, BL=blocked.

[2]Test table is provided to record abnormal and fault conditions for all applicable energy sources including thermal burn injury.

[3]Column "Abnormal/Fault." Specify if test condition by indicating "Abnormal" then the condition for a Clause B.3 test or "Single Fault" then the condition for Clause B.4.

* Supplied by internal fully charged battery.

9.0, B.3& B.4	TABLE: Touch temperature measurements						P
	Test Condition	A	B	C	--	--	
	Supply voltage (V)	18Vdc	18Vdc	18Vdc	--	--	---
	Ambient T _{min} (°C)	25.0	25.0	25.0	--	--	---
	Ambient T _{max} (°C)	25.0	25.0	25.0	--	--	---
Maximum measured temperature T of part/at:		T (°C)				Allowed T _{max} (°C)	
Plastic enclosure outside		32.3	34.1	36.8	--	--	70
Metal enclosure outside		29.2	30.8	33.3	--	--	61
Button surface		29.1	32.1	34.6	--	--	87

Ambient		25.0	25.0	25.0	--	--	--
Temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--

Supplementary information:
A: Speaker max non-clipped output power;
B: Speaker SC
C: USB O/L

Annex Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)	N
------------------	--	----------

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

Output Circuit	Components	Uoc (V)	Isc (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
--	--	--	--	--	--	--
--	--	--	--	--	--	--

Supplementary information:

T.2, T.3, T.4, T.5	TABLE: Steady force test	P
---------------------------	---------------------------------	----------

Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation
Internal components and wiring(T.2)	--	--	--	--	Intact, no damage.
Enclosure/ top, bottom, and sides (T.4)	Plastics	Min. 2.5	100	5	Intact, no damage.
Enclosure/ sides (T.4)	Metal	Min. 0.5	100	5	Intact, no damage.

Supplementary information:

T.6, T.9	TABLE: Impact tests	N
-----------------	----------------------------	----------

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	
Enclosure	Plastics	Min. 2.5	1000	Intact, no damage	
Enclosure	Metal	Min. 0.5	1000	Intact, no damage	
Supplementary information:					

T.8	TABLE: Stress relief test				P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation
Enclosure	Plastics	Min.2.1	70	7	Intact, no damage
--	--	--	--	--	--
Supplementary information:					

