Test Report issued under the responsibility of:

TÜVRheinland®

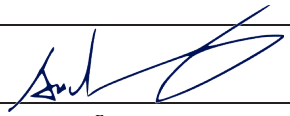
TEST REPORT
IEC 62368-1
Audio/video, information and communication technology equipment
Part 1: Safety requirements

Report Number ..... :	**CN220SYL 001**
Date of issue ..... :	2022-Aug-15
Total number of pages ..... :	81
Name of Testing Laboratory preparing the Report ..... :	**TÜV Rheinland (Shenzhen) Co., Ltd.**
Applicant's name ..... :	**TPV Electronics (Fujian) Co., Ltd.**
Address ..... :	Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian, P.R. 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 .....:		LCD MONITOR	
Trade Mark(s) .....:		AOC	
Manufacturer.....:		Same as applicant	
Model/Type reference .....:		27E3UM, 27E3********, Q27E3******** (* can be 0-9, A-Z, a-z, –, \, /, + or blank, represent different sales region and enclosure colour for marketing purpose)	
Ratings .....:		I/P: 100-240V~, 50/60Hz, 1.5A	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	TÜV Rheinland (Shenzhen) Co., Ltd.	
Testing location/ address.....:		1601-1604, 17-18F, Tower A Building 2, Shenzhen International Innovation Valley, Dashi 1st Road, Xili Street, Xili Community, Shenzhen 518052 Nanshan District, China	
Tested by (name, function, signature) .....:		Same as below	
Approved by (name, function, signature).....:		Same as below	
☒	**Testing procedure: CTF Stage 1:**	TPV Electronics (Fujian) Co., Ltd.	
Testing location/ address.....:		Shangzheng, Yuan Hong Road Fuqing City, Fujian, P.R.China	
Tested by (name, function, signature) .....:		Anderson Wang Senior Project Manager	
Approved by (name, function, signature).....:		Steven Lin Technical Reviewer	
☐	**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):

- Measurement Section (4 Pages)
- National Differences (54 Pages)
- Other National Requirements (2 pages)
- Photo documentation (8 Pages)

Summary of testing:

Tests performed (name of test and test clause):

name of test	test clause number
Classification of electrical energy sources	5.2
Accessibility to electrical energy sources and safeguards (Accessibility test)	5.3.2
Maximum operating temperature test (Heating test)	5.4.1.4, 6.3.2, 9.0, B.2.6
Determination of working voltage	5.4.1.8
Ball pressure test	5.4.1.10.3
Minimum Clearances/Creepage distance	5.4.2.2, 5.4.2.4 and 5.4.3
Humidity test	5.4.8
Electric strength test	5.4.9
Safeguards against capacitance discharge test	5.5.2.2
Resistance of the protective bonding system (Ground continuity test)	5.6.6.2
Earthed accessible conductive part test	5.7.2.2, 5.7.4
Electrical Power Source (PS) measurements for classification	6.2.2
Top Openings in Fire Enclosure	6.4.8.3.3
Bottom Openings in Fire Enclosure	6.4.8.3.4
Stability	8.6
Wall or ceiling mount loading test	8.7
Input test	Annex B.2.5
Simulated abnormal operating and single fault conditions	Annex B.3, B.4
Test for permanence of markings	Annex F.3.10
Safeguards against entry of foreign object	Annex P.2.2
Metallized coatings and adhesive securing parts	Annex P.4
Limited power source test (LPS)	Annex Q.1
Steady force test, 10N, 30N, 250N	Annex T.2, T.3, T.5
Enclosure impact test	Annex T.6
Stress relief test	Annex T.8

Testing location:

1) All tests except Ball pressure test and Wall mounting test as described in Test Case and Measurement Sections were performed at the CTF stage 1 described on page 2.

2) Ball pressure test and Wall mounting test was performed at CB Testing Laboratory described on page 2.

Summary of compliance with National Differences:

List of countries addressed:

EU Group Differences, EU Special National Conditions, AU, CA, DK, IT, JP, NZ, US

Explanation of used codes: AU = Australia, CA=Canada, DK=Demark, IT=Italy, JP=Japan, NZ = New Zealand, US=United States of America

The product fulfils the requirements of EN 62368-1:2014+ A11:2017 and BS EN 62368-1:2014 + A11: 2017.

For National Differences see corresponding Attachment.

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 NCBs that own these marks.

Note: All models rating label are identical except for type designation. Above labels are representing the other models.

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 ..... :	20 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 ☐ Class II with functional earthing ☐ Not classifed
Access location ..... :	☐ restricted access area ☒ N/A
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maxium operating ambient ..... :	40 °C
IP protection class ..... :	☒ IPX0 ☐ IP___
Power Systems ..... :	☒ TN ☐ TT ☐ IT - ____ V L-L; ☐ dc mains ☐ N/A
Altitude during operation (m) ..... :	☐ 2000 m or less ☒ 5000 m
Altitude of test laboratory (m) ..... :	☒ 2000 m or less ☐ _____ m
Mass of equipment (kg) ..... :	☒ Approx. 4.32kg (with base); Base weight: 0.67kg

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 .....:	Jun.29.2022
Date (s) of performance of tests .....:	Jun.29.2022 - Aug.09.2022

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).....:

1 TPV Electronics (Fujian) Co., Ltd.
Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian, P.R. China

2 TPV Electronics (Fujian) Co., Ltd.
Shangzheng, Yuan Hong Road, Fuqing City, Fujian, P.R. China

3 TPV Electronics (Fujian) Co., Ltd.
Optoelectronic Park, Rongqiao Economic and Technological Development Zone, Fuqing City, 350301, Fujian, P.R. China

4 L&T Display Technology (Fujian) Ltd.
Optoelectronic Park, Rongqiao Economic and Technological Development Zone, Fuqing, 350301, Fujian, P.R. China

5 TPV Display Technology (China) Co., Ltd.
No. 106 Jinghai 3 Rd., BDA, 100176, Beijing, P.R. China

6 TPV Display Technology (Wuhan) Co., Ltd.
Unique No. 11, Zhuankou Development District of Economic Technological Development Zone, 430056, Wuhan City, P.R. China

7 TPV Display Technology (Beihai) Co., Ltd.
China Electronic Beihai Industry Park, Northeast of the Crossing Between Taiwan Road and Jilin Road, Beihai City, Guangxi, P.R. China

8 Trend Smart CE Mexico S de RL de CV
Avenida Sor Juana Ines de la Cruz de 19602 Nueva Tijuana, 22435 Tijuana Baja California, MEXICO

9 Envision Indústria de Produtos Eletrônicos Ltda.
Av. Torquato Tapajós, 2236, Flores - CEP 69058-830 - Manaus/AM, Brazil

10 TPV Technology (Thailand) Co., Ltd.
No.267 Mu7, Tha Tum Sub- District, Si Maha Pho District, Prachin Buri Province, Thailand

11 GeneTouch Corp.
No. 9 Neixi Rd., Luzhu Dist., Taoyuan City, 338012, Taiwan

12 Dixon Technologies (India) Ltd.
EMC-2, Shed No. 2,4,5,6 & 7, Near Tirupati Airport, Village Govindhavaram, Munagalapalem Post, Revenue Vikruthamala, Yerpedu Mandelam,District-Chittoor, Andhra Pradesh, 517526, India

13 Fábrica Austral de Productos Eléctricos S.A.
Islas Malvinas 1180, Rio Grande (9420), Provincia de Tierra del Fuego, Antártida e Islas del Atlántico Sur, Argentina

General product information and other remarks:

Product Description –

The model is LCD MONITOR intended for general office use and has following features:

1. LCD Type: curved TFT LCD panel with LED backlight.
2. Two alternative building-in power supply boards 715GD270 and 715GD262 with DC/DC converter circuit and decoding circuit with data ports;
3. USB board 715G9632 (optional), which is supplied by power boards mentioned above
4. The internal metal chassis is considered as fire enclosure and mechanical enclosure, and the external plastic enclosure is regarded as electrical enclosure and mechanical enclosure, made of min. HB material;
5. Base stand (optional use): Plastic (HB or better) and metal;
6. Maximum declared ambient: 40°C.

Model Differences – N/A

Additional application considerations –

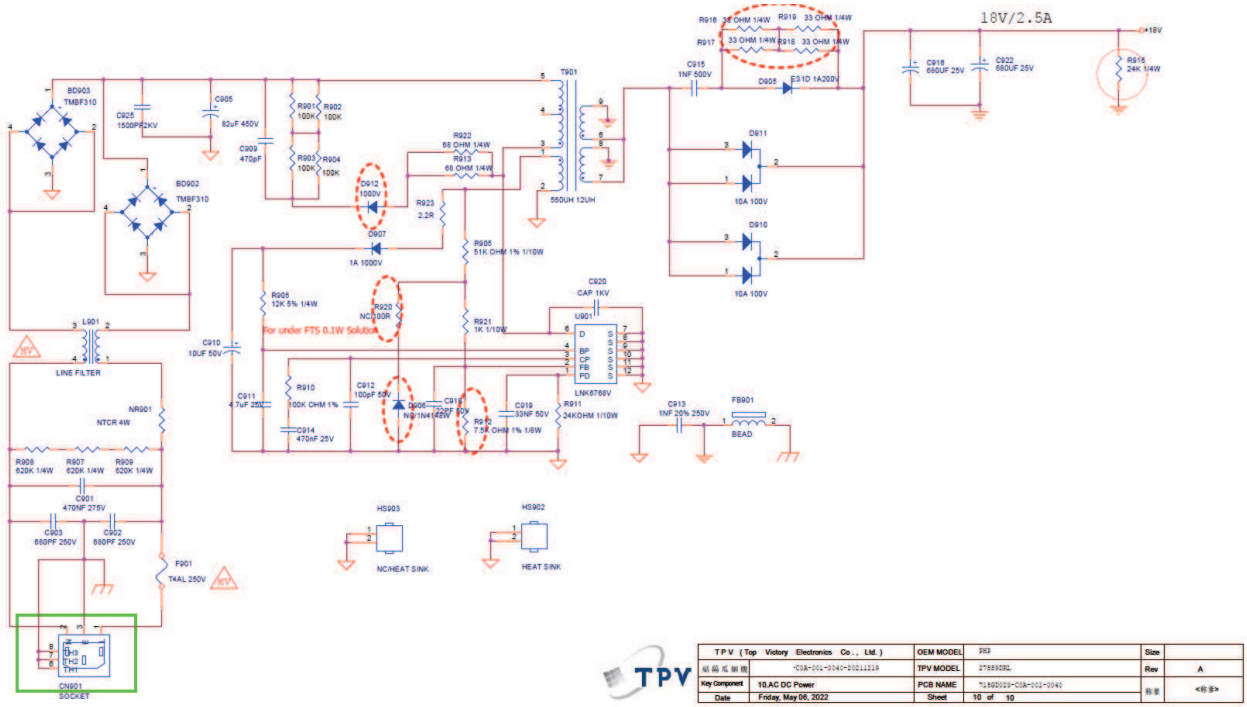
1. All models are identical except for type designation;
   Model 27E3UM is specified model of model 27E3******* listed by client's request.;
2. All data ports are optional use;
3. Other Country Differences
   Special national conditions for J3000 (H25)
   Per client's request, supplement the special national conditions for J3000 (H25) to present test report.

