




TEST REPORT IEC 62368-1 Audio/video, information and communication technology equipment Part 1: Safety requirements	
Report Number.	AOC251117001S
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Name of Testing Laboratory preparing the Report	Shenzhen AOCE Electronic Technology Service Co., Ltd Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
Applicant's name	Shenzhen Haodaxin Technology Co., Ltd
Address	5F Building Hualian, Donghuan 1st RD, Longhua District, Shenzhen, Guangdong Province, China
Test specification:	
Standard	<input checked="" type="checkbox"/> IEC 62368-1:2018 <input checked="" type="checkbox"/> AUSTRALIA / NEW ZEALAND NATIONAL DIFFERENCES
Test procedure	Test report
Non-standard test method	N/A
TRF template used	IECEE OD-2020-F1:2020, Ed.1.3
Test Report Form No.	IEC 62368_1E
Test Report Form(s) Originator	UL(US)
Master TRF	Dated 2021-02-04
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Test item description	Disposable power bank	
Trade Mark.....	N/A	
Manufacturer	Shenzhen Haodaxin Technology Co., Ltd 5F Building Hualian, Donghuan 1st RD, Longhua District, Shenzhen, Guangdong Province, China	
Model/Type reference.....	PB-52	
Ratings.....	Battery Capacity: 3000mAh/ 11.1Wh Output: 5V=1A	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input checked="" type="checkbox"/>	Testing Laboratory:	Shenzhen AOCE Electronic Technology Service Co., Ltd
Testing location/ address		Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
Tested by (name, function, signature)		Bill Hu Technical Engineer 
Approved by (name, function, signature) ..		Robin Liu Technical Manager 
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) :		
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List of Attachments (including a total number of pages in each attachment):**Attachment No.1:** AUSTRALIA / NEW ZEALAND NATIONAL DIFFERENCES**Attachment No.2:** Photo document.**Summary of testing:****Tests performed (name of test and test clause):**

- IEC 62368-1:2018

Testing location:

Shenzhen AOCE Electronic Technology Service Co., Ltd
 Room 202, 2nd Floor, No.12th Building of Xinhe
 Tongfuyu Industrial Park, Fuhai Street, Baoan District,
 Shenzhen, Guangdong, China

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

AUSTRALIA / NEW ZEALAND NATIONAL DIFFERENCES.

☒ **The product fulfils the requirements of AS/NZS 62368.1:2022**


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.

Disposable power bank

PB-52

Battery Capacity: 3000mAh/ 11.1Wh

Output: 5V  1A



Manufacturer: Shenzhen Haodaxin Technology Co., Ltd

Address: 5F Building Hualian, Donghuan 1st RD, Longhua District,
Shenzhen, Guangdong Province, China

Test item particulars:			
Product group	<input checked="" type="checkbox"/> end product	<input type="checkbox"/> built-in component	
Classification of use by	<input checked="" type="checkbox"/> Ordinary person	<input checked="" type="checkbox"/> Children likely present	
	<input checked="" type="checkbox"/> Instructed person		
	<input checked="" type="checkbox"/> Skilled person		
Supply connection	<input type="checkbox"/> AC mains	<input type="checkbox"/> DC mains	
	<input checked="" type="checkbox"/> not mains connected:		
	<input checked="" type="checkbox"/> ES1	<input type="checkbox"/> ES2	<input type="checkbox"/> ES3
Supply tolerance	<input type="checkbox"/> +10%/-10%		
	<input type="checkbox"/> +20%/-15%		
	<input type="checkbox"/> + %/ - %		
	<input checked="" type="checkbox"/> None		
Supply connection – type	<input type="checkbox"/> pluggable equipment type A -		
	<input type="checkbox"/> non-detachable supply cord		
	<input type="checkbox"/> appliance coupler		
	<input type="checkbox"/> direct plug-in		
	<input type="checkbox"/> pluggable equipment type B -		
	<input type="checkbox"/> non-detachable supply cord		
	<input type="checkbox"/> appliance coupler		
	<input type="checkbox"/> permanent connection		
	<input type="checkbox"/> mating connector		
	<input checked="" type="checkbox"/> other: Not directly connected to the mains		
Considered current rating of protective device	<input type="checkbox"/> A;		
	Location:	<input type="checkbox"/> building	<input type="checkbox"/> equipment
	<input checked="" type="checkbox"/> N/A		
Equipment mobility	<input type="checkbox"/> movable	<input checked="" type="checkbox"/> hand-held	<input type="checkbox"/> transportable
	<input type="checkbox"/> direct plug-in	<input type="checkbox"/> stationary	<input type="checkbox"/> for building-in
	<input type="checkbox"/> wall/ceiling-mounted	<input type="checkbox"/> SRME/rack-mounted	
	<input type="checkbox"/> other:		
Overvoltage category (OVC)	<input type="checkbox"/> OVC I	<input type="checkbox"/> OVC II	<input type="checkbox"/> OVC III
	<input type="checkbox"/> OVC IV	<input checked="" type="checkbox"/> other: Not directly connected to the mains	
Class of equipment	<input type="checkbox"/> Class I	<input type="checkbox"/> Class II	<input checked="" type="checkbox"/> Class III
	<input type="checkbox"/> Not classified	<input type="checkbox"/>	
Special installation location	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> restricted access area	
	<input type="checkbox"/> outdoor location	<input type="checkbox"/> other:	
Pollution degree (PD)	<input type="checkbox"/> PD 1	<input checked="" type="checkbox"/> PD 2	<input type="checkbox"/> PD 3
Manufacturer's specified T_{ma}	35 °C	<input type="checkbox"/> Outdoor: minimum	°C
IP protection class	<input checked="" type="checkbox"/> IPX0	<input type="checkbox"/> IP___	
Power systems	<input type="checkbox"/> TN	<input type="checkbox"/> TT	<input type="checkbox"/> IT - V _{L-L}
	<input checked="" type="checkbox"/> not AC mains		
Altitude during operation (m)	<input checked="" type="checkbox"/> 2000 m or less	<input type="checkbox"/>	m
Altitude of test laboratory (m)	<input checked="" type="checkbox"/> 2000 m or less	<input type="checkbox"/>	m

Mass of equipment (kg) : 0.14 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 : 2025-10-22	
Date (s) of performance of tests : 2025-10-22 to 2025-11-17	
General remarks:	
<p>The tested sample(s) and the sample information are provided by the client.</p> <p>"(See Enclosure #)" refers to additional information appended to the report.</p> <p>"(See appended table)" refers to a table appended to the report.</p> <p>Note: EN Group Differences together with National Differences and Special National Conditions, if any, are in the Appendix to the main body of this TRF.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p> <p>The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.</p> <p>When determining for test conclusion, measurement uncertainty of tests has been considered.</p>	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 62368-1:	
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 :	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies) : --	
General product information and other remarks:	
1. This product is a Disposable power bank which is used for information technology equipment. 2. Bottom enclosure is fixed to top enclosure by Snap-On method. 3. The batteries are complied with IEC 62133-2: 2017.	

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: +3.7Vdc input (battery)	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	1 st S	2 nd S
PS2	Enclosure	See 6.3	Min. V-0	N/A
PS2	Battery cell	See 6.3	Min. V-0	N/A
PS2	PCB	See 6.3	Min. V-0	N/A
PS2	Other combustible components / materials	See 6.3	See 6.4.5, 6.4.6	N/A
7	Injury caused by hazardous substances			
Class and Energy Source (e.g. Ozone)	Body Part (e.g., Skilled)	Safeguards		
		B	S	R
Lithium-ion polymer	Skilled	See Annex M	N/A	N/A
8	Mechanically-caused injury			
Class and Energy Source (e.g. MS3: Plastic fan blades)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
MS1: Equipment Mass	Ordinary	N/A	N/A	N/A
MS1: Sharp edges and corners	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
N/A	N/A	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

☒ ES ☒ PS ☒ MS ☒ TS ☐ RS

IEC 62368-1			
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	Safeguard components are certified to IEC and/or national standards and are used correctly within their ratings.	P
4.1.3	Equipment design and construction		P
4.1.4	Specified ambient temperature for outdoor use (°C):		N/A
4.1.5	Constructions and components not specifically covered		N/A
4.1.8	Liquids and liquid filled components (LFC)	(See G.15)	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 Clause T.4)	P
4.4.3.3	Drop tests	(See Clause T.7)	P
4.4.3.4	Impact tests		N/A
4.4.3.5	Internal accessible safeguard tests		N/A
4.4.3.6	Glass impact tests		N/A
4.4.3.7	Glass fixation tests	(See Clause T.9)	N/A
	Glass impact test (1J)		N/A
	Push/pull test (10 N)		N/A
4.4.3.8	Thermoplastic material tests	(See Clause T.8)	P
4.4.3.9	Air comprising a safeguard		N/A
4.4.3.10	Accessibility, glass, safeguard effectiveness	All safeguard remains effective	P
4.4.4	Displacement of a safeguard by an insulating liquid		N/A
4.4.5	Safety interlocks	(See Annex K)	N/A
4.5	Explosion		P
4.5.1	General	(See Annex M for batteries)	P
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		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Fix conductors not to defeat a safeguard		N/A
	Compliance is checked by test		N/A
4.7	Equipment for direct insertion into mains socket-outlets		N/A
4.7.2	Mains plug part complies with relevant standard ..		N/A
4.7.3	Torque (Nm)		N/A
4.8	Equipment containing coin/button cell batteries		N/A
4.8.1	General		N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery compartment door/cover construction	Not such 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		N/A
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	ES1	P
5.2.2.2	Steady-state voltage and current limits	+3.7Vdc input	P
5.2.2.3	Capacitance limits		N/A
5.2.2.4	Single pulse limits.....		N/A
5.2.2.5	Limits for repetitive pulses		N/A
5.2.2.6	Ring signals		N/A
5.2.2.7	Audio signals		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.3	Protection against electrical energy sources		N/A
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		N/A
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		N/A
	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		N/A
5.4.1.2	Properties of insulating material		N/A
5.4.1.3	Material is non-hygroscopic		N/A
5.4.1.4	Maximum operating temperature for insulating materials		N/A
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		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage		N/A
5.4.1.9	Insulating surfaces		N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		N/A
5.4.1.10.2	Vicat test		N/A
5.4.1.10.3	Ball pressure test		N/A
5.4.2	Clearances		N/A
5.4.2.1	General requirements		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	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		—
5.4.2.3.2.4	External circuit transient voltage.....		—
5.4.2.3.2.5	Transient voltage determined by measurement		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test		N/A
5.4.2.5	Multiplication factors for clearances and test voltages		N/A
5.4.2.6	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		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

