



TEST REPORT

IEC/EN 62368-1

Audio/video, information and communication technology equipment

Part 1: Safety requirements

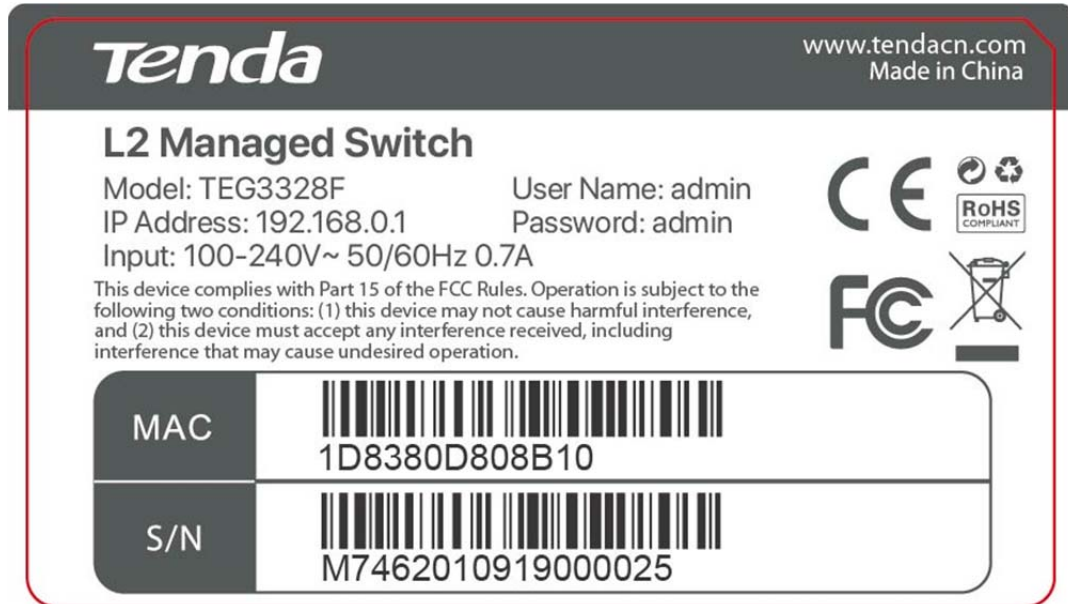
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Applicant's name	SHENZHEN TENDA TECHNOLOGY CO.,LTD
Address	6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052
Test specification:	
Standard	EN 62368-1:2014+A11:2017, EN 62368-1:2014, IEC 62368-1:2014 (Second Edition)
Test procedure	Service of CE Marking in LVD
Non-standard test method	N/A
Test Report Form No.	IEC62368_1B_1 (LVD)
Master TRF	Dated 2017-09
Test item description	L2 Managed Switch
Trade Mark	Tenda
Manufacturer	Same as applicant.
Model/Type reference	TEG3328F
Ratings	Input: 100-240V~, 50/60Hz, 0.7A.

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

- EU national differences (12 pages for EN 62368-1:2014+A11:2017, 4 pages for EN 62368-1:2014)
- Photo Documentation (5 pages)

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.



TEST ITEM PARTICULARS:	
Classification of use by	<input checked="" type="checkbox"/> Ordinary person <input type="checkbox"/> Instructed person <input type="checkbox"/> Skilled person <input checked="" type="checkbox"/> Children likely to be present
Supply Connection	<input checked="" type="checkbox"/> AC Mains <input type="checkbox"/> DC Mains <input type="checkbox"/> External Circuit - not Mains connected - <input type="checkbox"/> ES1 <input type="checkbox"/> ES2 <input type="checkbox"/> ES3
Supply % Tolerance	<input checked="" type="checkbox"/> +10%/-10% <input type="checkbox"/> +20%/-15% <input type="checkbox"/> + ____ %/ - ____ % <input type="checkbox"/> None
Supply Connection – Type	<input checked="" type="checkbox"/> pluggable equipment type A - <input type="checkbox"/> non-detachable supply cord <input checked="" type="checkbox"/> appliance coupler <input type="checkbox"/> direct plug-in <input type="checkbox"/> mating connector <input type="checkbox"/> pluggable equipment type B - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> permanent connection <input type="checkbox"/> mating connector <input type="checkbox"/> other:
Considered current rating of protective device as part of building or equipment installation	16A (for building) (13A for UK) Installation location: <input checked="" type="checkbox"/> building; <input type="checkbox"/> equipment
Equipment mobility	<input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in <input type="checkbox"/> rack-mounting <input type="checkbox"/> wall-mounted
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other:
Class of equipment	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III
Access location	<input type="checkbox"/> restricted access location <input checked="" type="checkbox"/> N/A
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
Manufacturer's specified maximum operating ambient:	45°C
IP protection class	<input checked="" type="checkbox"/> IPX0 <input type="checkbox"/> IP ____
Power Systems	<input checked="" type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT - 230 V _{L-L}
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)	<input checked="" type="checkbox"/> Approx. 1.84Kg

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	2020-03-06 (original); 2020-11-02
Date (s) of performance of tests	2020-03-06 to 2020-03-30 (original); N/A
GENERAL REMARKS:	
<p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p> <p>When determining the test conclusion, the nominal variations in some test parameters have little effect on the uncertainty of the measurement result. The decision rules are based on IEC Guide 115 with complying the relevant requirements of environment and equipment.</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>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p>	
Name and address of factory (ies)	--
GENERAL PRODUCT INFORMATION:	
Product Description – <ul style="list-style-type: none"> - The equipment is a L2 Managed Switch use in Audio/video, information and communication technology equipment. - The equipment consists of electrical components mounted on PWB for main board, and one internal switching power supply board, which are enclosed by metal enclosures. - The enclosure is secured together by screws. 	
Model Differences – <ul style="list-style-type: none"> - N/A. 	
Additional application considerations – (Considerations used to test a component or sub-assembly) – <ul style="list-style-type: none"> - Maximum Normal Load condition means: All RJ45 ports were transferred data continuously. - The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): All data ports. - The test samples were pre-production samples without serial numbers. - The manufacturer specified maximum ambient temperature is 45°C. - The equipment disconnect device is considered to be: appliance inlet. - The statement for LDMs: <ul style="list-style-type: none"> A. This end product is for use with field installable LDMs maynot provided with the product when shipped from the original equipment manufacturer. This end product was evaluated with representative LDMs during the Type Test investigation. 	

B. The end product with LDMs installed is required to comply with IEC 60950-1 and IEC 60825-1 and -2, including any declared national differences.

C. The decision on certification of the end product without the LDMs rests with the recognizing NCB.

- No tests were conducted due to this report is deem to reissue from original report BTL-LVD-1-S2003C002 (issued 2020-04-07) and due to below items:

A. Change Model.

B. Change the product name.

C. Change the label.

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

ES1

Source of electrical energy	Corresponding classification (ES)
Circuits supplied by mains (Primary circuit on power board)	ES3
Accessible part of AC inlet (discharge capacitance CX1)	ES3
output of power board	ES1
All accessible connectors and parts accessible to ordinary person	ES1

Electrically-caused fire (Clause 6):

(Note: List sub-assembly or circuit designation and corresponding energy source classification)

Example: Battery pack (maximum 85 watts):

PS2

Source of power or PIS	Corresponding classification (PS)
All internal circuit except for secondary circuits after output of power board	PS3, Arcing PIS, Resistive PIS
Secondary circuits after output of power board	PS2 (LPS), Resistive PIS
All accessible connectors and parts accessible to ordinary person	PS2 (LPS), Resistive PIS

Injury caused by hazardous substances (Clause 7)

(Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.)

Example: Liquid in filled component

Glycol

Source of hazardous substances	Corresponding chemical
N/A	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

MS2

Sharp edges and corners	MS1
Equipment mass	MS1

Thermal burn injury (Clause 9)

(Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.)

Example: Hand-held scanner – thermoplastic enclosure

TS1

Source of thermal energy	Corresponding classification (TS)
Internal parts	TS3
External surface of the equipment	TS1 (Consider room ambient of 25 °C)

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:

Radiation (Clause 10)

(Note: List the types of radiation present in the product and the corresponding energy source classification.)

Example: DVD – Class 1 Laser Product

RS1

Type of radiation	Corresponding classification (RS)
LED indicator	RS1

ENERGY SOURCE DIAGRAM

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

☐ ES ☐ PS ☐ MS ☐ TS ☐ RS

(Refer to ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE for detail)

OVERVIEW OF EMPLOYED SAFEGUARDS

Clause	Possible Hazard			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary	ES3: Input and internal primary circuits of SPS	N/A	N/A	Enclosure, See 5.4.2, 5.4.3, 5.5.2 and 5.5.3
Ordinary	Accessible part of AC Plug	N/A	N/A	See 5.5.2.2
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
PCB	PS3 circuit	See 6.3	V-1 or better	N/A
Internal wiring	PS3 circuit	See 6.3	N/A	See 6.5
The other components/materials	PS3 circuit (All internal circuit except for circuits after 12V output of power board)	See 6.3	See 6.4.5, 6.4.6, 6.4.8	N/A
Enclosure	PS3 circuit (internal part)	See 6.3	Metal	N/A
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A

8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3: High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
N/A	N/A	N/A	N/A	N/A
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	TS3: Internal component	N/A	N/A	Metal enclosure
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
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	Refer to summary of testing and appended table 4.1.2.	P
4.1.2	Use of components	Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this standard. Components, for which no relevant IEC-standard exists, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 62368-1.	P
4.1.3	Equipment design and construction	Equipment is adequately designed and constructed.	P
4.1.15	Markings and instructions.....:	See Annex F.	P
4.4.4	Safeguard robustness	See below.	P
4.4.4.2	Steady force tests.....:	See Annex T.2 and T.5.	P
4.4.4.3	Drop tests		N/A
4.4.4.4	Impact tests	See Annex T.6.	P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....:		N/A
4.4.4.6	Glass Impact tests		N/A
4.4.4.7	Thermoplastic material tests		N/A
4.4.4.8	Air comprising a safeguard.....:		N/A
4.4.4.9	Accessibility and safeguard effectiveness	After tests, no safeguard damaged.	P
4.5	Explosion	No explosion occurs during normal/abnormal operation and single fault conditions	P
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard	Internal wires are routed and secured so that adequate insulations are maintained. For the internal wires connected by pluggable connectors or soldered and glued. Wires fixed such that a loosening of the terminal connection is unlikely.	P
4.6.2	10 N force test applied to	See Annex T.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.7	Equipment for direct insertion into mains socket – outlets		N/A
4.7.2	Mains plug part complies with the relevant standard..... :		N/A
4.7.3	Torque (Nm) :		N/A
4.8	Products containing coin/button cell batteries	No coin/button cell batteries used.	N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery :		—
4.8.4	Battery Compartment Mechanical Tests :		N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object..... :	See Annex P.	P

5	ELECTRICALLY-CAUSED INJURY		P
5.2.1	Electrical energy source classifications..... :	See below	P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current..... :	(See appended table 5.2)	P
5.2.2.3	Capacitance limits :	(See appended table 5.2)	P
5.2.2.4	Single pulse limits :	No such single pulses generated in the EUT or applied to it.	N/A
5.2.2.5	Limits for repetitive pulses :	No such repetitive pulses generated in the EUT or applied to it	N/A
5.2.2.6	Ringing signals :	No such ringing signals within the EUT	N/A
5.2.2.7	Audio signals :		N/A
5.3	Protection against electrical energy sources	See below	P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	See only 4.3 and 5.3 to 5.5, 5.6, 5.7, which applies to protection between the accessible parts and hazardous parts of other circuits.	P
5.3.2.1	Accessibility to electrical energy sources and safeguards	Only ES1 circuit is accessible for ordinary person for this product.	P
5.3.2.2	Contact requirements	No access with test probe to any ES3 circuit or parts or unearthed parts separated by Basic safeguard only from ES3 via openings on enclosure.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	a) Test with test probe from Annex V	No contact to any ES3 parts with test probe of Figure V.1 and V.2, and its air gap distance more than 0.2mm.	P
	b) Electric strength test potential (V)		N/A
	c) Air gap (mm)	≥ 0.2mm	P
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material	The choice and application have taken into account as specified in this Clause 5 and Annex T and natural rubber, hygroscopic materials or asbestos are not used as insulation.	P
5.4.1.3	Humidity conditioning	See sub-clause 5.4.8.	P
5.4.1.4	Maximum operating temperature for insulating materials	(See appended table 5.4.1.4.)	P
5.4.1.5	Pollution degree	2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound	Pollution degree 2 is applied. No insulating compound applied.	N/A
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions	No such transformer within the EUT	N/A
5.4.1.7	Insulation in circuits generating starting pulses	No such circuits.	N/A
5.4.1.8	Determination of working voltage	(See appended table 5.4.1.8)	P
5.4.1.9	Insulating surfaces	No such accessible surfaces within the equipment.	N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	No such component used.	N/A
5.4.1.10.2	Vicat softening temperature.....		N/A
5.4.1.10.3	Ball pressure	No such component used.	N/A
5.4.2	Clearances	See appended table 5.4.2.2, 5.4.2.4 and 5.4.3	P
5.4.2.2	Determining clearance using peak working voltage	(See only appended table as below)	P
5.4.2.3	Determining clearance using required withstand voltage	(See appended table 5.4.2.2, 5.4.2.4 and 5.4.3)	P
	a) a.c. mains transient voltage	2500V for Overvoltage Cat. II	—
	b) d.c. mains transient voltage	No such transient	—
	c) external circuit transient voltage	No such transient	—