Photo documentation

Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7

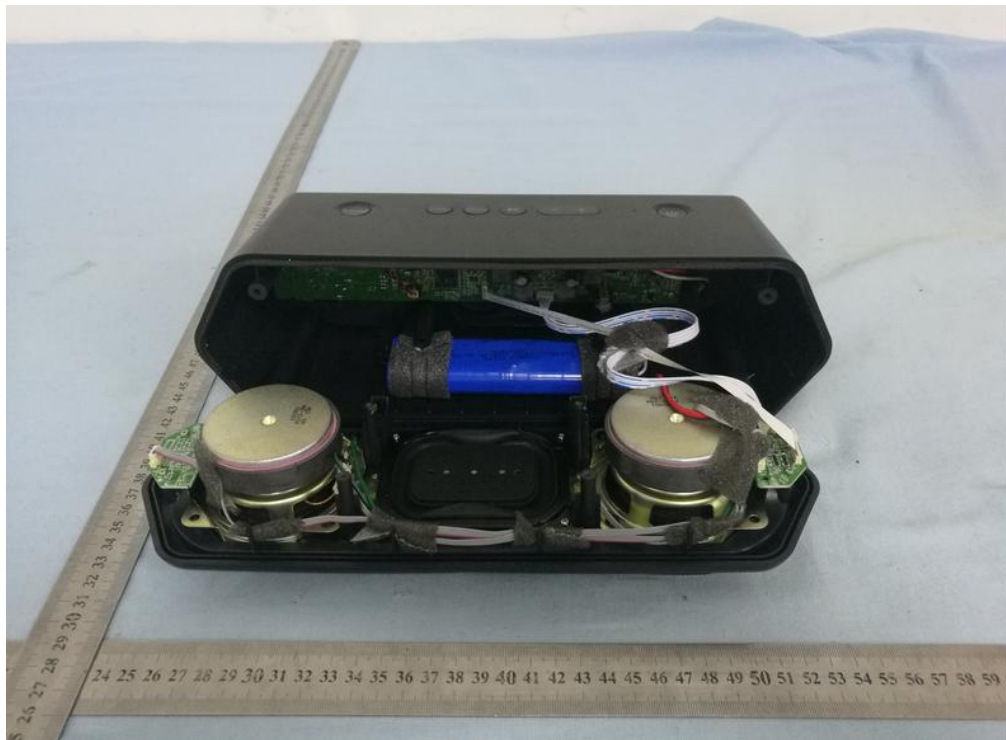


Photo 8

