

CE TEST REPORT

Report No. : 20250701G20237X
Sample Name : AC-DC converter
Model Name : See attached page
Applicant' Name : Mornsun Guangzhou Science
&Technology Co., Ltd.



中认英泰检测技术有限公司

CQC INTIME TESTING TECHNOLOGY CO., LTD.

TEST REPORT EN 62368-1 Audio/video, information and communication technology equipment Part 1: Safety requirements	
Report Reference No..... : 20250701G20237X	
Tested by (name and signature)..... : Su jiacheng 	
Approved by (name and signature)... : Gu qinfen 	
Date of issue..... : 2025-09-12	
Testing laboratory Name..... : CQCIT - CQC Intime Testing Technology Co., Ltd.	
Address..... : Wuzhong Science and Technology Park No. 1368, Wuzhong Avenue, Wuzhong Economic Development Zone, 215104 Suzhou, CHINA	
Applicant's Name..... : Mornsun Guangzhou Science &Technology Co., Ltd.	
Address..... : No.8,Nanyun Road 4,Huangpu District,Guangzhou.	
Test specification:	
Standard..... : EN 62368-1:2014/A11:2017	
Test procedure..... : CE-LVD	
Non-standard test method..... : N/A	
Test item Description..... : AC-DC concerter	
Trademark..... : N/A	
Model and/or type reference..... : See attached page	
Manufacturer..... : Same as applicant	
Rating(s)..... : Input: 100-277V~,0.8A,50/60Hz	
Output: The output specifications are as follows	

Test case verdicts

Test case does not apply to the test object..... : N(.A.)

Test item does meet the requirement..... : P(ass)

Test item does not meet the requirement..... : F(ail)

Testing

Date of receipt of test..... : 2025-07-21

Date of performance of test..... : 2025-07-21 to 2025-09-12

General remarks

"(see remark #)" refers to a remark appended to the report.

"(see Annex #)" refers to an annex appended to the report.

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

The instructions specified by the standard have to be in official language of each country, however, only English is checked for this report. It is the applicant responsibility to provide instruction in each official language of the EU.

The CE marking may only be used if all relevant and effective EC directives are complied with.

Remarks:**Name and address of factory (ies):**

Mornsun Guangzhou Science &Technology Co., Ltd.

No.8,Nanyun Road 4,Huangpu District,Guangzhou.

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.



Remarks:

- 1. Representative marking as above, marking for all models are identical except model name and product name.
- 2. The marking was printed on marking label and pasted on the product.
- 3. The height dimension of CE mark should not less than 5mm, the height dimension of WEEE symbol should not less than 7mm.
- 4. According to the EU directives which have been aligned with EU NLF (new legislative framework), both of manufacturer and importer's name and address shall be affixed on the product or, where that is not possible, on its packaging or in a document accompanying the product before the product is placed on the EU market.

TEST ITEM PARTICULARS:	
Classification of use by.....	<input checked="" type="checkbox"/> Ordinary person <input checked="" type="checkbox"/> Instructed person <input checked="" type="checkbox"/> Skilled person <input 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 type="checkbox"/> pluggable equipment type A - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> direct plug-in <input type="checkbox"/> mating connector <input type="checkbox"/> pluggable equipment type B - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> permanent connection <input type="checkbox"/> mating connector <input checked="" type="checkbox"/> other:_____
Considered current rating of protective device as part of building or equipment installation.....	16A for building; 3.15A(equipment) Installation location: <input checked="" type="checkbox"/> building; <input checked="" type="checkbox"/> equipment
Equipment mobility.....	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input checked="" 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.....	__50__ °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 - ____ V _{L-L}
Altitude during operation (m)	<input type="checkbox"/> 2000 m or less <input checked="" type="checkbox"/> 5000 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"/> 0.154 kg

GENERAL PRODUCT INFORMATION:

Product Description –

The equipment is a AC-DC converter for use in information technology equipment.

The manufacturer specified maximum ambient temperature is 50°C .

The product expected applicable altitude is 5000 m and below

Model Differences –

All models are identical except model name and output rating.

Model: See attached page

Model	Output voltage (V)	output current(A) current step is 0.01A	output power(W Max)	transformer model
LM35-23B05R2S LM35-23B05R2S-C LM35-23B05R2S-Q LM35-23B05R2S-QQ LM35-23B05R2S-CQ LM35-23B05R2S-CQQ LM35-23B05R2S-YYY LM35-23B05R2S-C-YYY LM35-23B05R2S-Q-YYY LM35-23B05R2S-QQ-YYY LM35-23B05R2S-CQ-YYY LM35-23B05R2S-CQQ-YYY	5	7	35	51503829 (A/0-A /9, B/0-B/9)
LM35-23B12R2S LM35-23B12R2S-C LM35-23B12R2S-Q LM35-23B12R2S-QQ LM35-23B12R2S-CQ LM35-23B12R2S-CQQ LM35-23B12R2S-YYY LM35-23B12R2S-C-YYY LM35-23B12R2S-Q-YYY LM35-23B12R2S-QQ-YYY LM35-23B12R2S-CQ-YYY LM35-23B12R2S-CQQ-YYY	12	3	36	51503830 (A/0-A /9, B/0-B/9)
LM35-23B15R2S LM35-23B15R2S-C LM35-23B15R2S-Q LM35-23B15R2S-QQ LM35-23B15R2S-CQ	15	2.4	36	51503831 (A/0-A /9, B/0-B/9)

LM35-23B15R2S-CQQ LM35-23B15R2S-YYY LM35-23B15R2S-C-YYY LM35-23B15R2S-Q-YYY LM35-23B15R2S-QQ-YYY LM35-23B15R2S-CQ-YYY LM35-23B15R2S-CQQ-YYY					
LM35-23B24R2S LM35-23B24R2S-C LM35-23B24R2S-Q LM35-23B24R2S-QQ LM35-23B24R2S-CQ LM35-23B24R2S-CQQ LM35-23B24R2S-YYY LM35-23B24R2S-C-YYY LM35-23B24R2S-Q-YYY LM35-23B24R2S-QQ-YYY LM35-23B24R2S-CQ-YYY LM35-23B24R2S-CQQ-YYY	24	1.5	36	51503832 (A/0-A/9, B/0-B/9)	
LM35-23B36R2S LM35-23B36R2S-C LM35-23B36R2S-Q LM35-23B36R2S-QQ LM35-23B36R2S-CQ LM35-23B36R2S-CQQ LM35-23B36R2S-YYY LM35-23B36R2S-C-YYY LM35-23B36R2S-Q-YYY LM35-23B36R2S-QQ-YYY LM35-23B36R2S-CQ-YYY LM35-23B36R2S-CQQ-YYY	36	1	36	51503833 (A/0-A/9, B/0-B/9)	
LM35-23B48R2S LM35-23B48R2S-C LM35-23B48R2S-Q LM35-23B48R2S-QQ LM35-23B48R2S-CQ LM35-23B48R2S-CQQ LM35-23B48R2S-YYY LM35-23B48R2S-C-YYY LM35-23B48R2S-Q-YYY LM35-23B48R2S-QQ-YYY LM35-23B48R2S-CQ-YYY LM35-23B48R2S-CQQ-YYY	48	0.8	38.4	51503834 (A/0-A/9, B/0-B/9)	

LM35-23B54R2S LM35-23B54R2S-C LM35-23B54R2S-Q LM35-23B54R2S-QQ LM35-23B54R2S-CQ LM35-23B54R2S-CQQ LM35-23B54R2S-YYY LM35-23B54R2S-C-YYY LM35-23B54R2S-Q-YYY LM35-23B54R2S-QQ-YYY LM35-23B54R2S-CQ-YYY LM35-23B54R2S-CQQ-YYY	54	0.67	36	51503835 (A/0-A/9, B/0-B/9)
LM35-23BXXXR2S LM35-23BXXXR2S-C LM35-23BXXXR2S-Q LM35-23BXXXR2S-QQ LM35-23BXXXR2S-CQ LM35-23BXXXR2S-CQQ LM35-23BXXXR2S-YYY LM35-23BXXXR2S-C-YYY LM35-23BXXXR2S-Q-YYY LM35-23BXXXR2S-QQ-YYY LM35-23BXXXR2S-CQ-YYY LM35-23BXXXR2S-CQQ-YYY	4.7V-5.8V 11.4V-14.4V 14.2V-17.3V 22.8V-28.8V 34.2V-41.4V 43.2V-52.8V 48.6V-59.4V	7.45A-6.03A 3.15A-2.5A 2.54A-2.08A 1.57A-1.25A 1.05A-0.87A 0.89A-0.73A 0.74A-0.6A	35W 36W 36W 36W 36W 38.4W 36W	51503829 (A/0-A/9, B/0-B/9) 51503830 (A/0-A/9, B/0-B/9) 51503831 (A/0-A/9, B/0-B/9) 51503832 (A/0-A/9, B/0-B/9) 51503833 (A/0-A/9, B/0-B/9) 51503834 (A/0-A/9, B/0-B/9) 51503835 (A/0-A/9, B/0-B/9)
<p>(XXX represents 2-3 digits, with output voltage ranges of 4.7V-5.8V, 11.4V-13.8V, 14.2V-17.3V, 22.8V-27.6V, 34.2V-41.4V, 43.2V-52.8V, 48.6V-59.4V; When XXX is a 2-digit number, the step value is 1V, such as 24V for 24; when XXX is a 3-digit number, the step value is 0.1V, such as 24.8V for 248. YYY represents 1-3 characters, Y=A-Z is any letter, and 0-9 is any number. Representing different clients. -C represents the product wiring terminal with plastic cover, - Q represents the product power board with single-sided three proof paint, - QQ represents the product power board with double-sided three proof paint, - CQ represents the product wiring terminal with plastic cover and single-sided three proof paint, - CQQ represents the product wiring terminal with plastic cover and double-sided three proof paint, and other characters are non variables)</p>				
<p>Additional application considerations – (Considerations used to test a component or sub-assembly) –</p> <p>Due to the similarity between models, model LM35-23B047R2S and LM35-23B48R2S and LM35-23B594R2S was selected for tests in order to represent the whole series, unless otherwise stated in particular.</p>				

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)
L-N	ES3
Internal circuits and input	ES3
Output terminal	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)
Primary circuit	PS3
Secondary Circuit	PS2
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	
Source of kinetic/mechanical energy	Corresponding classification (MS)
Equipment mass (≤ 7 kg)	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)
N/A	N/A
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 light	RS1

ENERGY SOURCE DIAGRAM				
Indicate which energy sources are included in the energy source diagram. Insert diagram below				
<div>See above</div> <div><div><input checked="" type="checkbox"/> ES</div><div><input checked="" type="checkbox"/> PS</div><div><input checked="" type="checkbox"/> MS</div><div><input type="checkbox"/> TS</div><div><input checked="" type="checkbox"/> RS</div></div>				

OVERVIEW OF ENERGY SOURCES AND SAFEGUARDS				
Clause	Possible Hazard			
5	Electrically-caused injury			
Class and Energy Source (e.g. ES3: Primary circuit)	Body Part (e.g.s. Ordinary)	Safeguards		
		B	S	R
ES3: L-N	Ordinary	Bleeder resistors provided	Accessible voltage didn't exceed ES2 limits of Table 5 under fault condition	N/A
ES3: Internal circuits and input	Ordinary	N/A	N/A	Enclosure, Transformer, Optocoupler and Capacitor
ES1: Output terminals	Ordinary	N/A	N/A	N/A
6	Electrically-caused fire			
Class and Energy Source (e.g. PS2: 100 Watt circuit)	Material part (e.g. Printed board)	Safeguards		
		B	1 st S	2 nd S
PS3: All circuits	All combustible materials within enclosure	See 6.3	N/A	N/A
	PCB		V-0PCB used	N/A
PS2:Secondary Circuit	Other components/materials	见6.3	见6.4.6	N/A
7	Injury caused by hazardous substances			
Class and Energy Source (e.g. Ozone)	Body Part (e.g., Skilled)	Safeguards		
		B	S	R
N/A	N/A	N/A	N/A	N/A
8	Mechanically-caused injury			
Class and Energy Source (e.g. MS3: Plastic fan blades)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
MS1: Equipment mass (<7kg)	Ordinary	N/A	N/A	N/A
9	Thermal burn			
Class and Energy Source (e.g. TS1: Keyboard caps)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
N/A	N/A	N/A	N/A	N/A
10	Radiation			
Class and Energy Source (e.g. RS1: PMP sound output)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
RS1:LED indicator light	Ordinary	N/A	N/A	N/A
Supplementary Information:				