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Clause	Requirement + Test	Result - Remark	Verdict
	d) transient voltage determined by measurement		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test	Using procedure 2 to determine the clearance according to 5.4.2.3.	N/A
5.4.2.5	Multiplication factors for clearances and test voltages	(See only appended tables) Specified the equipment to be operated up to 2000m above sea level. Factor 1 according to table 17 is applied.	P
5.4.3	Creepage distances	See appended table 5.4.2.2, 5.4.2.4 and 5.4.3	P
5.4.3.1	General		P
5.4.3.3	Material Group	IIIa & IIIb	—
5.4.4	Solid insulation	See below	P
5.4.4.2	Minimum distance through insulation	(See appended table 5.4.4.2)	P
5.4.4.3	Insulation compound forming solid insulation	No such component used.	N/A
5.4.4.4	Solid insulation in semiconductor devices	No such component used.	N/A
5.4.4.5	Cemented joints	No such part used. See only above.	N/A
5.4.4.6	Thin sheet material	Used for T1 on power board	P
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material		P
	Number of layers (pcs)	Min. 2 layers as reinforced insulation	P
5.4.4.6.3	Non-separable thin sheet material	No such thin sheet material within the EUT	N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material	See above	N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components	See also G.5.1 and G.6.	P
5.4.4.9	Solid insulation at frequencies >30 kHz	See appended table G.5.3.2 in miscellaneous for details.	P
5.4.5	Antenna terminal insulation	No such antenna terminal used.	N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ).....		—
5.4.6	Insulation of internal wire as part of supplementary safeguard	No such insulation of internal wire as part of supplementary safeguard.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.7	Tests for semiconductor components and for cemented joints	No tests necessary –see only 5.4.4.4.	N/A
5.4.8	Humidity conditioning	See below.	P
	Relative humidity (%).....:	93	—
	Temperature (°C)	40	—
	Duration (h)	120	—
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	Test voltage based on transient voltages. (See appended table 5.4.9)	P
5.4.9.2	Test procedure for routine tests	No routine tests considered. To be considered during the relevant national approval.	N/A
5.4.10	Protection against transient voltages between external circuit	No such external circuits	N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test		N/A
5.4.10.2.3	Steady-state test.....:		N/A
5.4.11	Insulation between external circuits and earthed circuitry	No such connections for external circuit applied within the EUT	N/A
5.4.11.1	Exceptions to separation between external circuits and earth	No such connections to external circuit as above.	N/A
5.4.11.2	Requirements		N/A
	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}		—
	$U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$		—
5.5	Components as safeguards		P
5.5.1	General	See the following details.	P
5.5.2	Capacitors and RC units	Approved X and Y capacitors provided. See G.11.1 for compliance and their application.	P
5.5.2.1	General requirement		P

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Clause	Requirement + Test	Result - Remark	Verdict
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector.....:	(See appended table 5.5.2.2)	P
5.5.3	Transformers	(See Annex G.5.3)	P
5.5.4	Optocouplers		N/A
5.5.5	Relays	Not used as safeguard.	N/A
5.5.6	Resistors	Not used as safeguard.	N/A
5.5.7	SPD's	No such component used.	N/A
5.5.7.1	Use of an SPD connected to reliable earthing		N/A
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable.....:	No such external circuits.	N/A
5.6	Protective conductor		P
5.6.2	Requirement for protective conductors	See below.	P
5.6.2.1	General requirements	No switch or overcurrent protective device in protective earthing or bonding conductor	P
5.6.2.2	Colour of insulation		P
5.6.3	Requirement for protective earthing conductors		N/A
	Protective earthing conductor size (mm ²)		—
5.6.4	Requirement for protective bonding conductors	See below.	P
5.6.4.1	Protective bonding conductors	PE of AC inlet fixed to metal chassis by metal screws and spring washer.	P
	Protective bonding conductor size (mm ²).	Min. 22AWG	—
	Protective current rating (A)	Max 3A	—
5.6.4.3	Current limiting and overcurrent protective devices		N/A
5.6.5	Terminals for protective conductors		P
5.6.5.1	Requirement	See below.	P
	Conductor size (mm ²), nominal thread diameter (mm).	The screw with spring washer secures to metal enclosure, used as protective bonding terminal, Φ =min. 3.5mm. The test of 5.6.6 complied.	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.6.5.2	Corrosion	The metal screw, star washer and metal parts are all made of mild steel. The combined electrochemical potential is lower than 0.6V.	P
5.6.6	Resistance of the protective system		P
5.6.6.1	Requirements		P
5.6.6.2	Test Method Resistance (Ω).....:	See appended table 5.6.6.2	P
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks	Figure 4 and Figure 5 of IEC 60990 was used in determining of the limit of ES1 and ES2.	P
5.7.2.1	Measurement of touch current	(See appended table 5.2.2.2)	P
5.7.2.2	Measurement of prospective touch voltage		P
5.7.3	Equipment set-up, supply connections and earth connections	Clause 4, 5.3 and 5.4 of IEC 60990:1999 applied.	P
	System of interconnected equipment (separate connections/single connection)	Single connection.	—
	Multiple connections to mains (one connection at a time/simultaneous connections)	Single connection.	—
5.7.4	Earthed conductive accessible parts	(See appended table 5.7.4)	P
5.7.5	Protective conductor current	The protective conductor current does not exceed the ES2 limits.	P
	Supply Voltage (V).....:	264Vac	—
	Measured current (mA).....:	0.162	—
	Instructional Safeguard.....:	The protective conductor current does not exceed the ES2 limits, instructional safeguard is not required.	N/A
5.7.6	Prospective touch voltage and touch current due to external circuits	No such external circuits.	N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits	No such external circuits.	N/A
	a) Equipment with earthed external circuits Measured current (mA).....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....:		N/A
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	See page 6 for details.	P
6.2.2.1	General	See the following details.	P
6.2.2.2	Power measurement for worst-case load fault ... :	(See appended table 6.2.2)	P
6.2.2.3	Power measurement for worst-case power source fault.....:	(See appended table 6.2.2)	P
6.2.2.4	PS1		N/A
6.2.2.5	PS2	For output of power board: (See appended table 6.2.2) For RJ-45 ports: (See Annex Q.1)	P
6.2.2.6	PS3	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources	See the following details.	P
6.2.3.1	Arcing PIS	(See appended table 6.2.3.1)	P
6.2.3.2	Resistive PIS	(See appended table 6.2.3.2)	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials	No ignition and no such temperature attained within the equipment. (See appended table 5.4.1.4, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure	No materials outside enclosure except for marking label.	N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Method by control of fire spread applied, metal fire enclosure provided.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits	Method by control of fire spread applied as 6.4.1.	N/A
6.4.3.1	General		N/A
6.4.3.2	Supplementary Safeguards		N/A
	Special conditions if conductors on printed boards are opened or peeled		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.3.3	Single Fault Conditions..... :		N/A
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		N/A
6.4.5	Control of fire spread in PS2 circuits		P
6.4.5.2	Supplementary safeguards :	Compliance detailed as follows: - <u>Printed board</u> : rated min. V-1 - <u>Wire insulation (tubing)</u> : complying with Clause 6. The internal wires are complied to UL 758 standard, which test method and testing condition equal to IEC/EN 60695-11-21; - <u>All other components</u> : at least V-2 except for mounted on min. V-1 material or small parts of combustible material (with mass less than 4g) or components complying to relevant IEC standard. - <u>Isolating transformer</u> : complying with G.5.3.	P
6.4.6	Control of fire spread in PS3 circuit	See appended tables 4.1.2 and Annex G.	P
6.4.7	Separation of combustible materials from a PIS	Compliance detailed as follows: - Parts as in 6.4.5 above including wiring. - Metal fire enclosure used.	N/A
6.4.7.1	General..... :		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	See below.	P
6.4.8.1	Fire enclosure and fire barrier material properties	Metal fire enclosure used.	P
6.4.8.2.1	Requirements for a fire barrier	No such fire barrier as control of fire spread	N/A
6.4.8.2.2	Requirements for a fire enclosure		P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier	See below	P
6.4.8.3.1	Fire enclosure and fire barrier openings		P
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm) :	See appended table 6.4.8.3.3, 6.4.8.3.4, P.2 in miscellaneous.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm)	See appended table 6.4.8.3.3, 6.4.8.3.4, P.2 in miscellaneous.	P
	Flammability tests for the bottom of a fire enclosure		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c)		N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating	Metal enclosure used.	N/A
6.5	Internal and external wiring		P
6.5.1	Requirements	The internal wires are complied to UL 758 standard, of which the test method and testing condition are equal to IEC/EN 60695-11-21.	P
6.5.2	Cross-sectional area (mm ²)	See appended tables 4.1.2	—
6.5.3	Requirements for interconnection to building wiring		N/A
6.6	Safeguards against fire due to connection to additional equipment		P
	External port limited to PS2 or complies with Clause Q.1	See annex Q.1.	P

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

8	MECHANICALLY-CAUSED INJURY		P
8.1	General		P
8.2	Mechanical energy source classifications		P
8.3	Safeguards against mechanical energy sources		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.4	Safeguards against parts with sharp edges and corners	Edges and corners are classed as MS1	P
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts	No moving parts.	N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard		—
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks		N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard		—
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N)		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test.....		N/A
8.6	Stability	Mass ≤ 7kg. Classification MS1 according to table 35, line 5 and no stability requirements.	N/A
8.6.1	Product classification		N/A
	Instructional Safeguard		—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt		—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force).....		N/A
	Position of feet or movable parts.....		—
8.7	Equipment mounted to wall or ceiling		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.7.1	Mounting Means (Length of screws (mm) and mounting surface)		N/A
8.7.2	Direction and applied force		N/A
8.8	Handles strength		N/A
8.8.1	Classification		N/A
8.8.2	Applied Force		N/A
8.9	Wheels or casters attachment requirements		N/A
8.9.1	Classification		N/A
8.9.2	Applied force		—
8.10	Carts, stands and similar carriers	No carts, stands or similar carriers	N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force		—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N)		—
8.10.6	Thermoplastic temperature stability (°C).....		N/A
8.11	Mounting means for rack mounted equipment	Not such equipment	N/A
8.11.1	General		N/A
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable <i>N</i>		N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas	No such parts.	N/A
	Button/Ball diameter (mm)		—

9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications	No part considered to be accessible other than enclosure. The equipment evaluated by temperature test (see table 5.4.1.4).	P
9.3	Safeguard against thermal energy sources	Temperature of enclosure classed as TS1.	P

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Clause	Requirement + Test	Result - Remark	Verdict
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard	Enclosure provided to limit the transfer of thermal energy of internal parts under normal operating conditions and abnormal operating conditions.	P
9.4.2	Instructional safeguard		N/A

10	RADIATION		P
10.2	Radiation energy source classification	Indicating LED and Optical fiber (optional) is low power application classified as RS1.	P
10.2.1	General classification		P
10.3	Protection against laser radiation		P
	Laser radiation that exists equipment:		—
	Normal, abnormal, single-fault		N/A
	Instructional safeguard		—
	Tool.....		—
10.4	Protection against visible, infrared, and UV radiation		N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons		N/A
10.4.1.b)	RS3 accessible to a skilled person.....		N/A
	Personal safeguard (PPE) instructional safeguard.....		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1. :		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions		N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque.....		N/A
10.4.1.f)	UV attenuation.....		N/A
10.4.1.g)	Materials resistant to degradation UV		N/A
10.4.1.h)	Enclosure containment of optical radiation.....		N/A
10.4.1.i)	Exempt Group under normal operating conditions		N/A
10.4.2	Instructional safeguard		N/A
10.5	Protection against x-radiation		N/A
10.5.1	X- radiation energy source that exists equipment :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards..... :		N/A
	Instructional safeguard for skilled person..... :		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation :		—
	Abnormal and single-fault condition :		N/A
	Maximum radiation (pA/kg)..... :		N/A
10.6	Protection against acoustic energy sources		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output, dB(A)..... :		N/A
	Output voltage, unweighted r.m.s..... :		N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards :		N/A
	Equipment safeguard prevent ordinary person to RS2..... :		—
	Means to actively inform user of increase sound pressure..... :		—
	Equipment safeguard prevent ordinary person to RS2..... :		—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output..... :		—
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A)..... :		—
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A)..... :		—