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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
	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 ($M\Omega$)		N/A
	Electric strength test		N/A
5.4.6	Insulation of internal wire as part of supplementary safeguard		N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		N/A
	Relative humidity (%), temperature ($^{\circ}C$), 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		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		N/A
5.4.11.2	Requirements		N/A
	SPDs bridge separation between external circuit and earth		N/A

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

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	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
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 :		N/A
5.7.6	Requirements when touch current exceeds ES2 limits		N/A
	Protective conductor current (mA) :		N/A
	Instructional Safeguard :		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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
6.2.2	Power source circuit classifications :	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources	See below.	P
6.2.3.1	Arcing PIS :		N/A
6.2.3.2	Resistive PIS :	All conductors and devices are considered as Resistive PIS.	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..... :	(See appended table 5.4.1.4, 9.3, B.1.5, B.2.6)	P
	Combustible materials outside fire enclosure :		N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard method	Method of Control fire spread used.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		P
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..... :	(See appended table B.3, B.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		P
6.4.5	Control of fire spread in PS2 circuits		P
6.4.5.2	Supplementary safeguards	Compliance detailed as follows: - Printed board: rated V-1 or VTM-1 min. class material; Other components other than PCB and wires are: - mounted on PCB rated V-1 or VTM-1 min., or - made of V-2, VTM-2 or HF2 min.	P
6.4.6	Control of fire spread in PS3 circuits		N/A
6.4.7	Separation of combustible materials from a PIS		N/A
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		P
6.4.8.2	Fire enclosure and fire barrier material properties	Equipment enclosure was evaluated as a fire enclosure.	P
6.4.8.2.1	Requirements for a fire barrier	V-0 fire enclosure used.	P
6.4.8.2.2	Requirements for a fire enclosure	V-0 fire enclosure used.	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		N/A
6.4.8.3.1	Fire enclosure and fire barrier openings		N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top openings and properties	No openings	N/A
	Openings dimensions (mm)..... :		N/A
6.4.8.3.4	Bottom openings and properties		N/A
	Openings dimensions (mm)..... :	No openings	N/A
	Flammability tests for the bottom of a fire enclosure		N/A
	Instructional Safeguard:		N/A
6.4.8.3.5	Side openings and properties	No openings	N/A
	Openings dimensions (mm)..... :		N/A
6.4.8.3.6	Integrity of a fire enclosure, condition met: a), b) or c)..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8.4	Separation of a PIS from a fire enclosure and a fire barrier distance (mm) or flammability rating :		N/A
6.4.9	Flammability of insulating liquid..... :		N/A
6.5	Internal and external wiring		P
6.5.1	General requirements	See below.	P
6.5.2	Requirements for interconnection to building wiring :	The material of VW-1 on internal wiring were considered compliance equal to equivalent to IEC/TS 60695-11-21 relevant standards.	P
6.5.3	Internal wiring size (mm ²) for socket-outlets..... :		N/A
6.6	Safeguards against fire due to the connection to additional equipment		P

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		N/A
	Instructional Safeguard :		N/A
8.4.2	Sharp edges or corners	Accessible edges and corners of the equipment are rounded and are classified as MS1.	P
8.5	Safeguards against moving parts		N/A
8.5.1	Fingers, jewellery, clothing, hair, etc., contact with MS2 or MS3 parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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
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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
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)		—
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)		—

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Clause	Requirement + Test	Result - Remark	Verdict
8.10.6	Thermoplastic temperature stability		N/A
8.11	Mounting means for slide-rail mounted equipment (SRME)		N/A
8.11.1	General		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		N/A
	Button/ball diameter (mm)		—
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 9.3)	P
9.3.2	Test method and compliance		P
9.4	Safeguards against thermal energy sources		N/A
9.5	Requirements for safeguards		N/A
9.5.1	Equipment safeguard		N/A
9.5.2	Instructional safeguard		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	(See appended table 9.6)	N/A
10	RADIATION		N/A
10.2	Radiation energy source classification		N/A
10.2.1	General classification		N/A
	Lasers		—
	Lamps and lamp systems		—

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Clause	Requirement + Test	Result - Remark	Verdict
	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)		N/A
10.4.1	General requirements		N/A
	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
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

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Clause	Requirement + Test	Result - Remark	Verdict
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 5.4.1.4, 9.3, B.1.5, B.2.6)	P
B.2	Normal operating conditions		P
B.2.1	General requirements..... :	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers	(See Annex E)	N/A
B.2.3	Supply voltage and tolerances		N/A
B.2.5	Input test	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		N/A
B.3.1	General		N/A
B.3.2	Covering of ventilation openings		N/A
	Instructional safeguard		N/A
B.3.3	DC mains polarity test		N/A
B.3.4	Setting of voltage selector		N/A
B.3.5	Maximum load at output terminals		N/A
B.3.6	Reverse battery polarity		N/A
B.3.7	Audio amplifier abnormal operating conditions		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
B.4	Simulated single fault conditions		P
B.4.1	General		P
B.4.2	Temperature controlling device		N/A
B.4.3	Blocked motor test		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		P
B.4.4.2	Short circuit of creepage distances for functional insulation		P
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short-circuit and interruption of electrodes in tubes and semiconductors		N/A
B.4.6	Short circuit or disconnection of passive components		N/A
B.4.7	Continuous operation of components		N/A
B.4.8	Compliance during and after single fault conditions :	(See appended table B.3, B.4)	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		N/A
E.1	Electrical energy source classification for audio signals		N/A
	Maximum non-clipped output power (W) :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Rated load impedance (Ω)		—
	Open-circuit output voltage (V)		—
	Instructional safeguard		—
E.2	Audio amplifier normal operating conditions		N/A
	Audio signal source type.....		—
	Audio output power (W)		—
	Audio output voltage (V)		—
	Rated load impedance (Ω)		—
	Requirements for temperature measurement		N/A
E.3	Audio amplifier abnormal operating conditions		N/A
F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General		P
	Language	English	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1		N/A
F.2.2	Graphic symbols according to IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	The equipment marking is located on the surface and is easily visible.	P
F.3.2	Equipment identification markings	See below.	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	See below.	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		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		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.4	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 :		N/A
F.3.5.2	Switch position identification marking :		N/A
F.3.5.3	Replacement fuse identification and rating markings :		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		N/A
F.3.6.1	Class I equipment		N/A
F.3.6.1.1	Protective earthing conductor terminal :		N/A
F.3.6.1.2	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
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	All markings required are easily discernible under normal lighting conditions.	P
F.3.10	Test for permanence of markings	After rubbing test by water and petroleum spirit, the marking still legible; it is not easily possible to remove the marking plate and show no curling.	P
F.4	Instructions		N/A
	a) Information prior to installation and initial use		N/A
	b) Equipment for use in locations where children not likely to be present		N/A
	c) Instructions for installation and interconnection		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	a) Graphic symbols used on equipment		N/A
	b) Permanently connected equipment not provided with all-pole mains switch		N/A
	c) Replaceable components or modules providing safeguard function		N/A
	d) Equipment containing insulating liquid		N/A
	e) Installation instructions for outdoor equipment		N/A
F.5	Instructional safeguards		N/A
G	COMPONENTS		N/A
G.1	Switches		N/A
G.1.1	General		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		N/A
G.2.2	Overload test		N/A
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		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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		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
G.5.3.1	Compliance method.....		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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		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

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	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		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, <i>D</i> (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

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Clause	Requirement + Test	Result - Remark	Verdict
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
	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		N/A
G.13.1	General requirements		N/A
G.13.2	Uncoated printed boards		N/A
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Number of insulation layers (pcs) :		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2	Test method and compliance		N/A
G.14	Coating on components terminals		N/A
G.14.1	Requirements :	(See Clause G.13)	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	Ringling signal		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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
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	(See separate test report)	—
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

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Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized		N/A
L.4	Single-phase equipment		N/A
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		N/A
L.8	Multiple power sources		N/A
	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 :	IEC 62133-2: 2017	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 M.3)	P
	Excessive discharging	(See appended table M.3)	P
	Unintentional charging of a non-rechargeable battery		N/A
	Reverse charging of a rechargeable battery		N/A
M.3.3	Compliance	(See appended table M.3)	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

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Clause	Requirement + Test	Result - Remark	Verdict
M.4.2.2	Compliance	(See appended table M.4.2)	P
M.4.3	Fire enclosure	V-0	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		P
M.4.4.3	Drop, Voltage on reference and dropped batteries (V); voltage difference during 24 h period (%):	<5%	P
M.4.4.4	Check of the charge/discharge function		P
M.4.4.5	Charge / discharge cycle test		P
M.4.4.6	Compliance		P
M.5	Risk of burn due to short-circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Test method and compliance		N/A
M.6	Safeguards against short-circuits		P
M.6.1	External and internal faults		P
M.6.2	Compliance	Has been conducted on the battery as part of compliance with IEC 62133-2.	P
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		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

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Clause	Requirement + Test	Result - Remark	Verdict
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)..... :		—
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	Stated in user manual.	P
N	ELECTROCHEMICAL POTENTIALS		N/A
	Material(s) used		—
O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		N/A
	Value of X (mm)..... :		—
P	SAFEGUARDS AGAINST CONDUCTIVE OBJECTS		N/A
P.1	General		N/A
P.2	Safeguards against entry or consequences of entry of a foreign object		N/A
P.2.1	General		N/A
P.2.2	Safeguards against entry of a foreign object		N/A
	Location and Dimensions (mm)		—
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

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Clause	Requirement + Test	Result - Remark	Verdict
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).....		—
Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		P
Q.1	Limited power sources		P
Q.1.1	Requirements		P
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output	(See appended table Q.1)	P
	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	(See appended table Q.1)	P
	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		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		N/A
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		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Wall thickness (mm)		—
	Conditioning (°C)		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material		—
	Wall thickness (mm)		—
	Conditioning (°C)		—
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 enclosures and fire barrier materials of equipment where the 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		N/A
T.4	Steady force test, 100 N	(See appended table T.4)	P
T.5	Steady force test, 250 N		N/A
T.6	Enclosure impact test		N/A
	Fall test		N/A
	Swing test		N/A
T.7	Drop test	(See appended table T.7)	P

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Clause	Requirement + Test	Result - Remark	Verdict
T.8	Stress relief test :	(See appended table T.8)	P
T.9	Glass Impact Test		N/A
T.10	Glass fragmentation test		N/A
	Number of particles counted.....:		N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm)		N/A
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		P
V.1	Accessible parts of equipment		P
V.1.1	General	Following the probes test specified in this annex Figure V.1, V.2, V.5 are suitable.	P
V.1.2	Surfaces and openings tested with jointed test probes		P
V.1.3	Openings tested with straight unjointed test probes	No openings	N/A
V.1.4	Plugs, jacks, connectors tested with blunt probe		P
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	Resistance to corrosion		N/A
Y.3.1	Metallic parts of outdoor enclosures are resistant to effects of water-borne contaminants by..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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
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 :		N/A