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.) (Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.	
Electrically-caused injury (Clause 5): (Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification) Example: +5 V dc input ES1	
Source of electrical energy	**Corresponding classification (ES)**
L/N pin of appliance inlet	ES3
Primary circuit of power boards	ES3
Output of power board	ES1
External accessible part	ES1
Electrically-caused fire (Clause 6): (Note: List sub-assembly or circuit designation and corresponding energy source classification) Example: Battery pack (maximum 85 watts): PS2	
Source of power or PIS	**Corresponding classification (PS)**
All circuit of power board	PS3
DC inputs after transformers on power board	PS2
Data ports on power board	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
Wall mount	MS3
Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.) Example: Hand-held scanner – thermoplastic enclosure TS1	
Source of thermal energy	**Corresponding classification (TS)**
Accessible parts	TS1

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
Radiation (Clause 10) (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product RS1	
Type of radiation	**Corresponding classification (RS)**
Indicating lights	RS1
LED backlight of LCD panel	RS1

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

ES3, ES1 (See Source of electrical energy for the details),
PS3, PS2 (See Source of power or PIS for the details)



Remark: Primary circuit of power board 715GD270 is identical to that of power board 715GD262.

☒ 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: L/N pin of appliance inlet	--	--	Bleeder Resistors
Ordinary	ES3: Primary circuit	Air gap	Enclosure	Transformers, Y1 capacitor
Ordinary	ES1: all DC outputs of SPS	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 inside power board	PS3	Ignition not occur	Fire enclosure	--
Combustible materials of DC output after transformer on power boards	PS2	Ignition not occur	Mounted on V-1 min. PCB	--
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	MS3: Wall mount	--	--	Compliance with test 8.7.2
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 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	RS1: Indicating lights	N/A	N/A	N/A
Ordinary	RS1: LED backlight of LCD panel	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	See appended table 4.1.2.	P
4.1.2	Use of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	P
4.1.3	Equipment design and construction	No accessible part which could cause injury.	P
4.1.15	Markings and instructions.....:	(See Annex F)	P
4.4.4	Safeguard robustness	For adhesives securing parts serving as safeguards, see Annex P.4. Others see below.	P
4.4.4.2	Steady force tests.....:	See Annex T.	P
4.4.4.3	Drop tests .....:		N/A
4.4.4.4	Impact tests .....:	See Annex T.	P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....:	See Annex T.	P
4.4.4.6	Glass Impact tests .....:	Laminated glass used.	N/A
4.4.4.7	Thermoplastic material tests.....:	Phenolic material used and described in subclauses 5.4.1.10 to 5.4.1.10.3. 70ºC, 7 hours, no deformation on all sources of plastic enclosure.	P
4.4.4.8	Air comprising a safeguard.....:		P
4.4.4.9	Accessibility and safeguard effectiveness	Compliance checked.	P
4.5	Explosion	No explosion occurs during normal/abnormal operation and single fault conditions.	P
4.6	Fixing of conductors	See below.	P
4.6.1	Fix conductors not to defeat a safeguard		P
4.6.2	10 N force test applied to .....:	See appended table 5.4.2.2, 5.4.2.4 and 5.4.3	P
4.7	Equipment for direct insertion into mains socket - outlets		N/A
4.7.2	Mains plug part complies with the relevant standard.....:		N/A
4.7.3	Torque (Nm) .....:		N/A
4.8	Products containing coin/button cell batteries	No lithium coin/button batteries used.	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.....:	Complied.	P
5	**ELECTRICALLY-CAUSED INJURY**		P
5.2.1	Electrical energy source classifications.....:	See ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE.	P
5.2.2	ES1, ES2 and ES3 limits	See below.	P
5.2.2.2	Steady-state voltage and current.....:	See appended table 5.2)	P
5.2.2.3	Capacitance limits .....:	ES3	N/A
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 .....:	(See Clause E.1)	N/A
5.3	Protection against electrical energy sources	See below.	P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	See “OVERVIEW OF EMPLOYED SAFEGUARDS” table.	P
5.3.2.1	Accessibility to electrical energy sources and safeguards	ES2 or ES3 source cannot accessed by ordinary persons and ES3 source cannot accessed by instructed persons. Double or reinforced safeguard is provided between ES2 or ES3 and ordinary persons or instructed persons.	P
5.3.2.2	Contact requirements	See below.	P
	a) Test with test probe from Annex V .....:	Test probe V.1, V.2 applied.	P
	b) Electric strength test potential (V) .....:		N/A
	c) Air gap (mm) .....:	Complied with the minimum distance requirement. (See appended table 5.4.2.2, 5.4.2.4 and 5.4.3.)	P
5.3.2.4	Terminals for connecting stripped wire	No such terminals.	N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material	Hygroscopic materials are not used for insulating material.	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.3	Humidity conditioning ..... :	(See sub-clause 5.4.8)	P
5.4.1.4	Maximum operating temperature for insulating materials ..... :	(See appended table 5.4.1.4)	P
5.4.1.5	Pollution degree ..... :	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	(See attachment: Measurement Section for the details.)	P
5.4.1.9	Insulating surfaces	Considered.	P
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	Bobbin materials of all transformers T901 are Phenolic that is accepted without further tests. Others see appended table 5.4.1.10.3.	P
5.4.1.10.2	Vicat softening temperature..... :		N/A
5.4.1.10.3	Ball pressure ..... :	See above.	P
5.4.2	Clearances	See below.	P
5.4.2.2	Determining clearance using peak working voltage	(See appended table 5.4.2.2, 5.4.2.4 and 5.4.3)	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 ..... :	2500V	—
	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 ..... :	Multiplication factor is 1.48 for altitude up to 5000.	P
5.4.3	Creepage distances ..... :	(See appended table 5.4.2.2, 5.4.2.4 and 5.4.3)	P
5.4.3.1	General	See below.	P
5.4.3.3	Material Group ..... :	Material group IIIb assumed.	—
5.4.4	Solid insulation	See below.	P
5.4.4.2	Minimum distance through insulation ..... :	No such component.	N/A
5.4.4.3	Insulation compound forming solid insulation	Alternative by 5.4.4.4.	N/A
5.4.4.4	Solid insulation in semiconductor devices	See above	P
5.4.4.5	Cemented joints		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.4.6	Thin sheet material	See below.	P
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material	Reinforced insulation.	P
	Number of layers (pcs) .....:	Min. 2.	P
5.4.4.6.3	Non-separable thin sheet material	Not used.	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	See Annex G.5	P
5.4.4.9	Solid insulation at frequencies >30 kHz .....:	(See appended Table 5.4.4.9) or (See appended Table 5.4.9)	P
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ).....:		—
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 (%).....:	95	—
	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	Method 1 is chose.	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		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).....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Nominal voltage U_{peak} (V).....:		—
	Max increase due to variation U_{sp} .....:		—
	Max increase due to ageing ΔU_{sa} .....:		—
	$U_{op}= U_{peak} + \Delta U_{sp} + \Delta U_{sa}$ .....:		—
5.5	Components as safeguards		P
5.5.1	General		P
5.5.2	Capacitors and RC units		P
5.5.2.1	General requirement	X-Cap. and Y-Cap. are IEC 60384-14 approval components and complied with Annex G.11.	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
5.5.5	Relays		N/A
5.5.6	Resistors	Approved bleeding resistors used. (See Annex G.10)	P
5.5.7	SPD's		N/A
5.5.7.1	Use of an SPD connected to reliable earthing		N/A
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable.....:		N/A
5.6	Protective conductor		P
5.6.2	Requirement for protective conductors	Protective conductor served as a supplementary safeguard to prevent accessible conductive parts from exceeding ES2 limits.	P
5.6.2.1	General requirements	No switch or overcurrent protective device in protective conductor.	P
5.6.2.2	Colour of insulation	No green-and-yellow wire used.	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	See below.	P
5.6.4.1	Protective bonding conductors	Total Cross-sectional area of protective bonding traces and metal cramp of AC inlet complied with Clause 5.6.6 and Table G.5.	P
	Protective bonding conductor size (mm^2). .....:	Min. 0.6	—
	Protective current rating (A) ..... :	20A	—

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Clause	Requirement + Test	Result - Remark	Verdict
5.6.4.3	Current limiting and overcurrent protective devices		N/A
5.6.5	Terminals for protective conductors		P
5.6.5.1	Requirement	Screws fixing earthed PCB trace to metal chassis for protective bonding. Size of screws is according with Table 32.	P
	Conductor size (mm^2), nominal thread diameter (mm). .....:	3.7 mm	P
5.6.5.2	Corrosion	Complied.	P
5.6.6	Resistance of the protective system	See below.	P
5.6.6.1	Requirements	See below.	P
5.6.6.2	Test Method Resistance (Ω).....:	(See appended table 5.6.6.2)	P
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks	Figure 5 of IEC 60990 was used in determining of the limit of ES2.	P
5.7.2.1	Measurement of touch current .....:	(See appended table 5.7.2.2, 5.7.4)	P
5.7.2.2	Measurement of prospective touch voltage	(See appended table 5.7.2.2, 5.7.4)	P
5.7.3	Equipment set-up, supply connections and earth connections	Clause 4, 5.3 and 5.4 of IEC 60990: 1999 applied.	P
	System of interconnected equipment (separate connections/single connection) .....:	Single equipment.	—
	Multiple connections to mains (one connection at a time/simultaneous connections) .....:	Single connection.	—
5.7.4	Earthed conductive accessible parts.....:	(See appended Table 5.7.4)	P
5.7.5	Protective conductor current	Protective conductor current does not exceed the ES2 limits.	P
	Supply Voltage (V).....:	240	—
	Measured current (mA).....:	0.19 (tested with normal, abnormal and single-fault condition, and maximum value was recorded.)	—
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....:		N/A
6	**ELECTRICALLY- CAUSED FIRE**		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications	See ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE.	P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault ... :	(See appended table 6.2.2)	P
6.2.2.3	Power measurement for worst-case power source fault ..... :	(See appended table 6.2.2)	P
6.2.2.4	PS1 ..... :		N/A
6.2.2.5	PS2 ..... :	(See appended table 6.2.2)	P
6.2.2.6	PS3 ..... :	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS ..... :	All components located within power board are considered as arcing PIS.	P
6.2.3.2	Resistive PIS ..... :	All components located within the equipment are considered as resistive PIS.	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		P
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	The method “Control fire spread” is selected.	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		N/A
6.4.5	Control of fire spread in PS2 circuits		P