B	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		P
B.2	Normal Operating Conditions	See the following details.	P
B.2.1	General requirements..... :	See summary of testing and appended tables.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Audio Amplifiers and equipment with audio amplifiers		N/A
B.2.3	Supply voltage and tolerances	Rated voltage $\pm 10\%$	P
B.2.5	Input test.....	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements.....	(See appended table B.3)	P
B.3.2	Covering of ventilation openings	(See appended table B.3)	P
B.3.3	D.C. mains polarity test	The EUT is not connected to a D.C. mains	N/A
B.3.4	Setting of voltage selector	No setting of voltage selector within the EUT	N/A
B.3.5	Maximum load at output terminals	(See appended table B.3)	P
B.3.6	Reverse battery polarity		N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions	All safeguards remained effective	P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited		N/A
B.4.3	Motor tests	No motor used.	N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature		N/A
B.4.4	Short circuit of functional insulation	See below for details.	P
B.4.4.1	Short circuit of clearances for functional insulation	(See appended table B.4)	P
B.4.4.2	Short circuit of creepage distances for functional insulation	(See appended table B.4)	P
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		N/A
B.4.6	Short circuit or disconnect of passive components	(See appended table B.4)	P
B.4.7	Continuous operation of components		N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions	No change to circuits classified	P
B.4.9	Battery charging under single fault conditions ...		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
C	UV RADIATION		N/A
C.1	Protection of materials in equipment from UV radiation	No such UV generated from the equipment.	N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A
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	Audio amplifier normal operating conditions		N/A
	Audio signal voltage (V)		—
	Rated load impedance (Ω)		—
E.2	Audio amplifier abnormal operating conditions		N/A
F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General requirements		P
	Instructions – Language	English	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1		P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	Equipment marking is located on the enclosure surface and is easily visible.	P
F.3.2	Equipment identification markings	See below for details.	P
F.3.2.1	Manufacturer identification	Trademark: Tenda	—
F.3.2.2	Model identification	See Page 1	—
F.3.3	Equipment rating markings	See below for details.	P

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.3.1	Equipment with direct connection to mains	The equipment is connected to AC mains supply.	P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage	IEC 60417-5032 for a.c. symbol used.	—
F.3.3.4	Rated voltage	100-240V~	—
F.3.3.4	Rated frequency	50/60Hz	—
F.3.3.6	Rated current or rated power	0.7A	—
F.3.3.7	Equipment with multiple supply connections	Only one supply connection.	N/A
F.3.4	Voltage setting device	No voltage setting device	N/A
F.3.5	Terminals and operating devices		P
F.3.5.1	Mains appliance outlet and socket-outlet markings	No mains appliance outlet or socket-outlet provided.	N/A
F.3.5.2	Switch position identification marking		N/A
F.3.5.3	Replacement fuse identification and rating markings	The marking is marked on PCB adjacent to fuse. F1 T6.3AL/250Vac or T3.15AL/250Vac	P
F.3.5.4	Replacement battery identification marking		N/A
F.3.5.5	Terminal marking location		P
F.3.6	Equipment markings related to equipment classification	See below for details	P
F.3.6.1	Class I Equipment		P
F.3.6.1.1	Protective earthing conductor terminal	Approved AC inlet used.	P
F.3.6.1.2	Neutral conductor terminal	Not permanently connected equipment.	N/A
F.3.6.1.3	Protective bonding conductor terminals		N/A
F.3.6.2	Class II equipment (IEC60417-5172)	Class I equipment	N/A
F.3.6.2.1	Class II equipment with or without functional earth		N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking	This equipment is classified as IPX0.	—
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking	Marking is considered to be legible and easily discernible. See also the following details.	P

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.10	Test for permanence of markings	The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. And then again for 15 sec. With the cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was no curling and lifting of the label edge. After each test, the marking remained legible.	P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking		N/A
	b) Instructions given for installation or initial use		P
	c) Equipment intended to be fastened in place		N/A
	d) Equipment intended for use only in restricted access area		N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard		N/A
	g) Protective earthing conductor current exceeding ES 2 limits		N/A
	h) Symbols used on equipment		N/A
	i) Permanently connected equipment not provided with all-pole mains switch		N/A
	j) Replaceable components or modules providing safeguard function		N/A
F.5	Instructional safeguards		N/A
	Where "instructional safeguard" is referenced in the test report it specifies the required elements, location of marking and/or instruction		N/A
G	COMPONENTS		P
G.1	Switches		N/A
G.1.1	General requirements	No such switch used.	N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	Relays		N/A
G.2.1	General requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
G.3	Protection Devices		P
G.3.1	Thermal cut-offs		N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691		N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H)		—
	Single Fault Condition		—
	Test Voltage (V) and Insulation Resistance (Ω) :		—
G.3.3	PTC Thermistors		N/A
G.3.4	Overcurrent protection devices		P
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		P
G.4.1	Spacings		P
G.4.2	Mains connector configuration	Approved AC inlet used.	P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N/A
G.5	Wound Components		P
G.5.1	Wire insulation in wound components.....	Consider	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°	Separated by tube and reflected tape.	P
G.5.1.2 b)	Construction subject to routine testing	The routine tests are to be considered for the production based on the relevant approval (see 5.4.9.2).	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s)		—
	Temperature (°C)		—
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	Transformers		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1)	The transformer on power board meets the requirements given in G.5.3.2 and G.5.3.3.	P
	Position	T1	—
	Method of protection	See G.5.3.3.	—
G.5.3.2	Insulation	See below.	P
	Protection from displacement of windings.....	Separated by tube and insulation tape between windings.	—
G.5.3.3	Overload test	(See appended table B.3 & B.4)	P
G.5.3.3.1	Test conditions		P
G.5.3.3.2	Winding Temperatures testing in the unit	Maximum temperatures of windings did not exceed the limits given in Table G.3. During the test, the transformer did not emit flames or molten metal.	P
G.5.3.3.3	Winding Temperatures - Alternative test method	Alternative test method was not considered.	N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements		N/A
	Position		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days)		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V)		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Electric strength test (V)..... :		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature :		N/A
	Electric strength test (V) :		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h) :		N/A
	Electric strength test (V)..... :		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage :		—
G.6	Wire Insulation		P
G.6.1	General		P
G.6.2	Solvent-based enamel wiring insulation	Solvent-based enamel winding is not considered basic insulation.	N/A
G.7	Mains supply cords		N/A
G.7.1	General requirements		N/A
	Type..... :		—
	Rated current (A)..... :		—
	Cross-sectional area (mm ²), (AWG) :		—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N) :		—
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm).... :		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry :		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.5.2	Mass (g)		—
	Diameter (m)		—
	Temperature (°C)		—
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	Varistors		P
G.8.1	General requirements		P
G.8.2	Safeguard against shock	Approved varistor used. See appended table 4.1.2.	P
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test	The method “reduce the likelihood of ignition” of 6.4.1 is not chosen.	N/A
G.8.3.3	Temporary overvoltage		N/A
G.9	Integrated Circuit (IC) Current Limiters		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.		N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA		—
G.9.1 d)	IC limiter output current (max. 5A)		—
G.9.1 e)	Manufacturers' defined drift		—
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	Resistors		N/A
G.10.1	General requirements	Resistor bridging functional insulation	N/A
G.10.2	Resistor test		N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	Capacitor and RC units		P

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.11.1	General requirements	Approved X-cap and Y-cap used. (see appended table 4.1.2)	P
G.11.2	Conditioning of capacitors and RC units		P
G.11.3	Rules for selecting capacitors		P
G.12	Optocouplers		N/A
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results).....:		N/A
	Type test voltage Vini		—
	Routine test voltage, Vini,b		—
G.13	Printed boards		P
G.13.1	General requirements	See the following details.	P
G.13.2	Uncoated printed boards	The insulation between conductors on the outer surfaces of an uncoated printed board complied with the minimum clearance and creepage requirements of 5.4.2 and 5.4.3.	P
G.13.3	Coated printed boards	No coated printed board or multilayer board applied for within the equipment.	N/A
G.13.4	Insulation between conductors on the same inner surface	See above.	N/A
	Compliance with cemented joint requirements (Specify construction).....:		—
G.13.5	Insulation between conductors on different surfaces	See above.	N/A
	Distance through insulation.....:		N/A
	Number of insulation layers (pcs)		—
G.13.6	Tests on coated printed boards	See above.	N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
G.14	Coating on components terminals		N/A
G.14.1	Requirements		N/A
G.15	Liquid filled components		N/A
G.15.1	General requirements		N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	IC including capacitor discharge function (ICX)		N/A
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N/A
b)	Impulse test using circuit 2 with U_c = to transient voltage		N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A
D2)	Capacitance		—
D3)	Resistance		—
H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N/A
H.1	General		N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringling signal		N/A
H.3.1.1	Frequency (Hz)		—
H.3.1.2	Voltage (V)		—
H.3.1.3	Cadence; time (s) and voltage (V)		—
H.3.1.4	Single fault current (mA):.....		—
H.3.2	Tripping device and monitoring voltage		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
H.3.2.3	Monitoring voltage (V)		—
J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		P
	General requirements		P
K	SAFETY INTERLOCKS		N/A
K.1	General requirements		N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location)		N/A
K.7.2	Overload test, Current (A)		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test		N/A
L	DISCONNECT DEVICES		P
L.1	General requirements	Appliance coupler used to disconnect from AC mains.	P
L.2	Permanently connected equipment	Not permanently connected equipment.	N/A
L.3	Parts that remain energized	When appliance coupler is disconnected no hazardous voltage in the equipment.	P
L.4	Single phase equipment	The appliance coupler as disconnects both poles simultaneously.	P
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	Only one a.c. mains connection.	N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		N/A
M.1	General requirements		N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method) .. :		N/A
M.3	Protection circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Tests		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance		N/A
M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature		—
M.4.2.2 b)	Single faults in charging circuitry		—
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.6	Prevention of short circuits and protection from other effects of electric current		N/A
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method)		N/A
M.6.2	Leakage current (mA)		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume V_z (m 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 (Determination of compliance: inspection, data review; or abnormal testing)		N/A
N	ELECTROCHEMICAL POTENTIALS		P
	Metal(s) used	The screw, ring type lug, spring washer and metal chassis are all made of mild steel	—
O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		P
	Figures O.1 to O.20 of this Annex applied	Considered.	—
P	SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS		P
P.1	General requirements	See the following details.	P
P.2.2	Safeguards against entry of foreign object	See below.	P

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Location and Dimensions (mm)	See appended table 6.4.8.3.3, 6.4.8.3.4, P.2 in miscellaneous.	—
P.2.3	Safeguard against the consequences of entry of foreign object	See above	P
P.2.3.1	Safeguards against the entry of a foreign object		P
	Openings in transportable equipment		N/A
	Transportable equipment with metalized plastic parts		N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard)		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts		N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C).....		—
	Tr (°C)		—
	Ta (°C).....		—
P.4.2 b)	Abrasion testing		N/A
P.4.2 c)	Mechanical strength testing		N/A
Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		P
Q.1	Limited power sources	All interconnection connectors evaluated for limited power source. See appended table Q.1	P
Q.1.1 a)	Inherently limited output		P
Q.1.1 b)	Impedance limited output		N/A
	- Regulating network limited output under normal operating and simulated single fault condition		N/A
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method	See appended table Annex Q.1	P
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A)		—

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Current limiting method		—
R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General requirements		N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)).		N/A
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	Metal fire enclosure provided.	N/A
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (°C).....		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (°C).....		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material		—
	Wall thickness (mm).....		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (test condition), (°C).....		—
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	After every test specimen was not consumed completely		N/A
	After fifth flame application, flame extinguished within 1 min		N/A
T	MECHANICAL STRENGTH TESTS		P
T.1	General requirements	See below.	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		N/A
T.5	Steady force test, 250 N	(see appended table T.5)	P
T.6	Enclosure impact test	(see appended table T.6)	P
	Fall test		P
	Swing test		N/A
T.7	Drop test		N/A
T.8	Stress relief test		N/A
T.9	Impact Test (glass)		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J).....		—
	Height (m)		—
T.10	Glass fragmentation test		N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm)		—
U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N/A
U.1	General requirements		N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen.....		N/A

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

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 (Edition / year)	Mark(s) of conformity ¹⁾
1. Enclosure	--	--	Metal, min. 0.8 mm thickness	--	--
2. PCB (except power board)	Interchangeable	Interchangeable	V-1 or better, min. 105°C	UL 796	UL
For Power board:					
3. Protective bonding wire	Interchangeable	Interchangeable	Min. 300V, VW-1 or FT-1 or better, min. 18AWG, min. 80°C, insulated with green/yellow color	UL 758	UL
4. PCB (power board)	Interchangeable	Interchangeable	V-1 or better, min. 130°C	UL 796	UL
5. AC inlet (CON1)	Shenzhen Kangyongda Electronics Co., Ltd.	DE-14-Serie(s)	250Vac, 10A, 70°C	EN 60320-1	VDE 40036820
	Steady Electronics Corporation	2111	250Vac, 10A, 70°C	EN 60320-1	VDE 40011922
6. Fuse (F1)	Zhongshan Lanbao Electrical Appliances Co., Ltd.	RTI-10 Serie(s)	T3.15AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3	VDE 40017009
	Conquer Electronics Co., Ltd.	MST	T3.15AL, 250Vac; or T6.3AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3	VDE 40017118
	King Wahoo Electronics Co., Ltd	KET	T3.15AL, 250Vac; or T6.3AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3	TUV R 50152902
7. Varistor (RV1) (optional)	Hongzhi Enterprises Ltd.	HEL10D561K	300Vac min., 105 degree C min. V-1 Coating	IEC 61051-1, IEC 61051-2, IEC 61051-2-2	VDE 40037512
	Centra Science Corp.	CNR-10D561K	300Vac min., 105 degree C min. V-1 Coating	IEC 61051-1, IEC 61051-2, IEC 61051-2-2	VDE 40008220

