Test Report issued under the responsibility of:

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

Report Number ..... :	SUES241100172401
Date of issue ..... :	2024-12-19
Total number of pages ..... :	58 pages
Name of Testing Laboratory preparing the Report ..... :	SGS-CSTC Standards Technical Services Co., Ltd. Suzhou Branch
Applicant's name ..... :	Hangzhou Hikvision Digital Technology Co., Ltd.
Address ..... :	No.555 Qianmo Road, Binjiang District, Hangzhou 310052, China
Test specification:	
Standard ..... :	IEC 62368-1:2014
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
TRF template used ..... :	IECEE OD-2020-F1:2021, Ed.1.4
Test Report Form No. ..... :	IEC62368_1D
Test Report Form(s) Originator .. :	UL(US)
Master TRF ..... :	Dated 2022-04-14

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

General disclaimer:

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

Test Item description ..... :		Audio Doorphone Indoor Station	
Trade Mark(s) ..... :		HIKVISION	
Manufacturer..... :		Same as applicant	
Model/Type reference ..... :		DS-KH1101, DS-KH1101/AR, DS-KH1101/US, DS-KH1101UHK, DS-KH1101CKV, DS-KH1101UVS, DS-KH1101KVO, VI-H301, VI-H301/AR, VI-H301/US	
Ratings ..... :		100 V a.c.-240 V a.c., 50/60 Hz, 15,0 W; Class II	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	SGS-CSTC Standards Technical Services Co., Ltd. Suzhou Branch	
Testing location/ address .....:		No.10, Weiye Road, Kunshan Development Zone, Suzhou, Jiangsu, China	
Tested by (name, function, signature) .....:		Cookie Zhang Project Engineer	
Approved by (name, function, signature) .....:		Ade Wu Reviewer	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :			
Tested by (name, function, signature) .....:			
Approved by (name, function, signature) .....:			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address .....:			
Tested by (name, function, signature) .....:			
Witnessed by (name, function, signature).....:			
Approved by (name, function, signature) .....:			
☐	**Testing procedure: CTF Stage 3 :**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address .....:			
Tested by (name, function, signature) .....:			
Witnessed by (name, function, signature).....:			
Approved by (name, function, signature) .....:			
Supervised by (name, function, signature) .....:			

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

Attachment 1 – 9 pages of Photos documents;
Attachment 2 – 10 pages of European group differences and national differences;
Attachment 3 – 1 page of Circuit diagram and PCB layout;
Attachment 4 – 2 pages of Construction of transformer;
Attachment 5 – 1 page of Safety information

Summary of testing:

The sample(s) tested complies with the requirements of IEC 62368-1: 2014 (Second Edition) and EN 62368-1:2014+A11:2017.

Unless otherwise specified, the EUT with model DS-KH1101 was selected as representative model for full testing.

Heating test:
Tma = 50°C (declared by manufacturer)

K-type thermocouple used for temperature measurement.

Tests performed (name of test and test clause):	**Testing location:**
☒ 4. General requirements ☒ 5. Electrically-caused injury ☒ 6. Electrically-caused fire ☐ 7. Injury caused by hazardous substances ☒ 8. Mechanically-caused injury ☒ 9. Thermal burn injury ☒10. Radiation ☒ Annex B. Normal operating condition tests, abnormal operating condition tests and single fault condition tests ☒ Annex F.3.9. Performance of Marking test ☐ Annex M Equipment containing batteries and their protection circuits ☐ Annex Q. Limited Power Source ☒ Annex T. Mechanical strength tests ☒ Annex V. Determination of accessible parts	SGS-CSTC Standards Technical Services Co., Ltd. Suzhou Branch No.10, Weiye Road, Kunshan Development Zone, Suzhou, Jiangsu, China

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

1. EU Group Differences (EN 62368-1:2014+A11:2017)
2. EU Special National Conditions, EU A-deviations: DE, DK, FI, GB, IE, NO, SE

Explanation of used codes: DE=Germany, DK=Denmark, FI=Finland, GB= United Kingdom, IE=Ireland, NO=Norway, SE=Sweden

☒ **The product fulfils the above requirements.**

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

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

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

Information on uncertainty of measurement:

The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE.

IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer.

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

Copy of marking plate:

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

Marking for Model DS-KH1101

Remark:

1) The Height of CE logo shall not be less than 5 mm; Height of WEEE logo shall not be less than 7 mm.

2) As declared by the applicant, the importer (and manufacturer, if it is different)'s name, registered trade name or registered trade mark and the postal address will be marked on the products before being placed on the market. The contact details shall be in a language easily understood by end-users and market surveillance authorities.

3) The marking plates for other models are of the same pattern except for model name and trade mark.

TEST ITEM PARTICULARS:	
Classification of use by.....:	☒ Ordinary person ☒ Instructed person ☒ Skilled person ☒ Children likely to be present
Supply Connection .....:	☒ AC Mains ☐ DC Mains ☐ External Circuit - not Mains connected - ☐ ES1 ☐ ES2 ☐ ES3
Supply % Tolerance .....:	☒ +10%/-10% ☐ +20%/-15% ☐ +____%/ -_____% ☐ None
Supply Connection – Type .....:	☒ pluggable equipment type A - ☒ non-detachable supply cord ☐ appliance coupler ☐ direct plug-in ☐ mating connector ☐ pluggable equipment type B - ☐ non-detachable supply cord ☐ appliance coupler ☐ permanent connection ☐ mating connector ☐ other: Not directly connected to mains
Considered current rating of protective device as part of building or equipment installation..... :	N/A Installation location: ☐ building; ☐ equipment
Equipment mobility..... :	☒ movable ☐ hand-held ☐ transportable ☐ stationary ☐ for building-in ☐ direct plug-in ☐ rack-mounting ☒ wall-mounted
Over voltage category (OVC) ..... :	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other: Not directly connected to mains
Class of equipment ..... :	☐ Class I ☒ Class II ☐ Class III
Access location ..... :	☐ restricted access location ☒ N/A
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maxium operating ambient ..... :	50°C
IP protection class ..... :	☒ IPX0 ☐ IP___
Power Systems ..... :	☒ TN ☒ TT ☐ IT - ____ V_{L-L}
Altitude during operation (m) ..... :	☐ 2000 m or less ☒ 5000 m
Altitude of test laboratory (m) ..... :	☒ 2000 m or less ☐ 100 m
Mass of equipment (kg) ..... :	☒ 0,33 kg

Possible test case verdicts:	
- test case does not apply to the test object .....:	N/A
- test object does meet the requirement .....:	P (Pass)
- test object does not meet the requirement .....:	F (Fail)
Testing .....:	
Date of receipt of test item.....:	2024-11-18
Date (s) of performance of tests .....:	2024-11-18 to 2024-11-28

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

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

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

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

Name and address of factory (ies).....:	GUANGDONG ROULE ELECTRONICS CO., LTD NO.12 Pingdong RD3, Nanping Industry Community, Zhuhai, Guangdong, China

General product information and other remarks:

Product Description –

Functions	The EUT are serials Class II Audio Doorphone Indoor Station, which is powered by building-in power supply through non-detachable supply cord
Material of enclosure	Plastic
Other features	Indoor use only
Model difference	All models are different except model name which have no effect for safety.

Additional application considerations – (Considerations used to test a component or sub-assembly) –

N/A

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)**
Primary circuit	ES3
Internal circuit except primary	ES1
Enclosure	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)**
Power input	PS3
All internal circuits	PS3
Output port of power board	PS1
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**
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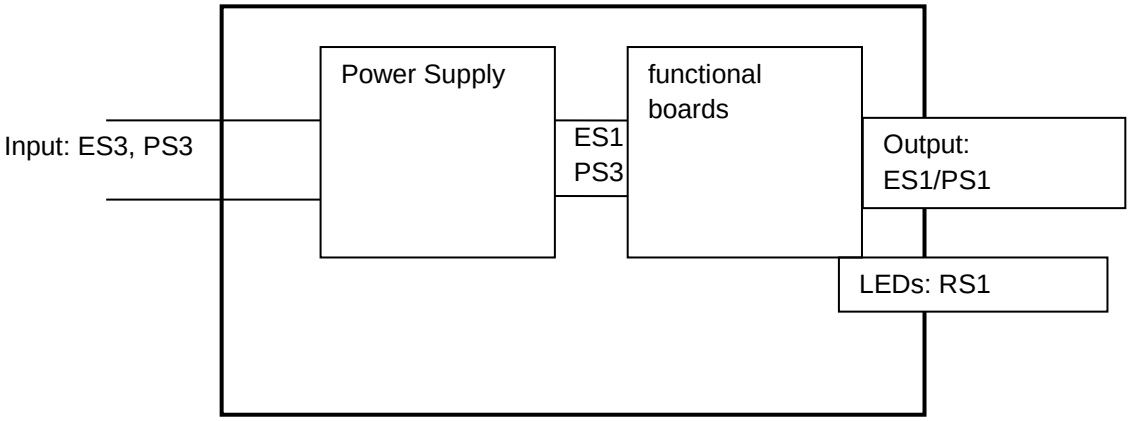
Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.) Example: Wall mount unit MS2	
Source of kinetic/mechanical energy	**Corresponding classification (MS)**
Sharp edges and corners	MS1
Equipment mass	MS1
Wall-mounted	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)**
Accessible parts	TS1
Radiation (Clause 10) (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product RS1	
Type of radiation	**Corresponding classification (RS)**
Indicate LED	RS1

ENERGY SOURCE DIAGRAM

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



Enclosure: ES1, MS1, TS1

Mass: MS1; Wall mounted: MS1

■ **ES** ■ **PS** ■ **MS** ■ **TS** ■ **RS**

OVERVIEW OF EMPLOYED SAFEGUARDS				
Clause	**Possible Hazard**			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary person	ES3: Primary circuit	Basic Insulation	Supplementary Insulation	Enclosure Transformers, optocouplers, and bridging
Ordinary person	ES1 part: Internal circuit except primary	N/A	N/A	N/A
Ordinary person	ES1: Enclosure	N/A	N/A	N/A
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
Internal combustible materials	PS3: Internal circuits	1. No ignition occurred. 2. No parts exceeding 90% of its spontaneous ignition temperature. 3. combustible material outside fire enclosure is of min HB	1. PCB is of min V-1 material 2. All other components were mounted on min V-1 PCB or of min V-2 or small parts of combustible material less than 4g. 3. Fire enclosure provided	N/A
Output	PS1: Output	N/A	N/A	N/A
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary person	MS1: Sharp edges and	N/A	N/A	N/A

	corners			
Ordinary person	MS1: Equipment mass	N/A	N/A	N/A
Ordinary person	MS1: Wall-mounted	N/A	N/A	N/A
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary person	TS1: Accessible parts	N/A	N/A	N/A
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary person	RS1: Indicate LED	N/A	N/A	N/A
Supplementary Information:				
(1) See attached energy source diagram for additional details. (2) “N” – Normal Condition; “A” – Abnormal Condition; “S” Single Fault				

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Clause	Requirement + Test	Result - Remark	Verdict