“B” – Basic Safeguard; “S” – Supplementary Safeguard; “R” – Reinforced Safeguard

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Clause	Requirement + Test	Result - Remark	Verdict

4	GENERAL REQUIREMENTS		P
4.1.1	Acceptance of materials, components and subassemblies	(See appended table 4.1.2)	P
4.1.2	Use of components		P
4.1.3	Equipment design and construction	(See Annex F)	P
4.1.15	Markings and instructions	(See Annex F)	P
4.4.4	Safeguard robustness	Built-in component, considered in end product.	N/A
4.4.4.2	Steady force tests..... :	(See Clause T.3, T.4, T.5)	N/A
4.4.4.3	Drop tests..... :		N/A
4.4.4.4	Impact tests..... :	(See Clause T.6)	N/A
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..... :		P
4.4.4.9	Accessibility and safeguard effectiveness		P
4.5	Explosion		P
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard		P
4.6.2	10 N force test applied to :	(See Clause T.2)	P
4.7	Equipment for direct insertion into mains socket-outlets		N/A
4.7.2	Mains plug part complies with relevant standard... :		N/A
4.7.3	Torque (Nm)..... :		N/A
4.8	Equipment containing coin/button cell batteries		N/A
4.8.2	Instructional safeguard..... :		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery..... :		N/A
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..... :		N/A

5	ELECTRICALLY-CAUSED INJURY		P
5.2.1	Classification and limits of electrical energy sources		P
5.2.2	ES1, ES2 and ES3 limits		P

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Clause	Requirement + Test	Result - Remark	Verdict
5.2.2.2	Steady-state voltage and current limits..... :	(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..... :		N/A
5.2.2.5	Limits for repetitive pulses..... :		N/A
5.2.2.6	Ringling signals		N/A
5.2.2.7	Audio signals		N/A
5.3	Protection against electrical energy sources		P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		P
5.3.2.1	Accessibility to electrical energy sources and safeguards		P
5.3.2.2	Contact requirements		P
	a) Test with test probe from Annex V..... :		--
	b) Electric strength test potential (V)..... :		N/A
	c) Air gap (mm) :		P
5.3.2.4	Compliance		P
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		P
5.4.1.3	Material is non-hygroscopic		P
5.4.1.4	Maximum operating temperature for insulating materials..... :	(See appended table 5.4.1.4)	P
5.4.1.5	Pollution degrees..... :	PD2	P
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A
5.4.1.5.3	Thermal cycling test		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage..... :	(See appended table 5.4.1.8)	P
5.4.1.9	Insulating surfaces		N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		P
5.4.1.10.2	Vicat test..... :	(See appended table 5.4.1.10.2)	N/A
5.4.1.10.3	Ball pressure test..... :	(See appended table 5.4.1.10.3)	N/A
5.4.2	Clearances		P
5.4.2.2	Determining clearance using peak working voltage	(See appended table 5.4.2.2)	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.2.3	Determining clearance using required withstand voltage	(See appended table 5.4.2.3)	P
	a) a.c. mains transient voltage.....	2500Vpeak	—
	b) d.c. mains transient voltage		—
	c) external circuit transient voltage.....		—
	d) transient voltage determined by measurement....		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test.....		N/A
5.4.2.5	Multiplication factors for clearances and test voltages	1.48	P
5.4.3	Creepage distances	(See appended table 5.4.3)	P
5.4.3.1	General		P
5.4.3.3	Material group.....	Assume to group IIIb	—
5.4.4	Solid insulation		P
5.4.4.2	Minimum distance through insulation		P
5.4.4.3	Insulating compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		P
5.4.4.5	Cemented joints		N/A
5.4.4.6	Thin sheet material		P
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material		P
	Number of layers (pcs).....	2	P
5.4.4.6.3	Non-separable thin sheet material		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material.....		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		P
5.4.4.9	Solid insulation at frequencies >30 kHz.....	(See appended Tables 5.4.4.9)	P
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ).....		N/A
5.4.6	Insulation of internal wire as part of supplementary safeguard		N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Relative humidity (%)..... :	93%	--
	Temperature (°C) :	40°C	--
	Duration (h)..... :	120h	--
5.4.9	Electric strength test		P
5.4.9.1	Test procedure for type test of solid insulation..... :	(See appended table 5.4.9)	P
5.4.9.2	Test procedure for routine test		N/A
5.4.10	Safeguards against transient voltages from external circuits		N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test..... :		N/A
5.4.10.2.3	Steady-state test..... :		N/A
5.4.11	Separation between external circuits and earth		N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage $U_{op}(V)$:		--
	Nominal voltage $U_{peak}(V)$:		--
	Max increase due to variation ΔU_{sp} :		--
	Max increase due to ageing ΔU_{sa} :		--
	$U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$:		--
5.5	Components as safeguards		P
5.5.1	General		P
5.5.2	Capacitors and RC units		P
5.5.2.1	General requirement		P
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		P
5.5.4	Optocouplers	(See sub-clause 5.4 or Clause G.12)	P
5.5.5	Relays	(See sub-clause 5.4)	N/A
5.5.6	Resistors	(See Clause G.10)	N/A
5.5.7	SPDs	(See Clause G.8)	P
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

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Clause	Requirement + Test	Result - Remark	Verdict
5.5.8	Insulation between the mains and an external circuit consisting of a coaxial cable..... :		N/A
5.6	Protective conductor		P
5.6.2	Requirement for protective conductors		P
5.6.2.1	General requirements		P
5.6.2.2	Colour of insulation		N/A
5.6.3	Requirement for protective earthing conductors		N/A
	Protective earthing conductor size (mm ²) :		—
5.6.4	Requirements for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm ²)..... :		—
5.6.4.2	Protective current rating (A)..... :		N/A
5.6.4.3	Current limiting and overcurrent protective devices		N/A
5.6.5	Terminals for protective conductors		P
5.6.5.1	Requirement		P
	Conductor size (mm ²), nominal thread diameter (mm)..... :		P
5.6.5.2	Corrosion		P
5.6.6	Resistance of the protective bonding system		P
5.6.6.1	Requirements		P
5.6.6.2	Test Method Resistance (Ω)..... :	(See appended table 5.6.6)	P
5.6.7	Reliable earthing		P
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks		P
5.7.2.1	Measurement of touch current		P
5.7.2.2	Measurement of voltage		N/A
5.7.3	Equipment set-up, supply connections and earth connections		P
	System of interconnected equipment (separate connections/single connection)..... :		N/A
	Multiple connections to mains (one connection at a time/simultaneous connections)..... :		N/A
5.7.4	Earthed accessible conductive parts..... :	(See appended table 5.7.4)	P
5.7.5	Protective conductor current		N/A
	Supply Voltage (V)..... :	See appended table 5.7.5)	N/A
	Measured current (mA)..... :	See appended table 5.7.5)	N/A
	Instructional Safeguard..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.7.6	Prospective touch voltage and touch current due to external circuits	No 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 external circuits.	N/A
	a) Equipment with earthed external circuits Measured current (mA).....:		N/A
	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		P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault.....:	(See appended table 6.2.2)	P
6.2.2.3	Power measurement for worst-case power source fault.....:	(See appended table 6.2.2)	P
6.2.2.4	PS1		N/A
6.2.2.5	PS2		P
6.2.2.6	PS3	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS	(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.....:	(See appended table B.1.5 and B.3)	P
6.3.1 (b)	Combustible materials outside fire enclosure.....:		N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard method	Method of control fire spread used	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	Supplementary safeguards		N/A
6.4.3.2	Single Fault Conditions.....:		N/A
	Special conditions for temperature limited by fuse		N/A

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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		P
6.4.6	Control of fire spread in PS3 circuits	Metal enclosure used, All other components: at least V-2 except for mounted on V-1 or better material or small parts of combustible material; V-0 PCB used	P
6.4.7	Separation of combustible materials from a PIS		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		P
6.4.8.1	Fire enclosure and fire barrier material properties		P
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure	Metal enclosure	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier	Built-in component, considered in end product	N/A
6.4.8.3.1	Fire enclosure and fire barrier openings		N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm) :		N/A
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) :		N/A
	Flammability tests for the bottom of a fire enclosure :		N/A
6.4.8.3.5	Integrity of a fire enclosure, condition met: a), b) or c)..... :		N/A
6.4.8.4	Separation of a PIS from a fire enclosure and a fire barrier distance (mm) or flammability rating..... :	Metal enclosure used.	P
6.5	Internal and external wiring		N/A
6.5.1	General requirements		N/A
6.5.2	Cross-sectional area (mm ²) :		N/A
6.5.3	Requirements for interconnection to building wiring :		N/A
6.6	Safeguards against fire due to connection to additional equipment		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	External port limited to PS2 or complies with Clause Q.1		N/A

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES		N/A
7.2	Reduction of exposure to hazardous substances		N/A
7.3	Ozone exposure		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 and their protection circuits		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		P
8.4	Safeguards against parts with sharp edges and corners	MS1	P
8.4.1	Safeguards		N/A
8.5	Safeguards against 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..... :		N/A
8.5.4	Special categories of equipment containing moving parts		N/A
8.5.4.1	General		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Protection of persons in the work cell		N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard..... :		N/A
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 of equipment		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.6.1	General		N/A
	Instructional safeguard..... :		N/A
8.6.2	Static stability		N/A
8.6.2.2	Static stability test..... :		N/A
	Applied Force..... :		N/A
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
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..... :		N/A
8.10	Carts, stands and similar carriers		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard..... :		N/A
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force..... :		N/A
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N)..... :		N/A
8.10.6	Thermoplastic temperature stability		N/A
8.11	Mounting means for rack mounted 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

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Clause	Requirement + Test	Result - Remark	Verdict
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas.....		N/A
	Button/ball diameter (mm)..... :		—

9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications		P
9.3	Safeguard against thermal energy sources	(See appended table 9.3)	P
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard	Built-in component, considered in end product	P
9.4.2	Instructional safeguard..... :		N/A

10	RADIATION		P
10.2	Radiation energy source classification		P
10.2.1	General classification	LED indicator light	P
10.3	Protection against laser radiation		N/A
	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	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	Safeguards against X-radiation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	X- radiation energy source that exists equipment.. :		N/A
	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	Safeguards 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		P
B.2.1	General requirements..... :	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers..... :		N/A
B.2.3	Supply voltage and tolerances		P

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Clause	Requirement + Test	Result - Remark	Verdict
B.2.5	Input test..... :	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General		P
B.3.2	Covering of ventilation openings	(See appended table B.3)	P
B.3.3	DC mains polarity test		N/A
B.3.4	Setting of voltage selector		N/A
B.3.5	Maximum load at output terminals	(See appended table B.3)	P
B.3.6	Reverse battery polarity		N/A
B.3.7	Audio amplifier abnormal operating conditions		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions..... :	(See appended table B.3)	P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device		N/A
B.4.3	Motor tests		N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature :		N/A
B.4.4	Functional insulation	(See appended table B.4)	P
B.4.4.1	Short circuit of clearances for functional insulation		P
B.4.4.2	Short circuit of creepage distances for functional insulation		P
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short-circuit and interruption of electrodes in tubes and semiconductors	(See appended table B.4)	P
B.4.6	Short circuit or disconnection of passive components	(See appended table B.4)	P
B.4.7	Continuous operation of components		N/A
B.4.8	Compliance during and after single fault conditions :	(See appended table B.4)	P
B.4.9	Battery charging and discharging under single fault conditions		N/A

C	UV RADIATION		N/A
C.1	Protection of materials in equipment from UV radiation		N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure test		N/A
C.2.4	Xenon-arc light-exposure test		N/A