IEC/EN 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
	Guangxi New Future Information Industry Co., Ltd.	10D561K	300Vac min., 85 degree C min. V-1 Coating	IEC 61051-1, IEC 61051-2, IEC 61051-2-2	VDE 40030322
	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	10D561K	300Vac min., 125 degree C min. V-1 Coating	IEC 61051-1, IEC 61051-2, IEC 61051-2-2	VDE 40023049
8. X-Cap (CX1) (X1 or X2 type)	Shenzhen Yimanfeng Science And Technology Co., Ltd.	X2-MPX/MKP	Min. 250VAC, max. 0.22uF, min.100°C	EN 60384-14	VDE 40028516
	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	MPX	Min. 250VAC, max. 0.22uF, min.110°C	EN 60384-14	VDE 40034679
	Hongzhi Enterprises Ltd.	MPX	Min. 250VAC, max. 0.22uF, min.100°C	EN 60384-14	VDE 40023936
	Dain Electronics Co., Ltd.	MPX	Min. 250VAC, max. 0.22uF, min.100°C	EN 60384-14	VDE 40018798
	Shenzhen Jinghao Capacitor Co., Ltd.	CBB62B	Min. 250VAC, max. 0.22uF, min.110°C	EN 60384-14	VDE 40018690
9. Bridging Y-Cap (CY1) (Y1 type) (Optional)	Hongzhi Enterprises Ltd.	Y	Min. 250VAC, max. 2200pF, 125°C	EN 60384-14	VDE 40038760
	Shenzhen Haotian Electronic Co., Ltd.	HT	Min. 250VAC, max. 2200pF, 125°C	EN 60384-14	VDE 40029300
	Hsuan Tai Electronic Co. Ltd.	CY	Min. 250VAC, max.2200pF, 125°C	EN 60384-14	VDE 40008912
	Jyh Chung Electronic Co., Ltd.	JD	Min. 250VAC, max.2200pF, 125°C	EN 60384-14	VDE 137027

IEC/EN 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	CD-Series	Min. 250VAC, max. 2200pF, 125°C	EN 60384-14	VDE 40025754
	Dongguan City Dafu Electronics Co. Ltd.	CT7 Y1	Min. 250VAC, max.2200pF, 125°C	EN 60384-14	VDE 40041523
10. Choke (LF1)	Hung KAY Industrial Co Ltd (Dongguan City Sun Mao Electronic Co., LTD.)	UU9.8-20MH V01	Min.130°C	--	--
	Shenzhen Dihylen Technology Co., Ltd	UU9.8-20MH V01	Min.130°C	--	--
	Interchangeable	Interchangeable	Min.130°C	--	--
11. Transformer (T1)	Hung KAY Industrial Co Ltd (Dongguan City Sun Mao Electronic Co., LTD.)	BN034-T2	Class B	--	--
11-1. TIW wire	Furukawa Electric Co., Ltd.	TEX-E	130 °C	IEC/EN 62368-1	VDE 6735
11-2. Bobbin	CHANG CHUN PLASTICS CO LTD	T375J	Phenolic, V-0, 150 degree C, Min. 0.70mm	UL 94, UL746C	UL E59481
11-3. Insulation tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT* (b)(g)	130 °C	UL 510A	UL E165111
12. Thermistor (RT1) (Optional)	--	--	2A min., max.6 ohm at 25°C	--	--
13. Bleeder resistor (R14, R15, R16, R17)	--	--	Max. 2Mohm, min. 1/4W	--	--

IEC/EN 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
14. Electrolytic Capacitor (EC1)	--	--	Max. 47uF, Min.400V, min. 105°C	--	--
15. Bridging Diode (BD1)	--	--	Min. 2A, Min. 600V	--	--
16. PWM IC (U1)	--	--	Min.1.3A, Min.650Vac	--	--
17. One layer of insulation tape used for heat-sink (HS1)	Interchangeable	Interchangeable	Min. 130 °C	UL 510A	UL
18. Mylar sheet (under power board)	SICHUAN DONGFANG INSULATING MATERIAL CO LTD	DFR117ECOB	Min V-2, min. 80°C	UL 94, UL 746C	UL 199019
	SICHUAN DONGFANG INSULATING MATERIAL CO LTD	DFR3A(d), DFR3713A(d), DFR3715A(d), DFR3716A(d), DFR3732A(d), DFR3735A(d), DFR3738A(d), DFR3613A(d), DFR3615A(d), DFR3616A(d), DFR3632A(d), DFR3635A(d), DFR3638A(d)	Min V-2, min. 110°C	UL 94, UL 746C	UL 199019

IEC/EN 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX FRPC-1880, KLX FRPC-1880B, KLX FRPC-1880-83, KLX FRPC-1880-83B, KLX FRPC-1880-1, KLX FRPC-1880B-1, KLX FRPC-1880-2, KLX FRPC-1880B-2, KLX FRPC-1880-3, KLX FRPC-1880B-3, KLX FRPC-1880-NTC, KLX FRPC-1880B-NTC, KLX FRPC-1880B-HY, KLX FRPC-1880-HY, KLX FRPC-1880B-K, KLX FRPC-1880-K, KLX FRPC-1860-YM, KLX FRPC-1860B-YM, KLX FRPC-1880-YM, KLX FRPC-1880B-YM, KLX FRPC-1880W, KLX FRPC-1880W-1, KLX FRPC-1860B-KS, KLX FRPC-1860-KS, KLX FRPC-1880-KS, KLX FRPC-1880B-KS	Min V-2, min. 115°C	UL 94, UL 746C	UL E315185
19. Output wire of power board	Interchangeable	Interchangeable	VW-1 or FT-1, min. 80°C, min. 300V, min. 22AWG	UL 758	UL
Supplementary information:					
1) An asterisk indicates a mark that assures the agreed level of surveillance.					

IEC/EN 62368-1				
Clause	Requirement + Test		Result - Remark	Verdict
4.8.4, 4.8.5		TABLE: Lithium coin/button cell batteries mechanical tests		N/A
(The following mechanical tests are conducted in the sequence noted.)				
4.8.4.2		TABLE: Stress Relief test		—
Part		Material	Oven Temperature (°C)	Comments
--		--	--	--
4.8.4.3		TABLE: Battery replacement test		—
Battery part no.:			--	—
Battery Installation/withdrawal			Battery Installation/Removal Cycle	Comments
--			1	--
			2	--
			3	--
			4	--
			5	--
			6	--
			8	--
			9	--
4.8.4.4		TABLE: Drop test		—
Impact Area		Drop Distance	Drop No.	Observations
--		--	1	--
--		--	2	--
--		--	3	--
4.8.4.5		TABLE: Impact		—
Impacts per surface		Surface tested	Impact energy (Nm)	Comments
--		--	--	--
--		--	--	--
--		--	--	--
4.8.4.6		TABLE: Crush test		—

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
Test position	Surface tested	Crushing Force (N)	Duration force applied (s)
--	--	--	--
--	--	--	--
Supplementary information:			

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

5.2	Table: Classification of electrical energy sources						P
5.2.2.2 – Steady State Voltage and Current conditions							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				U (Vrms or Vpk)	I (A _{pk} or A _{rms})	Hz	
01	264	+12V output of power board “+” to “-”	Normal	12.9Vdc	--	DC	ES1
			Abnormal-(for all condition in table B.3)	See table B.3	--	--	
			Single fault: R11 SC	0	--	--	
			Single fault: R18 SC	12.9	--	DC	
			Single fault: D3 SC	0	--	--	
			Single fault: C4 SC	12.9	--	DC	
02	264	+12V output of power board	Normal	--	0.471mA _{pk}	60	ES1

IEC/EN 62368-1							
Clause	Requirement + Test			Result - Remark			Verdict
		"+" to "earth"	Abnormal-(for all condition in table B.3)	--	See table B.3	--	
			Single fault: R11 SC	--	0.487mA _{pk}	60	
			Single fault: R18 SC	--	0.473mA _{pk}	60	
			Single fault: D3 SC	--	0.482mA _{pk}	60	
			Single fault: C4 SC	--	0.476mA _{pk}	60	
03	264	+12V output of power board "-" to "earth"	Normal	--	0.486mA _{pk}	60	ES1
			Abnormal-(for all condition in table B.3)	--	See table B.3	--	
			Single fault: R11 SC	--	0.489 mA _{peak}	60	
			Single fault: R18 SC	--	0.476 mA _{peak}	60	
			Single fault: D3 SC	--	0.485 mA _{peak}	60	
			Single fault: C4 SC	--	0.486 mA _{peak}	60	
5.2.2.3 - Capacitance Limits							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class	
				Capacitance, nF	Upk (V)		
01	264	L to N (CX1)	Normal	CX1=220nF	366	ES3	
			Abnormal	--	--		
			Single fault	--	--		
5.2.2.4 - Single Pulses							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Duration (ms)	Upk (V)	Ip _k (mA)	
--	--	--	Normal	--	--	--	--
			Abnormal	--	--	--	

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Clause		Requirement + Test		Result - Remark			Verdict
			Single fault – SC/OC	--	--	--	
5.2.2.5 - Repetitive Pulses							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Off time (ms)	Upk (V)	Ipk (mA)	
--	--	--	Normal	--	--	--	--
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	
Test Conditions: Normal – Abnormal - Supplementary information: SC=Short Circuit, OC=Open Circuit							

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements					P
	Supply voltage (V)	90V/60Hz		264V/60Hz		—
	Ambient T _{min} (°C)	--	--	--	--	—
	Ambient T _{max} (°C)	--	--	--	--	—
	T _{ma} (°C)	See below	See below	See below	See below	—
Maximum measured temperature T of part/at:		T (°C)				Allowed T _{max} (°C)
01. AC inlet (power board)		35.2	57.0	34.3	56.1	70
02. PWB near RT1 (power board)		46.9	68.7	40.1	61.9	130
03. RV1 body (power board)		42.0	63.8	39.1	60.9	85
04. CX1 body (power board)		53.0	74.8	47.8	69.6	100
05. LF1 coil (power board)		62.6	84.4	49.1	70.9	130
06. PWB near BD1 (power board)		66.8	88.6	57.9	79.7	130
07. EC1 body (power board)		49.7	71.5	46.6	68.4	105
08. PWB near U1 (power board)		65.0	86.8	63.8	85.6	130
09. CY1 body (power board)		46.8	68.6	47.9	69.7	125
10. T1 coil (power board)		65.2	87.0	67.6	89.4	110
11. T1 core (power board)		54.6	76.4	56.4	78.2	110
12. PWB near D3 (power board)		73.4	95.2	78.0	99.8	130

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Clause	Requirement + Test		Result - Remark		Verdict		
13. EC3 body (power board)	56.0	77.8	60.7	82.5	105		
14. LF2 coil (power board)	52.4	74.2	54.0	75.8	105		
15. Output wire (main board)	44.9	66.7	44.7	66.5	80		
16. C641 body (main board)	48.1	69.9	48.2	70.0	105		
18. PWB near U13 (main board)	68.3	90.1	68.4	90.2	105		
19. PWB near U2 (main board)	68.5	90.3	67.8	89.6	105		
Ambient	23.2	shift to 45.0°C	23.2	shift to 45.0°C	--		
Below are accessible parts							
20. Metal enclosure near T1	30.9	32.7	30.9	32.7	60		
21. Metal enclosure near U13	34.7	36.5	33.7	35.5	60		
Ambient	23.2	shift to 25.0°C	23.2	shift to 25.0°C	--		
Supplementary information:							
1. The apparatus was submitted and evaluated for maximum manufacturer's recommended ambient (Tma) of 45 °C.							
2. The temperatures were measured under the worse case normal mode defined in clause B.2.1.							
3. Temperature limits are calculated as follows:							
Winding components providing safety isolation:							
Class B→Tmax=120-10=110°C							
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:							

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

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

5.4.1.8	TABLE: Working voltage measurement				P
Location	RMS voltage (V)	Peak voltage (V)	Frequency (kHz)	Comments	
T1 pin1 to pin6	249	494	47.2	Max. Vpeak of T1	
T1 pin3 to pin6	219	373	--	--	
T1 pin4 to pin6	219	376	--	--	
T1 pin5 to pin6	219	401	--	--	
T1 pin1 to pin7	256	491	47.2	Max. Vr.m.s of T1	
T1 pin3 to pin7	219	408	--	--	
T1 pin4 to pin7	219	382	--	--	
T1 pin5 to pin7	218	362	--	--	
CY1 Primary to Secondary	218	360	--	--	
Supplementary information:					

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance						P
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz) ¹	Required cl (mm)	cl (mm) ²	Required ³ cr (mm)	cr (mm)
Line to Neutral (before fuse)	420	250	--	1.5	4.5	2.5	4.5
PCB trace between F1	420	250	--	1.5	2.6	2.5	2.6
Primary trace (N) to PE trace	420	250	--	1.5	2.8	2.5	2.8
Primary trace (L) to PE trace	420	250	--	1.5	2.8	2.5	2.8
Primary trace to secondary trace of PCB under CY1	420	250	--	3.0	6.5	5.0	6.5

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Clause	Requirement + Test			Result - Remark			Verdict
Primary trace to secondary trace of PCB under T1	494	256	47.2	3.0	7.2	5.2	7.2
Core of T1 to secondary component (LF2)	494	256	47.2	3.0	8.0	5.2	8.0
Primary coil of T1 to secondary component (LF2)	494	256	47.2	3.0	7.5	5.2	7.5
Primary component (HS1) to secondary component (LF2)	494	256	47.2	3.0	10.0	5.2	10.0
Primary component (T1) to the top enclosure	494	256	47.2	1.5	10.0	2.6	10.0
Primary Trace (F1) to the bottom of enclosure	494	256	47.2	1.5	5.0	2.6	5.0
Supplementary information: 1. Only for frequency above 30kHz 2. See table 5.4.2.4 if this is based on electric strength test 3. Provide Material Group IIIa/IIIb 4. One mylar sheet is under power board. 5. The transformer construction refers to table G.5.3.2. 6. Core of T1 regard as primary 7. T1 is wrapped by min.2 layers of insulation tape. 8. A section of HS1, which is closed to secondary side, is wrapped by insulation tape, which reflected at least 7mm.							