4	**GENERAL REQUIREMENTS**		P
4.1.1	Acceptance of materials, components and subassemblies		P
4.1.2	Use of components	Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this standard. Components not certified are used in accordance with their ratings and they comply with applicable parts of this standard and the relevant component standard. Components, for which no relevant IEC-standard exists, have been tested under the conditions occurring in the equipment, using applicable parts of this standard.	P
4.1.3	Equipment design and construction		P
4.1.15	Markings and instructions.....:	(See Annex F)	P
4.4.4	Safeguard robustness		P
4.4.4.2	Steady force tests.....:	(See Annex T.2, T.5)	P
4.4.4.3	Drop tests .....:	(See Annex T.7)	P
4.4.4.4	Impact tests .....:	(See Annex T.6)	P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....:		N/A
4.4.4.6	Glass Impact tests .....:		N/A
4.4.4.7	Thermoplastic material tests.....:	(See Annex T.8)	P
4.4.4.8	Air comprising a safeguard.....:	(See Annex T)	P
4.4.4.9	Accessibility and safeguard effectiveness		P
4.5	Explosion		N/A
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard		P
4.6.2	10 N force test applied to .....:	Internal primary wire and internal component.	P
4.7	Equipment for direct insertion into mains socket - outlets	Not such equipment.	N/A
4.7.2	Mains plug part complies with the relevant standard.....:		N/A
4.7.3	Torque (Nm) .....:		N/A
4.8	Products containing coin/button cell batteries		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery.....:		--
4.8.4	Battery Compartment Mechanical Tests .....:		N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object.....:	(See Annex P)	P
5	**ELECTRICALLY-CAUSED INJURY**		P
5.2.1	Electrical energy source classifications.....:	See page 9.	P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current.....:	See appended table 5.2	P
5.2.2.3	Capacitance limits .....:	See appended table 5.2	P
5.2.2.4	Single pulse limits .....:		N/A
5.2.2.5	Limits for repetitive pulses .....:		N/A
5.2.2.6	Ringing signals .....:		N/A
5.2.2.7	Audio signals .....:		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.....:	Checked by clause V.1.2, V.1.3, V.1.6.	P
	b) Electric strength test potential (V) .....:		N/A
	c) Air gap (mm) .....:	More than 2mm	P
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		P
5.4.1.3	Humidity conditioning .....:	See 5.4.8	P
5.4.1.4	Maximum operating temperature for insulating materials .....:	See appended table 5.4.1.4.	P
5.4.1.5	Pollution degree .....:	2	--
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage		P
5.4.1.9	Insulating surfaces		N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	Phenolic material used.	P
5.4.1.10.2	Vicat softening temperature ..... :	(See appended table 5.4.1.10.2)	N/A
5.4.1.10.3	Ball pressure ..... :	(See appended table 5.4.1.10.3)	P
5.4.2	Clearances		P
5.4.2.2	Determining clearance using peak working voltage	(See appended table 5.4.2.2)	P
5.4.2.3	Determining clearance using required withstand voltage ..... :	(See appended table 5.4.2.3)	P
	a) a.c. mains transient voltage ..... :	2500	--
	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	(See appended table 5.4.2.4)	N/A
5.4.2.5	Multiplication factors for clearances and test voltages ..... :	5000m, 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 ..... :	IIIb	--
5.4.4	Solid insulation		P
5.4.4.2	Minimum distance through insulation ..... :	(See appended table 5.4.4.2)	P
5.4.4.3	Insulation compound forming solid insulation		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) ..... :		N/A
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 ..... :	(See appended Table 5.4.9)	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 ..... :		N/A
5.4.5	Antenna terminal insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ)....:		--
5.4.6	Insulation of internal wire as part of supplementary safeguard....:	(See appended table 5.4.4.2)	N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		P
	Relative humidity (%)....:	93%	--
	Temperature (°C) ....:	40	--
	Duration (h) ....:	120	--
5.4.9	Electric strength test....:	(See appended table 5.4.9)	P
5.4.9.1	Test procedure for a solid insulation type test		P
5.4.9.2	Test procedure for routine tests		N/A
5.4.10	Protection against transient voltages between external circuit		N/A
5.4.10.1	Parts and circuits separated from external circuits	(See appended table 5.4.9)	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 ....:	(See appended table 5.4.9)	N/A
5.4.10.2.3	Steady-state test....:	(See appended table 5.4.9)	N/A
5.4.11	Insulation between external circuits and earthed circuitry ....:	(See appended table 5.4.9)	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 U_{sp} ....:		--
	Max increase due to ageing ΔU_{sa} ....:		--
	$U_{op}= U_{peak} + \Delta U_{sp} + \Delta U_{sa}$ ....:		--
5.5	Components as safeguards		
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	(See Annex G.5.3)	P
5.5.4	Optocouplers		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.5.5	Relays		N/A
5.5.6	Resistors	(See Annex G.10)	N/A
5.5.7	SPD's	(See Annex 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
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable.....:	(See Annex G.10.3)	N/A
5.6	Protective conductor		N/A
5.6.2	Requirement for protective conductors		N/A
5.6.2.1	General requirements		N/A
5.6.2.2	Colour of insulation		N/A
5.6.3	Requirement for protective earthing conductors		N/A
	Protective earthing conductor size (mm^2) .....:		--
5.6.4	Requirement for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm^2). .....:		--
	Protective current rating (A) ..... :		--
5.6.4.3	Current limiting and overcurrent protective devices		N/A
5.6.5	Terminals for protective conductors		N/A
5.6.5.1	Requirement		N/A
	Conductor size (mm^2), nominal thread diameter (mm). .....:		N/A
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective system		N/A
5.6.6.1	Requirements		N/A
5.6.6.2	Test Method Resistance (Ω).....:		N/A
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		N/A
5.7.2	Measuring devices and networks		N/A
5.7.2.1	Measurement of touch current .....:		N/A
5.7.2.2	Measurement of prospective touch voltage		N/A
5.7.3	Equipment set-up, supply connections and earth connections		N/A
	System of interconnected equipment (separate connections/single connection) .....:		--
	Multiple connections to mains (one connection at a time/simultaneous connections) .....:		--

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Clause	Requirement + Test	Result - Remark	Verdict
5.7.4	Earthed conductive accessible parts.....:		N/A
5.7.5	Protective conductor current		N/A
	Supply Voltage (V).....:		--
	Measured current (mA).....:		--
	Instructional Safeguard.....:		N/A
5.7.6	Prospective touch voltage and touch current due to 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		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 ... :	The internal circuit is considered as PS3 without test.	P
6.2.2.3	Power measurement for worst-case power source fault..... :		P
6.2.2.4	PS1 ..... :		P
6.2.2.5	PS2 ..... :		P
6.2.2.6	PS3 ..... :	The product is powered by PS3. And internal circuit is considered as PS3 without test.	P
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS ..... :	The internal primary circuit is considered as Arcing PIS without test.	P
6.2.3.2	Resistive PIS ..... :	The internal circuit except primary is considered as resistive PIS without test.	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 5.4.1.5, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure	Min HB.	P

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Clause	Requirement + Test	Result - Remark	Verdict
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	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	General		N/A
6.4.3.2	Supplementary Safeguards		N/A
	Special conditions if conductors on printed boards are opened or peeled		N/A
6.4.3.3	Single Fault Conditions..... :	(See appended table 6.4.3)	N/A
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		P
6.4.5	Control of fire spread in PS2 circuits		P
6.4.5.2	Supplementary safeguards .....:	− Wire insulation (tubing): Complying with Clause 6 (See Table 4.1.2 for wiring used). − All other components: At least V-2 except for mounted on min.V-1 material or small parts of combustible material. − Isolating transformer: Complying with G.5.3.	P
6.4.6	Control of fire spread in PS3 circuit	Certified components Fire enclosure used	P
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.1	General.....:	(See tables 6.2.3.1 and 6.2.3.2)	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		P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.3.1	Fire enclosure and fire barrier openings		P
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm) .....:	Side: 1mm diameter Top: No opening	P
	Needle Flame test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) .....:	No opening	P
	Flammability tests for the bottom of a fire enclosure .....:		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c) .....:	No door or cover.	N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating.....:	[] minimum 5mm from resistive PIS, [x] enclosure is metal or V-0	P
6.5	Internal and external wiring		P
6.5.1	Requirements		P
6.5.2	Cross-sectional area (mm^2) .....:	The test method described in IEC 60695-11-21 is considered equivalent to VW-1 rating of test method described in UL 758 and also internal wiring complied with IEC 60332-2-2.	--
6.5.3	Requirements for interconnection to building wiring .....:	(See Annex Q.)	N/A
6.6	Safeguards against fire due to connection to additional equipment		N/A
	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.....:		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	No sharp edges or corners, MS1	P
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard..... :		--
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks .....:		N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard.....:		--
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N) .....:		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test.....:		N/A
8.6	Stability		N/A
8.6.1	Product classification		N/A
	Instructional Safeguard.....:		--
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force.....:		--
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt.....:		--
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force).....:		N/A
	Position of feet or movable parts.....:		--
8.7	Equipment mounted to wall or ceiling	Mounted < 2m; Mass<1kg (1,4-1,6m declared in user manual) MS1	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

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Clause	Requirement + Test	Result - Remark	Verdict
8.9.1	Classification		N/A
8.9.2	Applied force .....:		--
8.10	Carts, stands and similar carriers	No such part.	N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard .....:		--
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force .....:		--
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N) .....:		--
8.10.6	Thermoplastic temperature stability (°C) .....:		N/A
8.11	Mounting means for rack mounted equipment	No such part.	N/A
8.11.1	General		N/A
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable *N* .....:		N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas.....	No such part.	N/A
	Button/Ball diameter (mm).....:		--
9	**THERMAL BURN INJURY**		P
9.2	Thermal energy source classifications	TS1 for accessible parts.	P
9.3	Safeguard against thermal energy sources	Enclosure safeguard	P
9.4	Requirements for safeguards		N/A
9.4.1	Equipment safeguard		N/A
9.4.2	Instructional safeguard .....:	Not used.	N/A
10	**RADIATION**		P
10.2	Radiation energy source classification		P
10.2.1	General classification	RS1 for LEDs.	P
10.3	Protection against laser radiation	No such part.	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	RS1 for LEDs.	P

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Clause	Requirement + Test	Result - Remark	Verdict
10.4.1	General		P
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 . :	RS1 for LEDs.	P
10.4.1.d)	Normal, abnormal, single-fault conditions .....:		P
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.....:		P
10.4.2	Instructional safeguard .....:		N/A
10.5	Protection against x-radiation	No such radiation.	N/A
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	Protection against acoustic energy sources	No such radiation.	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

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Clause	Requirement + Test	Result - Remark	Verdict
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
B.2.5	Input test..... :	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements..... :	(See appended table B.3)	P
B.3.2	Covering of ventilation openings		P
B.3.3	D.C. mains polarity test		N/A
B.3.4	Setting of voltage selector ..... :		N/A
B.3.5	Maximum load at output terminals ..... :		P
B.3.6	Reverse battery polarity		N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions		P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited ..... :	(See appended table B.4)	N/A
B.4.3	Motor tests		N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature ..... :	(See Clause G.5)	N/A
B.4.4	Short circuit of functional insulation		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

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Clause	Requirement + Test	Result - Remark	Verdict
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		N/A
B.4.6	Short circuit or disconnect of passive components		P
B.4.7	Continuous operation of components		N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions		P
B.4.9	Battery charging 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
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A
D	**TEST GENERATORS**		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A
E	**TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS**		N/A
E.1	Audio amplifier normal operating conditions		N/A
	Audio signal voltage (V) .....:		--
	Rated load impedance (Ω) .....:		--
E.2	Audio amplifier abnormal operating conditions		N/A
F	**EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS**		P
F.1	General requirements		P
	Instructions – Language .....:	English	--
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1		P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	Exterior of equipment.	P
F.3.2	Equipment identification markings		P

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.2.1	Manufacturer identification .....:	HIKVISION	--
F.3.2.2	Model identification .....:	See model list	--
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains		P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage.....:	AC	--
F.3.3.4	Rated voltage .....:	100 V a.c.-240 V a.c.	--
F.3.3.4	Rated frequency .....:	50/60Hz	--
F.3.3.6	Rated current or rated power .....:	15W	--
F.3.3.7	Equipment with multiple supply connections		N/A
F.3.4	Voltage setting device	No such part.	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..... :	F1: T2AL/250VAC	P
F.3.5.4	Replacement battery identification marking ..... :		N/A
F.3.5.5	Terminal marking location	No such marking.	N/A
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment		N/A
F.3.6.1.1	Protective earthing conductor terminal		N/A
F.3.6.1.2	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)		P
F.3.6.2.1	Class II equipment with or without functional earth		P
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking .....:		--
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking		P

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.10	Test for permanence of markings	The label was subject to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. And then again for 15 sec. with cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was no curling and lifting of the label edge.	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		P
	d) Equipment intended for use only in restricted access area		N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard		N/A
	g) Protective earthing conductor current exceeding ES 2 limits		N/A
	h) Symbols used on equipment		P
	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		P
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction		P
G	**COMPONENTS**		P
G.1	**Switches**		N/A
G.1.1	General requirements		N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	**Relays**		N/A
G.2.1	General requirements		N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
G.3	**Protection Devices**		P
G.3.1	Thermal cut-offs		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691		N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H) ..... :		--
	Single Fault Condition ..... :		--
	Test Voltage (V) and Insulation Resistance (Ω). :		--
G.3.3	PTC Thermistors		N/A
G.3.4	Overcurrent protection devices		P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions.....:		N/A
G.4	**Connectors**		P
G.4.1	Spacings		P
G.4.2	Mains connector configuration .....:		N/A
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		P
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°		P
G.5.1.2 b)	Construction subject to routine testing		N/A
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s) .....:		--
	Temperature (°C).....:		--
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	**Transformers**		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1).....:		P
	Position.....:	See critical components table	--
	Method of protection .....:	Regulating network	--

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.3.2	Insulation		P
	Protection from displacement of windings.....:	Secured by tubing and insulation tape.	--
G.5.3.3	Overload test ..... :	(See appended table B.3)	P
G.5.3.3.1	Test conditions		P
G.5.3.3.2	Winding Temperatures testing in the unit		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 .....:		--
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days) .....:		--
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V) .....:		--
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h) .....:		N/A
	Electric strength test (V) .....:		--
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature .....:		N/A
	Electric strength test (V) .....:		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h) .....:		N/A
	Electric strength test (V) .....:		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage .....:		--
G.6	**Wire Insulation**		P
G.6.1	General		P
G.6.2	Solvent-based enamel wiring insulation		N/A
G.7	**Mains supply cords**		P
G.7.1	General requirements	See Table 4.1.2	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Type.....:		--
	Rated current (A).....:		--
	Cross-sectional area (mm^2), (AWG)..... :		--
G.7.2	Compliance and test method		P
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		P
G.7.3.2	Cord strain relief		P
G.7.3.2.1	Requirements		P
	Strain relief test force (N) .....:	30N	--
G.7.3.2.2	Strain relief mechanism failure		P
G.7.3.2.3	Cord sheath or jacket position, distance (mm)....:	0	--
G.7.3.2.4	Strain relief comprised of polymeric material		P
G.7.4	Cord Entry ..... :		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g) ..... :		--
	Diameter (m) .....:		--
	Temperature (°C) .....:		--
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	**Varistors**		N/A
G.8.1	General requirements		N/A
G.8.2	Safeguard against shock		N/A
G.8.3	Safeguard against fire		N/A
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

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Clause	Requirement + Test	Result - Remark	Verdict
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	**Capacitor and RC units**		P
G.11.1	General requirements		P
G.11.2	Conditioning of capacitors and RC units		P
G.11.3	Rules for selecting capacitors		P
G.12	**Optocouplers**		N/A
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results).....:		N/A
	Type test voltage Vini .....:		--
	Routine test voltage, Vini,b .....:		--
G.13	**Printed boards**		P
G.13.1	General requirements		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 ..... :	(See G.13)	N/A
G.15	**Liquid filled components**		N/A
G.15.1	General requirements	No such part.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	**IC including capacitor discharge function (ICX)**		N/A
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N/A
b)	Impulse test using circuit 2 with Uc = 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	No ringing signal.	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 complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V) .....:		--
J	**INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION**		P
	General requirements		P

