

APPLICATION FOR TEST REPORT

On Behalf of

Prepared For : DongGuan Ikinor technology Co., Ltd
Room 452, No.1 HengCheng Road ChangAn Town, DongGuan City,
GuangDong province.

Product Name : Interactive Flat Panel
ST65R, ST55R, ST75R, ST86R, ST98R, ST110R, FG55, FG65,
FG75, FG86, FG98, FG110, IK55R, IK65R, IK75R, IK86R, IK98R,
Model : IK110R, FB75, FB85, FB86, PR55, PR65, PR75, PR86, PR98,
PR110, IK55C, IK65C, IK75C, IK86C, IK98C, IK110C, IB75, IB85,
IB86

Prepared By : Shenzhen POCE Technology Co., Ltd.
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Test Date : Sept. 23, 2021 - Sept. 30, 2021

Date of Report : Sept. 30, 2021

Report No. : POCE210926046CRS

TEST REPORT

IEC 62368-1

Audio/video, information and communication technology equipment

Part 1: Safety requirements

Report Number	POCE210926046CRS
Compiled by (name + signature) ...	Alicia
Approved by (name + signature) ..	Calvin Chen
Date of issue	Sept. 30, 2021
Testing Laboratory	Shenzhen POCE Technology Co., Ltd.
Address	Building H, Hongfa Science And Technology Park, Tangtou, Shiyan, Bao'an District, Shenzhen, China
Applicant's name	DongGuan Ikinor technology Co., Ltd
Address	Room 452, No.1 HengCheng Road ChangAn Town, DongGuan City, Guangdong province.
Test specification:	
Standard	IEC 62368-1:2014 (EN 62368-1:2014+A11:2017)
Test procedure	LVD
Non-standard test method	N/A
Test Report Form No.	IEC62368_1B
Master TRF	2018-02
Test Item description	Interactive Flat Panel
Trade Mark	Ikinor
Manufacturer	DongGuan Ikinor technology Co., Ltd
Address	Room 452, No.1 HengCheng Road ChangAn Town, DongGuan City, Guangdong province.
Model/Type reference	See page 1
Rating	100-240V~ 50/60Hz



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

- Pages 57 to 61 for European group differences and national differences of EN 62368-1:2014+A11:2017;
- Pages 62 to 69 for Pictures.

Summary of testing:

The appliance complies with the standards mentioned on page one.

Summary of compliance with National Differences:**List of countries addressed:**

Group differences and national differences for CENELEC countries were checked.

☒ **The product fulfils the requirements EN 62368-1:2014+A11:2017**

Copy of marking plate (as example):**Interactive Flat Panel**

Model: ST65R

Rating: 100-240V~ 50/60Hz



DongGuan Ikinor technology Co., Ltd
Made In China

Note:

1. The marking for another model is same as above only except for the model number and output parameter.
2. When the equipment is vended to EU, then name and address of the importer or authorized representative within the EEA shall be added on the equipment.
3. The above markings are the minimum requirements required by the safety standard. For the final production, the additional markings which do not give rise to misunderstanding may be added.
4. The height of CE mark and WEEE mark should be at least 5 mm and 7 mm respectively.

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: _____
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: _____
Class of equipment	☐ Class I ☒ Class II ☐ Class III
Access location	☐ restricted access location ☒ N/A
Pollution degree (PD)	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maximum operating ambient ..	40°C
IP protection class	☒ IPX0 ☐ IP ____
Power Systems	☒ TN ☐ TT ☐ IT - ____ V L-L
Altitude during operation (m)	☒ 2000 m or less ☐ ____ m
Altitude of test laboratory (m)	☒ 2000 m or less ☐ ____ m
Mass of equipment (kg)	☒ >7kg

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	Sept. 23, 2021
Date (s) of performance of tests	Sept. 23, 2021 - Sept. 30, 2021
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.	
Name and address of factory (ies)	DongGuan Ikinor technology Co., Ltd Room 452, No.1 HengCheng Road ChangAn Town, DongGuan City, GuangDong province.
GENERAL PRODUCT INFORMATION:	
Product Description:	
N/A	
Model Differences:	
All models are the same except for model naming, and all tests are based on ST65R.	
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)
Circuit supplied by AC mains (primary)	ES3
Secondary of transformer	--
Enclosure accessible by ordinary person	ES1

Electrically-caused fire (Clause 6):

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

Example: Battery pack (maximum 85 watts):

PS2

Source of power or PIS	Corresponding classification (PS)
Circuit supplied by AC mains (primary)	PS3
Secondary circuits	PS2

Injury caused by hazardous substances (Clause 7)

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

Example: Liquid in filled component

Glycol

Source of hazardous substances	Corresponding chemical
N/A	N/A

Mechanically-caused injury (Clause 8)

(Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.)

Example: Wall mount unit

MS2

Source of kinetic/mechanical energy	Corresponding classification (MS)
Sharp edges and corners	MS1
Equipment mass	MS1

Thermal burn injury (Clause 9)

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

Example: Hand-held scanner – thermoplastic enclosure

TS1

Source of thermal energy	Corresponding classification (TS)
--	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)
Indicator Light	RS1

ENERGY SOURCE DIAGRAM

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

☐ 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	ES3: Primary circuit connected to AC mains	N/A	N/A	1, Plastic enclosure. 2, Isolated transformer 3, Clearances and Creepage distances 4, Verified the test of prospective touch voltage and touch current
Ordinary	ES1:Enclosure accessible by ordinary person	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
Combustible materials	PS3: All primary circuit connect to AC mains	No parts exceeding 90% of its Spontaneo us Ignition temperature	1, Fire enclosure 2, Transformer complied the insulation requirement 3, Approved Fuse used as protective device 4, Internal combustible material comply class V-0 or better. 5, Mounted on PCBs which are complied	N/A

			with class V-0 material	
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	MS1: Sharp edges and corners	N/A	N/A	N/A
Ordinary	MS1: Equipment mass	N/A	N/A	N/A
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	TS1: Accessible surfaces	N/A	N/A	N/A
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
Indicator Light	RS1	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		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.5)	P
4.4.4.3	Drop tests..... :		N/A
4.4.4.4	Impact tests..... :		P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests..... :	No such enclosure and barrier	N/A
4.4.4.6	Glass Impact tests..... :	(See Annex T.9)	P
4.4.4.7	Thermoplastic material tests..... :		N/A
4.4.4.8	Air comprising a safeguard..... :	No such safeguard used	N/A
4.4.4.9	Accessibility and safeguard effectiveness		P
4.5	Explosion		P
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard		P
4.6.2	10 N force test applied to..... :		N/A
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
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..... :	Internal not to be removed	—
4.8.4	Battery Compartment Mechanical Tests..... :		N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object..... :		N/A
5	ELECTRICALLY-CAUSED INJURY		P
5.2.1	Electrical energy source classifications..... :		P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.2.2	ES1, ES2 and ES3 limits	Primary circuit connected to AC mains considered as ES3;	P
5.2.2.2	Steady-state voltage and current		P
5.2.2.3	Capacitance limits		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	No such parts	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		P
	b) Electric strength test potential (V)		P
	c) Air gap (mm)		P
5.3.2.4	Terminals for connecting stripped wire		P
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		P
5.4.1.3	Humidity conditioning	No hygroscopic material used Complied See humidity treatment clause 5.4.8 and electric strength test clause 5.4.9.1.	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
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		P
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.10.2	Vicat softening temperature		N/A
5.4.1.10.3	Ball pressure		N/A
5.4.2	Clearances		P
5.4.2.2	Determining clearance using peak working voltage		P
5.4.2.3	Determining clearance using required withstand voltage		P
	a) a.c. mains transient voltage.....	2500 V	—
	b) d.c. mains transient voltage		—
	c) external circuit transient voltage.....		—
	d) transient voltage determined by measurement		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test		N/A
5.4.2.5	Multiplication factors for clearances and test voltages		N/A
5.4.3	Creepage distances.....		P
5.4.3.1	General		P
5.4.3.3	Material Group	IIIb	—
5.4.4	Solid insulation		N/A
5.4.4.2	Minimum distance through insulation		P
5.4.4.3	Insulation compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Cemented joints		P
5.4.4.6	Thin sheet material	Consider approved Insulation Tape of Transformer	P
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material		P
	Number of layers (pcs)	At least 2 layers	P
5.4.4.6.3	Non-separable thin sheet material		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material.....		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		P
5.4.4.9	Solid insulation at frequencies >30 kHz.....		P
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Insulation resistance (MΩ)..... :		—
5.4.6	Insulation of internal wire as part of supplementary safeguard		N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		P
	Relative humidity (%)..... :	93% RH	—
	Temperature (°C)	40°C	—
	Duration (h)	120	—
5.4.9	Electric strength test		P
5.4.9.1	Test procedure for a solid insulation type test	Method 1 used	P
5.4.9.2	Test procedure for routine tests	Conducted by manufacturer	N/A
5.4.10	Protection against transient voltages between external circuit	No such external circuits	N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test		N/A
5.4.10.2.3	Steady-state test..... :		N/A
5.4.11	Insulation between external circuits and earthed circuitry		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	Components used as safeguard comply with all applicable requirements for that safeguard. Component used within its rating.	P
5.5.2	Capacitors and RC units	Approved Y Capacitor was used	P
5.5.2.1	General requirement		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector		P
5.5.3	Transformers	Approved transformer was used	P
5.5.4	Optocouplers	Approved Optocouplers was used	P
5.5.5	Relays		N/A
5.5.6	Resistors		N/A
5.5.7	SPD's		P
5.5.7.1	Use of an SPD connected to reliable earthing		P
5.5.7.2	Use of an SPD between mains and protective earth		P
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable		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.....	See appended table 5.2	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.7.2.2	Measurement of prospective touch voltage	See appended table 5.2	N/A
5.7.3	Equipment set-up, supply connections and earth connections	Clause 4, 5.3 and 5.4 of IEC 60990:1999 applied.	N/A
	System of interconnected equipment (separate connections/single connection).....:	Single equipment.	—
	Multiple connections to mains (one connection at a time/simultaneous connections)	Single connection.	—
5.7.4	Earthed conductive accessible parts	See appended table 5.7.2.2, 5.7.4.	N/A
5.7.5	Protective conductor current	The protective conductor current does not exceed the ES2 limits.	N/A
	Supply Voltage (V).....:	See appended table 5.7.2.2, 5.7.4	—
	Measured current (mA).....:	See appended table 5.7.2.2, 5.7.4	—
	Instructional Safeguard.....:	The protective conductor current does not exceed the ES2 limits, instructional safeguard is not required.	N/A
5.7.6	Prospective touch voltage and touch current due to external circuits	No external circuits.	N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits	No external circuits.	N/A
	a) Equipment with earthed external circuits Measured current (mA).....:		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....:		N/A