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage				P
	Overvoltage Category (OV):				II
	Pollution Degree:				2
Clearance distanced between:		Required withstand voltage	Required cl (mm)	Measured cl (mm)	
See table 5.4.2.2, 5.4.2.4 and 5.4.3 above.		2500	See table 5.4.2.2, 5.4.2.4 and 5.4.3	See table 5.4.2.2, 5.4.2.4 and 5.4.3 above.	
Supplementary information:					

5.4.2.4	TABLE: Clearances based on electric strength test			N/A
Test voltage applied between:		Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No
--		--	--	--
--		--	--	--

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

Supplementary information:

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements					N/A
Distance through insulation di at/of:	Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)	
--	--	--	--	--	--	
Supplementary information: For Insulation tape see also sub-clause 5.4.4.9. 1). See appended table 4.1.2 for details.						

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Unit: L to N with fuse open		AC	2500	No
Unit: primary to metal enclosure		AC	2500	No
Unit: primary to secondary		DC	4000	No
T1: primary to secondary		AC	4000	No
T1: secondary to core		AC	4000	No
Mylar sheet (under power board)		AC	2500	No
One layer of insulation tape of T1		AC	4000	No
One layer of insulation tape used for heat-sink (HS1)		AC	2500	No
Supplementary information: 1. The materials of mylar sheet: See table 4.1.2 2. Applied d.c. voltage in one polarity for 60s and then repeated it in reverse polarity. 3. The transformer manufactured by each factory was applied and passed the relevant tests.				

5.5.2.2	TABLE: Stored discharge on capacitors					P
Supply Voltage (V), Hz		Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification
264V, 60Hz		L to N	N	--	4	ES1
264V, 60Hz		Between L & N	S (R17 OC)	--	16	ES1
Supplementary information:						

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Clause	Requirement + Test	Result - Remark	Verdict

<ul style="list-style-type: none"> - X-capacitors installed for testing are: CX1: 0.22uF - Bleeding resistors rating: 2Mohm (R14 = R15 = R16 = R17 = 2Mohm) <p>Notes:</p> <p>A. Test Location: Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth</p> <p>B. Operating condition abbreviations: N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition SC – Short Circuit; OC – Open Circuit</p>			
--	--	--	--

5.6.6.2	TABLE: Resistance of protective conductors and terminations				P
Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)	
PE pin of AC inlet to metal enclosure	32	2	0.192	0.006	
Supplementary information:					

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		P
Supply voltage	264V, 60Hz	—	
Location	Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)	
Measured to metal chassis (Normal/Reverse)	1	0.425/0.418	
	2*	--	
	3	--	
	4	--	
	5	--	
	6	--	
	8	--	

<p>Supplementary Information:</p> <ul style="list-style-type: none"> - Overall capacity: CY1 refer to table 4.1.2 <p>Notes:</p> <p>[1] Supply voltage is the anticipated maximum Touch Voltage</p> <p>[2] Earthed neutral conductor [Voltage differences less than 1% or more]</p> <p>[3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3</p> <p>[4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable.</p> <p>[5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.</p>			
---	--	--	--

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Clause	Requirement + Test	Result - Remark	Verdict

6.2.2	Table: Electrical power sources (PS) measurements for classification				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s ^{*)}	PS Classification
12V output of power board	Normal	Power (W) :	--	37.59	PS2
		V _A (V) :	--	11.71	
		I _A (A) :	--	3.21	
12V output of power board	R11 S-C	Power (W) :	--	0	PS2
		V _A (V) :	--	0	
		I _A (A) :	--	0	
12V output of power board	D3/D4 S-C	Power (W) :	--	0	PS2
		V _A (V) :	--	0	
		I _A (A) :	--	0	
12V output of power board	EC3	Power (W) :	--	0	PS2
		V _A (V) :	--	0	
		I _A (A) :	--	0	

Supplementary Information:

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

The 12V output of power board is PS2.

All other circuits are considered as PS3; all output connector complied with Annex Q.1.

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)				P
Location	Open circuit voltage After 3 s (V _p)	Measured r.m.s current (I _{rms})	Calculated value (V _p x I _{rms})	Arcing PIS? Yes / No	
See below	--	--	--	--	
Supplementary information: - All primary components are considered to arcing PIS. - An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V _p) and normal operating condition rms current (I _{rms}) is greater than 15.					

6.2.3.2	Table: Determination of Potential Ignition Sources (Resistive PIS)				P
---------	--	--	--	--	---

IEC/EN 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
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
See below.	--	--	--	--	--
Supplementary Information: - All primary components and secondary components are considered to resistive PIS. - A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter. - If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification. A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, <u>or</u> (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.					

6.4.8.3.3, 6.4.8.3.4, P.2	TABLE: Top and bottom openings in fire or electrical enclosure		P
Location		Dimension (mm)	Comments
Top/ Bottom side		No openings.	--
Front side		Numerous round openings: Max. Φ = 3.1mm	1)
Rear side		No openings.	--
Left / Right sides		Numerous hexagon openings: Max. side = 3.6mm	1)
Supplementary information: 1) Openings that do not exceed 5 mm in any dimension.			

8.5.5	TABLE: High Pressure Lamp			N/A
Description	Values	Energy Source Classification		
Lamp type	--	—		
Manufacturer	--	—		
Cat no.	--	—		
Pressure (cold) (MPa)	--	MS_		
Pressure (operating) (MPa)	--	MS_		
Operating time (minutes)	--	—		
Explosion method	--	—		

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Clause	Requirement + Test	Result - Remark	Verdict
Max particle length escaping enclosure (mm)	--	MS_	
Max particle length beyond 1 m (mm).....	--	MS_	
Overall result	--		
Supplementary information:			

B.2.5	TABLE: Input test						P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
90V50Hz	0.342	--	20.6	--	F1	0.342	Maximum normal load
90V60Hz	0.394	--	20.7	--	F1	0.394	Maximum normal load
100V50Hz	0.318	0.7	20.5	--	F1	0.318	Maximum normal load
100V60Hz	0.363	0.7	20.6	--	F1	0.363	Maximum normal load
240V50Hz	0.143	0.7	20.4	--	F1	0.143	Maximum normal load
240V60Hz	0.188	0.7	20.4	--	F1	0.188	Maximum normal load
264V50Hz	0.132	--	20.5	--	F1	0.132	Maximum normal load
264V60Hz	0.172	--	20.5	--	F1	0.172	Maximum normal load
Supplementary information:							
- Equipment may be have rated current or rated power or both. Both should be measured							
- Maximum normal load refer to page 4.							

B.3	TABLE: Abnormal operating condition tests							P
Ambient temperature (°C)					25°C, if not specified			—
Power source for EUT: Manufacturer, model/type, output rating					--			—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Opening	Blocked	264	3.5hrs	F1	0.172	See below	See below	NB, Unit operated normally, no damaged, no hazard.
--	--	--	--	--	--	1) T1 coil	1) 68.5	--
--	--	--	--	--	--	2) T1 core	2) 57.0	--
--	--	--	--	--	--	3) PWB near D3	3) 79.4	--

IEC/EN 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
--	--	--	--	--	--	4) PWB near U13	4) 69.1	--
--	--	--	--	--	--	5) Metal enclosure near U13	5) 34.8	--
--	--	--	--	--	--	6) Ambient	6) 23.2	--
T1 pin6 to 7(after D3)	O-L	264	6.0hrs	F1	0.172 to 0.271A to 0.326A to 0.378A to 0.019	See below	See below	NB, Unit shutdown immediately when T1 pin6 to 7(after D3) loaded to 1.80A, no damaged, no hazards.
--	--	--	--	--	--	1) T1 coil	1) 115.7	--
--	--	--	--	--	--	2) T1 core	2) 113.1	--
--	--	--	--	--	--	3) PWB near D3	3) 112.2	--
--	--	--	--	--	--	4) PWB near U13	4) 71.6	--
--	--	--	--	--	--	5) Metal enclosure near U13	5) 38.4	--
--	--	--	--	--	--	6) Ambient	6) 24.9	--
Supplementary Information: - Results Key: NB=No indication of dielectric breakdown; IP=Internal protection operated (list component); CD=Components damaged (list damaged components); @ = Tests were repeated 2 more times (Totally 3 times) and get the same result; I/P = Input; O/P = Output, NSF=No Ignition, TC=Touch Current measured, TV= Touch Voltage measured.								

B.4 TABLE: Fault condition tests								P
Ambient temperature (°C)					25°C, if not specified			—
Power source for EUT: Manufacturer, model/type, output rating					--			—
Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
1. 12Vdc output of power board	S-C	264	10mins	F1	0.019	--	--	NB. Unit shutdown immediately. No damaged, No hazards.

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Clause	Requirement + Test					Result - Remark		Verdict
2. C4	S-C	264	10mins	F1	0.172	--	--	NB. Unit operated normally. No damaged, No hazards.
3. R12	S-C	264	10mins	F1	0.172	--	--	NB. Unit operated normally. No damaged, No hazards.
4. D3	S-C	264	10mins	F1	0.019	--	--	NB. Unit shutdown immediately. No damaged, No hazards.
5. EC3	S-C	264	10mins	F1	0.019	--	--	NB. Unit shutdown immediately. No damaged, No hazards.
6. T1 Pin 6-7	S-C	264	10mins	F1	0.019	--	--	NB. Unit shutdown immediately. No damaged, No hazards.
7. T1 Pin 1-5	S-C	264	10mins	F1	0.019	--	--	NB. Unit shutdown immediately. No damaged, No hazards.
8. T1 Pin 4-3	S-C	264	10mins	F1	0.019	--	--	NB. Unit shutdown immediately. No damaged, No hazards.
9. R3	S-C	264	10mins	F1	0.019	--	--	NB. Unit shutdown immediately. No damaged, No hazards.

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Clause	Requirement + Test					Result - Remark		Verdict
10. U1 Pin 2-7	S-C	264	10mins	F1	0.049	--	--	NB. Unit shutdown immediately. No damaged, No hazards.
11. U1 Pin 5-7	S-C	264	1s	F1	0	--	--	NB. F1 open instantly, No hazards.
12. BD1	S-C	264	1s	F1	0	--	--	NB. F1 open instantly, No hazards.
13. EC1	S-C	264	1s	F1	0	--	--	NB. F1 open instantly, No hazards.
Supplementary Information: - Results Key: NB=No indication of dielectric breakdown; IP=Internal protection operated (list component); CD=Components damaged (list damaged components); @ = Tests were repeated 2 more times (Totally 3 times) and get the same result; I/P = Input; O/P = Output, NSF=No Ignition, TC=Touch Current measured, TV= Touch Voltage measured. - The test repeats 10 times for resistor fusing open condition for all sources of fuse and same results came out. - After fuse opened condition, all sources of fuses were repeated and came out the same result. - Items with some components damaged and fuse not opened were conducted repeatedly 2 times (3 times totally), the same result come out.								

