SAFETY TEST REPORT

IEC / EN 62368-1

Audio / video, information, and communication technology equipment

Part 1: Safety requirements

Report Number.....:	TRS01969/22
Date of issue .....:	08/11/2022
Name of testing laboratory.....:	iSERT (Pty) Ltd.
Address.....:	129 Khai-Apple Street, Montana, Pretoria, South Africa, 0182
Applicant's name.....:	Parrot Products (Pty) Ltd.
Address.....:	22 Cleveland Rd, Cleveland, Johannesburg, 2000
Test specification	
Standard.....:	IEC 62368-1:2014 (Second edition) EN 62368-1:2014 + A11: 2017
Test Result .....:	The Model OP0454 DLP XGA 3600 Ansi Long Throw Projector Parrot complies with the requirements of IEC 62368-1 in the configuration tested.

General disclaimer:

iSERT (Pty) Ltd. test reports apply only to the specific sample(s) tested under stated conditions. All samples tested were in good operating condition throughout the entire test program. It is the manufacturer's responsibility to ensure that additional production units of this model are manufactured with identical electrical and mechanical components. iSERT (Pty) Ltd. shall have no liability for any deductions, inference or generalizations drawn by the client or others from our Issued test reports. This report shall not be used to claim, constitute, or imply a product endorsement from iSERT (Pty) Ltd.

ilac-MRA sanas Testing Laboratory T0812

This test report is issued in accordance with SANAS accreditation requirements. SANAS is a signatory to the ILAC Mutual Recognition arrangement for the mutual recognition of the equivalence of testing and calibration reports

DOCUMENT CONTROL

Revision	Date	Author	Pages affected	Change proposal
1.0	08/11/2022	ES van Niekerk	All	N/A

TEST LABORATORY INFORMATION

Established in 2017, iSERT (Pty) Ltd. Provides EMC, RF, Safety and Performance testing services by our skilled Engineers to the public. Our services employ a wide variety of advanced cutting-edge test equipment with one of the widest ranges of accredited standards in the country.

The site and apparatus are constructed in conformance with the requirements of CISPR 16-1-4, EN 50147-1 and other equivalent standards. The laboratory is compliant with the requirements of ISO/IEC 17025

It is our definite objective to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with the best EMC, RF & Safety services by knowledgeable and accommodating staff.

Our test site is located at 129 Khai-Apple Street, Montana, Pretoria, South Africa 0186.

Company details:

iSERT (Pty) Ltd.
Reg: 2017/186396/07
Tel: + 27 (0)12 548 0940
E-Mail: info@isert.co.za
Website: www.isert.co.za

Tested by .....:	**ES van Niekerk** (Safety Engineer)	
Approved by .....:	**CJ Deysel** (Technical Director)	

Test item description ..... :	DLP XGA 3600 Ansi Long Throw Projector Parrot
Trademark ..... :	PARROT PRODUCTS
Manufacturer ..... :	Parrot Products (Pty) Ltd.
Model / Type reference ..... :	OP0454
Ratings..... :	Input: 100-240Vac, 50/60Hz, 2.5A
Country of origin ..... :	China

Test conditions ..... :	**Maximum**	**Minimum**	**Limits**
Ambient temperature	23.5°C	21.9°C	25°C ±10°C
Relative humidity	72.7%	66%	< 75%

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 NCs that own these marks.

Figure 1: Device marking label

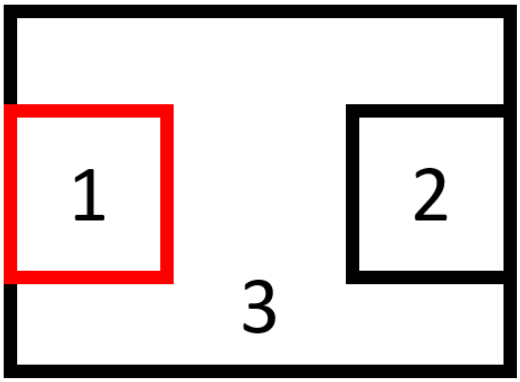
Test item particulars:	
Classification of use by ..... :	☒ Ordinary person ☒ Instructed person ☒ Skilled person ☒ Children likely to be present
Supply Connection ..... :	☒ AC Mains ☐ DC mains ☐ External Circuit – — ☐ ES1 ☐ ES2 ☐ ES3
Supply % Tolerance ..... :	☒ +10%/-10% ☐ +20%/-15% ☐ +___%/-___% ☐ None
Considered current rating of protective device as part of building or equipment installation ..... :	16A circuit breaker Installation location: ☒ Building; ☐ equipment
Supply Connection - Type ..... :	☒ Pluggable equipment type A – ☐ non-detachable supply cord ☒ appliance coupler ☐ direct plug-in ☐ mating connector ☐ Pluggable equipment type B – ☐ non-detachable supply cord ☐ appliance coupler ☐ Permanent connection ☐ Mating Connector ☐ Other:
Equipment mobility ..... :	☒ movable ☐ hand-held ☐ transportable ☒ stationary ☐ for building-in ☐ direct plug-in ☐ rack-mounting ☐ wall-mounted
Over voltage category (OVC) ..... :	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IIII ☐ other:
Class of equipment ..... :	☒ Class I ☐ Class II ☐ Class III
Access location ..... :	☐ restricted access location ☒ N/A
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maximum operating ambient ..... :	Standard environmental Conditions
IP protection class ..... :	☒ IP20
Power Systems ..... :	☐ TN ☐ TT ☐ IT - _____ V_{L_L}

Altitude during operation (m) .....:	☒ 2000m or less ☐ ____m
Altitude of test laboratory (m).....:	☐ 2000m or less ☒ 1300 m
Mass of equipment (kg) .....:	2.32kg approx.
Possible test case verdicts:	
- test case does not apply to the test object.....:	N (Not applicable)
- test object does meet the requirement .....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing	
Date (s) of performance of tests .....:	04/11/2022 – 08/11/2022 The results obtained in this test report are only valid for the item(s) tested. iSERT (Pty) Ltd. does not make any claims of compliance for samples other than the variants listed which were not tested.
General Product information	
Product description	The EUT is a projector that can be mounted onto ceilings. The EUT has four threaded holes on the bottom of the enclosure to fix the device to the ceiling.

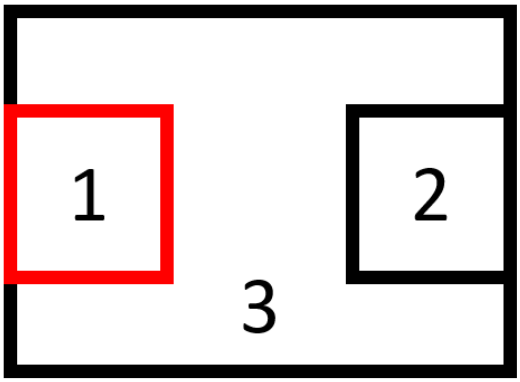
ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.) (Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared class 3 as a worse case classification e.g. PS3, ES3.	
Electrically caused injury (Clause 5): (Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification) Example: +5 V dc input	
Source of electrical energy	**Corresponding classification (ES)**
100 - 240Vac Mains	ES3
Electrically-caused fire (Clause 6): (Note: List sub-assembly or circuit designation and corresponding energy source classification) Example: battery pack (maximum 85 watts):	
Source of power or PIS	**Corresponding classification (PS)**
100 - 240Vac Mains	PS3
Injury caused by hazardous substances (Clause 7) (Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.) Example: Liquid in filled component	
Source of hazardous substances	**Corresponding chemical**
None	N/A
Mechanically-caused injury (Clause 8) (Note: list moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.) Example: Wall mount unit	
Source of kinetic/mechanical energy	**Corresponding classification (MS)**
Installation height: > 2m	MS3
Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.) Example: Hand-held scanner – thermoplastic enclosure	
Source of thermal energy	**Corresponding classification (TS)**
Equipment not touched during normal use (period < 1s)	TS1
Radiation (Clause 10) (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product	
Type of Radiation	**Corresponding Classification (RS)**
Visible radiation	RS2

ENERGY SOURCE DIAGRAM
Indicate which energy sources are included in the energy source diagram. Insert diagram below.
DLP XGA 3600 Ansi Long Throw Projector Parrot ☒ ES ☒ PS ☒ MS ☒ TS ☐ RS Classification: 1 2 3 1. AC Mains Input 2. Lamp 3. Device Enclosure