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Clause	Requirement + Test	Result - Remark	Verdict
K	**SAFETY INTERLOCKS**		N/A
K.1	General requirements		N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance .....:		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method .....:		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) .....:		N/A
K.7.2	Overload test, Current (A) .....:		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test .....:		N/A
L	**DISCONNECT DEVICES**		P
L.1	General requirements		P
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized		P
L.4	Single phase equipment		P
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		P
L.8	Multiple power sources		N/A
M	**EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS**		N/A
M.1	General requirements		N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method) ..:		N/A
M.3	Protection circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Tests		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance .....:		N/A
M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature .....:		--
M.4.2.2 b)	Single faults in charging circuitry .....:		--
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
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

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume *Vz* (m^3/s)..... :		--
M.8.2.3	Correction factors..... :		--
M.8.2.4	Calculation of distance *d* (mm) ..... :		--
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) ..... :		N/A
N	**ELECTROCHEMICAL POTENTIALS**		N/A
	Metal(s) used ..... :		--
O	**MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES**		P
	Figures O.1 to O.20 of this Annex applied..... :	(See appended table 5.4.2, 5.4.3)	--
P	**SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS**		P
P.1	General requirements		P
P.2.2	Safeguards against entry of foreign object		P
	Location and Dimensions (mm) ..... :	Top: No opening Side: 1mm diameter	--
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	No internal liquid.	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)..... :		--

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Clause	Requirement + Test	Result - Remark	Verdict
P.4.2 b)	Abrasion testing .....:		N/A
P.4.2 c)	Mechanical strength testing .....:		N/A
Q	**CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING**		N/A
Q.1	Limited power sources		N/A
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		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method		N/A
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	Not used.	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).....:		--
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material .....:		--
	Wall thickness (mm).....:		--
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	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 .....:	(See appended table T.5)	P
T.6	Enclosure impact test	(See appended table T.6)	P
	Fall test		P
	Swing test		P
T.7	Drop test .....:	(See appended table T.7)	P
T.8	Stress relief test .....:	(See appended table T.8)	P
T.9	Impact Test (glass)		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J).....:		--
	Height (m) .....:		--
T.10	Glass fragmentation test .....:		N/A
T.11	Test for telescoping or rod antennas	No such part.	N/A
	Torque value (Nm) .....:		--

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
U	**MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFECTS OF IMPLOSION**		N/A
U.1	General requirements	No such part.	N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen.....:		N/A
V	**DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)**		P
V.1	Accessible parts of equipment		P
V.2	Accessible part criterion		P

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

4.1.2	TABLE: List of critical components				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1]
Plastic enclosure	NINGBO LG YONGXING CHEMICAL CO LTD	FR-500	V-0, min. 60°C, min. thickness: 2,0mm	UL94	UL E203955
Power plug (EU type)	Guangdong Hongshanchuan Electronic Technology Co., Ltd.	HSC-401	2,5A, 250VAC	DIN VDE 0620-2-1 (VDE 0620-2-1), EN 50075	VDE 40020005
Power cord	Guangdong Hongshanchuan Electronic Technology Co., Ltd.	H03VVH2-F	2 x 0,75mm², 70°C, 300VAC, VW-1	DIN EN 50525-2-11 (VDE 0285-525-2-11), EN 50525-2-11	VDE 40037206
Bushing of power cord	DONGGUAN RONGHUI AGE PLASTICS CO LTD	RHA-PVC105RH	V-0, 70°C, min. thickness: 0,3 mm	UL 94, IEC 60695-11-10	UL E319027
PCB	Interchangeable	Interchangeable	Min V-1, 130°C	UL796 UL94	UL
Speaker	Interchangeable	Interchangeable	8Ω, 0.5W	IEC 62368-1: 2018 and EN IEC 62368-1:2020+ A11:2020	Test with appliance
Fuse (F1)	XIAMEN DEXIAN ELECRTONICS TECHNOLOGY CO LTD	DET	T2AL, 250VAC	IEC/EN 60127-1, IEC/EN 60127-3, UL 248-1, UL 248-14, CSA-C22.2 No. 248.1, CSA-C22.2 No. 248.14	TUV R 50415458 UL E500879
(Alternative)	SHANGHAI FULLNESS ELECTRICAL CO LTD	TSP	T2AL, 250VAC	IEC/EN 60127-1, IEC/EN 60127-3, UL 248-1, UL 248-14, CSA-C22.2 No. 248.1, CSA-C22.2 No. 248.14	TUV R 50315914 UL E485357
(Alternative)	Hollyland Company Limited	5ET	T2AL, 250VAC	IEC/EN 60127-1, IEC/EN 60127-3, UL 248-1, UL 248-14, CSA-C22.2 No. 248.1, CSA-C22.2 No. 248.14	VDE 40015669 UL E156471

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

-Heat shrinkable tube	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR-H	125°C, 600V, VW-1	UL 224	UL E203950
Line filter (L1)	Interchangeable	Interchangeable	Min. 470uH, min. 130°C.	IEC 62368-1: 2018 and EN IEC 62368-1:2020+ A11:2020	Test with appliance
Y-capacitor (CY1)	Jyh Chung Electronic Co., Ltd.	JD	Max. 2200pF, min. 250VAC, 125°C, Y1 type, 40/125/21	IEC/EN 60384-14, UL 60384-14, CAN/CSA-E60384-14	VDE 137027 UL E187963
(Alternative)	JYH HSU (JEC) ELECTRONICS LTD	JD	Max. 2200pF, min. 250VAC, 125°C, Y1 type, 40/125/21	IEC/EN 60384-14, UL 60384-14, CAN/CSA-E60384-14	VDE 40038642 UL E356696
(Alternative)	Dongguan Easy-gather Electronic Co., Ltd.	DCF	Max. 2200pF, min. 250VAC, 125°C, Y1 type, 40/125/21	IEC/EN 60384-14, UL 60384-14, CAN/CSA-E60384-14	VDE 40022942 UL E252221
(Alternative)	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	CD	Max. 2200pF, min. 250VAC, 125°C, Y1 type, 40/125/21	IEC/EN 60384-14, UL 60384-14, CAN/CSA-E60384-14	VDE 40025754 UL E208107
(Alternative)	Guangdong Huiwan Electronics Technology Co., LTD.	AR	Max. 2200pF, min. 250VAC, 125°C, Y1 type, 40/125/21	IEC/EN 60384-14, UL 60384-14, CAN/CSA-E60384-14	VDE 40043989 UL E480105
(Alternative)	Dongguan QinHong (QNR) Electronic Technology Co., LTD	CT7	Max. 2200pF, min. 250VAC, 125°C, Y1 type, 40/125/21	IEC/EN 60384-14, UL 60384-14, CAN/CSA-E60384-14	VDE 40046285 UL E488626
(Alternative)	ShenZhen Haotian Electronic Co., Ltd.	HT	Max. 2200pF, min. 250VAC, 125°C, Y1 type, 25/125/21	IEC/EN 60384-14, UL 60384-14, CAN/CSA-E60384-14	VDE 40029300 UL E326483

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

(Alternative)	Success Electronics Co., Ltd.	SB	Max. 2200pF, min. 250VAC, 125°C, Y1 type, 40/125/56	IEC/EN 60384-14, UL 60384-14, CAN/CSA-E60384-14	VDE 40020001 UL E114280
(Alternative)	Dongguan Cigu Electronic Technology Co., Ltd	CD	Max. 2200pF, min. 250VAC, 125°C, Y1 type, 25/125/21	IEC/EN 60384-14, UL 60384-14, CAN/CSA-E60384-14	VDE 40043434 UL E481614
(Alternative)	Dongguan City Dafu Electronics Co. Ltd.	CT7 Y1	Max. 2200pF, min. 250VAC, 125°C, Y1 type, 25/125/21	IEC/EN 60384-14, UL 60384-14, CAN/CSA-E60384-14	VDE 40041523 UL E465278
Transformer (T1)	Foshan Shundedistrict shunsonglinelectronics co.LTD	EE-1410-12V	Class B	IEC 62368-1: 2018 and EN IEC 62368-1:2020+ A11:2020	Test with appliance
-Bobbin	SUMITOMO BAKELITE CO LTD	PM-9820	Phenolic, V-0, 150°C, min. thickness: 0,88mm	UL 94, UL746B, IEC 60695-11-10	UL E41429
-Magnet wire	Interchangeable	Interchangeable	Min. 130°C	UL 1446	UL
-Triple insulation wire	Great Leoflon Industrial Co., Ltd	TRW(B)*, TRW(B)-M-(H)	Reinforced insulation, 130°C	IEC/EN/EN IEC 62368-1, UL 2353	VDE 136581, UL E211989
-Insulation tape	3M COMPANY	1350F-1 (b), 1351Y-1(a)	130°C	UL 510A	UL E17385
-Varnish	SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD	T-4260(a)	130°C	UL 1446	UL E228349
-Tube	GREAT HOLDING INDUSTRIAL CO LTD	TFS, TFT	VW-1, 200°C, min.300V	UL 224	UL E156256
Internal secondary wires	Interchangeable	Interchangeable	VW-1, 80°C, 300VAC, min. 22AWG	UL 758, UL 2556, IEC TS 60695-11-21	UL, TUV SUD

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

Heat shrinkable tube used on secondary wires	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR-H	125°C, 600V, VW-1, min. thickness: 0,4mm	UL 224, EN 62368-1	UL E203950 Tested with appliance
Silicon glue on power board	Interchangeable	Interchangeable	V-2 or better, min. 105°C	UL 94, IEC 60695-11-10	UL
Supplementary information: [1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039. [2)] Description line content is optional. Main line description needs to clearly detail the component used for testing					

IEC 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	--
	7	--
	8	--
	9	--
	10	--

4.8.4.4	**TABLE: Drop test**		
			--
Impact Area	Drop Distance	Drop No.	Observations
--	--	1	--
--	--	2	--
--	--	3	--

4.8.4.5	Intact		
			--
Impacts per surface	Intact	Impact energy (Nm)	Comments
1	--	--	--
2	--	--	--
2	--	--	--

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

Supplementary information:

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

4.8.5	TABLE: Lithium coin/button cell batteries mechanical test result	N/A

Test position	Surface tested	Force (N)	Duration force applied (s)
--	--	--	--
--	--	--	--
--	--	--	--

Supplementary information:

5.2	Table: Classification of electrical energy sources	P

5.2.2.2 – Steady State Voltage and Current conditions

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				U (Vrms or Vpk)	I (Apk or Arms)	Hz	
1	264Va.c./ 60Hz	Plastic enclosure	Normal	10Vpk/4,55Vrms	--	10,6K	ES1
			R8 OC	--	0,2mApk/0,01mArms	7,64K	
			C4 SC	--	0,16mApk/0,009mArms	1K	
			U1 pin 1-3 SC	--	0,2mApk/0,02mArms	3K	
2	264Va.c./ 60Hz	T1 pin A-B	Normal	--	0,648mApk/0,04mArms	8,9K	ES1
			R8 OC	--	0,54mApk/0,04 mArms	7,6K	
			C4 SC	--	0,16mApk/0,009mArms	15,4K	
			U1 pin 1-3 SC	--	0,19mApk/0,009mArms	2,7K	
3	264Va.c./ 60Hz	T1 pin A-earth	Normal	--	0,24mApk/0,06 mArms	44,4	ES1
			R8 OC	--	0,27mApk/0,07 mArms	60,5	
			C4 SC	--	0,24mApk/0,07 mArms	59,3	
			U1 pin 1-3 SC	--	0,23mApk/0,07 mArms	60,5	

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

5.2	Table: Classification of electrical energy sources						P
4	264Va.c./ 60Hz	T1 pin B-earth	Normal	--	0,3mApk/0,07mArms	1,9K	ES1
			R8 OC	--	0,35mApk/0,07mArms	57,8	
			C4 SC	--	0,57mApk/0,07mArms	3,3K	
			U1 pin 1-3 SC	--	0,57mApk/0,07mArms	3,3K	
5	264Va.c./ 60Hz	Output + to – of power supply	Normal	15,4V	--	DC	ES1
			R8 OC	15,4V	--	DC	
			C4 SC	--	0,2mApk/0,02mArms	5,9K	
			U1 pin 1-3 SC	5,52Vpk、5,37Vrms	--	6,5K	
6	264Va.c./ 60Hz	Output + to earth of power supply	Normal	--	0,33mApk/0,07mArms	4,8K	ES1
			R8 OC	--	0,34mApk/0,07mArms	5,8K	
			C4 SC	--	0,23mApk/0,07mArms	7,9K	
			U1 pin 1-3 SC	--	0,2mApk/0,07mArms	3,7K	
7	264Va.c./ 60Hz	Output - to earth of power supply	Normal	--	0,23mApk/0,07mArms	10,3K	ES1
			R8 OC	--	0,25mApk/0,07mArms	6,2K	
			C4 SC	--	0,23mApk/0,07mArms	13,2K	
			U1 pin 1-3 SC	--	0,18mApk/0,07mArms	3,2K	
--	--	--	--	--	--	--	--

5.2.2.3 - Capacitance Limits						
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Capacitance, nF	Upk (V)	
			Normal			
			Abnormal			
			Single fault – SC/OC			
5.2.2.4 - Single Pulses						

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Clause	Requirement + Test	Result - Remark	Verdict

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Duration (ms)	Upk (V)	Ipk (mA)	
			Normal				
			Abnormal				
			Single fault – SC/OC				

5.2.2.5 - Repetitive Pulses

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Off time (ms)	Upk (V)	Ipk (mA)	
			Normal				
			Abnormal				
			Single fault – SC/OC				

Test Conditions:

Normal –

Abnormal -

Supplementary information: SC=Short Circuit, OC=Short Circuit

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.4, 6.3.2, 9.0, B.2.6	**TABLE: Temperature measurements**			P
	Supply voltage (V) ..... :	90Va.c./60Hz	264Va.c./50Hz	--
	Ambient T_{min} (°C) ..... :	20,3	20,1	--
	Ambient T_{max} (°C) ..... :	21,1	21,2	--
	Tma (°C) ..... :	50,0	50,0	--
Maximum measured temperature T of part/at:		T (°C)		Allowed T_{max} (°C)
C1		71,2	72,1	105
C2		77,5	78,6	105
T1 coil		79,0	80,6	90
T1 core		80,4	82,1	90
CY1		69,4	70,5	125
C4		69,8	70,9	105
C5		66,4	67,3	105
PCB near U1		83,6	88,2	130
L1		67,8	68,0	130
LM1		82,2	82,4	130
PCB near U5		77,3	77,4	130
Inside plastic enclosure near T1		56,5	57,4	60
Outside plastic enclosure near T1*		31,8	32,7	60
Inside plastic enclosure near speaker(receiver)		53,3	53,4	60
Outside plastic enclosure near speaker(receiver)*		27,9	27,9	60
Supplementary information:				

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:

Note 1: Tma should be considered as directed by applicable requirementenclosure

Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9).