Annex M	TABLE: Batteries								N/A
The tests of Annex M are applicable only when appropriate battery data is not available									--
Is it possible to install the battery in a reverse polarity position?..... :							--		--
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition	--	--	--	--	--	--	--	--	--
Max. current during fault condition	--	--	--	--	--	--	--	--	--
Test results:									Verdict

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Clause	Requirement + Test	Result - Remark	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:			

Annex M.4	Table: Additional safeguards for equipment containing secondary lithium batteries					N/A
Battery/Cell No.	Test conditions	Measurements			Observation	
		U	I (A)	Temp (C)		
--	Normal	--	--	--	--	
--	Abnormal	--	--	--	--	
--	Single fault –SC/OC	--	--	--	--	
--	Normal	--	--	--	--	
--	Abnormal	--	--	--	--	
--	Single fault – SC/OC	--	--	--	--	
Supplementary Information:						
Battery identification	Charging at T_{lowest} (°C)	Observation	Charging at $T_{highest}$ (°C)	Observation		
--	--	--	--	--		
--	--	--	--	--		
Supplementary Information:						

Annex Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)					P
Note: Measured UOC (V) with all load circuits disconnected:						
Output Circuit	Components	U _{oc} (V)	I _{sc} (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
All RJ-45 ports	Normal	0	0	8	0	100
+12V output	Normal	12.655	3.42	8	36.25	100
+12V output	D3 S-C	0	0	8	0	100

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Clause	Requirement + Test			Result - Remark		Verdict
+12V output	EC3 S-C	0	0	8	0	100
+12V output	R11 S-C	0	0	8	0	100
Supplementary Information: SC=Short circuit, OC=Open circuit						

T.2, T.3, T.4, T.5	TABLE: Steady force test					P
Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation	
Internal components	--	--	10	5	All safeguards remain effective.	
Top metal enclosure near T1	Metal	Min. 0.8	250	5	No cracking, all safeguards remain effective.	
Bottom metal enclosure near T1	Metal	Min. 0.8	250	5	No cracking, all safeguards remain effective.	
Left side of metal enclosure near T1	Metal	Min. 0.8	250	5	No cracking, all safeguards remain effective.	
Right side of metal enclosure near T1	Metal	Min. 0.8	250	5	No cracking, all safeguards remain effective.	
Front side of metal enclosure near T1	Metal	Min. 0.8	250	5	No cracking, all safeguards remain effective.	
Rear side of metal enclosure near T1	Metal	Min. 0.8	250	5	No cracking, all safeguards remain effective.	
Supplementary information:						

T.6, T.9	TABLE: Impact tests				P
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation	
Top metal enclosure near T1	Metal	Min. 0.8	1300	No cracking, no indications of dielectric breakdown, all safeguards remain effective.	
Bottom metal enclosure near T1	Metal	Min. 0.8	1300	No cracking, no indications of dielectric breakdown, all safeguards remain effective.	

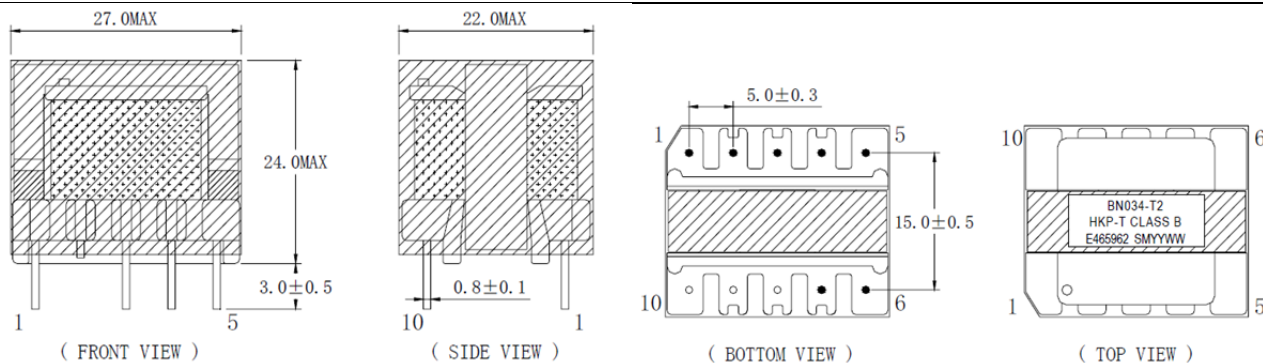
IEC/EN 62368-1				
Clause	Requirement + Test		Result - Remark	
Left side of metal enclosure near T1	Metal	Min. 0.8	1300	No cracking, no indications of dielectric breakdown, all safeguards remain effective.
Right side of metal enclosure near T1	Metal	Min. 0.8	1300	No cracking, no indications of dielectric breakdown, all safeguards remain effective.
Front side of metal enclosure near T1	Metal	Min. 0.8	1300	No cracking, no indications of dielectric breakdown, all safeguards remain effective.
Rear side of metal enclosure near T1	Metal	Min. 0.8	1300	No cracking, no indications of dielectric breakdown, all safeguards remain effective.
Supplementary information:				

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

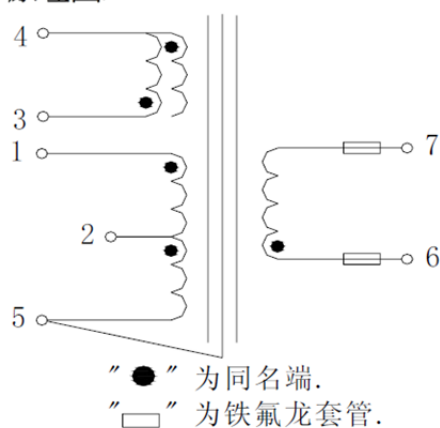
T.8	TABLE: Stress relief test					N/A
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
--	--	--	--	--	--	
Supplementary information:						

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.5.3.2	TABLE: Transformer insulation		P
Construction details:			
Transformer: T1			
Manufacture: See table 4.1.2			
Type: See table 4.1.2			
Recurring peak voltage		494	
Frequency		47.2 KHz	
Required clearance insulation		Procedure 2 (From Table 13 and Table 15)	
- For reinforced		3.0 mm	
- For basic/supplementary		1.5 mm	
Effective voltage rms		256	
Required creepage insulation (From Table 18 or Table 19 which is greater, Pollution degree 2, Material group IIIa+IIIb)		--	
- For reinforced		5.2 mm	
- For basic/supplementary		2.6 mm	
Measured min. clearances			
- Prim-sec (pri. winding to secondary winding)		6.5 mm	
- Prim-core (pri. winding to core)		Core is regarded as primary.	
- Sec-core (sec. winding to core)		7.0 mm	
Measured min. creepages			
- Prim-sec (pri. winding to secondary winding)		6.5 mm	
- Prim-core (pri. winding to core)		Core is regarded as primary.	
- Sec-core (sec. winding to core)		7.0 mm	
Construction:			

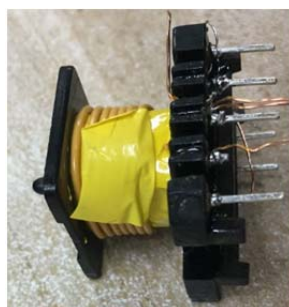
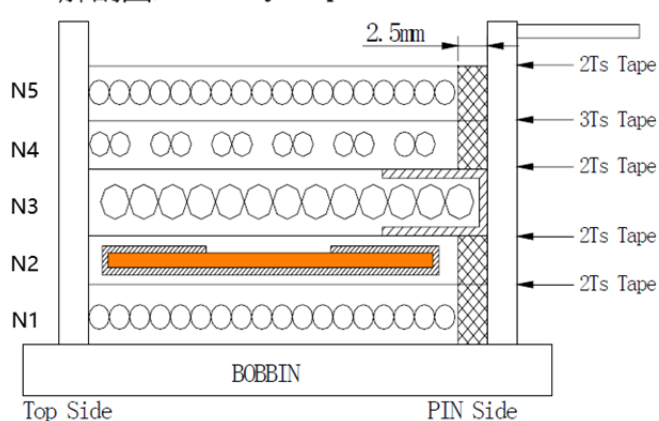
Clause	Requirement + Test	Result - Remark	Verdict
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2、原理图/SCHEMATIC DIAGRAM:



3、解剖图/Anatomy Map:



Winding	Terminal	Wire size	Turns	Winding way	Margin Tape		TAPE
					Top Side	Pin Side	
N1	1 - 2	φ 0.28mm×1P 2UEW	27 Ts	Close	/	2.5mm	11.2mm/2Ts
N2	4 - NC	0.025t×8.0mm Copper	1.1 Ts	Close	/	2.5mm	11.2mm/2Ts
N3	6 - 7	φ 0.70mm×1P TEX-E	7 Ts	Close	/	/	11.2mm/2Ts
N4	3 - 4	φ 0.28mm×2P 2UEW	7 Ts	Space	/	2.5mm	11.2mm/3Ts
N5	2 - 5	φ 0.28mm×1P 2UEW	26 Ts	Close	/	2.5mm	11.2mm/2Ts

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

Transformer:			
Pin numbers			
- Prim.		1-2-5, 3-4	
- Sec.		6-7	
Bobbin			
- Material		See table 4.1.2	
- Thickness		See table 4.1.2	
Solid insulation at frequency higher than 30 kHz			
- $V_W = E_P \times K_R \times d$ (From Table 21 and Table 22)		$17 \times 0.71(< 200\text{kHz}) \times 0.4 = 4.82 \text{ kV}$	
- For reinforced insulation: $V_W > 2 \times 1.2 \times V_{PW}$		Complied	
- For basic/supplimentanry insulation: $V_W > 1.2 \times V_{PW}$		Complied	
supplementary information:			
<ul style="list-style-type: none"> - V_W: Actual electric strength (kVrms). - E_P: The value of breakdown electric field strength of the insulation material (kV/mm). - K_R: The reduction factor in Table 22. - d: Minimum thickness of bobbin (mm). - V_{PW}: Peak working voltage (V). 			

Annex H	TABLE: criteria for telephone ringing signals							N/A
1. Through 5000Ω resistor between:								
Location	IDC (mA)	IP (mA)	IPP (mA)	t1 (ms)	t2 (ms)	ITS1 (mA)	ITS2 (mA)	Limit (mA)
--	--	--	--	--	--	--	--	--
<div><input type="checkbox"/> The current [did] [did not] exceed the limits of Figure H.2 for continuous ringing.</div> <div><input type="checkbox"/> The current [did] [did not] exceed 16 mA for continuous ringing.</div> <div><input type="checkbox"/> The current [did] [did not] exceed 20 mA for single-fault conditions which cause cadenced ringing to become continuous.</div> <div><input type="checkbox"/> I_{TS2} [did] [did not] exceed 16 mA rms.</div>								

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

<p align="center">ATTACHMENT TO TEST REPORT IEC 62368-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES (Audio/video, information and communication technology equipment Part 1: Safety requirements)</p>			
Differences according to EN 62368-1:2014+A11:2017			
Attachment Form No. EU_GD_IEC62368_1B_II			
Attachment Originator Nemko AS			
Master Attachment Date 2017-09-22			
Copyright © 2015 IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE)			

	CENELEC COMMON MODIFICATIONS (EN)					P																																				
	Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2014 are prefixed “Z”.					P																																				
CONTENT S	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations Annex ZD (informative) IEC and CENELEC code designations for flexible cords					P																																				
	Delete all the “country” notes in the reference document (IEC 62368-1:2014) according to the following list: <table border="1"><tr><td>0.2.1</td><td>Note</td><td>1</td><td>Note 3</td><td>4.1.15</td><td>Note</td></tr><tr><td>4.7.3</td><td>Note 1 and 2</td><td>5.2.2.2</td><td>Note</td><td>5.4.2.3.2.2 Table 13</td><td>Note c</td></tr><tr><td>5.4.2.3.2.4</td><td>Note 1 and 3</td><td>5.4.2.5</td><td>Note 2</td><td>5.4.5.1</td><td>Note</td></tr><tr><td>5.5.2.1</td><td>Note</td><td>5.5.6</td><td>Note</td><td>5.6.4.2.1</td><td>Note 2 and 3</td></tr><tr><td>5.7.5</td><td>Note</td><td>5.7.6.1</td><td>Note 1 and 2</td><td>10.2.1 Table 39</td><td>Note 2, 3 and 4</td></tr><tr><td>10.5.3</td><td>Note 2</td><td>10.6.2.1</td><td>Note 3</td><td>F.3.3.6</td><td>Note 3</td></tr></table>					0.2.1	Note	1	Note 3	4.1.15	Note	4.7.3	Note 1 and 2	5.2.2.2	Note	5.4.2.3.2.2 Table 13	Note c	5.4.2.3.2.4	Note 1 and 3	5.4.2.5	Note 2	5.4.5.1	Note	5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3	5.7.5	Note	5.7.6.1	Note 1 and 2	10.2.1 Table 39	Note 2, 3 and 4	10.5.3	Note 2	10.6.2.1	Note 3	F.3.3.6	Note 3	P
0.2.1	Note	1	Note 3	4.1.15	Note																																					
4.7.3	Note 1 and 2	5.2.2.2	Note	5.4.2.3.2.2 Table 13	Note c																																					
5.4.2.3.2.4	Note 1 and 3	5.4.2.5	Note 2	5.4.5.1	Note																																					
5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3																																					
5.7.5	Note	5.7.6.1	Note 1 and 2	10.2.1 Table 39	Note 2, 3 and 4																																					
10.5.3	Note 2	10.6.2.1	Note 3	F.3.3.6	Note 3																																					
	For special national conditions, see Annex ZB.					P																																				
1	Add the following note: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.					P																																				