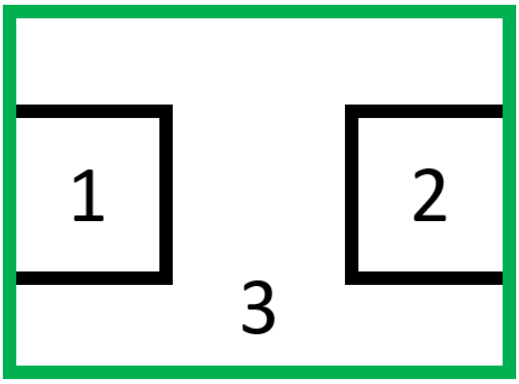
ES



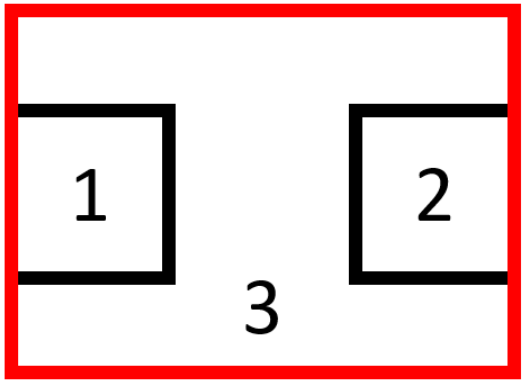
PS



TS



MS



Haz mat

RS

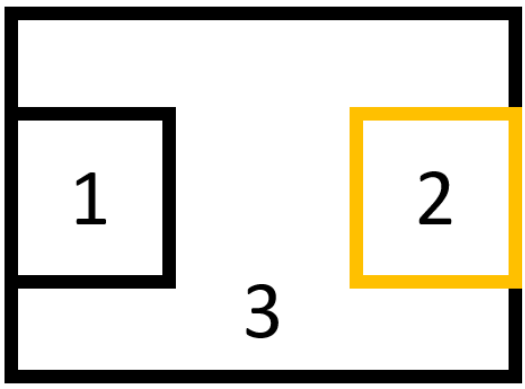


Figure 2: Energy Source Diagrams

OVERVIEW OF EMPLOYED SAFEGAURDS				
Clause	**Possible Hazard**			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary, Instructed, skilled (hands)	ES3: 100-240Vac Input	N/A/S	N/A/S	--
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100-Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
Equipment enclosure	PS3: Input > 100W	N/A/S	N/A/S	--
7.1	Chemically caused injury			
Body Part (e.g., Skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
None	None	--	--	--
8.1	Mechanically caused injury			
Body Part (E.g., Ordinary)	Energy Source (MS3: High pressure lamp)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary, Instructed, skilled (whole body)	MS3: Mount height > 2m	N/A/S	--	--
9.1	Thermal burn			
Body Part (E.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary, Instructed, skilled (hands)	TS1: Equipment Enclosure	N/A/S	--	--
10.1	Radiation			
Body Part (E.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
Eyes	Optical lamp	N/A/S	--	--
Supplementary Information: (1) See attached energy source diagram for additional details. (2) "N" – Normal Condition; "A" – Abnormal Condition; "S" – Single Fault				

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

4	**GENERAL REQUIREMENTS**		**P**
4.1.1	Acceptance of materials, components, and subassemblies		P
4.1.2	Use of Components	Certified components are used in accordance with their ratings, certifications and comply with applicable parts of this standard. Components not certified are used in accordance with their ratings and comply with applicable parts of IEC / EN 62368 and the relevant component standard. Components, for which no relevant IEC / EN standard exists, have been tested under the conditions occurring in the equipment, using applicable parts of IEC / EN 62368.	P
4.1.3	Equipment design and construction		P
4.1.15	Markings and instructions.....:	(See Annex F)	P
4.4.4	Safeguard robustness		P
4.4.4.2	Steady force tests .....:	(See Annex T.4)	P
4.4.4.3	Drop tests.....:	(See Annex T.7)	N
4.4.4.4	Impact tests .....:	(See Annex T.6)	P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....:	(See Annex T.3)	N
4.4.4.6	Glass Impact tests .....:	(See Annex T.9, Annex U)	N
4.4.4.7	Thermoplastic material tests .....:	(See Annex T.8)	N
4.4.4.8	Air Comprising a safeguard.....:	(See Annex T)	N
4.4.4.9	Accessibility and safeguard effectiveness		N
4.5	Explosion		N
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard		P
4.6.2	10 N force test applied to .....:	Internal conductors	P
4.7	Equipment for direct insertion into mains socket-outlets.....:	Not directly inserted into mains socket.	N
4.7.2	Mains plug part complies with the relevant standard		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.3	Torque (Nm)		N
4.8	Products containing coin/button cell batteries	No batteries	N
4.8.2	Instructional safeguard		N
4.8.3	Battery compartment construction		N
	Means to reduce the possibility of children removing the battery		--
4.8.4	Battery Compartment Mechanical Tests .....:	(See Table T.7)	N
4.8.5	Battery Accessibility		N
4.9	Likelihood of fire or shock due to entry of conductive object.....:	Sample complies with Annex P.	P
5	**ELECTRICALLY CAUSED INJURY**		**P**
5.2.1	Electrical energy source classifications .....:	(See appended table 5.2)	P
5.2.2	ES1, ES2 and ES3 limits	ES3 equipment	P
5.2.2.2	Steady-state voltage and current.....:	(See appended table 5.2)	P
5.2.2.3	Capacitance limits.....:	(See appended table 5.2)	N
5.2.2.4	Single Pulse limits .....:	(See appended table 5.2)	N
5.2.2.5	Limits for repetitive pulses.....:	(See appended table 5.2)	N
5.2.2.6	Ringing signals.....:	(See Annex H)	N
5.2.2.7	Audio signals.....:	(See Clause E.1)	N
5.3	Protection against electrical energy sources		P
5.3.1	General Requirements for accessible parts to ordinary, instructed, and skilled persons	No bare ES3 conductors	P
5.3.2.1	Accessibility to electrical energy sources and safeguards		P
5.3.2.2	Contact requirements		P
	a) Test with test probe from Annex V. .....:		N
	b) Electrical strength test potential (V).....:		N
	c) Air gap (mm). .....:		N
5.3.2.4	Terminals for connecting stripped wire	No such terminals	N
5.4	Insulation materials and requirements		-
5.4.1.2	Properties of insulating material	Non hygroscopic material used	P
5.4.1.3	Humidity conditioning. .....:	(See sub-clause 5.4.8)	N
5.4.1.4	Maximum operating temperature for insulating materials .....:	(See appended table 5.4.1.4)	N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.5	Pollution degree.....:	PD2	-
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N
5.4.1.5.3	Thermal cycling		N
5.4.1.6	Insulation in transformers with varying dimensions		N
5.4.1.7	Insulation in circuits generating starting pulses		N
5.4.1.8	Determination of working voltage	ES3 circuit	P
5.4.1.9	Insulating surfaces		N
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	No such parts	N
5.4.1.10.2	Vicat softening temperature. .....:	(See appended table 5.4.1.10.2)	N
5.4.1.10.3	Ball pressure.....:	(See appended table 5.4.1.10.3)	N
5.4.2	Clearances.....:	Max 240Vac.	P
5.4.2.2	Determining clearance using peak working voltage	(See appended table 5.4.2.2)	P
5.4.2.3	Determining clearance using required withstand voltage.....:	(See appended table 5.4.2.3)	N
	a) a.c mains transient voltage.....:		-
	b) d.c. mains transient voltage .....:		-
	c) external circuit transient voltage.....:		-
	d) Transient voltage determined by measurement .....:		-
5.4.2.4	Determining the adequacy of a clearance using electric strength test	(See appended table 5.4.2.4)	N
5.4.2.5	Multiplication factors for clearances and test voltages. .....:		N
5.4.3	Creepage distances. .....:	(See appended table 5.4.3)	P
5.4.3.1	General	Max 240Vac.	P
5.4.3.3	Material group.....:	IIIb assumed	---
5.4.4	Solid insulation		P
5.4.4.2	Minimum distance through insulation.....:	(See appended table 5.4.4.2)	N
5.4.4.3	Insulation compound forming solid insulation		N
5.4.4.4	Solid insulation in semiconductor devices		N
5.4.4.5	Cemented Joints		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.4.6	Thin Sheet material	Employed as basic insulation	P
5.4.4.6.1	General requirements		N
5.4.4.6.2	Separable thin sheet material		N
	Number of layers (pcs). .....:		N
5.4.4.6.3	Non-Separable thing sheet material		N
5.4.4.6.4	Standard test procedure for non-separable thin sheet material.....:	(See appended table 5.4.9)	N
5.4.4.6.5	Mandrel test		N
5.4.4.7	Solid insulation in wound components		N
5.4.4.9	Solid insulation at frequencies > 30kHz.....:		N
5.4.5	Antenna terminal insulation	No such components	N
5.4.5.1	General		N
5.4.5.2	Voltage surge test.....:		-
	Insulation resistance (MΩ) .....:		-
5.4.6	Insulation of internal wire as part of supplementary safeguard .....:	(See appended table 5.4.4.2)	N
5.4.7	Tests for semiconductor components and for cemented joints		N
5.4.8	Humidity conditioning	Non-hygroscopic materials: for functional insulation B.4.4.1 and B.4.4.2 of this standard applied.	N
	Relative humidity (%).....:		-
	Temperature (°C) .....:		-
	Duration (h).....:		-
5.4.9	Electric strength test .....:	(See appended table 5.4.9)	P
5.4.9.1	Test procedure for a solid insulation type test		N
5.4.9.2	Test procedure for routine tests		N
5.4.10	Protection against transient voltages between external circuit		N
5.4.10.1	Parts and circuits separated from external circuits	(See appended table 5.4.9)	N
5.4.10.2	Test methods		N
5.4.10.2.1	General		N
5.4.10.2.2	Impulse test. .....:	(See appended table 5.4.9)	N
5.4.10.2.3	Steady-state test. .....:	(See appended table 5.4.9)	N
5.4.11	Insulation between external circuits and earthed circuitry.....:	(See appended table 5.4.9)	N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.11.1	Exceptions to separation between external circuits and earth		N
5.4.11.2	Requirements		N
	Rated operating voltage U_{op} (V) .....:		-
	Nominal voltage U_{peak} (V).....:		-
	Max increase due to variation U_{sp}.....:		-
	Max increase due to ageing ΔU_{sa} .....:		-
	$U_{op} = U_{peak} + U_{sp} + U_{sa}$.....:		-
5.5	Components as safeguards		
5.5.1	General		P
5.5.2	Capacitor and RC unit		N
5.5.2.1	General requirement	(See Annex G.11)	N
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector .....:	(See appended table 5.5.2.2)	N
5.5.3	Transformers	(See Annex G.5.3)	P
5.5.4	Optocouplers	(See sub-clause 5.4 or Annex G.12)	N
5.5.5	Relays	(See Annex G.2)	N
5.5.6	Resistors	(See Annex G.10)	N
5.5.7	SPD's	(See Annex G.8)	N
5.5.7.1	Use of an SPD connected to reliable earthing		N
5.5.7.2	Use of an SPD between mains and protective earth		N
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable .....:	(See Clause 5.4.9)	N
5.6	Protective conductor		-
5.6.2	Requirement for protective conductors		P
5.6.2.1	General requirements		P
5.6.2.2	Colour of insulation		P
5.6.3	Requirement for protective earthing conductors		N
	Protective earthing conductor size (mm^2) .....:		-
5.6.4	Requirement for protective bonding conductors		P
5.6.4.1	Protective bonding conductors		P
	Protective bonding conductor size (mm^2). .....:	> 1.5mm^2	P
	Protective current rating (A). .....:	16A	P