* The test results of touchable surface temperature were considered base on ambient temperature 25°C.

Other temperature point list in this table has shifted to Tma 50°C

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

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

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance						P
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz)[1]	Required cl (mm)	cl (mm)[2]	Required[3] cr (mm)	cr (mm)
L & N before fuse F1 (BI)	340	240	<30	1,9	3,8	2,5	3,8
Different polarity of fuse F1 (BI)	340	240	<30	1,9	3,0	2,5	3,0
L to the primary circuits/ components after fuse F1 (BI)	340	240	<30	1,9	3,0	2,5	3,0
Primary trace to secondary trace of Y-cap, CY1 (RI)	344	240	<30	3,8	7,6	5,0	7,6
Primary trace to secondary trace under transformer T1 (RI)	536	240	<30	3,8	6,6	5,0	6,6
T1 primary winding/core to secondary pin/secondary circuits (RI)	536	240	<30	3,8	7,3	5,0	7,3
T1 primary winding/core to secondary component C4 (RI)	536	240	<30	3,8	7,0	5,0	7,0
Primary components to secondary wires (RI)	536	240	<30	3,8	>6,0	5,0	>6,0
Primary components to secondary mainboard (RI)	340	240	<30	3,8	>6,0	5,0	>6,0
Primary live parts and accessible enclosure (RI)	340	240	<30	3,8	>6,0	5,0	>6,0
Supplementary information:							

Note:

1. Only for frequency above 30 kHz.
2. Complete Electric Strength voltage (E.S. (V) when 5.4.2.4 applied).
3. Provide Material Group IIIb.
4. BI: basic insulation; SI: supplementary insulation; DI: double insulation; RI: reinforced insulation;
5. * means that the frequencies above and below 30 kHz.
6. Limit from Table 14 based on the required withstand voltage (2500Vpeak), which is higher than Table 10 and Table 11.
7. The core of the transformer T1 was considered as the primary live part, triple insulated wire used as secondary winding.
8. At least two layers insulation tape were wrapped on the core and outer of transformer T1, used as reinforced insulation.

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

9. Heat shrinkable tube used on secondary wires as supplementary insulation.
10. Clearance was evaluated for operating altitude up to 5000m above sea level.

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)
L & N before fuse F1 (BI)		2500Vpeak	2,3	3,8
Different polarity of fuse F1 (BI)		2500Vpeak	2,3	3,0
L to the primary circuits/ components after fuse F1 (BI)		2500Vpeak	2,3	3,0
Primary trace to secondary trace of Y-cap, CY1 (RI)		2500Vpeak	4,5	7,6
Primary trace to secondary trace under transformer T1 (RI)		2500Vpeak	4,5	6,6
T1 primary winding/core to secondary pin/secondary circuits (RI)		2500Vpeak	4,5	7,3
T1 primary winding/core to secondary component C4 (RI)		2500Vpeak	4,5	7,0
Primary components to secondary wires (RI)		2500Vpeak	4,5	>6,0
Primary components to secondary mainboard (RI)		2500Vpeak	4,5	>6,0
Primary live parts and accessible enclosure (RI)		2500Vpeak	4,5	>6,0
Supplementary information:				

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

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

Plastic enclosure	340	<30	Plastic	0,4	Min, 2,0
Heat shrinkable tube used on secondary wires	340	<30	Plastic	0,4	Min, 0,4
Bobbin of transformer T1	536	<30	Phenolic	0,4	Min, 0,62
Supplementary information:					

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Functional:				
L to N		DC	2500	No
Between fuse two ends on PCB		DC	2500	No
Basic/supplementary:				
--		--	--	--
Reinforced:		--	--	--
L/N to plastic enclosure		DC	4000	No
Primary and secondary winding of T1		DC	4000	No
Core and secondary winding of T1		DC	4000	No
One of two layers insulation tape used in transformer T1		DC	4000	No
Routine Tests:				
--		--	--	--
Supplementary information:				

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

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Clause	Requirement + Test	Result - Remark	Verdict

X-capacitors installed for testing are:

[ ] bleeding resistor rating:

[ ] ICX:

Notes:

A. Test Location:

Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth

B. Operating condition abbreviations:

N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition
Oc=Open circuit

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

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part	N/A
Supply voltage .....:	--	—
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)
-	1	--
	2*	--
	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: Electrical power sources (PS) measurements for classification	P

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

Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s*)	PS Classification
Input	--	Power (W) :	--	--	PS3 without test
		V_A (V) :	--	--	
		I_A (A) :	--	--	
Output (Green terminal)	Normal	Power (W) :	0	--	PS1
		V_A (V) :	0	--	
		I_A (A) :	0	--	
Supplementary Information:					
(*) Measurement taken only when limits at 3 seconds exceed PS1 limits					

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)			P
Location	Open circuit voltage After 3 s (Vp)	Measured r.m.s current (Irms)	Calculated value (V_p x I_{rms})	Arcing PIS? Yes / No
--	--	--	--	--
Supplementary information:				
An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V_p) and normal operating condition rms current (I_{rms}) is greater than 15. All primary circuits are considered as Arcing PIS without test.				

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
--	--	--	--	--	--
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. All circuits except primary circuit are considered as Resistive PIS without test.					

8.5.5	TABLE: High Pressure Lamp	N/A
Description	Values	Energy Source Classification
Lamp type .....:		—

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

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
90	50	80,6mA	--	3,29	--	F1	80,6mA	Normal work
90	60	81,4mA	--	3,33	--	F1	81,4mA	
100	50	72,1mA	--	3,21	15	F1	72,1mA	
100	60	71,8mA	--	3,20	15	F1	71,8mA	
240	50	43,4mA	--	3,27	15	F1	43,4mA	
240	60	42,4mA	--	3,20	15	F1	42,4mA	
264	50	45,7mA	--	3,30	--	F1	45,7mA	
264	60	47,5mA	--	3,34	--	F1	47,5mA	
Supplementary information:								
Equipment may be have rated current or rated power or both. Both should be measured								

B.3	TABLE: Abnormal operating condition tests	P

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

Ambient temperature (°C) .....:	See below	--
Power source for EUT: Manufacturer, model/type, output rating .:	See table 4.1.2	--

Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Output pf power board (T1 output)	ol	90	4h	F1	80,6mA->94,6mA->12,2mA	K	Max temperature: T1 core: 46,7°C; T1 coil: 52,3°C; Plastic enclosure: 33,9°C; Ambient: 21,1°C	Load conditiong: 0,17A→0,21A→0,22A→0(shutdown) No damaged, no hazards.
Output pf power board	sc	90	10min	F1	0	--	--	EUT work normally. No damaged, no hazards.
T1 output	sc	90	10min	F1	0	--	--	EUT work normally. No damaged, no hazards.

Supplementary information:

Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column “Abnormal/Fault.” Specify if test condition by indicating “Abnormal” then the condition for a Clause B.3 test or “Single Fault” then the condition for Clause B.4.

SC= short circuit

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) .....:	25°C if not specified		--
Power source for EUT: Manufacturer, model/type, output rating .:	--		--

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Speaker	SC	90V	10min	F1	30,9mA	--	--	Speaker shut down. No damaged, no hazards.
T1 pin 1-3	SC	90V	10min	F1	0	--	--	EUT shutdown immediately, no damage, no hazard
T1 pin 4-5	SC	90V	10min	F1	0	--	--	EUT shutdown immediately, no damage, no hazard

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Clause	Requirement + Test					Result - Remark		Verdict
U1 pin 1-3	SC	90V	3mins	F1	0	--	--	EUT shutdown immediately, no damage, no hazard
T1 pin 6-7	SC	90V	3mins	F1	0	--	--	EUT shutdown immediately, No damage, no hazard
U1 pin 1-3 on main board	SC	90V	3mins	F1	0	--	--	EUT shutdown immediately, no damage, no hazard
C2	SC	90V	3mins	F1	0	--	--	EUT shutdown immediately, no damage, no hazard
C4	SC	90V	3mins	F1	0	--	--	EUT shutdown immediately, no damage, no hazard
BD1 pin 2-4	OC	90V	3mins	F1	0	--	--	EUT shutdown immediately, F1, BD1 damage, no hazard
BD1 pin 1-3	OC	90V	3mins	F1	0	--	--	EUT shutdown immediately, no damage, no hazard
BD1 pin 2-4	SC	90V	3mins	F1	0	--	--	EUT shutdown immediately, F1, BD1 damage, no hazard
Supplementary information:								
Sc=Short circuit.								

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

Annex M.3	**TABLE: Batteries**		N/A
The tests of Annex M are applicable only when appropriate battery data is not available			--
Is it possible to install the battery in a reverse polarity position?..... :			--

	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition	--	--	--	--	--	--	--	--	--
Max. current during fault condition	--	--	--	--	--	--	--	--	--

Test results:		Verdict
- 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:				

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

Annex Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)	N/A

Note: Measured UOC (V) with all load circuits disconnected:

Output Circuit	Components	U_{oc} (V)	I_{sc} (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
--	--	--	--	--	--	--

Supplementary Information:

T.2, T.3, T.4, T.5	TABLE: Steady force test				P
Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation
Enclosure	Plastic	2,0	250	5	Intact
Internal components	--	--	10	5	After the application of the force, clearances and creepage distances shall not be reduced below the required values.

Supplementary information:

T.6, T.9	TABLE: Impact tests			P
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation
Enclosure	Plastic	2,0	1300	Intact

Supplementary information:

T.7	TABLE: Drop tests			P
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation
Enclosure	Plastic	2,0	1000	Intact

Supplementary information:

T.8	TABLE: Stress relief test				P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation

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

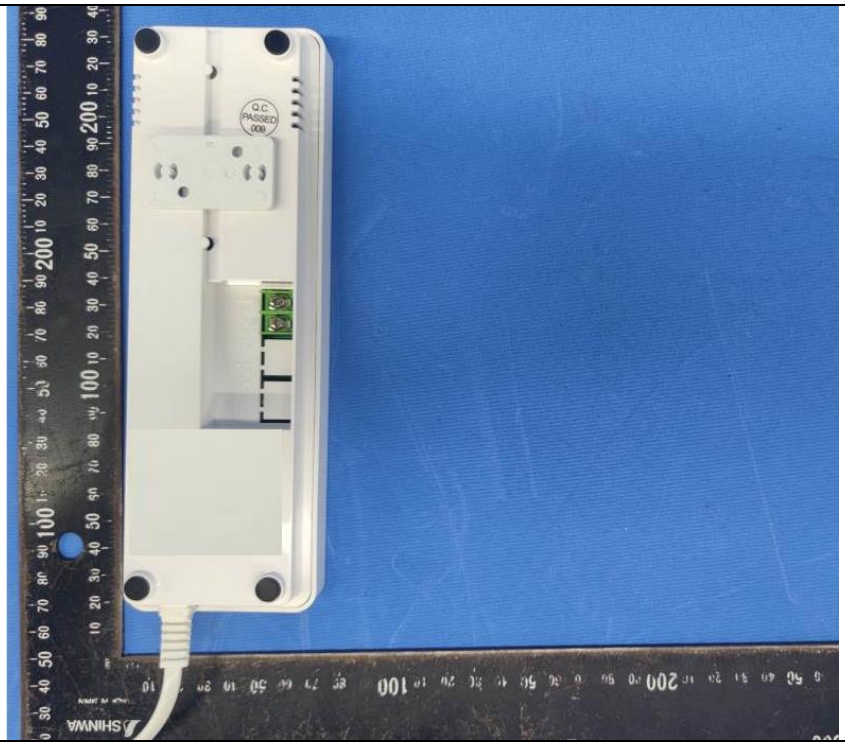
Enclosure	Plastic	2,0	70	7	Intact
Supplementary information:					