6	ELECTRICALLY- CAUSED FIRE		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications		P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault....:		P
6.2.2.3	Power measurement for worst-case power source fault		P
6.2.2.4	PS1		N/A
6.2.2.5	PS2		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.2.2.6	PS3	All primary components assumed as PS3	P
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS		P
6.2.3.2	Resistive PIS	No identification of resistive PIS required due to providing fire enclosure and it complied with requirements of sub-clause 6.4.8	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		P
6.3.1 (b)	Combustible materials outside fire enclosure		N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Control of fire spread	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		P
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		P
6.4.3.1	General		P
6.4.3.2	Supplementary Safeguards		N/A
	Special conditions if conductors on printed boards are opened or peeled		P
6.4.3.3	Single Fault Conditions.....		P
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		N/A
6.4.5	Control of fire spread in PS2 circuits		P
6.4.5.2	Supplementary safeguards		P
6.4.6	Control of fire spread in PS3 circuit		P
6.4.7	Separation of combustible materials from a PIS		P
6.4.7.1	General.....		P
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

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Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm)		N/A
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm)	No openings	N/A
	Flammability tests for the bottom of a fire enclosure		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c)		N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating		P
6.5	Internal and external wiring		P
6.5.1	Requirements	Suitable for type and size	P
6.5.2	Cross-sectional area (mm ²)		—
6.5.3	Requirements for interconnection to building wiring		P
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	No ozone produced.	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	Enclosure is smooth and no mechanical energy sources	P
8.2	Mechanical energy source classifications	MS1	P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
8.3	Safeguards against mechanical energy sources	No additional safeguards is needed to against mechanical energy sources	N/A
8.4	Safeguards against parts with sharp edges and corners	No sharp edges and corners.	P
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts	No moving parts within EUT	N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard..... :		—
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks..... :		N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard..... :		—
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N) :		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test :		N/A
8.6	Stability		N/A
8.6.1	Product classification		N/A
	Instructional Safeguard..... :		—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force :		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt :		—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force) :		N/A
	Position of feet or movable parts :		—
8.7	Equipment mounted to wall or ceiling		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.7.1	Mounting Means (Length of screws (mm) and mounting surface)		N/A
8.7.2	Direction and applied force.....		N/A
8.8	Handles strength	No handle	N/A
8.8.1	Classification		N/A
8.8.2	Applied Force		N/A
8.9	Wheels or casters attachment requirements		P
8.9.1	Classification		P
8.9.2	Applied force		—
8.10	Carts, stands and similar carriers	Not such devices	N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard.....		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force		—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N)		—
8.10.6	Thermoplastic temperature stability (°C)		N/A
8.11	Mounting means for rack mounted equipment	Not such apparatus	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 antennas	N/A
	Button/Ball diameter (mm).....		—
9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications	All accessible surfaces are classified as TS1.	P
9.3	Safeguard against thermal energy sources		P
9.4	Requirements for safeguards		N/A
9.4.1	Equipment safeguard	Not required due to TS1	N/A
9.4.2	Instructional safeguard		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10	RADIATION		N/A
10.2	Radiation energy source classification	No such radiation energy source	N/A
10.2.1	General classification		N/A
10.3	Protection against laser radiation		N/A
	Laser radiation that exists equipment:		—
	Normal, abnormal, single-fault.....:		N/A
	Instructional safeguard		—
	Tool		—
10.4	Protection against visible, infrared, and UV radiation		N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons		N/A
10.4.1.b)	RS3 accessible to a skilled person		N/A
	Personal safeguard (PPE) instructional safeguard.....:		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1...:		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions		N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque		N/A
10.4.1.f)	UV attenuation.....:		N/A
10.4.1.g)	Materials resistant to degradation UV.....:		N/A
10.4.1.h)	Enclosure containment of optical radiation		N/A
10.4.1.i)	Exempt Group under normal operating conditions		N/A
10.4.2	Instructional safeguard.....:		N/A
10.5	Protection against x-radiation		N/A
10.5.1	X- radiation energy source that exists equipment :		N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards.....:		N/A
	Instructional safeguard for skilled person		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation		—
	Abnormal and single-fault condition.....:		N/A
	Maximum radiation (pA/kg).....:		N/A
10.6	Protection against acoustic energy sources		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Acoustic output, dB(A)		N/A
	Output voltage, unweighted r.m.s.		N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards		N/A
	Equipment safeguard prevent ordinary person to RS2		—
	Means to actively inform user of increase sound pressure		—
	Equipment safeguard prevent ordinary person to RS2		—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output.....		—
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A)		—
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A)		—

B	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements.....	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers.....		N/A
B.2.3	Supply voltage and tolerances	+10%, -10%	P
B.2.5	Input test	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements.....	(See appended table B.3)	P
B.3.2	Covering of ventilation openings	No openings within the EUT	P
B.3.3	D.C. mains polarity test		N/A
B.3.4	Setting of voltage selector	No such selector	N/A
B.3.5	Maximum load at output terminals.....		P
B.3.6	Reverse battery polarity		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
B.3.7	Abnormal operating conditions as specified in Clause E.2.		P
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.....	No such controlling device	N/A
B.4.3	Motor tests		N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature		N/A
B.4.4	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
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		P
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	General indoor used equipment only	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	Not such apparatus	N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		N/A
E.1	Audio amplifier normal operating conditions	Equipment does not contain any audio amplifiers	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	On the rear enclosure	P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification	See page 3 for details	—
F.3.2.2	Model identification	See page 3 for details	—
F.3.3	Equipment rating markings	See page 3 for details	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.....	See page 3 for details	—
F.3.3.4	Rated voltage	See page 3 for details	—
F.3.3.4	Rated frequency.....	See page 3 for details	—
F.3.3.6	Rated current or rated power.....	See page 3 for details	—
F.3.3.7	Equipment with multiple supply connections	No multiple supply connection	N/A
F.3.4	Voltage setting device	No such device	N/A
F.3.5	Terminals and operating devices		N/A
F.3.5.1	Mains appliance outlet and socket-outlet markings.....		N/A
F.3.5.2	Switch position identification marking.....		P
F.3.5.3	Replacement fuse identification and rating markings.....		P
F.3.5.4	Replacement battery identification marking.....		N/A
F.3.5.5	Terminal marking location		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.6	Equipment markings related to equipment classification	See below.	P
F.3.6.1	Class I Equipment		P
F.3.6.1.1	Protective earthing conductor terminal		P
F.3.6.1.2	Neutral conductor terminal		P
F.3.6.1.3	Protective bonding conductor terminals		P
F.3.6.2	Class II equipment (IEC60417-5172)	Class I equipment	N/A
F.3.6.2.1	Class II equipment with or without functional earth		N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking :	IPX0 equipment	—
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking		P
F.3.10	Test for permanence of markings	After test there was no damage on 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		P
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard		P
	g) Protective earthing conductor current exceeding ES 2 limits		P
	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		P
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