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.6.4.3	Current limiting and overcurrent protective devices	No such components	N
5.6.5	Terminals for protective conductors		N
5.6.5.1	Requirements		N
	Conductor size (mm^2), nominal thread diameter (mm). .....:		N
5.6.5.2	Corrosion		N
5.6.6	Resistance of the protective system		P
5.6.6.1	Requirements		N
5.6.6.2	Test Method Resistance (Ω).....:		N
5.6.7	Reliable earthing		P
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks		P
5.7.2.1	Measurement of touch current.....:	(See appended table 5.7.4)	P
5.7.2.2	Measurement of prospective touch voltage		N
5.7.3	Equipment set-up, supply connections and earth connections .....:		N
	System of interconnected equipment (Separate connections/single connection).....:		-
	Multiple Connections to mains one connection at a time / simultaneous connections) .....:		-
5.7.4	Earthed conductive accessible parts	(See appended table 5.7.4)	N
5.7.5	Protective conductor current. .....:		P
	Supply voltage (V) .....:	100-240Vac	-
	Measured current (mA). .....:	150µA	-
	Instructional Safeguard	(See F.4 and F.5)	N
5.7.6	Prospective touch voltage and touch current due to external circuits		N
5.7.6.1	Touch current from coaxial cables		N
5.7.6.2	Prospective touch voltage and touch current from external circuits		N
5.7.7	Summation of touch currents from external circuits.....:		N
	a) Equipment with earthed external circuits. Measured current (mA). .....:		N
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA). ...:		N

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

6	**ELECTRICALLY – CAUSED FIRE**		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications		P
6.2.2.1	General	PS3 > 100W	P
6.2.2.2	Power measurement for worst-case load fault	(See appended table 6.2.2)	P
6.2.2.3	Power measurements for worst-case power source fault	(See appended table 6.2.2)	N
6.2.2.4	PS1. .....:	(See appended table 6.2.2)	P
6.2.2.5	PS2. .....:	(See appended table 6.2.2)	P
6.2.2.6	PS3. .....:	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources		N
6.2.3.1	Arcing PIS. .....:	(See appended table 6.2.2)	P
6.2.3.2	Resistive PIS. .....:	(See appended table 6.2.2)	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions	(See appended table 5.4.1.4, 6.3.2, 9.2.5, B.2.6)	P
6.3.1 (a)	No ignition and attainable temperature value less than 90% defined by ISO 871 or less than 300 °C for unknown materials. .....:	(See appended table 5.4.1.4, 6.3.2, 9.2.5, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure		N
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard method	See 6.4.3	N
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		P
6.4.3.1	General		P
6.4.3.2	Supplementary safeguards		P
	Special conditions if conductors on printed boards are opened or peeled	PCB material: V-0	N
6.4.3.3	Single fault conditions. .....:	(See appended table B3 and B4)	P
	Special conditions for temperature limited by fuse		N
6.4.4	Control of fire spread in PS1 circuits	PCB material: V-0 Enclosure material: V-1	P
6.4.5	Control of fire spread in PS2 circuits	PCB material: V-0 Enclosure material: V-1	P