5.2	TABLE: Classification of electrical energy sources						N/A
Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters				ES Class
			U (V)	I (mA)	Type ¹⁾	Additional Info ²⁾	
--	--	--	--	--	--	--	--

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Clause	Requirement + Test	Result - Remark	Verdict

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: N/A					

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: N/A				

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: N/A					

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⁾ (Hz)	Required cl (mm)	cl (mm)	E.S. ²⁾ (V)	Required cr (mm)	cr (mm)
--	--	--	--	--	--	--	--	--
Supplementary information:								
1) Only for frequency above 30 kHz								
2) Complete Electric Strength voltage (E.S. (V) when 5.4.2.4 applied)								

5.4.4.2	TABLE: Minimum distance through insulation				N/A
Distance through insulation	Peak voltage (V)	Insulation	Required DTI	Measured DTI	

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Clause	Requirement + Test		Result - Remark	Verdict
(DTI) at/of			(mm)	(mm)
--	--	--	--	--
Supplementary information: N/A				

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: N/A						

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: N/A				

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: X-capacitors installed for testing: <input type="checkbox"/> bleeding resistor rating: <input type="checkbox"/> ICX: 1) Normal operating condition (e.g., normal operation, or open fuse), SC= short circuit, OC= 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: N/A					

5.7.4	TABLE: Unearthed accessible parts				N/A
Location	Operating and	Supply	Parameters		ES

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Clause	Requirement + Test			Result - Remark		Verdict
	fault conditions	Voltage (V)	Voltage (V _{rms} or V _{pk})	Current (A _{rms} or A _{pk})	Freq. (Hz)	class
--	--	--	--	--	--	--
Supplementary information: Abbreviation: SC= short circuit; OC= open circuit						

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

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
--	--	--	--	--	--	--
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
Battery pack	Cell	4.17	15.04	41.63	5	PS2
Type-C (5V 1A)	normal	5.05	1.55	7.63	5	PS2
	U3 pin 28-31 SC	0	0	0	3	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.						

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		

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Clause	Requirement + Test		Result - Remark	Verdict
--	--	--	--	--
Supplementary information: N/A				

6.2.3.2	TABLE: Determination of resistive PIS			P
Location		Operating and fault condition	Dissipate power (W)	Resistive PIS? Yes / No
Cell		--	41.63	Yes (declared)
Supplementary information: Abbreviation: SC= short circuit; OC= open circuit				

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: N/A					

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: N/A								

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Clause	Requirement + Test					Result - Remark		Verdict
5.4.1.4, 9.3, B.1.5, B.2.6	TABLE: Temperature measurements							P
Supply voltage (V)				Discharge mode Type-C Out: 5V 1A		--		—
Ambient temperature during test T_{amb} (°C)				25.0	35.0	--	--	—
Maximum measured temperature T of part/at:				T (°C)				Allowed T_{max} (°C)
PCB near Type-C port				66.5	76.5	--	--	130
PCB near L1				87.7	97.7	--	--	130
PCB near U3				87.0	97.0	--	--	130
PCB near U4				87.9	97.9	--	--	130
Battery surface				41.8	51.8	--	--	--
Enclosure inside near battery				40.7	50.7	--	--	120
Enclosure outside near battery				37.4	--	--	--	48
Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class	
--	--	--	--	--	--	--	--	
Supplementary information: --								

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
4.2	--	2.15	--	9.03	--	--	--	Discharge mode
Supplementary information:								
Equipment may be have rated current or rated power or both. Both should be measured.								

B.3, B.4	TABLE: Abnormal operating and fault condition tests						P
Ambient temperature T_{amb} (°C)					25°C if not specified		—
Power source for EUT: Manufacturer, model/type, outputrating ..					--		—
Component No.	Condition	Supply voltage (V)	Test time	Fuse no.	Fuse current (A)	Observation	
Output “+”, “-”	SC	3.7V	5s	--	--	Protected, recoverable	
U3 pin 28-31	SC	3.7V	5s	--	--	Protected, recoverable	

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Clause	Requirement + Test			Result - Remark		Verdict
U1 pin 2 to 14 SC	Over discharging	3.7V	5h	--	--	Normal operation, no hazard.
TYPE-C Out: 5V	OL	3.7V	30mims	--	--	Unit shut down immediately, no damage no hazard. Max. load current 1.55A, Unit protect when USB output overloaded with 1.6A
Supplementary information: N/A						

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)			
	--			--			
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)			
PB-52 (Normal condition)	--	--	--	--	2.15	--	
PB-52 (Fault condition)	--	--	--	--	2.47 (U1 pin 2 to 14 SC)	--	
Note: The tests of M.3.2 are applicable only when above appropriate data is not available.							
Specified battery temperature (°C) :				discharge 0-60		—	
Component No.	Fault condition	Charge/ discharge mode	Test time	Temp. (°C)	Current (A)	Voltage (V)	Observation
Battery pack	over discharging	discharge	5h	54.8	2.47	4.17	Empty battery discharged for 7hours No emission, explosion and chemical leaks
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.							

M.4.2	TABLE: Charging safeguards for equipment containing a secondary lithium battery	N/A
--------------	--	------------

IEC 62368-1					
Clause	Requirement + Test			Result - Remark	Verdict
Maximum specified charging voltage (V) :				--	—
Maximum specified charging current (A) :				--	—
Highest specified charging temperature (°C) :				--	—
Lowest specified charging temperature (°C) :				--	—
Battery manufacturer/type	Operating and fault condition	Measurement			Observation
		Charging voltage (V)	Charging current (A)	Temp. (°C)	
--	--	--	--	--	--
Supplementary information:					
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)						P
Output Circuit	Condition	U _{oc} (V)	Time (s)	I _{sc} (A)		S (VA)	
				Meas.	Limit	Meas.	Limit
Type-C Out: (5V 1A)	normal	5.05	--	1.55	8	7.63	100
	U3 pin 28-31 SC	0	--	0	8	0	100

T.2, T.3, T.4, T.5	TABLE: Steady force test						P
Part/Location	Material	Thickness (mm)	Probe	Force (N)	Test Duration (s)	Observation	
Internal parts	--	--	V.2	10	5	No hazard	
Top enclosure	Plastic	Min 1.5	--	100	5	No damaged	
Side enclosure	Plastic	Min 1.5	--	100	5	No damaged	
Bottom enclosure	Plastic	Min 1.5	--	100	5	No damaged	
Supplementary information: N/A							

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

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

T.7	TABLE: Drop test				P
Location/part		Material	Thickness (mm)	Height (mm)	Observation
Top enclosure		Plastic	Min 1.5	1000	No hazard
Side enclosure		Plastic	Min 1.5	1000	No hazard
Bottom enclosure		Plastic	Min 1.5	1000	No hazard
Supplementary information: N/A					

T.8	TABLE: Stress relief test				P
Location/Part	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation
Completed sample	Plastic	Min 1.5	70	7	No damaged, the hazardous live parts cannot be touched.
Supplementary information: N/A					

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: N/A				

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
4.1.2	TABLE: Critical components information				P
Object / part No.	Manufacturer / trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Plastic enclosure	SABIC JAPAN L L C	940(f1)	V-0, 120°C, Min. thickness: 1.5mm	UL 94	UL E45587
PCB	Interchangeable	Interchangeable	V-0, 130°C,	UL 94	UL
Internal wiring	GUANGDONG YONGROI CABLE TECHNOLOGY CO LTD	1007	VW-1, Min. 22AWG, Min. 80°C Min. 300V	UL 758	UL 204893
Li-ion Polymer Battery	Shenzhen Haodaxin Technology Co., Ltd	18650	3000mAh, 3.7V, 11.1Wh.	IEC 62133-2: 2017	CB
NTC	Shenzhen shihan Co., Ltd	103F3380	10 K ±1%, B = 3950 K±1% Torp: 25 °C to 125 °C,	IEC: 62368-1	Tested with appliance
Supplementary information:					
1) Provided evidence ensures the agreed level of compliance. See OD-2039.					
2) Description line content is optional. Main line description needs to clearly detail the component used for testing.					

Attachment No.1	IEC 62368-1E-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			
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	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	<p>After the first paragraph, <i>add</i> the following:</p> <p>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</p> <p>-AS/NZS 3112, <i>Approval and test specification—Plugs and socket-outlets</i></p> <p>-AS/NZS 3123, <i>Approval and test specification—Plugs, socket-outlets and couplers for general industrial application</i></p> <p>-AS/NZS 3191, <i>Electric flexible cords</i></p> <p>-AS/NZS 60884.1, <i>Plugs and socket-outlets for household and similar purposes, Part 1: General requirements</i></p> <p>-IEC 60086-2 <i>Primary batteries — Part 2: Physical and electrical specifications</i></p> <p>-AS/NZS 60065, <i>Audio, video and similar</i></p>		P

Attachment No.1		IEC 62368-1E-ATTACHMENT	
Clause	Requirement + Test	Result - Remark	Verdict

	<p><i>electronic apparatus—Safety requirements (IEC 60065:2015 (ED.8.0) MOD)</i></p> <p><i>-AS/NZS 60320.1, Appliance couplers for household and similar general purposes, Part 1: General requirements (IEC 60320-1, Ed.2.1 (2007) MOD)</i></p> <p><i>-AS/NZS 60320.2.2, Appliance couplers for household and similar general purposes Part 2.2: Interconnection couplers for household and similar equipment (IEC 60320-2-2, Ed.2.0 (1998) MOD)</i></p> <p><i>-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</i></p> <p><i>-AS/NZS 60695.11.5, Fire hazard testing, Part 11.5: Test flames—Needle-flame test method—Apparatus, confirmatory test arrangement and guidance</i></p> <p><i>-AS/NZS 60695.11.10, Fire hazard testing, Part 11.10: Test flames—50 W horizontal and vertical flame test methods</i></p> <p><i>-AS/NZS 60884.1, Plugs and socket-outlets for household and similar purposes, Part 1: General requirements</i></p> <p><i>-AS/NZS 60950.1, Information technology equipment—Safety, Part 1: General requirements (IEC 60950-1, Ed.2.2 (2013), MOD)</i></p> <p><i>IEC 61032:1997, Protection of persons and equipment by enclosures—Probes for verification</i></p> <p><i>-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)</i></p> <p><i>-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.</i></p>		
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Attachment No.1		IEC 62368-1E-ATTACHMENT	
Clause	Requirement + Test	Result - Remark	Verdict
4.7.2	Requirements Delete the text of the second paragraph and <i>replace</i> 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.		P
4.7.3	Compliance Criteria Delete this clause		P
4.8.1	General After second list, <i>add</i> 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 <i>replace</i> 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 <i>replace</i> with the following:		P