---End of Report---

Details of: General View

Details of: General View

Details of: General View



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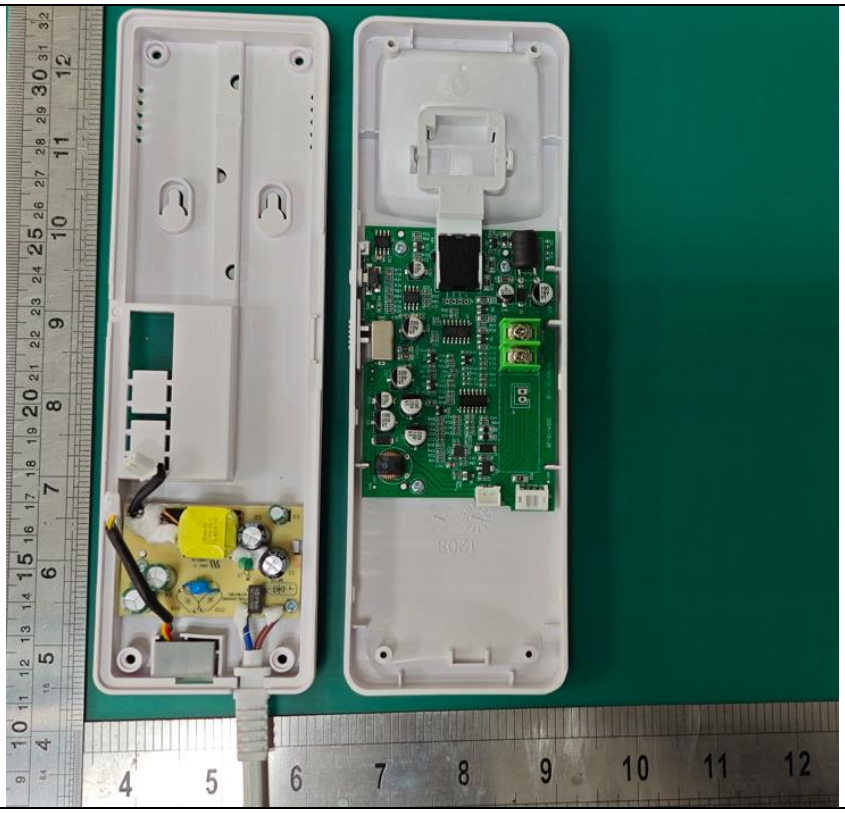

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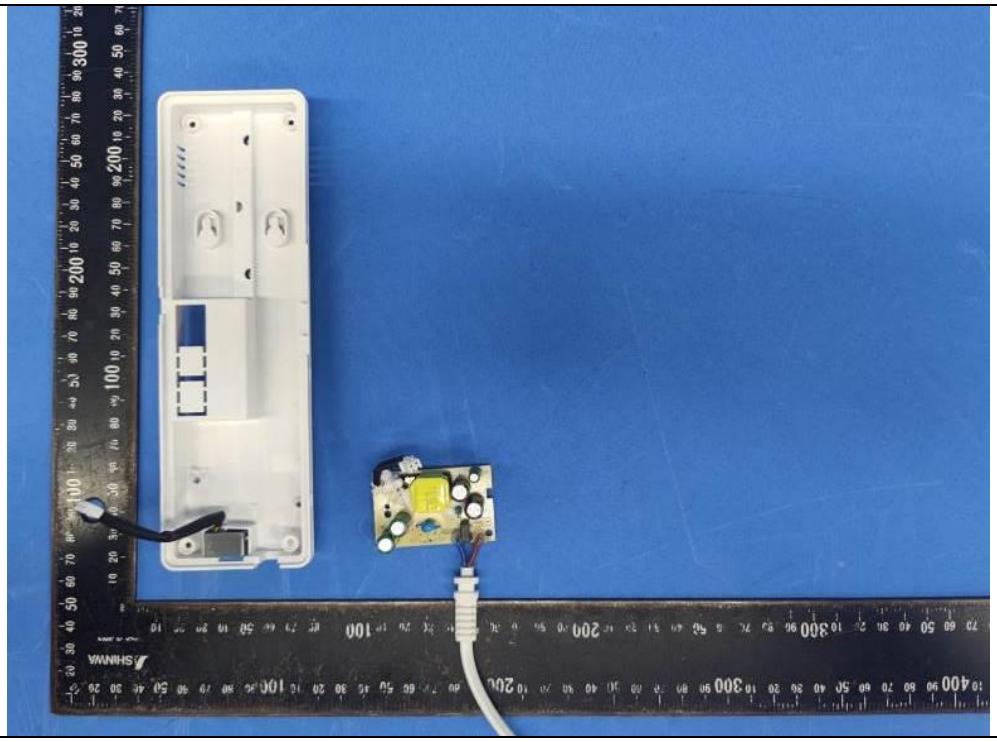
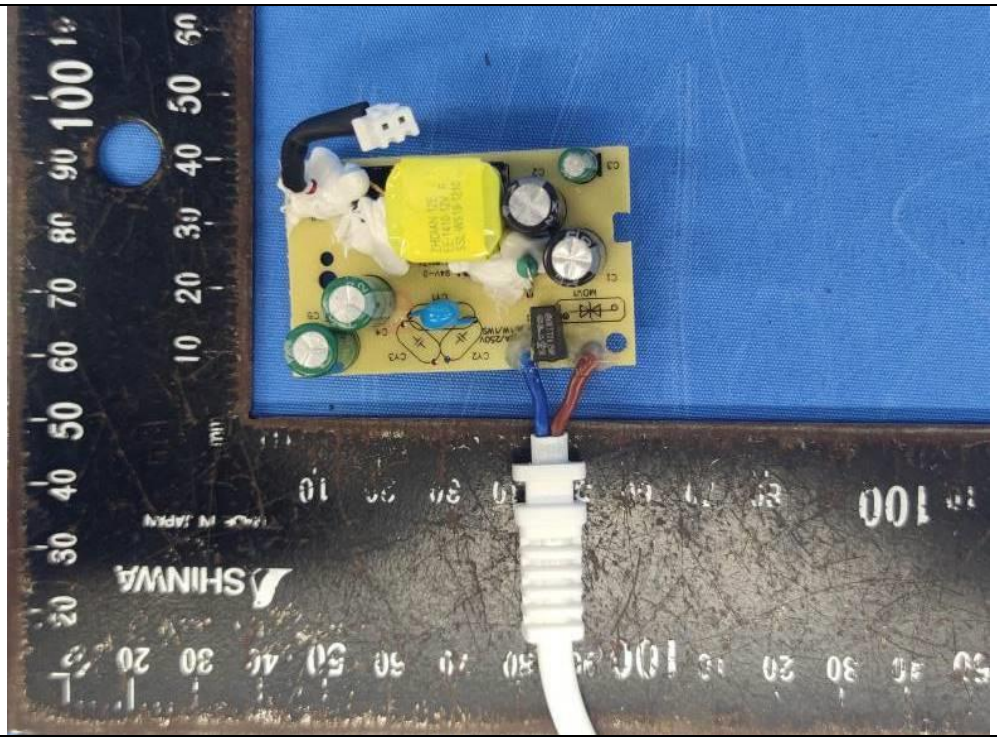


Details of: Building-in power supply



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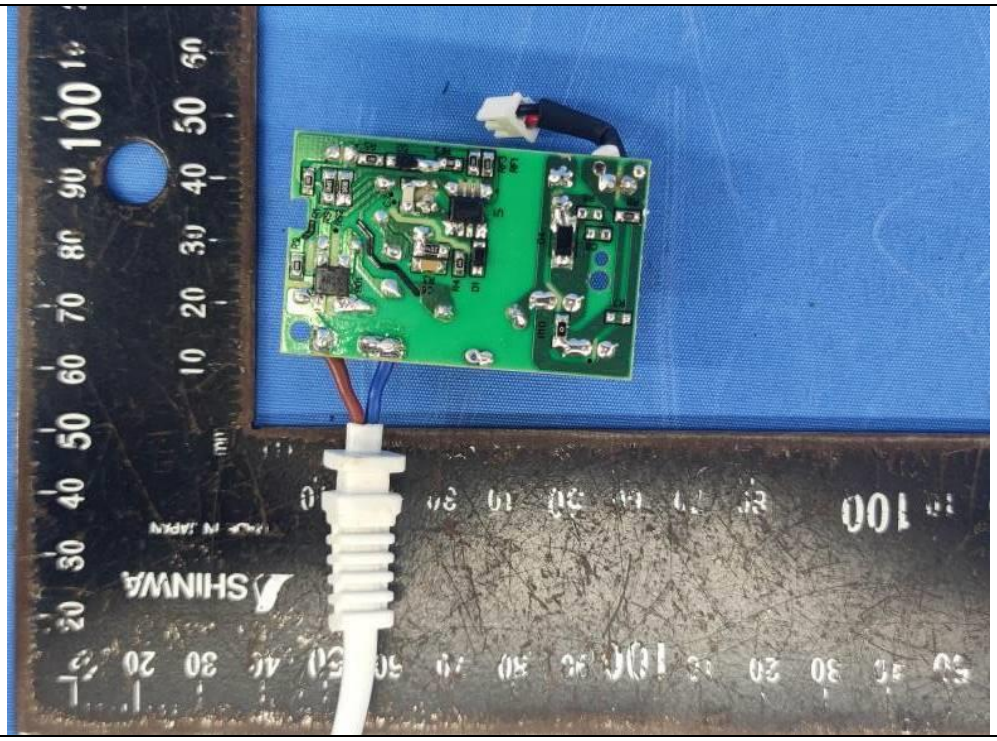
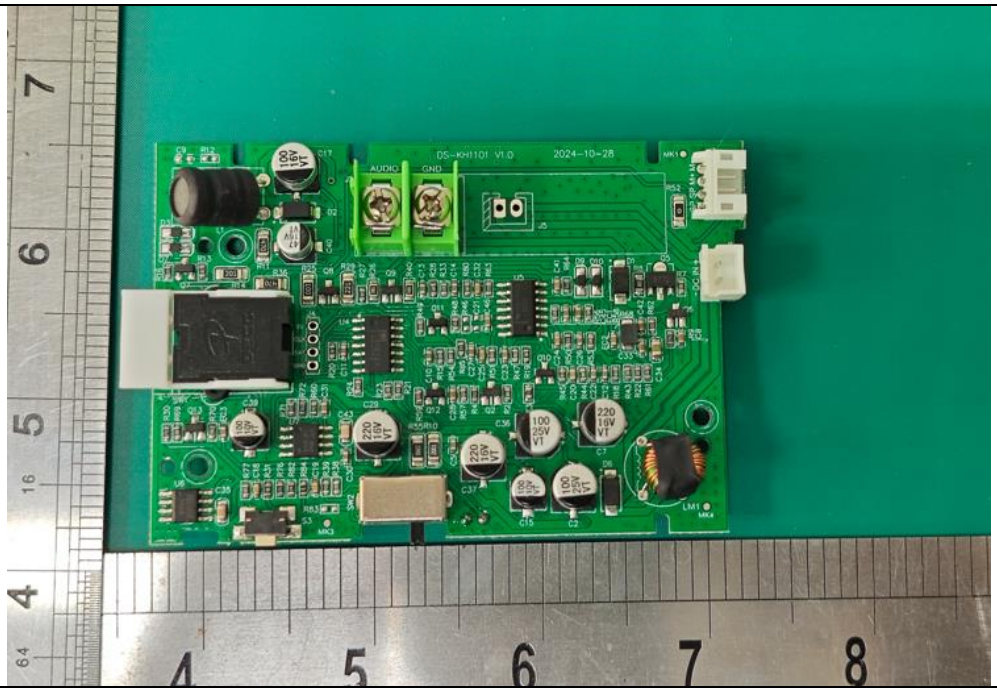