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.5.2	Supplementary safeguards .....:	Compliance detailed as follows: – Printed board: rated min. V-1 – Wire insulation and tubing: complying with Clause 6.5 – All other components: at least V-2 except for mounted on min. V-1 material or small parts of combustible material or components complying to relevant IEC standard. – Isolating transformer: complying with G.5.3. (See appended tables 4.1.2 and Annex G)	P
6.4.6	Control of fire spread in PS3 circuit	Providing fire enclosure for PS3 circuit.	P
6.4.7	Separation of combustible materials from a PIS	Providing fire enclosure for PS3 circuit.	P
6.4.7.1	General.....:	See above.	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	See below.	P
6.4.8.1	Fire enclosure and fire barrier material properties		P
6.4.8.2.1	Requirements for a fire barrier	Metal enclosure and V-0 Mylar sheet used as fire enclosure.	P
6.4.8.2.2	Requirements for a fire enclosure	Metal enclosure and V-0 Mylar sheet used as fire enclosure.	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier	See below.	P
6.4.8.3.1	Fire enclosure and fire barrier openings		P
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm) .....:	See attachment: Measurement Section for the details.	P
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) .....:	See attachment: Measurement Section for the details.	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 in fire enclosure	N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating.....:	Metal enclosure and V-0 Mylar sheet used as fire enclosure.	P
6.5	Internal and external wiring		P

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Clause	Requirement + Test	Result - Remark	Verdict
6.5.1	Requirements	Internal or external wiring materials are compliant with IEC 60950-1 according to Sub-clause 4.1.1. Furthermore, the test method described in IEC 60695-11-21 is considered equivalent to that test wiring materials for VW-1. All internal wiring are using VW-1 material.	P
6.5.2	Cross-sectional area (mm^2) .....:	See above.	—
6.5.3	Requirements for interconnection to building wiring .....:		N/A
6.6	Safeguards against fire due to connection to additional equipment	All data ports for connections to additional equipment are L.P.S.	P
	External port limited to PS2 or complies with Clause Q.1	(See appended table Annex Q.1)	P
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	See ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE.	P
8.3	Safeguards against mechanical energy sources	See “OVERVIEW OF EMPLOYED SAFEGUARDS” table.	P
8.4	Safeguards against parts with sharp edges and corners	No sharp edges and corners in accessible area.	P
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts	No moving parts.	N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard..... :		—
8.5.4	Special categories of equipment comprising moving parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.5.4.1	Large data storage equipment	Not that 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	Not that equipment.	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	See below	P
8.6.1	Product classification	See Clause 8.2 & 8.3	P
	Instructional Safeguard.....:		—
8.6.2	Static stability	MS1 equipment.	P
8.6.2.2	Static stability test		N/A
	Applied Force .....:	See above.	—
8.6.2.3	Downward Force Test	Not floor standing equipment.	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.....:	See above.	—
8.7	Equipment mounted to wall or ceiling		P
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) .....:	No wall mounting system provided. Only four M4 x 12mm screws evaluated.	P
8.7.2	Direction and applied force.....:	Test 2: 3.65kg applied for each point (four directions plus inward and outward). Test 3: 1.2Nm applied.	P
8.8	Handles strength	No handles.	N/A
8.8.1	Classification		N/A
8.8.2	Applied Force .....:		N/A
8.9	Wheels or casters attachment requirements		N/A
8.9.1	Classification		N/A
8.9.2	Applied force .....:		—
8.10	Carts, stands and similar carriers		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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		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.....		N/A
	Button/Ball diameter (mm).....:		—
9	**THERMAL BURN INJURY**		P
9.2	Thermal energy source classifications	See ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE.	P
9.3	Safeguard against thermal energy sources	No safeguards are required for TS1.	N/A
9.4	Requirements for safeguards		N/A
9.4.1	Equipment safeguard		N/A
9.4.2	Instructional safeguard .....:		N/A
10	**RADIATION**		P
10.2	Radiation energy source classification	See below.	P
10.2.1	General classification	The following parts are considered as RS1 without tests: - Indicating lights - LED backlight of LCD panel For LED backlight, the luminance is far less than 10000 cd/m2. With reference to sub clause 4.1 of IEC 62471:2006 no further test is necessary.	P
10.3	Protection against laser radiation		N/A
	Laser radiation that exists in the equipment:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Normal, abnormal, single-fault..... :	(See attached laser test report)	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 ..... :	(See appended table B.3 & B.4)	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 :	(See appended table B.3 & B.4)	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 ..... :	(See appended table B.3 & B.4)	N/A
	Maximum radiation (pA/kg)..... :		N/A
10.6	Protection against acoustic energy sources		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output, dB(A)..... :		N/A
	Output voltage, unweighted r.m.s..... :		N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards ..... :		N/A
	Equipment safeguard prevent ordinary person to RS2..... :		—
	Means to actively inform user of increase sound		—

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Clause	Requirement + Test	Result - Remark	Verdict
	pressure..... :		
	Equipment safeguard prevent ordinary person to RS2..... :		—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output..... :		—
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A)..... :		—
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A)..... :		—
B	**NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS**		P
B.2	Normal Operating Conditions	See below.	P
B.2.1	General requirements..... :	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers ..... :	For internal speakers, adjusted to the maximum volume while testing.	P
B.2.3	Supply voltage and tolerances	±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	Normal heating tested with ventilation blocked.	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 ..... :	(See appended table B.3)	P
B.3.6	Reverse battery polarity		N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.	(See appended table B.3)	P
B.3.8	Safeguards functional during and after abnormal operating conditions	Abnormal operating condition does not lead to a single fault condition, all safeguards remain effective. After restoration of normal operating conditions, all safeguards comply with applicable requirements.	P
B.4	Simulated single fault conditions		P

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Clause	Requirement + Test	Result - Remark	Verdict
B.4.2	Temperature controlling device open or short-circuited ..... :	No such devices.	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	For traces before fuse, comply with the clearance/creepage for basic insulation, others are considered to perform short-circuited during the tests.	P
B.4.4.1	Short circuit of clearances for functional insulation	See above.	P
B.4.4.2	Short circuit of creepage distances for functional insulation	See above.	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		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	Internal speaker and its supply circuit cannot be accessible by ordinary person.	N/A
	Audio signal voltage (V) .....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	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. Versions in other languages will be provided when national certificate approval.	—
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	The equipment marking is provided and is readily visible in operator access area.	P
F.3.2	Equipment identification markings	See below.	P
F.3.2.1	Manufacturer identification .....:	See copy of marking plate.	—
F.3.2.2	Model identification .....:	See copy of marking plate.	—
F.3.3	Equipment rating markings	See below.	P
F.3.3.1	Equipment with direct connection to mains	See below.	P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage.....:	See copy of marking plate.	—
F.3.3.4	Rated voltage .....:	See copy of marking plate.	—
F.3.3.5	Rated frequency.....:	See copy of marking plate.	—
F.3.3.6	Rated current or rated power .....:	See copy of marking plate.	—
F.3.3.7	Equipment with multiple supply connections		N/A
F.3.4	Voltage setting device		N/A
F.3.5	Terminals and operating devices		P
F.3.5.1	Mains appliance outlet and socket-outlet markings..... :		N/A
F.3.5.2	Switch position identification marking ..... :		N/A
F.3.5.3	Replacement fuse identification and rating markings..... :	The fuse marking is marked near fuse on PCB as follow: F901 (on primary): T4AL/250Vac CAUTION: RISK OF FIRE REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE. Not located in operator access areas.	P

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.5.4	Replacement battery identification marking ..... :		N/A
F.3.5.5	Terminal marking location		P
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment		P
F.3.6.1.1	Protective earthing conductor terminal	Appliance inlet is provided. The symbol IEC 60417-5019 was located on appliance inlet.	P
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		N/A
F.3.6.2	Class II equipment (IEC60417-5172)		N/A
F.3.6.2.1	Class II equipment with or without functional earth		N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking .....:		—
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking	See below.	P
F.3.10	Test for permanence of markings	Marking is durable and legible. The marking plate has no curling and is not able to be removed easily.	P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking	Figure V.1 considered for test.	N/A
	b) Instructions given for installation or initial use	Provided in user’s manual.	P
	c) Equipment intended to be fastened in place	For wall mounted function, provided in user’s manual.	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	The instruction is provided in the user’s manual.	P
	g) Protective earthing conductor current exceeding ES 2 limits		N/A
	h) Symbols used on equipment	Graphical symbols not used as an instructional safeguard.	N/A
	i) Permanently connected equipment not provided with all-pole mains switch		N/A
	j) Replaceable components or modules providing safeguard function		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
F.5	Instructional safeguards	No instructional safeguard required.	N/A
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction		N/A
G	**COMPONENTS**		P
G.1	**Switches**		N/A
G.1.1	General requirements		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
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	Current fuse complying with IEC 60127 as overcurrent protection device.	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.....:	(See appended Table B.4)	N/A
G.4	**Connectors**		P
G.4.1	Spacings	The appliance inlet complied with IEC 60320-1.	P
G.4.2	Mains connector configuration .....:	The appliance inlet complied with IEC 60320-1.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely	No misconnection likely.	P
G.5	**Wound Components**		P
G.5.1	Wire insulation in wound components.....	Bobbin of all transformer used as separation for insulation between primary pins and seconary pins. Triple insulated wire of transformer T901 used as separation for insulation between primary windings and seconary windings.	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°	Physical separation provided by insulation tape or tube to relieve mechanical stress at the crossover point.	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).....:	Meet the requirements in G.5.3.2 and G.5.3.3.	P
	Position.....:	All transformer on power board	—
	Method of protection .....:	Overcurrent protection.	—
G.5.3.2	Insulation	See attachment Transformer table.	P
	Protection from displacement of windings.....:	Displacement of windings is unlikely.	—
G.5.3.3	Overload test ..... :	(See appended table B.3 & B.4)	P
G.5.3.3.1	Test conditions	Tested in the complete equipment.	P
G.5.3.3.2	Winding Temperatures testing in the unit	(See appended table B.3 & B.4)	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) .....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
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**		N/A
G.7.1	General requirements	No mains supply cord provided.	N/A
	Type..... :		—
	Rated current (A)..... :		—
	Cross-sectional area (mm^2), (AWG)..... :		—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N) ..... :		—
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm).... :		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry ..... :	(See appended table 5.4.11.1)	N/A
G.7.5	Non-detachable cord bend protection		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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**		P
G.10.1	General requirements	Approved bleeding resistors used. (See table 4.1.2 for the details)	P
G.10.2	Resistor test	See above.	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	X-Capacitors and Y-Capacitors used as safeguard and complied with IEC/EN 60384-14. (See appended table 4.1.2)	P
G.11.2	Conditioning of capacitors and RC units	At least 21 days at 40 ± 2°C and 93±3% RH.	P

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Clause	Requirement + Test	Result - Remark	Verdict
G.11.3	Rules for selecting capacitors	The selection followed with tables G.9 and G.12.	P
G.12	**Optocouplers**		N/A
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results).....:		N/A
	Type test voltage Vini .....:		—
	Routine test voltage, Vini,b .....:		—
G.13	**Printed boards**		P
G.13.1	General requirements	See below.	P
G.13.2	Uncoated printed boards	(see appended table 5.4.2.2, 5.4.2.4 and 5.4.3)	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		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