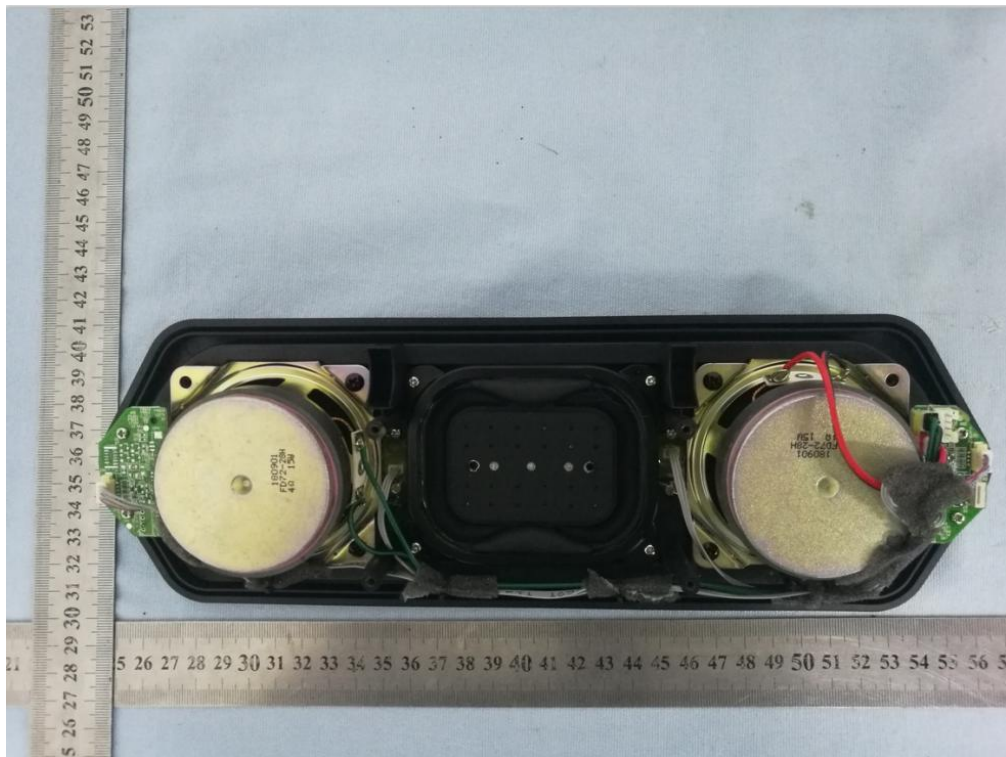


Photo 9

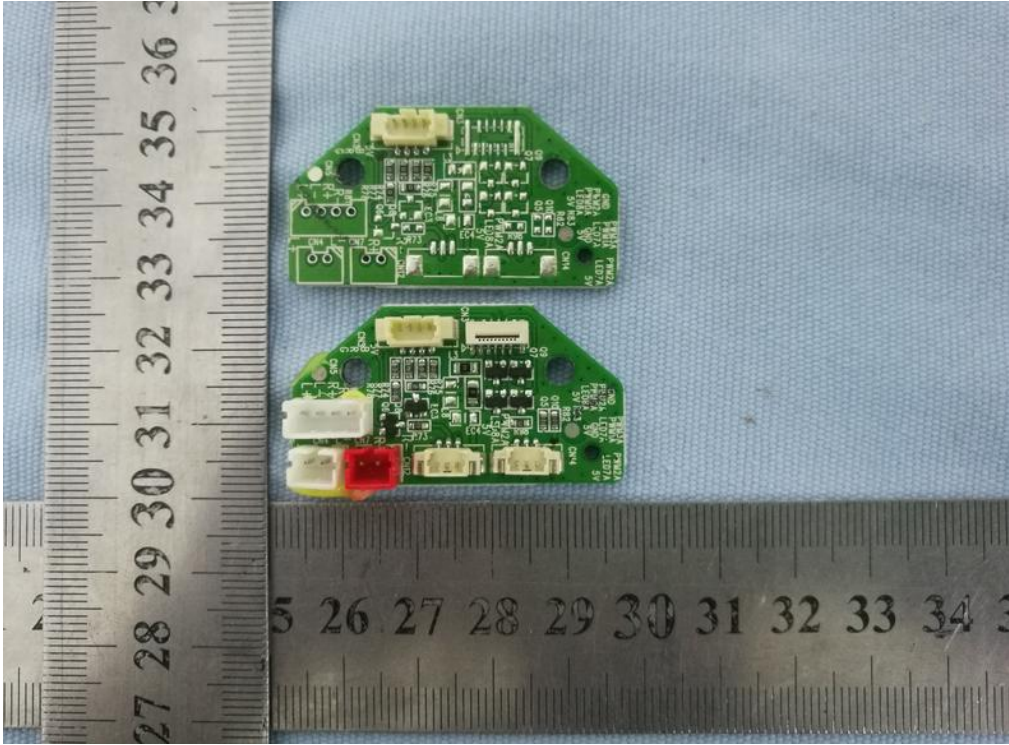


Photo 10

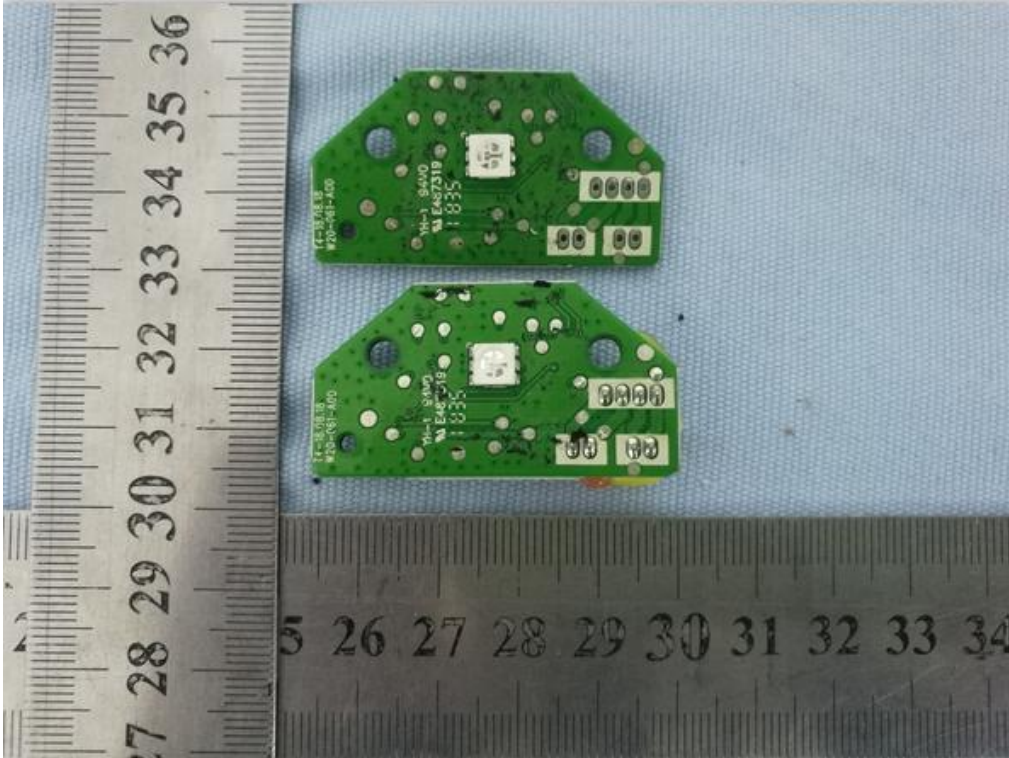