Attachment No.1		IEC 62368-1E-ATTACHMENT	
Clause	Requirement + Test	Result - Remark	Verdict

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 <i>replace</i> with “NOTE 1”. After NOTE 1, <i>add</i> 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.			P	
5.4.10.2.3	Delete “NOTE” and <i>replace</i> with “NOTE 1”. After NOTE 1, <i>add</i> 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.			P	
6	Electrically-caused fire			P	
6.6	After Clause 6.6, <i>add</i> the new Clauses 6.201 as follows: 6.201 External power supplies, docking stations and other similar devices (see special national conditions)				N/A
8.6	Stability of equipment				P
Table 36	Footnote ^a , after first sentence, <i>add</i> the following: Equipment having displays with moving images shall include “television sets and display devices”.			P	
8.6.1	After Clause 8.6.1 <i>add</i> the following new clauses: 8.6.201 Restraining Device fixing point (see special national conditions) 8.6.202 Restraining device (see special national conditions)			P	

Attachment No.1		IEC 62368-1E-ATTACHMENT	
Clause	Requirement + Test	Result - Remark	Verdict

Annex F Paragraph F.3.3.4	<p>Rated Voltage Delete "NOTE" and <i>replace</i> with NOTE1" After NOTE 1, <i>add</i> the following Equipment that is intended for connection to the supply mains in Australia and New Zealand shall be marked with:</p> <p>(a) A rated voltage of:</p> <ul style="list-style-type: none"> • 230 V for single phase equipment • 400 V for poly phase equipment <p>Or</p> <p>(b) A rated voltage range that includes:</p> <ul style="list-style-type: none"> • 230 V for single phase equipment • 400 V for poly phase equipment <p>NOTE 2: equipment that is not rated as above is not suitable for direct connection to the supply mains in Australia or new Zealand.</p>		P
Annex F.3.3.5	<p>After the list, <i>add</i> 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</p>		N/A
Annex F.3.8	<p>After "The DC output of an external power supply", insert "or docking stations and other similar external devices"</p>		P
Annex G Paragraph G.4.2	<p>Mains connectors 1 After "IEC 60320", insert "or AS/NZS 60320 series". 2 After "IEC 60906-1", insert "or AS/NZS 3123" 3 <i>After</i> first paragraph <i>add</i> 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.</p>		P
Paragraph G.5.3.1	<p>Transformers, General 1 Third dashed point <i>replace</i> '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 <i>replace</i> 'IEC 61558-2-16' with 'AS/NZS 61558.2.16'.</p>		N/A

Attachment No.1		IEC 62368-1E-ATTACHMENT	
Clause	Requirement + Test	Result - Remark	Verdict

Annex G.7.1	Mains supply cords, General Fourth dashed paragraph, <i>replace</i> 'IEC 60320-1' with 'AS/NZS 60320.1'		N/A
Table G.7	Sizes of conductors 1 First column, second row, <i>delete</i> "6" and <i>replace</i> with "7.5" 2 Second column, second row, <i>delete</i> '0,75' and <i>replace</i> with '0.75 ^b 3 <i>Delete</i> NOTE 1. 4 <i>Replace</i> 'NOTE 2' with 'NOTE:'. 5 <i>Delete</i> 'Footnote b' and <i>replace</i> 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 <i>replace</i> 'IEC 60320-1' with 'AS/NZS 60320.1' 7 Footnote d <i>replace</i> 'IEC 60320-1' with 'AS/NZS 60320.1'		N/A
Annex M M 2.1	<i>Add</i> "IEC 60086-2" to the list		N/A
Annex M Paragraph M.3.2	Test method <i>Delete</i> "NOTE" and <i>replace</i> with "NOTE 1" After NOTE 1 <i>add</i> 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.		N/A
	Special national conditions (if any)		

Attachment No.1	IEC 62368-1E-ATTACHMENT		
Clause	Requirement + Test	Result - Remark	Verdict

6.201	<p>External power supplies, docking stations and other similar devices</p> <p>For external power supplies, docking stations and other similar devices, during and after abnormal operating conditions and during single fault conditions the output voltage—</p> <ul style="list-style-type: none"> (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 single fault 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 after 3 seconds of introducing a single fault condition and after 3 s of introducing abnormal operating conditions <p>For equipment with multiple rated voltages at the output, the requirements apply with the equipment configured for each output rated voltage in turn</p> <p>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, <i>TC 108, Standards Interpretation Panel Question 15 — Output voltage</i>, in relation to similar requirements in IEC 62368-3:2017.</p> <p>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.</p>		P
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Attachment No.1		IEC 62368-1E-ATTACHMENT	
Clause	Requirement + Test	Result - Remark	Verdict

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
	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 .		

Attachment No.1	IEC 62368-1E-ATTACHMENT		
Clause	Requirement + Test	Result - Remark	Verdict

AS/NZS 3112:2017 Appendix J			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT AS_NZS_3112:2017_+A1:2021 APPENDIX J AUSTRALIAN / NEW ZEALAND NATIONAL DIFFERENCES (APPROVAL AND TEST SPECIFICATION—PLUGS AND SOCKET-OUTLETS)			
Differences according to : AS_NZS_3112:2017_Amendment 1:2021_Appendix J			
TRF template used:..... : IECEE OD-2020-F3, Ed. 1.1			
Attachment Form No. : AS_NZS_3112:2017_Appendix J			
Attachment Originator : JAS-ANZ			
Master Attachment..... : 2022-06			
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	Note: AS/NZS 3112 is NOT covered by IECEE Accreditation for Testing / Reporting Please State Laboratory Accreditation for this Standard		N/A
	Accreditation		N/A
	Accreditation Stamp		N/A

J1 SCOPE	<p>General: This Appendix specifies additional dimensional and constructional requirements for detachable plug portions, or equipment incorporating integral supply pins or equipment incorporating detachable plug portions.</p> <p>This Appendix shall be read in conjunction with Section 2 of this Standard.</p> <p>For the purposes of this Appendix, where the term 'plug' is used in Section 2 it shall be taken to mean the plug portion of equipment or the detachable plug portion.</p> <p>The equipment shall comply with the relevant product Standard. The tests and requirements specified in this Appendix are in addition to any test and requirements of the relevant product Standard for the equipment.</p> <p>(AS/NZS 3112:2017/A1:2021)</p>	N/A
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Attachment No.1		IEC 62368-1E-ATTACHMENT	
Clause	Requirement + Test	Result - Remark	Verdict

J2	DEFINITION	N/A
J2.1	<p>Detachable plug portion</p> <p>A plug portion that is detachable from the equipment and with connections including the following standardized outputs and other contacts</p> <p>(a) Type A (see Figure J1):</p> <p>A detachable plug portion with a connection intended for plugging directly into equipment. The connection being via the equipment group 1 appliance inlet within the scope of AS/NZS 60320.1.</p> <p>(b) Type B (see Figure J2):</p> <p>A detachable plug portion with a non-standardized connection intended for plugging directly into equipment</p> <p>(c) Type C (see Figure J3):</p> <p>A detachable plug portion with a connection intended for use with an adaptor connected to a flexible cord so as to replicate a supply plug and flexible cord configuration. The connection being via a group 1 appliance outlet within scope of AS/NZS 60320.2.2, which is integral with the plug portion</p> <p>(AS/NZS 3112:2017)</p>	N/A
J2.2	<p>Integral plug portion</p> <p>A plug portion that is integral to the equipment enclosure and is not detachable</p> <p>(AS/NZS 3112:2017)</p>	N/A
J2.3	<p>Plug portion</p> <p>A plug portion is that portion of equipment with pins for insertion into a socket-outlet, including the plug pins, terminals of the plug pins, external dimensions of the 'maximum projection' and any connections of a detachable plug portion.</p> <p>(AS/NZS 3112:2017/A1:2021)</p>	N/A

J3	REQUIREMENTS FOR THE PLUG PORTION		N/A
J3.1	<p>General</p> <p>The following provisions apply to the dimensional and constructional requirements of plug portions of equipment and any detachable connection between the plug portion and the equipment:</p>		N/A
	(a)	For detachable plug portions intended for connection to the equipment in multiple orientations, the relevant tests are performed in the most onerous orientation.	N/A
	(b)	For Type A detachable plug portion, the relevant requirements of AS/NZS 3105:2014 are applicable, in addition to conformance with relevant clauses of this Appendix	<p>See</p> <p>Test Report xxx to AS/NZS 3105:2014</p> <p>Test Report xxx to AS/NZS 60320.1 for the Group 1 appliance inlet portion.</p>

Attachment No.1		IEC 62368-1E-ATTACHMENT	
Clause	Requirement + Test	Result - Remark	Verdict

(c)	For Type B detachable plug portions, the conformance is shown by the relevant clauses of this Appendix.		N/A
(d)	For Type C detachable plug portions, conformance is shown by assessment to Section 2 of this Standard (plugs) and relevant clauses of this Appendix (AS/NZS 3112:2017)	See also Test Report xxx to AS/NZS 60320.2.2 for the Group 1 appliance outlet portion.	N/A
J3.2	Plug pins of plug portions The requirements of Clause 2.2 are applicable for plug pins.		N/A
2.2	PLUG PINS		N/A
2.2.1	Current carrying parts of plug pins of metal having sufficient mechanical strength, electrical conductivity and resistance to corrosion adequate for the intended use		N/A
	Plug pin material?		N/A
2.2.3	Plug pins adequately proportioned throughout and portion adjacent to the connection designed to not introduce a stress concentration which may lead to a fracture of the pin, and suitably shaped to prevent abrasion or cutting of conductor strands due to flexure in normal use		N/A
	Exposed ends of plug pins have a lead-in, bevel or radius to facilitate entry into socket-outlets and to operate shutters		N/A
	Flat-pins with the following profile are deemed to comply:		N/A
(a)	Flat-pins with a radius on the end with side bevels may have a width and thickness profile as specified in Figure 2.1(h)		N/A
(b)	Flat-pins square on the end with corner and side bevels may have a width and thickness profile as specified in Figure 2.1(i)		N/A
(c)	Flat-pins square on the end with corner bevels and a radius on the sides may have a width and thickness profile as specified in Figure 2.1(j)		N/A
	Contact portion of the pins smooth and free from openings or indentations		N/A
	Flat pin plugs having a longitudinal seam or opening in the contact portion of one face; width not exceeding 0.3 mm and		N/A
	Thickness not exceeding 1.58 mm		N/A

Attachment No.1		IEC 62368-1E-ATTACHMENT	
Clause	Requirement + Test	Result - Remark	Verdict