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Clause	Requirement + Test	Result - Remark	Verdict
G.16	**IC including capacitor discharge function (ICX)**		N/A
a)	Humidity treatment in accordance with sc 5.4.8 – 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		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	Triple insulated wire used in transformer (T901) was separately approved.	P
K	**SAFETY INTERLOCKS**		N/A
K.1	General requirements		N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance .....:		N/A
K.6	Mechanically operated safety interlocks		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method .....:		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) .....:		N/A
K.7.2	Overload test, Current (A).....:		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test .....:		N/A
L	**DISCONNECT DEVICES**		P
L.1	General requirements	Appliance Inlet as disconnect device.	P
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized	When the power cord is removed from the inlet no remaining parts with hazardous voltage in the equipment.	P
L.4	Single phase equipment	The disconnect device disconnects both poles simultaneously.	P
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		N/A
L.8	Multiple power sources		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
	- 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

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Clause	Requirement + Test	Result - Remark	Verdict
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature .....:		—
M.4.2.2 b)	Single faults in charging circuitry .....:		—
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		N/A
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method) .....:		N/A
M.6.2	Leakage current (mA) .....:		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume 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

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Clause	Requirement + Test	Result - Remark	Verdict
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) ..... :		N/A
N	**ELECTROCHEMICAL POTENTIALS**		P
	Metal(s) used ..... :	The internal metal enclosure is made of mild steel, screw spring washer are made of Ni on steel, the combined electrochemical potential is below 0.6V according to Annex N.	—
O	**MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES**		P
	Figures O.1 to O.20 of this Annex applied ..... :	Considered.	—
P	**SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS**		P
P.1	General requirements		P
P.2.2	Safeguards against entry of foreign object	External plastic enclosure and internal metal chassis are provided as internal barrier.	P
	Location and Dimensions (mm) ..... :	See attachment: Measurement Section for the details.	—
P.2.3	Safeguard against the consequences of entry of foreign object	See above.	P
P.2.3.1	Safeguards against the entry of a foreign object	Complied.	P
	Openings in transportable equipment		N/A
	Transportable equipment with metalized plastic parts ..... :		N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) ..... :		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts	Adhesive for Ripple Capacitor is considered as safeguard; Adhesive for Mylar sheet is considered as safeguard.	P
P.4.2 a)	Conditioning testing		P
	Tc (°C) ..... :	118.0 for Ripple Capacitor; 103.6 for adhesive for Mylar sheet.	—
	Tr (°C) ..... :	100	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Ta (°C)..... :	90.0 for Ripple Capacitor; 75.6 for adhesive for Mylar sheet.	—
P.4.2 b)	Abrasion testing ..... :		N/A
P.4.2 c)	Mechanical strength testing ..... :	After test mentioned above, all safeguards remain effective.	P
Q	**CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING**		P
Q.1	Limited power sources		P
Q.1.1 a)	Inherently limited output	(See appended table Annex Q.1)	P
Q.1.1 b)	Impedance limited output		P
	- Regulating network limited output under normal operating and simulated single fault condition	(See appended table Annex Q.1)	P
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method	(See appended table Annex Q.1)	P
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A) ..... :		—
	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**		P
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)..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material .....:		—
	Wall thickness (mm).....:		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials	See table 4.1.2 for detail	P
S.5	Flammability test for fire enclosure materials of equipment with a steady-state power exceeding 4000 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, T.3, T.4, T.5)	P
T.3	Steady force test, 30 N .....:	(See appended table T.2, T.3, T.4, T.5)	P
T.4	Steady force test, 100 N .....:		N/A
T.5	Steady force test, 250 N .....:	(See appended table T.2, T.3, T.4, T.5)	P
T.6	Enclosure impact test	(See appended table T.6, T.9)	P
	Fall test		P
	Swing test		P
T.7	Drop test .....:		N/A
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) .....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
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 EFECTS OF IMPLOSION**		N/A
U.1	General requirements		N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen.....:	(See Annex T)	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

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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]
LCD Panel	TPV	TPM270***-**** (* can be A to Z, a to z, 0 to 9, +, –, \, /, ".", "-" or blank)	27.0 inch TFT LCD (power consumption: 19.7W (typ.); LED array voltage: 60V)	--	Tested in equipment
Alt.)	LG Display	TPM270***-********* (* can be A to Z, a to z, 0 to 9, +, –, \, /,".", "-" or blank)	27.0 inch TFT LCD (power consumption: 22.9W (typ.); LED array voltage: 51V)	--	Tested in equipment
Alt.)	LG Display	LM270******** (* can be A to Z, a to z, 0 to 9, +, –, \, /,".", "-" or blank)	27.0 inch TFT LCD (power consumption: 34.94W (typ.); LED array voltage: 53.6V)	--	Tested in equipment
Alt.)	AUO	M270*****.* (* can be A to Z, a to z, 0 to 9, +, –, \, /,".", "-" or blank)	27.0 inch TFT LCD (power consumption: 27.85W (typ.); LED array voltage: 42.9V)	--	Tested in equipment
Alt.)	AUO	M270*****.* (* can be A to Z, a to z, 0 to 9, +, –, \, /,".", "-" or blank)	27.0 inch TFT LCD (power consumption: 31.9W (typ.); LED array voltage: 56.1V)	--	Tested in equipment
Alt.)	BOE	MV270******* (* can be A to Z, a to z, 0 to 9, +, –, \, /,".", "-" or blank)	27.0 inch TFT LCD (power consumption: 30.86W (typ.); LED array voltage: 40.6V)	--	Tested in equipment
Alt.)	BOE	MV270******* (* can be A to Z, a to z, 0 to 9, +, –, \, /,".", "-" or blank)	27.0 inch TFT LCD (power consumption: 25.12W (typ.); LED array voltage: 51V)	--	Tested in equipment

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Clause	Requirement + Test	Result - Remark	Verdict

Alt.)	INNOLUX	M270******* (* can be A to Z, a to z, 0 to 9, +, –, \, /,".", "-" or blank)	27.0 inch TFT LCD (power consumption: 27.8W (typ.); LED array voltage: 34.5V)	--	Tested in equipment
Alt.)	INNOLUX	M270******* (* can be A to Z, a to z, 0 to 9, +, –, \, /,".", "-" or blank)	27.0 inch TFT LCD (power consumption: 29W (typ.); LED array voltage: 32.1V)	--	Tested in equipment
Alt.)	LG Display	LM270******** (* can be A to Z, a to z, 0 to 9, +, –, \, /,".", "-" or blank)	27.0 inch TFT LCD (power consumption: 17.65W (typ.); LED array voltage: 51V)	--	Tested in equipment
Alt.)	SAMSUNG	LTM270******** (* can be A to Z, a to z, 0 to 9, +, –, \, /,".", "-" or blank)	27.0 inch TFT LCD (power consumption: 17.46W (typ.); LED array voltage: 40.0V)	--	Tested in equipment
Plastic Enclosure	ORINKO	ABS-3070H, HIPS-2000, ABS-340* (*=0~10)	HB or better, min. 2.0mm thickness	UL 94	UL (E328304)
Alt.)	SABIC	C6600	HB or better, min. 2.0mm thickness	UL 94	UL (E207780)
Alt.)	Chi Mei	PA-757(+)	HB or better, min. 2.0mm thickness	UL 94	UL (E56070)
Alt.)	Chi Mei	PC345(+)	HB or better, min. 2.0mm thickness	UL 94	UL (E56070)
Alt.)	LG	HF-350, HF-380	HB or better, min. 2.0mm thickness	UL 94	UL (E67171)
Alt.)	LG	SE-750, XG-568, XG-569C, GP-1000L, SE885	HB or better, min. 2.0mm thickness	UL 94	UL (E67171)
Alt.)	LOTTE CHEMICAL CORPORATION	SD-0150(+)	HB or better, min. 2.0mm thickness	UL 94	UL (E115797)
Alt.)	Basf	GP-35, GP-22	HB or better, min. 2.0mm thickness	UL 94	UL (E41871)

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Clause	Requirement + Test	Result - Remark	Verdict

Alt.)	Grand	D-150	HB or better, min. 2.0mm thickness	UL 94	UL (E88637)
Alt.)	KingFa	5197	HB or better, min. 2.0mm thickness	UL 94	UL (E171666)
Alt.)	LOTTE CHEMICAL CORPORATION	BF-0677(+), BF-0675(+), BF-0670F	HB or better, min. 2.0mm thickness	UL 94	UL (E115797)
Alt.)	LOTTE CHEMICAL CORPORATION	GC-0700(+), GC-0750(+), HS-7000RA, LX-0951(+), LX-0957(+), HG-0760(+)	HB or better, min. 2.0mm thickness	UL 94	UL (E115797)
Alt.)	KingFa	RS-900, GAR-011 C, GAR-011(L65), GAR-011(L85), GAR-011(HG6), RS-300, RS-400, CK-100, RD-900	HB or better, min. 2.0mm thickness	UL 94	UL (E171666)
Alt.)	Haier	HRABS-RS, HRABS-HG	HB or better, min. 2.0mm thickness	UL 94	UL (E230779)
Alt.)	DOOSAN CORPORATION ELECTRO-MATERIALS BG	DS-1107A, DS-1202G, DS-7106	HB or better, min. 2.0mm thickness	UL 94	UL (E103670)
Alt.)	TOTAL PETROCHEMICALS SOUTH EAST ASIA PTE LTD	3441, 260-XX	HB or better, min. 2.0mm thickness	UL 94	UL (E314268)
Alt.)	WISTRON	GA35, NC30, GA(M)(b)(c)	HB or better, min. 2.0mm thickness	UL 94	UL (E359575)
Alt.)	WISTRON	GC(t) (t)-Replace the one, two, three or four numbers and/or letters to denote to serial number	HB or better, min. 2.0mm thickness	UL 94	UL (E359575)
Alt.)	WOTE	2100	HB or better, min. 2.0mm thickness	UL 94	UL (E310240)
Alt.)	SABIC	C6600	HB or better, min. 2.0mm thickness	UL 94	UL (E207780)
Alt.)	CHI MEI	PA-756S	HB or better, min. 2.0mm thickness	UL 94	UL (E56070)

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Clause	Requirement + Test	Result - Remark	Verdict