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Clause	Requirement + Test	Result - Remark	Verdict
G	COMPONENTS		P
G.1	Switches		P
G.1.1	General requirements		P
G.1.2	Ratings, endurance, spacing, maximum load		P
G.2	Relays		N/A
G.2.1	General requirements	No such device used	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	No such device used	N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691	No such device used	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	No such device used	N/A
G.3.4	Overcurrent protection devices		P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		P
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions.....	(See appended Table B.4)	P
G.4	Connectors		P
G.4.1	Spacings	No such device used	P
G.4.2	Mains connector configuration		P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		P
G.5	Wound Components		P

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.1	Wire insulation in wound components	Approved triple insulated wire used as secondary winding of transformer	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		P
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).....	Approved	P
	Position		—
	Method of protection		—
G.5.3.2	Insulation		P
	Protection from displacement of windings		—
G.5.3.3	Overload test.....		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	No such device used	N/A
	Position		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days)		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V)		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Electric strength test (V)		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature		N/A
	Electric strength test (V)		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h)		N/A
	Electric strength test (V)		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage		—
G.6	Wire Insulation		P
G.6.1	General		P
G.6.2	Solvent-based enamel wiring insulation		P
G.7	Mains supply cords		P
G.7.1	General requirements		P
	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)		—
G.7.3.2.2	Strain relief mechanism failure		P
G.7.3.2.3	Cord sheath or jacket position, distance (mm) ...		—
G.7.3.2.4	Strain relief comprised of polymeric material		P
G.7.4	Cord Entry		P
G.7.5	Non-detachable cord bend protection		P
G.7.5.1	Requirements		P
G.7.5.2	Mass (g)		—
	Diameter (m)		—
	Temperature (°C)		—

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	Varistors		P
G.8.1	General requirements	Approved	P
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.	No such components used	N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA		—
G.9.1 d)	IC limiter output current (max. 5A).....		—
G.9.1 e)	Manufacturers' defined drift		—
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	Resistors		N/A
G.10.1	General requirements		N/A
G.10.2	Resistor test		N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	Capacitor and RC units		P
G.11.1	General requirements	Approved	P
G.11.2	Conditioning of capacitors and RC units		P
G.11.3	Rules for selecting capacitors		P
G.12	Optocouplers		P
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results).....	Approved	P
	Type test voltage Vini		—

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Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
G.15	Liquid filled components		N/A
G.15.1	General requirements	No such components used	N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	IC including capacitor discharge function (ICX)		N/A
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours	No such components used	N/A
b)	Impulse test using circuit 2 with Uc = to transient voltage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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	Not such apparatus	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	Approved triple insulated wire used as secondary winding of transformer	P
K	SAFETY INTERLOCKS		N/A
K.1	General requirements	No safety interlocks in the EUT	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

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Clause	Requirement + Test	Result - Remark	Verdict
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	AC Plug was used	P
L.2	Permanently connected equipment		P
L.3	Parts that remain energized		N/A
L.4	Single phase equipment		P
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		P
L.7	Plugs as disconnect devices		N/A
L.8	Multiple power sources		N/A
M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		N/A
M.1	General requirements		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	No such battery used	N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery	(See append table Annex M)	N/A
M.3.3	Compliance	(See append table Annex M)	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	(See append table Annex M.4)	—

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Clause	Requirement + Test	Result - Remark	Verdict
M.4.2.2 b)	Single faults in charging circuitry..... :	(See Annex B.4 and append table Annex M.4)	—
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	No such battery used	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	No such battery used	N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume V_z (m^3/s) :		—
M.8.2.3	Correction factors..... :		—
M.8.2.4	Calculation of distance d (mm) :		—
M.9	Preventing electrolyte spillage	No such battery used	N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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	Pollution degree considered	—
O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		P
	Figures O.1 to O.20 of this Annex applied		—
P	SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS		N/A
P.1	General requirements		N/A
P.2.2	Safeguards against entry of foreign object		N/A
	Location and Dimensions (mm)		—
P.2.3	Safeguard against the consequences of entry of foreign object		N/A
P.2.3.1	Safeguards against the entry of a foreign object		N/A
	Openings in transportable equipment		N/A
	Transportable equipment with metalized plastic parts		N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard)		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts		N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C).....		—
	Tr (°C)		—
	Ta (°C)		—
P.4.2 b)	Abrasion testing		N/A
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

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

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
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		N/A
	Swing test		N/A
T.7	Drop test		N/A
T.8	Stress relief test		N/A
T.9	Impact Test (glass)		P
T.9.1	General requirements		P
T.9.2	Impact test and compliance		P
	Impact energy (J)	2	—
	Height (m)	0.408	—
T.10	Glass fragmentation test		N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm)		—
U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N/A
U.1	General requirements		N/A

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

4.1.2	TABLE: List of critical components				P
Object / part No.	Manufacturer/ Trademark	Type/Mode I	Technical Data	Standard	Marks of Conformity - Required for FUS
Switch	LECI Electronics Co., Ltd	RS601D	Rated voltage: AC 250 V Rated current: 6(4) A	EN IEC 61058- 1:2018	VDE 40017430
Input plug	Shenzhen YeTatsu Electrical Co.,Ltd.	YTV11	AC250V 2.5A	DIN VDE 0620 Teil 101:1992- 05; EN 50075:1990	VDE 40040232
Power cord	Guangdong Biadi Electronics Co., Ltd.	H05VV-F	3X0.75mm2	EN 50525-2-11	VDE 40044971
Display Screen	Guangzhou Lindian Intelligent Technology Co., Ltd	LD750L	65 inches	IEC/EN62368	Tested within appliance
Plastic Enclosure	SHENZHEN	PC-203FR	V-0,	IEC 60695-11-	UL

	FUHENG NEW MATERIAL CO LTD		min.1.5mm	10 UL 746	E234833
Internal power supply :					
Appliance coupler	ZHEJIANG ZHUOLI ELECTRONIC CO.,LTD.	ZL3963-A-3P	250V~, 10A, 85℃	UL 1977	UL E239965
Alt.	Interchangeable	Interchangeable	Interchangeable	UL 1977 EN61984:2009-11 EN61984:2009	VDE UL
Internal primary line	Ningbo Liansheng Wire & Cable Co., Ltd.	H05VVH2-F	300V/500 2×1,0 mm²	EN 50525-2-11:2011	VDE 40022054
Fuse (F1)	Hollyland Company Limited	5ET	T3.15A, AC250V	DINEN60127-3(VDE0820-3):2015-11;EN 60127-3:2015 IEC 60127-1:2006 IEC 60127-1:2006/AMD1:2011 IEC 60127-1:2006/AMD2:2015 IEC 60127-3:2015 DIN EN 60127-1(VDE 0820-1):2015-12;EN60127-1:2006+A1:2011+A2:2015	VDE (40015669) TUV (J 50248340)
Alt.	XC Electronics (Shen Zhen) Corp. Ltd.	5TE	T3.15A, AC250V	DINEN60127-3(VDE0820-3):2015-11;EN 60127-3:2015 IEC 60127-1:2006 IEC 60127-1:2006/AMD1:2011 IEC 60127-1:2006/AMD2:2015 IEC 60127-3:2015 DIN EN 60127-1(VDE 0820-1):2015-12;EN60127-1:2006+A1:2011+A2:2015	VDE (40029550) UL (E249609)
Alt.	Conquer Electronics Co., Ltd.	MST	T3.15A, AC250V	DINEN60127-3(VDE0820-3):2015-11;EN 60127-3:2015 IEC 60127-1:2006	VDE (40017118) UL (E82636) TUV (R