Details of: Main board



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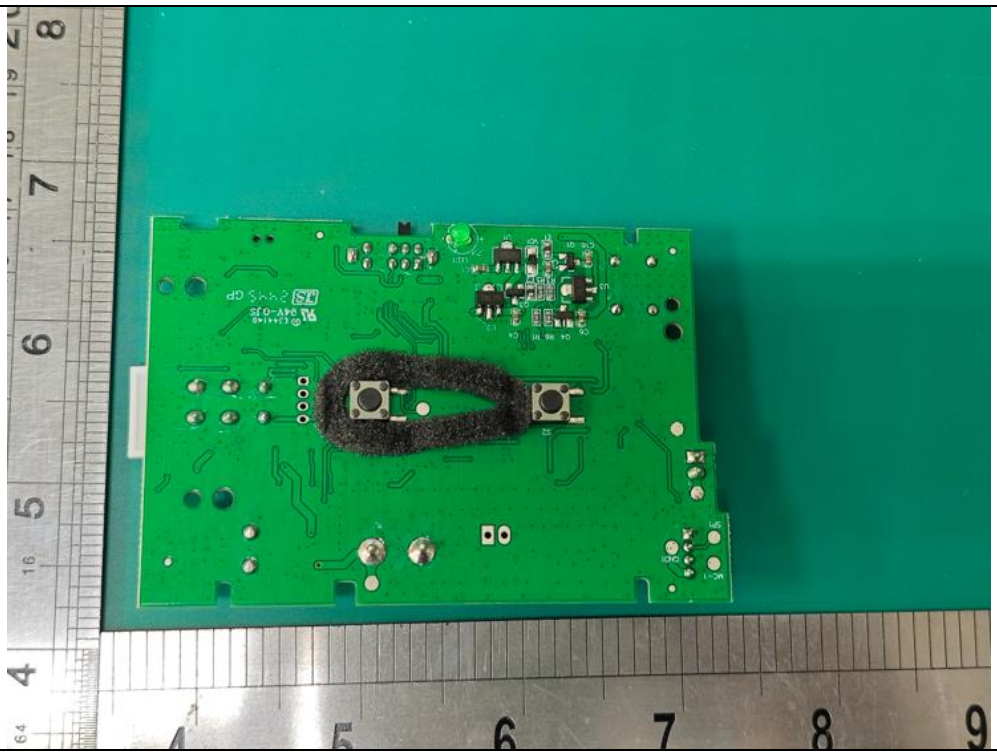
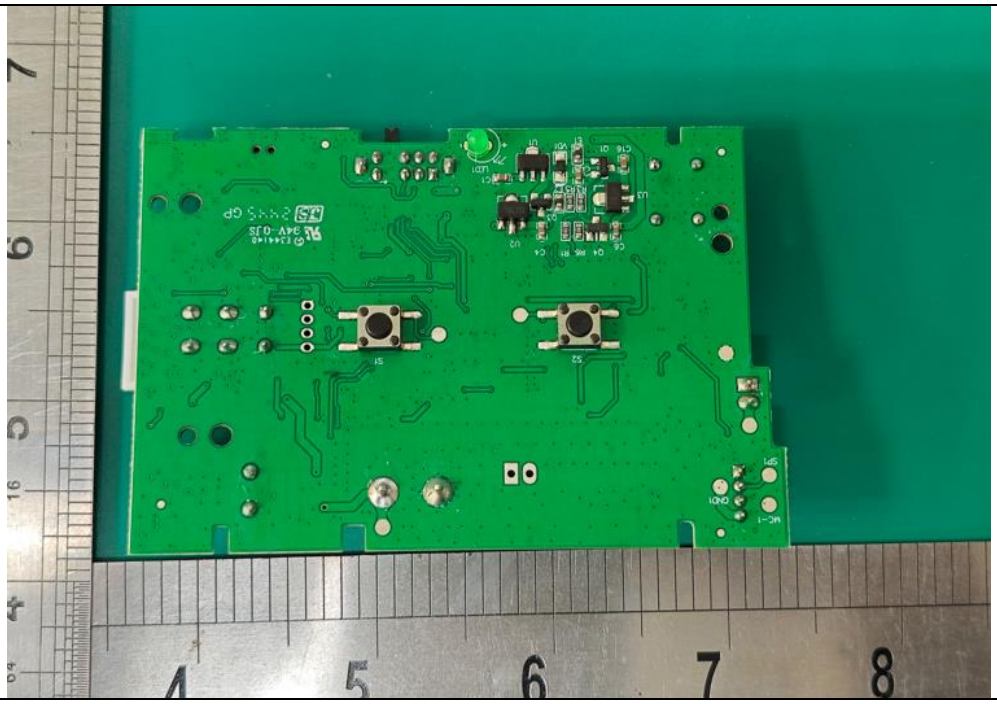
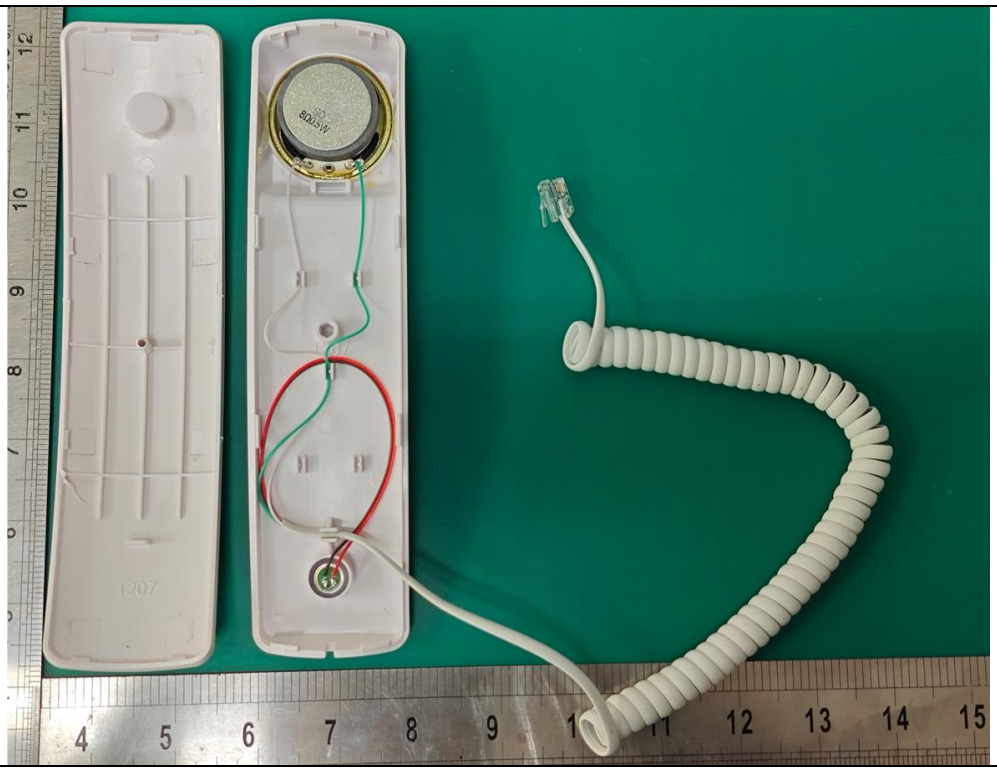