Alt.)	UNIC	UR-3006+, UR-200+ (+: A to Z)	HB or better, min. 2.0mm thickness	UL 94	UL (E135175)
Alt.)	UNIC	UR-200+ (+: A to Z)	HB or better, min. 2.0mm thickness	UL 94	UL (E135175)
Alt.)	KingFa	CK-55111	HB or better, min. 2.0mm thickness	UL 94	UL (E171666)
Alt.)	PONTEX	AFE5000N, AFE5100N, 9004BK	HB or better, min. 2.0mm thickness	UL 94	UL (E205938)
Alt.)	CHI LIN	GA1535	HB or better, min. 2.0mm thickness	UL 94	UL (E177071)
Alt.)	LOTTE CHEMICAL CORPORATION	HR-1360(+)	HB or better, min. 2.0mm thickness	UL 94	UL (E115797)
Alt.)	LOTTE CHEMICAL CORPORATION	SD-0150T	HB or better, min. 2.0mm thickness	UL 94	UL (E115797)
Alt.)	KingFa	HP-126	HB or better, min. 2.0mm thickness	UL 94	UL (E171666)
Alt.)	KingFa	CK-61506	HB or better, min. 2.0mm thickness	UL 94	UL (E171666)
Alt.)	WISTRON	GA65, GA85	HB or better, min. 2.0mm thickness	UL 94	UL (E359575)
Alt.)	FUHENG	FH-HIPS-568	HB or better, min. 2.0mm thickness	UL 94	UL (E234833)
Alt.)	LOTTE CHEMICAL CORPORATION	ABF-0200E	HB or better, min. 2.0mm thickness	UL 94	UL (E115797)
Alt.)	UNIC	UP700, UR-7085+(R90)	HB or better, min. 2.0mm thickness	UL 94	UL (E135175)
Alt.)	LG	AF-365	HB or better, min. 2.0mm thickness	UL 94	UL (E17671)
Alt.)	GON	ABS 2115, ABS21(xx)G-A, ABS2030A, ABS20(xx)B	HB or better, min. 2.0mm thickness	UL 94	UL (E330547)
Alt.)	DONGGUAN HINGLONG PLASTIC TECHNOLOGY CO LTD	HL-ABS-PCR85	HB or better, min. 2.0mm thickness	UL 94	UL (E345434)
Alt.)	GUO HENG	YOUHO(1302)(B) YOUHO(1303)(B)	HB or better, min. 2.0mm thickness	UL 94	UL (E471190)

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Clause	Requirement + Test	Result - Remark	Verdict

Alt.)	GUO HENG	YOUHO(1304)(B) YOUHO(1333)(B) YOUHO(1303)(OP)	HB or better, min. 2.0mm thickness	UL 94	UL (E471190)
Alt.)	GUOHENG	YOUHO(####)(Y) YOUHO-1303B, YOUHO1312B	HB or better, min. 2.0mm thickness	UL 94	UL (E471190)
Alt.)	Chongqing Gengye New Materials Technology Co Ltd	GU-022	HB or better, min. 2.0mm thickness	UL 94	UL (E514505)
Alt.)	LG	GN-1002F(m)	HB or better, min. 2.0mm thickness	UL 94	UL (E248280)
Alt.)	LOTTE CHEMICAL CORPORATION	NH-1027HF, NH-1027(+)	HB or better, min. 2.0mm thickness	UL 94	UL (E115797)
Alt.)	ORINKO	ABS900F23	HB or better, min. 2.0mm thickness	UL 94	UL (E328304)
Alt.)	FORMOSA CHEMICALS & FIBRE CORP PLASTICS DIV	AC2820	HB or better, min. 2.0mm thickness	UL 94	UL (E162823)
Alt.)	KINGFA SCI & TECH CO LTD	JH960 62(M4), JH960 62(M4) (ccc) (##), JH960-62(M4) (ccc) (##)	HB or better, min. 2.0mm thickness	UL 94	UL (E171666)
Alt.)	CHI MEI CORPORATION	PC-110(+)	HB or better, min. 2.0mm thickness	UL 94	UL (E56070)
Alt.)	Chongqing Gengye New Materials Technology Co Ltd	Ecorex® RN - +(R #)	HB or better, min. 2.0mm thickness	UL 94	UL (E514505)
Alt.)	Formosa Idemitsu Petrochemical Corp	#1900+(f2)	HB or better, min. 2.0mm thickness	UL 94	UL (E238753)
Mylar sheet (between power board and panel plate; On metal enclosure for covering opening)	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX FRPC-1880, KLX FRPC-1890	min. 0.4mm thickness, min. V-0, 115°C	UL 94	UL E315185

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Clause	Requirement + Test	Result - Remark	Verdict

Alt.)	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX PP BK-10, KLX PP WT-10	min. 0.4mm thickness, min. V-0, 110°C	UL 94	UL E315185
Alt.)	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX PP BK-10	min. 0.4mm thickness, min. V-0, 110°C	UL 94	UL E315185
Alt.)	SICHUAN DONGFANG INSULATING MATERIAL CO LTD	DFR3A(d)	min. 0.4mm thickness, min. V-0, 110°C	UL 94	UL E199019
Alt.)	SICHUAN DONGFANG INSULATING MATERIAL CO LTD	DFPET 6023	min. 0.4mm thickness, min. V-0, 105°C	UL 94	UL E199019
Alt.)	SICHUAN DONGFANG INSULATING MATERIAL CO LTD	DFR117ECO	min. 0.4mm thickness, min. V-0, 100°C	UL 94	UL E199019
Alt.)	SHENZHEN TEESUN TECHNOLOGY CO LTD	TS-FR1370	min. 0.4mm thickness, min. V-0, 105°C	UL 94	UL E329660
Alt.)	SHENZHEN TEEBON PLASTICS TECHNOLOGY CO LTD	TB-FR65, TB-FR63, TB-FR60, TB-FR1, TB-FR60Y, TB-FR70F, TB-FR70, TB-FR183, TB-FR700, TB-FR83	min. 0.4mm thickness, min. V-0, 100°C	UL 94	UL E357515
Silica gel cap (adhered on metal enclosure inside)	JIANGSU HONGDANEWM ATERIALCO LTD	HD-87	V-0, 150°C, min. thickness 0.6mm	UL 94, UL746	UL E231325 and tested with appliance
Adhesive for Mylar sheet and Silica gel cap mentioned above	SYMBIO	DS50-A, DS50L	100°C, 0.05mm Thickness	--	Tested with appliance
Alt.)	3M CHINA CO LTD	55236, 9448A, 55230, 9495MP	100°C, 0.05mm Thickness	--	Tested with appliance

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

Alt.)	XIAMEN LABAO OPTICS & ELECTRONICS CO LTD	TD-10, LA9120	100°C, 0.05mm Thickness	--	Tested with appliance
Alt.)	NITTO DENKO CORP	GA835	100°C, 0.05mm Thickness	--	Tested with appliance
Alt.)	TESA SE	68646	100°C, 0.05mm Thickness	--	Tested with appliance
Alt.)	DEXERIALS CORP	G4000	100°C, 0.05mm Thickness	--	Tested with appliance
Switching mode power supply boards: 715GD270 and 715GD262 by TPV					
AC-Inlet (CN901)	Solteam	ST-01	10A, 250Vac	IEC/EN 60320-1, ANSI/UL60320-1	ENEC16/FI/20/10036, UL E200241
Alt.)	Zhangjiagang Huajie Electronic Co., Ltd.	SA-4S, SA-4S 1	10A, 250Vac	IEC/EN 60320-1, ANSI/UL60320-1	VDE 40003610, UL E154342
Alt.)	Zhangjiagang Huajie Electronic Co., Ltd.	SA-4S 9, SA-4S 6, SA-4S 7	10A, 250Vac	IEC/EN 60320-1, ANSI/UL60320-1	TUV R 50293856 0001-0012, UL E154342
Alt.)	Zhangjiagang Huajie Electronic Co., Ltd.	SA-4D	10A, 250Vac	EN 60320-1, ANSI/UL60320-1	TUV R 50274698 0001-0002, UL E154342
Alt.)	Rong Feng	SS-120, SS-7B	10A, 250Vac	IEC/EN 60320-1, ANSI/UL60320-1	VDE 40028101, UL E102641
Alt.)	Kunshan DLK Electronics	CDJ-3	10A, 250Vac	IEC/EN 60320-1, ANSI/UL60320-1	VDE 40010513, UL E217394
Alt.)	Kunshan DLK Electronics	CDJ-3-1	10A, 250Vac	IEC/EN 60320-1, ANSI/UL60320-1	VDE 40015913, UL E217394
Alt.)	Kunshan DLK Electronics	CDJ-7, CDJ-7 1	10A, 250Vac	IEC/EN 60320-1, ANSI/UL60320-1	SE-ENEC-2001967, UL E317189
Alt.)	TECX	TU-301 series	10A, 250Vac	ANSI/UL60320-1	UL E220004

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

Alt.)	Yueqing Hongchang	DB-14, DB-14-14-R, DB-14-05, DB-14-15, DB-14-07, DB-14-11-L, DB-14-14-L, DB-14-23	10A, 250Vac	IEC/EN 60320-1, ANSI/UL60320-1	VDE 40028645, UL E327347
Alt.)	INALWAYS ELECTRONICS INC	0707-1, 0714-1, 0711-2	10A, 250Vac	ANSI/UL60320-1	UL E94191
Alt.)	Interchangeable	Interchangeable	10A, 250Vac, 15A, 250Vac, 70°C	IEC/EN 60320-1, ANSI/UL60320-1	VDE UL
Fuse (F901 in primary)	Littelfuse Inc	382, 392 +	T4AL, 250Vac	IEC/ EN 60127-1 IEC/ EN 60127-3 UL 248-1	VDE (40018249, 126983), UL (E67006)
Alt.)	Littelfuse Inc	TE5 808	T4AL, 250Vac	IEC/ EN 60127-1 IEC/ EN 60127-3 UL 248-1	VDE (40018249, 126983), UL (E67006)
Alt.)	Conquer	MET MST PTU	T4AL, 250Vac	IEC/ EN 60127-1 IEC/ EN 60127-3 UL 248-1	VDE (40017155, 40017118, 40001462), UL (E82636)
Alt.)	Walter	SR-5, SS-5	T4AL, 250Vac	IEC/ EN 60127-1 IEC/ EN 60127-3 UL 248-1	VDE (40020046, 40015513), UL (E19180)
Alt.)	Ever Island Electric Co., Ltd. & Walter Electric	2000, 2010 series	T4AL, 250Vac	IEC/ EN 60127-1 IEC/ EN 60127-3 UL 248-1	VDE (40018790, 40018781), UL (E220181)
Alt.)	Littelfuse Inc	877	T4AL, 250Vac	IEC/ EN 60127-1 IEC/ EN 60127-3 UL 248-1	VDE (40033369), UL (E300003)
Alt.)	Better	932	T4AL, 250Vac	IEC/ EN 60127-1 IEC/ EN 60127-3 UL 248-1	VDE (40018249, 126983), UL (E67006)

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

Y- Capacitor (C902, C903) Y1 or Y2 type (optional)	Walsin	AC, AH	Max. 680pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 40001804, UL E146544
Alt.)	TDK	CS, CD	Max. 680pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 40029780, UL E37861
Alt.)	Murata	KH, KX	Max. 680pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 40002831, UL E37921
Alt.)	JYA-NAY	JY, JN	Max. 680pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	UL E201384
Alt.)	Hongming	F	Max. 680pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE, UL E154899
Alt.)	Wansheng	CT7	Max. 680pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 40012143, UL E249006
Alt.)	Haohua	CT7	Max. 680pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 40003902, UL E233106
Alt.)	Samwha	SD	Max. 680pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE, UL E97754
Alt.)	Success	SE	Max. 680pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 40037218, UL E114280
Alt.)	Success	SB	Max. 680pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 40037221, UL E114280
Alt.)	Yinan Don's	CT81	Max. 680pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 135256, UL E145038
Alt.)	Interchangeable	Interchangeable	Max. 680pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE UL
Y- Capacitor (C913) Y1 type (optional)	Walsin	AH	Max. 1000pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 40001804, UL E146544
Alt.)	TDK	CD	Max. 1000pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 40029780, UL E37861
Alt.)	Murata	KX	Max. 1000pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 40002831, UL E37921

