Test Report issued under the responsibility of:

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TEST REPORT
IEC 62368-1
Audio/video, information and communication technology equipment
Part 1: Safety requirements

Report Number..... :	CN2562CH 001
Date of issue ..... :	May 06, 2025
Total number of pages ..... :	55
Name of Testing Laboratory preparing the Report ..... :	Guangdong Dongdian Testing Service Co., Ltd.
Applicant's name..... :	**Harman International Industries, Incorporated**
Address ..... :	8500 Balboa Blvd. Northridge, CA 91329, USA
Test specification:	
Standard ..... :	IEC 62368-1:2018
Test procedure..... :	CB Scheme
Non-standard test method..... :	N/A
TRF template used ..... :	IECEE OD-2020-F1:2021, Ed.1.4
Test Report Form No. ..... :	IEC62368_1E
Test Report Form(s) Originator.... :	UL(US)
Master TRF ..... :	Dated 2022-04-14

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description .....:	Portable Bluetooth Speaker
Trade Mark(s) .....:	JBL
Manufacturer.....:	Same as applicant
Model/Type reference .....:	TUNER 3
Ratings .....:	Input: 5VDC, 1.35A (via type-C port)
	3.6VDC, 2500mAh, 9.0Wh (supplied by internal Li-ion battery)

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	**Guangdong Dongdian Testing Service Co., Ltd.**	
Testing location/ address ..... :		Unit 2, Building 1, No.17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, 523808, Guangdong, China	
Tested by (name, function, signature) ..... :		Nina Zhang / Project Handler	Nina Zhang
Approved by (name, function, signature) .. :		Henry Fu / Authorizer	Henry Fu
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Approved by (name, function, signature) .. :			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address ..... :			
Tested by (name, function, signature)			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature) .. :			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature) .. :			
Supervised by (name, function, signature) :			

List of Attachments (including a total number of pages in each attachment):

- Attachment 1: National differences (51 pages)
- Attachment 2: IEC 62368-3 test report (16 pages)
- Attachment 3: Photos documentation (9 pages)

Summary of testing:

Tests performed (name of test and test clause):

5.2	Classification of electrical energy sources
5.4.1.4, 6.3.2, 9.0, B.2.6	Maximum operating temperature test (Heating test)
6.2.2	Electrical power sources (PS) measurements for classification
6.2.3	Classification of potential ignition sources
9.4	Safeguards against thermal energy sources
Annex B.2.5	Input Test
Annex B.3	Simulated Abnormal operating condition tests
Annex B.4	Simulated single fault conditions
Annex F.3.9	Durability, legibility and permanence of markings
Annex M	Battery Test
Annex S.2	Flammability test for fire enclosure and fire barrier integrity
Annex T.2	Steady force test, 10N
Annex T.5	Steady force test, 250N
Annex T.7	Drop test
Annex T.8	Stress relief test
Annex T.11	Test for telescoping or rod antennas

Note: --

Testing location:

See page 2

Summary of compliance with National Differences (List of countries addressed):

EU Group Differences, EU Special National Conditions, US, CA, SA, JP, AU, NZ, KR, CN, AR

Explanation of used codes: US=United States of America, CA=Canada, SA=Saudi Arabia, JP=Japan, AU=Australia, NZ=New Zealand, KR=Republic of Korea, CN=China, AR=Argentina

☒ **The product fulfils the requirements of EN IEC 62368-1:2020+A11:2020, BS EN IEC 62368-1:2020+A11:2020, UL 62368-1:2019, CSA C22.2 NO. 62368-1:19, SASO-IEC 62368-1:2020, J62368-1(2023) , AS/NZS 62368.1:2022, KC 62368-1(2021-08), GB 4943-1:2022**

Use of uncertainty of measurement for decisions on conformity (decision rule) :

☒ No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").

☐ Other:… (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)

Information on uncertainty of measurement:
The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE.
IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer.

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

(for made in china)

(for made in Vietnam)

Note: --

Test item particulars:	
Product group .....:	☒ end product ☐ built-in component
Classification of use by .....:	☒ Ordinary person ☒ Children likely present ☒ Instructed person ☒ Skilled person
Supply connection.....:	☐ AC mains ☐ DC mains ☒ not mains connected ☒ ES1 ☐ ES2 ☐ ES3
Supply tolerance .....:	☐ +10%/-10% ☐ +20%/-15% ☐ + %/ - % ☒ None
Supply connection – type .....:	☐ pluggable equipment type A - ☐ non-detachable supply cord ☐ appliance coupler ☐ direct plug-in ☐ pluggable equipment type B - ☐ non-detachable supply cord ☐ appliance coupler ☐ permanent connection ☐ mating connector ☒ other: not Mains connected
Considered current rating of protective device.....:	☐ A; Location: ☐ building ☐ equipment ☒ N/A
Equipment mobility .....:	☒ movable ☒ hand-held ☒ transportable ☐ direct plug-in ☐ stationary ☐ for building-in ☐ wall/ceiling-mounted ☐ SRME/rack-mounted ☐ other:
Overvoltage category (OVC) .....:	☐ OVC I ☐ OVC II ☐ OVC III ☐ OVC IV ☒ other: not Mains connected
Class of equipment .....:	☐ Class I ☐ Class II ☒ Class III ☐ Not classified ☐
Special installation location .....:	☒ N/A ☐ restricted access area ☐ outdoor location ☐
Pollution degree (PD) .....:	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified T_{ma}.....:	45 °C ☐ Outdoor: minimum °C
IP protection class .....:	☒ IPX0 ☐ IPX4
Power systems .....:	☐ TN ☐ TT ☐ IT - V L-L ☒ not AC mains
Altitude during operation (m) .....:	☐ 2000 m or less ☒ 5000 m
Altitude of test laboratory (m) .....:	☒ 2000 m or less ☐ m
Mass of equipment (kg) .....:	0.512 kg

Possible test case verdicts:	
- 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)
Testing:	
Date of receipt of test item .....:	2025-03-15
Date (s) of performance of tests .....:	2025-03-15 to 2025-04-08

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.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided .....:	☒ **Yes** ☐ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) ..... :	**1) GANZHOU DEHUIDA TECHNOLOGY CO., LTD.** Dehuida Science and Technology Park, Huoyanshan Road, Anyuan District, Ganzhou City, 342100 Jiangxi, P.R. China **2) Shenzhen Dehuida Intelligent Technology Co., Ltd.** No.121, Qiankeng Road, Qiankeng Community, Fucheng Street, Longhua District, Shenzhen City, P.R. China **3) Dehuida Viet Nam Technology Co., Ltd** Factory No. 01, Lot 13, Noi Hoang Industrial Cluster(Rent factory of Viet Uc Steel Joint Stock Company), Noi Hoang Commune, 26220 Yen Dung District, Bac Giang Province, Vietnam

General product information and other remarks:

1. The EUT covered by this report is Portable Bluetooth Speaker used as audio apparatus. It is supplied by external DC source or by internal Li-ion battery.
2. The tropical climates had been considered.
3. The manufacturer specified maximum ambient temperature is 45°C. The specified altitude is up to and including 5000m above sea level.

The product mainly consists of:

- Speaker with main board
- Internal rechargeable battery
- Plastic enclosure

OVERVIEW OF ENERGY SOURCES AND SAFEGUARDS				
Clause	**Possible Hazard**			
5	Electrically-caused injury			
Class and Energy Source (e.g. ES3: Primary circuit)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
ES1: +5Vdc input	Ordinary	N/A	N/A	N/A
6	Electrically-caused fire			
Class and Energy Source (e.g. PS2: 100 Watt circuit)	Material part (e.g. Printed board)	Safeguards		
		B	1st S	2nd S
PS3: >100 Watt circuit (+5V input)	Intemal parts (combustiblematerials) within equipment	Equipment safeguards (no ignition)	See 6.4.6	See 6.4.8
PS2: >100 Watt circuit (cell output)	Fire enclosure and Insulation sheet used around battery protective board	Equipment safeguards (no ignition)	See 6.4.5	N/A
PS1: ≤15 Watt (speaker output)	Material for peripheral interconnection equipment	N/A	N/A	N/A
7	Injury caused by hazardous substances			
Class and Energy Source (e.g. Ozone)	Body Part (e.g., Skilled)	Safeguards		
		B	S	R
Li-ion battery	Ordinary	N/A	N/A	Comply with annex M
8	Mechanically-caused injury			
Class and Energy Source (e.g. MS3: Plastic fan blades)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
MS1: Edges and corners of enclosure	Ordinary	N/A	N/A	N/A
MS1: Mass of the unit	Ordinary	N/A	N/A	N/A
9	Thermal burn			
Class and Energy Source (e.g. TS1: Keyboard caps)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
TS1: All accessible parts	Ordinary	N/A	N/A	N/A
10	Radiation			
Class and Energy Source (e.g. RS1: PMP sound output)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
RS1: LED for indicating	Ordinary	N/A	N/A	N/A
RS1: Panel	Ordinary	N/A	N/A	N/A
Supplementary Information: “B” – Basic Safeguard; “S” – Supplementary Safeguard; “R” – Reinforced Safeguard				

ENERGY SOURCE DIAGRAM
Optional. Manufacturers are to provide the energy sources diagram identify declared energy sources and identifying the demarcations are between power sources. Recommend diagram be provided included in power supply and multipart systems. Insert diagram below. Example diagram designs are; Block diagrams; image(s) with layered data; mechanical drawings
(Refer to **OVERVIEW OF ENERGY SOURCES AND SAFEGUARDS** for details)

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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	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment. See also Annex G	P
4.1.3	Equipment design and construction	Equipment is adequately designed and constructed.	P
4.1.4	Specified ambient temperature for outdoor use (°C) .....:	Indoor used only	N/A
4.1.5	Constructions and components not specifically covered		N/A
4.1.8	Liquids and liquid filled components (LFC)	No such part	N/A
4.1.15	Markings and instructions	See Annex F	P
4.4.3	Safeguard robustness	See below	P
4.4.3.1	General		P
4.4.3.2	Steady force tests	(See Annex T.2, T.5)	P
4.4.3.3	Drop tests	(See Annex T.7)	P
4.4.3.4	Impact tests		N/A
4.4.3.5	Internal accessible safeguard tests	The external enclosure cannot be opened without a tool.	N/A
4.4.3.6	Glass impact tests	No such glass used.	N/A
4.4.3.7	Glass fixation tests		N/A
	Glass impact test (1J)		N/A
	Push/pull test (10 N)		N/A
4.4.3.8	Thermoplastic material tests	(See Annex T.8)	P
4.4.3.9	Air comprising a safeguard	(See Annex T)	P
4.4.3.10	Accessibility, glass, safeguard effectiveness	After tests of 4.4.3, no safeguard damaged.	P
4.4.4	Displacement of a safeguard by an insulating liquid		N/A
4.4.5	Safety interlocks	No safety interlocks	N/A
4.5	**Explosion**		P
4.5.1	General	No explosion occurs during normal/abnormal operation and single fault conditions	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.5.2	No explosion during normal/abnormal operating condition	(See Clause B.2, B.3)	P
	No harm by explosion during single fault conditions	(See Clause B.4)	P
4.6	**Fixing of conductors**		P
	Fix conductors not to defeat a safeguard		P
	Compliance is checked by test ..... :		P
4.7	**Equipment for direct insertion into mains socket–outlets**		N/A
4.7.2	Mains plug part complies with relevant standard .. :	Not such equipment.	N/A
4.7.3	Torque (Nm) ..... :		N/A
4.8	**Equipment containing coin/button cell batteries**		N/A
4.8.1	General	No coin/button cell batteries used	N/A
4.8.2	Instructional safeguard ..... :		N/A
4.8.3	Battery compartment door/cover construction		N/A
	Open torque test		N/A
4.8.4.2	Stress relief test		N/A
4.8.4.3	Battery replacement test		N/A
4.8.4.4	Drop test		N/A
4.8.4.5	Impact test		N/A
4.8.4.6	Crush test		N/A
4.8.5	Compliance		N/A
	30N force test with test probe		N/A
	20N force test with test hook		N/A
4.9	**Likelihood of fire or shock due to entry of conductive object**		P
4.10	**Component requirements**		N/A
4.10.1	Disconnect Device		N/A
4.10.2	Switches and relays		N/A
5	**ELECTRICALLY-CAUSED INJURY**		P
5.2	**Classification and limits of electrical energy sources**		P
5.2.2	ES1, ES2 and ES3 limits	Unit is supplied by DC source and battery pack that output voltage is below 60 Vdc and no boost circuits inside Unit and no connection to external circuits. All circuits are classified as ES1.	P
5.2.2.2	Steady-state voltage and current limits .....:	(See appended table 5.2)	P
5.2.2.3	Capacitance limits .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.2.2.4	Single pulse limits .....:		N/A
5.2.2.5	Limits for repetitive pulses .....:		N/A
5.2.2.6	Ringing signals		N/A
5.2.2.7	Audio signals	(See Clause E.1)	P
5.3	**Protection against electrical energy sources**		P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		P
5.3.1 a)	Accessible ES1/ES2 derived from ES2/ES3 circuits		N/A
5.3.1 b)	Skilled persons not unintentional contact ES3 bare conductors		N/A
5.3.2.1	Accessibility to electrical energy sources and safeguards	Only ES1 circuit can be accessed for this product.	P
	Accessibility to outdoor equipment bare parts		N/A
5.3.2.2	Contact requirements		N/A
	Test with test probe from Annex V		--
5.3.2.2 a)	Air gap – electric strength test potential (V) .....:		N/A
5.3.2.2 b)	Air gap – distance (mm) .....:		N/A
5.3.2.3	Compliance		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	No insulation as a safeguard.	N/A
5.4.1.3	Material is non-hygroscopic		N/A
5.4.1.4	Maximum operating temperature for insulating materials.....:	(See appended table 5.4.1.4)	P
5.4.1.5	Pollution degrees .....:		N/A
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 test		N/A
5.4.1.6	Insulation in transformers with varying dimensions	No such transformer within the EUT	N/A
5.4.1.7	Insulation in circuits generating starting pulses	No such starting pulses within the EUT	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 test.....:		N/A
5.4.1.10.3	Ball pressure test .....:		N/A
5.4.2	Clearances		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.2.1	General requirements		N/A
	Clearances in circuits connected to AC Mains, Alternative method		N/A
5.4.2.2	Procedure 1 for determining clearance		N/A
	Temporary overvoltage .....:		--
5.4.2.3	Procedure 2 for determining clearance		N/A
5.4.2.3.2.2	a.c. mains transient voltage.....:		--
5.4.2.3.2.3	d.c. mains transient voltage .....:	No such transient.	--
5.4.2.3.2.4	External circuit transient voltage.....:	No such transient.	--
5.4.2.3.2.5	Transient voltage determined by measurement .....:	No such transient.	--
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
5.4.2.6	Clearance measurement .....:		N/A
5.4.3	Creepage distances		N/A
5.4.3.1	General		N/A
5.4.3.3	Material group .....:		--
5.4.3.4	Creepage distances measurement .....:		N/A
5.4.4	Solid insulation		N/A
5.4.4.1	General requirements		N/A
5.4.4.2	Minimum distance through insulation .....:		N/A
5.4.4.3	Insulating compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Insulating compound forming 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	No such thin sheet material within the UNIT	N/A
	Number of layers (pcs) .....:		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, E_P, K_R, d, V_{PW} (V) .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Alternative by electric strength test, tested voltage (V), K_R ..... :		N/A
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
5.4.5.3	Insulation resistance (MΩ)..... :		N/A
	Electric strength test .....:		N/A
5.4.6	Insulation of internal wire as part of supplementary safeguard	No such insulation of internal wire as part of supplementary safeguard.	N/A
5.4.7	Tests for semiconductor components and for cemented joints	No tests necessary –see only 5.4.4.4.	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 type test of solid insulation.....:		N/A
5.4.9.2	Test procedure for routine test		N/A
5.4.10	Safeguards against transient voltages from external circuits	No such external circuits	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
5.4.10.3	Verification for insulation breakdown for impulse test ..... :		N/A
5.4.11	Separation between external circuits and earth		N/A
5.4.11.1	Exceptions to separation between external circuits and earth	No such connections to external circuit as above.	N/A
5.4.11.2	Requirements		N/A
	SPDs bridge separation between external circuit and earth		N/A
	Rated operating voltage U_{op} (V)..... :		--
	Nominal voltage U_{peak} (V)..... :		--
	Max increase due to variation ΔU_{sp} ..... :		--
	Max increase due to ageing ΔU_{sa} ..... :		--
5.4.11.3	Test method and compliance ..... :		N/A
5.4.12	Insulating liquid		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.12.1	General requirements		N/A
5.4.12.2	Electric strength of an insulating liquid ..... :		N/A
5.4.12.3	Compatibility of an insulating liquid ..... :		N/A
5.4.12.4	Container for insulating liquid ..... :		N/A
5.5	**Components as safeguards**		N/A
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
5.5.5	Relays		N/A
5.5.6	Resistors		N/A
5.5.7	SPDs		N/A
5.5.8	Insulation between the mains and an external circuit consisting of a coaxial cable ..... :		N/A
5.5.9	Safeguards for socket-outlets in outdoor equipment		N/A
	RCD rated residual operating current (mA)..... :		--
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^2) ..... :		--
	Protective earthing conductor serving as a reinforced safeguard		N/A
	Protective earthing conductor serving as a double safeguard		N/A
5.6.4	Requirements for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm^2). ..... :		--
5.6.4.2	Protective current rating (A)..... :		N/A
5.6.5	Terminals for protective conductors		N/A
5.6.5.1	Terminal size for connecting protective earthing conductors (mm)..... :		N/A
	Terminal size for connecting protective bonding conductors (mm) .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective bonding system		N/A
5.6.6.1	Requirements		N/A
5.6.6.2	Test Method ..... :		N/A
5.6.6.3	Resistance (Ω) or voltage drop ..... :		N/A
5.6.7	Reliable connection of a protective earthing conductor		N/A
5.6.8	Functional earthing		N/A
	Conductor size (mm^2) ..... :		N/A
	Class II with functional earthing marking ..... :		N/A
	Appliance inlet cl & cr (mm) ..... :		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 voltage		N/A
5.7.3	Equipment set-up, supply connections and earth connections		N/A
5.7.4	Unearthed accessible parts ..... :		N/A
5.7.5	Earthed accessible conductive parts ..... :	No such parts	N/A
5.7.6	Requirements when touch current exceeds ES2 limits		N/A
	Protective conductor current (mA) ..... :		N/A
	Instructional Safeguard ..... :		N/A
5.7.7	Prospective touch voltage and touch current associated with external circuits		N/A
5.7.7.1	Touch current from coaxial cables		N/A
5.7.7.2	Prospective touch voltage and touch current associated with paired conductor cables		N/A
5.7.8	Summation of touch currents from external circuits		N/A
	a) Equipment connected to earthed external circuits, current (mA) ..... :		N/A
	b) Equipment connected to unearthed external circuits, current (mA) ..... :		N/A
5.8	**Backfeed safeguard in battery backed up supplies**		N/A
	Mains terminal ES ..... :		N/A
	Air gap (mm) ..... :		N/A

6	**ELECTRICALLY- CAUSED FIRE**	P
6.2	**Classification of PS and PIS**	P

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Clause	Requirement + Test	Result - Remark	Verdict
6.2.2	Power source circuit classifications.....:	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources	All conductors and devicesare considered as PIS.	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	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 5.4.1.4, 6.3.2, 9.0, B.2.6)	P
	Combustible materials outside fire enclosure .....:	Cloth outside of main body passed the Glow-Wire test at 550°C according to IEC 60695-2-11	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/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	Supplementary safeguards		N/A
6.4.3.2	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	See below	P
6.4.5.2	Supplementary safeguards	(See appended tables 4.1.2 and Annex G) − Printed board: rated V-0 − All other components: at least V-2 except for parts mounted on V-0 material or small parts of combustible material (with mass less than 4g) or components complying with relevant IEC standard.	P
6.4.6	Control of fire spread in PS3 circuits	Compliance detailed as follows: − See 6.4.5. − Fire enclosure (V-0 plastic enclosure and silicone button passed Annex S.2 test) used	P

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.7	Separation of combustible materials from a PIS	Only small parts of combustible material (with mass less than 4g) on the PCB is not considered as PIS does not require separation from PIS	P
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers	The output power for the internal battery and cell exceed PS1, fire enclosure required.	P
6.4.8.2	Fire enclosure and fire barrier material properties	See below	P
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure	− V-0 plastic enclosure used − Silicone button have passed Annex S.2 test	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier	See below	P
6.4.8.3.1	Fire enclosure and fire barrier openings	See below	P
6.4.8.3.2	Fire barrier dimensions		P
6.4.8.3.3	Top openings and properties	For plastic enclosure: diameter of all openings less than 3.0mm	P
	Openings dimensions (mm)..... :		P
6.4.8.3.4	Bottom openings and properties	For plastic enclosure: diameter of all openings less than 3.0mm	P
	Openings dimensions (mm)..... :		P
	Flammability tests for the bottom of a fire enclosure		N/A
	Instructional Safeguard.....:		N/A
6.4.8.3.5	Side openings and properties	For plastic enclosure: diameter of all openings less than 3.0mm	P
	Openings dimensions (mm)..... :		N/A
6.4.8.3.6	Integrity of a fire enclosure, condition met: a), b) or c)..... :	Enclosure cannot be opened by ordinary person, tools needed	N/A
6.4.8.4	Separation of a PIS from a fire enclosure and a fire barrier distance (mm) or flammability rating ..... :	− V-0 plastic enclosure used − Silicone button have passed Annex S.2 test	P
6.4.9	Flammability of insulating liquid.....:	No such insulating liquid	N/A
6.5	**Internal and external wiring**		P