D	TEST GENERATORS		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A

E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		N/A
E.1	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 according to IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations		P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification	See marking label.	P
F.3.2.2	Model identification	See marking label.	P
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains		N/A
F.3.3.2	Equipment without direct connection to mains		P
F.3.3.3	Nature of the supply voltage.....:	~	P
F.3.3.4	Rated voltage.....:	100-277V	P
F.3.3.5	Rated frequency.....:	50/60Hz	P
F.3.3.6	Rated current or rated power.....:	0.8A	P
F.3.3.7	Equipment with multiple supply connections		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.4	Voltage setting device		N/A
F.3.5	Terminals and operating devices		P
F.3.5.1	Mains appliance outlet and socket-outlet markings :		N/A
F.3.5.2	Switch position identification marking..... :		N/A
F.3.5.3	Replacement fuse identification and rating markings :	F101:T3.15AL /300VAC	P
F.3.5.4	Replacement battery identification marking..... :		N/A
F.3.5.5	Terminal marking location		N/A
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I equipment		P
F.3.6.1.1	Protective earthing conductor terminal..... :		P
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals :		N/A
F.3.6.2	Class II equipment (IEC60417-5172)		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.3.6.3	Functional earthing terminal marking..... :		N/A
F.3.7	Equipment IP rating marking..... :	IPX0	N/A
F.3.8	External power supply output marking..... :		P
F.3.9	Durability, legibility and permanence of marking		P
F.3.10	Test for permanence of markings		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		P
	g) Protective earthing conductor current exceeding ES2 limits		N/A
	h) Symbols used on equipment		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	Relays		N/A
G.2.1	Requirements		N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supplying power to other equipment		N/A
G.2.4	Test method and compliance		N/A
G.3	Protective devices		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	Test method and compliance		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	(See appended table 4.1.2)	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..... :	(See appended table B.4)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.4	Connectors		P
G.4.1	Spacings	(See appended table 4.1.2)	P
G.4.2	Mains connector configuration.....:		P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N/A
G.5	Wound components		P
G.5.1	Wire insulation in wound components		P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°	Tube used	P
G.5.1.2 b)	Construction subject to routine testing		N/A
G.5.2	Endurance test		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	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).....:		P
	Position.....:	T401	P
	Method of protection	Electronic protection	P
G.5.3.2	Insulation		P
	Protection from displacement of windings.....:	Fixed by type and bobbin	--
G.5.3.3	Overload test.....:		P
G.5.3.3.1	Test conditions		P
G.5.3.3.2	Winding temperatures	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		N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements		N/A
	Position		N/A
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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	Electric strength test (V).....		—
G.5.4.6	Locked-rotor overload test for DC motors		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature		N/A
	Electric strength test (V)		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h).....	(See appended table B.4)	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	Enamelled winding wire insulation		P
G.7	Mains supply cords		N/A
G.7.1	General requirements		N/A
	Type.....		—
	Rated current (A).....		--
	Cross sectional area (mm ² or 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).....		N/A
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm).....		N/A
G.7.3.2.4	Strain relief and cord anchorage material		N/A
G.7.4	Cord Entry		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g)		N/A
	Diameter (mm).....		—
	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		P
G.8.3	Safeguards against fire	Metal casing	P
G.8.3.2	Varistor overload test.....		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		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	Capacitors and RC units		P
G.11.1	General requirements	(See appended table 4.1.2)	P
G.11.2	Conditioning of capacitors and RC units		N/A
G.11.3	Rules for selecting capacitors		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.12	Optocouplers		P
	Optocouplers comply with IEC 60747-5-5 with specifics	(See appended table 4.1.2)	P
	Type test voltage $V_{ini,a}$:		—
	Routine test voltage, $V_{ini,b}$:		—
G.13	Printed boards		P
G.13.1	General requirements	(See appended table 4.1.2)	P
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction)..... :		--
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation..... :		N/A
	Number of insulation layers (pcs)..... :		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	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	Pressurized liquid filled components		N/A
G.15.1	General requirements		N/A
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

EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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	Ringing signal		N/A
H.3.1.1	Frequency (Hz)		—
H.3.1.2	Voltage (V)		—
H.3.1.3	Cadence; time (s) and voltage (V)		—
H.3.1.4	Single fault current (mA):.....		—
H.3.2	Tripping device and monitoring voltage		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V).....		N/A

J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		P
J.1	General requirements		P

K	SAFETY INTERLOCKS		N/A
K.1	General requirements		N/A
	Instructional safeguard.....		N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Compliance :		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Test method and compliance.....:		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (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		N/A
L.1	General requirements	Built-in component, considered in end product.	N/A
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized		N/A
L.4	Single-phase equipment		N/A
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		N/A
L.8	Multiple power sources		N/A

M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		N/A
M.1	General requirements	No battery used.	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

EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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
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) :		--

EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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
	Material(s) used..... :	<0.6V	—
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		N/A
P.1	General requirements	Built-in component, considered in end product.	N/A
P.2.2	Safeguards against entry of foreign object		N/A
	Location and Dimensions (mm)		—
P.2.3	Safeguard against the consequences of entry of foreign object		N/A
P.2.3.1	Safeguards against the entry of a foreign object		N/A
	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

EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
P.4.2 c)	Mechanical strength testing..... :		N/A

Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		P
Q.1	Limited power sources		P
Q.1.1 a)	Inherently limited output		N/A
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		P
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method		P
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A) :		—
	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		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		N/A
	Samples, material..... :		--
	Wall thickness (mm)..... :		--
	Conditioning (°C)..... :		--

EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	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)..... :		--
	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.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
	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		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		N/A
T.6	Enclosure impact test		N/A
	Fall test		N/A
	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

EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Impact energy (J)..... :		--
	Height (m).....:		--
T.10	Glass fragmentation test		N/A
	Number of particles counted..... :		N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm)..... :		N/A
U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N/A
U.1	General		N/A
	Instructional safeguard :		N/A
U.2	Test method and compliance for non-intrinsically protected CRTs		N/A
U.3	Protective screen		N/A
V	DETERMINATION OF ACCESSIBLE PARTS		N/A
V.1	Accessible parts of equipment	Built-in component, considered in end product.	N/A
V.2	Accessible part criterion		N/A

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		
10				
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			—
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)
	--	--	--	—
	--	--	--	—

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

Supplementary information:

5.2	TABLE: Classification of electrical energy sources					P
5.2.2.2 – Steady State Voltage and Current conditions						
Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
			U (Vrms or Vpk)	I (Apk or Arms)	Hz	
304.7Vac	Primary circuits	Normal	–	--	--	ES3 (declared)
		Abnormal	–	--	--	
		Single fault –SC/OC	–	--	--	
304.7Vac	output terminal (4.7V)	Normal	4.7Vdc	--	--	ES1
		Abnormal: overload	4.56Vdc	--	--	
		Single fault – SC/OC:D403 SC	0Vdc	--	--	
304.7Vac	output terminal (48V)	Normal	48.00Vdc	--	--	ES1
		Abnormal: overload	47.98Vdc	--	--	
		Single fault – SC/OC:D403 SC	0Vdc	--	--	
304.7Vac	output terminal (59.4V)	Normal	59.41Vdc	--	--	ES1
		Abnormal: overload	59.39Vdc	--	--	
		Single fault – SC/OC:D403 SC	0Vdc	--	--	
Supplementary information:						
1) Type: Steady state (SS), Capacitance (CP), Single pulse (SP), Repetitive pulses (RP), etc.						
2) Additional Info: Frequency, Pulse duration, Pulse off time, Capacitance value, etc.						
*: See approved internal power supply board.						

EN 62368-1								
Clause	Requirement + Test				Result - Remark		Verdict	
5.4.1.4, 9.3, B.1.5, B.2.6	TABLE: Temperature measurements						P	
	Supply voltage (V).....:			90Vac, 60Hz		304.7Vac, 50Hz		—
	Ambient temperature during test T_{amb} (°C).....:			26.9	Shift to Tma	27.1	Shift to Tma	—
	Maximum measured temperature T of part/at:			T (°C)				Allowed T_{max} (°C)
	Ambient			26.9	50	27.1	50	--
	CON101			39.4	62.5	38.0	60.9	/
	RV101			63.9	87.0	54.5	77.4	/
	CX101			68.7	91.8	59.6	82.5	105
	L101			72.2	95.3	60.7	83.6	120
	C101			81.5	104.6	71.6	94.5	110
	Transformer T401 winding			86.6	109.7	85.4	108.3	110
	Transformer T401 bobbin			80.2	103.3	79.6	102.5	/
	PCB near T401			96.3	119.4	93.9	116.8	130
	CY101			85.4	108.5	78.1	101.0	125
U701			91.1	114.2	90.0	112.9	125	
Metal enclosure			60.4	83.5	57.9	80.8	/	
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:4.7VDC,7.45A								

EN 62368-1									
Clause	Requirement + Test					Result - Remark		Verdict	
5.4.1.4, 9.3, B.1.5, B.2.6	TABLE: Temperature measurements								P
	Supply voltage (V).....:			90Vac, 60Hz		304.7Vac, 50Hz		—	
	Ambient temperature during test T_{amb} (°C).....:			26.9	Shift to Tma	27.1	Shift to Tma	—	
	Maximum measured temperature T of part/at:			T (°C)				Allowed T_{max} (°C)	
	Ambient			26.9	50	27.1	50	--	
	CON101			34.1	57.2	34.4	33.1	/	
	RV101			50.5	73.6	48.0	44.7	/	
	CX101			57.8	80.9	52.9	48.8	105	
	L101			60.8	83.9	57.8	49.2	120	
	C101			64.3	87.4	64.3	54.3	110	
Transformer T401 winding			69.5	92.6	78.6	72.1	110		
Transformer T401 bobbin			69.4	92.5	83.6	72.0	/		
PCB near T401			66.7	89.8	75.8	71.9	130		
CY101			63.7	86.8	62.5	58.0	125		
U701			62.0	85.1	65.1	66.6	125		
Metal enclosure			46.0	69.1	51.1	44.8	/		
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:48VDC,0.8A									

EN 62368-1									
Clause	Requirement + Test					Result - Remark		Verdict	
5.4.1.4, 9.3, B.1.5, B.2.6	TABLE: Temperature measurements								P
	Supply voltage (V).....:			90Vac, 60Hz		304.7Vac, 50Hz		—	
	Ambient temperature during test T_{amb} (°C).....:			27.0	Shift to Tma	27.1	Shift to Tma	—	
	Maximum measured temperature T of part/at:			T (°C)				Allowed T_{max} (°C)	
	Ambient			27.0	50	27.1	50	--	
	CON101			34.9	57.9	34.1	57.0	/	
	RV101			49.1	72.1	43.7	66.6	/	
	CX101			54.8	77.8	47.1	70.0	105	
	L101			58.5	81.5	48.0	70.9	120	
	C101			60.1	83.1	53.3	76.2	110	
Transformer T401 bobbin			65.7	88.7	73.1	96.0	110		
Transformer T401winding			66.9	89.9	76.1	99.0	/		
PCB near T401			69.4	92.4	82.4	105.3	130		
CY101			61.6	84.6	54.3	77.2	125		
U701			59.5	82.5	68.7	91.6	125		
Metal enclosure			43.1	66.1	45.2	68.1	/		
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:59.4VDC,0.6A									

5.4.1.8	TABLE: Working voltage measurement				P
Location		RMS voltage (V)	Peak voltage (V)	Frequency (Hz)	Comments
T401pin (1-9)		315	559	140.5kHz	Max.
T401pin (2-9)		256	403		
T401pin (4-9)		237	394		
T401pin (6-9)		234	375		
T401pin (1-10)		279	509		
T401pin (2-10)		270	575	140.5kHz	Max.
T401pin (4-10)		260	456		

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Clause	Requirement + Test		Result - Remark	Verdict
T401pin (6-10)	248	434		
CY101/CY102	247	391		
U701 (1-3)	230	378		
U701 (2-3)	229	377		
U701 (1-4)	228	376		
U701 (2-4)	227	376		
Supplementary information:				
1) Test voltage: 277Vac, 60Hz				

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

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

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance						P
Clearance (cl) and creepage distance (cr) at/of/between:	U _p (V)	U _{rms} (V)	Freq ¹⁾ (Hz)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
L-N (before fuse F101)	420	277	<30K	2.7	3.5	2.8	3.5
Two side of Fuse	420	277	<30K	2.7	3.1	2.8	3.1
CY103 Primary pin to Earthed pin	420	277		2.7	4.6	2.8	4.6
U701 Primary pin to secondary pin	420	277	<30K	5.4	8.4	5.6	8.4
CY101/CY102 Primary pin to secondary pin	420	277	<30K	5.4	6.8	5.6	6.8
T501 Primary trace to secondary trace on PCB	420	277	<30K	5.4	7.7	5.6	7.7

EN 62368-1							
Clause	Requirement + Test			Result - Remark			Verdict
T401 Primary winding to core	575	315	140.5kHz	5.4	7.3	6.3	7.3
T401 Primary pins to core	575	315	140.5kHz	5.4	>8.0	6.3	>8.0
T401 Primary trace to secondary trace on PCB	575	315	140.5kHz	5.4	>8.0	6.3	>8.0
Supplementary information: 1) Only for frequency above 30 kHz 2) Complete Electric Strength voltage (E.S. (V) when 5.4.2.4 applied) 3) The equipment has been evaluated for compliance with altitude up to 5000m above the sea level. A correction factor according to IEC60664-1/table A2 for clearance of 1.48 is considered. 4) Core of T401 is considered as Secondary part.							