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.4.5.2	Supplementary safeguards	(See appended tables 4.1.2 and Annex G)	N
6.4.6	Control of fire spread in PS3 circuit	PCB material: V-0 Enclosure material: V-1	P
6.4.7	Separation of combustible materials from a PIS		P
6.4.7.1	General. .....:	(See appended tables 6.2.3.1 and 6.2.3.2)	N
6.4.7.2	Separation by distance		N
6.4.7.3	Separation by a fire barrier		N
6.4.8	Fire enclosure and fire barriers	PCB material: V-0 Enclosure material: V-1	P
6.4.8.1	Fire enclosure and fire barrier material properties	PCB material: V-0 Enclosure material: V-1	P
6.4.8.2.1	Requirements for a fire barrier		N
6.4.8.2.2	Requirements for a fire enclosure	PCB material: V-0 Enclosure material: V-1	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.3.1	Fire enclosure and fire barrier openings		P
6.4.8.3.2	Fire barrier dimensions	No fire barrier	N
6.4.8.3.3	Top openings in fire enclosure, dimensions (mm) .....:	No such openings	N
	Needle flame test		N
6.4.8.3.4	Bottom openings in fire enclosure, condition met a), b) and/or c) dimensions (mm)		P
	Flammability tests for the bottom of a fire enclosure	Enclosure material: V-1	N
6.4.8.3.5	Integrity of the fire enclosure, condition met a), b) or c)		N
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating. ..:		N
6.5	Internal and external wiring		P
6.5.1	Requirements		P
6.5.2	Cross-sectional area (mm^2). .....:		N
6.5.3	Requirements for interconnection to building wire. .....:	Not connected to building wiring	N
6.6	Safeguards against fire due to connection additional equipment		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	External port limited to PS2 or complies with Clause Q.1		N
7	**INJURY CAUSED BY HAZARDOUS SUBSTANCES**		**N**
7.2	Reduction of exposure to hazardous substances		N
7.3	Ozone exposure		N
7.4	Use of personal safeguards (PPE)		N
	Personal safeguards and instructions		-
7.5	Use of instructional safeguards and instructions. .....:		N
	Instructional safeguard (ISO 7010). .....:		-
7.6	Batteries. .....:	No batteries	N
8	**MECHANICALLY CAUSED INJURY**		**P**
8.1	General		N
8.2	Mechanical energy source classifications	Device is MS3	P
8.3	Safeguards against mechanical energy sources		P
8.4	Safeguards against parts with sharp edges and corners	No sharp edges or corners	N
8.4.1	Safeguards		N
8.5	Safeguards against moving parts	No moving parts	N
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment	No access required for functioning	N
8.5.2	Instructional safeguard. .....:		-
8.5.4	Large data storage equipment		N
8.5.4.1	Large data storage equipment		N
8.5.4.2	Equipment having electromechanical device for destruction of media		N
8.5.4.2.1	Safeguard and safety interlocks. .....:	(See Annex F.4 and Annex K)	N
8.5.4.2.2	Instructional safeguards against moving parts		N
	Instructional safeguard		-
8.5.4.2.3	Disconnection from supply		N
8.5.4.2.4	Probe type and force (N). .....:		N
8.5.5	High pressure lamps		N
8.5.5.1	Energy source classification		N
8.5.5.2	High pressure lamp explosion test		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
8.6	Stability	Device mass < 7kg, no requirement	N
8.6.1	Product classification		-
	Instructional safeguard.....:		N
8.6.2	Static stability		N
8.6.2.2	Static stability test		N
	Applied force. .....:		-
8.6.2.3	Downward force test		N
8.6.3	Relocation stability test	No requirement	N
	Unit configuration during 10° tilt. .....:		-
8.6.4	Glass slide test		N
8.6.5	Horizontal force test (Applied Force).....:		N
	Position of feet or movable parts.....:		-
8.7	Equipment mounted to wall or ceiling	Device may be mounted higher than 2m	P
8.7.1	Mounting means (Length of screws (mm) and mounting surface). .....:	4 mounting screws	N
8.7.2	Direction and applied force.....:	23N	N
8.8	Handles strength	No such components	N
8.8.1	Classification		N
8.8.2	Applied Force. .....:		N
8.9	Wheels or casters attachment requirements	No such components	N
8.9.1	Classification		N
8.9.2	Marking and instructions. .....:		-
8.10	Carts, stand or carriers	No such components	N
8.10.1	General		N
8.10.2	Marking and instructions		N
	Instructional safeguard.....:		-
8.10.3	Carts, stand or carrier loading test and compliance		N
	Applied Force .....:		-
8.10.4	Cart, Stand or carrier impact test		N
8.10.5	Mechanical stability		N
	Applied horizontal force (N).....:		-
8.10.6	Thermoplastic temperature stability (°C).....:		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
8.11	Mounting means for rack mounted equipment	Not rack mounted equipment	N
8.11.1	General		N
8.11.2	Product Classification		N
8.11.3	Mechanical strength test, variable N.....:		N
8.11.4	Mechanical strength test 250N, including end stops		N
8.12	Telescoping or rod antennas. .....:	(See appended table T.11)	N
	Button/Ball diameter (mm).....:		-
9	**THERMAL BURN INJURY**		**P**
9.2	Thermal Energy source classification	TS1	P
9.3	Safeguard against thermal energy sources		N
9.4	Requirements for safeguards		-
9.4.1	Equipment safeguard		N
9.4.2	Instructional safeguard.....:		N
10	**RADIATION**		**P**
10.2	Radiation energy source classifications		P
10.2.1	General Classification	RS2	P
10.3	Protection against laser radiation	No lasers present	N
	Laser radiation that exists equipment		-
	Normal, abnormal, single-fault. .....:		N
	Instructional safeguard.....:		-
	Tool. .....:		-
10.4	Protection against visible, infrared, and UV radiation	Optical output required for device operation. Instructional safeguards present.	P
10.4.1	General		N
10.4.1.a)	RS3 for ordinary and instructed persons.....:		N
10.4.1.b)	RS3 accessible to a skilled person. .....:		N
	Personal safeguard (PPE) instructional safeguard .....:		_
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1. .....:		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
10.4.1.d)	Normal, abnormal, single-fault conditions. .....:	(See appended table B.3 and B.4)	N
10.4.1.e)	Enclosure material employed as safeguard is opaque.....:		N
10.4.1.f)	UV attenuation. .....:		N
10.4.1.g)	Materials resistant to degradation UV. .....:		N
10.4.1.h)	Enclosure containment of optical radiation. .....:		N
10.4.1.i)	Exempt group under normal operating conditions. .....:		N
10.4.2	Instructional safeguard.....:		N
10.5	Protection against x-radiation		N
10.5.1	X-radiation energy source that exists equipment	(See appended table B.3 and B.4)	N
	Normal, abnormal, single-fault conditions		N
	Equipment safeguards.....:		N
	Instructional safeguard for skilled persons. .....:		N
10.5.3	Most unfavourable supply voltage to give maximum radiation.....:		-
	Abnormal and single-fault conditions.....:	(See appended table B.3 and B.4)	N
	Maximum radiation (pA/kg).....:		N
10.6	Protection against acoustic energy sources		N
10.6.1	General		N
10.6.2	Classification		N
	Acoustic output, dB(A).....:		N
	Output voltage, unweighted r.m.s.....:		N
10.6.4	Protection of persons		N
	Instructional safeguards... .....:		-
	Equipment safeguard prevent ordinary persons to RS2. .....:		-
	Means to actively inform user of increase sound pressure.....:		-
	Equipment safeguard prevent ordinary person to RS2. .....:		-
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N
10.6.5.1	Corded passive listening devices with analog input		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output.....:		-
10.6.5.2	Corded listening devices with digital input		N
	Maximum dB(A)		-
10.6.5.3	Cordless listening device		N
	Maximum dB(A).....:		-
B	**NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS**		**P**
B.2	Normal Operating Conditions		P
B.2.1	General requirements. .....:	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers. .....:	(See Annex E)	N
B.2.3	Supply voltage and tolerances		P
B.2.5	Input test. .....:	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements. .....:	(See appended table B.3)	N
B.3.2	Covering of ventilation openings		P
B.3.3	D.C. mains polarity test		N
B.3.4	Setting of voltage selector. .....:		N
B.3.5	Maximum load at output terminals.....:	(See appended table B.3)	P
B.3.6	Reverse battery polarity		N
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N
B.3.8	Safeguards functional during and after abnormal operating conditions		N
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short circuited.....:	(See appended table B.4)	N
B.4.3	Motor tests		N
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature. .....:	(See Clause G.5)	N
B.4.4	Short circuit of functional insulation		N
B.4.4.1	Short circuit of clearances for functional insulation		N
B.4.4.2	Short circuit of creepage distances for functional insulation		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
B.4.4.3	Short circuit of functional insulation on coated printed boards		N
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		N
B.4.6	Short circuit or disconnect of passive components	(See table B.4)	P
B.4.7	Continuous operation of components		N
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions		N
B.4.9	Battery charging under single fault conditions...:	(See Annex M)	N
C	**UV RADIATION**		**N**
C.1	Protection of materials in equipment from UV radiation	See Table 4.1.2	N
C.1.2	Requirements		N
C.1.3	Test method		N
C.2	UV light conditioning test		N
C.2.1	Test apparatus		N
C.2.2	Mounting of test samples		N
C.2.3	Carbon-arc light-exposure apparatus		N
C.2.4	Xenon-arc light exposure apparatus		N
D	**TEST GENERATORS**		**N**
D.1	Impulse test generators		N
D.2	Antenna interface test generator		N
D.3	Electronic pulse generator		N
E	**TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS**		**N**
E.1	Audio amplifier normal operating conditions		N
	Audio signal voltage (V). .....:		-
	Rated load impedance (Ω).....:		-
E.2	Audio amplifier abnormal operating conditions		N
F	**EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS**		**P**
F.1	General requirements		-