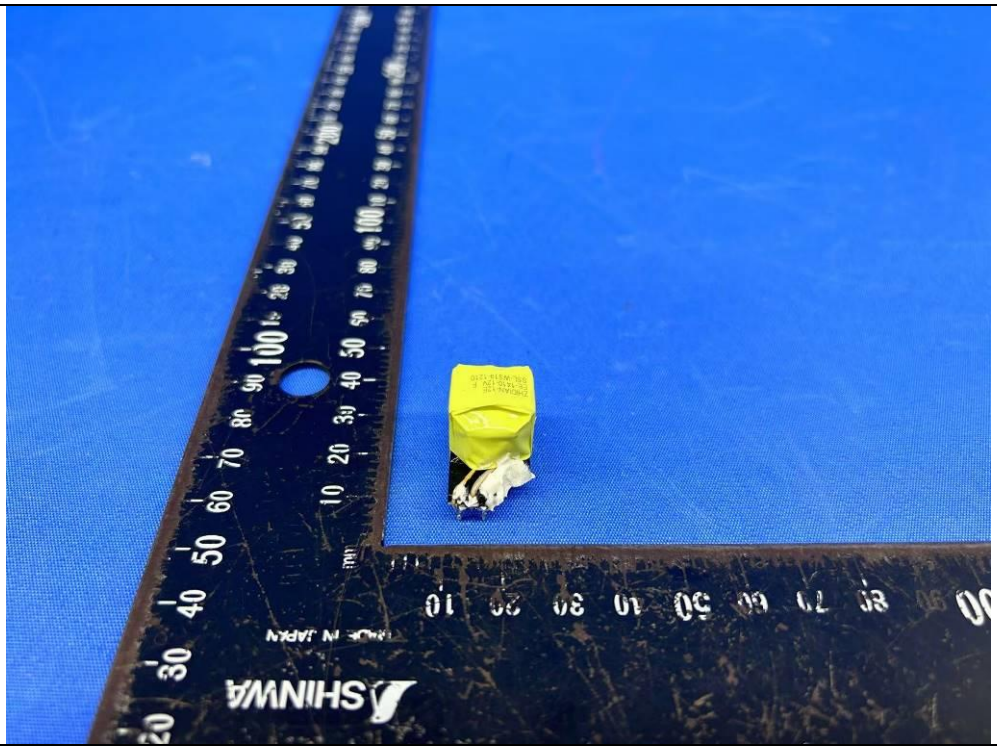
Details of: Main board



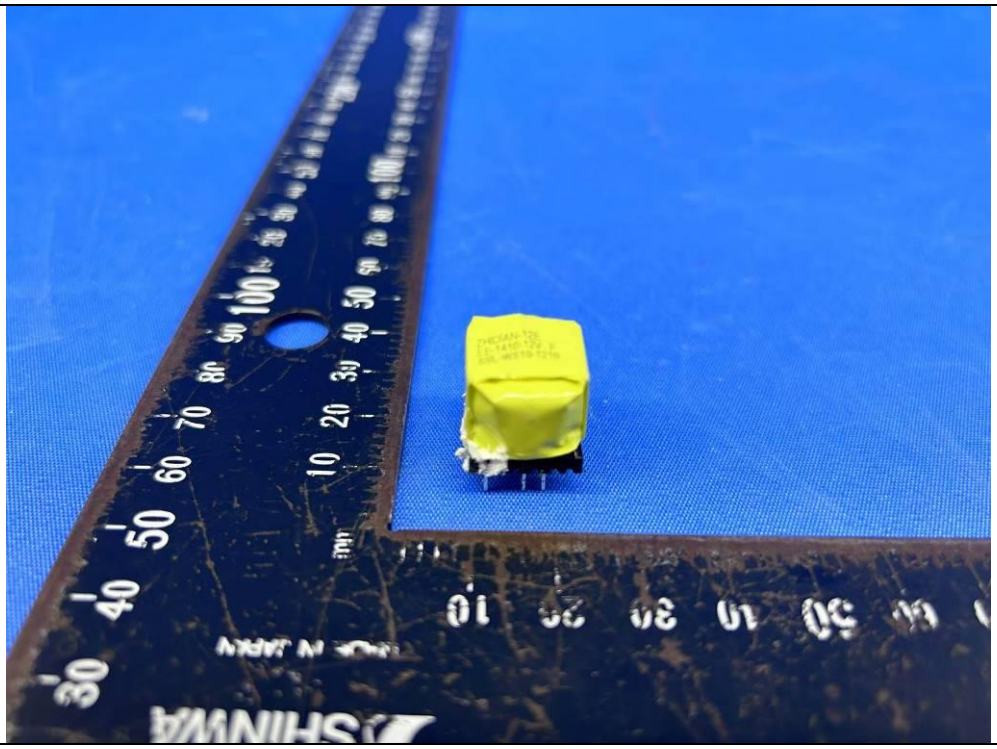
Details of: Internal View



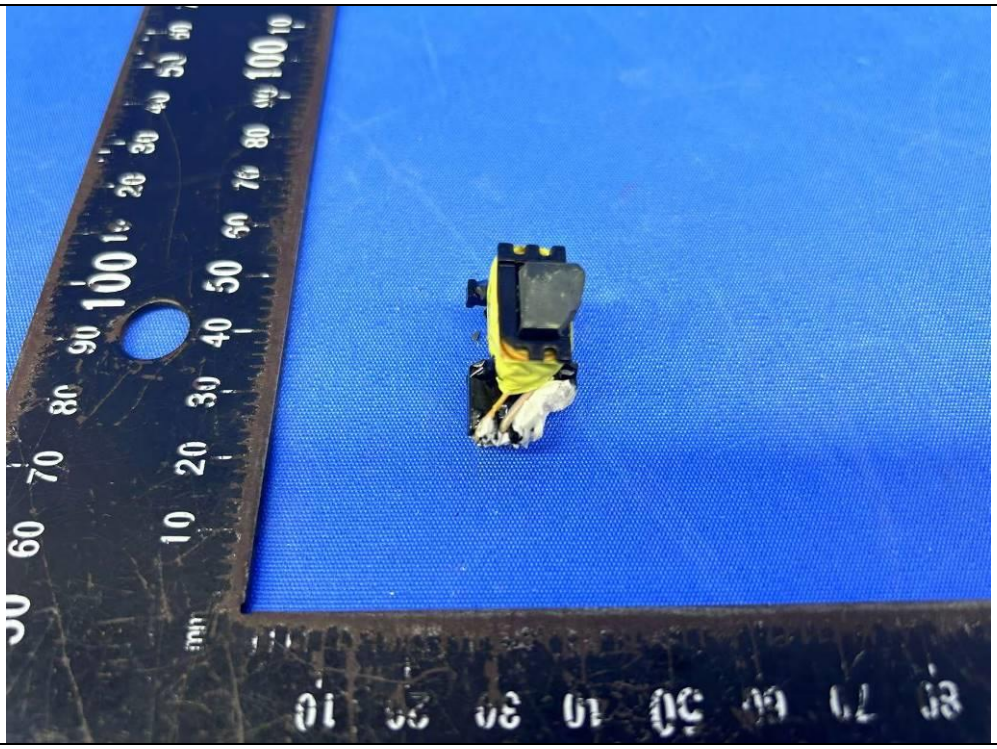
Details of: Transformer



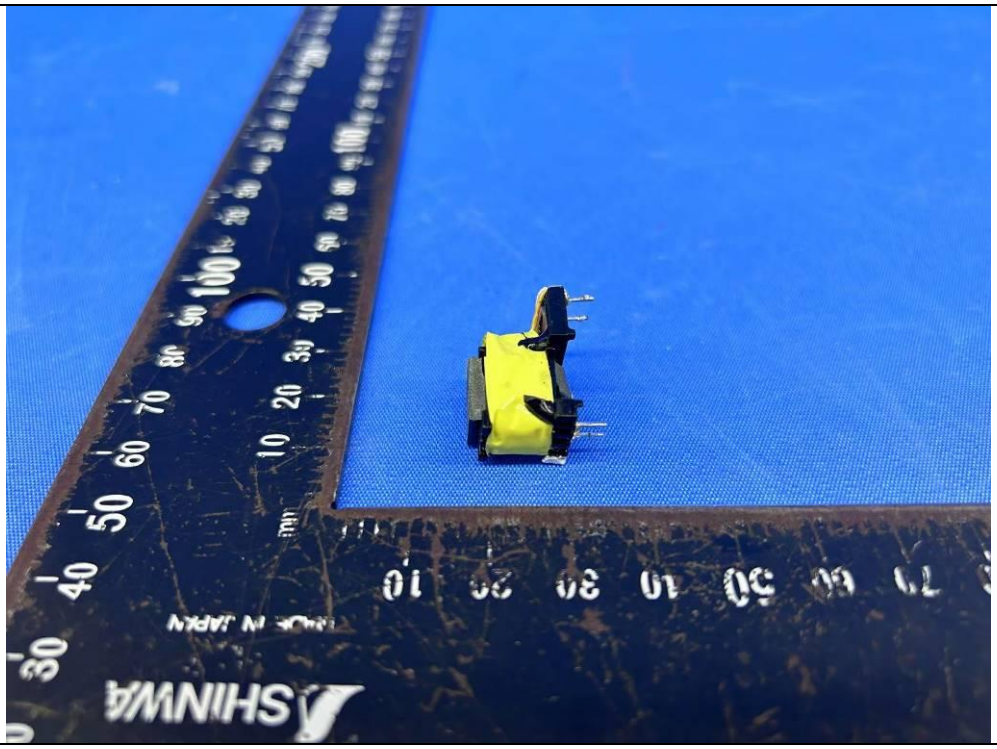
Details of: Transformer



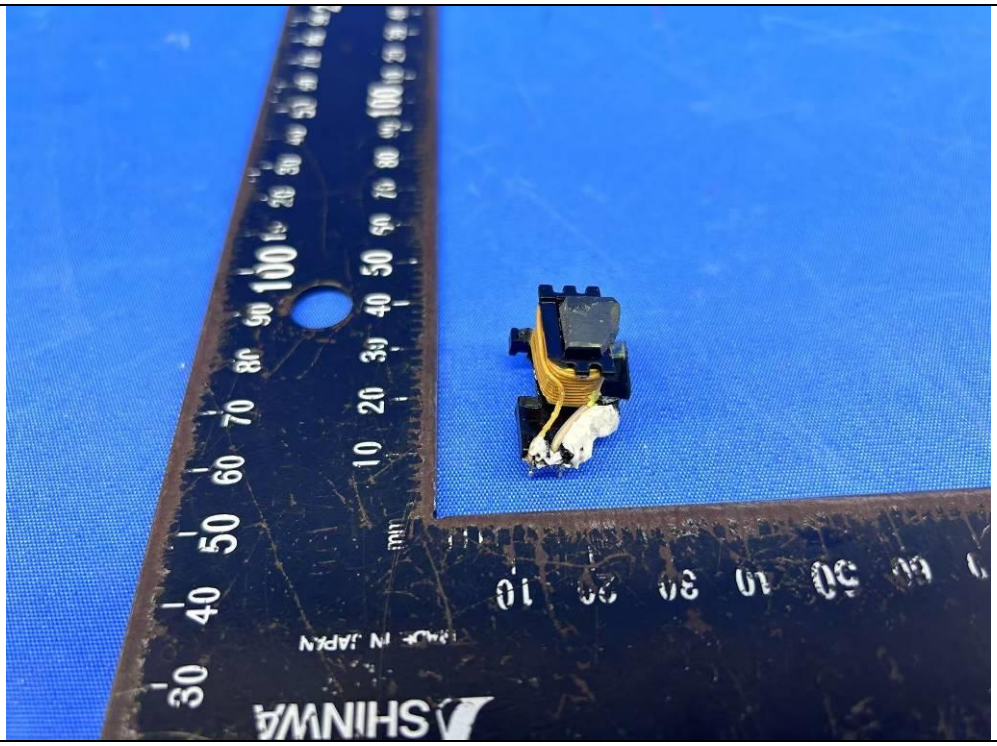
Details of: Transformer



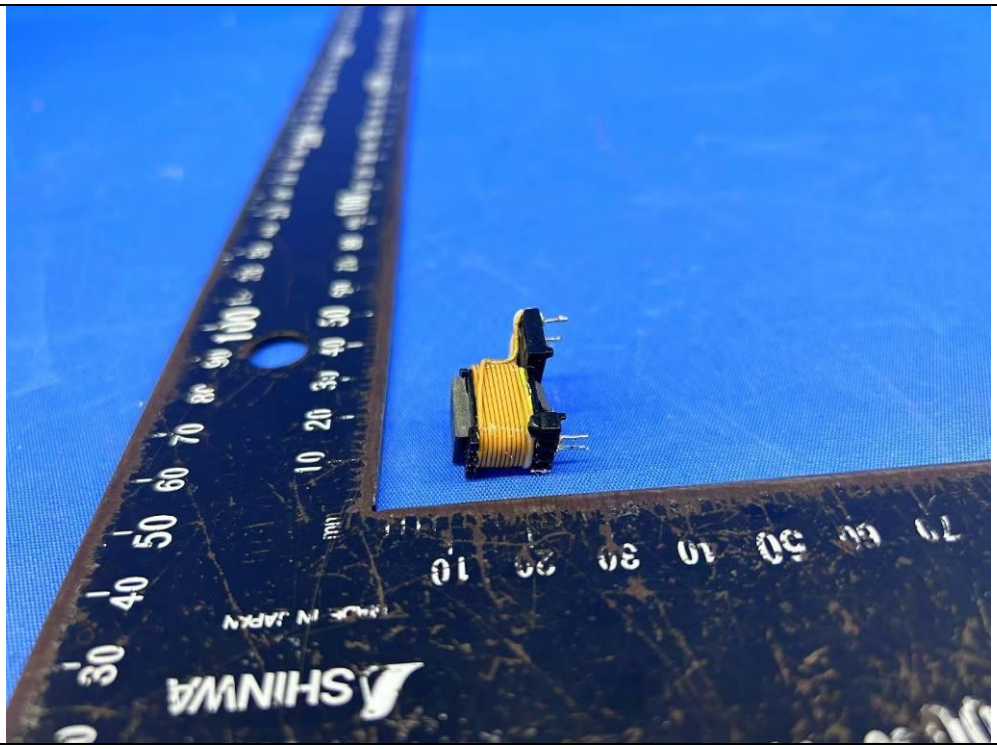
Details of: Transformer



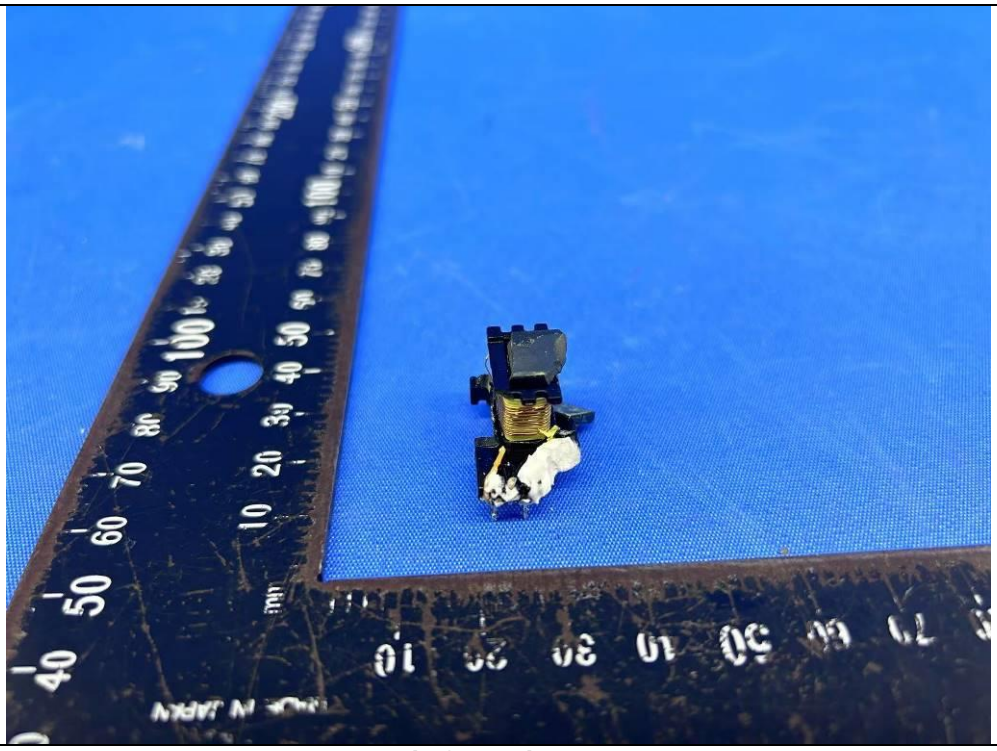
Details of: Transformer



Details of: Transformer



Details of: Transformer



*******End of Attachment 1*******

<table>
<tr><td colspan="4">IEC62368_1D - ATTACHMENT</td></tr>
<tr><td>Clause</td><td>Requirement + Test</td><td>Result - Remark</td><td>Verdict</td></tr>
<tr><td colspan="4">ATTACHMENT TO TEST REPORT
IEC 62368-1
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
(Audio/video, information and communication technology equipment - Part 1: Safety requirements)</td></tr>
<tr><td colspan="4">Differences according to ..... : EN 62368-1:2014+A11:2017</td></tr>
<tr><td colspan="4">Attachment Form No. ..... : EU_GD_IEC62368_1D_II
Attachment Originator ..... : Nemko AS
Master Attachment..... : Date 2021-02-04</td></tr>
<tr><td colspan="4"></td></tr>
<tr><td></td><td>CENELEC COMMON MODIFICATIONS (EN)</td><td></td><td>P</td></tr>
<tr><td></td><td>Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2014 are prefixed “Z”.</td><td></td><td>P</td></tr>
<tr><td>CONTENTS</td><td>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</td><td></td><td>P</td></tr>
<tr><td></td><td>Delete all the “country” notes in the reference document (IEC 62368-1:2014) according to the following list:
<table>
<tr><td>0.2.1</td><td>Note</td><td>1</td><td>Note 3</td><td>4.1.15</td><td>Note</td></tr>
<tr><td>4.7.3</td><td>Note 1 and 2</td><td>5.2.2.2</td><td>Note</td><td>5.4.2.3.2.2 Table 13</td><td>Note c</td></tr>
<tr><td>5.4.2.3.2.4</td><td>Note 1 and 3</td><td>5.4.2.5</td><td>Note 2</td><td>5.4.5.1</td><td>Note</td></tr>
<tr><td>5.5.2.1</td><td>Note</td><td>5.5.6</td><td>Note</td><td>5.6.4.2.1</td><td>Note 2 and 3</td></tr>
<tr><td>5.7.5</td><td>Note</td><td>5.7.6.1</td><td>Note 1 and 2</td><td>10.2.1 Table 39</td><td>Note 2, 3 and 4</td></tr>
<tr><td>10.5.3</td><td>Note 2</td><td>10.6.2.1</td><td>Note 3</td><td>F.3.3.6</td><td>Note 3</td></tr>
</table></td><td></td><td>P</td></tr>
<tr><td></td><td>For special national conditions, see Annex ZB.</td><td></td><td>P</td></tr>
<tr><td>1</td><td>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.</td><td>Should be considered during national approval.</td><td>P</td></tr>
</table>

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.Z1	**Add** the following new subclause after 4.9: To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. **mains**, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for **pluggable equipment type B** or **permanently connected equipment**, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for **pluggable equipment type A** the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		N/A
5.4.2.3.2.4	**Add** the following to the end of this subclause: The requirement for interconnection with **external circuit** is in addition given in EN 50491-3:2009.		N/A
10.2.1	Add the following to [c] and [d] in table 39: For additional requirements, see 10.5.1.		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	**Add** the following after the first paragraph: *For RS 1 compliance is checked by measurement under the following conditions:* *In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or 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.* NOTE Z1 Soldered joints and paint lockings are examples of adequate locking. *The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus.* *Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.* *For RS1, the dose-rate shall not exceed 1 µSv/h taking account of the background level.* NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.		N/A
10.6.1	**Add** the following paragraph to the end of the subclause: EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.		N/A
10.Z1	**Add** the following new subclause after 10.6.5. **10.Z1 Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz** The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz). For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand-held and body-mounted devices, attention is drawn to EN 50360 and EN 50566		N/A
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

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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)**		N/A
4.1.15	**Denmark, Finland, Norway** and **Sweden** To the end of the subclause the following is added: **Class I pluggable equipment type A** intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and **accessible** parts, have a marking stating that the equipment shall be connected to an earthed **mains** socket-outlet. The marking text in the applicable countries shall be as follows: In **Denmark**: “Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord.” In **Finland**: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In **Norway**: “Apparatet må tilkoples jordet stikkontakt” In **Sweden**: “Apparaten skall anslutas till jordat uttag”		N/A
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

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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 • two layers of thin sheet material, each of which shall pass the electric strength test below, or • one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition • passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), and • is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5kV. 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: • the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11; • the additional testing shall be performed on all the test specimens as described in EN 60384-14; the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		N/A
5.5.2.1	**Norway** After the 3rd paragraph the following is added: Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.6	**Finland, Norway** and **Sweden** To the end of the subclause the following is added: Resistors used as **basic safeguard** or bridging **basic insulation** in **class I pluggable equipment type A** shall comply with G.10.1 and the test of G.10.2.		N/A
5.6.1	**Denmark** **Add** to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. *Justification:* In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.		N/A
5.6.4.2.1	**Ireland and United Kingdom** After the indent for **pluggable equipment type A**, the following is added: – the **protective current rating** is taken to be 13 A, this being the largest rating of fuse used in the **mains** plug.		N/A
5.6.5.1	To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm^2 to 1,5 mm^2 in cross-sectional area.		N/A
5.7.5	**Denmark** To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the **protective conductor current** exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.1	**Norway and Sweden** To the end of the subclause the following is added: The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation needs to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)” NOTE In Norway, due to regulation for CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet.” Translation to Swedish: ”Apparater som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet.”.		N/A