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

Alt.)	JYA-NAY	JN	Max. 1000pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	UL E201384
Alt.)	Hongming	F	Max. 1000pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE, UL E154899
Alt.)	Wansheng	CT7	Max. 1000pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 40012143, UL E249006
Alt.)	Haohua	CT7	Max. 1000pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE, UL E233106
Alt.)	Samwha	SD	Max. 1000pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE, UL E97754
Alt.)	Success	SE	Max. 1000pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 40037218, UL E114280
Alt.)	Success	SB	Max. 1000pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 40037221, UL E114280
Alt.)	Yinan Don's	CT81	Max. 1000pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE 135256, UL E145038
Alt.)	Interchangeable	Interchangeable	Max. 1000pF, 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	VDE UL
X-Capacitor (X1 or X2 type) (C901) (optional)	Ultra Tech Xiphi	HQX	Max. 0.47µF, Min. 250Vac, 110°C	IEC/EN 60384-14 UL 60384-14	VDE 40024534, UL E183780
Alt.)	Faratronic	MKP62	Max. 0.47µF, Min. 250Vac, 110°C	IEC/EN 60384-14 UL 60384-14	VDE, UL E186600
Alt.)	Hua Jung	MKP	Max. 0.47µF, Min. 250Vac, 110°C	IEC/EN 60384-14 UL 60384-14	ENEC(Semko), UL E149075
Alt.)	Nanjing Tengen Rongguangda	MKP	Max. 0.47µF, Min. 250Vac, 100°C	IEC/EN 60384-14 UL 60384-14	VDE 40028680, UL E200596
Alt.)	Europtronic	MPX, MPX2	Max. 0.47µF, Min. 250Vac, 110°C	IEC/EN 60384-14 UL 60384-14	VDE 40025981, UL E211347
Alt.)	Liow Gu	GS-L	Max. 0.47µF, Min. 250Vac, 110°C	IEC/EN 60384-14 UL 60384-14	VDE 40023391, UL E186321
Alt.)	Arcotronics (KEMET)	R.46	Max. 0.47µF, Min. 250Vac, 125°C	IEC/EN 60384-14 UL 60384-14	ENEC DAT97000141, UL E97797

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

Alt.)	EPCOS	B3292#	Max. 0.47μF, Min. 250Vac, 110°C	IEC/EN 60384-14 UL 60384-14	VDE 40010694, UL E97863
Alt.)	ZhuHai Sung Ho Electronics Co., Ltd.	CMPP	Max. 0.47μF, Min. 250Vac, 110°C	IEC/EN 60384-14 UL 60384-14	VDE 40026078, UL E327138
Alt.)	Interchangeable	Interchangeable	Max. 0.47μF, Min. 250Vac, 110°C	IEC/EN 60384-14 UL 60384-14	VDE UL
Bleeder Resistor (R907, R908, R909)	Guangdong Fenghua Advanced Technology Holding Co., Ltd.	RVS-06#xxxFT series	Max. 620kΩ, min. 1/4W	IEC 62368-1	CB issued by NEMKO (CB cert No. NO99692)
Alt.)	Guangdong Fenghua Advanced Technology Holding Co., Ltd.	RS-06#xxxFT series	Max. 620kΩ, min. 1/4W	IEC 62368-1	CB issued by NEMKO (CB report No. 337017)
Alt.)	Yageo Corporation	RV1206XX-0782K1L	Max. 620kΩ, min. 1/4W	IEC 62368-1	CB issued by UL(CB cert No. DK-64853-UL)
Alt.)	Yageo Corporation	RV1206 series	Max. 620kΩ, min. 1/4W	IEC 62368-1	CB issued by UL(CB report No. E491387-4787887815-1 Original)
Alt.)	Tzai Yuan Enterprise Co., Ltd.	HSMD*********, SMD*********	Max. 620kΩ, min. 1/4W	IEC 62368-1	CB issued by UL (CB cert No. DK-29431-A1-M1-UL)
Alt.)	Interchangeable	Interchangeable	Max. 620kΩ, min. 1/4W	IEC 62368-1	CB
Line Choke (L901) (Optional)	CHANNELON (JIANGSU HAIAN)	373G0174602H	105°C	--	--
Alt.)	LFDJ	373G0174602J	105°C	--	--
Alt.)	TC	373G0174602S	105°C	--	--
Transformer (T901)	PHOENIX	380GL32P783P	Min. Class 130 material (B)	Applicable parts of IEC 62368-1 and according to IEC 60085	Accepted by TÜV Rheinland
-Bobbin	Sumitomo	PM-9750 PM-9823	V-0, 150°C, min. 0.45mm thick	UL94	UL E41429

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Clause	Requirement + Test	Result - Remark	Verdict

-Triple insulation wire	SUZHOU YUSHENG	TIW-B*, TIW-B	130°C	IEC/EN 62368-1, VDE0805 Teil1, UL 2353	UL E332529 VDE 40033527
- Insulation tape	YAHUA	CT* (c)(g)	130°C	UL510	UL E165111
-Tube	GREAT HOLDING	TFL	PTFE, 200°C, VW-1	UL224	UL E156256
Transformer (T901) Alt.)	LFDJ	380GL32P783J	Min. Class 130 material (B)	Applicable parts of IEC 62368-1 and according to IEC 60085	Accepted by TÜV Rheinland
-Bobbin	Sumitomo CHANG CHUN	PM-9750 T200HF	V-0, 150°C, min. 0.45mm thick	UL94	UL E41429 UL E59481
-Triple insulation wire	COSMOLINK CO.,LTD	TIW-M	Reinforced insulation, 130°C	IEC/EN 62368-1, VDE0805 Teil1, UL 2353	VDE 138053 UL E213764
- Insulation tape	YAHUA	CT* (c)(g)	130°C	UL510	UL E165111
-Tube	GREAT HOLDING	TFL	PTFE, 200°C, VW-1	UL224	UL E156256
Transformer (T901) Alt.)	CHANNELON	380GL32P783H	Min. Class 130 material (B)	Applicable parts of IEC 62368-1 and according to IEC 60085	Accepted by TÜV Rheinland
-Bobbin	CHANG CHUN	T200HF	V-0, 150°C, min. 0.45mm thick	UL94	UL E59481
-Triple insulation wire	COSMOLINK CO.,LTD	TIW-M	Reinforced insulation, 130°C	IEC/EN 62368-1, VDE0805 Teil1, UL 2353	VDE 138053 UL E213764
- Insulation tape	YAHUA	CT* (c)(g)	130°C	UL510	UL E165111
-Tube	GREAT HOLDING	TFL	PTFE, 200°C, VW-1	UL224	UL E156256
Components listed below are not regarded critical components:					
P.C.B	Interchangeable	Interchangeable	V-1 or better Min. 105°C.	UL 796	UL
Base stand (optional)	Interchangeable	Interchangeable	HB or better	UL 94	UL
Metal enclosure	Interchangeable	Interchangeable	Metal thickness: min. 0.81mm	--	--
Thermistor (NR901)	Interchangeable	Interchangeable	Min. 3Ω at 25°C, min. 2A	--	--
Bridging Diode (BD902, BD903)	Interchangeable	Interchangeable	Min.500V, min.2A	--	--

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

Ripple Capacitor (C905)	Interchangeable	Interchangeable	47-180μF, max. 450V, 105°C	--	--

Supplementary information:

1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.

2) In the technical data column of optocoupler, where “Dti” means distance through insulation, “Int. cr” means internal creepage distance, and “Ext. cr” means external creepage distance.

4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests	N/A

(The following mechanical tests are conducted in the sequence noted.)

4.8.4.2	TABLE: Stress Relief test	—

Part	Material	Oven Temperature (°C)	Comments

4.8.4.3	TABLE: Battery replacement test	—

Battery part no. .....:		—
Battery Installation/withdrawal	Battery Installation/Removal Cycle	Comments
	1	
	2	
	3	
	4	
	5	
	6	
	8	
	9	
	10	

4.8.4.4	TABLE: Drop test	—

Impact Area	Drop Distance	Drop No.	Observations
		1	
		2	
		3	

4.8.4.5	TABLE: Impact	—

Impacts per surface	Surface tested	Impact energy (Nm)	Comments

4.8.4.6	TABLE: Crush test	—

Test position	Surface tested	Crushing Force (N)	Duration force

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

			applied (s)
Supplementary information:			

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

5.2	Table: Classification of electrical energy sources	P

5.2.2.2 – Steady State Voltage and Current conditions

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				U (Vrms or Vpk)	I (Apk or Arms)	Hz	
1	264V, 60Hz	+18V output of power board 715GD270 to "-"/ GND	Normal	18.5 Vdc	--	--	ES1
			Abnormal – (see table B.3 for details, maximum result recorded)	18.5 Vdc	--	--	
			Single fault – (see table B.4 for details, maximum result recorded)	18.5 Vdc	--	--	
2	264V, 60Hz	+18V output of power board 715GD262 to "-"/ GND	Normal	18.4 Vdc	--	--	ES1
			Abnormal – (see table B.3 for details, maximum result recorded)	18.4 Vdc	--	--	
			Single fault – (see table B.4 for details, maximum result recorded)	18.4 Vdc	--	--	

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Clause	Requirement + Test	Result - Remark	Verdict

3	264V, 60Hz	LED backlight output of power board 715GD270 to "-" /GND	Normal	34.1Vdc	--	--	ES1
			Abnormal – (see table B.3 for details, maximum result recorded)	34.1Vdc	--	--	
			Single fault – (see table B.4 for details, maximum result recorded)	34.1Vdc	--	--	
4	264V, 60Hz	LED backlight output of power board 715GD262 to "-" /GND	Normal	56.6Vdc	--	--	ES1
			Abnormal – (see table B.3 for details, maximum result recorded)	56.6Vdc	--	--	
			Single fault – (see table B.4 for details, maximum result recorded)	56.6Vdc	--	--	
5	264V, 60Hz	L/N to All secondary port	Normal	--	0.01mApk	--	ES1
			Abnormal	--	0.01mApk	--	
			Single fault	--	0.01mApk	--	
6	264V, 60Hz	L/N to button of key board	Normal	--	0.01mApk	--	ES1
			Abnormal	--	0.01mApk	--	
			Single fault	--	0.01mApk	--	

5.2.2.3 - Capacitance Limits

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Capacitance, nF	Upk (V)	
1	264V, 60Hz	L&N pin of AC inlet	Normal	See Table 4.1.2	373	ES3
			Abnormal	--	--	
			Single fault – SC/OC	--	--	