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Instructions – Language. .....:	English	-
F.2	Letter symbols and graphical symbols		N
F.2.1	Letter symbols according to IEC60027-1		N
F.2.2	Graphic symbols IEC, ISO or manufacturer specific		N
F.3	Equipment markings		P
F.3.1	Equipment marking locations		P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification. .....:	PARROT PRODUCTS	-
F.3.2.2	Model identification. .....:	OP0454	-
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains	100-240Vac	P
F.3.3.2	Equipment without direct connection to mains		N
F.3.3.3	Nature of supply voltage. .....:	AC	-
F.3.3.4	Rated voltage. .....:	100-240Vac	-
F.3.3.5	Rated frequency .....:	50/60Hz	-
F.3.3.6	Rated current or rated power. .....:	2.5A	-
F.3.3.7	Equipment with multiple supply connections	Single supply connection	N
F.3.4	Voltage setting device		N
F.3.5	Terminals and operating devices	Connectors only	N
F.3.5.1	Mains appliance outlet and socket-outlet markings. .....:		N
F.3.5.2	Switch position identification marking. .....:		N
F.3.5.3	Replacement fuse identification and rating markings. .....:		N
F.3.5.4	Replacement battery identification marking. .....:		N
F.3.5.5	Terminal marking location		N
F.3.6	Equipment markings related to equipment classification	Appliance coupler used	N
F.3.6.1	Class I Equipment	Appliance coupler used	P
F.3.6.1.1	Protective earthing conductor terminal		N
F.3.6.1.2	Neutral conductor terminal		N
F.3.6.1.3	Protective bonding conductor terminals		N
F.3.6.2	Class II equipment (IEC60417-5172)		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
F.3.6.2.1	Class II equipment with or without functional earth		N
F.3.6.2.2	Class II equipment with functional earth terminal marking		N
F.3.7	Equipment IP rating marking.....:		N
F.3.8	External power supply output marking		N
F.3.9	Durability, legibility and permanence of marking		P
F.3.10	Test for permanence of markings	Rubbed with cloth soaked with petroleum spirit and water, 15s each.	P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking		N
	b) Instructions given for installation or initial use		N
	c) Equipment intended to be fastened in place		N
	d) Equipment intended for use only in restricted access area		N
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N
	f) Protective earthing employed as safeguard		N
	g) Protective earthing conductor current exceeding ES2 limits		N
	h) Symbols used on equipment		P
	i) Permanently connected equipment not provided with all-pole mains switch		N
	j) Replaceable components or modules providing safeguard function		N
F.5	Instructional safeguards		P
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction		P
G	**COMPONENTS**		**P**
G.1	**Switches**		N
G.1.1	General requirements		N
G.1.2	Ratings, endurance, spacing, maximum load		N
G.2	**Relays**		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.2.1	General requirements	No requirements	N
G.2.2	Overload test		N
G.2.3	Relay controlling connectors supply power		N
G.2.4	Mains relay, modified as stated in G.2		N
G.3	**Protection Devices**		P
G.3.1	Thermal cut-offs	No thermal cut-offs	N
G.3.1.1.a) & b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N
G.3.1.2	Thermal cut-off connections maintained and secure		N
G.3.2	Thermal links		N
G.3.2.1a)	Thermal links separately tested with IEC 60691		N
G.3.2.2b)	Thermal links tested as part of the equipment		N
	Ageing hours (H).....:		-
	Single Fault Condition. .....:		-
	Test Voltage (V) and Insulation Resistance (Ω).:		-
G.3.3	PTC Thermistors		N
G.3.4	Overcurrent protection devices	(See appended Table 4.1.2)	P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N
G.3.5.1	Non-resettable devices suitably rated and marking provided		N
G.3.5.2	Single faults conditions. .....:	(See appended Table B.4)	N
G.4	**Connectors**		P
G.4.1	Spacings		P
G.4.2	Mains connector configuration. .....:		P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N
G.5	**Wound Components**		P
G.5.1	Wire insulation in wound components.....:		N
G.5.1.2a)	Two wires in contact inside wound component, angle between 45° and 90°		N
G.5.1.2b)	Construction subject to routine testing		N
G.5.2	Endurance test on wound components		N
G.5.2.1	General test requirements		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.5.2.2	Heat run test		N
	Time (s).....:		-
	Temperature (°C). .....:		-
G.5.2.3	Wound Components supplied by mains		N
G.5.3	**Transformers**		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1).....:	Overload test performed	P
	Position.....:		-
	Method of protection. .....:		-
G.5.3.2	Insulation		N
	Protection from displacement of windings. .....:		-
G.5.3.3	Overload test. .....:	(See appended table B.3)	N
G.5.3.3.1	Test conditions		N
G.5.3.3.2	Winding Temperatures testing in the unit		N
G.5.3.3.3	Winding Temperatures - Alternative test method		N
G.5.4	**Motors**		**N**
G.5.4.1	General requirements		N
	Position.....:		-
G.5.4.2	Test conditions		N
G.5.4.3	Running overload test		N
G.5.4.4	Locked-rotor overload test		N
	Test duration (days).. .....:		-
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N
G.5.4.5.2	Tested in the unit		N
	Electric strength test (V).. .....:		-
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h).....:		N
	Electric strength test (V).. .....:		-
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N
G.5.4.6.2	Tested in the unit		N
	Maximum Temperature.....:		N
	Electric strength test (V). .....:		N
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h).....:		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Electric strength test (V). .....:		N
G.5.4.7	Motors with capacitors		N
G.5.4.8	Three-phase motors		N
G.5.4.9	Series motors		N
	Operating voltage. .....:		-
G.6	**Wire Insulation**		N
G.6.1	General		N
G.6.2	Solvent-based enamel wiring insulation		N
G.7	**Mains supply cords**		**N**
G.7.1	General requirements		N
	Type. .....:		-
	Rated current (A).....:		-
	Cross-Sectional area (mm^2), (AWG). .....:		-
G.7.2	Compliance		P
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N
G.7.3.2	Cord strain relief		N
G.7.3.2.1	Requirements		N
	Strain relief test force (N).. .....:		-
G.7.3.2.2	Strain relief mechanism failure		N
G.7.3.2.3	Cord sheath or jacket position, distance (mm).:		-
G.7.3.2.4	Strain relief comprised of polymeric material		N
G.7.4	Cord Entry. .....:	(See appended table 5.4.11.1)	N
G.7.5	Non-detachable cord bend protection		N
G.7.5.1	Requirements		N
G.7.5.2	Mass (g).....:		-
	Diameter (m).....:		-
	Temperature (°C). .....:		-
G.7.6	Supply wiring space		N
G.7.6.2	Stranded wire		N
G.7.6.2.1	Test with 8 mm strand		N
G.8	**Varistors**		N
G.8.1	General requirements		N
G.8.2	Safeguard against shock		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.8.3	Safeguard against fire		N
G.8.3.2	Varistor overload test.....:		N
G.8.3.3	Temporary overvoltage. .....:		N
G.9	**Integrated Circuit (IC) Current Limiters**		N
G.9.1a)	Manufacturer defines limit at max. 5A		N
G.9.1b)	Limiters do not have manual operator or reset		N
G.9.1c)	Supply source does not exceed 250 VA.. .....:		-
G.9.1d)	IC limiter output current (max. 5A). .....:		-
G.9.1e)	Manufacturers' defined drift.. .....:		-
G.9.2	Test Program 1		N
G.9.3	Test Program 2		N
G.9.4	Test Program 3		N
G.10	**Resistors**		N
G.10.1	General requirements		N
G.10.2	Resistor test		N
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N
G.10.3.1	General requirements		N
G.10.3.2	Voltage surge test		N
G.10.3.3	Impulse test		N
G.11	**Capacitor and RC units**		N
G.11.1	General requirements		N
G.11.2	Conditioning of capacitors and RC units		N
G.11.3	Rules for selecting capacitors		N
G.12	**Optocouplers**		N
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results).. .....:	(See Table 4.1.2)	N
	Type test voltage Vini.. .....:		-
	Routine test voltage, Vini,b. .....:		-
G.13	**Printed boards**		P
G.13.1	General requirements		N
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.13.4	Insulation between conductors on the same inner surface		N
	Compliance with cemented joint requirements (Specify construction).....:		-
G.13.5	Insulation between conductors on different surfaces		N
	Distance through insulation.....:		N
	Number of insulation layers (pcs).....:		-
G.13.6	Tests on coated printed boards		N
G.13.6.1	Sample preparation and preliminary inspection		N
G.13.6.2a)	Thermal conditioning		N
G.13.6.2b)	Electric strength test		N
G.13.6.2c)	Abrasion resistance test		N
G.14	**Coating on components terminals**		N
G.14.1	Requirements. .....:	(See G.13)	N
G.15	**Liquid filled components**		N
G.15.1	General requirements		N
G.15.2	Requirements		N
G.15.3	Compliance and test methods		N
G.15.3.1	Hydrostatic pressure test		N
G.15.3.2	Creep resistance test		N
G.15.3.3	Tubing and fittings compatibility test		N
G.15.3.4	Vibration test		N
G.15.3.5	Thermal cycling test		N
G.15.3.6	Force test		N
G.15.4	Compliance		N
G.16	**IC including capacitor discharge function (ICX)**		N
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N
b)	Impulse test using circuit 2 with Uc = to transient voltage.....:		N
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N
C2)	Test voltage. .....:		-
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
D2)	Capacitance. .....:		-
D3)	Resistance. .....:		-
H	**CRITERIA FOR TELEPHONE RINGING SIGNALS**		**N**
H.1	General		N
H.2	Method A		N
H.3	Method B		N
H.3.1	Ringing signal		N
H.3.1.1	Frequency (Hz). .....:		-
H.3.1.2	Voltage (V) .....:		-
H.3.1.3	Cadence; time (s) and voltage (V).. .....:		-
H.3.1.4	Single fault current (mA).. .....:		-
H.3.2	Tripping device and monitoring voltage. .....:		N
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N
H.3.2.2	Tripping device		N
H.3.2.3	Monitoring voltage (V).....:		-
J	**INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION**		**N**
	General requirements		N
K	**SAFETY INTERLOCKS**		**N**
K.1	General requirements	No safety interlocks	N
K.2	Components of safety interlock safeguard mechanism		N
K.3	Inadvertent change of operating mode		N
K.4	Interlock safeguard override		N
K.5	Fail-safe		N
	Compliance		N
K.6	Mechanically operated safety interlocks		N
K.6.1	Endurance requirement		N
K.6.2	Compliance and Test method		N
K.7	Interlock circuit isolation		N
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location)		N
K.7.2	Overload test, Current (A)		N
K.7.3	Endurance test		N
K.7.4	Electric strength test		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
L	**DISCONNECT DEVICES**		**P**
L.1	General requirements	Appliance coupler serves as disconnect device.	P
L.2	Permanently connected equipment		N
L.3	Parts that remain energized		N
L.4	Single phase equipment		N
L.5	Three-phase equipment		N
L.6	Switches as disconnect devices		N
L.7	Plugs as disconnect devices		P
L.8	Multiple power sources		N
M	**EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS**		**N**
M.1	General requirements	(See Table M.3)	N
M.2	Safety of batteries and their cells		N
M.2.1	Requirements		N
M.2.2	Compliance and test method (identify method)		N
M.3	Protection circuits		N
M.3.1	Requirements		N
M.3.2	Tests		N
	- Overcharging of a rechargeable battery		N
	- Unintentional charging of a non-rechargeable battery		N
	- Reverse charging of a rechargeable battery		N
	- Excessive discharging rate for any battery		N
M.3.3	Compliance.....:		N
M.4	Additional safeguards for equipment containing secondary lithium battery	(See appended table M.4)	N
M.4.1	General		N
M.4.2	Charging safeguards		N
M.4.2.1	Charging operating limits	See table Annex M.4	N
M.4.2.2 a)	Charging voltage, current and temperature. ....:	See tables 5.4.1.4, B.3, B.4	-
M.4.2.2 b)	Single faults in charging circuitry. .....:	See tables 5.4.1.4, B.3, B.4	-
M.4.3	Fire Enclosure		N
M.4.4	Endurance of equipment containing a secondary lithium battery	(See table Annex M.4)	N
M.4.4.2	Preparation	(See table Annex M.4)	N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.4.4.3	Drop and charge/discharge function tests	(See table Annex M.4)	N
	Drop	(See table Annex M.4)	N
	Charge	(See table Annex M.4)	N
	Discharge	(See table Annex M.4)	N
M.4.4.4	Charge-discharge cycle test	(See table Annex M.4)	N
M.4.4.5	Result of charge-discharge cycle test	(See table Annex M.4)	N
M.5	Risk of burn due to short circuit during carrying		N
M.5.1	Requirement		N
M.5.2	Compliance and Test Method (Test of P.2.3)		N
M.6	Prevention of short circuits and protection from other effects of electric current		N
M.6.1	Short circuits		N
M.6.1.1	General requirements	(See table 4.1.2)	N
M.6.1.2	Test method to simulate an internal fault		N
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method). .....:		N
M.6.2	Leakage current (mA).....:		N
M.7	Risk of explosion from lead acid and NiCad batteries	No batteries	N
M.7.1	Ventilation preventing explosive gas concentration		N
M.7.2	Compliance and test method		N
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N
M.8.1	General requirements		N
M.8.2	Test method		N
M.8.2.1	General requirements		N
M.8.2.2	Estimation of hypothetical volume V (m^3/s).....:		-
M.8.2.3	Correction factors. .....:		-
M.8.2.4	Calculation of distance d (mm). .....:		-
M.9	Preventing electrolyte spillage		N
M.9.1	Protection from electrolyte spillage		N
M.9.2	Tray for preventing electrolyte spillage		N
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing)..:		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
N	**ELECTROCHEMICAL POTENTIALS**		**N**
	Metal(s) used.....:		-
O	**MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES**		**N**
	Figures O.1 to O.20 of this Annex applied.....:		-
P	**SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS**		**P**
P.1	General requirements		P
P.2.2	Safeguards against entry of foreign object		N
	Location and Dimensions (mm).....:		-
P.2.3	Safeguard against the consequences of entry of foreign object		P
P.2.3.1	Safeguards against the entry of a foreign object		N
	Openings in transportable equipment		N
	Transportable equipment with metalized plastic parts. .....:		N
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard).....:	No bridging of insulation inside the enclosure of the device.	P
P.3	Safeguards against spillage of internal liquids		N
P.3.1	General requirements		N
P.3.2	Determination of spillage consequences		N
P.3.3	Spillage safeguards		N
P.3.4	Safeguards effectiveness		N
P.4	Metallized coatings and adhesive securing parts		N
P.4.2 a)	Conditioning testing		N
	Tc (°C) .....:		-
	Tr (°C).....:		-
	Ta (°C). .....:		-
P.4.2 b)	Abrasion testing.....:	(See G.13.6.2)	N
P.4.2 c)	Mechanical strength testing. .....:	(See Annex T)	N
Q	**CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING**		N
Q.1	Limited power sources		N
Q.1.1 a)	Inherently limited output		N
Q.1.1 b)	Impedance limited output		N
	Regulating network limited output under normal operating and simulated single fault condition		N