				IEC 60127-1:2006/AMD1:2011 IEC 60127-1:2006/AMD2:2015 IEC 60127-3:2015 DIN EN 60127-1 (VDE 0820-1):2015-12;EN60127-1:2006+A1:2011+A2:2015	50176525)
Alt.	Shenzhen Lanson Electronics Co.,Ltd.	SMT T3,15A250V SMT	T3.15A, AC250V	DINEN60127-3(VDE0820-3):2015-11;EN60127-3:2015 IEC 60127-1:2006 IEC 60127-1:2006/AMD1:2011 IEC 60127-1:2006/AMD2:2015 IEC 60127-3:2015 DIN EN 60127-1 (VDE 0820-1):2015-12;EN60127-1:2006+A1:2011+A2:2015	VDE (40012592) UL (E221465)
Alt.	Interchangeable	Interchangeable	Interchangeable	DINEN60127-3(VDE0820-3):2015-11;EN60127-3:2015 IEC 60127-1:2006 IEC 60127-1:2006/AD1:2011 IEC 60127-1:2006/AMD2:2015 IEC 60127-3:2015 DIN EN 60127-1 (VDE 0820-1):2015-12;EN60127-1:2006+A1:2011+A2:2015	VDE UL
NTC (TR1)	NANJING KE MIN ELECTRONICS CO., LTD	NSP102R55	2.5Ω at 25℃,5A	EN 60539-1:2008	UL (E312488) TUV (B 18 06 93844 003)
Alt.	NANJING SHIHENG	MF72	2.5Ω at	EN 60539-1:	TUV

	ELECTRONICS CO., LTD	2.5D11	25°C,5A	2008	(R 50245892) UL (E241319)
Alt.	GUANGDONG SOUTH HONGMING ELECTRONIC SCIENCE & TECHNOLOGY CO LTD	2.5D-11M	2.5Ω at 25°C,5A	EN 60539-1: 2008	UL (E361907) TUV (B 101551 0001)
Alt.	Interchangeable	Interchangeable	Interchangeable	EN 60539-1: 2008	VDE UL
X-Capacitor (CX1)	Changzhou Jiaguan Electronics Co., Ltd.	MKP	AC 300V,0.47uF min X2, 40/110/21,C	DIN EN 60384-14/A1 (VDE 0565-1-1/A1):2017-04; EN 60384-14:2013/A1:2016 IEC 60384-14:2013 IEC 60384-14:2013/AMD1: 2016 DIN EN 60384-14 (VDE 0565-1-1):2014-04; EN 60384-14:2013-08	VDE (40037250) UL (E354203)
Alt.	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	MPX	AC 275V,0.47uF min, X2, 40/110/56,B	DIN EN 60384-14/A1 (VDE 0565-1-1/A1):2017-04; EN 60384-14:2013/A1:2016 IEC 60384-14:2013 IEC 60384-14:2013/AMD1: 2016 DIN EN 60384-14 (VDE 0565-1-1):2014-04; EN 60384-14:2013-08	VDE (40034679) UL (E208107)
Alt.	Carli Electronics Co.,Ltd.	MPX	AC 275V,0.47uF min, X2, 40/110/56,B	DIN EN 60384-14/A1 (VDE 0565-1-1/A1):2017-04; EN 60384-14:2013/A1:2016 IEC 60384-14:2013 IEC 60384-14:2013/AMD1: 2016 DIN EN 60384-14 (VDE 0565-	VDE (40008520)

				1-1):2014-04; EN 60384-14:2013-08	
Alt.	Xiamen Faratronic Co., Ltd.	MKP62	AC 275V,0.47uF min, X2, 40/110/56,B	DIN EN 60384-14/A1 (VDE 0565-1-1/A1):2017-04; EN 60384-14:2013/A1:2016 IEC 60384-14:2013 IEC 60384-14:2013/AMD1:2016 DIN EN 60384-14 (VDE 0565-1-1):2014-04; EN 60384-14:2013-08	VDE (40000358)
Alt.	Shenzhen Su Rong Electronic Co., Ltd.	MPX/MKP	AC 280V,0.47uF min, X2, 40/110/56,B	DIN EN 60384-14/A1 (VDE 0565-1-1/A1):2017-04; EN 60384-14:2013/A1:2016 IEC 60384-14:2013 IEC 60384-14:2013/AMD1:2016 DIN EN 60384-14 (VDE 0565-1-1):2014-04; EN 60384-14:2013-08	VDE (40008924)
Alt.	Euoptronic (Suzhou) Co.,Ltd. EUROPTRONIC (TAIWAN) INDUSTRIAL CORP	MPX2	AC 305V,0.47uF min, X2, 40/110/56,B	DIN EN 60384-14/A1 (VDE 0565-1-1/A1):2017-04; EN 60384-14:2013/A1:2016 IEC 60384-14:2013 IEC 60384-14:2013/AMD1:2016 DIN EN 60384-14 (VDE 0565-1-1):2014-04; EN 60384-14:2013-08	VDE (40025981) UL (E211347)
Alt.	Guangdong JURCC electronics Co., LTD.	MPX/MKP	AC 310V,0.47uF min, X2, 40/110/56,B	DIN EN 60384-14/A1 (VDE 0565-1-1/A1):2017-04 EN 60384-14:2013/A1:201	VDE (40034920) UL (E343072)

				6 IEC 60384-14:2013 IEC 60384-14:2013/AMD1:2016 DIN EN 60384-14 (VDE 0565-1-1):2014-04 EN 60384-14:2013-08	
Alt.	Interchangeable	Interchangeable	Interchangeable	DIN EN 60384-14/A1 (VDE 0565-1-1/A1):2017-04 EN 60384-14:2013/A1:2016 IEC 60384-14:2013 IEC 60384-14:2013/AMD1:2016 DIN EN 60384-14 (VDE 0565-1-1):2014-04 EN 60384-14:2013-08	VDE UL
Y-Capacitor (CY1,CY2)	Guangdong South Hongming Electronic Science and Technology Co.,Ltd.	F	AC 250V,470PF max Y1, 40/125/21,C	DIN EN 60384-14/A1 (VDE 0565-1-1/A1):2017-04; EN 60384-14:2013/A1:2016 IEC 60384-14:2013 IEC 60384-14:2013/AMD1:2016 DIN EN 60384-14 (VDE 0565-1-1):2014-04; EN 60384-14:2013-08	VDE (40036393) UL (E154899)
Alt.	Dongguan City Dafu Electronics Co. Ltd.	CT7 Y1 Series	AC 440V,470PF max Y1, 25/125/21,C	DIN EN 60384-14 (VDE 0565-1-1):2014-04; EN 60384-14:2013-08 IEC 60384-14(ed.4)	VDE (40041523) UL (E465278)
Alt.	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	CD-Series	AC 250V,470PF max Y1, 25/125/21,C	DIN EN 60384-14/A1 (VDE 0565-1-1/A1):2017-04; EN 60384-14:2013/A1:2016 IEC 60384-	VDE (40025754) UL (E208107)

				14:2013 IEC 60384-14:2013/AMD1:2016 DIN EN 60384-14 (VDE 0565-1-1):2014-04; EN 60384-14:2013-08	
Alt.	Shaanxi Huaxing Electronic Development Co. Ltd.	CT7Y1	AC 400V,470PF max Y1, 25/125/21,C	EN 60384-14:2013/A1:2016 IEC 60384-14:2013/AMD1:2016 IEC 60384-14:2013	VDE (40015542) UL (E217400)
Alt.	Interchangeable	Interchangeable	Interchangeable	EN 60384-14:2013/A1:2016 IEC 60384-14:2013/AMD1:2016 IEC 60384-14:2013	VDE UL
Y-Capacitor (CY3)	Guangdong South Hongming Electronic Science and Technology Co.,Ltd.	F	AC 250V,1000PF max Y1, 40/125/21,C	DIN EN 60384-14/A1 (VDE 0565-1-1/A1):2017-04; EN 60384-14:2013/A1:2016 IEC 60384-14:2013 IEC 60384-14:2013/AMD1:2016 DIN EN 60384-14 (VDE 0565-1-1):2014-04; EN 60384-14:2013-08	VDE (40036393) UL (E154899)
Alt.	Dongguan City Dafu Electronics Co. Ltd.	CT7 Y1 Series	AC 440V,1000PF max Y1, 25/125/21,C	DIN EN 60384-14 (VDE 0565-1-1):2014-04; EN 60384-14:2013-08 IEC 60384-14(ed.4)	VDE (40041523) UL (E465278)
Alt.	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	CD-Series	AC 250V,1000PF max Y1, 25/125/21,C	DIN EN 60384-14/A1 (VDE 0565-1-1/A1):2017-04; EN 60384-14:2013/A1:2016 IEC 60384-14:2013 IEC 60384-14:2013/AMD1:	VDE (40025754) UL (E208107)