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.		2500Vpk	2.7for BI/SI 5.4 for RI	See table 5.4.2.2, 5.4.2.4 and 5.4.3 above.
Supplementary information:				
Note 1: FI: Functional insulation; BI: Basic insulation; SI: Supplementary insulation; DI: Double insulation; RI: Reinforced insulation.				

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	
—	--	--	--	
—	--	--	--	
—	--	--	--	
Supplementary information:				

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements					P
Distance through insulation di at/of:	Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)	
T401 bobbin	575	140.5	See 4.1.2	0.4	0.94	
Supplementary information:						

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

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (Surge, Impulse, AC, DC, etc.)	Test voltage (V)	Breakdown Yes / No
Functional:				
L-N before fuse (fuse open)		DC	2500	No
Basic/supplementary:				
L/N-Metal enclosure		DC	2500	No
Insulating sheet		DC	2500	No
Reinforced:				
L/N-output terminal		DC	5000	No
T401 primary winding to secondary winding		DC	5000	No
Supplementary information:				

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
304.7V, 60Hz	Phase to Neutral	Normal	on	10Vpk	ES1
304.7V, 60Hz	Phase to Neutral	R101-OCI	on	15Vpk	ES1
Supplementary information:					
CX101=0.82μF					
<input checked="" type="checkbox"/> bleeding resistor rating: R101=R102=R103=R104=R105=R106=470KΩ					
<input type="checkbox"/> ICX:					
Notes:					
A. Test Location:					
Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth					
B. Operating condition abbreviations:					
N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition					

5.6.6.2	TABLE: Resistance of protective conductors and terminations				P
Location	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)	
Protective earthing to metal enclosure	32A	2min	0.70V	0.022Ω	
Supplementary information:					

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part	P
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EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Supply voltages:	304.7Vac	—
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)
L/N-Metal enclosure	1	--
	2*	0.415mA _{pk}
	3	--
	4	--
	5	--
	6	--
	8	--
Supplementary Information: Notes: [1] Supply voltage is the anticipated maximum Touch Voltage [2] Earthed neutral conductor [Voltage differences less than 1% or more] [3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3 [4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable. [5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.		

6.2.2	TABLE: Power source circuit classifications						P
Location	Operating and fault condition	Voltage (V)	Current (A)	Max. Power ¹⁾ (W)	Time (S)	PS class	
Internal circuit	Normal	--	--	--	--	PS3(declared)	
Output	Overload	4.42V	16.50A	72.82W	5s	PS2	
	D100 -SC	0V	0A	0W	3s	PS1	
	Overload	23.90V	3.50A	82.63W	5s	PS2	
	D100 -SC	0V	0A	0W	3s	PS1	
	Overload	59.33V	1.56A	92.55W	5s	PS2	
	D100 -SC	0V	0A	0W	3s	PS1	
Supplementary information: Abbreviation: SC= short circuit; OC= open circuit 1) Measured after 3 s for PS1 and measured after 5 s for PS2 and PS3.							

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)	P
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EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

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
Internal circuit	--	--	--	Yes

Supplementary information:

An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V_p) and normal operating condition rms current (I_{rms}) is greater than 15.

6.2.3.2	Table: Determination of Potential Ignition Sources (Resistive PIS)				P
Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured wattage or VA During first 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
Internal circuit	--	--	--	--	Yes

Supplementary Information:

A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter.

If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification.

A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, or (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.

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..... :		—	—
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)	Hz	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status

EN 62368-1								
Clause		Requirement + Test				Result - Remark		Verdict
90	50	0.884	/	46.9	/	F101	0.884	Normal condition under rated load 4.7Vdc,7.45A
90	60	0.821	/	46.7	/	F101	0.821	
100	50	0.778	0.8	46.2	/	F101	0.778	
100	60	0.738	0.8	46.0	/	F101	0.738	
220	50	0.389	0.8	44.7	/	F101	0.389	
220	60	0.381	0.8	44.6	/	F101	0.381	
277	50	0.329	0.8	45.0	/	F101	0.329	
277	60	0.324	0.8	44.8	/	F101	0.324	
304.7	50	0.309	/	45.2	/	F101	0.309	
304.7	60	0.304	/	45.1	/	F101	0.304	
Supplementary information:/								

B.2.5		TABLE: Input test							P
U (V)	Hz	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status	
90	50	0.826	/	44.0	/	F101	0.826	Normal condition under rated load 48Vdc,0.8A	
90	60	0.770	/	44.1	/	F101	0.770		
100	50	0.731	0.8	43.4	/	F101	0.731		
100	60	0.695	0.8	43.2	/	F101	0.695		
220	50	0.371	0.8	42.8	/	F101	0.371		
220	60	0.364	0.8	42.8	/	F101	0.364		
277	50	0.313	0.8	43.1	/	F101	0.313		
277	60	0.308	0.8	43.1	/	F101	0.308		
304.7	50	0.294	/	43.5	/	F101	0.294		
304.7	60	0.290	/	43.5	/	F101	0.290		
Supplementary information:/									

B.2.5		TABLE: Input test							P
U (V)	Hz	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status	
90	50	0.763	/	41.1	/	F101	0.763	Normal condition under rated load 59.4Vdc, 0.6A	
90	60	0.721	/	40.9	/	F101	0.721		
100	50	0.683	0.8	40.7	/	F101	0.683		
100	60	0.654	0.8	40.6	/	F101	0.654		
220	50	0.354	0.8	40.1	/	F101	0.354		
220	60	0.347	0.8	40.1	/	F101	0.347		

EN 62368-1								
Clause		Requirement + Test				Result - Remark		Verdict
277	50	0.302	0.8	40.7	/	F101	0.302	
277	60	0.299	0.8	40.6	/	F101	0.299	
304.7	50	0.286	/	41.1	/	F101	0.286	
304.7	60	0.284	/	41.0	/	F101	0.284	
Supplementary information:/								

B.3, B.4 TABLE: Abnormal operating and fault condition tests							P
Ambient temperature T_{amb} (°C):					See below		—
Power source for EUT: Manufacturer, model/type, output rating:					--		—
Component No.	Condition	Supply voltage (V)	Test time	Fuse no.	Fuse current (A)	Observation	
Output (4.7V)	Overload	304.7Vac	1h	F101	0.401A	The maximum overload: 10.5A, The unit operated normally. Ambient: 26.9°C/50°C Transformer T401 winding: 111.0°C/134.1°C	
Output (48V)	Overload	304.7Vac	1h	F101	0.456A	The maximum overload: 1.30A, The unit operated normally. Ambient: 26.7°C/50°C Transformer T401 winding: 90.2°C/113.5°C	
Output (59.4V)	Overload	304.7Vac	1h	F101	0.390A	The maximum overload: 0.85A, The unit operated normally. Ambient: 26.7°C/50°C Transformer T401 winding: 85.1°C/108.4°C	
Output (4.7V)	SC	304.7Vac	10min	F101	0.03A	Product protection, unable to work. No hazard.	
Output (24V)	SC	304.7Vac	10min	F101	0.03A	Product protection, unable to work. No hazard.	
Output (59.4V)	SC	304.7Vac	10min	F101	0.03A	Product protection, unable to work. No hazard.	
T401 Pin1-Pin2	SC	304.7Vac	10min	F101	0.03A	Product protection, unable to work. No hazard.	
T401 Pin4-Pin6	SC	304.7Vac	10min	F101	0.03A	Product protection, unable to work. No hazard.	
T401 Pin9-Pin10	SC	304.7Vac	10min	F101	0.03A	Product protection, unable to work. No hazard.	
Q401 Pin G-Pin S	SC	304.7Vac	10min	F101	0.03A	Product protection, unable to work. No hazard.	

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Clause	Requirement + Test				Result - Remark	
Q401 Pin G-Pin D	SC	304.7Vac	<1s	F101	0	Fuse(F101) is open, Components damaged, No hazard.
Q401 Pin D-Pin S	SC	304.7Vac	<1s	F101	0	Fuse(F101) is open, Components damaged, No hazard.
D101	SC	304.7Vac	<1s	F101	0	Fuse(F101) is open, Components damaged, No hazard.
R406	SC	304.7Vac	<1s	F101	0	Fuse(F101) is open, Components damaged, No hazard.
C101	SC	304.7Vac	<1s	F101	0	Fuse(F101) is open, Components damaged, No hazard.
C405	SC	304.7Vac	10min	F101	0.03A	Product protection, unable to work. No hazard.
D403	SC	304.7Vac	10min	F101	0.03A	Product protection, unable to work. No hazard.
U701 primary	SC	304.7Vac	10min	F101	0.03A	Product protection, unable to work. No hazard.
U701 secondary	SC	304.7Vac	10min	F101	0.03A	Product protection, unable to work. No hazard.
Supplementary information: 1. SC: Short circuit; OL: Over load. 2. Temperature limit for transformer winding under the fault condition: 165°C (T401: Class B). 3. Secondary output did not exceed 42.4Vpeak or 60Vdc after fault tests were applied. 4. The tests where fuse opened were repeated with each source listed in table 4.1.2 and same result observed.						

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Clause	Requirement + Test	Result - Remark	Verdict

Annex M	TABLE: Batteries								N/A
The tests of Annex M are applicable only when appropriate battery data is not available									N/A
Is it possible to install the battery in a reverse polarity position?.....							--		N/A
	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:	--	--	--	--	--	--	--	--	--
Max. current during fault condition:	--	--	--	--	--	--	--	--	--
Test results:									Verdict
- Chemical leaks							--		N/A
- Explosion of the battery							--		N/A
- Emission of flame or expulsion of molten metal							--		N/A
- Electric strength tests of equipment after completion of tests							--		N/A
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	--	—	—	--	
Supplementary Information:						
Battery identification	Charging at T _{lowest} (°C)	Observation	Charging at T _{highest} (°C)	Observation		
--	—	--	--	--		
--	—	--	--	--		
Supplementary Information:						

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

Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)						P
Output Circuit	Condition	U _{oc} (V)	Time (s)	I _{sc} (A)		S (VA)	
				Meas.	Limit	Meas.	Limit
Output (4.7V)	Normal	4.7	5	10.50	8	47.04	100
Output (48V)	Normal	48.00	5	1.30	8	62.36	100
Output (59.4V)	Normal	59.41	5	0.85	8	50.47	100
Output	R406-SC	0	5	0	8	0	100
Supplementary Information:							

T.2, T.3, T.4, T.5	TABLE: Steady force test						P
Part/Location	Material	Thickness (mm)	Probe	Force (N)	Test Duration (s)	Observation	
Internal component	—	—	--	10N	5s	Unable accessible class 3 energy sources, Safeguards remain effective. Electrical clearance and creepage distance are not reduced to the required value below	
Supplementary information: 1):See appended table 4.1.2.							

T.6, T.9	TABLE: Impact test				N/A
Location/part	Material	Thickness (mm)	Height (mm)	Observation	
Supplementary information: 1):See appended table 4.1.2.					