	Exposed portion of earthing pins and pins other than insulated pins free from any non-metallic coverings or coatings (AS/NZS 3112:2017)		N/A
2.2.4	Live parts of insulated pin plugs not exposed when plug is partially or fully engaged with associated socket		N/A
	Compliance by measurement to Figure 2.4	(see appended table)	N/A
	Lacquer, enamel or sprayed insulating coating not considered to be insulation material		N/A
	All live pins on low voltage plugs except for those shown in Figure 2.1 (a2), (b) and (g) of the insulated pin type		N/A
	Colour green or green / yellow not used for insulation of insulated pins (AS/NZS 3112:2017)		N/A
J3.3	Ratings and dimensions for low-voltage plug portions Requirements of clauses 2.8.1 and 2.8.4 apply for rating and dimensions		N/A
2.8	Ratings and Dimensions of Low Voltage Plugs		N/A
2.8.1	Plugs with ratings up to and including 20A; shall conform to the appropriate dimensions shown in Figure 2.1	(see appended results)	N/A
	Rating of plug	___A	N/A
	Nominal dimensions covering disposition of pins checked by gauge of Appendix A		N/A
	Distance between live pin and edge of moulding to not less than 9 mm		N/A
	Measured distance	___mm	N/A
	No point on plug face protrudes more than 0.5 mm		N/A
	Measured protrusion	___mm	N/A
	Dimensional requirements of Figure 2.1(e2) did not applied to plugs with greater than three pins (AS/NZS 3112:2017)		N/A
2.8.4	Low voltage plugs comply with dimensions of Figure 2.1	(see appended table 2.8.1)	N/A
	Disposition of pins checked by gauge complying with Appendix A, B or F as appropriate		N/A
	Low voltage plug having rating up to 15A and of the		N/A

Attachment No.1		IEC 62368-1E-ATTACHMENT	
Clause	Requirement + Test	Result - Remark	Verdict

	Figure 2.1 (a1), (c), (d), (f) or (g) type; comply with dimensional requirements of Figure 2.1 (e1 and e2)		
	20A plug of Figure 2.1 (a2) type complies with dimensional requirements of Figure 2.1 (e2)		N/A
	Plugs with insulated pins need not comply with dimension $R20.0 \pm 1$ mm requirement of Figure 2.1 (e3) provided there is at least 9mm from the edge of the live pins to the edge of the plug face Figure 2.1(e3). (AS/NZS 3112:2017)		N/A
J3.4	Internal connections for plug portions Requirements of clause 2.9 apply for internal connections, unless requirements contained in the relevant product standard (AS/NZS 3112:2017)		N/A
2.9	INTERNAL CONNECTIONS		N/A
	Plug provided with earthing connections designed and constructed so that when plug is correctly wired and assembled:		N/A
(a)	Loose terminal screw or conductive material cannot bridge any live or earthed parts		N/A
(b)	Earthing parts effectively isolated from contact with live conductor which may become detached		N/A
(c)	Live parts effectively isolated from contact with any earthing conductor which may become detached		N/A
	Any connections for auxiliary devices comply with above requirements (AS/NZS 3112:2017)		N/A
J3.5	Arrangement of earthing connections for plug portions Requirements of clause 2.10 apply for arrangement of earthing connections		N/A
2.10	Arrangement of earthing connections		N/A
	Earthing pin radial to the circle embracing the pins (AS/NZS 3112:2017)		N/A
2.12	Marking		N/A
2.12.6	Configuration of plugs		N/A
	Pins disposed so that configuration, as viewed from the pins, is earth, neutral and active in a clockwise direction		N/A
	Where there is no earthing pin; live pins conform to this configuration (AS/NZS 3112:2017)		N/A

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J4	Tests		N/A
J4.1	General Plug portions of equipment shall be subjected to the following tests and unless stated otherwise, shall comply with the requirements specified in Section 2 for each test. The number of test samples shall be in accordance with Table J1 For equipment with a detachable plug portion, the assessment(s) of Table J1 tests 2, 3, 5, 10 and 11 shall be conducted on the— (a) assembled equipment with the detachable plug portion connected; and (b) the detachable plug portion after it has been separated from the equipment (AS/NZS 3112:2017/A1:2021)		N/A
J4.2	High voltage test The requirements of Clause 2.13.3 are applicable unless requirements are contained in the relevant product standard (AS/NZS 3112:2017)		N/A
2.13.3	Test No.1 - High voltage test		N/A
	Plug withstands without failure electric strength test as specified (AS/NZS 3112:2017)	(see appended table)	N/A
J4.3	Mechanical strength		N/A
J4.3.1	Tumbling barrel test The tumbling barrel test is applied to determine the mechanical strength of the plug portions and equipment having integral or detachable plug portions. For equipment with a detachable plug portion, the detachable plug portion may become detached during the test. If this occurs the detachable plug portion shall be reassembled with the equipment when the pins are straightened as per (a) and (b) below. Three samples (Samples BCD in Table J1) that have not been subjected to any previous test are tested as specified in Clause 2.13.7.1 , however the test is modified as follows:		N/A
	They are tested in a tumbling barrel as described in AS 60068.2.32 or test Free fall repeated – Procedure 2 in IEC 60068-2.31. The samples shall be dropped from a height of 500 mm onto a steel plate, 3 mm thick. The barrel shall be turned at a rate of 5 r/min, to yield 10 falls per minute. Only one sample shall be tested at a time.		N/A

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	<p>A sample is dropped—</p> <p>(a) 500 times if the mass of the specimen does not exceed 250 g.</p> <p>The pins being straightened after each 100 drops and at the completion of the test to pass through the appropriate gauge of Figure A1, Figure B1 or Figure F1; and</p> <p>(b) 250 times if the mass of the specimen exceeds 250 g. The pins being straightened after each 25 drops and at the completion of the test to pass through the appropriate gauge of Figures A1, Figure B1 or Figure F1.</p> <p>(AS/NZS 3112:2017/A1:2021)</p>		
	Mass of sample	_____Grams	N/A
	Number of drops	500 / 250	N/A
	Compliance shall be checked by Paragraph J4.3.3	(See appended table)	N/A
J4.3.2	<p>Test No.3 Impact test.</p> <p>Plug portions and equipment having integral plug portions or detachable plug portions shall withstand lateral impact forces.</p> <p>All samples that were subjected to the tests in Paragraph J4.3.1 (Samples BCD in Table J1) shall be tested as follows:</p>		N/A
	(a) The sample shall be positioned at the centre of a steel plate with a thickness of at least 6 mm. Apertures in the steel plate for the plug pins to pass through shall conform to the corresponding socket Standard. The sample shall be held against the steel plate by clamping all the pins.		N/A
	(b) Samples shall be subjected to blows, with an impact energy of 1.0 ± 0.05 J by any means having the same performance as the spring-operated impact-test apparatus of AS/NZS 3100.		N/A
	(c) Three blows shall be applied to every point that is most likely to directly or indirectly stress the enclosure joints of the sample		N/A
	Compliance shall be checked by Paragraph J4.3.3		N/A
J4.3.3	<p>Specific compliance criteria</p> <p>This Paragraph provides the common compliance assessment criteria for tests specified in Paragraphs J4.3.1 and J4.3.2.</p>		N/A
	Following each test, the samples shall comply with Clause 2.13.7.1		N/A
(a)	assembled equipment with the detachable plug portion connected;		N/A
	After the test, samples show no damage	(See appended table)	N/A

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(b)	the detachable plug portion after it has been separated from the equipment.		N/A
	After the test, samples show no damage	(See appended table)	N/A
4.3.4	Pin bending test The pins of the plug portion of three samples (Samples EFG in Table J1) not subjected to any previous tests shall be tested for compliance with the pin bending test of Clause 2.13.7.2 (AS/NZS 3112:2017/A1:2021)		N/A
2.13.7.2	Test No.4 – Pin bending test		N/A
	All flat-pin plugs rated up to and including 15 A shall be subjected to the pin bending test		N/A
	Three samples are subjected by clamping the plug in a rigid holding block and applying the bending force as specified		N/A
	After the test the pins shall not be broken off. (AS/NZS 3112:2017)		N/A
J4.8.3	Test No.5 Plug portion detachment requirements		N/A
	For all Type B or C devices and for Type A devices where the outlet of the detachable plug portion is parallel to the plug supply pins, disengagement of the detachable plug portion from the equipment shall require at least two simultaneous independent actions or the use of a tool.		N/A
	The plug portion and the equipment/adaptor shall be connected and disconnected 50 times (100 strokes).		N/A
	Compliance is verified by the plugging test, a force which, over a period of 10 s, shall be increased steadily to 60 ±0.6 N and held at this value for a further 10 s, shall be applied evenly at the connecting equipment in a direction parallel to the pins. This procedure shall be conducted three times on the same plug portion, at intervals of 5 min, without disturbing the plug portions between tests		N/A
	During the test the plug portion shall not separate		N/A
	The test of AS/NZS 3112 'temperature rise test' for plugs shall be conducted immediately after the above test without disturbing the sample. Test No 6 Temperature Rise test J4.4 (AS/NZS 3112:2017/A1:2021)		N/A
J4.4	Temperature rise test The relevant requirements of Clause 2.13.8 are applicable for the temperature		N/A

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	rise test, except that the test current shall be that specified in the relevant product standard		
	The temperature rise of the pins shall not exceed 45 K irrespective of the temperature rise of parts specified in end-product standards.		N/A
	For detachable plug portions the temperature rise of terminals and contacts shall not exceed 45 K. (AS/NZS 3112:2017)		N/A
2.13.8	Test No.6 – Temperature rise test		N/A
	Plug tested in draught free environment as specified using clamping units as specified in Figure 2.10		N/A
	Test Current Relevant Product Standard	_____ Amps _____ (Standard?)	N/A
	Temperature of terminals and contacts of detachable plug portion not exceeding 45 K (AS/NZS 3112:2017)	(see appended table)	N/A
J4.5	Securement of pins of the plug portion The requirements of Clause 2.13.9 are applicable for the securement of pins. (AS/NZS 3112:2017)		N/A
2.13.9	Test No.7. Securement of pins		N/A
2.13.9.1	Movement of pins		N/A
	Plug pins clamped 5 ± 0.5 mm from pin face; test equipment and sample pre-conditioning for 1 h at $40 \pm 1^\circ\text{C}$		N/A
	Force of 18 ± 1 N applied to pin 14 ± 0.5 mm from plug face; applied gradually over 10 s and maintained for 10 s; applied in four directions		N/A
	Maximum deflection during test not exceeding 2.0 mm	(see appended results)	N/A
	Any distortion 5 minutes after test does not prevent insertion of plug into standard gauge(s) (AS/NZS 3112:2017 + A1:2021)		N/A
2.13.9.2	Fixing of pins		N/A
	Plug heated to $50 \pm 2^\circ\text{C}$ for 1h		N/A
	Force of 60 ± 0.6 N applied to each pin over 10 s and maintained for 10 minutes; applied in two directions along length of pin		N/A
	Maximum displacement during test not exceeding		N/A