				2016 DIN EN 60384-14 (VDE 0565-1-1):2014-04; EN 60384-14:2013-08	
Alt.	Shaanxi Huaxing Electronic Development Co. Ltd.	CT7Y1	AC 400V,1000PF max Y1, 25/125/21,C	EN 60384-14:2013/A1:2016 IEC 60384-14:2013/AMD1:2016 IEC 60384-14:2013	VDE (40015542) UL (E217400)
Alt.	Interchangeable	Interchangeable	Interchangeable	EN 60384-14:2013/A1:2016 IEC 60384-14:2013/AMD1:2016 IEC 60384-14:2013	VDE UL
Y Capacitor (CY4)	GUANGDONG SOUTH HONGMING ELECTRONIC SCIENCE AND TECHNOLOGY CO., LTD.	F	250VAC ,1000 pF, Y1	UL 60384-14 EN60384-14 K60384-1 K60384-14	UL:E15489 9 VDE:40036 393 KC:HU0300 4-10004C
Alt.	Shaanxi Huaxing Electronic Development Co. Ltd.	CT7Y1	AC 400V,470PF max Y1, 25/125/21,C	EN 60384-14:2013/A1:2016 IEC 60384-14:2013/AMD1:2016 IEC 60384-14:2013	VDE (40015542) UL (E217400)
Alt.	Interchangeable	Interchangeable	Interchangeable	EN 60384-14:2013/A1:2016 IEC 60384-14:2013/AMD1:2016 IEC 60384-14:2013	VDE UL
Alt.	Interchangeable	Interchangeable	Interchangeable	EN 60384-14:2013/A1:2016 IEC 60384-14:2013/AMD1:2016 IEC 60384-14:2013	VDE UL
Optocoupler (PC401)	Lite-On Technology Corp	LTV-817	Int.Cr / Ext.Cr / Dti. 5.3 mm / 8.0 mm / 0.50 mm 100 °C	IEC 60747-5-5:2007 IEC 60747-5-5:2007/AMD1:2013 DIN EN 60747-5-5 (0884-5):2015-11; EN	VDE (40015248) UL (E113898)

				60747-5-5:2011; A1:2015	
Alt.	Everlight Electronics Co., Ltd.	EL817	Int. Cr / Ext. Cr / Dti. 5.3 mm / 8.0 mm / 0.50 mm 100 °C	DIN EN 60747-5-5 (0884-5):2015-11; EN 60747-5-5:2011; A1:2015	VDE (132249) UL (E214129)
Alt.	China Resources Semiconductor (ShenZhen) Ltd.	PC817	Int. Cr / Ext. Cr / Dti. 5.3 mm / 8.0 mm / 0.50 mm 100 °C	DIN EN 60747-5-5 (0884-5):2015-11; EN 60747-5-5:2011; A1:2015	VDE (40042139) UL (E465130)
Alt.	COSMO Electronics Corporation	K1010	Int. Cr / Ext. Cr / Dti. 5.3 mm / 8.0 mm / 0.50 mm 100 °C	DIN EN 60747-5-5 (0884-5):2015-11; EN 60747-5-5:2011; A1:2015	VDE (101347) UL (E169586)
Alt.	CT MICROELECTRONIC S FAR EAST LTD CT Micro International Corporation	CT817	Int. Cr / Ext. Cr / Dti. 5.3 mm / 8.0 mm / 0.50 mm 100 °C	DIN EN 60747-5-5 (0884-5):2015-11; EN 60747-5-5:2011; A1:2015	VDE (40039590) UL (E364000)
Alt.	SHENZHEN ORIENT COMPONENTS CO LTD	ORPC-817SB	Int. Cr / Ext. Cr / Dti. 5.3 mm / 8.0 mm / 0.50 mm 100 °C	DIN EN 60747-5-5 (0884-5):2015-11; EN 60747-5-5:2011; A1:2015	VDE (40029733) UL (E323844)
Alt.	Interchangeable	Interchangeable	Int. Cr / Ext. Cr / Dti. 5.3 mm / 8.0 mm / 0.50 mm 100 °C	DIN EN 60747-5-5 (0884-5):2015-11; EN 60747-5-5:2011; A1:2015	VDE UL
PCB	SHENGYI TECHNOLOGY CO LTD	S1141	V-0,130°C	--	E109769
Alt.	Interchangeable	Interchangeable	V-0, 130°C	--	UL
Transformer (T100)	Xiang Yang Rui Xin Peng Electronic Technology Co.,LTD	BCK-26114WHC	Class B 130°C	IEC 62368	Tested within appliance
Bobbin	CHANGCHUN PLASTIC CO., LTD.	T375J	V-0, 150 oC,	UL 94, UL746	UL:E59481
Wire	ZHEJIANG HONGBO TECHNOLOGY CO LTD	2UEW/130	130°C	UL 1446	UL E221719
Multi-layer Insulated Winding	COSMOLINK CO LTD	TIW-M	130°C	UL 1446	UL E213764 VDE:138053
Tube	CHANGYUAN ELECTRONICS GROUP CO LTD	CB-TT-S	200°C	UL 224	UL E180908
Insulating Tape	XINYU SHENGDAFENG ELECTRIC MATERIAL CO LTD	SDF-312	130°C	UL 510	UL E317896
Varnish	SUZHOU TAIHU ELECTRIC ADVANCED	T-4260(a)	130°C	UL 1446	UL E228349

Transformer (T401)	MATERIAL CO LTD Xiang Yang Rui Xin Peng Electronic Technology Co.,LTD	T1.26979S 02-ER	Class B 130°C	IEC 62368	Tested within appliance
--Bobbin	CHANGCHUN PLASTIC CO., LTD.	T375J	V-0, 150 oC,	UL 94, UL746	UL:E59481
--Wire	ZHEJIANG HONGBO TECHNOLOGY CO LTD	2UEW/130	130°C	UL 1446	UL E221719
--Multi-layer Insulated Winding	COSMOLINK CO LTD	TIW-M	130°C	UL 1446	UL E213764 VDE:13805 3
--Insulating Tape	XINYU SHENGDAFENG ELECTRIC MATERIAL CO LTD	SDF-312	130°C	UL 510	UL E317896
--Varnish	SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD	T-4260(a)	130°C	UL 1446	UL E228349
--Base	Changchun Plastic Co., Ltd.	T375HF	V-0, 150 oC,	UL 94, UL746	UL E59481
MYLAR	SUZHOU OMAI OPTICAL MATERIALS CO LTD	SE42B	V-0 0.4mm thick min.	UL 94, UL 746C	UL (E249605)
Alt.	SICHUAN LONGHUA FILM CO LTD	PC-870	V-0 0.4mm thick min.	UL 94, UL 746C	UL (E254551)
Alt.	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX FRPC- 870B	V-0 0.4mm thick min.	UL 94, UL 746C	UL (E315185)
Alt.	Interchangeable	Interchange able	V-0, 0.4mm thick min.	UL 94, UL 746C	UL

4.8.4	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	--

4.8.4	TABLE: Lithium coin/button cell batteries mechanical tests			N/A
(The following mechanical tests are conducted in the sequence noted.)				
			3	--
			4	--
			5	--
			6	--
			8	--
			9	--
				10
4.8.4.4	TABLE: Drop test			—
Impact Area		Drop Distance	Drop No.	Observations
--		--	1	
--		--	2	
--		--	3	
4.8.4.5	TABLE: Impact			—
Impacts per surface		Surface tested	Impact energy (Nm)	Comments
--		--	--	--
--		--	--	--
--		--	--	--
4.8.4.6	TABLE: Crush test			—
Test position		Surface tested	Crushing Force (N)	Duration force applied (s)
--		--	--	--
--		--	--	--
Supplementary information:				

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

5.2	Table: Classification of electrical energy sources					P
5.2.2.2 – Steady State Voltage and Current conditions						
No.	Supply	Location (e.g.	Test conditions	Parameters		ES Class

	Voltage	circuit designation)		U (Vrms or Vpk)	I (Apk or Arms)	Hz	
1	264V	Primarv circuit connected to AC mains	Normal	264	--	60	ES3
			Abnormal	--	--	--	
			Single fault –SC	--	--	--	
			Single fault –SC	--	--	--	
2	264V	UBS + to -	Normal	5.13V	--	DC	ES1
			Abnormal	5.13V	--	--	
			Single fault –	0	--	--	
3	264V	Speaker	Normal	3.75	--		ES1
			Abnormal	10.6	--	--	
			Single fault –	--	--	--	

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	--	--		
Overall capacity:							
5.2.2.4 - Single Pulses							
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

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements						P	
	Supply voltage (V) :		90V		264V		—	
	Ambient T _{min} (°C) :		--		--		—	
	Ambient T _{max} (°C) :		--		--		—	
	T _{max} (°C) :		40		40			
	Test location		See below		See below		—	
Maximum measured temperature T of part/at:			T (°C)				Allowed T _{max} (°C)	
Internal wire			65.8		62.1		80	
VR1 body			78.3		63.2		85	
L 2coil			89.6		65.3		110	
L3 coil			90.2		72.3		110	
CY3 body			85.2		68.2		125	
CY4 body			85.7		68.5		125	
PC401 body			86.8		70.1		100	
EC303 body			90.2		71.3		105	
T401 winding			96.2		85.4		110	
T401 Bobbin			93.5		84.3		Ref.	
PCB near T401			88.3		67.8		130	
PCB near IC			80.6		75.3		130	
Inside of plastic housing			77.1		55.3		Ref.	
Ambient			40.0		40.0		--	
Accessible parts:								
Outside of plastic housing			40.5		38.2		77	
Screen			36.3		33.2		71	
Output terminal			38.6		34.3		51	
Ambient			25.0		25.0		--	
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: * Temperature limit for TS1 of accessible enclosure according to Table 38.