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

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

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

EN 62368-1:2014+A11:2017 - CENELEC COMMON MODIFICATIONS (EN)						
	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:					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
4.Z1	Add the following new subclause after 4.9: To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. mains , protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for pluggable equipment type B or permanently connected equipment , to rely on dedicated overcurrent and short-circuit protection in the building installation, provided					N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	<p>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>		
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
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
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>		N/A

EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	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		
G.7.1	Add the following note: NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.		N/A
Bibliography	Add the following standards: Add the following notes for the standards indicated: IEC 60130-9 NOTE Harmonized as EN 60130-9. IEC 60269-2 NOTE Harmonized as HD 60269-2. IEC 60309-1 NOTE Harmonized as EN 60309-1. IEC 60364 NOTE some parts harmonized in HD 384/HD 60364 series. IEC 60601-2-4 NOTE Harmonized as EN 60601-2-4. IEC 60664-5 NOTE Harmonized as EN 60664-5. IEC 61032:1997 NOTE Harmonized as EN 61032:1998 (not modified). IEC 61508-1 NOTE Harmonized as EN 61508-1. IEC 61558-2-1 NOTE Harmonized as EN 61558-2-1. IEC 61558-2-4 NOTE Harmonized as EN 61558-2-4. IEC 61558-2-6 NOTE Harmonized as EN 61558-2-6. IEC 61643-1 NOTE Harmonized as EN 61643-1. IEC 61643-21 NOTE Harmonized as EN 61643-21. IEC 61643-311 NOTE Harmonized as EN 61643-311. IEC 61643-321 NOTE Harmonized as EN 61643-321. IEC 61643-331 NOTE Harmonized as EN 61643-331.		N/A
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		
4.1.15	Denmark, Finland, Norway and Sweden To the end of the subclause the following is added: Class I pluggable equipment type A intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment shall be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Denmark: "Apparatetsstikpropskalttilsluttesenstikkontakt med jordsom giver forbindelse til stikproppens jord." In Finland: "Laite on liitettävä suojakoskettimillä varustettuun pistorasian" In Norway: "Apparatet må tilkoples jordet stikkontakt"		N/A

EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	In Sweden : "Apparatens skall anslutas till jordatuttag"		
4.7.3	United Kingdom To the end of the subclause the following is added: The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex		N/A
5.2.2.2	Denmark After the 2nd paragraph add the following: A warning (marking safeguard) for high touch current is required if the touch current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A
5.4.11.1 and Annex G	Finland and Sweden To the end of the subclause the following is added: For separation of the telecommunication network from earth the following is applicable: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either <ul style="list-style-type: none"> • two layers of thin sheet material, each of which shall pass the electric strength test below, or • one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. 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 <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. It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: <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 		N/A

EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>defined in 5.4.11;</p> <ul style="list-style-type: none"> the additional testing shall be performed on all the test specimens as described in EN 60384-14; <p>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.</p>		
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
5.5.6	<p>Finland, Norway and Sweden</p> <p>To the end of the subclause the following is added:</p> <p>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.</p>		N/A
5.6.1	<p>Denmark</p> <p>Add to the end of the subclause</p> <p>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.</p> <p><i>Justification:</i></p> <p>In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.</p>		N/A
5.6.4.2.1	<p>Ireland and United Kingdom</p> <p>After the indent for pluggable equipment type A, the following is added:</p> <p>– the protective current rating is taken to be 13 A, this being the largest rating of fuse used in the mains plug.</p>		N/A
5.6.5.1	<p>To the second paragraph the following is added:</p> <p>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:</p> <p>1,25 mm² to 1,5 mm² in cross-sectional area.</p>		N/A
5.7.5	<p>Denmark</p> <p>To the end of the subclause the following is added:</p> <p>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.</p>		N/A
5.7.6.1	<p>Norway and Sweden</p> <p>To the end of the subclause the following is</p>		N/A

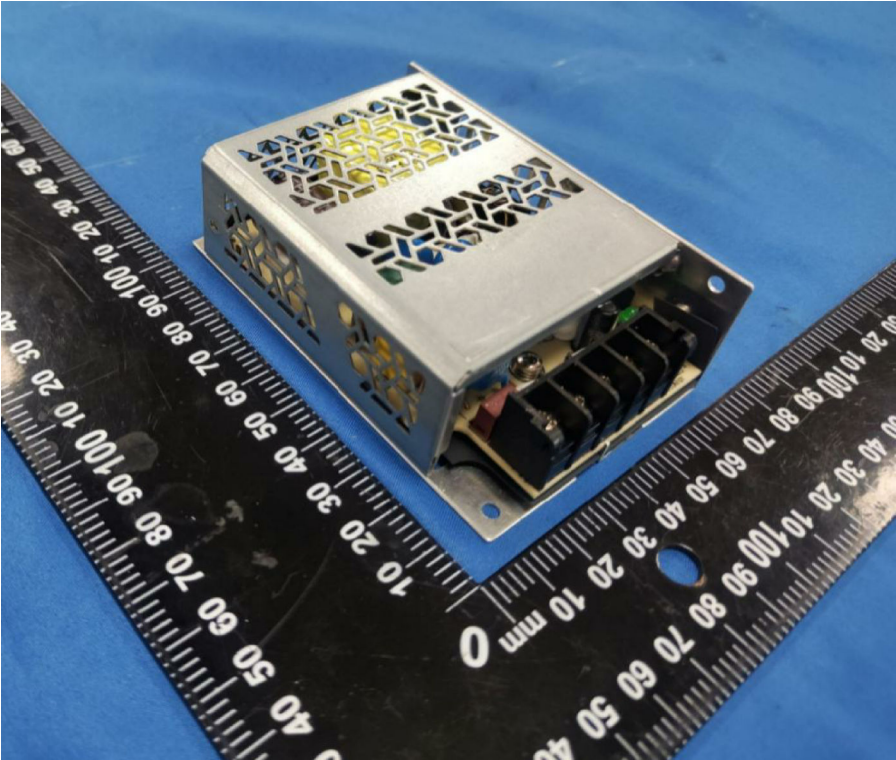
EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>added:</p> <p>The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation needs to be isolated from the screen of a cable distribution system.</p> <p>It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example.</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>“Apparatersom er koplettilbeskyttelsesjord via nettpluggog/eller via annetjordtilkoplettutstyr – og er tilkoplett et koaksialbasertkabel-TV nett, kanforårsakebrannfare. For å unngådetteskal det vedtilkoplingavapparatertil kabel-TV nett installeresengalvanisk isolator mellomapparatetogkabel-TV nettet.”</p> <p>Translation to Swedish:</p> <p>“Apparatersomärkopplad till skyddsjord via jordatvägguttagoch/eller via annanutrustningochsamtidigtärkopplad till kabel-TV nätkanivissa fall medföra risk för brand. Förattundvikadettaskall vid anslutningavapparaten till kabel-TV nätgalvanisk isolator finnas mellan apparaten och kabel-TV nätet.”.</p>		
5.7.6.2	<p>Denmark</p> <p>To the end of the subclause the following is added:</p> <p>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 .</p>		N/A

EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
B.3.1 and B.4	<p>Ireland and United Kingdom</p> <p>The following is applicable:</p> <p>To protect against excessive currents and short-circuits in the primary circuit of direct plug-in equipment, tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the direct plug-in equipment, until the requirements of Annexes B.3.1 and B.4 are met</p>		N/A
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

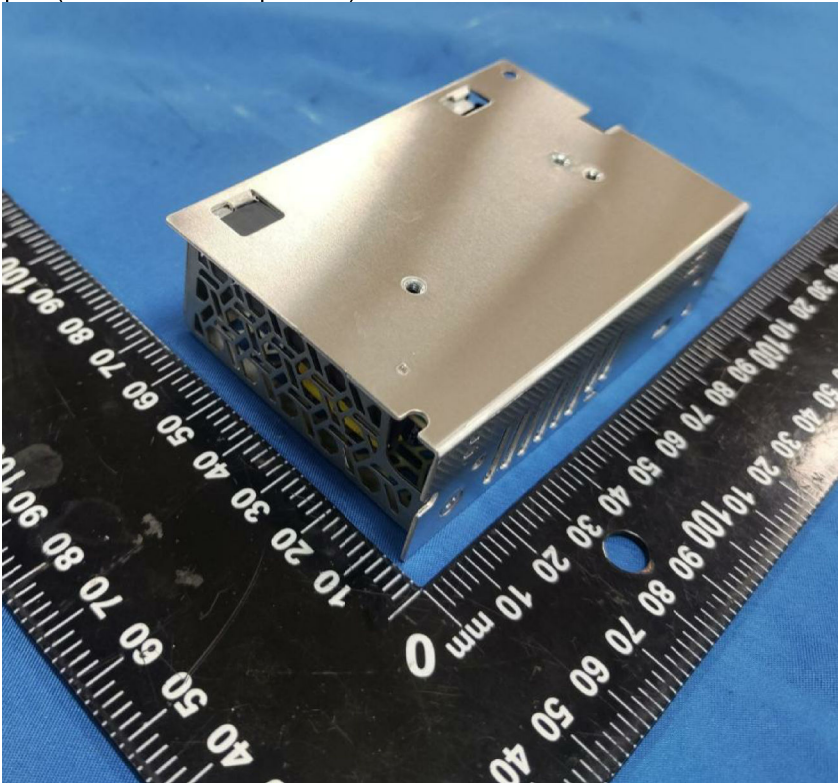
EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.7.1	<p>United Kingdom</p> <p>To the first paragraph the following is added:</p> <p>Equipment which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible 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.</p> <p>NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>		N/A
G.7.1	<p>Ireland</p> <p>To the first paragraph the following is added:</p> <p>Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard</p>		N/A
G.7.2	<p>Ireland and United Kingdom</p> <p>To the first paragraph the following is added:</p> <p>A power supply cord with a conductor of 1,25 mm² is allowed for equipment which is rated over 10 A and up to and including 13 A.</p>		N/A
ZC	<i>ANNEX ZC, NATIONAL DEVIATIONS (EN)</i>		
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: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int +49-531-592-6320, Internet: http://www.ptb.de</p>		N/A

Attachment - Photographs

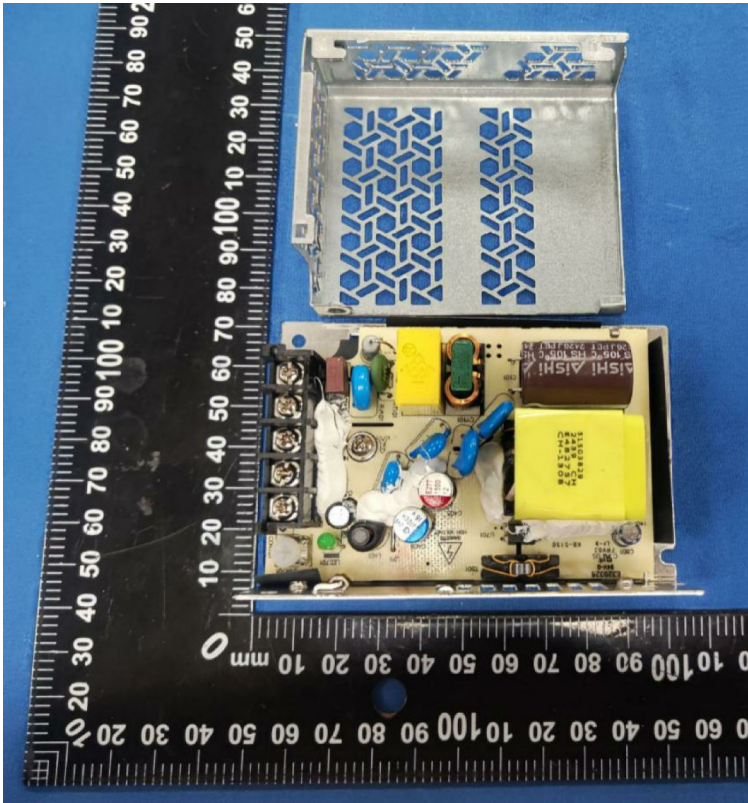
Details of: Photographs (External view of product)



Details of: Photographs (External view of product)