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
Q.1.1 c)	Overcurrent protective device limited output		N
Q.1.1 d)	IC current limiter complying with G.9		N
Q.1.2	Compliance and test method		N
Q.2	Test for external circuits – paired conductor cable		N
	Maximum output current (A).....:		-
	Current limiting method.....:		-
R	**LIMITED SHORT CIRCUIT TEST**		**N**
R.1	General requirements		N
R.2	Determination of the overcurrent protective device and circuit		N
R.3	Test method Supply voltage (V) and short-circuit current (A).....:		N
S	**TESTS FOR RESISTANCE TO HEAT AND FIRE**		**P**
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4000W	Metal enclosure	P
	Samples, material.....:		-
	Wall thickness (mm).....:		-
	Conditioning (°C). .....:		-
	Test flame according to IEC 60695-11-5 with conditions as set out		N
	- Material not consumed completely		N
	- Material extinguishes within 30s		N
	- No burning of layer or wrapping tissue		N
S.2	Flammability test for fire enclosure and fire barrier integrity		N
	Samples, material.....:		-
	Wall thickness (mm).....:		-
	Conditioning (°C). .....:		-
	Test flame according to IEC 60695-11-5 with conditions as set out		N
	Test specimen does not show any additional hole		N
S.3	Flammability test for the bottom of a fire enclosure		N
	Samples, material.....:		-

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Wall thickness (mm).....:		-
	Cheesecloth did not ignite		N
S.4	Flammability classification of materials		N
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power exceeds 4000W		N
	Samples, material.....:		-
	Wall thickness (mm).....:		-
	Conditioning (test condition), (°C). .....:		-
	Test flame according to IEC 60695-11-20 with conditions as set out		N
	After every test specimen was not consumed completely		N
	After fifth flame application, flame extinguished within 1 min		N
T	**MECHANICAL STRENGTH TESTS**		**P**
T.1	General requirements		N
T.2	Steady force test, 10 N.....:	(See appended table T.2)	N
T.3	Steady force test, 30 N.....:	(See appended table T.3)	N
T.4	Steady force test, 100 N.....:	(See appended table T.4)	N
T.5	Steady force test, 250 N.....:	(See appended table T.5)	P
T.6	Enclosure impact test		P
	Fall test		N
	Swing test	(See appended table T.6)	P
T.7	Drop test.....:	(See appended table T.7)	N
T.8	Stress relief test. .....:	(See appended table T.8)	N
T.9	Impact Test (glass)		N
T.9.1	General requirements		N
T.9.2	Impact test and compliance.....:		N
	Impact energy (J).....:		-
	Height (m) .....:		-
T.10	Glass fragmentation test	(See sub-clause 4.4.4.9)	N
T.11	Test for telescoping or rod antennas	(See appended table T.11)	N
	Torque value (Nm). .....:		-

IEC / EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
U	**MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFECTS OF IMPLOSION**		**N**
U.1	General requirements		N
U.2	Compliance and test method for non-intrinsically protected CRTs		N
U.3	Protective Screen.....:	(See Annex T)	N
V	**DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)**		**P**
V.1	Accessible parts of equipment		P
V.2	Accessible part criterion		N

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

4.1.2	TABLE: List of critical components				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard	[1)]Mark(s) of conformity
Enclosure	Chang Chun Sb(Changshu) Co., Ltd.	EME-5051	Flammability rating: V-1	UL 94 UL 746 (File: E223871)	UL
Plug Holder	Dongguan E-Jun Wire Co., Ltd.	EL-701	Max. Current: 10A Max. Voltage: 250Vac	EN 60320-1 (Certificate: 35-100611)	None
PCB	Gultech (Jiangsu) Electronics Technologies Co Ltd	18	Flammability rating: V-0	UL 94	UL
Fuse	Dongguan Better Electronic Technology Co., Ltd.	316	Max. Current 3.15A Max. Voltage: 350V	UL 284-1 UL 248-14 (File: E300003)	UL
Y-Capacitor	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	CD-Series	Max Voltage: 250Vac	IEC 60384-14	VDE
Capacitor	Yinan Don's Electronic Component Co.,Ltd	CT81	Max Voltage: 250Vac	IEC 60384-14	VDE
V1 - Varistor	Thinking Electronic Industrial Co.Ltd	TVR14	621K	IEC 61051-1, IEC 61051-2, IEC 61051-2-2	VDE
Opto-coupler	Toshiba	TLP421F	Voltage: 3750Vac	IEC 60747-5-2	VDE
Opto-coupler	Vishay	TCLT1003	Voltage: 3750Vac	IEC 60747-5-2	VDE

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

Transformer	Shenzhen Meikai Electronics Co., Ltd.	BCK-82610L	Class B	IEC 62368-1 (Tested with appliance)	None
Winding	Feng Ching Metal Corp	2UEW	130°C	UL 1446 (File: E172395)	UL
Bobbin	Sumitomo Bakelite	PM-98209	Flammability: V-0 150°C	UL 94 (File: E41429)	UL
Varnish	John C Dolph Co., Ltd.	BB-353	130°C	UL 1446 (File: E317427)	UL
Triple insulating tape	Jingjiang Yahuapressure Sensitiveglue Co., Ltd.	PZ-WF	130°C	UL 510 (File: E165111)	UL
Supplementary information:					