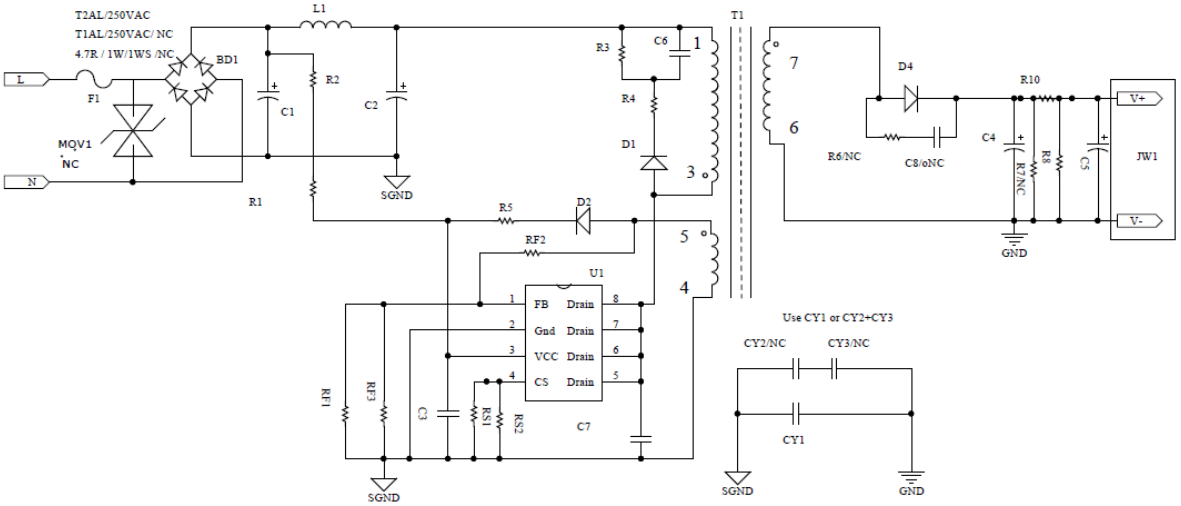
IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.2	**Denmark** To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA .		N/A
B.3.1 and B.4	**Ireland and United Kingdom** The following is applicable: To protect against excessive currents and short-circuits in the primary circuit of **direct plug-in equipment**, tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the **direct plug-in equipment**, until the requirements of Annexes B.3.1 and B.4 are met		N/A
G.4.2	**Denmark** To the end of the subclause the following is added: Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a 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. Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a *Justification:* Heavy Current Regulations, Section 6c		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	**United Kingdom** To the end of the subclause the following is added: The plug part of direct plug-in equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16, and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A
G.7.1	**United Kingdom** To the first paragraph the following is added: Equipment which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord shall be fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768, unless exempted by those regulations. NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
G.7.1	**Ireland** To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard		N/A
G.7.2	**Ireland and United Kingdom** To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm^2 is allowed for equipment which is rated over 10 A and up to and including 13 A.		N/A

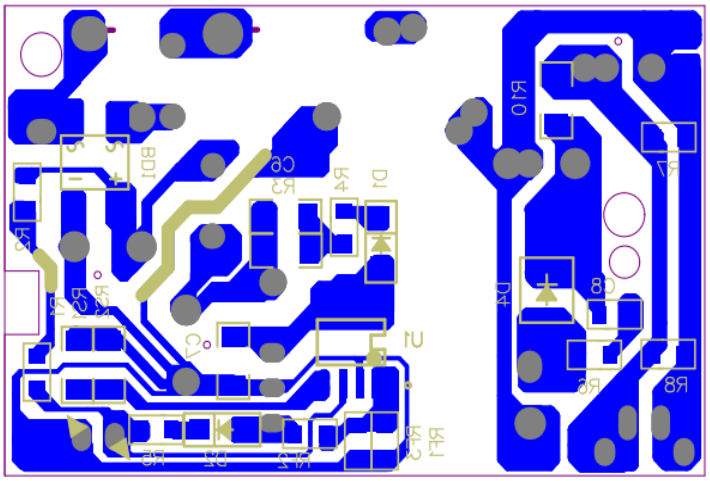
IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ZC	**ANNEX ZC, NATIONAL DEVIATIONS (EN)**		**N/A**
10.5.2	**Germany** The following requirement applies: For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking. *Justification:* German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM. **NOTE** Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int +49-531-592-6320, Internet: http://www.ptb.de		N/A

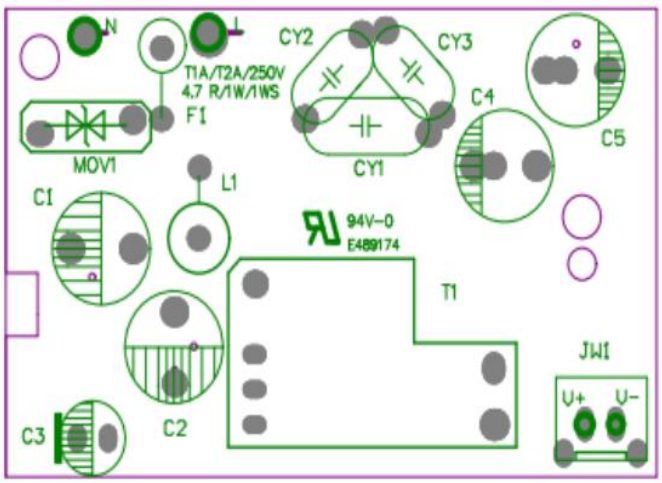
---End of Attachment 2---

Circuit Diagram



PCB Layout

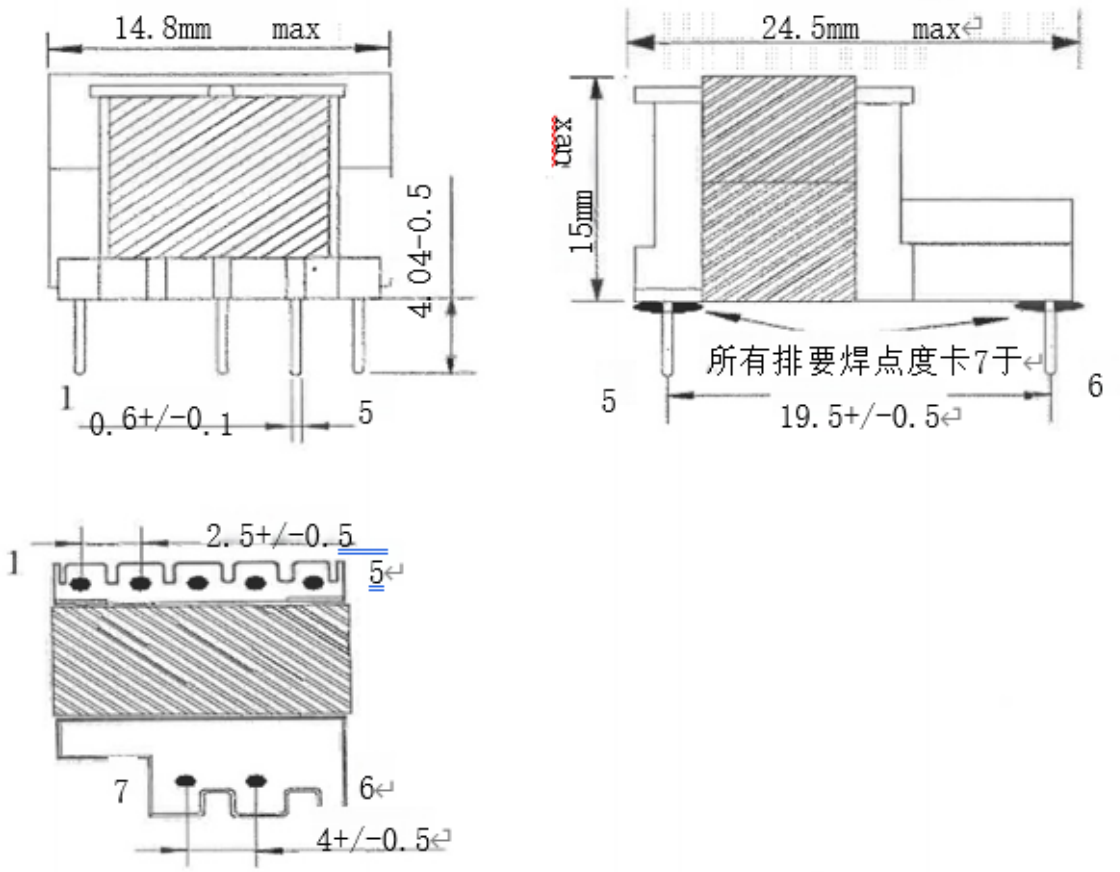




*******End of attachment 3*******

Construction of transformer

1. OUTLINE DIMENSION: (UNIT: mm)



NOTE:

1. 骨架EE1410立式5+2, PIN2NO.

2. N3的起线套管加长至初级PIN脚处，收线不加套管。

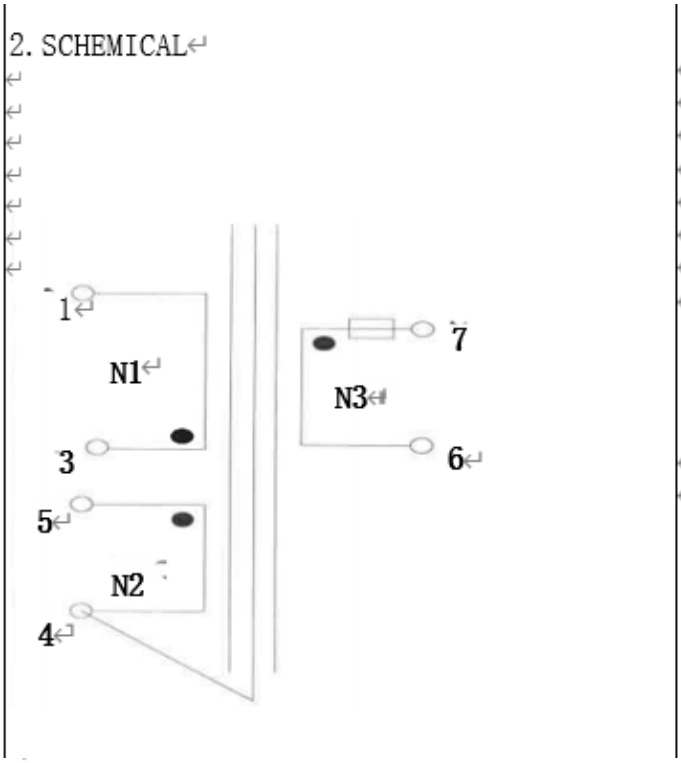
3. CORE为PC44材质，研磨气隙装顶配，用9.0MM胶布沿铁芯方向包2TS, 成品需真空含浸处理

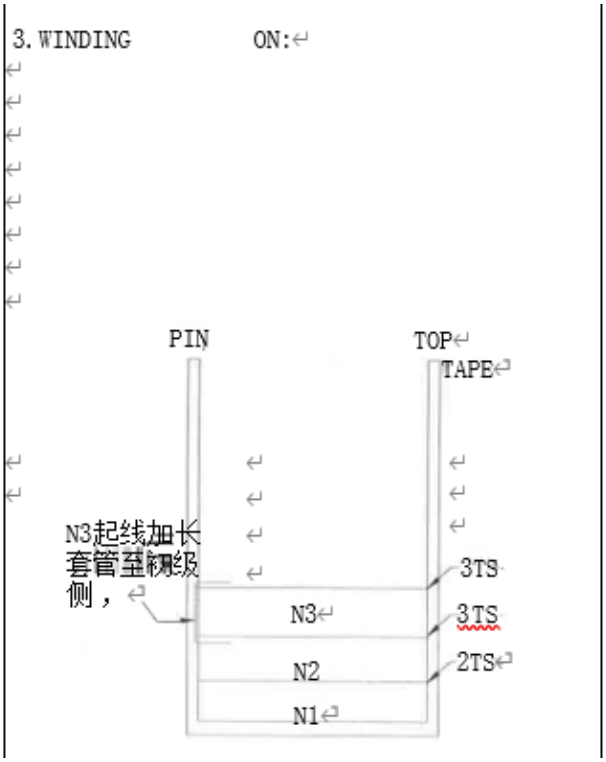
4. 标签于成品顶部，1-5PIN方向. 标签内容为：

ZHTDTAN-12R
EE-1410-12V
SSL-WS19-1210

5. 标签镭射，黑字. 靠左对齐。(内容不能模糊或轻意抹掉).

6. 成品脚位成型需与客户板块一致





-Bobbin	SUMITOMO BAKELITE CO LTD	PM-9820	Phenolic, V-0, 150°C, min. thickness: 0.88mm	UL 94, UL746B, IEC 60695-11-10	UL E41429
-Magnet wire	Interchangeable	Interchangeable	Min. 130°C	UL 1446	UL
-Triple insulation wire	Great Leoflon Industrial Co., Ltd	TRW(B)*, TRW(B)-M-(H)	Reinforced insulation, 130°C	IEC/EN/EN IEC 62368-1, UL 2353	VDE 136581, UL E211989
-Insulation tape	3M COMPANY	1350F-1 (b), 1351Y-1(a)	130°C	UL 510A	UL E17385
-Varnish	SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD	T-4260(a)	130°C	UL 1446	UL E228349
-Tube	GREAT HOLDING INDUSTRIAL CO LTD	TFS, TFT	VW-1, 200°C, min.300V	UL 224	UL E156256

*****End of attachment 4*****

Safety Instructions

- Keep the indoor unit away from high temperature or high humidity environment.
- Do not throw or hit the unit.
- To prevent damage, the units should be fastened on the wall according to instruction.
- Power plug as disconnecting device should be kept convenient to operate.

*******End of attachment 5*******