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Clause	Requirement + Test	Result - Remark	Verdict
6.5.1	General requirements	The battery lead wires and FFC wires have passed IEC 60332-1-2 and IEC 60332-1-3 test, or the wires complied with UL standard, of which the test method and testing condition are equal to IEC TS 60695-11-21.	P
6.5.2	Requirements for interconnection to building wiring ..... :		N/A
6.5.3	Internal wiring size (mm^2) for socket-outlets..... :	No such wire used	N/A
6.6	**Safeguards against fire due to the connection to additional equipment**		N/A
7	**INJURY CAUSED BY HAZARDOUS SUBSTANCES**		P
7.2	**Reduction of exposure to hazardous substances**		N/A
7.3	**Ozone exposure**		N/A
7.4	**Use of personal safeguards or personal protective equipment (PPE)**		N/A
	Personal safeguards and instructions ..... :		--
7.5	**Use of instructional safeguards and instructions**		N/A
	Instructional safeguard (ISO 7010)..... :		--
7.6	**Batteries and their protection circuits**		P
8	**MECHANICALLY-CAUSED INJURY**		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	See below	N/A
	Instructional Safeguard.....:		N/A
8.4.2	Sharp edges or corners	Edges and corners of the enclosure are rounded.	P
8.5	**Safeguards against moving parts**		N/A
8.5.1	Fingers, jewellery, clothing, hair, etc., contact with MS2 or MS3 parts	No moving part exist	N/A
	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
	Moving MS3 parts only accessible to skilled person		N/A
8.5.2	Instructional safeguard.....:		N/A
8.5.4	Special categories of equipment containing moving parts		N/A
8.5.4.1	General		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.5.4.2	Equipment containing work cells with MS3 parts		N/A
8.5.4.2.1	Protection of persons in the work cell		N/A
8.5.4.2.2	Access protection override		N/A
8.5.4.2.2.1	Override system		N/A
8.5.4.2.2.2	Visual indicator		N/A
8.5.4.2.3	Emergency stop system		N/A
	Maximum stopping distance from the point of activation (m).....:		N/A
	Space between end point and nearest fixed mechanical part (mm) .....:		N/A
8.5.4.2.4	Endurance requirements		N/A
	Mechanical system subjected to 100 000 cycles of operation		N/A
	- Mechanical function check and visual inspection		N/A
	- Cable assembly .....:		N/A
8.5.4.3	Equipment having electromechanical device for destruction of media		N/A
8.5.4.3.1	Equipment safeguards		N/A
8.5.4.3.2	Instructional safeguards against moving parts .....:		N/A
8.5.4.3.3	Disconnection from the supply		N/A
8.5.4.3.4	Cut type and test force (N).....:		N/A
8.5.4.3.5	Compliance		N/A
8.5.5	High pressure lamps		N/A
	Explosion test.....:		N/A
8.5.5.3	Glass particles dimensions (mm) .....:		N/A
8.6	**Stability of equipment**		N/A
8.6.1	General		N/A
	Instructional safeguard.....:		N/A
8.6.2	Static stability		N/A
8.6.2.2	Static stability test .....:		N/A
8.6.2.3	Downward force test		N/A
8.6.3	Relocation stability		N/A
	Wheels diameter (mm) .....:		--
	Tilt test		N/A
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test.....:		N/A
8.7	**Equipment mounted to wall, ceiling or other structure**		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
8.7.1	Mount means type .....:		N/A
8.7.2	Test methods		N/A
	Test 1, additional downwards force (N).....:		N/A
	Test 2, number of attachment points and test force (N).....:		N/A
	Test 3 Nominal diameter (mm) and applied torque (Nm).....:		N/A
8.8	**Handles strength**		**N/A**
8.8.1	General		N/A
8.8.2	Handle strength test		N/A
	Number of handles.....:		--
	Force applied (N) .....:		N/A
8.9	**Wheels or casters attachment requirements**		N/A
8.9.2	Pull test		N/A
8.10	**Carts, stands and similar carriers**		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions.....:		N/A
8.10.3	Cart, stand or carrier loading test		N/A
	Loading force applied (N) .....:		N/A
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Force applied (N) .....:		N/A
8.10.6	Thermoplastic temperature stability		N/A
8.11	**Mounting means for slide-rail mounted equipment (SRME)**		N/A
8.11.1	General	No such mounting means	N/A
8.11.2	Requirements for slide rails		N/A
	Instructional Safeguard.....:		N/A
8.11.3	Mechanical strength test		N/A
8.11.3.1	Downward force test, force (N) applied.....:		N/A
8.11.3.2	Lateral push force test		N/A
8.11.3.3	Integrity of slide rail end stops		N/A
8.11.4	Compliance		N/A
8.12	**Telescoping or rod antennas**		P
	Button/ball diameter (mm) .....:	The end piece has no sharp edges or points	--

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Clause	Requirement + Test	Result - Remark	Verdict
9	**THERMAL BURN INJURY**		P
9.2	**Thermal energy source classifications**		P
9.3	**Touch temperature limits**		P
9.3.1	Touch temperatures of accessible parts .....:	(See appended table)	P
9.3.2	Test method and compliance		P
9.4	**Safeguards against thermal energy sources**		P
9.5	**Requirements for safeguards**		P
9.5.1	Equipment safeguard	Enclosure provided to limit the transfer of thermal energy of internal parts under normal operating conditions and abnormal operating conditions.	P
9.5.2	Instructional safeguard.....:	Instructional safeguard is not required.	N/A
9.6	**Requirements for wireless power transmitters**		N/A
9.6.1	General		N/A
9.6.2	Specification of the foreign objects		N/A
9.6.3	Test method and compliance .....:		N/A

10	**RADIATION**		P
10.2	**Radiation energy source classification**		**P**
10.2.1	General classification	RS1	P
	Lasers.....:		--
	Lamps and lamp systems .....:	LED for indicating	--
	Image projectors.....:		--
	X-Ray .....:		--
	Personal music player.....:		--
10.3	**Safeguards against laser radiation**		N/A
	The standard(s) equipment containing laser(s) comply..... :		N/A
10.4	**Safeguards against optical radiation from lamps and lamp systems (including LED types)**		P
10.4.1	General requirements	The LED only used for indicating which considered as low power & inherently exempt group according to IEC 62471.	P
	Instructional safeguard provided for accessible radiation level needs to exceed		N/A
	Risk group marking and location..... :		N/A
	Information for safe operation and installation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10.4.2	Requirements for enclosures		N/A
	UV radiation exposure ..... :		N/A
10.4.3	Instructional safeguard .....:		N/A
10.5	**Safeguards against X-radiation**		N/A
10.5.1	Requirements		N/A
	Instructional safeguard for skilled persons.....:		--
10.5.3	Maximum radiation (pA/kg) .....:		--
10.6	**Safeguards against acoustic energy sources**		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output $L_{Aeq,T}$, dB(A) ..... :		N/A
	Unweighted RMS output voltage (mV) ..... :		N/A
	Digital output signal (dBFS)..... :		N/A
10.6.3	Requirements for dose-based systems		N/A
10.6.3.1	General requirements		N/A
10.6.3.2	Dose-based warning and automatic decrease		N/A
10.6.3.3	Exposure-based warning and requirements		N/A
	30 s integrated exposure level (MEL30)..... :		N/A
	Warning for MEL ≥ 100 dB(A)..... :		N/A
10.6.4	Measurement methods		N/A
10.6.5	Protection of persons		N/A
	Instructional safeguards .....:		N/A
10.6.6	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.6.1	Corded listening devices with analogue input		N/A
	Listening device input voltage (mV) .....:		N/A
10.6.6.2	Corded listening devices with digital input		N/A
	Max. acoustic output $L_{Aeq,T}$, dB(A)..... :		N/A
10.6.6.3	Cordless listening devices		N/A
	Max. acoustic output $L_{Aeq,T}$, dB(A)..... :		N/A

B	**NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS**		P
B.1	**General**		P
B.1.5	Temperature measurement conditions	(See appended table B.1.5)	P
B.2	**Normal operating conditions**		P
B.2.1	General requirements .....:	(See appended table B.2.5)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Audio Amplifiers and equipment with audio amplifiers.....:	(See appended table B.2.5)	P
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	(See appended table B.3, B.4)	P
B.3.2	Covering of ventilation openings	No ventilation opening.	N/A
	Instructional safeguard.....:		N/A
B.3.3	DC mains polarity test	The UNIT is not connected to a D.C. mains	N/A
B.3.4	Setting of voltage selector	No setting of voltage selector within the UNIT	N/A
B.3.5	Maximum load at output terminals	No such device used.	N/A
B.3.6	Reverse battery polarity	The battery pack cannot be reversed connect by the design of construction.	N/A
B.3.7	Audio amplifier abnormal operating conditions	(See appended table B.3, B.4)	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.4.1	General		P
B.4.2	Temperature controlling device	NTC used on battery protective board. The test is carried out for three times, no failure. See appended table B.4 for details.	P
B.4.3	Blocked motor test	No such device used.	N/A
B.4.4	Functional insulation	(See appended table B.3, B.4)	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 coated printed boards within the EUT	N/A
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 disconnection of passive components	(See appended table B.3, B.4)	P
B.4.7	Continuous operation of components	The EUT is continuous operating type and no such components intended for short time operation or intermittent operatio	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
B.4.8	Compliance during and after single fault conditions .....:	No change to circuits classified in 5.3	P
B.4.9	Battery charging and discharging under single fault conditions	See annex M	P
C	**UV RADIATION**		N/A
C.1	**Protection of materials in equipment from UV radiation**		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 test		N/A
C.2.4	Xenon-arc light-exposure test		N/A
D	**TEST GENERATORS**		N/A
D.1	**Impulse test generators**		N/A
D.2	**Antenna interface test generator**		N/A
D.3	**Electronic pulse generator**		N/A
E	**TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS**		**P**
E.1	**Electrical energy source classification for audio signals**		P
	Maximum non-clipped output power (W) .....:	(See appended table B.3, B.4)	--
	Rated load impedance (Ω) .....:	(See appended table 4.1.2)	--
	Open-circuit output voltage (V) .....:	(See appended table B.3, B.4)	--
	Instructional safeguard.....:	ES1, not required	--
E.2	**Audio amplifier normal operating conditions**		P
	Audio signal source type.....:	(See appended table B.2.5)	--
	Audio output power (W) .....:	(See appended table B.2.5)	--
	Audio output voltage (V).....:	(See appended table B.2.5)	--
	Rated load impedance (Ω) .....:	(See appended table 4.1.2)	--
	Requirements for temperature measurement	(See appended table 5.4.1.4, 9.3, B.1.5, B.2.6)	P
E.3	Audio amplifier abnormal operating conditions	(See appended table B.3, B.4)	P
F	**EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS**		P
F.1	**General**		P
	Language .....:	English	--
F.2	**Letter symbols and graphical symbols**		P

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Clause	Requirement + Test	Result - Remark	Verdict
F.2.1	Letter symbols according to IEC60027-1	Letter symbols for quantities and units comply with IEC 60027-1.	P
F.2.2	Graphic symbols according to IEC, ISO or manufacturer specific	Graphical symbols comply with IEC 60417, ISO 3864-2, ISO 7000 or ISO 7010.	P
F.3	**Equipment markings**		P
F.3.1	Equipment marking locations	Equipment marking is located on the enclosure surface and is easily visible.	P
F.3.2	Equipment identification markings	See the following details.	P
F.3.2.1	Manufacturer identification .....:	See copy of marking plate	P
F.3.2.2	Model identification .....:	See copy of marking plate	P
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains		N/A
F.3.3.2	Equipment without direct connection to mains		P
F.3.3.3	Nature of the supply voltage .....:	See copy of marking plate	P
F.3.3.4	Rated voltage .....:	See copy of marking plate	P
F.3.3.5	Rated frequency .....:	DC input	N/A
F.3.3.6	Rated current or rated power .....:	See copy of marking plate	P
F.3.3.7	Equipment with multiple supply connections	Single supply connection.	N/A
F.3.4	Voltage setting device	No voltage setting 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 or socket-outlet provided.	N/A
F.3.5.2	Switch position identification marking .....:	No such switching device used.	N/A
F.3.5.3	Replacement fuse identification and rating markings.....:	No such fuse used	N/A
	Instructional safeguards for neutral fuse.....:		N/A
F.3.5.4	Replacement battery identification marking .....:		N/A
F.3.5.5	Neutral conductor terminal		N/A
F.3.5.6	Terminal marking location		N/A
F.3.6	Equipment markings related to equipment classification	See below for details	N/A
F.3.6.1	Class I equipment	Class III equipment	N/A
F.3.6.1.1	Protective earthing conductor terminal .....:		N/A
F.3.6.1.2	Protective bonding conductor terminals .....:		N/A
F.3.6.2	Equipment class marking.....:		N/A
F.3.6.3	Functional earthing terminal marking.....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.7	Equipment IP rating marking.....:	IPX0	N/A
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, 15 sec. for water and 15 sec. for petroleum spirit. After each test, the marking remained legible.	P
F.4	**Instructions**		P
	a) Information prior to installation and initial use	Provided in the manual.	P
	b) Equipment for use in locations where children not likely to be present		N/A
	c) Instructions for installation and interconnection		P
	d) Equipment intended for use only in restricted access area		N/A
	e) Equipment intended to be fastened in place		N/A
	f) Instructions for audio equipment terminals		N/A
	g) Protective earthing used as a safeguard		N/A
	h) Protective conductor current exceeding ES2 limits		N/A
	i) Graphic symbols used on equipment		P
	j) Permanently connected equipment not provided with all-pole mains switch		N/A
	k) Replaceable components or modules providing safeguard function		N/A
	l) Equipment containing insulating liquid		N/A
	m) Installation instructions for outdoor equipment		N/A
F.5	Instructional safeguards		P
G	**COMPONENTS**		P
G.1	**Switches**		N/A
G.1.1	General	No such switch used	N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.1.3	Test method and compliance		N/A
G.2	**Relays**		N/A
G.2.1	Requirements	No such relay used	N/A
G.2.2	Overload test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.2.3	Relay controlling connectors supplying power to other equipment		N/A
G.2.4	Test method and compliance		N/A
G.3	**Protective devices**		N/A
G.3.1	Thermal cut-offs	No thermal cut-offs used.	N/A
	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Test method and compliance		N/A
G.3.2	Thermal links		N/A
G.3.2.1	a) Thermal links tested separately according to IEC 60691 with specifics		N/A
	b) Thermal links tested as part of the equipment		N/A
G.3.2.2	Test method and compliance		N/A
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.3.4		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
G.4	**Connectors**		N/A
G.4.1	Spacings	No such connectors used	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
G.5	**Wound components**		N/A
G.5.1	Wire insulation in wound components		N/A
G.5.1.2	Protection against mechanical stress		N/A
G.5.2	Endurance test		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Test time (days per cycle) .....:		--
	Test temperature (°C) .....:		--
G.5.2.3	Wound components supplied from the mains		N/A
G.5.2.4	No insulation breakdown		N/A
G.5.3	Transformers		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.3.1	Compliance method .....:		N/A
	Position.....:		N/A
	Method of protection .....:		N/A
G.5.3.2	Insulation		N/A
	Protection from displacement of windings .....:		--
G.5.3.3	Transformer overload tests		N/A
G.5.3.3.1	Test conditions		N/A
G.5.3.3.2	Winding temperatures		N/A
G.5.3.3.3	Winding temperatures - alternative test method		N/A
G.5.3.4	Transformers using FIW	No such device used in transformer	N/A
G.5.3.4.1	General		N/A
	FIW wire nominal diameter .....:		--
G.5.3.4.2	Transformers with basic insulation only		N/A
G.5.3.4.3	Transformers with double insulation or reinforced insulation .....:		N/A
G.5.3.4.4	Transformers with FIW wound on metal or ferrite core		N/A
G.5.3.4.5	Thermal cycling test and compliance		N/A
G.5.3.4.6	Partial discharge test		N/A
G.5.3.4.7	Routine test		N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements		N/A
G.5.4.2	Motor overload test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4.2	Locked-rotor overload test		N/A
	Test duration (days) .....:		--
G.5.4.5	Running overload test for DC motors		N/A
G.5.4.5.2	Tested in the unit		N/A
G.5.4.5.3	Alternative method		N/A
G.5.4.6	Locked-rotor overload test for DC motors		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature .....:		N/A
G.5.4.6.3	Alternative method		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

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Clause	Requirement + Test	Result - Remark	Verdict
	Operating voltage .....:		--
G.6	**Wire Insulation**		N/A
G.6.1	General		N/A
G.6.2	Enamelled winding wire insulation		N/A
G.7	**Mains supply cords**		N/A
G.7.1	General requirements	Not directly connected to the mains	N/A
	Type .....:		--
G.7.2	Cross sectional area (mm^2 or AWG).....:		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N) .....:		N/A
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm).....:		N/A
G.7.3.2.4	Strain relief and cord anchorage 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	Test method and compliance		N/A
	Overall diameter or minor overall dimension, *D* (mm) .....:		--
	Radius of curvature after test (mm).....:		--
G.7.6	Supply wiring space		N/A
G.7.6.1	General requirements		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Requirements		N/A
G.7.6.2.2	Test with 8 mm strand		N/A
G.8	**Varistors**		N/A
G.8.1	General requirements		N/A
G.8.2	Safeguards against fire		N/A
G.8.2.1	General		N/A
G.8.2.2	Varistor overload test		N/A
G.8.2.3	Temporary overvoltage test		N/A
G.9	**Integrated circuit (IC) current limiters**		N/A
G.9.1	Requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	IC limiter output current (max. 5A) .....:		--
	Manufacturers' defined drift .....:		--
G.9.2	Test Program		N/A
G.9.3	Compliance		N/A
G.10	**Resistors**		N/A
G.10.1	General		N/A
G.10.2	Conditioning		N/A
G.10.3	Resistor test		N/A
G.10.4	Voltage surge test		N/A
G.10.5	Impulse test		N/A
G.10.6	Overload test		N/A
G.11	**Capacitors and RC units**		N/A
G.11.1	General requirements		N/A
G.11.2	Conditioning of capacitors and RC units		N/A
G.11.3	Rules for selecting capacitors		N/A
G.12	**Optocouplers**		N/A
	Optocouplers comply with IEC 60747-5-5 with specifics		N/A
	Type test voltage $V_{ini,a}$ .....:		--
	Routine test voltage, $V_{ini,b}$ .....:		--
G.13	**Printed boards**		P
G.13.1	General requirements	Only need to comply with functional insulation, see only B.4.4.	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/A
G.13.4	Insulation between conductors on the same inner surface	See above	N/A
G.13.5	Insulation between conductors on different surfaces	See above	N/A
	Distance through insulation.....:		N/A
	Number of insulation layers (pcs) .....:		--
G.13.6	Tests on coated printed boards	See above	N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2	Test method and compliance		N/A
G.14	**Coating on components terminals**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.14.1	Requirements .....:	No coating on component terminals considered to affect creepage or clearances.	N/A
G.15	**Pressurized liquid filled components**		N/A
G.15.1	Requirements		N/A
G.15.2	Test methods and compliance		N/A
G.15.2.1	Hydrostatic pressure test		N/A
G.15.2.2	Creep resistance test		N/A
G.15.2.3	Tubing and fittings compatibility test		N/A
G.15.2.4	Vibration test		N/A
G.15.2.5	Thermal cycling test		N/A
G.15.2.6	Force test		N/A
G.15.3	Compliance		N/A
G.16	**IC including capacitor discharge function (ICX)**		N/A
G.16.1	Condition for fault tested is not required		N/A
	ICX with associated circuitry tested in equipment		N/A
	ICX tested separately		N/A
G.16.2	Tests		N/A
	Smallest capacitance and smallest resistance specified by ICX manufacturer for impulse test .....:		--
	Mains voltage that impulses to be superimposed on .....:		--
	Largest capacitance and smallest resistance for ICX tested by itself for 10000 cycles test .....:		--
G.16.3	Capacitor discharge test .....:		N/A
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	Ringing 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		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) .....:		N/A
J	**INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION**		N/A
J.1	**General**		N/A
	Winding wire insulation .....:		--
	Solid round winding wire, diameter (mm).....:		N/A
	Solid square and rectangular (flatwise bending) winding wire, cross-sectional area (mm^2) .....:		N/A
J.2/J.3	Tests and Manufacturing		--
K	**SAFETY INTERLOCKS**		N/A
K.1	**General requirements**		N/A
	Instructional safeguard.....:		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
K.5.1	Under single fault condition		N/A
K.6	**Mechanically operated safety interlocks**		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Test method and compliance.....:		N/A
K.7	**Interlock circuit isolation**		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements		N/A
	In circuit connected to mains, separation distance for contact gaps (mm) .....:		N/A
	In circuit isolated from mains, separation distance for contact gaps (mm) .....:		N/A
	Electric strength test before and after the test of K.7.2 .....:		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
L	**DISCONNECT DEVICES**		N/A
L.1	**General requirements**	The equipment is not directly connected to the mains	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

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Clause	Requirement + Test	Result - Remark	Verdict
L.6	**Switches as disconnect devices**		N/A
L.7	**Plugs as disconnect devices**		N/A
L.8	**Multiple power sources**		N/A
	Instructional safeguard.....:		N/A
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	Batteries and their cells comply with relevant IEC standards.....:	Approved battery pack used	P
M.3	**Protection circuits for batteries provided within the equipment**		P
M.3.1	Requirements		P
M.3.2	Test method		P
	Overcharging of a rechargeable battery	(see appended table Annex M)	P
	Excessive discharging		P
	Unintentional charging of a non-rechargeable battery	No such battery used	N/A
	Reverse charging of a rechargeable battery	Built-in battery used, reverse charging is prevented	N/A
M.3.3	Compliance	No chemical leakage, no spillage of liquid, no explosion of the battery, no emission of flame or expulsion of molten metal (See appended Tables and Annex M.3 and M.4)	P
M.4	**Additional safeguards for equipment containing a portable secondary lithium battery**		P
M.4.1	General		P
M.4.2	Charging safeguards		P
M.4.2.1	Requirements		P
M.4.2.2	Compliance .....:	(See Annex M.4)	P
M.4.3	Fire enclosure.....:	(See 6.4.6)	P
M.4.4	Drop test of equipment containing a secondary lithium battery		P
M.4.4.2	Preparation and procedure for the drop test	As a preparation of the drop test, two batteries are fully charged at the same time under the same charging conditions.	P
M.4.4.3	Drop, Voltage on reference and dropped batteries (V); voltage difference during 24 h period (%): .....:	After test, the voltage difference less than 5% in the 24H	P