4.8.4	**Table: Lithium coin/button cell batteries mechanical tests**		**N**
(The following mechanical tests are conducted in the sequence noted.)			
4.8.4.2	**TABLE: Stress Relief test**		**--**
Part	Material	Oven Temperature(°C)	Comments
--	--	--	--
Supplementary information: Professional equipment, not child accessible			

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

4.8.4.3	**TABLE: Battery replacement test**		**N**
Battery part no. .....:			-
Battery Installation/withdrawal		Battery Installation/Removal Cycle	Comments
		1	N
		2	
		3	
		4	
		5	
		6	
		7	
		8	
		9	
		10	

4.8.4.4	**TABLE: Drop test**			**N**
Impact Area		Drop Distance	Drop No.	Observations
--		--	--	--
Supplementary information:				

4.8.4.5	**TABLE: Impact**			**N**
Impacts per surface		Surface tested	Impact energy (J)	Comments
--		--	--	--
Supplementary information:				

4.8.4.6	**TABLE: Crush test**				**N**
Test position		Surface tested	Crushing Force (N)	Duration force applied (s)	Comments
--		--	--	--	--
Supplementary information:					

4.8.5	**TABLE: Lithium coin/button cell batteries mechanical compliance criteria**			**N**
Test position		Test equipment applied	Force (N)	Observation
--		--	--	--
Supplementary information:				

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

5.2	TABLE: Classification of electrical energy sources					P
5.2.2.2 - Steady State Voltage and Current Conditions						
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				U (Vrms or Vpk or Vdc)	I (Apk or Arms) / Hz	
1	100Vac	Appliance coupler	Normal	100Vac	1.625A / --	ES3
			Abnormal	100Vac	-- / --	ES3
			Single Fault	100Vac	-- / --	ES3
2	240Vac	Mains Input Socket	Normal	240Vac	1.074 A / --	ES3
			Abnormal	240Vac	-- / --	ES3
			Single Fault	240Vac	-- / --	ES3
Supplementary information:						

5.2	TABLE: Classification of electrical energy sources (Continued)					N
5.2.2.3 - Capacitance Limits						
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Capacitance, nF	Upk (V)	
--	--	--	Normal	--	--	--
			Abnormal	--	--	--
			Single Fault	--	--	--
Supplementary information:						

5.2	TABLE: Classification of electrical energy sources (Continued)					N
5.2.2.4 - Single Pulses						
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Off time (ms)	Upk (V) / Ipk (mA)	
--	--	--	Normal	--	-- / --	--
			Abnormal	--	-- / --	--
			Single Fault	--	-- / --	--
Supplementary information:						

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

5.2	TABLE: Classification of electrical energy sources (Continued)					N
5.2.2.5 - Repetitive Pulses						
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Duration (ms)	Upk (V) / Ipk (mA)	
--	--	--	Normal	--	--	--
			Abnormal	--	--	--
			Single Fault	--	--	--
Supplementary information: --						

5.4.1.4, 6.3.2, 9.2.5, B.2.6	TABLE: Temperature measurements					P
	Supply Voltage(V) ...:	240V	--	--	--	--
	Ambient T_{min} (°C).....:	21.9	--	--	--	--
	Ambient T_{max} (°C). ....:	23.5	--	--	--	--
	Tma (°C).....:	--	--	--	--	--

Maximum measured temperature T of part/at:	T (°C)				Allowed T_{max} (°C)
Enclosure	65	--	--	--	94
PCB	82.3	--	--	--	130
Transformer	86.2	--	--	--	300
Supplementary information: * Standard environmental conditions.					

Temperature T of winding:	t1 (°C)	R1 (Ω)	t2 (°C)	R2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class
--	--	--	--	--	--	--	--
Supplementary information:							

5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics	N
Penetration (mm) .....:		--

Object/Part No./Material	Manufacturer/trademark	T softening (°C)
--	--	--
Supplementary information:		

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

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

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distances						P
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Primary to secondary circuit	340V	240V	--	3	5.8	5	5.8
Supplementary information:							

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage			N
	Overvoltage Category (OV):			
	Pollution Degree:			
Clearance distanced between:	Required withstand voltage	Required cl (mm)	Measured cl (mm)	
--	--	--	--	
Supplementary information:				

5.4.2.4	TABLE: Minimum Clearances distances using electric strength test			N
Test voltage applied between:	Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No	
--	--	--	--	
Supplementary information:				

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

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

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
L/N and Secondary circuit		DC	2.5kV	No
--		--	--	--
Supplementary information:				

5.5.2.2	TABLE: Stored discharge on capacitors				N
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification
--	--	--	--	--	--

Supplementary information:
X-capacitors installed for testing are:
☐ bleeding resistor rating:
☐ ICX:
Notes:
A. Test Location: Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth
B. Operating condition abbreviations:
N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition

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

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

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		P
Supply voltage .....:	240Vac		--
Location	Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7		Touch current (mA)
Enclosure	1		150µA
	2		--
	3		--
	4		--
	5		--
	6		--
	7		--
	8		--
Supplementary Information:			

6.2.2	Table: Electrical power sources (PS) measurements for classification				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5s	PS Classification
A	100Vac	Power (W) .....:	92.9W	162.5W	*PS3
		VA (V) . .....:	100Vac	100Vac	
		IA (A) . .....:	929mA	1.625A	
B	240Vac	Power (W) .....:	636W	636W	*PS3
		VA (V) . .....:	240Vac	240Vac	
		IA (A) . .....:	2.65A	2.65A	
Supplementary Information: *Device powered by AC mains					

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)			N
Location	Open circuit voltage After 3 s (Vp)	Measured r.m.s current (Irms)	Calculated value (Vp x Irms)	Arcing PIS? Yes / No
--	--	--	--	--
Supplementary information:				

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

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

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

B.2.5	TABLE: Input test						P
U (V)	I (mA)	I rated (mA)	P (W)	P rated (W)	Fuse No	Fuse Rating (A)	Condition / status
100Vac	1.625A	2.5A	162.5W	--	--	3.15A	Normal
240Vac	1.074A	2.5A	257.76W	--	--	3.15A	Normal
Supplementary information:							

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

B.3	TABLE: Abnormal operating condition tests								P
Ambient temperature (°C) .....:				--					-
Power source for EUT: Manufacturer, model/type, output rating .....:				Manson, HCS-3304 Switch Mode Power Supply, 1-60Vdc 8A					-
Component No.	Abnormal Condition	Supply Voltage (V)	Test Time (min)	Fuse no.	Fuse current (A)	T-couple	Temp. (°C)	Observation	
Ventilation openings	Blocked	240Vac	140	F1	2.65	Type-K	82.3	No temperature limits exceeded. No hazard.	
USB Port	Overload	240Vac	325	F1	2.6	Type-K	85.6	No temperature limits exceeded. No hazard.	
Output	SC	240Vac	10	F1	0.01	Type-K	--	Unit shut down immediately. No hazard.	
Supplementary information: SC=Short Circuit, OC=Open Circuit									

B.4	TABLE: Fault condition tests							P
Ambient temperature (°C) .....:				--				-
Power source for EUT: Manufacturer, model/type, output rating .....:				AC Mains				-
Component No.	Fault Condition	Supply voltage (V)	Test time (min)	Fuse #	Fuse current (A)	T-Couple	Temp (°C)	Observation
BD1	SC	240Vac	1s	F1	0	Type-K	--	Fuse F1 opened immediately. No hazard.
C22	SC	240Vac	1s	F1	0	Type-K	--	Fuse F1 opened immediately. No hazard.
Q5	SC gate to source pins	240Vac	10	F1	0.01	Type-K	--	Unit shut down immediately. No hazard.
Supplementary information: SC=Short Circuit, OC=Open Circuit								

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

Annex M	**TABLE: Batteries**									**N**
The tests of Annex M are applicable only when appropriate battery data is not available										N
Is it possible to install the battery in a reverse polarity position?				Not possible						N
	Non-rechargeable batteries			Rechargeable batteries						
	Discharging		Unintentional charging	Charging		Discharging		Reversed charging		
Max. current during:	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	
- normal condition	--	--	--	--	--	--	--	--	--	
- fault condition	--	--	--	--	--	--	--	--	--	
				Test results						**Verdict**
Chemical leaks				--						--
Explosion of the battery				--						--
Emission of flame or expulsion of molten metal				--						--
Electric strength tests of equipment after completion of tests				--						--
Supplementary information:										
Device Battery Data										
Battery category .....: --										--
Manufacturer .....: --										--
Type / model .....: --										--
Voltage .....: --										--
Capacity .....: --										--
Tested and Certified .....: --										--