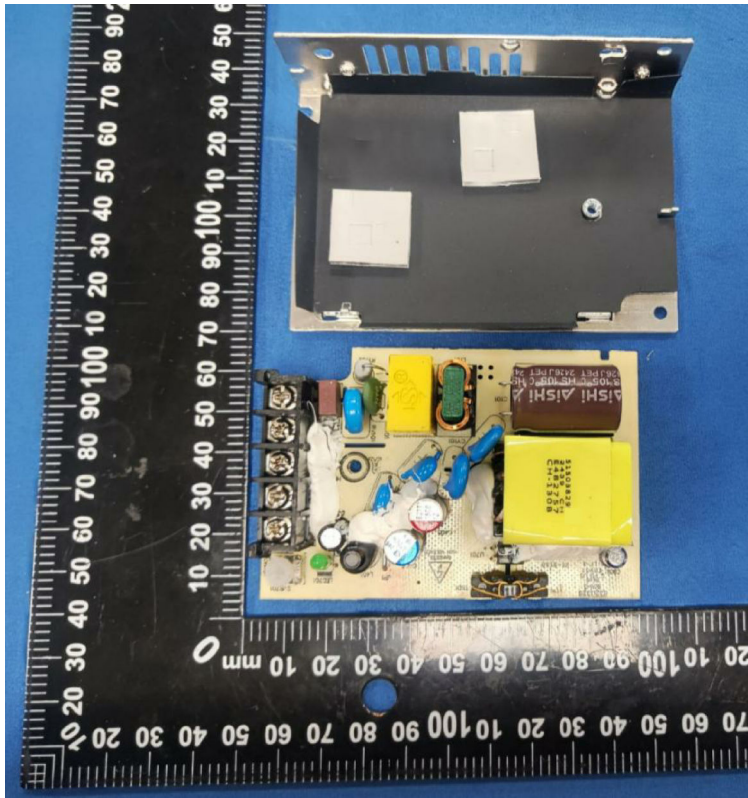


Details of: Photographs (Internal view of product)



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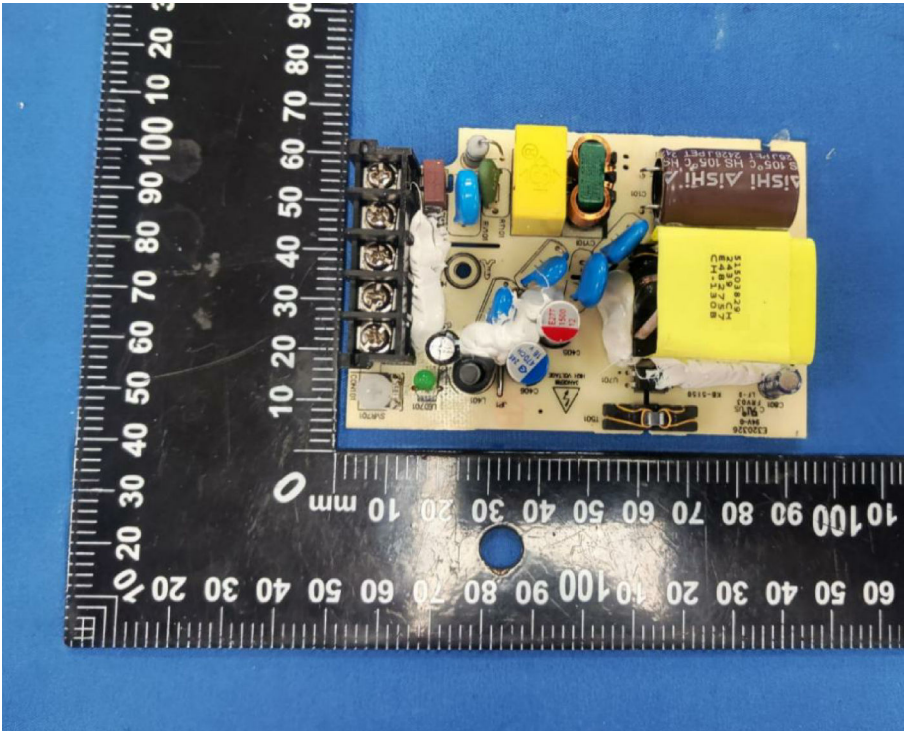
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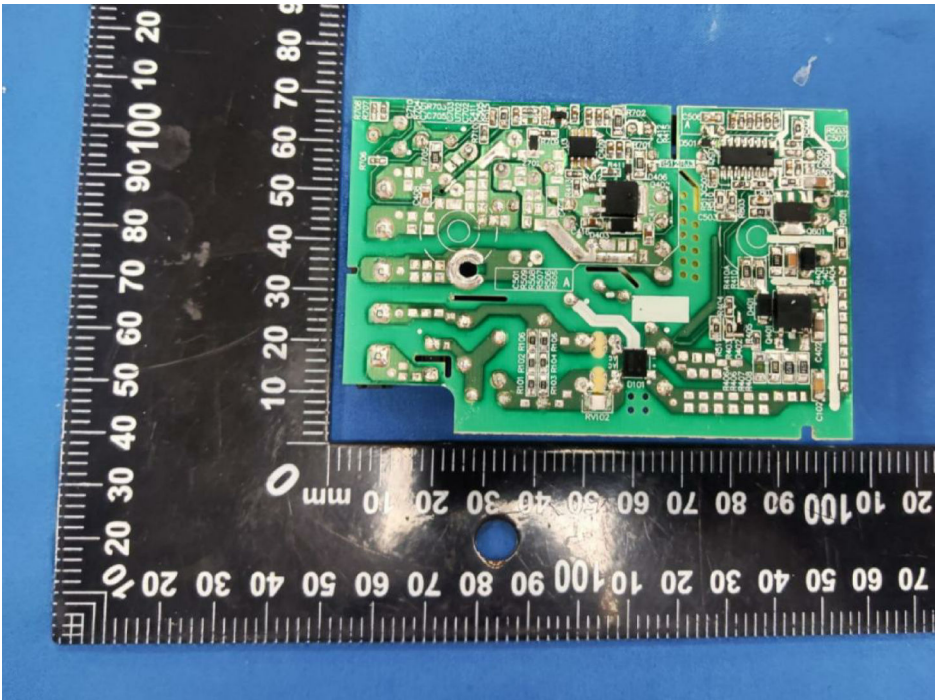
Details of: Photographs (Internal view of product)

ITC-4-A-B077-A0



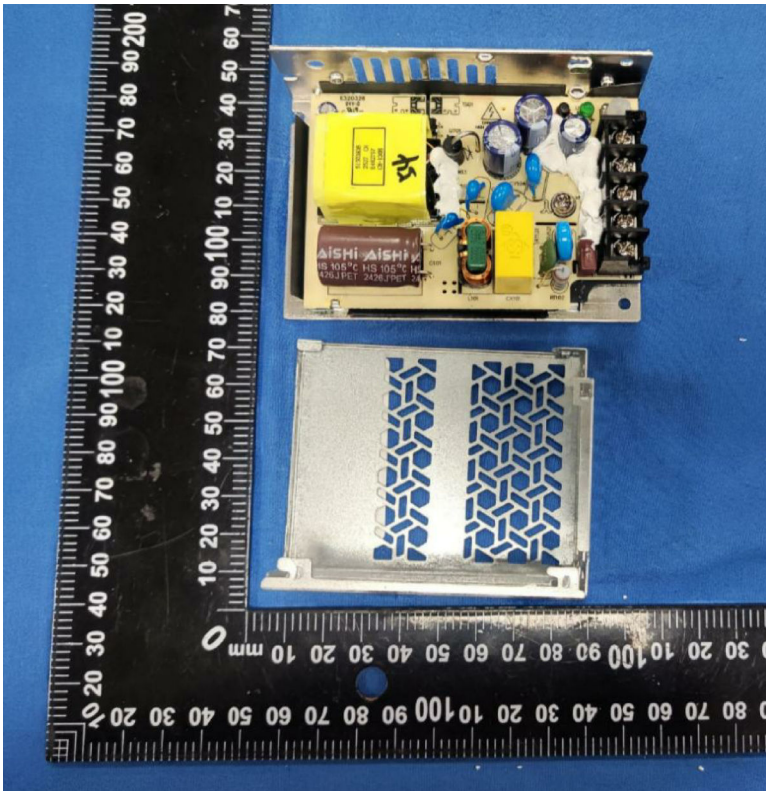
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Details of: Photographs (Internal view of product)



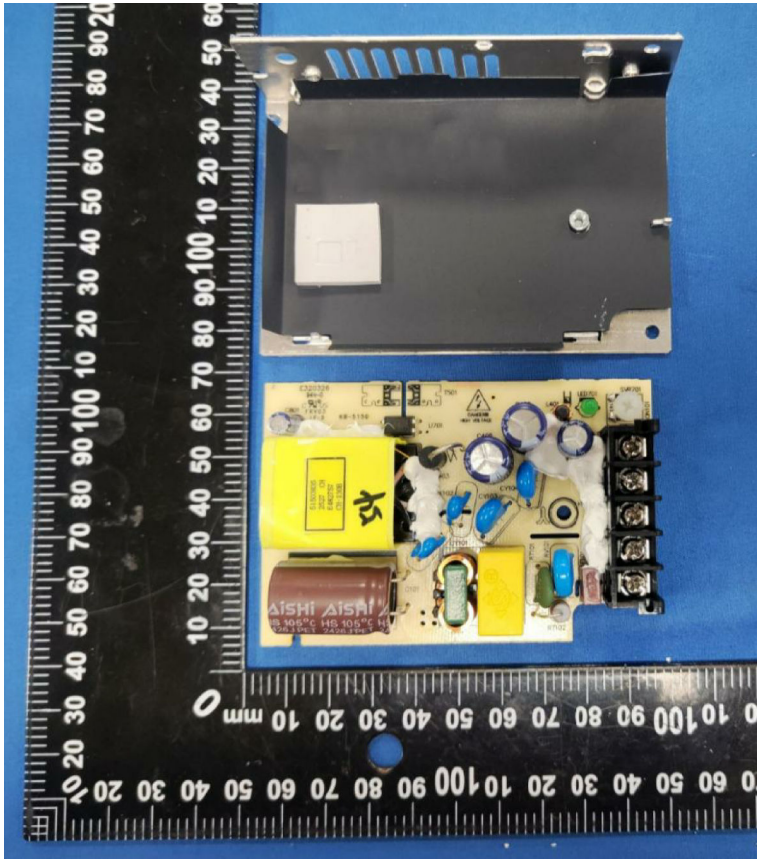
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Details of: Photographs (Internal view of product)



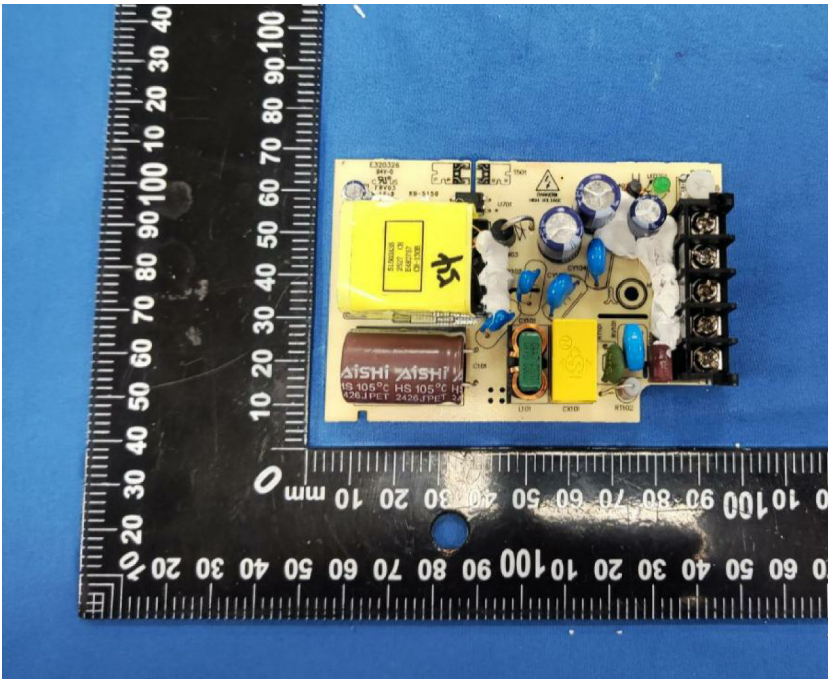
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Details of: Photographs (Internal view of product)