Photo 11

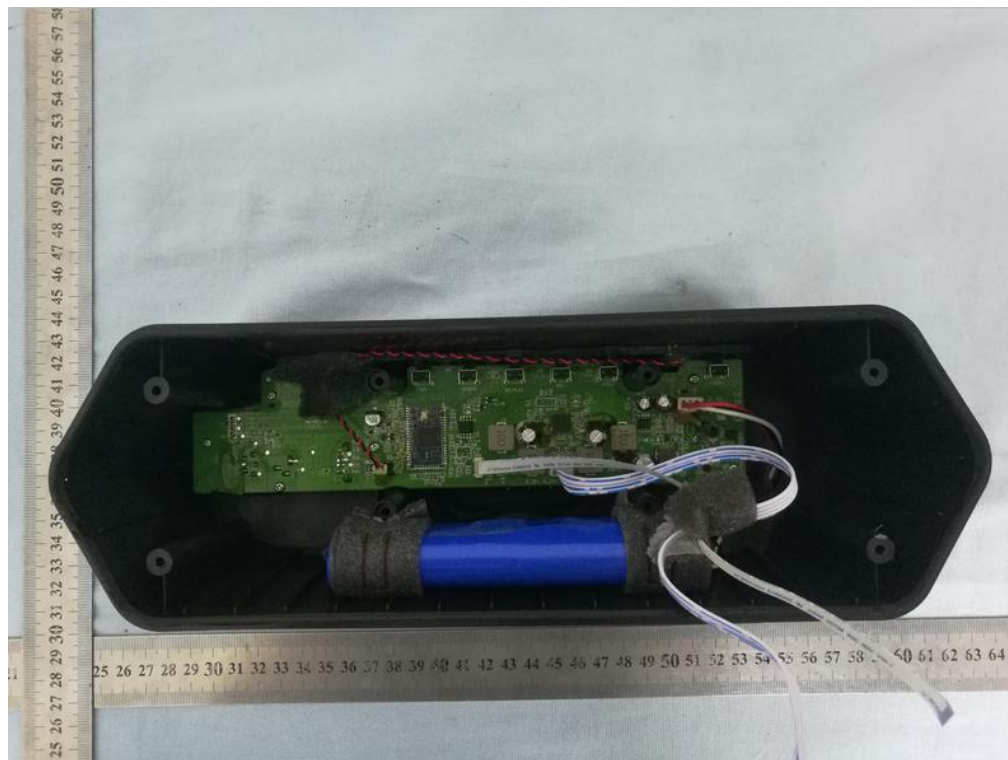


Photo 12

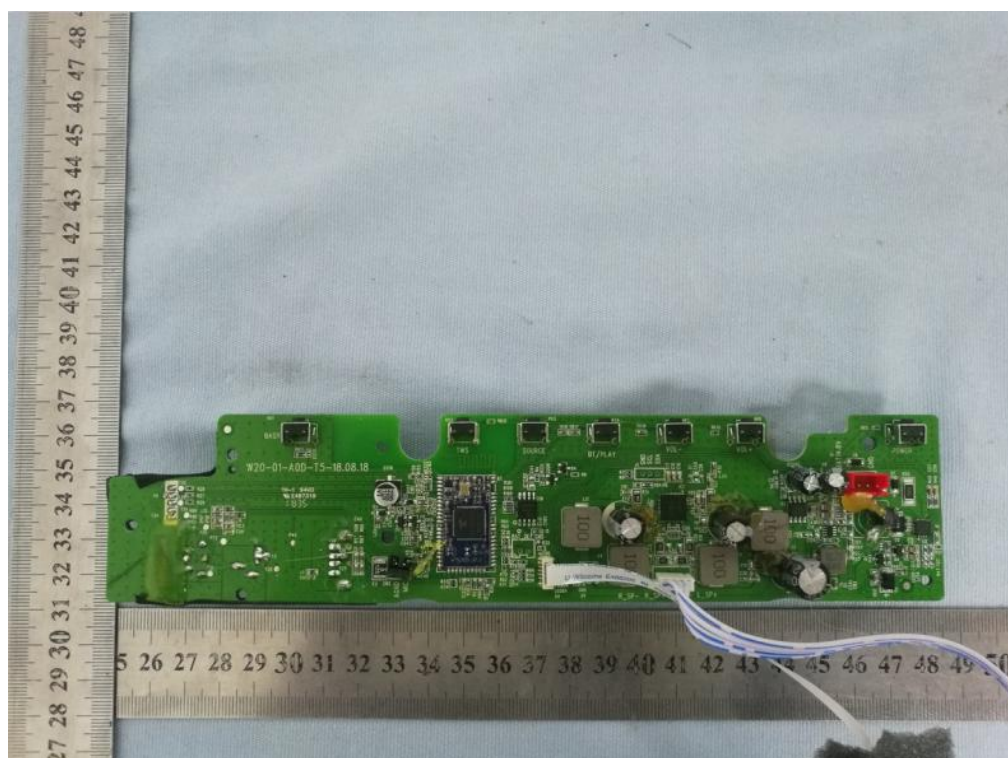


Photo 13

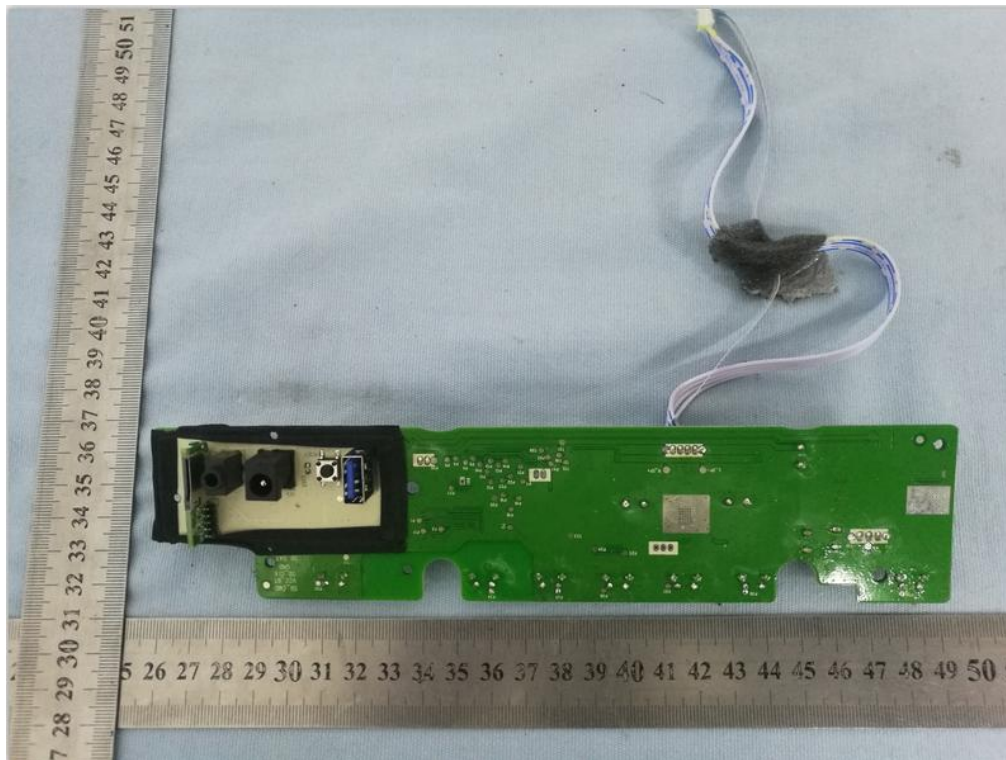