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

Annex M.4	**TABLE: Additional safeguards for equipment containing secondary lithium batteries**				**N**
Battery/Cell No.	Test conditions	Measurements			Observation
		U (V)	I (A)	Temp (°C)	
--	--	--	--	--	--
--	--	--	--	--	--
Supplementary Information:					

Battery identification	Rated max charging Temp (°C)	Rated min charging Temp (°C)	Test Temp (°C)	Observation
--	--	--	--	--

Battery identification	Rated max discharging Temp (°C)	Rated min discharging Temp (°C)	Test Temp (°C)	Observation
--	--	--	--	--
Supplementary Information:				

Test	**Result**	**Observation**
Drop test	--	--
Battery used in drop test Voc varied	--	--
Reference battery Voc varied	--	--
Difference between Test sample and Reference sample	--	--
Supplementary information:		

Battery used in drop test	No. of discharging cycles completed	No. of charging cycles completed	Observations
--	--	--	--

Annex Q.1	**TABLE: Circuits intended for interconnection with building wiring (LPS)**						**N**
Note: Measured Uoc (V) with all load circuits disconnected:							
Output Circuit	Components	U_{oc} (V)	I_{sc} (A)		S (VA)		
			Meas.	Limit	Meas.	Limit	
--	--	--	--	--	--	--	
Supplementary Information:							

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

T.2, T.3, T.4, T.5	TABLE: Steady force test					P
Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation	
Enclosure	EME-5051	> 0.4mm	250	5	No cracking or deformation of enclosure. No access gained to hazardous components.	
Supplementary Information:						

T.6 & T.9	TABLE: Impact Test				P
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation	
Enclosure	EME-5051	> 0.4mm	1300	No cracking of enclosure. No access gained to hazardous components.	
Supplementary information:					

T.7	TABLE: Drop tests				N
Part/Location	Material	Thickness (mm)	Drop height (mm)	Observation	
--	--	--	--	--	
Supplementary information:					

T.8	TABLE: Stress relief test					P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
Enclosure	EME-5051	> 0.4mm	70	7	No cracking or deformation of enclosure. No access gained to hazardous components.	
Supplementary information:						

T.11	TABLE: Telescoping or rod antenna test					N
Antenna type	Diameter (mm)	Torque (Nm)	Force (N)	Duration (s)	Observation	
--	--	--	--	--	--	
Supplementary information:						

APPENDIX 1: Device images

Figure 3: Enclosure top view

Figure 4: Enclosure bottom view

Figure 5: Enclosure appliance coupler and IO ports

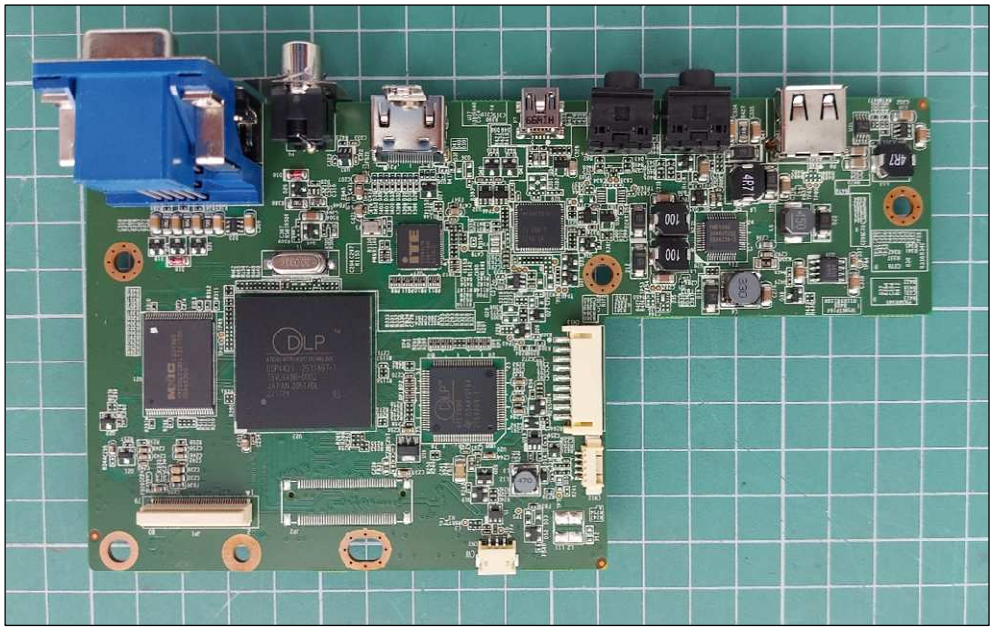


Figure 6: PCB 1 view 1

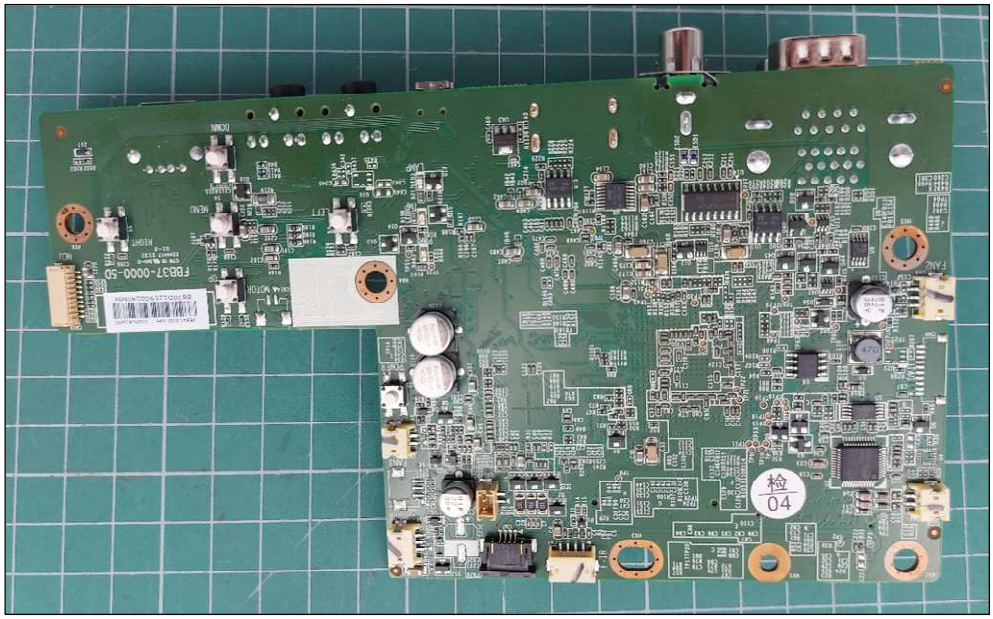


Figure 7: PCB 1 view 2

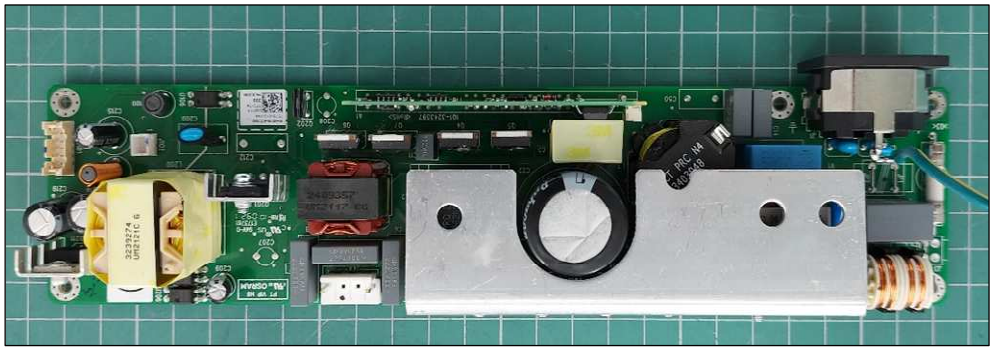


Figure 8: PCB 2 view 1

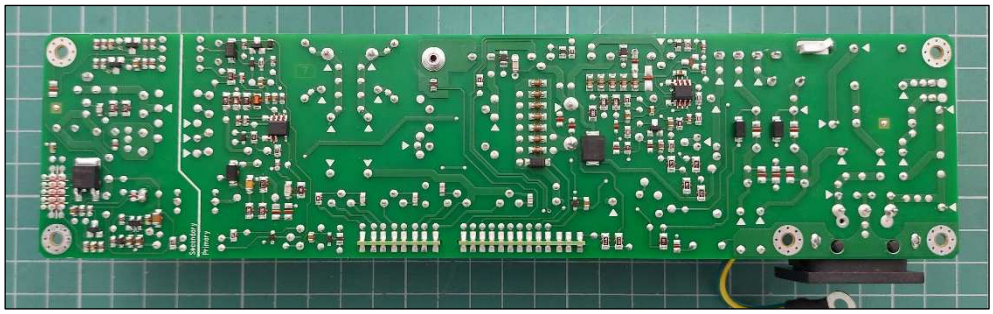


Figure 9: PCB 2 view 2

*** END OF REPORT ***