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	--	--	--	

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Clause	Requirement + Test	Result - Remark	Verdict

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/ 60Hz	264V/ 60Hz	--	--	—
	Ambient T_{min} (°C) ..... :	See below	See below	--	--	—
	Ambient T_{max} (°C) ..... :	See below	See below	--	--	—
	Tma (°C) ..... :	40.0	40.0	--	--	—
Maximum measured temperature T of part/at:		T (°C)				Allowed T_{max} (°C)
Tested on power board 715GD270, DP mode, Horizontal						
AC inlet near "L" (on power board)		55.8	52.4	--	--	70
X-cap C901 (on power board)		61.0	56.7	--	--	100
Y-cap C902 (on power board)		61.0	56.2	--	--	125
Y-cap C903 (on power board)		62.9	59.1	--	--	125
Y-cap C913 (on power board)		80.7	81.0	--	--	125
E-cap C905 (on power board)		84.4	73.9	--	--	105
L901 Coil (on power board)		84.6	64.6	--	--	130
T901 Coil (on power board)		93.9	94.8	--	--	110
T901 Core (on power board)		92.6	95.4	--	--	110
PCB near NR901 (on power board)		77.7	63.9	--	--	105
PCB near BD902 and BD903 (on power board)		87.0	74.1	--	--	105
PCB near D912 (on power board)		90.5	89.3	--	--	105
PCB near D910 and D911 (on power board)		94.2	96.0	--	--	105

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Clause	Requirement + Test	Result - Remark			Verdict
PCB near Q801 (on power board)	87.5	88.0	--	--	105
PCB near main IC (on main board)	71.5	71.7	--	--	105
Mylar between panel and power board	74.9	74.5	--	--	100
Plastic enclosure inside near T901	57.4	57.0	--	--	Ref.
Ambient	40.0	40.0	--	--	--
Touch temperature for accessible part under normal condition					
Metal enclosure	42.4	42.0	--	--	70
Plastic enclosure outside near T901	31.0	30.2	--	--	94
Panel surface	35.4	35.7	--	--	94
Button	25.8	26.0	--	--	77
Ambient	25.0	25.0	--	--	--
Tested on power board 715GD262, DP mode, Horizontal					
AC inlet near "L" (on power board)	59.3	53.2	--	--	70
X-cap C901 (on power board)	71.5	61.5	--	--	100
Y-cap C902 (on power board)	71.1	60.2	--	--	125
Y-cap C903 (on power board)	65.1	58.1	--	--	125
Y-cap C913 (on power board)	85.5	82.4	--	--	125
E-cap C905 (on power board)	90.0	72.9	--	--	105
L901 Coil (on power board)	95.6	66.7	--	--	130
T901 Coil (on power board)	95.6	92.7	--	--	110
T901 Core (on power board)	87.1	85.3	--	--	110
PCB near NR901 (on power board)	94.2	70.8	--	--	105
PCB near BD902&BD903 (on power board)	91.5	73.6	--	--	105
PCB near D912 (on power board)	89.4	85.0	--	--	105
PCB near D907 (on power board)	88.9	85.5	--	--	105
PCB near D910&D911 (on power board)	91.2	90.7	--	--	105
PCB near Q801 (on power board)	85.6	84.1	--	--	105
PCB near main IC (on main board)	80.4	78.8	--	--	105
Mylar between panel & power board	75.6	72.9	--	--	100
Plastic enclosure inside near T901	59.7	59.5	--	--	Ref.
Ambient	40.0	40.0	--	--	--
Touch temperature for accessible part under normal condition					
Metal enclosure	44.7	44.5	--	--	70
Plastic enclosure outside near T901	34.9	33.4	--	--	94

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Clause	Requirement + Test	Result - Remark	Verdict

Panel surface	27.8	27.5	--	--	94
Button	27.2	27.2	--	--	77
Ambient	25.0	25.0	--	--	--

Supplementary information:

1. The temperatures were measured under worst case normal mode defined in B.2.5 and at voltages as described above.
2. The instruction installation manual defines the Tma at 40 °C.
   Winding components (providing safety isolation):
   - Class 130 material (B) Tmax = 120 °C – 10 °C = 110 °C
   Components with maximum absolute temperature of others:
   Tmax = Tmax of component
3. All values for T (°C) are re-calculated from actual ambient.

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:

Supplementary information:
Note 1: Tma should be considered as directed by appliable requirement
Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9)

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

Supplementary information:

5.4.1.10.3	TABLE: Ball pressure test of thermoplastics		P
Allowed impression diameter (mm) ..... :	≤ 2 mm		—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)
Plastic enclosure: HIPS-5197, 2.5mm	Kingfa	90	1.59
Plastic enclosure: GAR-011(L85), 2.5mm	Kingfa	85	1.31
Plastic enclosure: GAR-011(L65), 2.5mm	Kingfa	85	1.29

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Clause	Requirement + Test	Result - Remark	Verdict

Plastic enclosure: HIPS-510(H), 2.5mm	Kingfa	80	1.29
Plastic enclosure: FRHIPS-960, 2.5mm	Kingfa	85	1.88
Plastic enclosure: GC-0750(+), 2.5mm	Cheil	80	1.61
Plastic enclosure: GC-0700(+), 2.5mm	Cheil	80	1.94
Plastic enclosure: HG-0760(+), 2.5mm	Cheil	85	1.73
Plastic enclosure: LX-0951(+), 2.5mm	Cheil	85	1.83
Plastic enclosure: SD-0150, 2.5mm	Cheil	85	1.48
Plastic enclosure: HR-1360, 2.5mm	Cheil	85	1.71
Plastic enclosure: BF-0670F, 2.5mm	Cheil	80	1.59
Plastic enclosure: HF380, 2.5mm	LG	85	1.48
Plastic enclosure: SE885, 2.5mm	LG	80	1.42
Plastic enclosure: LUPOY GP-1000(#), 2.5mm	LG	95	1.21
Plastic enclosure: XG568, 2.5mm	LG	80	1.81
Plastic enclosure: XG569C, 2.5mm	LG	80	1.85
Plastic enclosure: HF388H, 2.5mm	LG	85	1.39
Plastic enclosure: SE750, 2.5mm	LG	80	1.5
Plastic enclosure: TN-7500, 2.5mm	Teijin	85	1.57
Plastic enclosure: HIPS-2000, 2.5mm	ORINKO	85	1.48
Plastic enclosure: GAR-011C, 2.5mm	Kingfa	90	1.91
Supplementary information:			
Above mentioned plastic enclosure material was tested by client’s request.			

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Clause	Requirement + Test	Result - Remark	Verdict

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)
Tested on power board 715GD270 and 715GD262							
Basic/supplementary:							
Under fuse (F901)	420	250	--	2.3	3.2	2.5	3.2
Before fuse (between L-N)	420	250	--	2.3	9.9	2.5	9.9
Line-GND	420	250	--	2.3	3.1	2.5	3.1
Neutral-GND	420	250	--	2.3	3.1	2.5	3.1
Under C902	420	250	--	2.3	3.2	2.5	3.2
Under C903	420	250	--	2.3	3.2	2.5	3.2
Primary component (C909) to metal enclosure	420	250	--	2.3	*1)*	2.5	*1)*
Primary component (C905) to metal enclosure	420	250	--	2.3	3.9	2.5	3.9
Core of T901 to metal enclosure	**544**	**271**	**219K**	2.3	4.4	2.8	4.4
Reinforced:							
Under T901	**544**	**270**	**219K**	4.5	8.2	5.5	8.2
Under C913	420	250	--	4.5	8.0	5.0	8.0
Trace side to plate of LCD panel	**544**	**270**	**219K**	4.5	*2)*	5.5	*2)*
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

1. Silica gel cap is fixed inside screw cylinder of metal enclosure to fulfill the requirement for supplementary insulation. See table 5.4.9 for the electric strength test for Silica gel cap.
2. One Mylar sheet is fixed between power board solder pin side and panel side to fulfill the requirement for reinforced insulation. See table 5.4.9 for the electric strength test for Mylar sheet.
3. Glued component: C905.
4. Considered altitude correction factor 1.48 for clearances for an altitude of 5000m.
5. Core of main transformer T901 consider as primary part.
6. Primary circuit layout of power board 715GD270 is similar with that of power board 715GD262. Two power boards have been performed the test, and worse test result was recorded in this table.

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Clause	Requirement + Test	Result - Remark	Verdict

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)
Basic		2500	See table 5.4.2.2, 5.4.2.4 and 5.4.3	See table 5.4.2.2, 5.4.2.4 and 5.4.3
Reinforce		2500	See table 5.4.2.2, 5.4.2.4 and 5.4.3	See table 5.4.2.2, 5.4.2.4 and 5.4.3
Supplementary information:				
The equipment to be operated up to 5000 m above sea level, each clearance multiplied with an altitude correction factor of 1.48.				

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)
Plastic enclosure		420	--	See table 4.1.2	0.4	See table 4.1.2
Bobbin of transformer		See Table 5.4.2.2, 5.4.2.4 and 5.4.3	Above 30	See table 4.1.2	0.4	See table 4.1.2
Mylar sheet		See Table 5.4.2.2, 5.4.2.4 and 5.4.3	Above 30	See table 4.1.2	0.4	See table 4.1.2
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:				
Unit primary to earthed metal part		AC	2500	No
Silica gel cap		AC	2500	No

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Reinforced:			
L/N to accessible plastic enclosure with metal foil	AC	4000	No
Unit primary to secondary (output)	DC	4000	No
T901 1): primary to secondary	AC	4000	No
T901 1): secondary to core	AC	4000	No
T901 1): one layer of insulation tape	AC	4000	No
Mylar sheet 2)	AC	4000	No
Routine Tests:			
Unit primary to earthed metal part	AC	2500	No
Supplementary information:			

1. For all sources of transformer;
2. For all source of mylar sheet;
3. The tests mentioned above were performed after humidity test and heating test.

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
Tested on power board 715GD270					
264V, 60Hz	L-N	N	N/A	25	ES1
Tested on power board 715GD262					
264V, 60Hz	L-N	N	N/A	24	ES1
Supplementary information:					

X-capacitors installed for testing are:
[x] bleeding resistor rating: See Table 4.1.2
[] 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

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Clause	Requirement + Test	Result - Remark	Verdict

5.6.6.2	TABLE: Resistance of protective conductors and terminations				P
Accessible part		Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)
Tested on power board 715GD270 and 715GD262					
PE terminal of AC inlet to internal metal enclosure		40	2	0.24	0.006
PE terminal of AC inlet to C902 trace		40	2	0.24	0.006
PE terminal of AC inlet to C903 trace		40	2	0.24	0.006
Supplementary information:					

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		P
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)
Line to earth, Neutral to earth, Line to metal enclosure, Neutral to metal enclosure		1	Max. 0.77
		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] Tested with normal, abnormal and single-fault condition, and maximum value was recorded.			