Photo 14

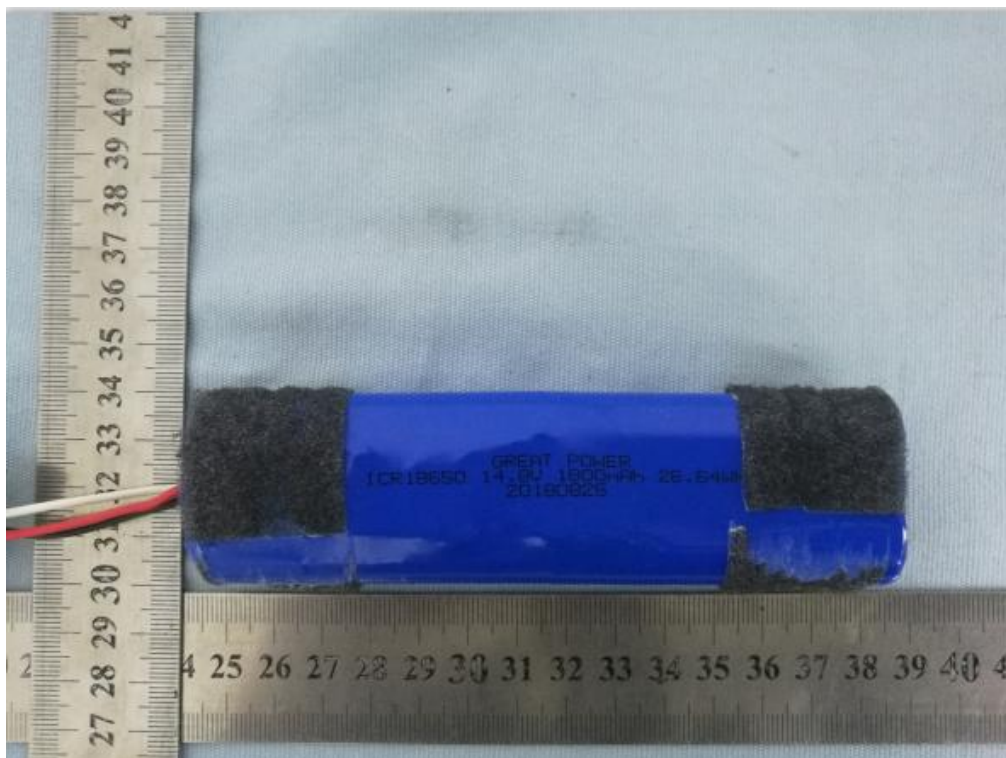


Photo 15



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