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.Z1	<p>Add the following new subclause after 4.9:</p> <p>To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. mains, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):</p> <p>a) except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment;</p> <p>b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;</p> <p>c) it is permitted for pluggable equipment type B or permanently connected equipment, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.</p> <p>If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for pluggable equipment type A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>	Type-A equipment.	N/A
5.4.2.3.2.4	<p>Add the following to the end of this subclause:</p> <p>The requirement for interconnection with external circuit is in addition given in EN 50491-3:2009.</p>		N/A
10.2.1	<p>Add the following to ^{c)} and ^{d)} in table 39:</p> <p>For additional requirements, see 10.5.1.</p>		N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	<p>Add the following after the first paragraph:</p> <p><i>For RS 1 compliance is checked by measurement under the following conditions:</i></p> <p><i>In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or presets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.</i></p> <p>NOTE Z1 Soldered joints and paint lockings are examples of adequate locking.</p> <p><i>The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus.</i></p> <p><i>Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.</i></p> <p><i>For RS1, the dose-rate shall not exceed 1 μSv/h taking account of the background level.</i></p> <p>NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.</p>		N/A
10.6.1	<p>Add the following paragraph to the end of the subclause:</p> <p>EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.</p>		N/A

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

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.1.15	<p>Denmark, Finland, Norway and Sweden</p> <p>To the end of the subclause the following is added:</p> <p>Class I pluggable equipment type A intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment shall be connected to an earthed mains socket-outlet.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In Denmark: "Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord."</p> <p>In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"</p> <p>In Norway: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In Sweden: "Apparaten skall anslutas till jordat uttag"</p>		N/A
4.7.3	<p>United Kingdom</p> <p>To the end of the subclause the following is added:</p> <p>The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex</p>		N/A
5.2.2.2	<p>Denmark</p> <p>After the 2nd paragraph add the following:</p> <p>A warning (marking safeguard) for high touch current is required if the touch current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.</p>		N/A
5.4.11.1 and Annex G	<p>Finland and Sweden</p> <p>To the end of the subclause the following is added:</p> <p>For separation of the telecommunication network from earth the following is applicable:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> • two layers of thin sheet material, each of which shall pass the electric strength test below, or 		N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	<ul style="list-style-type: none"> • one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> • passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), and • is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5kV. <p>It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> • the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11; • the additional testing shall be performed on all the test specimens as described in EN 60384-14; the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14. 		
5.5.2.1	<p>Norway</p> <p>After the 3rd paragraph the following is added:</p> <p>Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).</p>		N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.6	Finland, Norway and Sweden To the end of the subclause the following is added: Resistors used as basic safeguard or bridging basic insulation in class I pluggable equipment type A shall comply with G.10.1 and the test of G.10.2.		N/A
5.6.1	Denmark Add to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. <i>Justification:</i> In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.		N/A
5.6.4.2.1	Ireland and United Kingdom After the indent for pluggable equipment type A , the following is added: – the protective current rating is taken to be 13 A, this being the largest rating of fuse used in the mains plug.		P
5.6.5.1	To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm ² to 1,5 mm ² in cross-sectional area.		N/A
5.7.5	Denmark To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the protective conductor current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A
5.7.6.1	Norway and Sweden To the end of the subclause the following is added: The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation		N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>needs to be isolated from the screen of a cable distribution system.</p> <p>It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example.</p> <p>The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in:</p> <p>“Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)”</p> <p>NOTE In Norway, due to regulation for CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.</p> <p>Translation to Norwegian (the Swedish text will also be accepted in Norway):</p> <p>“Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet.”</p> <p>Translation to Swedish:</p> <p>”Apparater som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet.”.</p>		

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.2	Denmark To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA .		N/A
B.3.1 and B.4	Ireland and United Kingdom The following is applicable: To protect against excessive currents and short-circuits in the primary circuit of direct plug-in equipment , tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the direct plug-in equipment , until the requirements of Annexes B.3.1 and B.4 are met		N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	<p>Denmark</p> <p>To the end of the subclause the following is added:</p> <p>Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</p> <p>If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.</p> <p>Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a.</p> <p>Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c.</p> <p>Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a</p> <p><i>Justification:</i> Heavy Current Regulations, Section 6c</p>		N/A
G.4.2	<p>United Kingdom</p> <p>To the end of the subclause the following is added:</p> <p>The plug part of direct plug-in equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16, and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.</p>		N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.7.1	United Kingdom To the first paragraph the following is added: Equipment which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord shall be fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768, unless exempted by those regulations. NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
G.7.1	Ireland To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard		N/A
G.7.2	Ireland and United Kingdom To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm ² is allowed for equipment which is rated over 10 A and up to and including 13 A.		N/A
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
10.5.2	<p>Germany</p> <p>The following requirement applies:</p> <p>For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking.</p> <p><i>Justification:</i></p> <p>German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM.</p> <p>NOTE Contact address:</p> <p>Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int +49-531-592-6320, Internet: http://www.ptb.de</p>		N/A

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

ATTACHMENT TO TEST REPORT IEC 62368-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES (Audio/video, information and communication technology equipment Part 1: Safety requirements)	
Differences according to.....:	EN 62368-1:2014
Attachment Form No.....:	EU_GD_IEC62368_1B
Attachment Originator	Intertek Semko AB
Master Attachment	Date (2015-08)
Copyright © 2015 IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE)	

	CENELEC COMMON MODIFICATIONS (EN)		P
1	NOTE Z1		P
4.Z1	Protective devices included as integral parts of the equipment or as parts of the building installation:		N/A
	a) Included as parts of the equipment		N/A
	b) For components in series with the mains; by devices in the building installation		N/A
	c) For pluggable type B or permanently connected; by devices in the building installation		N/A
5.4.2.3.2.4	Interconnection with external circuit		N/A
10.2.1	Additional requirements in 10.5.1		N/A
10.5.1	RS1 compliance measurement conditions		N/A
10.6.2.1	EN 71-1:2011, 4.20 and methods and distances		N/A
10.Z1	Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz		N/A
G.7.1	NOTE Z1		N/A

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		P
4.1.15	Denmark, Finland, Norway and Sweden: Class I pluggable equipment type A marking		N/A
4.7.3	United Kingdom: Torque test socket-outlet BS 1363, and the plug part BS 1363.		N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.2.2.2	Denmark: Warning for high touchcurrent		N/A
5.4.11.1 and Annex G	Finland and Sweden: Separation of the telecommunication network from earth		N/A
5.5.2.1	Norway: Capacitors rated for the applicable line-to-line voltage (230 V).		N/A
5.5.6	Finland, Norway and Sweden: Resistors used as basic safeguard or bridging basic insulation comply with G.10.1 and G.10.2.		N/A
5.6.1	Denmark: Protection for pluggable equipment type A; integral part of the equipment		N/A
5.6.4.2.1	Ireland and United Kingdom: The protective current rating is taken to be 13 A		N/A
5.6.5.1	Ireland and United Kingdom: Conductor sizes of flexible cords to be accepted by terminals for equipment rated 10 A to 13 A		N/A
5.7.5	Denmark: The installation instruction affixed to the equipment if high protective conductor current		N/A
5.7.6.1	Norway and Sweden: Television distribution system isolation text in user manual		N/A
5.7.6.2	Denmark: Warning for high touch current		N/A
B.3.1 and B.4	Ireland and United Kingdom: Tests conducted using an external miniature circuit breaker or protective devices included as an integral part of the direct plug-in equipment		N/A
G.4.2	Denmark: Appliances rated ≤ 13 A provided with a plug according to DS 60884-2-D1:2011.		N/A
	Class I equipment provided with socket-outlets provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.		N/A
	If a single-phase equipment having rated > 13 A or poly-phase equipment provided with a supply cord with a plug, plug in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.		N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Mains socket outlets intended for providing power to Class II apparatus rated 2,5 A in accordance with DS 60884-2-D1:2011 standard sheet DKA 1-4a.		N/A
	Other current rating socket outlets in compliance with Standard Sheet DKA 1-3a or DKA 1-1c.		N/A
	Mains socket-outlets with earth in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a		N/A
G.4.2	United Kingdom: The plug part of direct plug-in equipment assessed to BS 1363		N/A
G.7.1	United Kingdom: Equipment fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768		N/A
G.7.1	Ireland: Apparatus provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use		N/A
G.7.2	Ireland and United Kingdom: A power supply cord for equipment which is rated over 10 A and up to and including 13 A.		N/A

ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)	P
10.5.2	Germany: Cathode ray tube intended for the display of visual images, authorization or application of type approval and marking.	N/A
F.1	Italy: The power consumption in Watts (W) indicated on TV receiver and in instruction for use	N/A
	TV receivers provided with an instruction for use, schematic diagrams and adjustments procedure in Italian language.	N/A
	Marking for controls and terminals in Italian language.	N/A
	Conformity declaration according to the above requirements in the instruction manual	N/A

IEC/EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	First importers of TV receivers manufactured outside EEC previous conformity certification to the Italian Post Ministry and Certification number on the backcover.		N/A