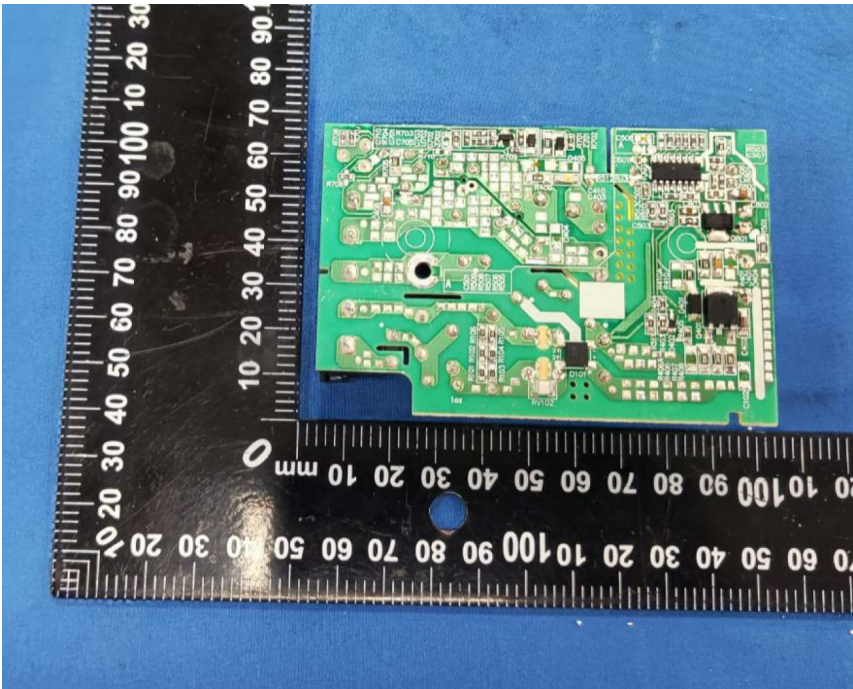
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Details of: Photographs (Internal view of product)



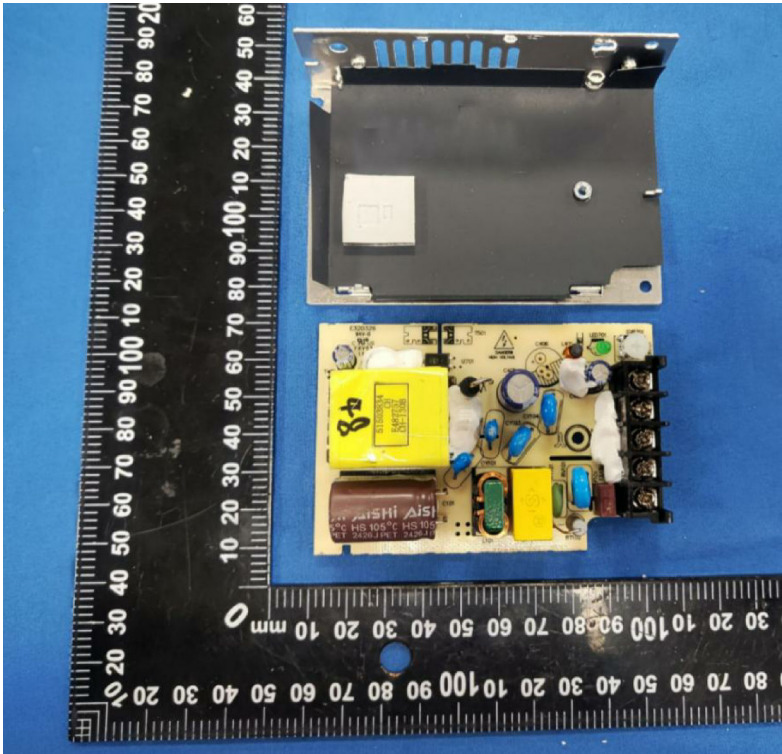
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Details of: Photographs (Internal view of product)



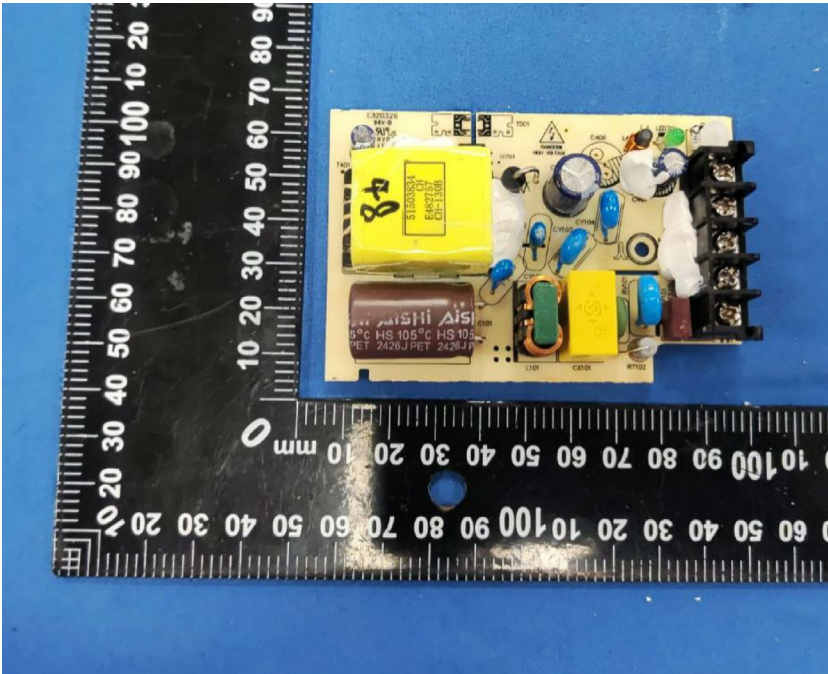
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Details of: Photographs (Internal view of product)



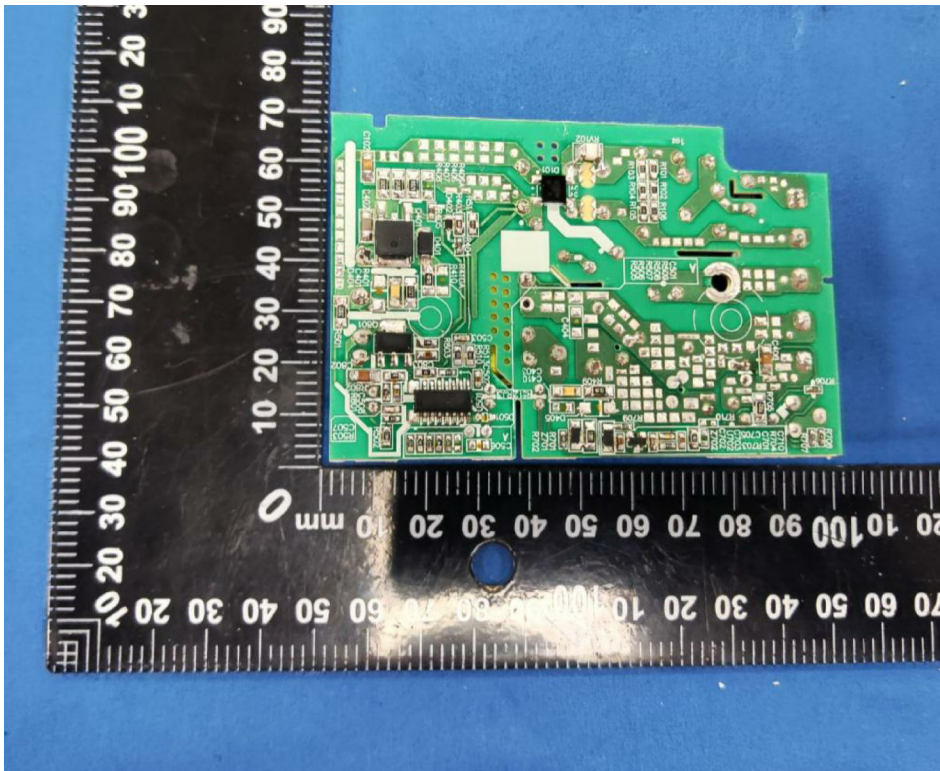
Model: LM35-23B48R2S

Details of: Photographs (Internal view of product)



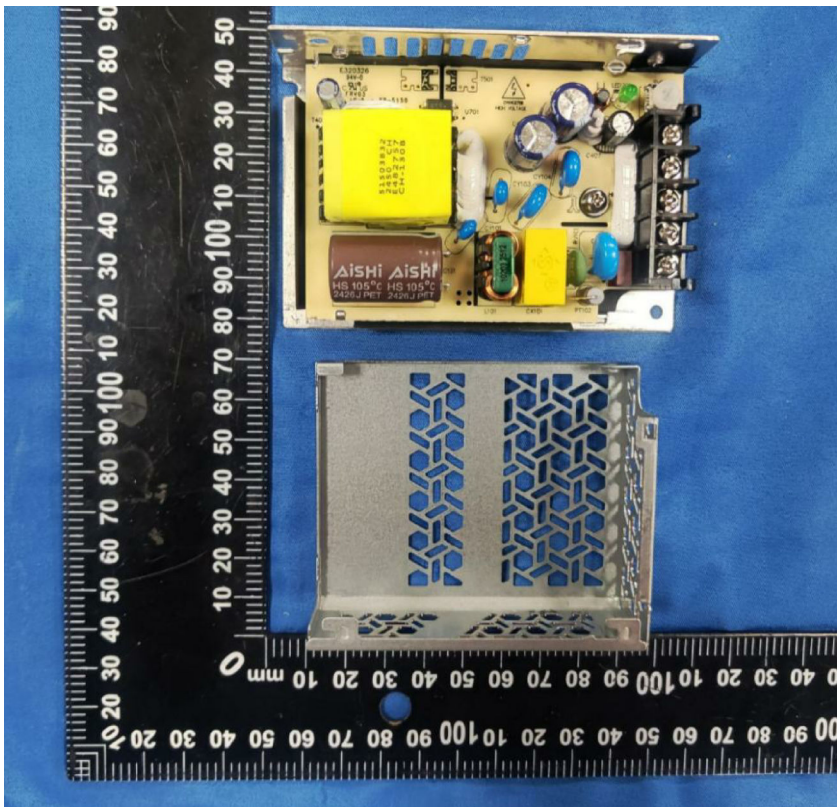
Model: LM35-23B48R2S

Details of: Photographs (Internal view of product)



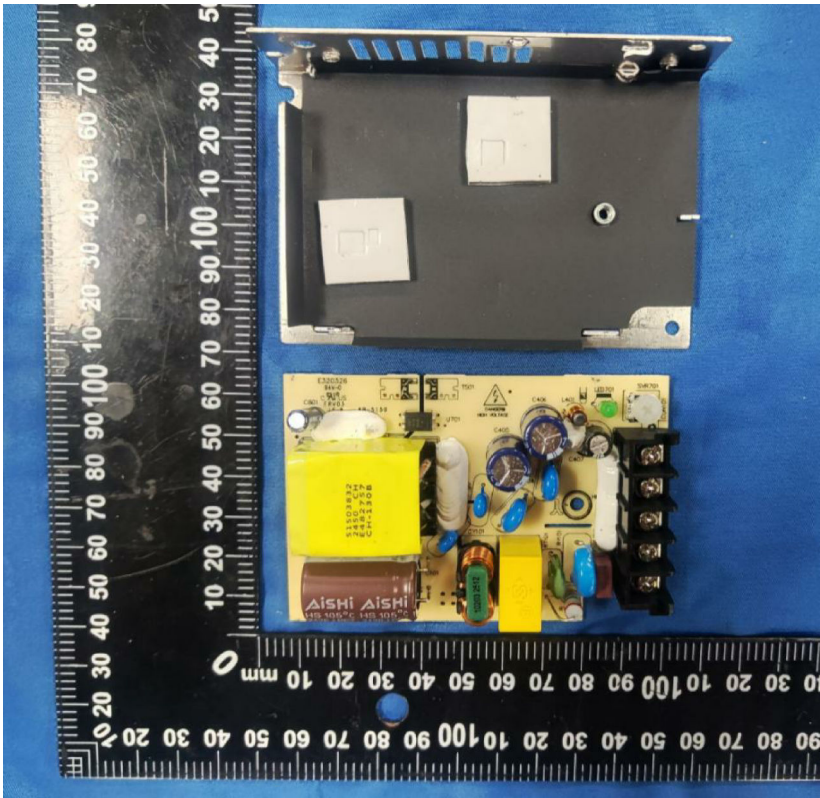
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Details of: Photographs (Internal view of product)