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Clause	Requirement + Test	Result - Remark	Verdict
M.4.4.4	Check of the charge/discharge function	Charge/discharge function under normal operation condition still operated after drop test.	P
M.4.4.5	Charge / discharge cycle test	Complied by completing 3 complete charge and discharge cycles.	P
M.4.4.6	Compliance	No fire, explosion or venting occurred.	P
M.5	**Risk of burn due to short-circuit during carrying**		P
M.5.1	Requirement	No bare conductive terminal used	P
M.5.2	Test method and compliance		P
M.6	**Safeguards against short-circuits**		P
M.6.1	External and internal faults	The battery complied with IEC 62133-2 which considered the internal fault tests. No such explosion or fire likely to result from short circuits.	P
M.6.2	Compliance		P
M.7	**Risk of explosion from lead acid and NiCd batteries**		N/A
M.7.1	Ventilation preventing explosive gas concentration	Not lead acid or NiCd battery.	N/A
	Calculated hydrogen generation rate.....:		N/A
M.7.2	Test method and compliance		N/A
	Minimum air flow rate, Q (m^3/h) .....:		N/A
M.7.3	Ventilation tests		N/A
M.7.3.1	General		N/A
M.7.3.2	Ventilation test – alternative 1		N/A
	Hydrogen gas concentration (%).....:		N/A
M.7.3.3	Ventilation test – alternative 2		N/A
	Obtained hydrogen generation rate .....:		N/A
M.7.3.4	Ventilation test – alternative 3		N/A
	Hydrogen gas concentration (%).....:		N/A
M.7.4	Marking.....:		N/A
M.8	**Protection against internal ignition from external spark sources of batteries with aqueous electrolyte**		N/A
M.8.1	General		N/A
M.8.2	Test method		N/A
M.8.2.1	General		N/A
M.8.2.2	Estimation of hypothetical volume V_Z (m^3/s) .....:		--

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Clause	Requirement + Test	Result - Remark	Verdict
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		P
	Instructional safeguard.....:		P
N	**ELECTROCHEMICAL POTENTIALS**		N/A
	Material(s) used.....:		--
O	**MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES**		N/A
	Value of *X* (mm) .....:	Only function insulation used	--
P	**SAFEGUARDS AGAINST CONDUCTIVE OBJECTS**		P
P.1	**General**	See below	P
P.2	**Safeguards against entry or consequences of entry of a foreign object**		P
P.2.1	General	See below	P
P.2.2	Safeguards against entry of a foreign object	See below	P
	Location and Dimensions (mm) .....:	No openings on the external enclosure	--
P.2.3	Safeguards against the consequences of entry of a foreign object		N/A
P.2.3.1	Safeguard requirements		N/A
	The ES3 and PS3 keep-out volume in Figure P.3 not applicable to transportable equipment		N/A
	Transportable equipment with metalized plastic parts .....:		N/A
P.2.3.2	Consequence of entry test .....:		N/A
P.3	**Safeguards against spillage of internal liquids**		N/A
P.3.1	General		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Compliance		N/A
P.4	**Metallized coatings and adhesives securing parts**		N/A
P.4.1	General		N/A
P.4.2	Tests		N/A
	Conditioning, T_C (°C).....:		--
	Duration (weeks).....:		--

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Clause	Requirement + Test	Result - Remark	Verdict
Q	**CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING**		**N/A**
Q.1	**Limited power sources**		N/A
Q.1.1	Requirements		N/A
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output		N/A
	d) Overcurrent protective device limited output		N/A
	e) IC current limiter complying with G.9		N/A
Q.1.2	Test method and compliance .....:		N/A
	Current rating of overcurrent protective device (A) .....:		N/A
Q.2	**Test for external circuits – paired conductor cable**		N/A
	Maximum output current (A) .....:		N/A
	Current limiting method .....:		--
R	**LIMITED SHORT CIRCUIT TEST**		N/A
R.1	**General**	No such consideration.	N/A
R.2	**Test setup**		N/A
	Overcurrent protective device for test .....:		--
R.3	**Test method**		N/A
	Cord/cable used for test .....:		--
R.4	**Compliance**		N/A
S	**TESTS FOR RESISTANCE TO HEAT AND FIRE**		**P**
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**		P
	Samples, material .....:	Silicone button	--
	Wall thickness (mm) .....:	Min. 0.5mm	--
	Conditioning (°C) .....:	70	--

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Clause	Requirement + Test	Result - Remark	Verdict
S.3	**Flammability test for the bottom of a fire enclosure**		N/A
S.3.1	Mounting of samples		N/A
S.3.2	Test method and compliance		N/A
	Mounting of samples .....:		--
	Wall thickness (mm) .....:		--
S.4	**Flammability classification of materials**		N/A
S.5	**Flammability test for fire enclosure materials of equipment with a steady state power exceeding 4 000 W**		N/A
	Samples, material .....:		--
	Wall thickness (mm) .....:		--
	Conditioning (°C) .....:		--
T	**MECHANICAL STRENGTH TESTS**		**P**
T.1	**General**		P
T.2	**Steady force test, 10 N .....:**	(See appended table T.2)	P
T.3	**Steady force test, 30 N .....:**		NA
T.4	**Steady force test, 100 N .....:**		NA
T.5	**Steady force test, 250 N .....:**	(See appended table T.5)	P
T.6	**Enclosure impact test**		NA
	Fall test		NA
	Swing test		NA
T.7	**Drop test .....:**	(See appended table T.7)	P
T.8	**Stress relief test .....:**	(See appended table T.8)	P
T.9	**Glass Impact Test..... :**		NA
T.10	**Glass fragmentation test**		N/A
	Number of particles counted ..... :		N/A
T.11	**Test for telescoping or rod antennas**		P
	Torque value (Nm) .....:	0.3	P
U	**MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION**		N/A
U.1	**General**		N/A
	Instructional safeguard:		N/A
U.2	**Test method and compliance for non-intrinsically protected CRTs**		N/A
U.3	**Protective screen**		N/A
V	**DETERMINATION OF ACCESSIBLE PARTS**		N/A
V.1	**Accessible parts of equipment**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
V.1.1	General		N/A
V.1.2	Surfaces and openings tested with jointed test probes		N/A
V.1.3	Openings tested with straight unjointed test probes		N/A
V.1.4	Plugs, jacks, connectors tested with blunt probe		N/A
V.1.5	Slot openings tested with wedge probe		N/A
V.1.6	Terminals tested with rigid test wire		N/A
V.2	**Accessible part criterion**		N/A
X	**ALTERNATIVE METHOD FOR DETERMINING CLEARANCES FOR INSULATION IN CIRCUITS CONNECTED TO AN AC MAINS NOT EXCEEDING 420 V PEAK (300 V RMS)**		N/A
	Clearance..... :	(See appended table X)	N/A
Y	**CONSTRUCTION REQUIREMENTS FOR OUTDOOR ENCLOSURES**		N/A
Y.1	**General**		N/A
Y.2	**Resistance to UV radiation**		N/A
Y.3	**Resistance to corrosion**		N/A
Y.3.1	Metallic parts of outdoor enclosures are resistant to effects of water-borne contaminants by .....:		N/A
Y.3.2	Test apparatus		N/A
Y.3.3	Water – saturated sulphur dioxide atmosphere		N/A
Y.3.4	Test procedure.....:		N/A
Y.3.5	Compliance		N/A
Y.4	**Gaskets**		N/A
Y.4.1	General		N/A
Y.4.2	Gasket tests		N/A
Y.4.3	Tensile strength and elongation tests		N/A
	Alternative test methods.....:		N/A
Y.4.4	Compression test		N/A
Y.4.5	Oil resistance		N/A
Y.4.6	Securing means		N/A
Y.5	**Protection of equipment within an outdoor enclosure**		N/A
Y.5.1	General		N/A
Y.5.2	Protection from moisture		N/A
	Relevant tests of IEC 60529 or Y.5.3.....:		N/A
Y.5.3	Water spray test		N/A
Y.5.4	Protection from plants and vermin		N/A
Y.5.5	Protection from excessive dust		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
Y.5.5.1	General		N/A
Y.5.5.2	IP5X equipment		N/A
Y.5.5.3	IP6X equipment		N/A
Y.6	**Mechanical strength of enclosures**		N/A
Y.6.1	General		N/A
Y.6.2	Impact test.....:	(See Table T.6)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5.2	TABLE: Classification of electrical energy sources						P
Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters				ES Class
			U (V)	I (mA)	Type[1)]	Additional Info [2)]	
+5Vdc input	The UNIT is designed to be supplied via Type C port	Normal	<60Vdc	--	SS	--	ES1
		Abnormal	--	--	--	--	
		Single fault – SC/OC	--	--	--	--	
Battery output	The UNIT is designed to be supplied via internal lithium-ion battery	Normal	<60Vdc	--	SS	--	ES1
		Abnormal	--	--	--	--	
		Single fault – SC/OC	--	--	--	--	
Supplementary information:							
1) Type: Steady state (SS), Capacitance (CP), Single pulse (SP), Repetitive pulses (RP), etc.							
2) Additional Info: Frequency, Pulse duration, Pulse off time, Capacitance value, etc.							

5.4.1.8	Table: working voltage measurement			N/A
Location	RMS voltage (V)	Peak voltage (V)	Frequency (Hz)	Comments
--	--	--	--	--
supplementary information:				

5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics		N/A
Method ..... :	ISO 306 / B50		—
Object/ Part No./Material	Manufacturer/trademark	Thickness (mm)	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	Thickness (mm)	Test temperature (°C)	Impression diameter (mm)
--	--	--	--	--
Supplementary information:				

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.2, 5.4.3	TABLE: Minimum Clearances/Creepage distance							N/A
Clearance (cl) and creepage distance (cr) at/of/between:	U_p (V)	U_{rms} (V)	Freq [1)] (kHz)	Required cl (mm)	cl (mm)	E.S. [2)] (V)	Required cr (mm)	cr (mm)
--	--	--	--	--	--	--	--	--
Supplementary information:								

5.4.4.2	TABLE: Minimum distance through insulation				N/A
Distance through insulation (DTI) at/of	Peak voltage (V)	Insulation	Required DTI (mm)	Measured DTI (mm)	
--	--	--	--	--	
Supplementary information:					
1) See appended table 4.1.2 for details. 2) *See also sub-clause 5.4.4.9.					

5.4.4.9	TABLE: Solid insulation at frequencies >30 kHz					N/A
Insulation material	E_P	Frequency (kHz)	K_R	Thickness d (mm)	Insulation	V_{PW} (Vpk)
--	--	--	--	--	--	--
Supplementary information:						
*See clause 5.4.4.9						

5.4.9	TABLE: Electric strength tests			N/A
Test voltage applied between:	Voltage shape (Surge, Impulse, AC, DC, etc.)	Test voltage (V)	Breakdown Yes / No	
--	--	--	--	
Supplementary information:				

5.5.2.2	TABLE: Stored discharge on capacitors				N/A
Location	Supply voltage (V)	Operating and fault condition [1)]	Switch position	Measured voltage (Vpk)	ES Class
--	--	--	--	--	--
Supplementary information:					
Limit of ES1 applied for mains (inlet) terminal. X-capacitors installed for testing are:					

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Clause	Requirement + Test	Result - Remark	Verdict

[ ] bleeding resistor rating:

[ ] ICX:

Notes: OC=Open circuit

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 (Bleeder Resistor open circuit)

5.6.6	**TABLE: Resistance of protective conductors and terminations**			N/A
Location	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)
--	--	--	--	--
Supplementary information:				

5.7.4	**TABLE: Unearthed accessible parts**					N/A
Location	Operating and fault conditions	Supply Voltage (V)	Parameters			ES class
			Voltage (V_{rms} or V_{pk})	Current (A_{rms} or A_{pk})	Freq. (Hz)	
--	--	--	--	--	--	--
Supplementary information:						
Abbreviation:						

5.7.5	**TABLE: Earthed accessible conductive part**			N/A
Supply voltage (V) ..... :				--
Phase(s) ..... :	[ ] Single Phase; [ ] Three Phase: [ ] Delta [ ] Wye			--
Power Distribution System ..... :	[ ] TN [ ]TT [ ] IT			--
Location	Fault Condition No in IEC 60990 clause 6.2.2	Touch current (mA)	Comment	
Supplementary Information:				

5.8	**TABLE: Backfeed safeguard in battery backed up supplies**					N/A
Location	Supply voltage (V)	Operating and fault condition	Time (s)	Open-circuit voltage (V)	Touch current (A)	ES Class

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Supplementary information:
Abbreviation: SC= short circuit, OC= open circuit

6.2.2	TABLE: Power source circuit classifications					P
Location	Operating and fault condition	Voltage (V)	Current (A)	Max. Power[1)] (W)	Time (S)	PS class
+5V input via Type C port	Normal operation	--	--	>100	5	PS3 (declared)
Cell output	Normal operation	2.390	36.66	87.62	5	PS2
Battery output	Normal operation	3.136	15.70	49.24	5	PS2
	Single Fault: U1 pin 5-1SC (On Battery protective board) *	0	0	0	3	PS1
Speaker output	Max available output	5.360	--	7.18	5	PS1
Supplementary information:						
Abbreviation: SC= short circuit; OC= open circuit [1)] Measured after 3 s for PS1 and measured after 5 s for PS2 and PS3. *Unit shut down, no damage, no hazard.						

6.2.3.1	TABLE: Determination of Arcing PIS			N/A
Location	Open circuit voltage after 3 s (Vpk)	Measured r.m.s current (A)	Calculated value	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 resistive PIS		P
Location	Operating and fault condition	Dissipate power (W)	Resistive PIS? Yes / No
All internal circuits	--	--	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			

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power exceeding 15 W measured 30 s after introduction of the fault.

8.5.5	TABLE: High pressure lamp			N/A
Lamp manufacturer	Lamp type	Explosion method	Longest axis of glass particle (mm)	Particle found beyond 1 m Yes / No
Supplementary information:				

9.6	TABLE: Temperature measurements for wireless power transmitters								N/A
Supply voltage (V)..... :									--
Max. transmit power of transmitter (W)..... :									--
Foreign objects	w/o receiver and direct contact		with receiver and direct contact		with receiver and at distance of 2 mm		with receiver and at distance of 5 mm		
	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	
Supplementary information:									

5.4.1.4, 9.3, B.1.5, B.2.6	TABLE: Temperature measurements			P
Supply voltage (V) ..... :	4.17VDC	5VDC	5VDC	--
Ambient temperature during test T_{amb} (°C).....	See below	See below	See below	--
Maximum measured temperature *T* of part/at:	T (°C)			Allowed T_{max} (°C)
	Condition 1	Condition 2	Condition 3	
Battery body	30.6	34.4	33.6	For ref.
Battery wire	37.2	44.3	38.9	80-(45-25)=60
PCB near U9	39.3	48.1	41.4	130-(45-25)=110
PCB near U2	38.0	53.7	48.3	130-(45-25)=110
PCB near U5	37.3	42.6	38.2	130-(45-25)=110
PCB near U200	40.1	44.8	36.7	130-(45-25)=110
PCB near U13	40.3	45.8	37.6	130-(45-25)=110
E-cap CE4 body	38.0	48.1	42.6	105-(45-25)=85
E-cap CE1 body	38.3	47.3	41.1	105-(45-25)=85
E-cap CE2 body	39.2	44.4	36.7	105-(45-25)=85
L7 winding	41.3	46.7	38.3	130-(45-25)=110

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L200 winding	39.9	44.4	36.3	130-(45-25)=110
Plastic enclosure inside near U9	31.7	34.9	31.8	For ref.
Plastic enclosure inside near battery	30.1	33.7	32.8	For ref.
Plastic enclosure outside near battery	28.9	32.2	30.7	48#
Plastic enclosure outside near U9	28.3	31.2	30.8	48#
Button	30.0	32.7	30.8	48#
Display screen	31.1	37.1	34.6	48#
Ambient	25.0	25.0	25.0	--

Supplementary information:

Tested with maximum normal load condition as in Table B.2.5.
Temperature limit for TS1 of accessible enclosure according to Table 38.

Note 1: The apparatus was submitted and evaluated for maximum manufacturer's recommended ambient (Tma) of 45°C.

Note 2: Temperature limits are calculated as follows:

Test condition:
Condition 1: Only discharge mode with fully charged battery
Condition 2: Charge while working mode with fully discharged battery
Condition 3: Only charge mode with empty battery

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
Condition 1: Only discharge mode with fully charged battery								
4.17V dc1)	--	0.615	--	2.565	--	--	--	Bluetooth mode: 1/8 of Max. available output power with 1kHz signal input. Battery discharge current(A): 0.615 Speaker output (4Ω): 1.90V/0.90W
4.17V dc1)	--	0.608	--	2.535	--	--	--	Boost mode: 1/8 of Max. available output power with 1kHz signal input. Battery discharge current(A): 0.608 Speaker output (4Ω): 1.90V/0.90W
Condition 2: Charge while working mode with fully discharged battery								
5Vdc	--	1.307	1.35	6.535	--	--	--	Bluetooth mode: 1/8 of Max. available output power with 1kHz signal input. Battery charging current(A): 1.004 Speaker output (4Ω): 1.43V/0.51W

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Clause	Requirement + Test	Result - Remark	Verdict

5Vdc	--	1.286	1.35	6.430	--	--	--	Boost mode: 1/8 of Max. available output power with 1kHz signal input. Battery charging current(A): 1.004 Speaker output (4Ω): 1.43V/0.51W
Condition 3: Only charge mode with internal empty battery								
5Vdc	--	1.333	1.35	6.665	--	--	--	Battery charging current(A): 1.268
Supplementary information:								
1) battery output voltage								

B.3, B.4	TABLE: Abnormal operating and fault condition tests					P
Ambient temperature T_{amb} (°C) .....:				25°C		--
Power source for EUT: Manufacturer, model/type, outputrating ..:				--		--
Component No.	Condition	Supply voltage (V)	Test time	Fuse no.	Fuse current (A)	Observation
Condition 1: Only discharge mode with fully charged battery						
Speaker	Max. available output	4.17Vdc	2hrs 50mins	--	--	Bluetooth mode: Max. available output power with 1kHz signal input. Unit work normally. No damaged, no hazards. Battery discharge current(A):2.787 Speaker output: Speaker(4Ω): 5.36V/7.18W Max. Temperature(°C): Battery body:41.6 Plastic enclosure outside near battery:41.6 Plastic enclosure outside near battery: 35.8 Button:44.0 Display screen:41.8 Ambient:25.0
Speaker	SC	4.17Vdc	10mins	--	--	Speaker no output, others work normally, no damage, no hazards. Battery discharge current(A):0.615→0.266
U13 pin 7-5	SC	4.17Vdc	10mins	--	--	Unit shutdown immediately, recoverable, no damage, no hazards. Battery discharge current(A):0.615→0
CE2	SC	4.17Vdc	10mins	--	--	Unit shutdown immediately, recoverable, no damage, no hazards. Battery discharge current(A):0.615→0

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Clause	Requirement + Test				Result - Remark	Verdict
U200 pin 28-3	SC	4.17Vdc	10mins	--	--	Speaker no output, others work normally, no damage, no hazards. Battery discharge current(A):0.615→0.266
L210	SC	4.17Vdc	10mins	--	--	Speaker no output, others work normally, no damage, no hazards. Battery discharge current(A):0.615→0.266
R211	SC	4.17Vdc	10mins	--	--	Unit working normally. No damage, no hazard. Battery charging current(A):0.615
D7	SC	4.17Vdc	10mins	--	--	Unit working normally. No damage, no hazard. Battery charging current(A):0.615
Battery pin + to -	SC	4.17Vdc	10mins	--	--	Unit shutdown immediately, recoverable, no damage, no hazards. Battery discharge current(A):0.615→0
Condition 2: Charge while working mode with fully discharged battery						
Speaker	Max. available output	5Vdc	7hrs	--	--	Bluetooth mode: Max. available output power with 1kHz signal input. Unit work normally. No damaged, no hazards. Speaker output (4Ω): 4.04V/4.08W In(A)=1.297 Pn(W)=6.485 Battery charging current(A):0.086 Max. Temperature(°C): Battery body:48.0 Plastic enclosure outside near battery:43.3 Plastic enclosure outside near battery: 39.4 Button:43.0 Display screen:44.0 Ambient:25.0
Speaker	SC	5Vdc	7hrs	--	--	Speaker no output, others work normally, no damage, no hazards. In(A)=1.307→1.348 Pn(W)=6.535→6.740 Battery charging current(A):1.004→1.218 Max. Temperature(°C): Battery body:35.6 Plastic enclosure outside near battery:32.8

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Clause	Requirement + Test	Result - Remark	Verdict

						Plastic enclosure outside near battery: 32.0 Button:34.1 Display screen:39.5 Ambient:25.0
Condition 3: Only charge mode with fully discharged battery						
U2 pin 1-13	SC	5Vdc	7hrs	--	--	Unit shutdown immediately, recoverable, no damage, no hazards. In(A)=1.333→0 Pn(W)=6.665→0 Battery charging current(A):1.268→0
C33	SC	5Vdc	7hrs	--	--	Unit shutdown immediately, recoverable, no damage, no hazards. In(A)=1.333→0 Pn(W)=6.665→0 Battery charging current(A):1.268→0
C12	SC	5Vdc	7hrs	--	--	Unit shutdown immediately, recoverable, no damage, no hazards. In(A)=1.333→0 Pn(W)=6.665→0 Battery charging current(A):1.268→0
U15 pin 1-9	SC	5Vdc	10mins	--	--	Unit working normally. No damage, no hazard. In(A)=1.333 Pn(W)=6.665 Battery charge current(A): 1.268
R168	SC	5Vdc	10mins	--	--	Unit working normally. No damage, no hazard. In(A)=1.333 Pn(W)=6.665 Battery charge current(A): 1.268
Q8 pin D-S	SC	5Vdc	7hrs	--	--	Unit shutdown immediately, recoverable, no damage, no hazards. In(A)=1.333→0 Pn(W)=6.665→0 Battery charging current(A):1.268→0
D17	SC	5Vdc	7hrs	--	--	Unit shutdown immediately, recoverable, no damage, no hazards. In(A)=1.333→0 Pn(W)=6.665→0

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Clause	Requirement + Test	Result - Remark	Verdict

						Battery charging current(A):1.268→0
RT1(On Battery protective board)	OC	5Vdc	10mins	--	--	Unit shutdown immediately, recoverable, no damage, no hazards. Repeat three times, same result. In(A)=1.333→0 Pn(W)=6.665→0 Battery charging current(A):1.268→0
RT2(On Battery protective board)	OC	5Vdc	10mins	--	--	Unit shutdown immediately, recoverable, no damage, no hazards. Repeat three times, same result. In(A)=1.333→0 Pn(W)=6.665→0 Battery charging current(A):1.268→0

Supplementary information:

1) OL: Overloaded, SC=Short circuit, OC: Open circuit

2) The test result shown all safeguards remained effective and didn't lead to a single fault condition during abnormal operating condition; In addition all safeguards complied with applicable requirements in this standard after restoration of normal operating conditions.