PHOTOS



External View – 1

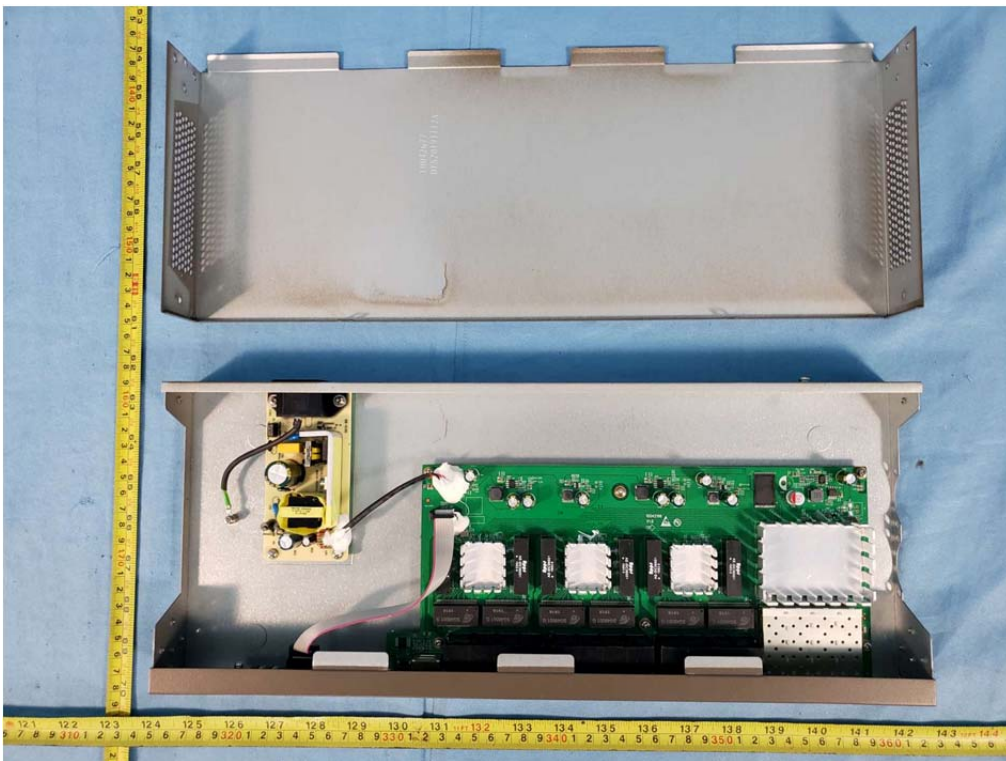


External View – 2

PHOTOS

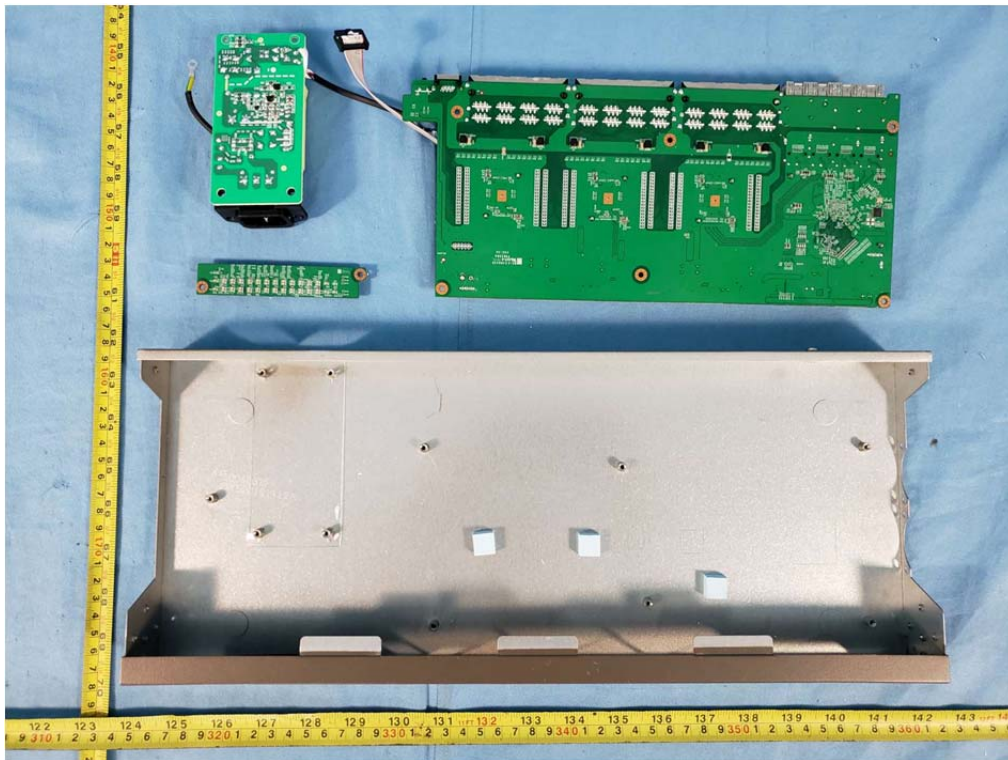


Connector view - 1

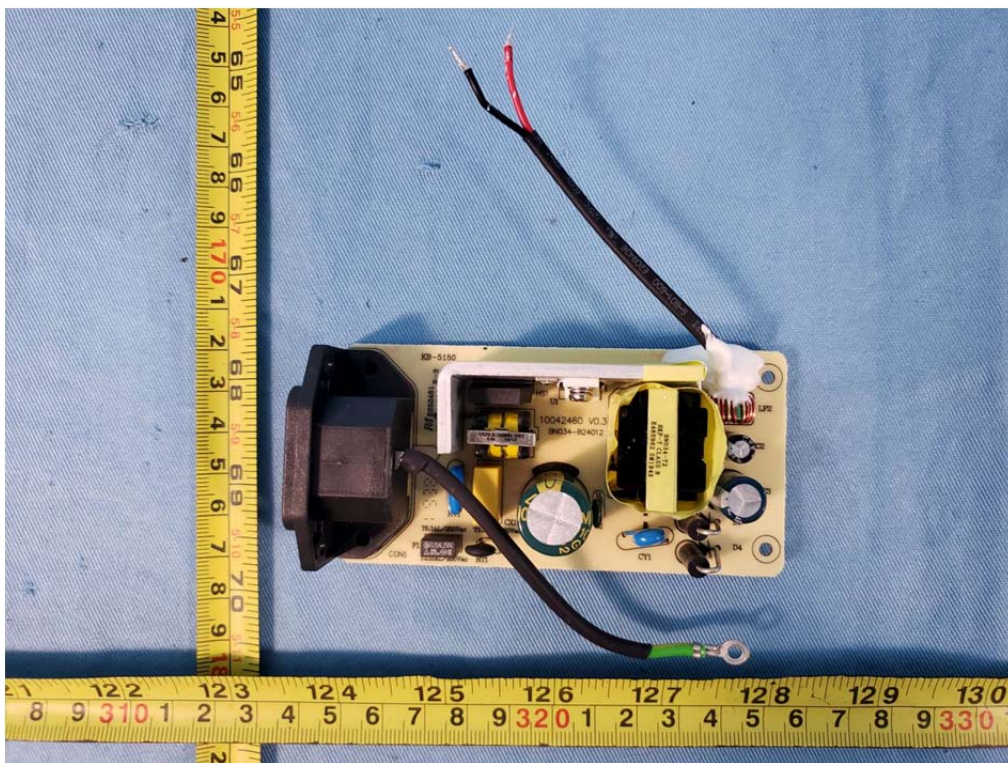


Internal View – 1

PHOTOS

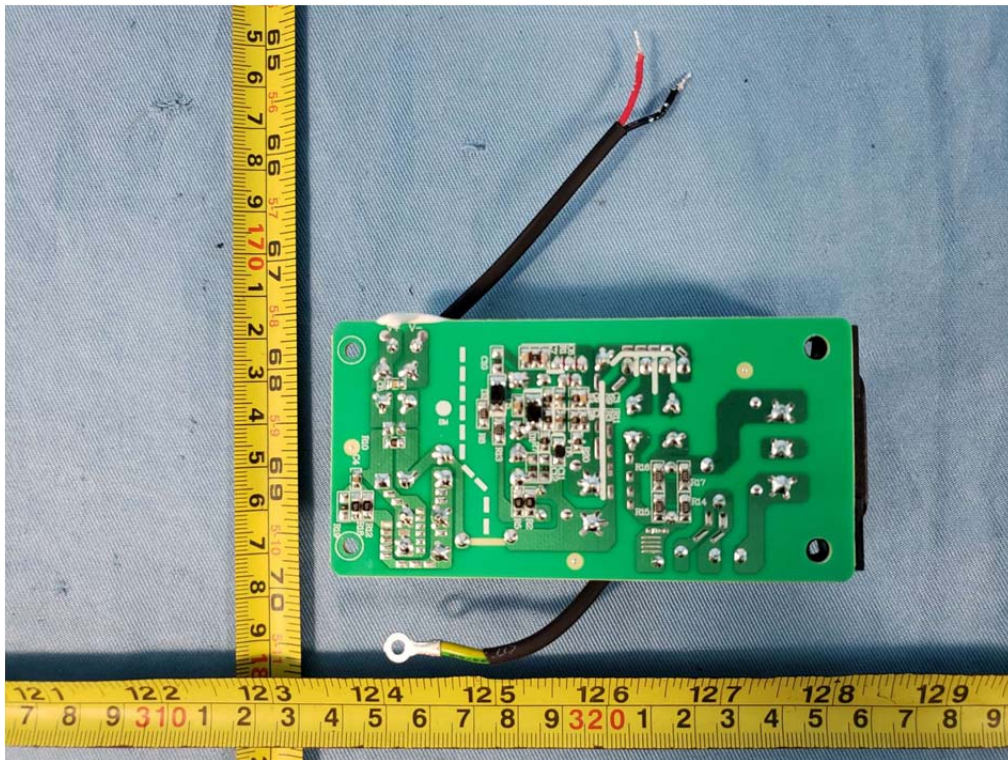


Internal View – 2

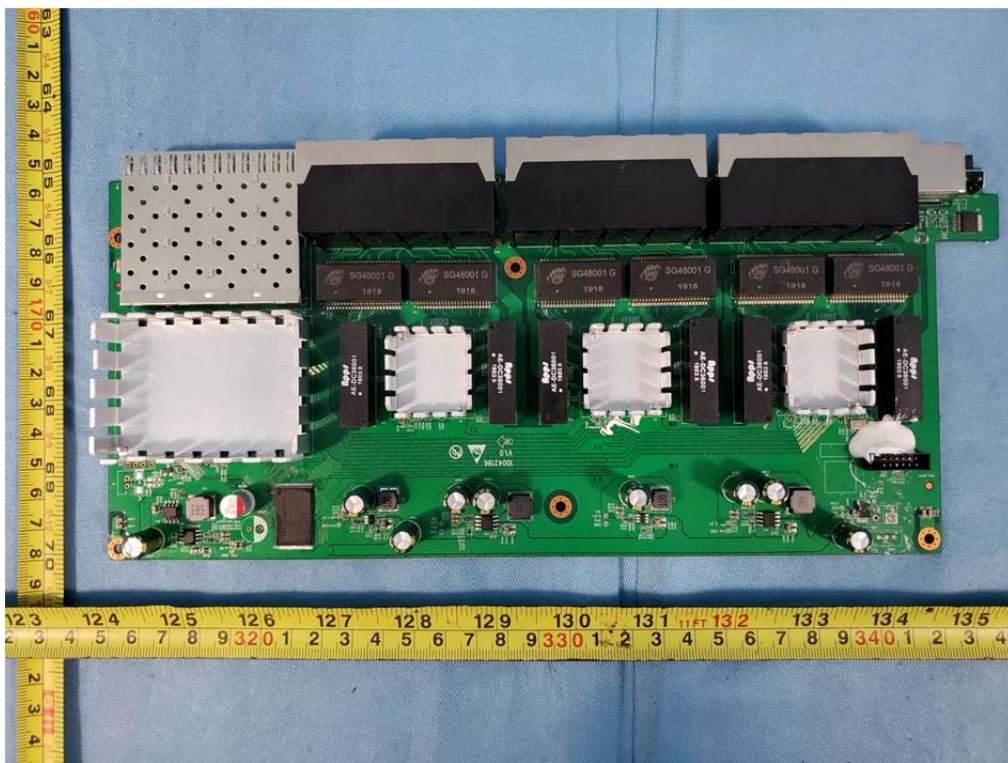


Component side of Power board

PHOTOS

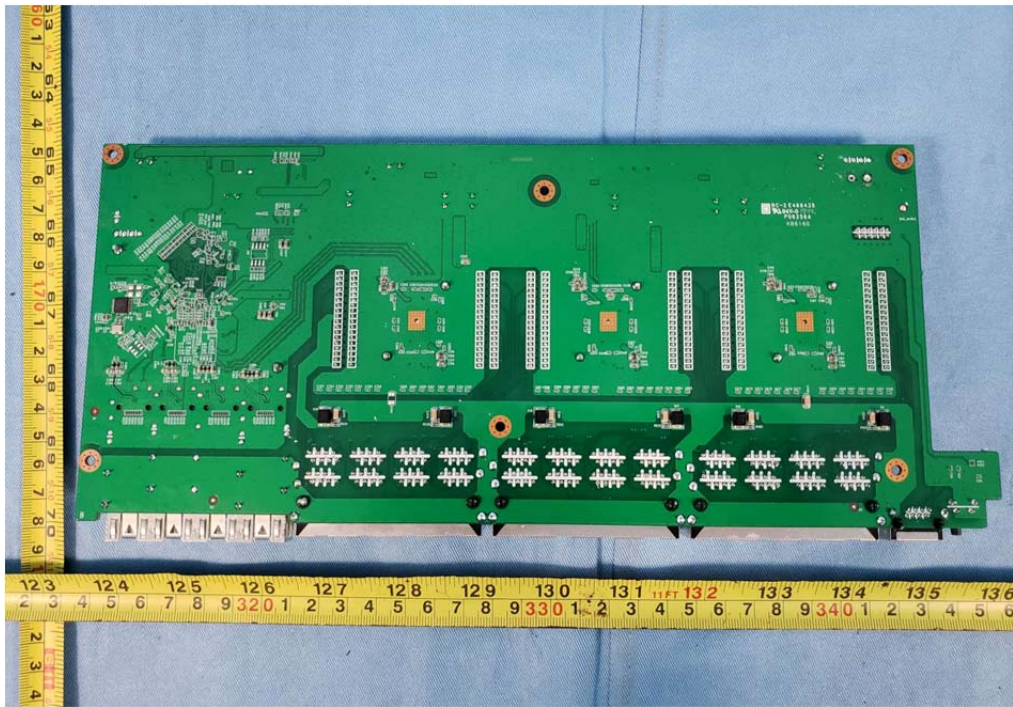


Solder side of Power board

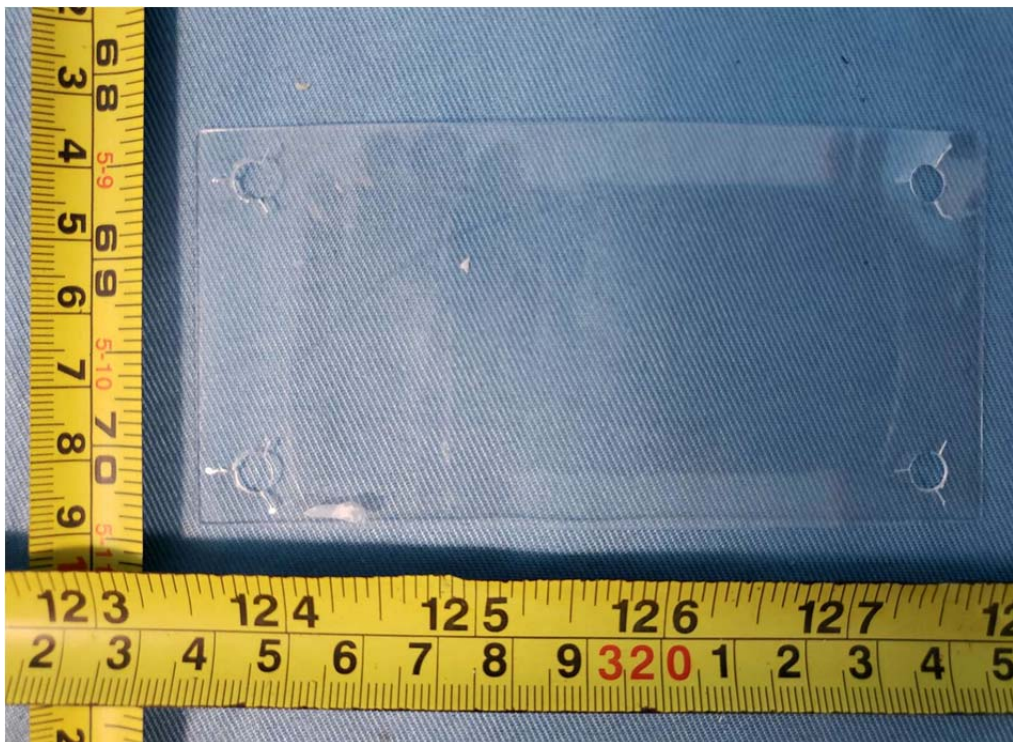


Component side of main board

PHOTOS



Solder side of main board



Mylar sheet under power board

-End of Test Report-