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	2.4 mm		
	Maximum measured displacement		N/A
	Pin returns to within 0.8 mm of nominal length within 5 minutes of removal of test force (AS/NZS 3112:2017)		N/A
J4.6	Tests on the insulation material of insulated pin-plug portions The requirements of Clause 2.13.13 are applicable for insulating material of insulated plug pins. (AS/NZS 3112:2017)		N/A
2.13.13	Test No.8 Tests for insulation material of insulated pin plugs		N/A
2.13.13.1	Material of pin-insulation resistant to stresses at temperature likely to occur		N/A
2.13.13.2	Pressure test at high temperature		N/A
	Specimen tested as per Figure 2.5 with force of 2.5 N applied as specified; maintained for 2 h at $160 \pm 5^{\circ}\text{C}$; removed and cooled by immersion in water within 10 s		N/A
	Thickness of insulation at point of impression not reduced by more than 50%		N/A
	Initial thickness	mm	N/A
	Thickness after test	mm	N/A
	No visible cracks on insulation material		N/A
	Dimension of insulating material not below minimum size in Figure 2.4 (AS/NZS 3112:2017)		N/A
2.13.13.3	Static damp heat test		N/A
	Specimen subjected to two damp heat cycles in accordance with IEC 60068-2-30; Db (12 + 12h), 95% RH, $25 \pm 3^{\circ}\text{C}$; 40°C		N/A
	After this treatment and recovery to room temperature; specimen subjected to:		N/A
(a)	Insulation resistance test in accordance with clause 2.13.2 (e)	(see appended table)	N/A
(b)	High voltage test in accordance with clause 2.13.3	(see appended table)	N/A
(c)	Abrasion test in accordance with clause 2.13.13.6		N/A
2.13.13.4	Low temperature test		N/A
	Plug maintained at $-15 \pm 2^{\circ}\text{C}$ for minimum of 24 h and returned to room temperature; after which specimen subjected to:		N/A

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(a)	Insulation resistance test in accordance with clause 2.13.2 (e)	(see appended table)	N/A
(b)	High voltage test in accordance with clause 2.13.3	(see appended table)	N/A
(c)	Abrasion test in accordance with clause 2.13.13.6		N/A
2.13.13.5	Impact test at low temperature		N/A
	Specimen maintained at $-15 \pm 2^{\circ}\text{C}$ for 24 h		N/A
	Specimen placed in position and subjected to impact test as per Figure 2.6; mass of 100 ± 1 g falling through 100 mm		N/A
	Four impacts applied; specimen rotated through 90° between impacts		N/A
	After return to room temperature; no visible cracks of insulating material		N/A
2.13.13.6	Abrasion test		N/A
	Plug held in clamp and tested as per Figure 2.7; pin loaded at 4 N; 20 000 movements		N/A
	After test; pins show no damage affecting safety or impairing further use of the plug		N/A
	Insulating sleeve not punctured or rucked up (AS/NZS 3112:2017)		N/A
J4.7	Test no.9 Equipment with a plug portion intended to be supported by the contacts of a socket-outlet		N/A
	Equipment with pins intended to be introduced into fixed socket-outlets not imposing undue strain on socket-outlet		N/A
	Applied torque not exceeding 0.25 Nm		N/A
	Measured torque (AS/NZS 3112:2017)	_____Nm	N/A
J4.8	Additional requirements for detachable plug portions		N/A
J4.8.1	Test no.10 Access to live parts		N/A
	Small test finger of Figure 13 of IEC 61032 was not possible to contact live parts with the force of 20N		N/A
	incorrectly assemble the plug portion was not possible (AS/NZS 3112:2017)		N/A
J4.8.2	Test No.11 Construction of detachable contacts where the input current of the equipment exceeds 0.2 A		N/A

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	Contacts of the equipment shall be such that they make and maintain, under normal service conditions, satisfactory electrical and mechanical contact with the corresponding contact of the detachable plug portion.		N/A
	For connections intended to accommodate pins, contact shall be made on two surfaces diametrically opposite, except if a single spring-assisted contact is used. (AS/NZS 3112:2017/A1:2021)		N/A
	Contacts shall not rely exclusively on the resilience of the contact material and shall have an opposite face of material other than thermoplastic or resilient insulating material. (AS/NZS 3112:2017/ A1:2021)		
	The alignment and contact-making properties of contacts shall be independent of terminal screws		N/A
	The effectiveness of the contacts shall be independent of pressure from any thermoplastic or resilient moulding.		N/A
	A visual inspection is conducted to determine the existence of interference between the metal contacts and the thermoplastic or resilient moulding to provide supplementary contact pressure to the metal contacts.		N/A
	Conformance of the effectiveness of the contacts is checked by inspection and by the inspection and tests in J4.8.3 (AS/NZS 3112:2017)		N/A
J4.8.4	Resistance of insulating material to heat and fire		N/A
J4.8.4.1	Test no.12 Resistance to heat For Type B detachable plug portions parts of non-metallic material, parts of insulating material supporting live parts including connections, and parts of thermoplastic material providing supplementary insulation or reinforced insulation, shall be sufficiently resistant to heat if their deterioration could cause the appliance to fail to comply with this Standard.		N/A
	Ball pressure test conducted in accordance with IEC 60695-10-2		N/A
(a)	75°C ± 2°C, for external parts;		N/A
(b)	125°C ± 2°C, for parts supporting live parts.		N/A
J4.8.4.2	Test no.13 Resistance to fire		N/A
	Plug portions comply with resistance to fire requirements of AS/NZS 3100 Annex A as follows:		N/A
	The glow wire test temperature 'T' for 'retaining parts' of fixed socket outlets shall be 750 C (AS/NZS 3112:2017)		N/A

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TABLES OF RESULTS

2.2.4	TABLE: Dimensions of insulation on insulated pin plugs		N/A
Dimension (Figure 2.1 designation)		Measured (mm)	Allowed (mm)
Phase pin		--	8.7 ± 0.5
Neutral pin		--	8.7 ± 0.5

2.8.1	TABLE: Dimensions of plugs- 10A (a1)		N/A
Dimension (Figure 2.1 designation)		Measured (mm)	Allowed (mm)
Phase and neutral pin width (A)		--	6.35 ± 0.15
Earth pin width (B)		--	6.35 ± 0.15
Pin thickness (C)		--	$1.63 + 0.15, -0.05$
Pin disposition (D)		--	checked by test gauge
Pin disposition (E)		--	checked by test gauge
Phase and neutral pin length (F)		--	17.06 ± 0.4
Earth pin length (G)		--	19.94 ± 0.8
Pin boss radius - maximum		--	21.0 max
Pin boss height		--	8.6 min

2.8.1	TABLE: Dimensions of plugs- 15A (a1)		N/A
Dimension (Figure 2.1 designation)		Measured (mm)	Allowed (mm)
Phase and neutral pin width (A)		--	6.35 ± 0.15
Earth pin width (B)		--	9.08 ± 0.15
Pin thickness (C)		--	$1.63 + 0.15, -0.05$
Pin disposition (D)		--	checked by test gauge
Pin disposition (E)		--	checked by test gauge
Phase and neutral pin length (F)		--	17.06 ± 0.4
Earth pin length (G)		--	19.94 ± 0.8
Pin boss radius - maximum		--	21.0 max
Pin boss height		--	8.6 min

2.8.1	TABLE: Dimensions of plugs-20A (a2)		N/A
Dimension (Figure 2.1 designation)		Measured (mm)	Allowed (mm)

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Phase and neutral pin width (A)	--	9.08 ± 0.15
Earth pin width (B)	--	9.08 ± 0.15
Pin thickness (C)	--	1.63 + 0.15, -0.05
Pin disposition (D)	--	checked by test gauge
Pin disposition (E)	--	checked by test gauge
Phase and neutral pin length (F)	--	17.06 ± 0.4
Earth pin length (G)	--	19.94 ± 0.8
Pin boss radius - maximum	--	21.0 max
Pin boss height	--	8.6 min

2.8.1	TABLE: Projection from plug face centroid		N/A
Direction of projection		Measured (mm)	Allowed (mm)
Left		--	≤ 21.9 or ≥ 27.0
Right		--	≤ 21.9 or ≥ 27.0
Up		--	≤ 21.9 or ≥ 27.0
Down		--	≤ 21.9 or ≥ 27.0

2.13.3	TABLE: Test No. 1 – High voltage test		N/A
Test voltage applied between:		Test voltage (V)	Breakdown
All poles of the plug; taken in pairs		1000	Yes / No
Live poles of the plug and any external metal		3500	Yes / No
Live poles of the plug and the earthing terminal		1000	Yes / No
Live poles of the plug and a flexible electrode		3500	Yes / No
Live poles and metal foil applied around insulation on pins		1250	Yes / No

2.13.7.1	Test No.2 – Tumbling barrel test		N/A
	Following the test, the samples shall comply with Clause 2.13.7.1(a..e)		N/A
	(a) Live parts shall not have become exposed to the standard test finger		N/A

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	(b) For earth pins, the resistance of the plug/socket-outlet circuit shall be such that conformance with Clause 3.14.7 is maintained. AS/NZS 3100 Cl 8.5 The resistance shall not exceed 0.1 Ω	___ Ω .	N/A
	(c) Any other function affecting safety shall not be impaired		N/A
	(d) No live part shall have become detached or loosened, to the extent that a hazardous situation is created (see Clause 2.9)		N/A
	(e) The pins shall be inspected with normal, or corrected to normal, vision. Insulation may be removed if necessary. Pins shall not be broken or show cracking		N/A

	Test No.3 Impact test for assembled equipment with the detachable plug portion connected and for equipment with an integral plug portion.		N/A
	Following the test, the samples shall comply with Clause 2.13.7.1 (a..e) as follows:		N/A
	(a) Live parts shall not have become exposed to the standard test finger (Figure 8.10 in AS/NZS 3100 or Test Probe B in IEC 61032)		N/A
	(b) For earth pins, the resistance of the plug/socket-outlet circuit shall be such that conformance with Clause 3.14.7 is maintained so that the resistance between the earthing terminal of any socket-outlet provided with an earthing contact and the earthing terminal of the plug used for testing shall be of a low resistance. Compliance is by the test of earthing connection in AS/NZS 3100 Clause 8.5. The resistance shall not exceed 0.1 Ω	___ Ω .	N/A
	(c) Any other function affecting safety shall not be impaired		N/A
	(d) No live part shall have become detached or loosened, to the extent that a hazardous situation is created		N/A