3) The test result showed no Class 1 or 2 energy source become Class 3 level during and after single fault condition.

4) Plastic Enclosure limit: 58°C

M.3	**TABLE: Protection circuits for batteries provided within the equipment**						P
Is it possible to install the battery in a reverse polarity position?.....:					No		--
Equipment Specification	Charging						
	Voltage (V)				Current (A)		
	5Vdc				1.35		
Manufacturer/type	Battery specification						
	Non-rechargeable batteries		Rechargeable batteries				
	Discharging current (A)	Unintentional charging current (A)	Charging		Discharging current (A)	Reverse charging current (A)	
			Voltage (V)	Current (A)			
Guangdong Pow-Tech New Power Co., Ltd. / C1146C2	--	--	4.2	2.5	5.0	--	
Note: The tests of M.3.2 are applicable only when above appropriate data is not available.							
Specified battery temperature (°C) .....:					Charging: 0~45 °C Discharging: -20~60°C		--

Component No.	Fault condition	Charge/ discharge mode	Test time	Temp. (°C)	Current (A)	Voltage (V)	Observation

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Clause	Requirement + Test	Result - Remark	Verdict

--*	--	--	--	--	--	--	--

Supplementary information:

Abbreviation: SC= short circuit; OC= open circuit NL= no chemical leakage; NS= no spillage of liquid; NE= no explosion; NF= no emission of flame or expulsion of molten metal.

*: see table B.3, B.4

M.4.2	**TABLE: Charging safeguards for equipment containing a secondary lithium battery**	**P**
Maximum specified charging voltage (V) ..... :	4.2	--
Maximum specified charging current (A) ..... :	2.5	--
Highest specified charging temperature (°C) ..... :	45	--
Lowest specified charging temperature (°C) ..... :	0	--

Battery manufacturer/type	Operating and fault condition	Measurement			Observation
		Charging voltage (V)	Charging current (A)	Temp. (°C)	
Guangdong Pow-Tech New Power Co., Ltd. / C1146C2	Normal	4.17	1.268	Battery body: 33.6 °C (under ambient 25 °C)	Cell charging voltage does not exceed 4.20V, battery charging current does not exceed 2.5A
	Abnormal – Speaker SC under condition 2	4.17	1.004→ 1.218	Battery body: 35.6 °C (under ambient 25 °C)	Cell charging voltage does not exceed 4.20V, battery charging current does not exceed 2.5A
	Single fault –U15 pin 1-9 SC on Condition 3	4.17	1.268	Battery body: 33.6 °C (under ambient 25 °C)	Cell charging voltage does not exceed 4.20V, battery charging current does not exceed 2.5A

Supplementary information:

When battery surface temperature reaches or exceeds 44.6°C, the product cannot charge.

When battery surface temperature reaches or falls below 0°C, the product cannot charge.

Abbreviation: SC= short circuit; OC= open circuit; MSCV= maximum specified charging voltage; MSCC= maximum specified charging current; HSCT= highest specified charging temperature; LSCT= lowest specified charging temperature

Q.1	**TABLE: Circuits intended for interconnection with building wiring (LPS)**						N/A
Output Circuit	Condition	U_{oc} (V)	Time (s)	I_{sc} (A)		S (VA)	
				Meas.	Limit	Meas.	Limit

Supplementary Information:

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

T.2, T.3, T.4, T.5	**TABLE: Steady force test**						P
Location/Part	Material	Thickness (mm)	Probe	Force (N)	Test Duration (s)	Observation	
Internal components / parts (T.2)	--	--	--	10	5	No reduction the clearances and creepage distances	
Enclosure top/side/bottom (T.5)	Plastic	1)	--	250	5	Enclosure remained intact, no crack/ opening developed	
Supplementary information:							
1) See appended table 4.1.2. Each source of enclosure in table 4.1.2 was applied and passed the relevant tests.							

T.6, T.9	**TABLE: Impact test**				N/A
Location/Part	Material	Thickness (mm)	Height (mm)	Observation	
Supplementary information:					

T.7	**TABLE: Drop test**				P
Location/Part	Material	Thickness (mm)	Height (mm)	Observation	
Enclosure top/side/bottom	Plastic	1)	1000	Enclosure remained intact, no crack/ opening developed	
Supplementary information:					
1) See appended table 4.1.2. Each source of enclosure in table 4.1.2 was applied and passed the relevant tests.					

T.8	**TABLE: Stress relief test**					P
Location/Part	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
Plastic enclosure	Plastic	1)	70	7	Enclosure remained intact, no crack/ opening developed	
Supplementary information:						
1) See appended table 4.1.2. Each source of enclosure in table 4.1.2 was applied and passed the relevant tests.						

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Clause	Requirement + Test	Result - Remark	Verdict

X	**TABLE: Alternative method for determining minimum clearances distances**			N/A
Clearance distanced between:		Peak of working voltage (V)	Required cl (mm)	Measured cl (mm)
--		--	--	--
Supplementary information:				

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

4.1.2	**TABLE: List of critical components**				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
Battery	Guangdong Pow-Tech New Power Co., Ltd.	C1146C2	3.6V, 2500mAh, 9.0Wh	IEC 62133-2:2017,IEC 62133-2:2017/AMD1:2021, EN 62133-2:2017+A1:2021	SGS CB, report no.: SZES240100040801, certi. No.: FI-60003, FI-60003/M1
- Cell	GUANGZHOU GREATPOWER ENERGY& TECHNOLOGY CO LTD	ICR18650	3.6V, 2600mAh	IEC 62133-2:2017,IEC 62133-2:2017/AMD1:2021, EN 62133-2:2017+A1:2021	UL (Demko) CB, report no.: S03A21120353S001, certi. No.: DK-122596-UL
- Battery lead wires	DONGGUAN ZHONGZHEN NEW ENERGY TECHNOLOGY CO.,LTD	3132	20AWG, Passed IEC 60332-1-2 and IEC 60332-1-3 test	IEC 62368-1	Test with appliance
- Battery lead wires (Alternative)	Interchangeable	Interchangeable	Min. 20AWG, min. 80°C, VW-1	UL 758	UL
Plastic enclosure (Main body, external plastic cover and battery compartment cover)	GUANGDONG HTASO NEW MATERIALS TECHNOLOGY CO., LTD	T305F00 CR(hh)	V-0, Min. 80°C, min. thickness 0.8mm	UL 94	UL E321019
Silicone button	SHENZHEN HOLD SUCCESS INDUSTRIAL SCIENCE CO.,LTD.	HSD-70A	Min. thickness: 0.5mm, Passed annex S.2 Flammability test	IEC 62368-1	Test with appliance
PCB	MODERN TIME ELECTRONIC TECHNOLOGY (HZ) CO LTD	HT-M, HT-D	V-0, 130°C	UL 796	UL E217290
(Alternative)	Interchangeable	Interchangeable	V-0, 130°C	UL 796	UL
Speaker	Interchangeable	Interchangeable	4Ω, 8W	--	--
FFC wires	ZHEJIANG BOZHONG ELECTRIC CO.， LTD	20624	1.56mm^2, Min. 80°C, Passed IEC 60332-1-2 and IEC 60332-1-3 test	IEC 62368-1	Test with appliance
(Alternative)	Interchangeable	Interchangeable	Min. 80°C, VW-1	UL 758	UL

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

[1)]License available upon request. Provided evidence ensures the agreed level of compliance. See OD-CB2039.

IEC62368_1E - ATTACHMENT			
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 IEC 62368-1:2020+A11:2020

Attachment Form No..... : EU_GD_IEC62368_1E

Attachment Originator ..... : UL(Demko)

Master Attachment..... : 2021-02-04

	CENELEC COMMON MODIFICATIONS (EN)	P
	Clause numbers in the cells that are shaded light grey are clause references in EN IEC 62368-1:2020+A11:2020. All other clause numbers in that column, except for those in the paragraph below, refers to IEC 62368-1:2018. Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2018 are prefixed “Z”.	--
	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	P
1	**Modification to Clause 3.**	N/A
3.3.19	**Sound exposure** *Replace 3.3.19 of IEC 62368-1 with the following definitions:*	N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.19.1	**momentary exposure level, MEL** metric for estimating 1 s sound exposure level from the HD 483-1 S2 test signal applied to both channels, based on EN 50332-1:2013, 4.2. Note 1 to entry: MEL is measured as A-weighted levels in dB. Note 2 to entry: See B.3 of EN 50332-3:2017 for additional information.		N/A
3.3.19.3	**sound exposure, *E*** A-weighted sound pressure (p) squared and integrated over a stated period of time, T Note 1 to entry: The SI unit is Pa^2 s. $E = \int_0^T p(t)^2 \, \mathrm{d}t$		N/A
3.3.19.4	**sound exposure level, *SEL*** logarithmic measure of sound exposure relative to a reference value, E_0, typically the 1 kHz threshold of hearing in humans. Note 1 to entry: *SEL* is measured as A-weighted levels in dB. $SEL = 10 \lg\left(\frac{E}{E_0}\right)$ dB Note 2 to entry: See B.4 of EN 50332-3:2017 for additional information.		N/A
3.3.19.5	**digital signal level relative to full scale, dBFS** levels reported in dBFS are always r.m.s. Full scale level, 0 dBFS, is the level of a dc-free 997-Hz sine wave whose undithered positive peak value is positive digital full scale, leaving the code corresponding to negative digital full scale unused Note 1 to entry: It is invalid to use dBFS for non-r.m.s. levels. Because the definition of full scale is based on a sine wave, the level of signals with a crest factor lower than that of a sine wave may exceed 0 dBFS. In particular, square wave signals may reach +3,01 dBFS.		N/A
2	**Modification to Clause 10**		N/A
10.6	**Safeguards against acoustic energy sources** Replace 10.6 of IEC 62368-1 with the following:		N/A
10.6.1.1	**Introduction** **Safeguard** requirements for protection against long-term exposure to excessive sound pressure levels from personal music players closely coupled to the ear are specified below. Requirements		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	for earphones and headphones intended for use with personal music players are also covered. A personal music player is a portable equipment intended for use by an **ordinary person**, that: – is designed to allow the user to listen to audio or audiovisual content / material; and – uses a listening device, such as headphones or earphones that can be worn in or on or around the ears; and – has a player that can be body worn (of a size suitable to be carried in a clothing pocket) and is intended for the user to walk around with while in continuous use (for example, on a street, in a subway, at an airport, etc.). EXAMPLES Portable CD players, MP3 audio players, mobile phones with MP3 type features, PDAs or similar equipment. Personal music players shall comply with the requirements of either 10.6.2 or 10.6.3. NOTE 1 Protection against acoustic energy sources from telecom applications is referenced to ITU-T P.360. NOTE 2 It is the intention of the Committee to allow the alternative methods for now, but to only use the dose measurement method as given in 10.6.5 in future. Therefore, manufacturers are encouraged to implement 10.6.5 as soon as possible. Listening devices sold separately shall comply with the requirements of 10.6.6. These requirements are valid for music or video mode only. The requirements do not apply to: – professional equipment; NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment. – hearing aid equipment and other devices for assistive listening; – the following type of analogue personal music players: • long distance radio receiver (for example, a multiband radio receiver or world band radio receiver, an AM radio receiver), and • cassette player/recorder; NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies. – a player while connected to an external amplifier that does not allow the user to walk around while in use.		

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	For equipment that is clearly designed or intended primarily for use by children, the limits of the relevant toy standards may apply. The relevant requirements are given in EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.		
10.6.1.2	**Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz** 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). 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.		N/A
10.6.2	**Classification of devices without the capacity to estimate sound dose**		N/A
10.6.2.1	**General** This standard is transitioning from short-term based (30 s) requirements to long-term based (40 hour) requirements. These clauses remain in effect only for devices that do not comply with sound dose estimation as stipulated in EN 50332-3. For classifying the acoustic output $L_{Aeq,T}$, measurements are based on the A-weighted equivalent sound pressure level over a 30 s period. For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, measurements may be done over the duration of the complete song. In this case, T becomes the duration of the song. NOTE Classical music, acoustic music and broadcast typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the content and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song does not exceed the required limit. For example, if the player is set with the programme simulation noise to 85 dB, but the average music level of the song is only 65 dB, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dB.		N/A
10.6.2.2	**RS1 limits (to be superseded, see 10.6.3.2)** RS1 is a class 1 acoustic energy source that does		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the $L_{Aeq,T}$ acoustic output shall be ≤ 85 dB when playing the fixed "programme simulation noise" described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 27 mV (analogue interface) or -25 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1. – The RS1 limits will be updated for all devices as per 10.6.3.2.		
10.6.2.3	**RS2 limits (to be superseded, see 10.6.3.3)** RS2 is a class 2 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or when the combination of player and listening device is known by other means such as setting or automatic 130 detection, the $L_{Aeq,T}$ acoustic output shall be ≤ 100 dB(A) when playing the fixed "programme simulation noise" as described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 150 mV (analogue interface) or -10 dBFS (digital interface) when playing the fixed "programme simulation noise" as described in EN 50332-1.		N/A
10.6.2.4	**RS3 limits** RS3 is a class 3 acoustic energy source that exceeds RS2 limits.		N/A
10.6.3	**Classification of devices (new)**		N/A
10.6.3.1	**General** Previous limits (10.6.2) created abundant false negative and false positive PMP sound level warnings. New limits, compliant with The Commission Decision of 23 June 2009, are given below.		N/A
10.6.3.2	**RS1 limits (new)** RS1 is a class 1 acoustic energy source that does		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the $L_{Aeq,T}$ acoustic output shall be ≤ 80 dB when playing the fixed "programme simulation noise" described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 15 mV (analogue interface) or -30 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.		
10.6.3.3	**RS2 limits (new)** RS2 is a class 2 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the weekly sound exposure level, as described in EN 50332-3, shall be ≤ 80 dB when playing the fixed "programme simulation noise" described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output level, integrated over one week, as described in EN50332-3, shall be ≤ 15 mV (analogue interface) or -30 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.		N/A
10.6.4	**Requirements for maximum sound exposure**		N/A
10.6.4.1	**Measurement methods** All volume controls shall be turned to maximum during tests. Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable.		N/A
10.6.4.2	**Protection of persons** Except as given below, protection requirements for parts **accessible** to **ordinary persons**, **instructed persons** and **skilled persons** are given in 4.3. NOTE 1 Volume control is not considered a **safeguard.** Between RS2 and an **ordinary person**, the **basic**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	safeguard may be replaced by an **instructional safeguard** in accordance with Clause F.5, except that the **instructional safeguard** shall be placed on the equipment, or on the packaging, or in the instruction manual. Alternatively, the **instructional safeguard** may be given through the equipment display during use. The elements of the **instructional safeguard** shall be as follows: – element 1a: the symbol  , IEC 60417-6044 (2011-01) – element 2: “High sound pressure” or equivalent wording – element 3: “Hearing damage risk” or equivalent wording – element 4: “Do not listen at high volume levels for long periods.” or equivalent wording An **equipment safeguard** shall prevent exposure of an **ordinary person** to an RS2 source without intentional physical action from the **ordinary person** and shall automatically return to an output level not exceeding what is specified for an RS1 source when the power is switched off. The equipment shall provide a means to actively inform the user of the increased sound level when the equipment is operated with an output exceeding RS1. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an output exceeding RS1. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time. NOTE 2 Examples of means include visual or audible signals. Action from the user is always needed. NOTE 3 The 20 h listening time is the accumulative listening time, independent of how often and how long the personal music player has been switched off. A **skilled person** shall not be unintentionally exposed to RS3.		
10.6.5	**Requirements for dose-based systems**		N/A
10.6.5.1	**General requirements** Personal music players shall give the warnings as provided below when tested according to EN 50332-3, using the limits from this clause. The manufacturer may offer optional settings to allow the users to modify when and how they wish to receive the notifications and warnings to		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	promote a better user experience without defeating the safeguards. This allows the users to be informed in a method that best meets their physical capabilities and device usage needs. If such optional settings are offered, an administrator (for example, parental restrictions, business/educational administrators, etc.) shall be able to lock any optional settings into a specific configuration. The personal music player shall be supplied with easy to understand explanation to the user of the dose management system, the risks involved, and how to use the system safely. The user shall be made aware that other sources may significantly contribute to their sound exposure, for example work, transportation, concerts, clubs, cinema, car races, etc.		
10.6.5.2	**Dose-based warning and requirements** When a dose of 100 % *CSD* is reached, and at least at every 100 % further increase of *CSD*, the device shall warn the user and require an acknowledgement. In case the user does not acknowledge, the output level shall automatically decrease to compliance with class RS1. The warning shall at least clearly indicate that listening above 100 % *CSD* leads to the risk of hearing damage or loss.		N/A
10.6.5.3	**Exposure-based requirements** With only dose-based requirements, cause and effect could be far separated in time, defying the purpose of educating users about safe listening practice. In addition to dose-based requirements, a PMP shall therefore also put a limit to the short-term sound level a user can listen at. The exposure-based limiter (EL) shall automatically reduce the sound level not to exceed 100 dB(A) or 150 mV integrated over the past 180 s, based on methodology defined in EN 50332-3. The EL settling time (time from starting level reduction to reaching target output) shall be 10 s or faster. Test of EL functionality is conducted according to EN 50332-3, using the limits from this clause. For equipment provided as a package (player with its listening device), the level integrated over 180 s shall be 100 dB or lower. For equipment provided with a standardized connector, the unweighted level integrated over 180 s shall be no more than 150 mV for an analogue interface and no more than -10 dBFS for a digital interface.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	NOTE In case the source is known not to be music (or test signal), the EL may be disabled.		
10.6.6	**Requirements for listening devices (headphones, earphones, etc.)**		N/A
10.6.6.1	**Corded listening devices with analogue input** With 94 dB L_{Aeq} acoustic pressure output of the listening device, and with the volume and sound settings in the listening device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output, the input voltage of the listening device when playing the fixed "programme simulation noise" as described in EN 50332-1 shall be ≥ 75 mV. NOTE The values of 94 dB and 75 mV correspond with 85 dB and 27 mV or 100 dB and 150 mV.		N/A
10.6.6.2	**Corded listening devices with digital input** With any playing device playing the fixed "programme simulation noise" described in EN 50332-1, and with the volume and sound settings in the listening device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output, the $L_{Aeq,T}$ acoustic output of the listening device shall be ≤ 100 dB with an input signal of -10 dBFS.		N/A
10.6.6.3	**Cordless listening devices** In cordless mode, – with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and – respecting the cordless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and – with volume and sound settings in the receiving device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the above mentioned programme simulation noise, the $L_{Aeq,T}$ acoustic output of the listening device shall be ≤ 100 dB with an input signal of -10 dBFS.		N/A
10.6.6.4	**Measurement method** *Measurements shall be made in accordance with EN 50332-2 as applicable.*		N/A
3	**Modification to the whole document**		P

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Clause	Requirement + Test	Result - Remark	Verdict

	Delete all the “country” notes in the reference document according to the following list: 0.2.1 Note 1 and 2; 1 Note 4 and 5; 3.3.8.1 Note 2 3.3.8.3 Note 1; 4.1.15 Note; 4.7.3 Note 1 and 2 5.2.2.2 Note; 5.4.2.3.2.2 Table 12 Note c; 5.4.2.3.2.4 Note 1 and 3 5.4.2.3.2.4 Table 13 Note 2; 5.4.2.5 Note 2; 5.4.5.1 Note 5.4.10.2.1 Note; 5.4.10.2.2 Note; 5.4.10.2.3 Note 5.5.2.1 Note; 5.5.6 Note; 5.6.4.2.1 Note 2 and 3 and 4 5.6.8 Note 2; 5.7.6 Note; 5.7.7.1 Note 1 and Note 2 8.5.4.2.3 Note; 10.2.1 Table 39 Note 3 and 4 and 5; 10.5.3 Note 2 ~~10.6.1~~ Note 3; F.3.3.6 Note 3; Y.4.1 Note Y.4.5 Note		P
4	**Modification to Clause 1**		P
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

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Clause	Requirement + Test	Result - Remark	Verdict

5	**Modification to 4.Z1**		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): 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; 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; 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. 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.	Considered. Complied with item a) for internal fuse used and for parts as described in b) reliance on the protection in the building installation.	P
6	**Modification to 5.4.2.3.2.4**		N/A
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/A
7	**Modification to 10.2.1**		N/A
10.2.1	Add the following to [c)] and [d)] in table 39: For additional requirements, see 10.5.1.	No such radiation from the equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

8	**Modification to 10.5.1**		N/A
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 pre-sets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, 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 1 µSv/h taking account of the background level. NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.	Added. No x-radiation used.	N/A
9	**Modification to G.7.1**		N/A
G.7.1	***Add*** *the following note:* NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.	Added.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