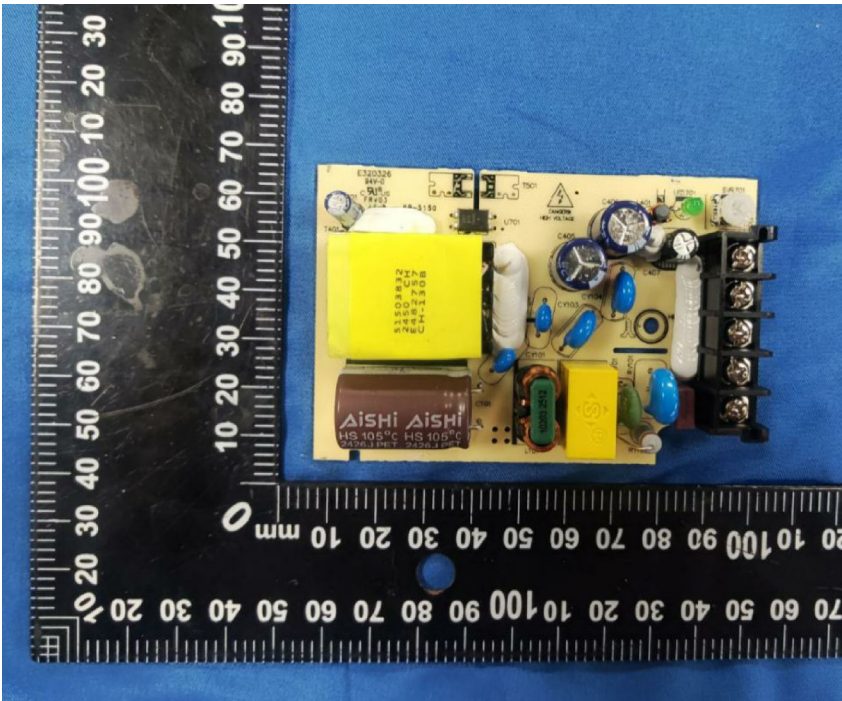
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Details of: Photographs (Internal view of product)



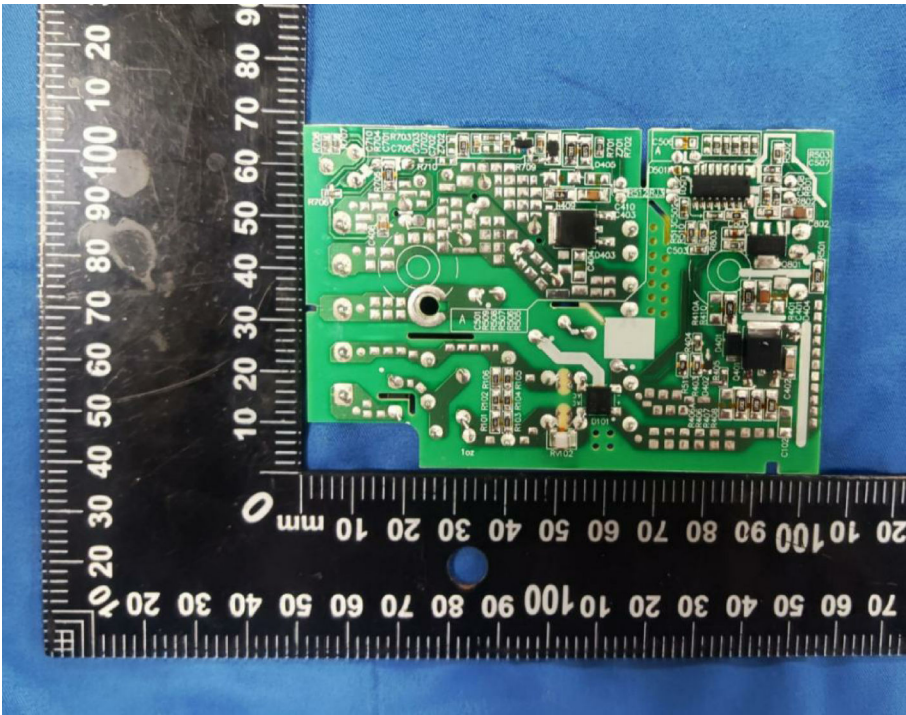
Model1: LM35-23B24R2S

Details of: Photographs (Internal view of product)



Model1: LM35-23B24R2S

Details of: Photographs (Internal view of product)

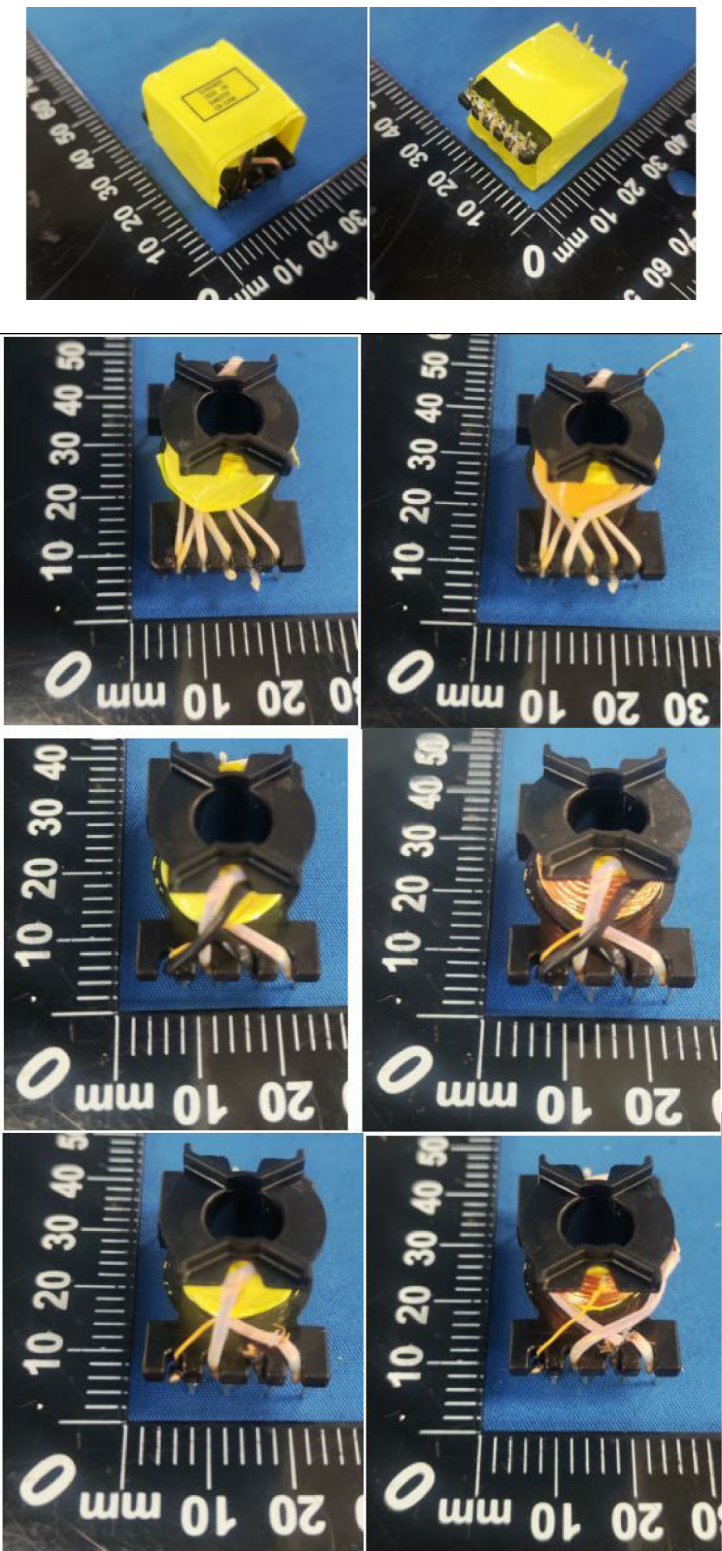


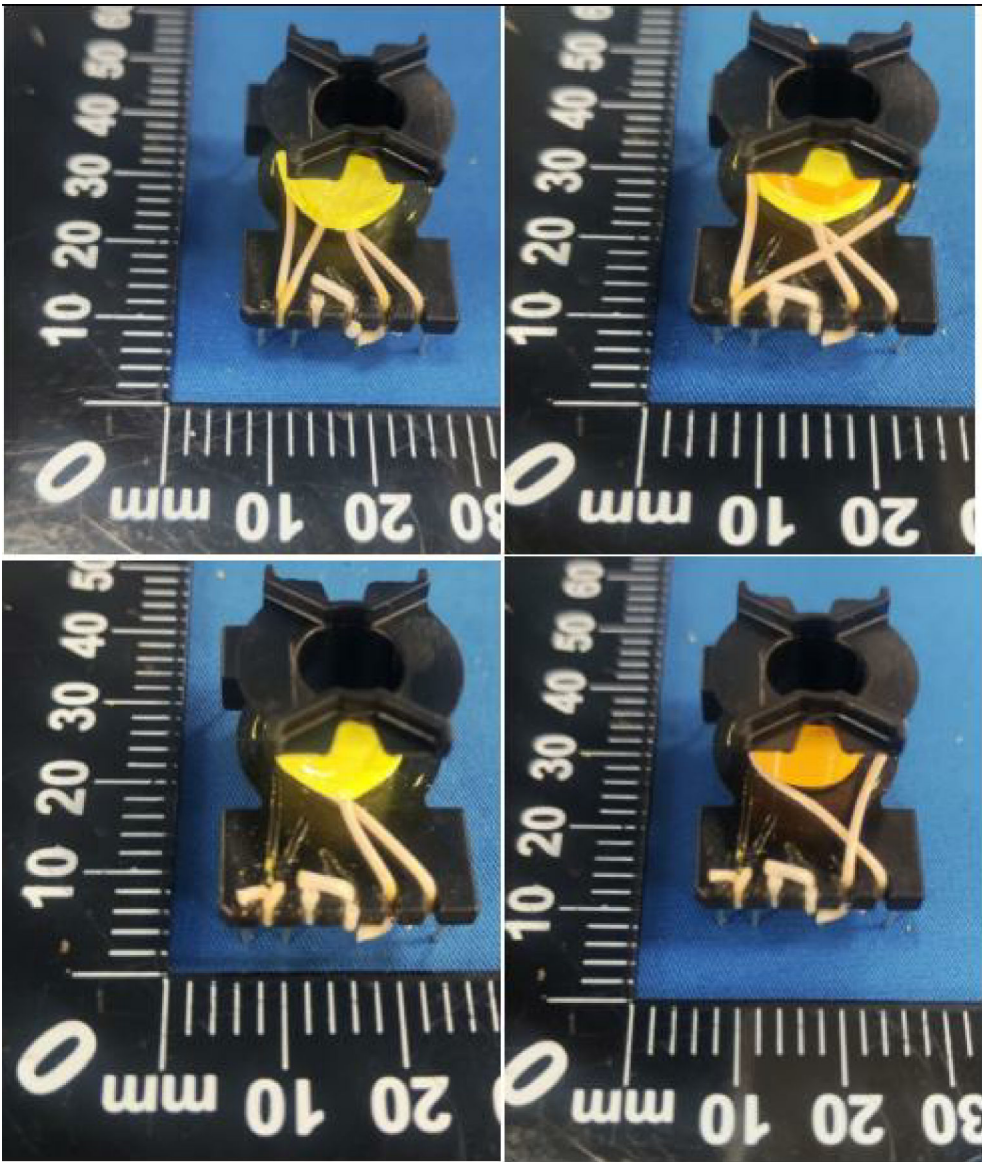
Model: LM35-23B24R2S

Details of: Photographs (view of Fuse)



Details of: Photographs (View of transformer)





Statement

1. The report is invalid without the special seal for inspection and testing of the test department.
2. Any changes, modifications, or partial photocopy of this report without the written approval of the laboratory shall be deemed invalid. The report shall be used properly and legally.
3. The inspection and testing results are only valid for the tested samples.
4. The representativeness and authenticity of the samples submitted for testing shall be the responsibility of the client.
5. The test results given in this test report should only be used for purposes of scientific research, teaching and internal quality control when the CMA mark is not presented.
6. Objections to the inspection and testing results shall be submitted to the laboratory in written form within 10 days after receiving the report.

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Report Ends