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	(e) The pins shall be inspected with normal, or corrected to normal, vision. Insulation may be removed if necessary. Pins shall not be broken or show cracking.		N/A
	Following the test, the samples shall conform to the 'Guarding of live parts' requirements of AS/NZS 3100:2015 cl 5.1 as follows:		N/A
	Except for equipment intended for use only in a position not accessible to unauthorized persons, all equipment shall be so designed and constructed that, when the equipment is standing, supported, or fixed, in a normal manner, no person can inadvertently come into contact with any live part		N/A
	If a hole giving access to preset controls is marked as such on the enclosure or reference made to it in the instructions and the setting of this control requires a screwdriver or other tool, the adjustment of the control shall not allow contact with any live parts. A metal test pin having a diameter of 2 mm and a length of 100 mm shall not become live when it is inserted through the hole in every position with a force of 10 N.		N/A
	In addition, the opening or removal of any cover or component, with or without tools, where such opening or removal is necessary as a normal operation of the equipment as distinct from maintenance, repairs, or adjustment, shall not expose live parts to inadvertent personal contact.		N/A
	Any metal cover or casing enclosing live parts shall be of a strength sufficient to ensure that it cannot be deformed readily so as to come into contact with live parts.		N/A
	Compliance is checked by inspection, test and checking that live parts shall not have become exposed to the standard test finger (Figure 8.10 in AS/NZS 3100 or Test Probe B in IEC 61032)		N/A
	Class II equipment and class II constructions shall be constructed and enclosed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only.		N/A
	It shall only be possible to touch parts which are separated from live parts by double insulation or reinforced insulation.		N/A
	Compliance is checked by application of the standard test finger (Figure 8.10 in AS/NZS 3100 or Test Probe B in IEC 61032)		N/A

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	Following the test, the samples shall conform to the 'Separation of live parts from non-current-carrying conductive parts' requirements of AS/NZS 3100.Cl 5.2.2 as follows:		N/A
	The support and insulation of every live part shall be such as will ensure that no live part can make contact with any non-current-carrying conductive part exposed to personal contact.		N/A
	In respect of terminals of components such as switches, adequate clearances shall be maintained or insulation shall be provided to prevent contact of the terminals, or loose strands of flexible cords intended to be terminated therein, with exposed conductive parts. Where necessary, provision shall be made to ensure that conductors protruding through terminals, when normally connected, will not contact exposed conductive parts.		N/A
	Compliance is checked by inspection.		N/A

	Test No.3 Impact test for the detachable plug portion after it has been separated from the equipment		N/A
	Following the test, the samples shall comply with Clause 2.13.7.1 (a..e)		N/A
	(a) Live parts shall not have become exposed to the standard test finger (Figure 8.10 in AS/NZS 3100 or Test Probe B in IEC 61032)		N/A
	(b) For earth pins, the resistance of the plug/socket-outlet circuit shall be such that conformance with Clause 3.14.7 is maintained so that the resistance between the earthing terminal of any socket-outlet provided with an earthing contact and the earthing terminal of the plug used for testing shall be of a low resistance. Compliance is by the test of earthing connection in AS/NZS 3100 Clause 8.5. The resistance shall not exceed 0.1 Ω	___ Ω .	N/A
	(c) Any other function affecting safety shall not be impaired		N/A
	(d) No live part shall have become detached or loosened, to the extent that a hazardous situation is created		N/A

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	(e) The pins shall be inspected with normal, or corrected to normal, vision. Insulation may be removed if necessary. Pins shall not be broken or show cracking.		N/A
	Following the test, the samples shall conform to the 'Guarding of live parts' requirements of AS/NZS 3100:2015 cl 5.1 as follows:		N/A
	Except for equipment intended for use only in a position not accessible to unauthorized persons, all equipment shall be so designed and constructed that, when the equipment is standing, supported, or fixed, in a normal manner, no person can inadvertently come into contact with any live part		N/A
	If a hole giving access to preset controls is marked as such on the enclosure or reference made to it in the instructions and the setting of this control requires a screwdriver or other tool, the adjustment of the control shall not allow contact with any live parts. A metal test pin having a diameter of 2 mm and a length of 100 mm shall not become live when it is inserted through the hole in every position with a force of 10 N.		N/A
	In addition, the opening or removal of any cover or component, with or without tools, where such opening or removal is necessary as a normal operation of the equipment as distinct from maintenance, repairs, or adjustment, shall not expose live parts to inadvertent personal contact.		N/A
	Any metal cover or casing enclosing live parts shall be of a strength sufficient to ensure that it cannot be deformed readily so as to come into contact with live parts.		N/A
	Compliance is checked by inspection, test and checking that live parts shall not have become exposed to the standard test finger (Figure 8.10 in AS/NZS 3100 or Test Probe B in IEC 61032)		N/A
	Class II equipment and class II constructions shall be constructed and enclosed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only.		N/A
	It shall only be possible to touch parts which are separated from live parts by double insulation or reinforced insulation.		N/A
	Compliance is checked by application of the standard test finger (Figure 8.10 in AS/NZS 3100 or Test Probe B in IEC 61032)		N/A

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	Following the test, the samples shall conform to the 'Separation of live parts from non-current-carrying conductive parts' requirements of AS/NZS 3100.CI 5.2.2 as follows:		N/A
	The support and insulation of every live part shall be such as will ensure that no live part can make contact with any non-current-carrying conductive part exposed to personal contact.		N/A
	In respect of terminals of components such as switches, adequate clearances shall be maintained or insulation shall be provided to prevent contact of the terminals, or loose strands of flexible cords intended to be terminated therein, with exposed conductive parts. Where necessary, provision shall be made to ensure that conductors protruding through terminals, when normally connected, will not contact exposed conductive parts.		N/A
	Compliance is checked by inspection.		N/A

2.13.8	TABLE: Test No. 6 - Temperature rise test		N/A
	Ambient temperature	°C	N/A
	Test current	A	N/A
Measured part		dT measured (K)	dT allowed (K)
Active (phase) terminal		--	45
Neutral terminal		--	45
Earthing terminal		--	45

2.13.9.1	TABLE: Movement of pins		N/A
	Earth and neutral pins clamped – phase pin loaded		N/A
Force direction		Measured deflection (mm)	Allowed deflection (mm)
Force towards neutral plane parallel to pin plane		--	2.0
Force from neutral plane parallel to pin plane		--	2.0
Force outwards at 90° to pin plane		--	2.0
Force inwards at 90° to pin plane		--	2.0

2.13.9.1	TABLE: Movement of pins		N/A
	Phase and neutral pins clamped – earth pin loaded		N/A

Attachment No.1	IEC 62368-1E-ATTACHMENT		
Clause	Requirement + Test	Result - Remark	Verdict

Force direction	Measured deflection (mm)	Allowed deflection (mm)
Force inwards parallel to pin plane	--	2.0
Force outwards parallel to pin plane	--	2.0
Force towards neutral	--	2.0
Force towards phase	--	2.0

2.13.9.1	TABLE: Movement of pins		N/A
	Phase and earth pins clamped – neutral pin loaded		
Force direction	Measured deflection (mm)	Allowed deflection (mm)	
Force towards phase plane parallel to pin plane	--	2.0	
Force from phase plane parallel to pin plane	--	2.0	
Force outwards at 90° to pin plane	--	2.0	
Force inwards at 90° to pin plane	--	2.0	

2.13.13.3	TABLE: Test No.13(b) – Insulation resistance test after static damp heat test		N/A
Applied between:	Insulation resistance (MΩ)	Minimum required (MΩ)	
Live poles and metal foil applied around insulation on pins	--	5	

2.13.13.3	TABLE: Test No.1 – High voltage test after static damp heat test		N/A
Test voltage applied between:	Test voltage (V)	Breakdown	
Live poles and metal foil applied around insulation on pins	1250	Yes / No	

2.13.13.4	TABLE: Test No.1 – Insulation resistance test after low temperature test		
Applied between:	Insulation resistance (MΩ)	Minimum required (MΩ)	
Live poles and metal foil applied around insulation on pins	--	5	

2.13.13.4	TABLE: Test No.1 – High voltage test after low temperature test		N/A
Test voltage applied between:	Test voltage (V)	Breakdown	
Live poles and metal foil applied around insulation on pins	1250	Yes / No	

Attachment No.1	IEC 62368-1E-ATTACHMENT		
Clause	Requirement + Test	Result - Remark	Verdict

J4.8.4.1	TABLE: Test no.12 Resistance to heat		N/A
Component tested		Temperature (°C)	Diameter of impression (mm)
--		--	--
--		--	--
--		--	--

Conformance is checked by subjecting the relevant part to the ball pressure test of IEC 60695-10-2.

J4.8.4.2	TABLE: Test no.13 Resistance to Fire		N/A
	Plug portions shall comply with the requirements for resistance to fire in accordance with AS/NZS 3100:2017 Annex A. The glow-wire test temperature 'T' shall be 750°C.		N/A

Glow-wire testing was conducted in accordance with IEC 60695-2-11.

Test specimens arranged so that the surface in contact with the tip of the glow-wire was vertical and glow wire tip applied to surface of the specimen likely to be subjected to thermal stresses in normal use.

A layer of white pine board and wrapping tissue was placed beneath the sample at 200mm ±5mm distance.