10	**Modification to Bibliography**		P
	Add the following notes for the standards indicated: 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
11	**ADDITION OF ANNEXES**		P
ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		P
4.1.15	**Denmark, Finland, Norway** and **Sweden** 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: 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”	Class III equipment	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.3	**United Kingdom** 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	Not direct plug-in equipment	N/A
5.2.2.2	**Denmark** 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.	No high touch current.	N/A
5.4.11.1 and Annex G	**Finland and Sweden** 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 • 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. 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 • 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. It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.	No connection to such a network.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: • 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.		
5.5.2.1	**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).		N/A
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.	Not class I equipment	N/A
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/A
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 13 A, this being the largest rating of fuse used in the **mains** plug.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.6.4.2.1	**France** After the indent for **pluggable equipment type A**, the following is added: – in certain cases, the **protective current rating** of the circuit supplied from the mains is taken as 20 A instead of 16 A.	Class III equipment	N/A
5.6.5.1	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/A
5.6.8	**Norway** To the end of the subclause the following is added: Equipment connected with an earthed mains plug is classified as **class I equipment**. See the Norway marking requirement in 4.1.15. The symbol IEC 60417-6092, as specified in F.3.6.2, is accepted.	Class III equipment	N/A
5.7.6	**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/A
5.7.6.2	**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 3,5 mA .	No external circuits.	N/A
5.7.7.1	**Norway and Sweden** 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. 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		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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)" 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. 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." 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.".		
8.5.4.2.3	**United Kingdom** Add the following after the 2nd dash bullet in 3rd paragraph: An emergency stop system complying with the requirements of IEC 60204-1 and ISO 13850 is required where there is a risk of personal injury.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
B.3.1 and B.4	**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	Not direct plug-in equipment.	N/A
G.4.2	**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 DS 60884-2-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 polyphase 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	Class III equipment	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	**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.	Not direct plug-in equipment	N/A
G.7.1	**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.	Class III equipment	N/A
G.7.1	**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		N/A
G.7.2	**Ireland and United Kingdom** To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm^2 is allowed for equipment which is rated over 10 A and up to and including 13 A.	Class III equipment	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

ZC	**ANNEX ZC, NATIONAL DEVIATIONS (EN)**		N/A
10.5.2	**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 40 kV, 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	No CRT within the equipment.	N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZD	**IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS (EN)**	N/A
		N/A

Type of flexible cord	Code designations	
	IEC	CENELEC
PVC insulated cords		
Flat twin tinsel cord	60227 IEC 41	H03VH-Y
Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F H03VVH2-F
Ordinary polyvinyl chloride sheathed flexible cord	60227 IEC 53	H05VV-F H05VVH2-F
Rubber insulated cords		
Braided cord	60245 IEC 51	H03RT-F
Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F
Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F
Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F
Cords having high flexibility		
Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H
Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	H03RV4-H
Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H
Cords insulated and sheathed with halogen-free thermoplastic compounds		
Light halogen-free thermoplastic insulated and sheathed flexible cords		H03Z1Z1-F H03Z1Z1H2-F
Ordinary halogen-free thermoplastic insulated and sheathed flexible cords		H05Z1Z1-F H05Z1Z1H2-F

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT

IEC 62368-1

U.S.A. AND CANADA NATIONAL DIFFERENCES

(Audio/video, information and communication technology equipment – Part 1: Safety requirements)

Differences according to.....: CSA/UL 62368-1:2019

TRF template used: .....: IECEE OD-2020-F3, Ed. 1.1

Attachment Form No.....: US_CA_ND_IEC62368_1E

Attachment Originator .....: UL(US)

Master Attachment.....: Dated 2022-03-04

IEC 62368-1 - US and Canadian National Differences

Special National Conditions based on Regulations and Other National Differences

1 (1DV.1) (1.3)	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part 1, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, for such equipment marked or otherwise identified, installation is allowed per the Standard for the Protection of Information Technology Equipment, ANSI/NFPA 75.	In accordance with the National Electrical Code (NEC) and the Canadian Electrical Code (CEC) part 1 CAN/CSA C22.1, ANSI/NFPA 70, and unless marked or otherwise identified, the Standard for Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	P
1 (1DV.2.1)	This standard includes additional requirements for equipment used for entertainment purposes intended for installation in general patient care areas of health care facilities. See Annex DVB.	Not such equipment.	N/A
1 (1DV.2.2)	This standard includes additional requirements for equipment intended for mounting under cabinets. See Annex DVC.		N/A
1 (1DV.2.3)	IEC 62368-3 clause 5 for DC power transfer at ES1 or ES2 voltage levels is considered informative. IEC 62368-3 clause 6 for remote power feeding telecommunication (RFT) circuits is considered normative (see ITU K.50). Alternatively, equipment with RFT circuits are given in either UL 2391 or CSA/UL 60950-21. RFT-C circuits are not permitted unless the RFT-C circuit complies with RFT-V limits (≤ 200V per conductor to earth).		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1 (1DV.3)	For protection against direct lightning strikes, reference is made to NFPA 780 and CAN/CSA-B72 for additional requirements.		N/A
1 (DV.5)	Additional requirements apply to some forms of power distribution equipment, including sub-assemblies.		N/A
4.1 (4.1.17)	For lengths exceeding 3.05 m, external interconnecting cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the NEC.	Class III equipment	N/A
	For lengths 3.05 m or less, external interconnecting cable assemblies that are not types specified in the NEC generally are required to have special construction features and identification markings.		N/A
4.6 (4.6.2)	Wire-wrap terminals have special construction and performance requirements.		N/A
4.8 (4.8.3, 4.8.4.5, 4.8.5)	Coin / button cell batteries have modified special construction and performance requirements.	No such battery	N/A
5.4.2.3.2 (5.4.2.3.2.1)	Surge Arrestors and Transient Voltage Surge Suppressors installed external to the equipment are required to comply with the appropriate NEC and CEC requirements.		N/A
5.5.9	Receptacles, rated 125-V, single phase, 15- or 20-A accessible to either ordinary, instructed, or skilled persons are required to be provided with GFCI Protection for Personnel if the equipment containing the receptacles is installed outdoors. The protection devices are required to comply with UL 943, and CAN/CSA C22.2 No.144.		N/A
5.6.3	Protective earthing conductors comply with the minimum conductor sizes in Table G.7, except as required by Table G.7ADV.1 for cord connected equipment, or Annex DVH for permanently connected equipment.		N/A
5.7.8 (5.7.8.1)	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	No such parts	N/A
6.5.1	PS3 wiring outside a fire enclosure is required to comply with single fault testing in B.4, or be current limited per one of the permitted methods.	No such parts	N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex F (F.3.3.9)	Output terminals provided for supply of other equipment, except mains supply, are required to be marked with a maximum rating or reference to equipment permitted to be connected.		N/A
Annex F (F.3.7)	Outdoor Enclosures are required to be classified and marked in accordance with UL 50 or 50E, or CAN/CSA C22.2 No. 94.1 or 94.2.		N/A
Annex G (G.7)	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.	Non-permanent connection of equipment	N/A
	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
	Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
	Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Power supply cords are required to be no longer than 4.5 m in length if used in ITE Rooms.		N/A
	Power supply cords for outdoor equipment are required to be suitable outdoor use type as required by Section 400.4 of the NEC and Rule 4-012 of the CEC, i.e., marked “W.”	Not outdoor equipment	N/A
Annex H.2	Continuous ringing signals under normal operating conditions up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex H.4	For circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A
Annex Q (Q.3)	Equipment with paired conductor and/or coax communications cables/wiring connected to building wiring are required to have special voltage, current, power and marking requirements.		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVA (1)	Equipment that is designed such that it may be powered from a separate electrical service, is required to meet applicable requirements for service equipment for control and protection of services and their installation and complies with Article 230 of the National Electrical Code (NEC), NFPA 70 and Section 6 of the Canadian Electrical Code, Part I, CSA C22.1.		N/A
	Equipment intended for use in spaces used for environmental air (plenums) are subjected to special flammability requirements for heat and visible smoke release.		N/A
	For ITE room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A
	Consumer products designed or intended primarily for children 12 years of age or younger are subject to additional requirements in accordance with U.S. and Canadian Regulations.		N/A
	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.	Not a baby monitor	N/A
	Storage batteries and battery management equipment, other than associated with lead-acid batteries, and including battery backup systems that are not an integral part of stationary AV and ICT equipment, such as provided in separate cabinets, are required to be certified (listed) to the appropriate standard(s) for such storage batteries and equipment.		P
Annex DVA (5.6)	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.		N/A
Annex DVA (6.3)	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVA (6.4.8)	For ITE room applications, enclosures with combustible material measuring greater than 0.9 m^2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less. For equipment with the same dimensions for other applications, an external surface that is not a fire enclosure requires a minimum flammability classification of V-1.	No such application	N/A
Annex DVA (10.3)	Equipment with lasers is required to meet the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No such device	N/A
Annex DVA (10.5)	Equipment that produces ionizing radiation is required to comply with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No such part	N/A
Annex DVA (F.3.3.4)	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. Additional considerations apply for voltage ratings that exceed the attachment cap rating or that are lower than the “Normal Operating Condition” in Table 2 of CAN/CSA C22.2 No. 235.”		N/A
Annex DVA (F.3.3.6)	Equipment identified for ITE (computer) room installation is required to be marked with the rated current.		N/A
Annex DVA (G.1)	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position, where mounted in an enclosure, vertically mounted **disconnect switches** and **circuit breakers** with vertical operating means extending outside the enclosure are required to indicate in a location visible when accessing the external operating means whether the switch or circuit breaker is in the open (off) or closed (on) position.		N/A
Annex DVA (G.3.4)	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.	No standard supply outlets, receptacles, medium-base or smaller lamp holders provided.	N/A
	Where a fuse is used to provide Class 2 or Class 3 current limiting, it is not operator-accessible unless it is non- interchangeable.		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVA (G.4.2)	Equipment with isolated ground (earthing) receptacles is required to comply with NEC 250.146(D) and CEC 10-400 and 10-612.	No such parts.	N/A
Annex DVA (G.4.3)	Interconnection of units by conductors supplied by a limited power source, or a Class 2 circuit defined in the NEC/CEC may have field wiring connections other than specified in DVH.3, such as wire-wrap and crimp-on types, if the limited power source and Class 2 circuits are separated from all other circuits by barriers, routing or fixing.	No such parts.	N/A
Annex DVA (G.5.3)	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.	No such parts.	N/A
Annex DVA (G.5.4)	Motor control devices are required for cord-connected equipment with a mains-connected motor if the equipment is rated more than 12 A, or if the equipment has a nominal voltage rating greater than 120 V, or if the motor is rated more than 1/3 hp (locked rotor current over 43 A).	No such parts.	N/A
Annex DVA (G.7)	Flexible cords used outdoors are required to have the suffix “W” marked on the flexible cord.		N/A
Annex DVA (M)	For ITE room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the ITE room remote power-off circuit.	Not such application.	N/A
Annex DVA (Q)	If applicable per NEC 725.121(C), some limited power sources supplied from AV/ICT equipment are required to have a label indicating the maximum voltage and rated current output for per conductor for each connection point. Where multiple connection points have the same rating, a single label is permitted to be used.		N/A
	Wiring terminals intended to supply Class 2 outputs in accordance with the NEC or CEC Part 1are required to be marked with the voltage rating and “Class 2” or equivalent. The marking is located adjacent to the terminals and visible during wiring.	No such terminal	N/A
	Applicable parts of Chapter 8 of the NEC, and Rules 54 and 60 of the CEC, may be applicable to ITE installed outdoors with connections to communication systems.		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVB (1)	Additional requirements apply for equipment used for entertainment purposes intended for installation in general patient care areas of health care facilities.	Not such application.	N/A
Annex DVC (1)	Additional requirements apply for equipment intended for mounting under kitchen cabinets.	Not such application.	N/A
Annex DVE (4.1.1)	Some equipment, components, sub-assemblies and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material requirements. These equipment and components include: appliance couplers, attachment plugs, battery backup systems, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultracapacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), ground-fault current interrupters, interconnecting cables, modular data centres, power supply cords, some power distribution equipment, printed wiring, protectors for communications circuits, receptacles, surge protective devices, vehicle battery adapters, wire connectors, and wire and cables.	UL/CSA/CAN standard approved components used.	P
Annex DVH	Equipment for permanent connection to the mains supply is subjected to additional requirements.		N/A
Annex DVH (DVH.1)	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains are required to be in accordance with the NEC/CEC.		N/A
Annex DVH (DVH.2.1)	For safe and reliable connection to a mains, permanently connected equipment is to be provided.	Not permanently connected equipment.	N/A
Annex DVH (DVH.2.2)	Additional considerations for D.C. mains.	No wire binding screws.	N/A
Annex DVH (DVH.3.2.1)	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified.	Not permanently connected equipment.	N/A
Annex DVH (DVH.3.2.3)	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).	The equipment not connected to a centralized d.c. power system.	N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVH (DVH.3.2.4)	All associated mains supply terminals are located in proximity to each other and to the main protective earthing terminal, if any.	No such circuits within the equipment.	N/A
Annex DVH (DVH.3.2.5)	Terminals are located, guarded or insulated so that, should a strand of a conductor escape when the conductor is fitted, there is no likelihood of accidental contact between such a strand and accessible conductive parts or unearthed conductive parts separated from accessible conductive parts by supplementary insulation only.		N/A
Annex DVH (DVH.3.3)	When field connection to an external circuit is via wires (example, free conductors), the wires are not smaller than 18 AWG (0.82 mm^2) and the free length of the wire inside an outlet box or wiring compartment is 150 mm or more.		N/A
Annex DVH (DVH.3.4)	Size of protective earthing conductors and terminals	(See sub-clause 5.6.5)	N/A
Annex DVH (DVH.4)	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.		N/A
Annex DVH (DVH.4.1)	Wire bending space		N/A
Annex DVH (DVH.4.2)	Volume of wiring compartment		N/A
Annex DVH (DVH.4.3)	Separation of circuits		N/A
Annex DVH (DVH.5)	Equipment markings and instructional safeguards		N/A
Annex DVH (DVH.5.1)	Identification of protective earthing terminal		N/A
Annex DVH (DVH.5.2)	Identification of terminal for earthed conductor (neutral)		N/A
Annex DVH (DVH.5.3)	Identification of terminals for aluminium conductors		N/A
Annex DVH (DVH.5.4)	Wire temperature ratings		N/A
Annex DVH (DVH 5.5)	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.		N/A
Annex DVI (6.7)	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses.	No such circuits within the equipment.	N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVJ (10.6.1)	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.	No such circuits within the equipment.	N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT

IEC 62368-1:2018

SAUDI ARABIA NATIONAL DIFFERENCES
(Audio/video, information and communication technology equipment Part 1: Safety requirements)

Differences according to ..... :	National standard SASO-IEC 62368-1:2020
TRF template used: ..... :	IECEE OD-2020-F3, Ed. 1.1
Attachment Form No. ..... :	SA_ND_IEC62368_1E
Attachment Originator ..... :	SASO
Master Attachment..... :	2022-12-22

	National Differences		
	Plugs used for pluggable equipment comply with standard SASO-2203.		N/A
--	**Frequency (Hz)**		N/A
	60 Hz		N/A
--	**Rated voltage (V)**		N/A
	Single phase 230 V Three phase 400 V		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT

IEC 62368-1:2018

JAPAN NATIONAL DIFFERENCES

Audio/video, information and communication technology equipment – Part 1: Safety requirements

Differences according to ..... :	J62368-1(2023)
TRF template used:.....:	IECEE OD-2020-F3:2022, Ed. 1.2
Attachment Form No. ..... :	JP_ND_IEC62368_1E
Attachment Originator..... :	UL Solutions (JP)
Master Attachment..... :	Dated 2023-05-12

	National Differences		—
4.1.2	Where the component, or a characteristic of a component, is a safeguard or a part of a safeguard, components shall comply with the requirements of this document or, where specified in a requirements clause, with the safety aspects of the relevant JIS component standards or IEC component standards, or components shall have properties equivalent to or better than these.	Complied	P
5.6.1	Mains socket-outlet and interconnection coupler shall comply with Clause G.4.2A if they are incorporated as part of the equipment.		N/A
5.6.2.1	Connection for protective conductor of class 0I equipment provided with instructional safeguard in accordance with Clause F.3.6.1A is considered to make earlier and break later than supply connection. Mains plug having a lead wire for protective earthing connection of class 0I equipment shall comply with all of the following: – Not to be used for equipment having a rated voltage of 150 V or more – Clip is not used for the earthing connection of the lead wire. – The lead wire for earthing is at least 10 cm long If class 0I equipment provides an independent main protective earthing terminal and is intended to be installed by ordinary person, earthing wire shall be provided in the package of the equipment.		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.6.2.2	Internal earthing conductor of the cord set that is covered by the sheath of mains cord and is formed together with mains plug and appliance connector need not be green-and-yellow.		N/A
5.6.3	In case of class 0I equipment using power supply cord having two conductors (no earthing conductor), the conductor of protective earthing lead wire shall comply with either of the following: – use of annealed copper wire with 1.6 mm diameter or corrosion-inhibiting metal wire having size and strength that are equivalent to or more than the above copper wire – single core cord or single core cab tire cable with 1.25 mm^2 or more cross-sectional area		N/A
5.7.3	For class 0I equipment that is provided with mains socket-outlet in the configuration as specified in JIS C 8282 series, JIS C 8300 or JIS C 8303, or that is provided with mains appliance outlet as specified in JIS C 8283 series for the purpose of interconnection, the measurement is conducted on the system of the interconnected equipment having a single connection to the mains.		N/A
5.7.5	In case of class 0I equipment, touch current shall not exceed 1.41 mA peak or for sinusoidal wave, 1.0 mA r.m.s. when measured using the network specified in Figure 4 of IEC 60990:2016.		N/A
6.4.3.2	A fuse complying with JIC C 6575 series or a fuse having equivalent characteristics shall open within 1 s. A fuse having time/current characteristics other than those specified in IEC 60127 shall be tested with the characteristics taken into account. In case of Class A fuse of JIS C 6575, replace “2.1 times” by “1.35 times” and in case of Class B fuse of JIS C 6575, replace “2.1 times” by “1.6 times”.		N/A
8.5.4.3.1	Only three-phase stationary equipment rated more than AC 200 V can be considered as being for use in locations where children are not likely to be present, when complying with Clause F.4.		N/A
8.5.4.3.2	For equipment installed where children may be present, an instructional safeguard shall be provided by easily understandable wording in accordance with Clause F.5, except that element 3 is optional.		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
8.5.4.3.4	The media destruction device is tested according to Clause V.1.2 with applicable jointed test probes to the opening. And then the wedge probe per Figure V.4 shall not contact any moving part.		N/A
8.5.4.3.5	The wedge probe of Figure V.4 and applicable jointed test probes specified in Clause V.1.2 shall not contact any moving part. Instructional safeguard shall not be used instead of equipment safeguard for preventing access to hazardous moving parts.		N/A
F.3.5.1	When the mains socket-outlet is configured in accordance with JIS C 8282 series, JIS C 8300 or JIS C 8303, the assigned current or power shall be marked. If the voltage of the socket-outlet is the same as the mains voltage, the voltage need not be marked. Instructional safeguard of Class 0I equipment shall be provided with an instructional safeguard in accordance with Clause F.5 when a mains socket-outlet as specified in JIS C 8282 series, JIS C 8300 or JIS C 8303 to which class I equipment can be connected is provided in accordance with Clause G.4.2A except for the cases where the socket-outlet is accessible only to skilled persons.		N/A
F.3.5.3	If the fuse is necessary for the safeguard function, the symbols indicating pre-arcing time-current characteristic shall be included.		N/A
F.3.6.1A	Marking for class 0I equipment The requirements of Clauses F.3.6.1.1 and F.3.6.1.2 shall be applied to class 0I equipment. For class 0I equipment, a marking of instructions shall be provided regarding the earthing connection. In addition to the above, for class 0I equipment, an instruction to connect earthing before and disconnect earthing after the connection of supply conductors shall be marked on the visible place of the main body or shall be in the text of an accompanying document.		N/A
F.3.6.2	Symbols, IEC 60417-5172 (2003-02) or IEC 60417-6092 (2011-10), shall not be used for class I equipment or class 0I equipment.		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
F.3.8A	Attention marking for aging deterioration of CRT television Year of manufacture, standard usage period by design according to JIS C 9921-5 and cautionary statement for possible risks of aging deterioration when used beyond the specified period shall be marked on CRT television except for industrial use CRT television.		N/A
F.4	For audio equipment with terminals classified as ES3 in accordance with Table E.1, and for other equipment with terminals marked in accordance with F.3.6.1 and F.3.6.1A, the instructions shall require that the external wiring connected to these terminals shall be installed by a skilled person, or shall be connected by means of ready-made leads or cords that are constructed in a way that would prevent contact with any ES3 circuit. For class 0I equipment provided with independent main protective earthing terminal, where the cord for the protective earthing connection is not provided in the package of the equipment, if the protective earthing connection is made by instructed person or skilled person, the suitable installation instruction for the protective earthing connection shall be provided.		N/A
G.3.2.1	The thermal link when tested as a separate component, shall comply with the requirements of JIS C 6691 or have properties equivalent to or better than that.		N/A
G.3.4	Except for devices covered by Clause G.3.5, overcurrent protective devices used as a safeguard shall comply with the applicable JIS or IEC standard in accordance with 4.1.2 or shall have equivalent or better properties. Such a protective device shall have adequate breaking (rupturing) capacity to interrupt the maximum fault current (including short-circuit current) that can flow.		N/A
G.4.1	This requirement does not apply to connectors covered in Clauses G.4.2 and G.4.2A.		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	Mains connectors, mains plugs and socket-outlets shall comply with JIS C 8283 series, JIS C 8285, IEC 60309 series, JIS C 8282 series, JIS C 8300, JIS C 8303, or have equivalent or better properties. A power supply cord set provided with appliance connector that can fit appliance inlet complying with JIS C 8283-1 shall comply with JIS C 8286. Construction shall prevent mechanical stress not to transmit to the soldering part of appliance inlet terminal. When an equipment is rated not more than 125 V and all of the following are met, Type C14 and C18 appliance inlet complying with JIS C 8283-3 can be considered as rated 15 A. – The temperature of appliance inlet does not exceed the value specified in JIS C 8283-1 under the most unfavourable normal operating condition as specified in Clause B.2.1. – "Use only designated cord set attached in this equipment" or equivalent text is described in the operating instruction. If the cord set is not provided in the package of the equipment, suitable information regarding to the cord set is described in the operating instruction.		N/A
G.4.2A	Mains socket-outlet and interconnection coupler provided with the class II, class I and class 0I equipment respectively		N/A
G.7.1	A mains supply cord need not include the protective earthing conductor for class 0I equipment provided with independent protective earthing conductor.		N/A
G.7.2 Table G.7	Cross-sectional area of equipment rated up to and including 3 A shall be 0.75 mm^2.		N/A
G.7.6.1 Table G.9	The cross-sectional area of mains cords according to JIS C 3010 may comply with relevant Japanese wiring regulation. For cables other than those complying with JIS C 3662 series or JIS C 3663 series, the terminals shall be suitable for the size of the intended cables.		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT

IEC 62368-1

(AUSTRALIA / NEW ZEALAND) NATIONAL DIFFERENCES

(Audio/video, information and communication technology equipment)

Differences according to ..... : AS/NZS 62368.1:2022

TRF template used: .....: IECEE OD-2020-F3, Ed. 1.1

Attachment Form No. ..... : AU_NZ_ND_IEC62368_1E

Attachment Originator ..... : JAS-ANZ

Master Attachment..... : 2022-07-01

	National Differences		P
Appendix ZZ	Variations to IEC 62368-1:2018 (ED. 3.0) for Australia and New Zealand		P
ZZ1 Scope	This Appendix lists the normative variations to IEC 62368-1:2018 (ED. 3.0)		P
ZZ2 Variations	The following modifications are required for Australian/New Zealand conditions:		P
2	After the first paragraph, *add* the following: The Australian or Australian/New Zealand Standards listed below are modified adoptions of, or not equivalent to, the IEC normative references and are required for the application of this Standard. All references in the source text to those IEC normative references shall be replaced by references to the corresponding Australian or Australian/New Zealand Standards. Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably -AS/NZS 3112, *Approval and test specification—Plugs and socket-outlets* -AS/NZS 3123, *Approval and test specification—Plugs, socket-outlets and couplers for general industrial application* -AS/NZS 3191, *Electric flexible cords* *-AS/NZS 60884.1.Plugs and socket-outlets for household and similar purposes, Part 1: General requirements* *-IEC 60086-2 Primary batteries — Part 2: Physical and electrical specifications* -AS/NZS 60065, *Audio, video and similar electronic apparatus—Safety requirements (IEC 60065:2015 (ED.8.0) MOD)* -AS/NZS 60320.1, *Appliance couplers for household and similar general purposes, Part 1: General requirements (IEC 60320-1, Ed.2.1 (2007) MOD)* -AS/NZS 60320.2.2, *Appliance couplers for*		P

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	household and similar general purposes *Part 2.2: Interconnection couplers for household and similar equipment (IEC 60320-2-2, Ed.2.0 (1998) MOD)* -AS/NZS 60695.2.11*, Fire hazard testing, Part 2.11: Glowing/hot wire based test methods—Glow-wire flammability test method for end-products* -AS/NZS 60695.11.5, *Fire hazard testing, Part 11.5: Test flames—Needle-flame test method—Apparatus, confirmatory test arrangement and guidance* -AS/NZS 60695.11.10, *Fire hazard testing, Part 11.10: Test flames—50 W horizontal and vertical flame test methods* -AS/NZS 60884.1, *Plugs and socket-outlets for household and similar purposes, Part 1: General requirements* -AS/NZS 60950.1, *Information technology equipment—Safety*, Part 1: *General requirements (IEC 60950-1, Ed.2.2 (2013), MOD)* IEC 61032:1997, *Protection of persons and equipment by enclosures—Probes for verification* -AS/NZS 61558.1, *Safety of Power Transformers, Power Supplies, Reactors and Similar Products, Part 1: General requirements and tests (IEC 61558-1 Ed 3, MOD)* -AS/NZS 61558.2.16, *Safety of transformers, reactors, power supply units and similar products for voltages up to 1 100 V, Part 2.16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units.*		
4.7.2	**Requirements** *Delete* the text of the second paragraph and *replace* with the following: Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flat-pin socket-outlet conforming to AS/NZS 3112, shall conform to the requirements in AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets. Conformity is checked by inspection and, if necessary, by the tests in AS/NZS 3112. NOTE: Equipment with plug portions for use in countries other than Australia and New Zealand will need to conform to other countries' requirements Note Additional AS/NZS 3112 Appendix J,TRF is appended to end of this TRF.		N/A
4.7.3	**Compliance Criteria** *Delete* this clause		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4.8.1	**General** After second list, *add* the following: NOTE: Refer to the Consumer Goods (Products Containing Button/Coin Batteries) Safety Standard 2020 and Consumer Goods (Products Containing Button/Coin Batteries) Information Standard 2020 for more information on button cell batteries in Australia..		N/A
5.4.10.2.1	**General** *Delete* the first paragraph and *replace* with the following: In Australia, the separation is checked by the test given in both Clause 5.4.10.2.2 and Clause 5.4.10.2.3. In New Zealand, the separation is checked by the test given in either 5.4.10.2.2 or 5.4.10.2.3..		N/A
Table 28	*Delete* Table 28 and *replace* with the following:		N/A

Parts	Impulse test		Steady state test	
	New Zealand	Australia	New Zealand	Australia
Parts indicated in Clause 5.4.10.1 a) [a]	2.5 kV	7.0 kV for hand-held telephones and headsets, 2.5 kV for other equipment.	1.5 kV	3 kV
Parts indicated in Clause 5.4.10.1 b) and c) [b]	1.5 kV [c]		1.0 kV	1.5 kV

[a] Surge suppressors shall not be removed.
[b] Surge suppressors may be removed, provided that such devices pass the impulse test of Clause 5.4.10.2.2 when tested as components outside the equipment.
[c] During this test, it is allowed for a surge suppressor to operate and for a sparkover to occur in a GDT.

5.4.10.2.2	*Delete* “NOTE” and *replace* with “NOTE 1”. After NOTE 1, *add* the following: NOTE 2: For Australia, the 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines. NOTE 3: For Australia, the value of 2.5 kV for Clause 5.4.10.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.		N/A
5.4.10.2.3	*Delete* “NOTE” and *replace* with “NOTE 1”. After NOTE 1, *add* the following: NOTE 2: For Australia, where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used. NOTE 3: The 3 kV and 1.5 kV values for Australia have been determined considering the low frequency induced voltages from the power supply distribution system.		N/A
6	**Electrically-caused fire**		N/A
6.6	After Clause 6.6, *add* the new Clauses 6.201 as follows: **6.201 External power supplies, docking stations and other similar devices** (see special national conditions)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

8.6	**Stability of equipment**		N/A
Table 36	Footnote [a], after first sentence, *add* the following: Equipment having displays with moving images shall include “television sets and display devices”.		N/A
8.6.1	After Clause 8.6.1 *add* the following new clauses: **8.6.201 Restraining Device fixing point** (see special national conditions) **8.6.202 Restraining device** (see special national conditions)		N/A
Annex F **Paragraph F.3.3.4**	**Rated Voltage** *Delete* “NOTE” and *replace* with NOTE1” After NOTE 1, *add* the following Equipment that is intended for connection to the supply mains in Australia and New Zealand shall be marked with: (a) A rated voltage of: • 230 V for single phase equipment • 400 V for poly phase equipment Or (b) A rated voltage range that includes: • 230 V for single phase equipment • 400 V for poly phase equipment NOTE 2: equipment that is not rated as above is not suitable for direct connection to the supply mains in Australia or new Zealand.		N/A
Annex F.3.3.5	After the list, *add* the following Equipment that is intended for connection to supply mains in Australia or New Zealand shall be marked with a rated frequency of 50 Hz or a rated frequency range or nominal value which includes 50Hz		N/A
Annex F.3.8	After “The DC output of an external power supply”, insert ”or docking stations and other similar external devices”		N/A
Annex G **Paragraph G.4.2**	**Mains connectors** 1 After “IEC 60320”, insert “or AS/NZS 60320 series”. 2 After “IEC 60906-1”, insert”or AS/NZS 3123” 3 *After* first paragraph *add* the following: 10 A or 15 A 250 V flat pin plugs for the connection of equipment to mains-powered socket-outlets for household or similar general use shall comply with AS/NZS 3112 or AS/NZS 60884.1.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

Paragraph G.5.3.1	**Transformers, General** 1 Third dashed point *replace* 'IEC 61558-1 and the relevant parts of IEC 61558-2' with 'AS/NZS 61558-1 and the relevant parts of AS/NZS 61558.2' 2 Fourth dashed point *replace* 'IEC 61558-2-16' with 'AS/NZS 61558.2.16'.		N/A
Annex G.7.1	**Mains supply cords, General** Fourth dashed paragraph, *replace* 'IEC 60320-1' with 'AS/NZS 60320.1'		N/A
Table G.7	**Sizes of conductors** 1 First column, second row, *delete* "6" and *replace* with "7.5" 2 Second column, second row, *delete* '0,75' and *replace* with '0.75[b] 3 *Delete* NOTE 1. 4 *Replace* 'NOTE 2' with 'NOTE:'. 5 *Delete* 'Footnote b' and *replace* with the following: [b] This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the entry to the plug does not exceed 2 m (0.5 mm^2 three-core supply flexible cords are not permitted; see AS/NZS 3191). 6 Footnote c *replace* 'IEC 60320-1' with 'AS/NZS 60320.1' 7 Footnote d *replace* 'IEC 60320-1' with 'AS/NZS 60320.1'		N/A
Annex M **M 2.1**	*Add* "IEC 60086-2" to the list		N/A
Annex M **Paragraph M.3.2**	**Test method** Delete"NOTE" and replace with "NOTE 1" After NOTE 1 *add* the following: NOTE 2: In cases where the voltage source is provided by power from an unassociated power source, consideration should be given to the effects of possible single fault conditions in the unassociated equipment. If the power source is unknown then it should be assumed that the maximum limit of ES1 may be applied to the source input under assumed single fault conditions in the source when assessing the charging circuit in the equipment under test.		P
	Special national conditions (if any)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.201	**External power supplies, docking stations and other similar devices** For external power supplies, docking stations and other similar devices, during and after abnormal operating conditions and during single fault conditions the output voltage— (a) at all ES1 outlets or connectors shall not increase by more than 10 % of the output rated voltage under normal operating conditions, measured after 3 s of introducing a singlefault condition and after 3 s of introducing abnormal operating conditions; and (b) of a USB outlet or connector shall not increase by more than 3 V or 10 % of the output rated voltage under normal operating conditions, whichever is higher, measured after3 seconds of introducing a single fault condition and after 3 s of introducing abnormal operating conditions For equipment with multiple rated voltages at the output, the requirements apply with the equipment configured for each output rated voltage in turn NOTE: This is intended to reduce the possibility of battery fire or explosion in attached equipment or accessories when charging secondary lithium batteries. The 3 s measurement delay is based on IEC document 108/742/INF, *TC 108, Standards Interpretation Panel Question 15 — Output voltage*, in relation to similar requirements in IEC 62368-3:2017. Conformity shall be checked by measurement, taking into account the abnormal operating conditions of Annex B.3 and the simulated single fault conditions of Annex B.4.		N/A
8.6.201	**Restraining device fixing point** Freestanding-capable MS2 and MS3 television sets and display devices shall be provided with a fixing point to facilitate the anchoring of the equipment from toppling The fixing point shall conform to Clause 8.7 where the fixing point uses a wall, ceiling or other structure mount. Alternatively, the fixing point shall be capable of withstanding a pull equal to the mass of the equipment in all directions without damage Instructions for installation or instructions for use shall be provided to specify correct use of the fixing point		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
8.6.202	**Restraining device** MS2 and MS3 television sets and display devices shall be provided with a restraining device and associated hardware to attach to the television set or display device. The restraining device shall be capable of withstanding a pull equal to the mass of the equipment in all directions. Instructions for installation or instructions for use shall be provided to specify correct use of the fixing point.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 62368_1E ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT **IEC 62368-1** **CHINA NATIONAL DIFFERENCES** (**Audio/video, information and communication technology equipment -Part 1: Safety requirements**)			
Differences according to ..... : GB 4943.1-2022			
TRF template used: ..... : IECEE OD-2020-F3, Ed. 1.1			
Attachment Form No. ..... : CN_ND_IEC62368_1E **Attachment Originator .....** : CQC **Master Attachment**..... : 2025-02-25			
	National Differences		P
4.1.2	**Use of components** Add a paragraph: A component used shall comply with related requirements corresponding altitude of the equipment.		P
4.11	Add clause 4.11,as follows: Protection in PRIMARY CIRCUITS against overcurrent short-circuits and earth faults shall be provided as an integral part of the equipment except the device shall meet the all requirement of Fault conditions. If pluggable equipment type B or permanently connected equipment depends on protective devices outside the equipment for protection, this shall be stated in the installation instructions of the equipment, with requirements for short-circuit protection, over-current protection, or both if necessary.		N/A
5.3.2.2	**Contact requirements** Amend the 2nd paragraph of table 8 to be: For equipment intended to be used at altitude of 2000m to 5000m, the values in this table are multiplied by the multiplication factor corresponding altitude of 5000m.		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 62368_1E ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.2.5	**Multiplication factors for altitudes higher than 2 000 m above sea level** Amend the 1st paragraph to be: For equipment to be operated at more than 2000 m above sea level and up to 5000m above sea level, the minimum CLEARANCE in tables 10,11 and 14,and resistance test voltages required in table 15, shall meet the requirements of 5000 m above sea level, This is multiplied by the multiplication factor corresponding altitude of 5000m in table 16. For equipment to be used at equal or less than 2000 m above sea level, the minimum CLEARANCE in tables 10, 11 and 14, and resistance test voltages required in table 15, shall meet the requirements of 2000 m above sea level. This is multiplied by the multiplication factor corresponding altitude of 2000m in table 16. Delete note 2 of Clause 5.4.2.5.		N/A
5.4.5.1	**General** Delete the 2nd paragraph of Clause 5.4.5.1: This test does not apply to equipment where one antenna terminal on the equipment is connected to earth in accordance with 5.6.7. Add the following: The Insulation resistance between CATV antenna coaxial sockets and protective earth of apparatus shall comply with BASIC INSULATION. If it's possible that CLASS II apparatus with CATV antenna coaxial sockets connect with protective earth of another CLASS I apparatus by other terminals, the insulation resistance between them shall comply with BASIC INSULATION as well. If antenna cable separated from the protective earth before connection to the apparatus, there is no requirements of Insulation resistance between them but F.4 requirements shall be meet. *Del*ete "NOTE" of Clause 5.4.5.1		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 62368_1E ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.8	**Humidity conditioning** Amend clause 5.4.8 as follows : The humidity conditioning is conducted for 120 h in a cabinet or room containing air with ambient temperature (40±2) °C and a relative humidity of (93±3)%. During this conditioning, the component or subassembly is not energized. For equipment not to be operated at tropical climatic conditions, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of (93±3) %. The temperature of the air, at all places where samples can be located, is maintained within 2 °C of any convenient value between 20 °C and 30 °C such that condensation does not occur. Add note: For equipment to be operated at 2000 m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered. Pre-processing conditions and requirements below 2000m can be used until additional data is available.		N/A
6.4.9 Y.4.3	Delete references to ASTM and NEMA.		N/A
6.5.1	**General requirements** Delete the text of the Note “Wire complying with UL 2556 VW-1 is considered to comply with these requirements”.	Added. Should be evaluated during national approval	N/A
F.1	Amend the second paragraph of annex F.1 to be: Unless symbols are used or otherwise specified, safety related equipment markings, instructions, and instructional safeguards shall be in normative Chinese.	Added. Should be evaluated during national approval	N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 62368_1E ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
F.2.2	After the first paragraph of annex F.2.2 ,add the following: For apparatus intended to be used at altitude not exceeding 2000m, a warning label containing the following or a similar appropriate wording or a symbol shown below shall fixed to the equipment at readily visible place. "Only used at altitude not exceeding 2000m."  For apparatus intended to be used in not-tropical climate regions, a warning label containing the following or a similar appropriate wording or a symbol shown below shall fixed to the equipment at readily visible place. "Only used in not-tropical climate regions."  If only symbol used, the explanation of the symbol shall be contained in the instruction manual. The statements above shall be given in a language acceptable to the regions where the apparatus is intended to be used.	5000m	N/A
F.3.3.4	After the last paragraph, Added: …for single rated voltage, “220 V” or three-phase “380V” shall be marked only. For a rating voltage range, 220 V or three-phase 380V shall be covered. For multiple rated voltages, one of them shall be 220 V or three-phase 380V and which default setting from manufacture shall be 220 V or three-phase 380V as well.	Class III equipment	N/A
F.3.3.5	After the last paragraph, Added: Rated frequency shall be 50Hz or frequency range shall cover 50Hz.		N/A
F.4	**Instructions** Added: – For apparatus incorporating antenna coaxial sockets which is non-separated with CATV network, a warning wording or a similar shall be given in the instruction manual: “A CATV cable intended to be connected to apparatus shall be separated with the protective earth of the apparatus, otherwise fire hazard might be caused.”		N/A
F.5	**Instructional safeguards** In table F.2， change 230V to 220V，change 400Y/230V 3Ø to 380 Y/220 V 3Ø		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 62368_1E ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	Amend clause G.4.2 as follows : Plugs connected to the MAINS in apparatus shall comply with GB/T 1002,GB/T 1003,GB/T 2099.1 or GB/T11918（All parts） series. Appliance coupler shall comply with GB/T 17465（All parts） series or GB/T 11918（All parts） series.		N/A
	Special national conditions (if any)		
0.12	Add clause 0.12 Description of relevant information.		N/A
1	GB 4943.1-2022 applies to equipment used at altitudes not exceeding 5000m above sea level, For apparatus intended to be used at altitude not exceeding 2000m, The requirements can be appropriately reduced, but warning instructions shall be provided.. Revise the sixth paragraph of 1 as: In addition to specified by the manufacturer, this document assumes a maximum altitude of 5000m	Maximum altitude of 5000m	N/A
B.2.6.1	Amend T_{ma} as follows: T_{ma} is the maximum ambient temperature permitted by the manufacturer's specification, or 35 °C, whichever is greater. Add note 1: For equipment not to be operated at tropical climatic conditions, T_{ma} is the maximum ambient temperature permitted by the manufacturer's specification, or 25 °C, whichever is greater. Add note 2: For equipment to be operated at 2000m-5000m above sea leave, its temperature test conditions and temperature limits are under consideration. temperature test conditions and temperature limits below 2000m can be used until additional data is available.		P
Annex Z (normative)	Added annex Z: Instructions of the new safety warning labels.	Added. Should be evaluated during national approval	N/A
Annex AA (informative)	Added annex AA: Illustration relative to safety explanation in normative Chinese, Tibetan, Mongolian, Zhuang Language and Uighur.	Added. Should be evaluated during national approval	N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT

IEC 62368-1:2018

Republic of Korea NATIONAL DIFFERENCES

Audio/video, information and communication technology equipment - Part 1: Safety requirements

Differences according to ..... : KC 62368-1(2021-08)

TRF template used:..... : IECEE OD-2020-F3, Ed. 1.2

Attachment Form No. ..... : KR_ND_IEC62368_1E

Attachment Originator..... : KTL

Master Attachment..... : 2024-09-02

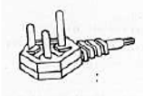
	National Differences		
4.1.1	As of January 1, 2023, internal and external components and subassemblies that comply with IEC 60950-1 or IEC 60065 are not acceptable if those components and subassemblies mandates KC certification.	Added.	P
G.4.2	Plugs for the connection of the apparatus to the supply main shall comply with the Korean requirement (KS C 8305 or KC 60884-1 or KC 60799).		N/A
	Special national conditions (if any)		N/A
Voltage	The marking of rated voltage or rated voltage range, for appliances intended to be connected to the supply mains, shall include 110 V, 220 V or 380 V.	See copy of marking plate	P
Frequency	Only appliances having supply frequency of 60 Hz or a frequency range including 60 Hz are accepted.		N/A
Instruction	Instruction manuals and appliance marking related safety, including nameplate shall be in Korean	Added. Should be evaluated during national approval	N/A

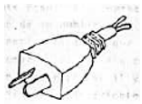
IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT

IEC 62368-1
ARGENTINA NATIONAL DIFFERENCES
Audio/video, information and communication technology equipment - Part 1: Safety requirements

Differences according to ..... :	Special National Conditions
TRF template used:.....:	IECEE OD-2020-F3:2022, Ed. 1.2
Attachment Form No. ..... :	AR_ND_IEC62368_1_A
Attachment Originator..... :	IRAM – Instituto Argentino de Normalización y Certificación
Master Attachment..... :	2024-06-06

	National Differences		P
	Not applicable		N/A
	Special national conditions (if any)		P
	- Appliances other than SELV, ratings shall cover 220 VAC - 50 Hz or 3x380 VAC – 50 Hz		N/A
	- Class 0 and Class 0I appliances are not allowed		N/A
	- Safety instructions and manuals shall be written in Spanish language	Added. Should be evaluated during national approval	N/A
	- Country of origin shall be shown on the marking plate		P
	- Class I appliances provided with plugs shall be provided with the label specified in sheet "Class I" **IMPORTANTE PARA EL USUARIO** Los aparatos de la Clase I, poseen ficha de 3 espigas planas con toma de tierra, para aumentar su seguridad.  NO LA ELIMINE colocando un adaptador o reemplazando la ficha por otra de 2 espigas. PARA SU SEGURIDAD, su instalación debe estar provista de conductor de tierra. De no ser así, realice la adecuación con personal especializado.		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	- Class II appliances provided with plugs shall be provided with the label specified in sheet "Class II" **IMPORTANTE PARA EL USUARIO** Los aparatos de la Clase II, que se identifican con el símbolo □ poseen ficha de 2 espigas planas sin toma de tierra, pues poseen doble aislación o aislación reforzada en todas sus partes.  NO LA ELIMINE colocando un adaptador o reemplazando la ficha por otra de 2 espigas cilíndricas, ya que la misma es compatible con los tomacorrientes con toma de tierra. PARA SU SEGURIDAD, su instalación debe estar provista de conductor de tierra. De no ser así, realice la adecuación con personal especializado.		N/A
	- Plugs shall be in conformity with IRAM 2063 Standard for Class II appliances and IRAM 2073 Standard for Class I appliances		N/A
	- Appliances with detachable interchangeable plug pins must include with its products, written instructions to inform the customer about the type of interchangeable and detachable plug pins approved and suitable for use in Argentina.		N/A
	- Direct plug-in appliances or appliances provided with integrated plugs shall be according to geometry of IRAM 2063 standard for Class II appliances or IRAM 2073 standard for Class I appliances		N/A
	- Appliances with integrated socket outlet shall be according to geometry of IRAM 2071 standard.		N/A

TEST REPORT
IEC 62368-3
Audio/video, information and communication technology equipment
Part 3: Safety aspects for DC power transfer through communication cables and ports

Report Number ..... :	CN2562CH 001
Date of issue ..... :	See main test report
Total number of pages ..... :	16
Name of Testing Laboratory preparing the Report ..... :	**Guangdong Dongdian Testing Service Co., Ltd.**
Applicant's name ..... :	**Harman International Industries, Incorporated**
Address ..... :	8500 Balboa Blvd. Northridge, CA 91329, USA
Test specification:	
Standard ..... :	IEC 62368-3:2017 for use in conjunction with IEC 62368-1:2018
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC62368_3C
Test Report Form(s) Originator .. :	TÜV Rheinland Japan Ltd.
Master TRF ..... :	Dated 2021-01-18

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This Test Report Form is intended for the investigation of safety in accordance with IEC 62368-3. It can only be used together with the IEC 62368-1 requirements.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test Item description .....:		Portable Bluetooth Speaker	
Trade Mark .....:		JBL	
Manufacturer(s).....:		Same as applicant	
Model/Type reference .....:		TUNER 3	
Ratings .....:		Input: 5VDC, 1.35A (via type-C port), 3.6VDC, 2500mAh, 9.0Wh (supplied by internal Li-ion battery)	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	See main test report	
Testing location/ address .....:		See main test report	
Tested by (name, function, signature).....:		See main test report	
Approved by (name, function, signature) ..:		See main test report	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address .....:			
Tested by (name, function, signature).....:			
Approved by (name, function, signature) ..:			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address .....:			
Tested by (name + signature).....:			
Witnessed by (name, function, signature) .:			
Approved by (name, function, signature) ..:			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address .....:			
Tested by (name, function, signature).....:			
Witnessed by (name, function, signature) .:			
Approved by (name, function, signature) ..:			
Supervised by (name, function, signature) :			

List of Attachments (including total number of pages in each attachment):

N/A

Summary of testing:

Tests performed (name of test and test clause):

All applicable tests as described in Test Case and Measurement Sections were performed.