Note 1: The apparatus was submitted and evaluated for maximum manufacturer's recommended ambient (T_{ma}) of 40°C.

Note 2: The temperatures were measured under the worse case normal mode defined in clause B.2.1.

1 kHz sine wave signal input, adjust volume to 1/8 max. Non-clipped output power. The video signal is three vertical bar signal, adjust the brightness and contrast to maximum value: HDMI mode, each USB 2.0 loaded with 0.5A.

Note 3: Temperature limits are calculated as follows:

Winding components providing safety isolation: Class B→T_{max} =120-10=110 °C

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

5.4.1.10.3	TABLE: Ball pressure test of thermoplastics		P
Allowed impression diameter (mm) :		≤ 2 mm	—
Object/Part No./Material		Test temperature (°C)	Impression diameter (mm)
Power switch		125	1.1
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 to N	420	250	--	1.5	>6.0	2.5	>6.0
Primary to secondary (for internal power supply)	496	250	--	3.0	>6.0	5.0	>6.0
Live parts and accessible parts	496	250	--	3.0	>6.0	5.0	>6.0
Transformer core to transformer secondary pins	496	250	--	3.0	>6.0	5.0	>6.0
Transformer core to secondary components	496	250	--	3.0	>6.0	5.0	>6.0
Supplementary information:							
Note 1: Only for frequency above 30 kHz							
Note 2: See table 5.4.2.4 if this is based on electric strength test							
Note 3: Provide Material Group							

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 to N		2500	1.5	> 1.5
Primary to secondary(for internal power supply)		4000	1.5	> 6.0
Live parts and accessible parts		4000	5.0	> 6.0
Transformer core to transformer secondary pins		4000	5.0	> 6.0
Transformer core to secondary components		4000	5.0	> 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)
Insulation sheet	420	--	Polybutylene Terephthalate	0.4	Min. 0.4
Supplementary information:					

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Basic/supplementary:				
L and N before fuse F1 (fuse disconnected)		DC	2500	No
Reinforced:				
Unit primary to secondary (Display surface with metal foil)		DC	4000	No
Unit primary to secondary		DC	4000	No

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
L and N before fuse F1 (fuse disconnected)		DC	2500	No
T401 primary and secondary winding		DC	4000	No
T401 secondary winding and core		DC	4000	No
One layer insulation tape		DC	4000	No
L/N to enclosure		DC	4000	No
Supplementary information:				

5.5.2.2	TABLE: Stored discharge on capacitors				P
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification
264VAC,60Hz	L to N	N	ON	0	ES1
264VAC,60Hz	L to N	N	OFF	0	ES1
Supplementary information:					
X-capacitors installed for testing are: PX1					
☐ bleeding resistor rating:					
☐ ICX:					
Notes:					
A. Test Location:					
Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth					
B. Operating condition abbreviations:					
N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition					

5.6.6.2	TABLE: Resistance of protective conductors and terminations				N/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)

	3	--
	4	--
	5	--
	6	--
	--	--
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
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s*)	PS Classification	
INPUT	All primary circuit connected to AC mains	Power (W) :	--	--	PS3 (Declared)	
		VA (V) :	--	--		
		IA (A) :	--	--		
USB	Output + to-normal condition	Power (W) :	2.5W	--	PS1	
		VA (V) :	5V	--		
		IA (A) :	0.5A	--		
For other output connectors	Normal operation	Power (W) :	0	0	PS1	
		VA (V) :	0	0		
		IA (A) :	0	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 (V _p)	Measured r.m.s current (I _{rms})	Calculated value (V _p x I _{rms})	Arcing PIS? Yes / No	
Primary circuits and secondary circuit / parts except for RJ45 data port				Yes (Declaration)	

Supplementary information:

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

6.2.3.2	Table: Determination of Potential Ignition Sources (Resistive PIS)					P
Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured wattage or VA During first 30 s (W / VA)	Measured wattage or VA After 30 s (W / VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No	
Primary circuits and secondary circuit / parts except for RJ45 data port	--	--	--	--	Yes (Declaration)	

Supplementary Information:

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

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

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

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

Supplementary information:

B.2.5		TABLE: Input test					P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
90V/50Hz	7.86	--	--	--	F1	7.86	EUT loading Max
90V/60Hz	7.85	--	--	--	F1	7.85	
100V/50Hz	7.83	8	--	--	F1	7.83	
100V/60Hz	7.82	8	--	--	F1	7.82	
240V/50Hz	7.81	8	--	--	F1	7.81	
240V/60Hz	7.80	8	--	--	F1	7.80	
264V/50Hz	7.77	--	--	--	F1	7.77	
264V/60Hz	7.76	--	--	--	F1	7.76	
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
Ambient temperature (°C)					25.0			—
Power source for EUT: Manufacturer, model/type, output rating ...					See page 2 for details			—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Openings	Blocked	264Vac	50min	F1	0.263	Type K	Measured max. temperature: T401 coil:85.2°C T401 core:82.3°C Outside of plastic housing :45.3°C	Unit normal operation, no damage, no hazards.
Speaker	Max. non clipped output	264Vac	2h50min	F1	0.263→0.285	Type K	--	Unit normal operation, no damage, no hazards.
Supplementary information: * There is no voltage and current output, only used for data transmission. - 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. -Temperature limit for component: PCB, Y-cap, , Winding: 165°C, Enclosure External: 77 °C - Comply with Hi-pot test including insulation component after the abnormal test.								

B.4		TABLE: Fault condition tests						P	
Ambient temperature (°C)					25			—	
Power source for EUT: Manufacturer, model/type, output rating ...					See page 2 for details			—	
Component No.	Fault Condition	Supply voltage, (V)	Test time	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation	
USB port	S/C	264	10 min	PF1	0.263→ 0.246	--	--	The unit shutdown immediately. no damaged, no hazards.	
Speaker	S/C	264	10 min	PF1	0.263→ 0.251	--	--	Unit normal operation, no damage, no hazards	
Supplementary information: - SC=short circuit; OC=open circuit; OL=over load; BL=block. 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.									

Annex M	TABLE: Batteries								N/A	
The tests of Annex M are applicable only when appropriate battery data is not available										
Is it possible to install the battery in a reverse polarity position?..... :										
	Non-rechargeable batteries			Rechargeable batteries						
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging		
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	
Max. current during normal condition	--	--	--	--	--	--	--	--	--	--
Max. current during fault condition (Shorted D1AP1 Pin 2-3)	--	--	--	--	--	--	--	--	--	--
Test results:							--		Verdict	
- Chemical leaks							--		--	
- Explosion of the battery							--		--	
- Emission of flame or expulsion of molten metal							--		--	
- Electric strength tests of equipment after completion of tests							--		--	

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

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)		
--	--	--	--	--	--	
--	--	--	--	--	--	
Supplementary Information:						

Battery identification	Charging at T _{lowest} (°C)	Observation	Charging at T _{highest} (°C)	Observation
--	--	--	--	--
--	--	--	--	--
Supplementary Information:				

Annex Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)					P
Note: Measured UOC (V) with all load circuits disconnected:						
Output Circuit	Components	Uoc (V)	Isc (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
USB2.0	Normal working	5.13	1.3	8	5.78	100
RJ45	Normal working	5	0	8	0	100
HDMI	Normal working	3.00	0	8	0	100
VGA	Normal working	4.98	0	8	0	100
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	

Internal components	-	-	10	5	Clearance and creepage still complied with the requirement of this standard
External enclosure	Metal	Min 1.2mm	250	5	Enclosure remained intact, no crack/opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.
Supplementary information:					

T.6, T.9	TABLE: Impact tests				P
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation	
Enclosure	Glass	Min 1.4mm	480	Enclosure remained intact, no crack/opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Supplementary information:					