Attachment No.1	IEC 62368-1E-ATTACHMENT		
Clause	Requirement + Test	Result - Remark	Verdict

SPECIMEN NUMBER	1	2	3	4	5	6	7	8
SPECIMEN DESCRIPTION	--	--	--	--	--	--	--	--
Material	--	--	--	--	--	--	--	--
Colour	--	--	--	--	--	--	--	--
Test specimen	--	--	--	--	--	--	--	--
Glow wire tip temperature (°C)	750	750	750	750	750	750	750	750
Duration of glow wire application (t _a) (s)	30	30	30	30	30	30	30	30
OBSERVATIONS	--	--	--	--	--	--	--	--
Duration from beginning of glow-wire tip application to ignition of specimen or layer (t _i) (s)	--	--	--	--	--	--	--	--
Duration from beginning of glow-wire tip application to when flames extinguish (t _e) (s)	--	--	--	--	--	--	--	--
Maximum height of flames after initial 1s (to nearest 5 mm) (mm)	--	--	--	--	--	--	--	--
Flame impingement on other parts	--	--	--	--	--	--	--	--
Degree of tip penetration	--	--	--	--	--	--	--	--

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Attachment No.1	IEC 62368-1E-ATTACHMENT		
Clause	Requirement + Test	Result - Remark	Verdict

Degree of specimen distortion	--	--	--	--	--	--	--	--
Scorching of pinewood board	--	--	--	--	--	--	--	--
EVALUATION CRITERIA	--	--	--	--	--	--	--	--
Visible flame or sustained glowing	--	--	--	--	--	--	--	--
Visible Flame Duration in Seconds during test.	--	--	--	--	--	--	--	--
Duration of flaming or glowing after tip removal (max. allowable 30 s) (s)	--	--	--	--	--	--	--	--
Surrounding parts burned away completely (not permitted)	--	--	--	--	--	--	--	--
Ignition of wrapping tissue layer (not permitted)	--	--	--	--	--	--	--	--
RESULTS If parts tested withstand the glow-wire test, but during the test produce a flame that persists for longer than 2 s, then the consequential needle flame test of AS/NZS 3100:2017 Annex A 6.1.5 applies.	--	--	--	--	--	--	--	--

LEGEND: CE Complete Equipment SA Sub Assembly SE Self Extinguished
EBD Emitted Burning Droplets SBD Specimen Burned and Distorted SMD Specimen Melted and Distorted
ME Manually Extinguished SC Separate Component SS Specimen Scorched
NA Not Applicable SCC Specimen Completely Consumed WPNI Wall Penetrated but no Ignition
NI No Ignition X Flame Appeared for an Instant

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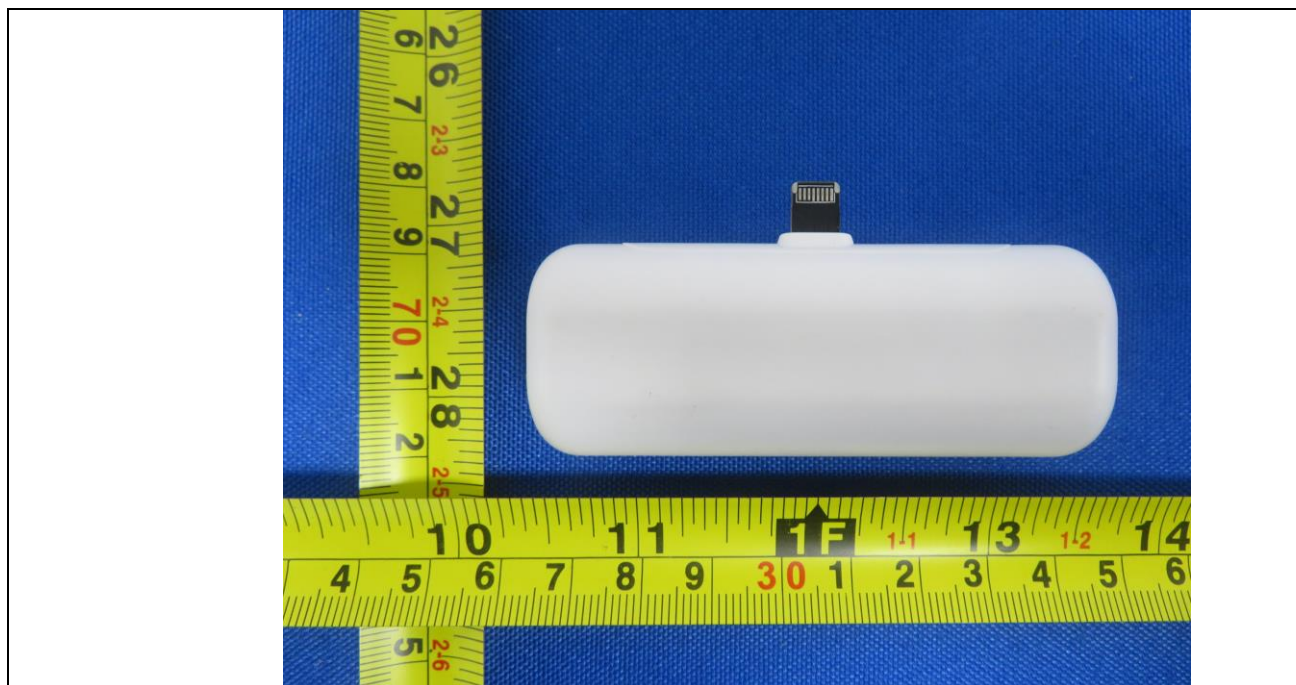
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TRF No. IEC 62368_1E

Attachment No.1	IEC 62368-1E-ATTACHMENT		
Clause	Requirement + Test	Result - Remark	Verdict

	TABLE: Needle- flame test (NFT)				N/A
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
--	--	--	--	--	--
Supplementary information: - NFT not relevant (or applicable) for Parts of material classified as V-0 or V-1 - NFT not relevant (or applicable) for Base material of PCBs classified as V-0 or if relevant VTM-0					

Attachment No.2**Product Photos**Details of: Overview for model PB-52Details of: Overview for model PB-52

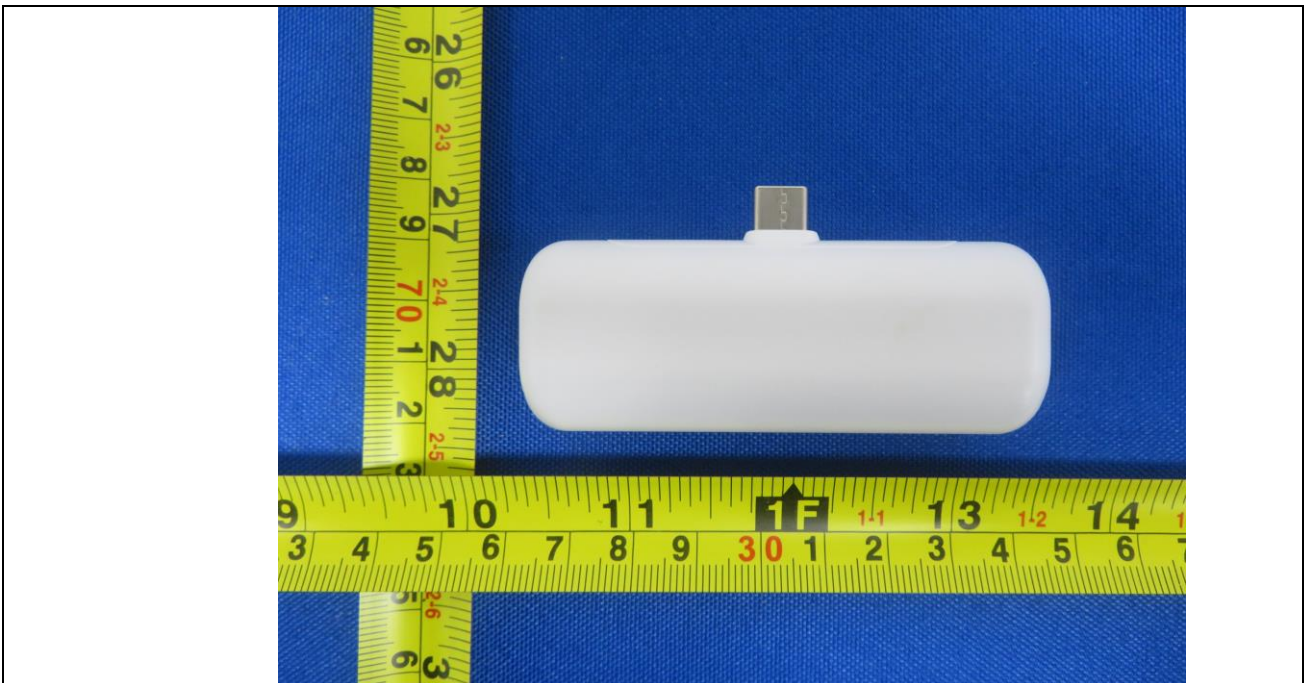
Attachment No.2

Product Photos

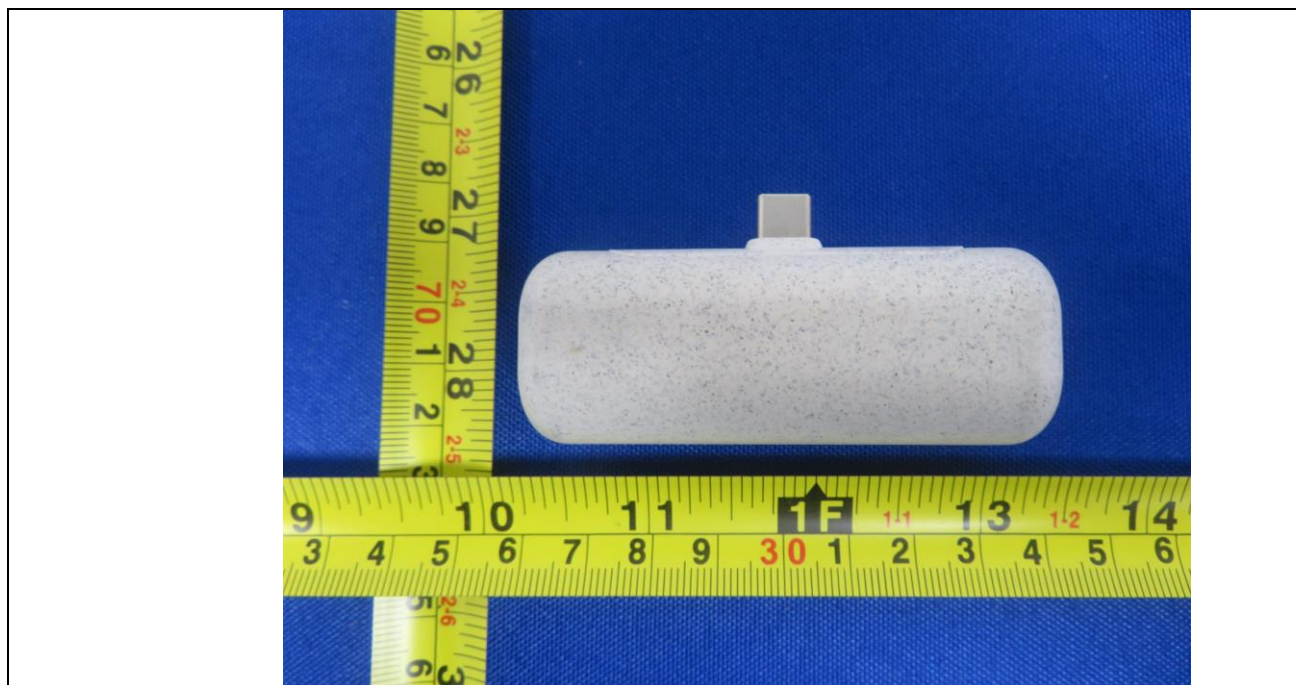
Details of: Overview for model PB-52



Details of: Overview for model PB-52



Attachment No.2**Product Photos**Details of: Overview for model PB-52Details of: Overview for model PB-52

Attachment No.2**Product Photos**Details of: Overview for model PB-52Details of: Overview for model PB-52

Attachment No.2

Product Photos

Details of: Overview for model PB-52



- End of report -