- Maximal ambient temperature as specified by the manufacturer: +45°C.
- Test samples without serial numbers.
- The equipment is specified to be operated up to 5000m above sea level.
- Following tests performed during evaluation

5.4.2	Requirement for the PD

Note: --

Testing location:

Guangdong Dongdian Testing Service Co., Ltd.

Unit 2, Building 1, No.17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, 523808, Guangdong, China

Summary of compliance with National Differences (List of countries addressed):

See main test report

☒ **The product fulfils the requirements of** __ IEC 62368-3: 2017, EN IEC 62368-3: 2020, BS EN IEC 62368-3: 2020_ **(insert standard number and edition and delete the text in parenthesis, leave it blank or delete the whole sentence, if not applicable)**

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

☐ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

Procedure number, issue date and title:

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

☒ **Statement not required by the standard used for type testing**

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

See main test report

Test item particulars..... :	See main test report.
Supply Connection..... :	☐ AC Mains ☐ DC Mains ☐ Battery ☒ External Circuit - not Mains connected - ☒ ES1 ☐ ES2 ☐ ES3
Class of equipment .....:	☐ Class I ☐ Class II ☒ Class III
Equipment type ..... :	☐ PSE power sourcing equipment ☒ PD powered device ☐ connected to ICT network ☐ RFT circuit (remote feeding telecom circuit)

Possible test case verdicts:	
- 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)
Testing.....:	
Date of receipt of test item..... :	2025-03-15
Date (s) of performance of tests..... :	2025-03-15 to 2025-04-08
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.**	
Name and address of factory (ies) ..... :	See main test report
General product information and other remarks: See main test report	

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:
See main test report

ENERGY SOURCE DIAGRAM
Indicate which energy sources are included in the energy source diagram. Insert diagram below
See main test report

OVERVIEW OF EMPLOYED SAFEGUARDS
See main test report

IEC 62368-3			
Clause	Requirement - Test	Result	Verdict

4	**GENERAL REQUIREMENTS**		P
	Equipment serving as a PD or a PSE using voltages at ES1 or ES2,	Equipment serving as one PD using voltages at ES1.	P
	Equipment used as PSE or PD with proprietary connectors	Type-C input port	N/A
	Equipment where a proprietary protocol is used to enable the power transfer		N/A

5	**POWER TRANSFER USING ES1 OR ES2 VOLTAGES**		P
5.1	**General requirements**		N/A
	Maximum rated output voltage of PSE (V) ..... :		—
	under conditions of no load (V) ..... :		—
	normal load (V)..... :		—
	maximum rated load (V) ..... :		—
	Rated limits of intended communication systems:		N/A
	PD or PSE have the capability to both provide power and receive power		N/A
5.2	**Electrical-caused injury, electrical sources and safeguards**		N/A
	For a PSE classified as ES1 and ES2, the requirements of IEC 62368-1 clause 5.2 apply.		N/A
5.3	**Electrical-caused fire, power sources and safeguards**		N/A
5.3.1	Output power reduces the likelihood of ignition.		N/A
	Output current does not cause damage to communication cables, building wiring, and other devices including PD.		N/A
	PSE circuits comply with IEC 62368 1, Annex Q.1 requirements for limited power source (LPS).		N/A
	Interconnection of PSE circuits to other devices for DC power transfer via building wiring		N/A
	PSE maximum continuous current (A)..... :		—
	Minimum wire gauge specified in the equipment installation instruction (mm^2 or AWG) ..... :		—
	Current limits of minimum wire gauge (A)..... :		—
	PD receives multiple PSE power inputs. PD implements power limiting in accordance with PS2 or IEC 62368-1, Annex Q		N/A
	PSE connected to external paired conductor cable having a minimum wire diameter of 0.4 mm (IEC 62368-1:2014, Table 14, ID 1 and 2 IEC 62368-1:2018, Table 13, ID 1 and 2)		N/A

IEC 62368-3			
Clause	Requirement - Test	Result	Verdict
	Current limited to not more than 1.3 A ..... :		—
5.3.2	DC power transfer interconnection to other equipment, where it is unknown that attached devices are likely to comply with IEC 62368-1, PSE circuit shall comply with requirements of IEC 62368-1 for PS2 or Clause Q.1		N/A
	Available output current under abnormal operating conditions and single fault conditions in the PSE does not exceed the specified fault current rating in power delivery specification.		N/A
	Fault current rating in power delivery specification (A) ..... :		—
	Available output current under abnormal operating conditions and single fault conditions in the PSE (A) ..... :		—
	No prescribed maximum fault current specified for standardized interface. Available current not exceeding:		N/A
	8.0 A under any circumstances		N/A
	Circuits > 2 A, 130% for more than 5 s ..... :		N/A
	Circuits ≤ 2 A, 150% for more than 5 s: ..... :		N/A
5.4	**Safeguards to protect against a single fault condition in the PSE**		P
5.4.1	Requirement for the PSE		N/A
	PSE with a single output voltage ..... :		N/A
	Nominal rated output voltage (V)..... :		—
	Single fault conditions output voltage (V) ..... :		—
	ES2 limit (DC 120V, 50V RMS, 70.7 V peak)		N/A
	PSE delivering a range of output voltages via negotiation with the PD..... :		N/A
	Single fault conditions output voltage (V) ..... :		—
	Negotiated > 5 V, output 130% (min. 7.5 V)..... :		N/A
	Negotiated ≤ 5 V, output 150%..... :		N/A
5.4.2	Requirement for the PD	(See appended table 5.4.2)	P
	Nominal rated input voltage (V)..... :	5.0Vdc	—
	Nominal > 5 V, supplied with 130% (min. 7.5 V) :		N/A
	Nominal ≤ 5 V supplied with 150%..... :	(See appended table 5.4.2)	P
	Any consequential failure of components in the PD..... :	No consequential failure of components in the PD.	P

IEC 62368-3			
Clause	Requirement - Test	Result	Verdict

6	**POWER TRANSFER USING RFT**		N/A
6.1	**General requirements**		N/A
	Access to RFT circuit conductors is restricted to a skilled person ..... :		N/A
	Access by an instructed person is restricted in accordance with IEC 62368-1, clause 5.3.2.1 and 5.3.2.2..... :		N/A
6.2	**Connection to ICT networks**		N/A
	RFT circuit directly connected to an ICT network:		N/A
6.3	**Electrically caused injury**		N/A
6.3.1.1.1	The current limits in 6.3.1.1.2 to 6.3.1.1.4 are inherently met.		N/A
	The RFT-C circuit has a monitoring and control device that maintains the required current limits		N/A
6.3.1.1.2	Limits under normal operating conditions		N/A
	a) steady state current from supply equipment into ICT network under any load condition (mA) ..... :		N/A
	b) using a resistor of 2 000 Ω ± 2 %, max. steady state current from one conductor of equipment through ICT network to earth (mA)..... :		N/A
	c) RFT-C circuit is limited to voltage rating of ICT network wiring, if this voltage is known (V) ..... :		N/A
	d) RFT-C circuit voltage rating of insulation between conductors and from any conductor to earth is coordinated with max. RFT-C circuit supply equipment voltage (V)..... :		N/A
6.3.1.1.3	Current measured under single fault conditions did not exceed the line-to-earth and line-to-line limits in Figure 1		N/A
6.3.1.1.4	Current limits with one RFT-C conductor accidentally earthed, between the other conductor and earth measured through a 2 000 Ω ± 2 % resistor, under any external load condition ..... :		N/A
	Current not exceeding line-to-earth limits in Figure 1 with a limit of 25 mA after 10 s..... :		N/A
	Open circuit voltage between other conductor and earth not exceeding maximum RFT-C circuit voltage determined in 6.3.1.1.2 c) and 6.3.1.1.2 d), after 2 s ..... :		N/A

IEC 62368-3			
Clause	Requirement - Test	Result	Verdict
6.3.1.2	RFT-V circuit limits		N/A
6.3.1.2.1	Limits under normal operating conditions		N/A
	Steady state open circuit voltage between earth and each RFT-V circuit conductor that normally connects to an ICT network, not exceeding (V) - 140 V DC ..... : - 200 V DC with monitoring and control device in accordance with 6.3.1.2.3..... :		N/A
	Voltage rating of insulation of RFT-V circuit receiving power via ICT network is suitable for - 400 V between conductors and - 200 V from any conductor to earth..... :		N/A
6.3.1.2.2	Voltage limits within RFT-V circuit supply equipment under single fault conditions (see IEC 62368-1, clause B.4)		N/A
	with any conductor of RFT-V circuit that normally connects to ICT network being earthed (V) ..... :		—
	without any conductor of RFT-V circuit that normally connects to ICT network being earthed (V) ..... :		—
	Not exceeding Figure 2 limits during first 200 ms, measured across a 5 000 Ω ± 2 % resistor with all load circuits disconnected		N/A
	Not exceeding 6.3.1.2.1 limits after first 200 ms		N/A
6.3.1.2.3	Voltage limits with one RFT-V conductor earthed, between the other conductor and earth:		N/A
	Not exceeding maximum RFT-V circuit supply voltage after 200 ms (V) ..... :		N/A
	For RFT-V circuits with normal open circuit voltage exceeding 140 V DC, current between the other conductor and earth not exceeding Figure 1 line-to-earth limits, measured through a 2 000 Ω ± 2 % resistor, under any external load condition ..... :		N/A
	This current not exceeding 10 mA DC after 10 s :		N/A
6.3.2	Accessibility to electrical energy sources and safeguards (See also IEC 62368-1, 5.3.2)		N/A
6.3.2.1	Accessibility for an ordinary person		N/A
	Adequate protection against contact with RFT circuits bare parts for all positions of the equipment wired and operated as in normal use.		N/A
	Not accessible: bare parts at ES3; and an ES3 basic safeguard		N/A
	Not accessible: bare parts at ES2, except for pins of connectors. However, such pins are not accessible under normal operating conditions by IEC 62368-1, Figure V.3 blunt probe		N/A

IEC 62368-3			
Clause	Requirement - Test	Result	Verdict
	Protection achieved by insulation, guarding (electrical enclosure), interlocks :		N/A
6.3.2.2	Accessibility for an instructed person (See also IEC 62368-1, clause 4.3.3)		N/A
	Contact is possible with RFT circuit bare parts by the IEC 62368-1, Figure V.3 blunt probe		N/A
	RFT circuit bare parts so located or guarded that unintentional contact is unlikely.		N/A
6.3.2.3	Accessibility for a skilled person (See also IEC 62368-1, clause 4.3.4 and 5.3)		N/A
	RFT circuits bare parts located or guarded so that accidental shorting to ES1 or ES2 parts is unlikely		N/A
	Required guards easily removable and replaceable if necessary for servicing.		N/A
6.3.3	Safeguards		N/A
6.3.3.1	RFT circuits separated from other circuits and parts..... :		N/A
	- from other RFT circuits by functional insulation. If shorted, neither circuit exceeds 6.3.1.1 and 6.3.1.2 limits		N/A
	- from other RFT circuits separated as if one was at ES3		N/A
	- from earthed accessible parts, earthed ES1 circuits and earthed ES2 circuits by basic insulation		N/A
	- from unearthed accessible parts, ES1, ES2 and ES3 circuits by one or both: • double insulation or reinforced insulation; • basic insulation, together with a conductive screen as protective bonding conductor.		N/A
6.3.3.2	Interconnection of equipment		N/A
6.3.3.2.1	General requirements ..... :		N/A
	Interconnecting cable containing more than one type of circuit ..... :		N/A
6.3.3.2.2	Interconnection between RFT circuits		N/A
	RFT-C circuits in supply equipment are connected to RFT-C circuits in other equipment ..... :		N/A
	RFT-V circuits in supply equipment are connected to RFT-V circuits in other equipment ..... :		N/A
6.3.4	Installation instructions for equipment using an RFT circuit do specify:		N/A
6.3.4 a)	RFT circuit voltage (V) ..... :		N/A
6.3.4 b)	EUT effective capacitance between connection points		N/A
	1) for the ICT network conductors (nF) ..... :		—
	2) for ICT network one conductor and earth (nF) :		—

IEC 62368-3			
Clause	Requirement - Test	Result	Verdict
6.3.4 c)	A system assessment shall be carried out at the time of installation, to ensure:		N/A
	Effective capacitance of the total system, including the capacitance of the EUT, does not exceed the values specified in Figure 3 ..... :		N/A
6.3.4 d)	Checking is done that the voltage rating of ICT network wiring is adequate for normal RFT circuit voltage, together with superimposed transients . :		N/A
6.3.4 e)	Checking is done that circuits to be connected together are either all RFT-C circuits or all RFT-V circuits ..... :		N/A
6.3.4 f)	Where an RFT circuit is directly connected to an ICT network, that the building cabling termination records are updated to indicate which terminals are used for an RFT circuit ..... :		N/A
6.4	**Electrically caused fire**		N/A
6.4.1	Classification of RFT power sources		N/A
6.4.1.1	RFT-C power source is a PS2 circuit (See IEC 62368-1, clause 6.2.2.5 or 6.2.2.6) ..... :		N/A
	RFT-C circuit limited by maximum current (60 mA) and maximum voltage (usually < 800 V).		N/A
	RFT-C circuits comply with requirements of 6.4.2.		N/A
6.4.1.2	RFT-V power source is a PS2 circuit (See IEC 62368-1, clause 6.2.2.5)..... :		N/A
	RFT-V circuits comply with requirements of 6.4.2.		N/A
6.4.2	Fire protection requirements		N/A
	RFT circuit power in accordance with Table 1.... :		N/A
	Output voltage (V)..... :		—
	Maximum current (A) ..... :		—
	Maximum Power (W) ..... :		—
	Steady state current that can be supplied to ICT network complies with IEC 62368-1:2014, 6.5.3 IEC 62368-1:2018, 6.5.2 ..... :		N/A

5.1	Table: Power transfer using ES1 or ES2 voltages. General requirements				N/A
Output Connector	Components	Output voltage V dc)			
		No load	Normal load	Max. rated road	Limits
Supplementary Information:					

5.3.2	TABLE: DC power transfer interconnection to other equipment					N/A
Note: Measured each port with maximum attainable current:						
Output Circuit	Components	Fault current rating (A)	Any circumstance (A)		More than 5 s (A)	
			Meas.	Limit	Meas.	Limit
Supplementary Information: Fault current rating: > 2 A, limit 130%, ≤ 2 A, limit 150% Fault conditions tested: SC=Short circuit, OC=Open circuit						

5.4.1	TABLE: Requirement for the PSE				N/A
Note: Measured U fault (V) with all load circuits disconnected:					
Output Circuit	Components	U nominal rated (V)	U fault (V)		Fault conditions tested
			Meas.	Limit	
Supplementary Information: Fault conditions tested: SC=Short circuit					

5.4.2	TABLE: Requirement for the PD				P	
Note: Measured U input at PSE with all other load circuits disconnected:						
Input Circuit	Components	U nominal rated (V)	U input (V)		Observation	
			Meas.	Limit	Component	Hazard
Type-C input port	Charge while working mode with internal empty battery.	5Vdc	7.5Vdc	7.5Vdc	Normal	No hazard.
Type-C input port	Only charge with internal empty battery.	5Vdc	7.5Vdc	7.5Vdc	Normal	No hazard.
Supplementary Information: Conditions tested: PD supplied with voltage above nominal rated input voltage. Nominal > 5 V, supplied with 130% (min. 7.5 V) Nominal ≤ 5 V supplied with 150%						

6.3.1.1	TABLE: RFT-C circuit limits						N/A
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			Observation
				U (V DC)	I (mA DC)	limit	
1			Normal load			60 mA	
			Abnormal load			60 mA	
			To earth			2 mA	
			Single fault			60 mA	
			Single fault – to earth			25 mA	
2			Normal load			60 mA	
			Abnormal load			60 mA	
			To earth			2 mA	
			Single fault –			60 mA	
			Single fault – to earth			25 mA	

Supplementary information:

1) Current flow from the RFT-C CIRCUIT supply equipment into the TELECOMMUNICATION NETWORK

2) Current flow from one conductor of the RFT-C CIRCUIT supply equipment through the TELECOMMUNICATION NETWORK to earth. Use of a resistor of 2000 ± 2 %

6.3.1.2	TABLE: RFT-V circuit limits							N/A
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			Observation
				U (V DC)	I (mA DC)	limit	
1			Open circuit			140 V	
			Open circuit, monitored			200 V	
			Single fault – < 200 ms			Figure 2	
			Single fault – > 200 ms			140 V	
			Single fault – > 200 ms, monitored			200 V	
			Conductor earthed > 200 ms			Figure 1	
			Conductor earthed > 10 s			10 mA	
2			Open circuit			140 V	
			Open circuit, monitored			200 V	
			Single fault – < 200 ms			Figure 2	
			Single fault – > 200 ms			140 V	
			Single fault – > 200 ms, monitored			200 V	
			Conductor earthed > 200 ms			Figure 1	
			Conductor earthed > 10 s			10 mA	
Test Conditions: Normal – Abnormal - Supplementary information: SC=Short Circuit, OC=Open Circuit							

4.1.2	TABLE: List of critical components				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1]
See main test report for detail.					
Supplementary information: See referred IEC 62368-1 test report. [1)] Provided evidence ensures the agreed level of compliance. See OD-2039. License available upon request.					