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

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

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

ATTACHMENT TO TEST REPORT IEC 62368-1
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
(Audio/video, information and communication technology equipment Part 1: Safety requirements)

Differences according to : EN 62368-1:2014+A11:2017

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

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		
4.1.15	Denmark, Finland, Norway and Sweden: Class I pluggable equipment type A marking		N/A
4.7.3	United Kingdom: Torque test socket-outlet BS 1363, and the plug part BS 1363.		N/A
5.2.2.2	Denmark: Warning for high touchcurrent		N/A
5.4.11.1 and Annex G	Finland and Sweden: Separation of the telecommunication network from earth		N/A
5.5.2.1	Norway: Capacitors rated for the applicable line-to-line voltage (230 V).		N/A
5.5.6	Finland, Norway and Sweden: Resistors used as basic safeguard or bridging basic insulation comply with G.10.1 and G.10.2.		N/A
5.6.1	Denmark: Protection for pluggable equipment type A; integral part of the equipment		N/A

EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.6.4.2.1	Ireland and United Kingdom: The protective current rating is taken to be 13 A		N/A
5.6.5.1	Ireland and United Kingdom: Conductor sizes of flexible cords to be accepted by terminals for equipment rated 10 A to 13 A		N/A
5.7.5	Denmark: The installation instruction affixed to the equipment if high protective conductor current		N/A
5.7.6.1	Norway and Sweden: Television distribution system isolation text in user manual		N/A
5.7.6.2	Denmark: Warning for high touch current		N/A
B.3.1 and B.4	Ireland and United Kingdom: Tests conducted using an external miniature circuit breaker or protective devices included as an integral part of the direct plug-in equipment		N/A
G.4.2	Denmark: Appliances rated ≤ 13 A provided with a plug according to DS 60884-2-D1:2011.		N/A
	Class I equipment provided with socket-outlets provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.		N/A
	If a single-phase equipment having rated >13 A or poly-phase equipment provided with a supply cord with a plug, plug in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.		N/A
	Mains socket outlets intended for providing power to Class II apparatus rated 2,5 A in accordance with DS 60884-2-D1:2011 standard sheet DKA 1-4a.		N/A
	Other current rating socket outlets in compliance with Standard Sheet DKA 1-3a or DKA 1-1c.		N/A
	Mains socket-outlets with earth in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a		N/A
G.4.2	United Kingdom: The plug part of direct plug-in equipment assessed to BS 1363		N/A

EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.7.1	United Kingdom: Equipment fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768		N/A
G.7.1	Ireland: Apparatus provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use		N/A
G.7.2	Ireland and United Kingdom: A power supply cord for equipment which is rated over 10 A and up to and including 13 A.		N/A