ATTACHMENT 3 Photo Documentation

Product: Portable Bluetooth Speaker

Type Designation: TUNER 3

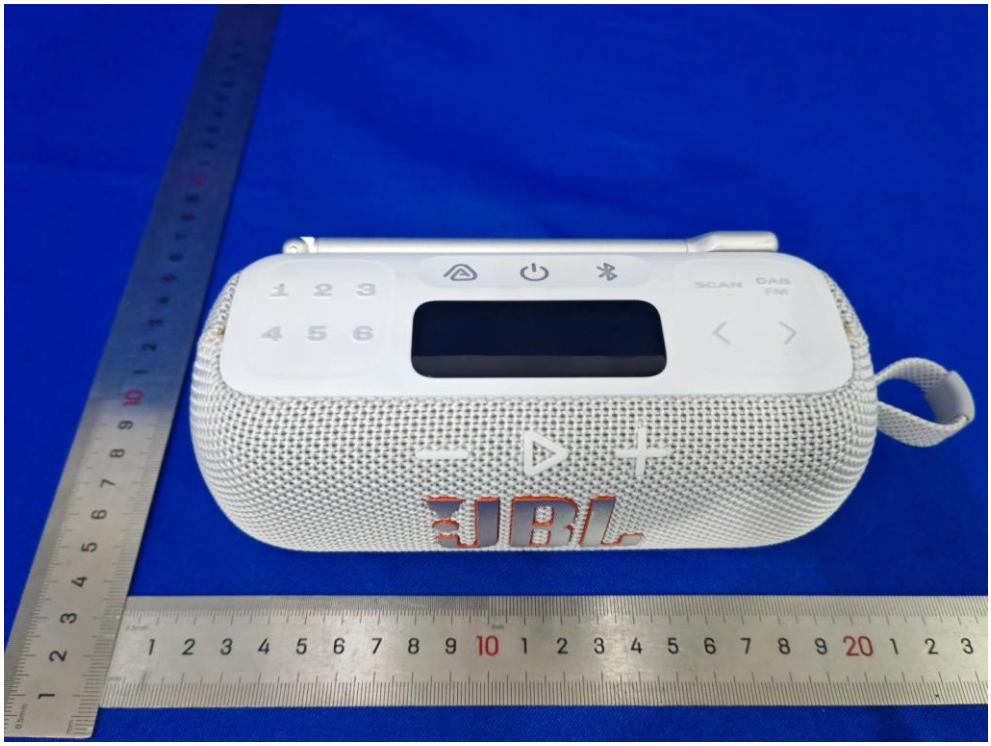


Figure 1 External view

Figure 2 External view

Product: Portable Bluetooth Speaker

Type Designation: TUNER 3

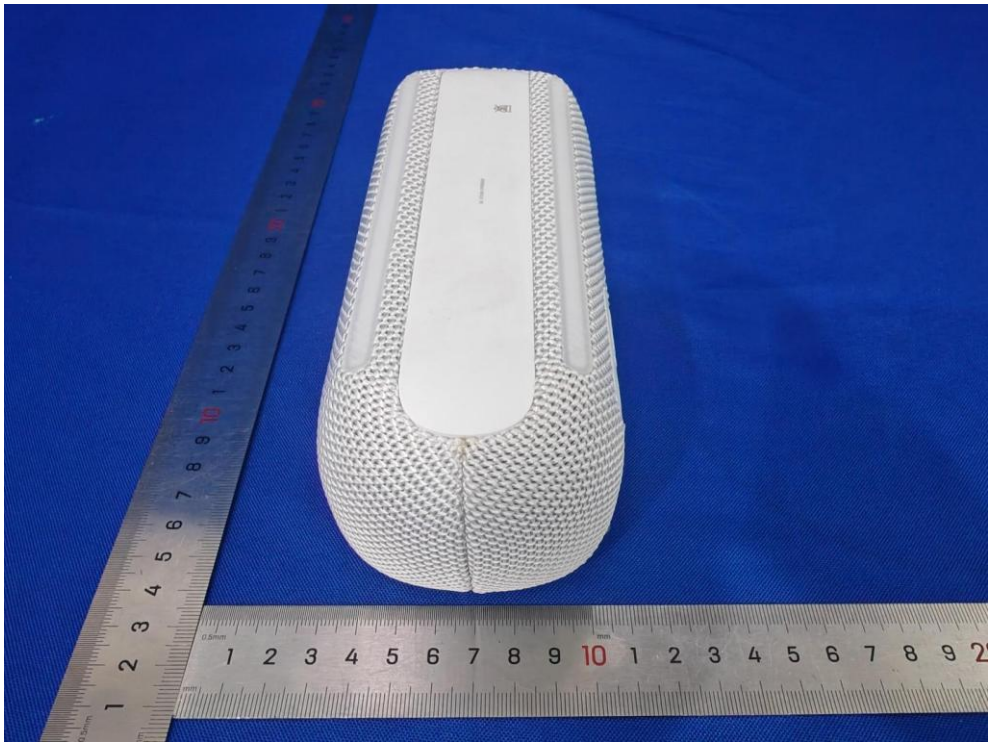


Figure 3 External view

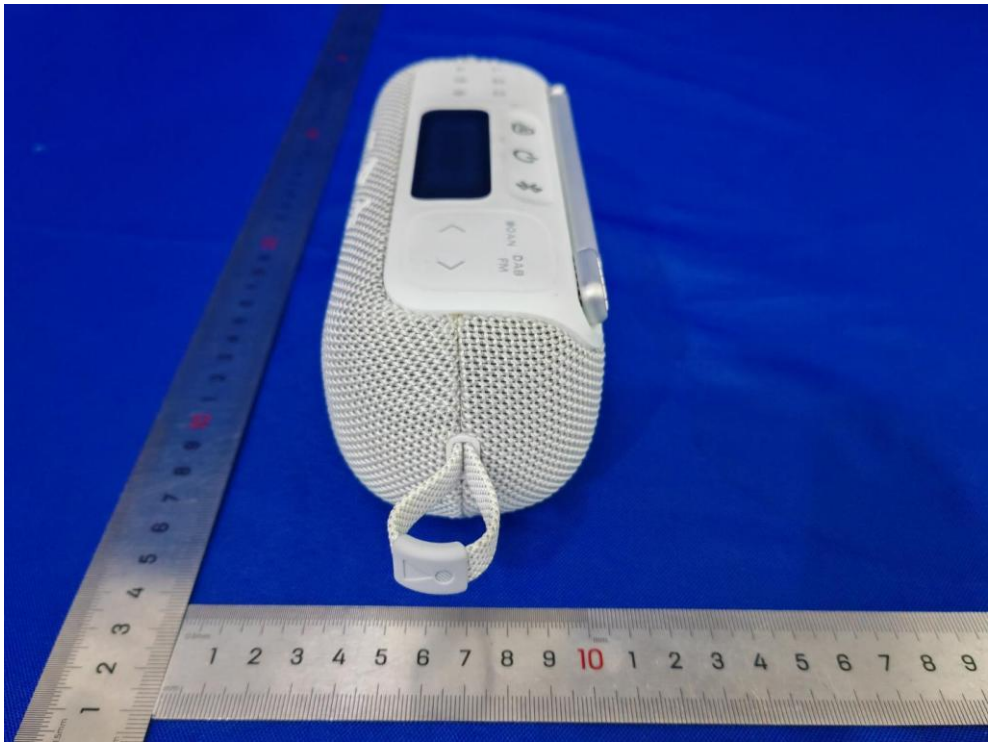


Figure 4 External view

Product: Portable Bluetooth Speaker

Type Designation: TUNER 3

Figure 5 Internal view

Figure 6 Internal view

Product: Portable Bluetooth Speaker

Type Designation: TUNER 3

Figure 7 Internal view

Figure 8 Internal view

Product: Portable Bluetooth Speaker

Type Designation: TUNER 3

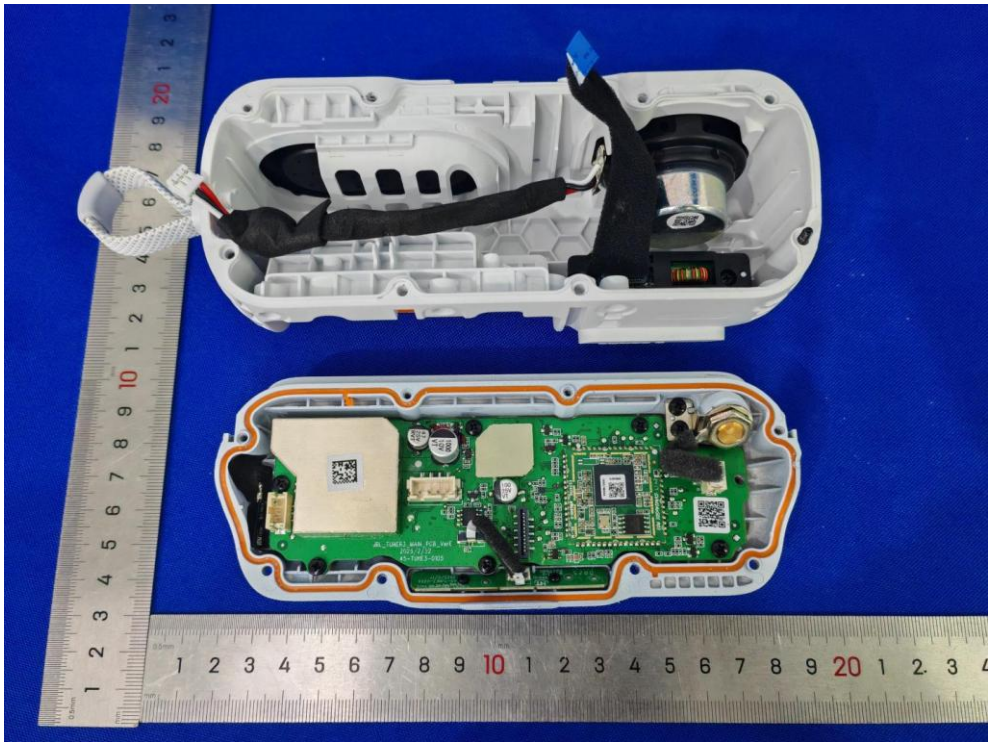


Figure 9 Internal view

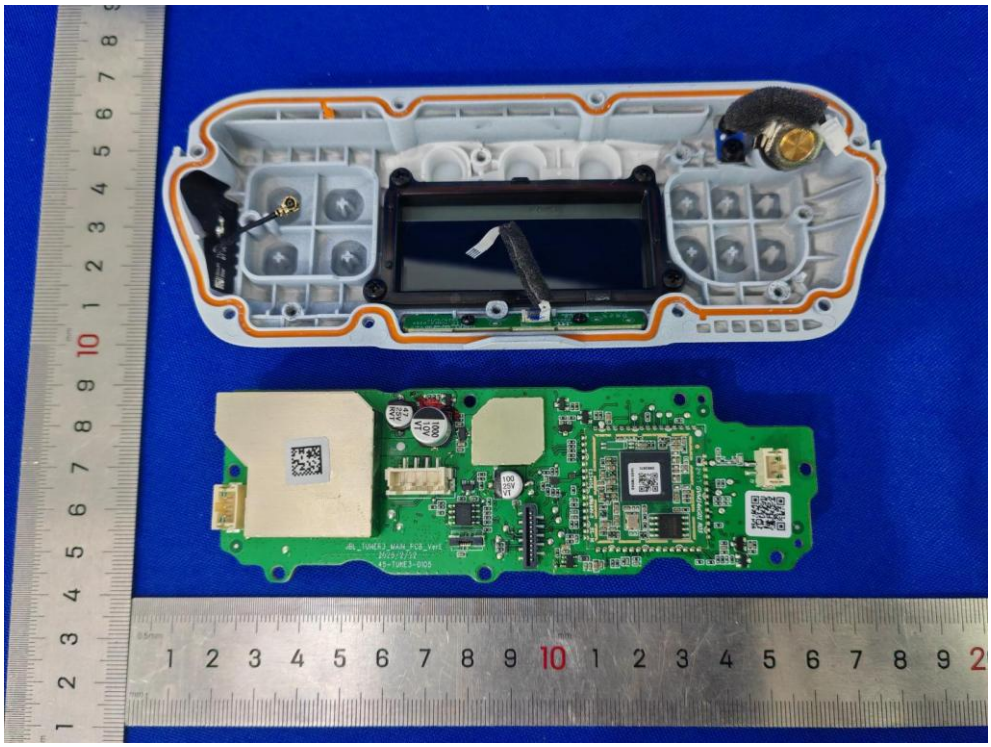


Figure 10 Internal view

Product: Portable Bluetooth Speaker

Type Designation: TUNER 3

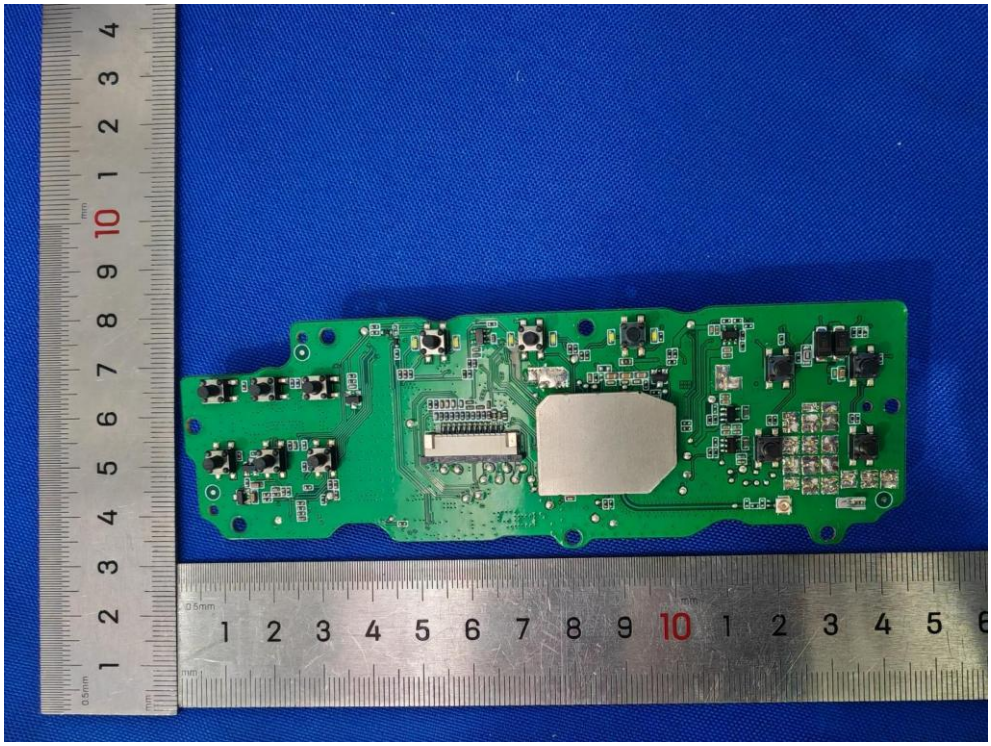


Figure 11 PCB view

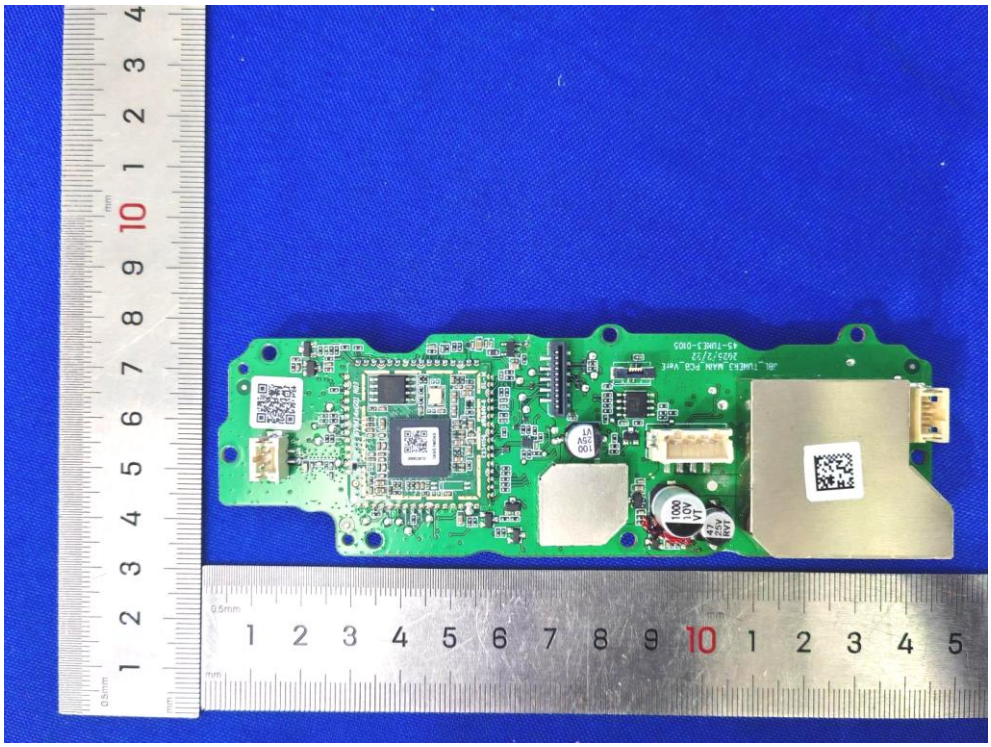


Figure 12 PCB view

Product: Portable Bluetooth Speaker

Type Designation: TUNER 3

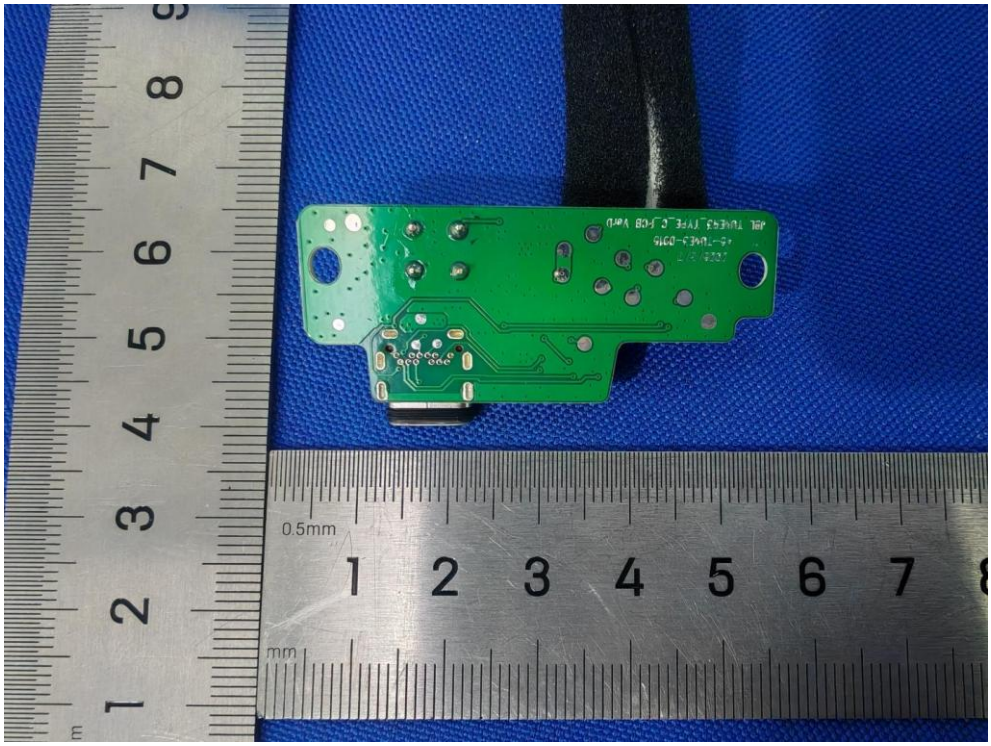


Figure 13 PCB view

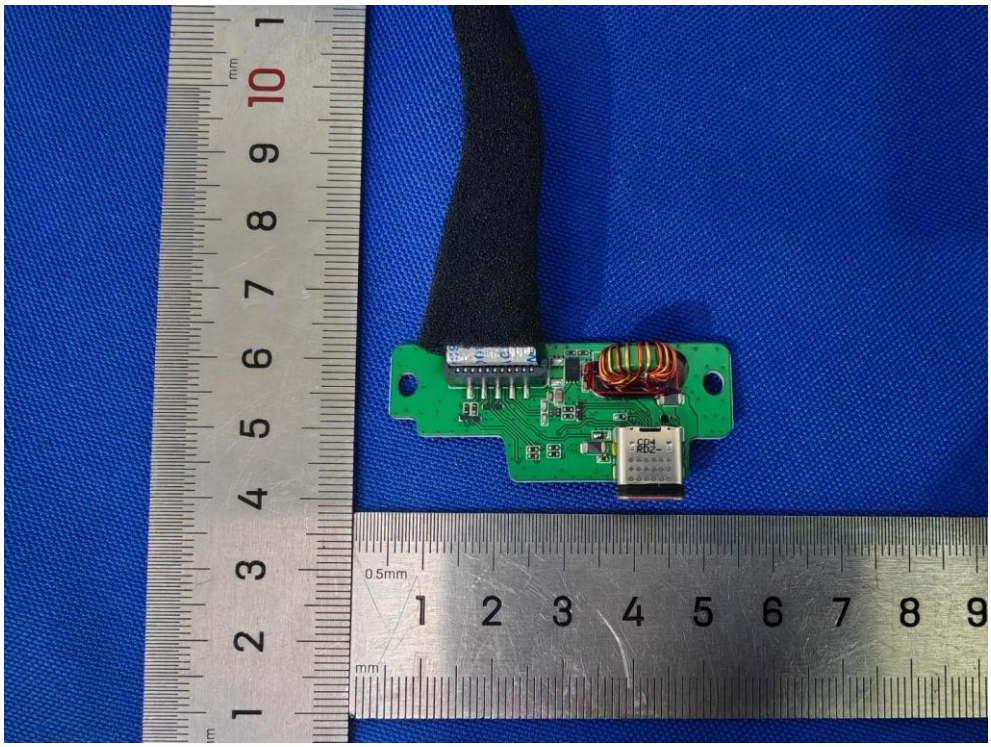


Figure 14 PCB view

Product: Portable Bluetooth Speaker

Type Designation: TUNER 3

Figure 15 Battery view

Figure 16 Battery view

Product: Portable Bluetooth Speaker

Type Designation: TUNER 3

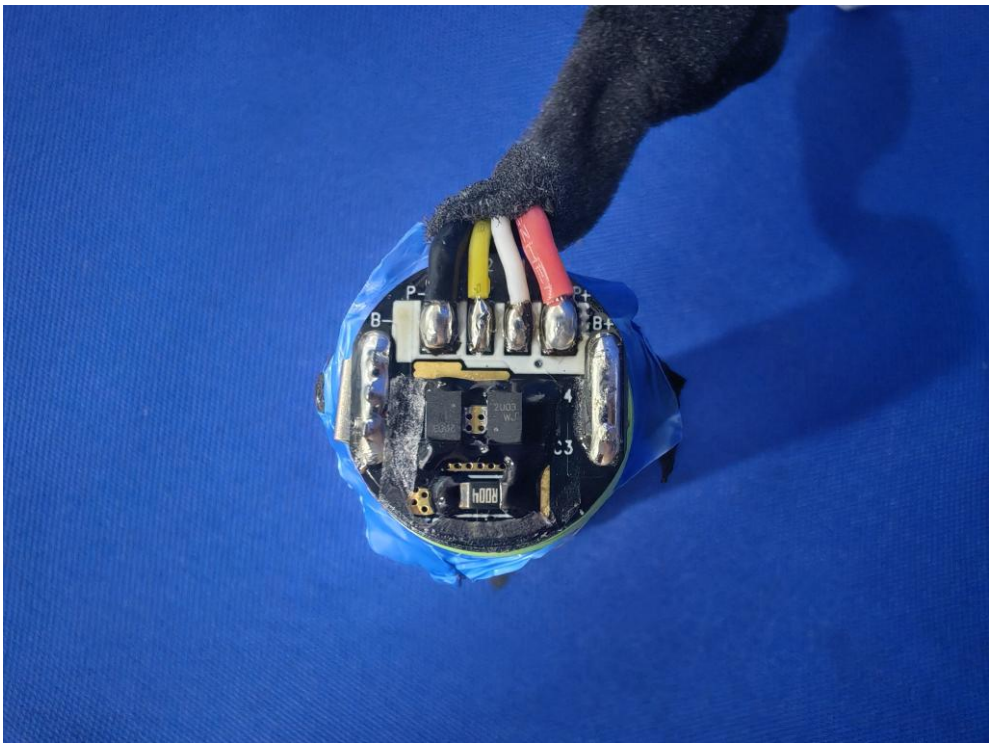


Figure 17 Battery view