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

Pictures



Fig.1



Fig.2

Pictures



Fig.3



Fig.4

Pictures



Fig.5

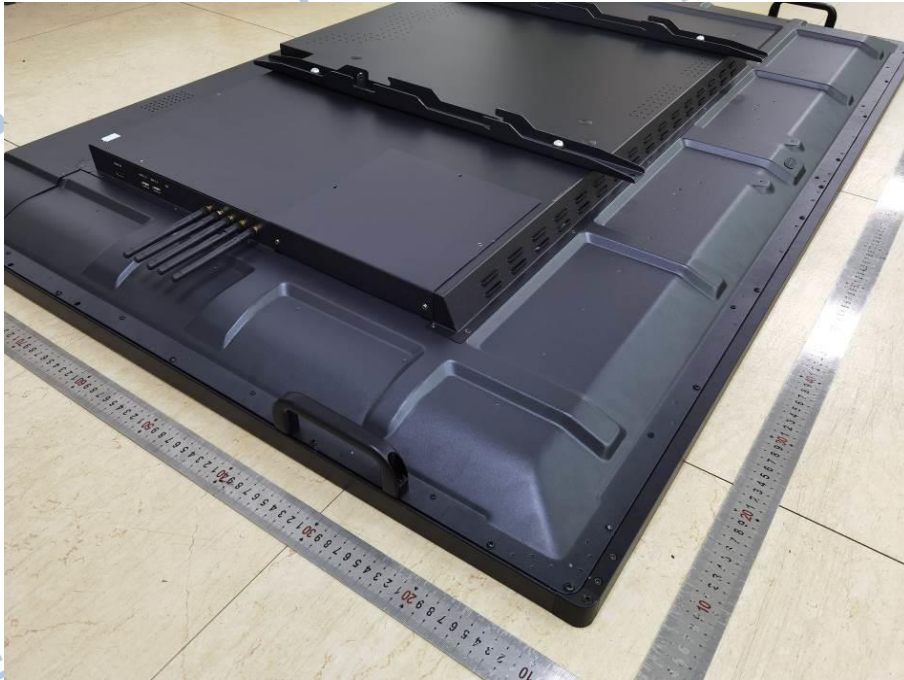


Fig.6

Pictures



Fig.7



Fig.8

Pictures

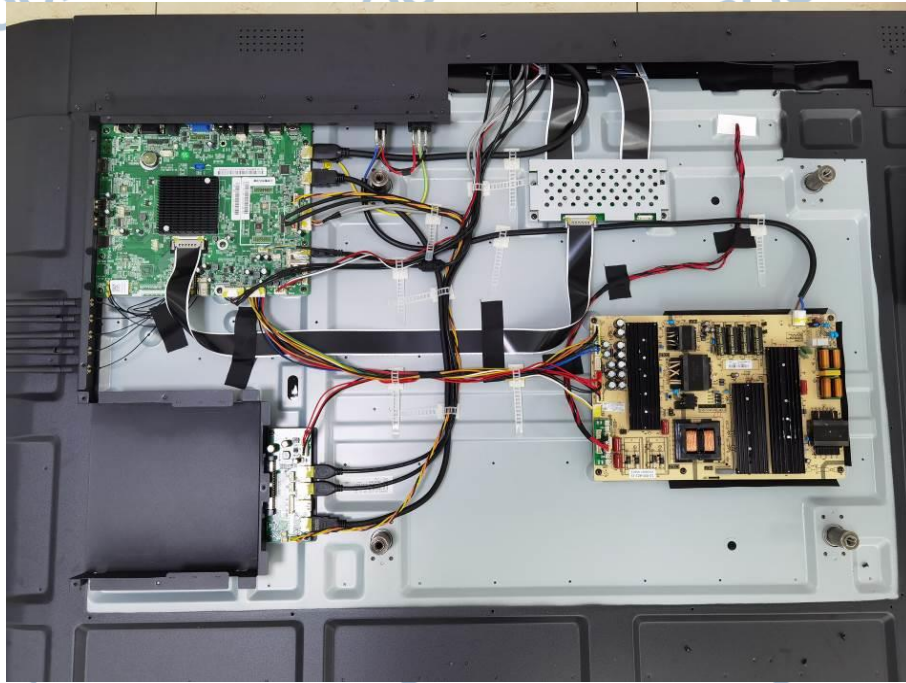


Fig.9

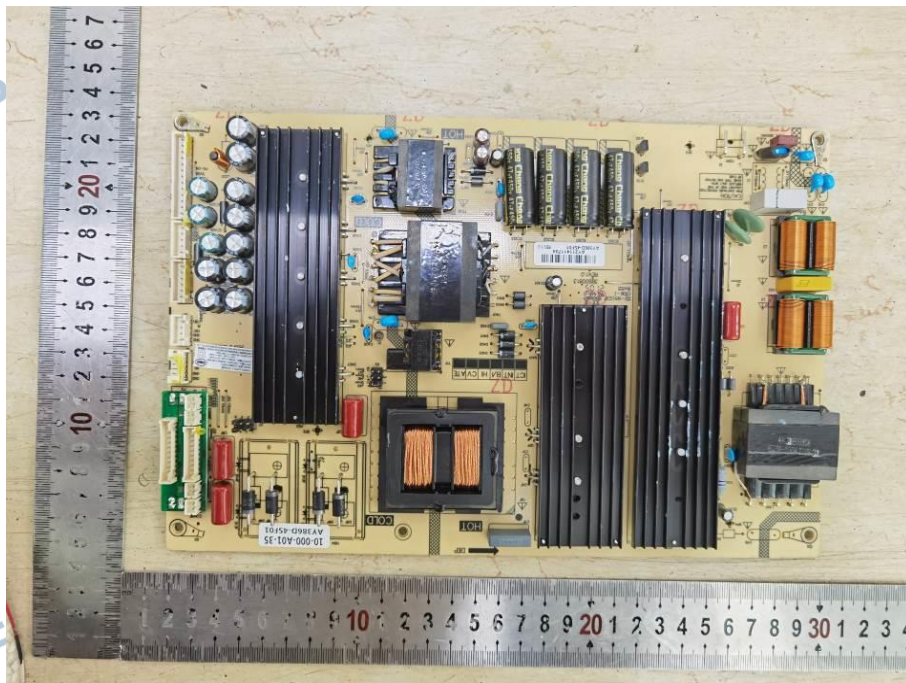


Fig.10

Pictures

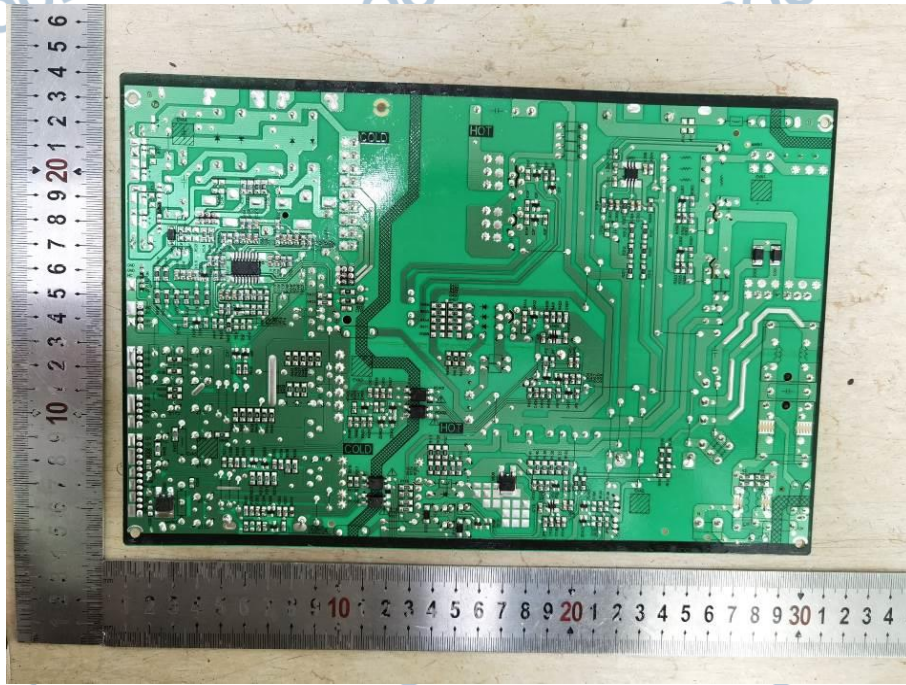


Fig.11



Fig.12

Pictures

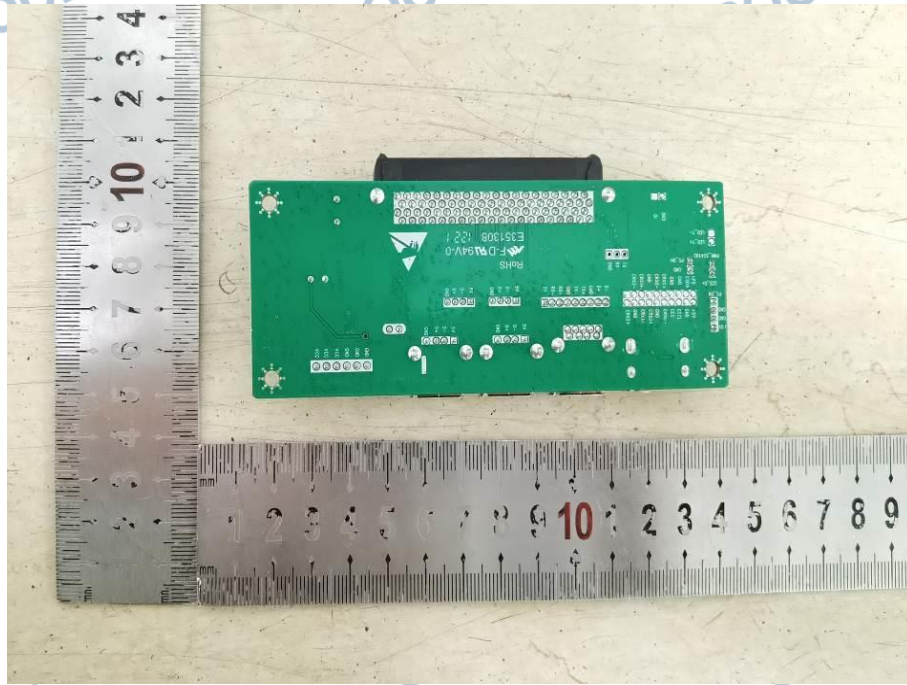


Fig.13

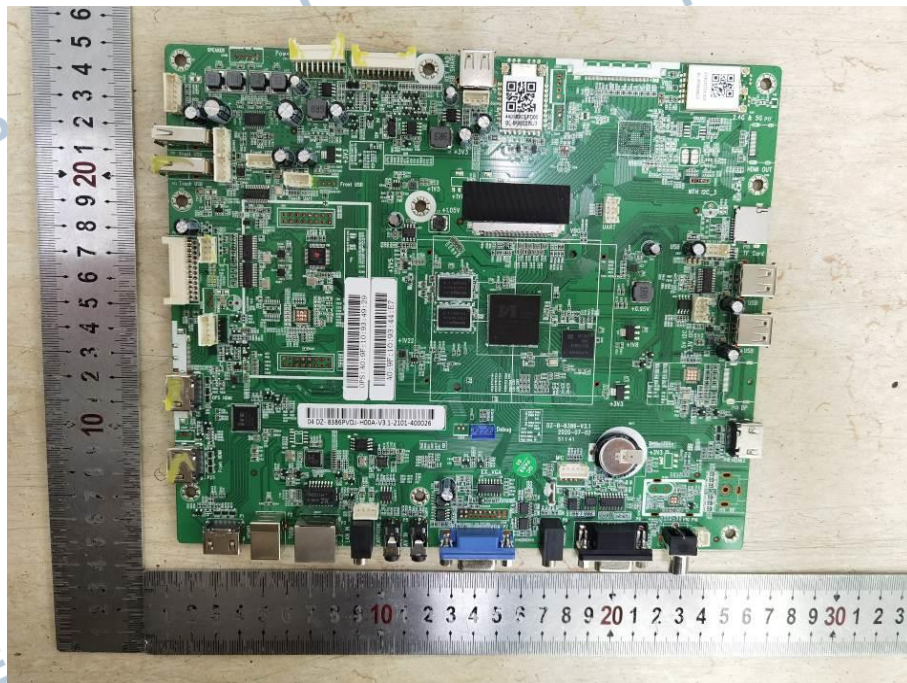


Fig.14

Pictures

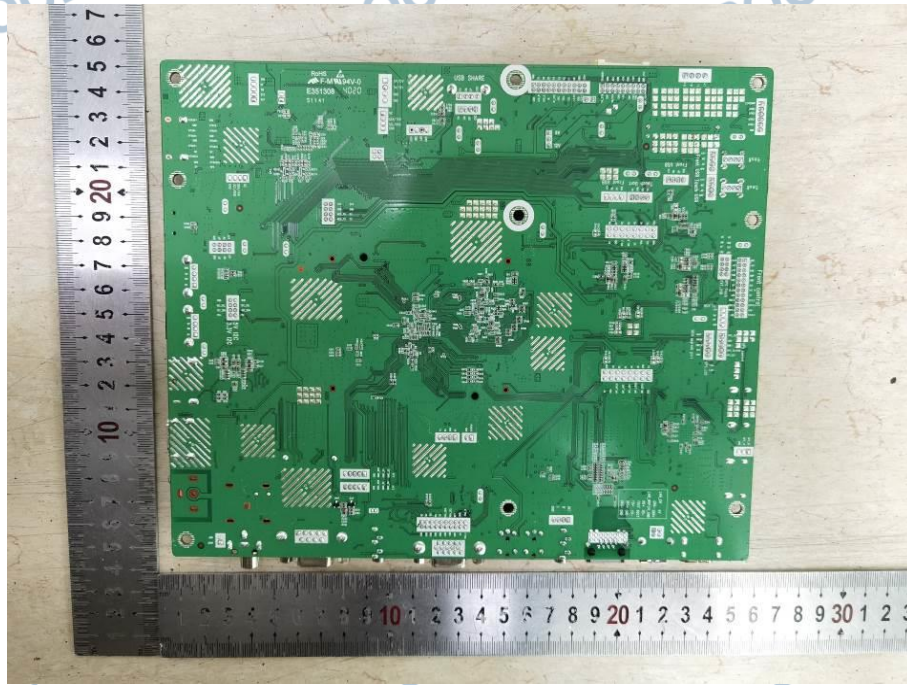


Fig.15

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