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Clause	Requirement + Test	Result - Remark	Verdict

6.2.2	Table: Electrical power sources (PS) measurements for classification				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s*)	PS Classification
A	+18V output of power boards	Power (W) :	--	--	PS2 (See Table Annex Q.1)
		V_A (V) :	--	--	
		I_A (A) :	--	--	
B	All data ports on power boards	Power (W) :	--	--	PS2 (See Table Annex Q.1)
		V_A (V) :	--	--	
		I_A (A) :	--	--	
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
2)	2)	2)	2)	Yes
Supplementary information:				
1) 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.				
2) All components located within the power board are considered as arcing PIS.				

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
3)	3)	3)	3)	--	Yes
Supplementary Information:					
1) 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.					
2) 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.					
3) All components located within the EUT are considered as resistive PIS.					

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Clause	Requirement + Test	Result - Remark	Verdict

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

B.2.5	TABLE: Input test							P
U (V)	Hz	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
Tested on power board 715GD262								
HDMI mode								
90	50	0.880	--	46.12	--	F901	0.880	Maximum normal load
90	60	0.905	--	46.14	--	F901	0.905	Maximum normal load
100	50	0.812	1.5	45.63	--	F901	0.812	Maximum normal load
100	60	0.828	1.5	45.63	--	F901	0.828	Maximum normal load
240	50	0.412	1.5	44.65	--	F901	0.412	Maximum normal load
240	60	0.418	1.5	44.68	--	F901	0.418	Maximum normal load
264	50	0.389	--	45.00	--	F901	0.389	Maximum normal load
264	60	0.381	--	44.97	--	F901	0.381	Maximum normal load
DisplayPort mode								
90	50	0.898	--	47.68	--	F901	0.898	Maximum normal load
90	60	0.931	--	47.63	--	F901	0.931	Maximum normal load
100	50	0.826	1.5	47.21	--	F901	0.826	Maximum normal load
100	60	0.839	1.5	47.62	--	F901	0.839	Maximum normal load
240	50	0.417	1.5	46.37	--	F901	0.417	Maximum normal load
240	60	0.412	1.5	46.31	--	F901	0.412	Maximum normal load
264	50	0.391	--	46.72	--	F901	0.391	Maximum normal load
264	60	0.385	--	46.72	--	F901	0.385	Maximum normal load
Tested on power board 715GD270								

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Clause	Requirement + Test					Result - Remark		Verdict
HDMI mode								
90	50	0.845	--	43.81	--	F901	0.845	Maximum normal load
90	60	0.876	--	43.81	--	F901	0.876	Maximum normal load
100	50	0.781	1.5	43.53	--	F901	0.781	Maximum normal load
100	60	0.793	1.5	43.62	--	F901	0.793	Maximum normal load
240	50	0.404	1.5	42.84	--	F901	0.404	Maximum normal load
240	60	0.397	1.5	42.81	--	F901	0.397	Maximum normal load
264	50	0.377	--	42.83	--	F901	0.377	Maximum normal load
264	60	0.371	--	42.87	--	F901	0.371	Maximum normal load
DisplayPort mode								
90	50	0.854	--	44.03	--	F901	0.854	Maximum normal load
90	60	0.885	--	44.14	--	F901	0.885	Maximum normal load
100	50	0.799	1.5	43.97	--	F901	0.799	Maximum normal load
100	60	0.818	1.5	43.97	--	F901	0.818	Maximum normal load
240	50	0.411	1.5	43.06	--	F901	0.411	Maximum normal load
240	60	0.403	1.5	43.05	--	F901	0.403	Maximum normal load
264	50	0.384	--	43.38	--	F901	0.384	Maximum normal load
264	60	0.377	--	43.36	--	F901	0.377	Maximum normal load
VGA mode								
90	50	0.756	--	38.65	--	F901	0.756	Maximum normal load
90	60	0.778	--	38.66	--	F901	0.778	Maximum normal load
100	50	0.700	1.5	38.40	--	F901	0.700	Maximum normal load
100	60	0.702	1.5	38.45	--	F901	0.702	Maximum normal load
240	50	0.361	1.5	37.94	--	F901	0.361	Maximum normal load
240	60	0.356	1.5	37.93	--	F901	0.356	Maximum normal load
264	50	0.335	--	37.81	--	F901	0.335	Maximum normal load
264	60	0.331	--	37.84	--	F901	0.331	Maximum normal load
Supplementary information:								
1. Maximum normal load: maximum brightness, maximum contrast, full white screen; speakers (two sets) loaded with 1KHz sinusoidal signal and turned to maximum volume; each USB 3.0 port loaded with 5V/0.9A, each USB 3.0 port with fast charge loaded with 5V/1.5A; 2. If not specified particularly, DP mode of main board was used for all other tests.								

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Clause	Requirement + Test	Result - Remark	Verdict

B.3	TABLE: Abnormal operating condition tests		P
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
Tested on power board 715GD270								
Ventilation openings	blocked	90	1.5hrs	F901	0.89	Yes	Max. measured temperature: T901 coil = 85.0°C, T901 core = 83.2°C, AC inlet = 46.2°C, Metal enclosure = 48.6°C, USB port = 43.0°C, Plastic enclosure outside near T901 = 37.6°C, Panel = 26.9°C, Button = 26.7°C, Ambient = 26.9°C	Unit operated normally, no hazards, no damage.
USB with fast charging function	overload	90	1.0hr	F901	0.923	Yes	Max. measured temperature: T901 coil = 88.2°C, T901 core = 86.2°C, AC inlet = 44.6°C, Metal enclosure = 46.7°C, Plastic enclosure outside near T901 = 34.3°C, USB port = 44.7°C, Panel = 26.5°C, Button = 26.7°C, Ambient = 27.7°C	Before shutdown, USB port is loaded to 2.5A. No damage, no hazards.
USB 3.0	overload	90	1.0hr	F901	0.965	Yes	Max. measured temperature: T901 coil = 91.9°C, T901 core = 89.5°C, AC inlet = 44.8°C, Metal enclosure = 47.1°C, Plastic enclosure outside near T901 = 34.5°C, USB port = 45.6°C, Panel = 28.7°C, Button = 27.8°C, Ambient = 27.5°C	Before shutdown, USB port is loaded to 2.4A. No damage, no hazards.

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Clause	Requirement + Test						Result - Remark	Verdict
+18V output	overload	90	1.0hr	F901	1.38	Yes	Max. measured temperature: T901 coil = 95.9°C, T901 core = 96.2°C, AC inlet = 42.6°C, Metal enclosure = 46.8°C, Plastic enclosure outside near T901 = 33.9°C, USB port = 39.5°C, Panel = 28.0°C, Button = 27.2°C, Ambient = 27.4°C	Before shutdown, winding is additionally loaded to 1.5A. No damage, no hazards.
Tested on power board 715GD262								
Ventilation openings	blocked	90	1.5hrs	F901	0.93	Yes	Max. measured temperature: T901 coil = 86.8°C, T901 core = 77.7°C, AC inlet = 49.6°C, Metal enclosure = 49.3°C, USB port = 43.6°C, Plastic enclosure outside near T901 = 38.9°C, Panel = 30.5°C, Button = 29.5°C, Ambient = 27.5°C	Unit operated normally, no hazards, no damage.
USB with fast charging function	overload	90	1.0hr	F901	1.01	Yes	Max. measured temperature: T901 coil = 89.6°C, T901 core = 79.3°C, AC inlet = 47.5°C, Metal enclosure = 46.6°C, USB port = 41.5°C, Plastic enclosure outside near T901 = 36.7°C, Panel = 29.1°C, Button = 28.4°C, Ambient = 27.1°C	Before shutdown, USB port is loaded to 2.5A. No damage, no hazards.
USB 3.0	overload	90	1.0hr	F901	1.09	Yes	Max. measured temperature: T901 coil = 96.0°C, T901 core = 84.9°C, AC inlet = 49.7°C, Metal enclosure = 49.8°C, USB port = 44.6°C, Plastic enclosure outside near T901 = 38.9°C, Panel = 31.4°C, Button = 30.1°C, Ambient = 27.3°C	Before shutdown, USB port is loaded to 2.5A. No damage, no hazards.

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

+18V output	overload	90	1.0hr	F901	1.24	Yes	Max. measured temperature: T901 coil = 107.8°C, T901 core = 94.2°C, AC inlet = 53.4°C, Metal enclosure = 50.6°C, USB port = 46.5°C, Plastic enclosure outside near T901 = 39.7°C, Panel = 32.5°C, Button = 28.3°C, Ambient = 26.8°C	Before shutdown, winding is additionally loaded to 1.0A. No damage, no hazards.

Supplementary information:

1. 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.

2. Temp. limit of transformer according to table G.3 is 175°C - 10 - (40°C - Tamb) (worst case) for Class B.

B.4	**TABLE: Fault condition tests**							P
Ambient temperature (°C) .....:					See below			—
Power source for EUT: Manufacturer, model/type, output rating .:					See table 4.1.2			—
Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Tested on power board 715GD270								
BD902 pin 1-4	s-c	264	<1 sec	F901	--	--	--	Fuse open immediately, no hazards.
BD903 pin 1-4	s-c	264	<1 sec	F901	--	--	--	Fuse open immediately, no hazards.
C905	s-c	264	<1 sec	F901	--	--	--	Fuse open immediately, no hazards.
D907	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
D911	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
D912	s-c	264	5 min	F901	0.19	--	--	Panel shut down, EUT operated normally, no hazards.
R916	s-c	264	5 min	F901	0.19	--	--	Panel shut down, EUT operated normally, no hazards.

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

R919	s-c	264	5 min	F901	0.19	--	--	Panel shut down, EUT operated normally, no hazards.
R905	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
C916	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
U901 pin 2-7	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
U901 pin 3-7	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
U901 pin 2-3	s-c	264	5 min	F901	0.04	--	--	Unit operated normally, no damaged, no hazards.
T901 pin 1-2	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
T901 pin 3-5	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
T901 pin 7-9	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
+18V output to earth	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
Speaker	s-c	264	5 min	F901	0.35	--	--	EUT operated normally except for speakers, no hazards.
Tested on power board 715GD262								
BD902 pin 1-4	s-c	264	<1 sec	F901	--	--	--	Fuse open immediately, no hazards.
BD903 pin 1-4	s-c	264	<1 sec	F901	--	--	--	Fuse open immediately, no hazards.
C905	s-c	264	<1 sec	F901	--	--	--	Fuse open immediately, no hazards.
D907	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards

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Clause	Requirement + Test	Result - Remark	Verdict

D911	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
D912	s-c	264	5 min	F901	0.19	--	--	Panel shut down, EUT operated normally, no hazards.
R916	s-c	264	5 min	F901	0.19	--	--	Panel shut down, EUT operated normally, no hazards.
R919	s-c	264	5 min	F901	0.19	--	--	Panel shut down, EUT operated normally, no hazards.
R905	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
C916	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
U901 pin 2-7	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
U901 pin 3-7	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
U901 pin 2-3	s-c	264	5 min	F901	0.04	--	--	Unit operated normally, no damaged, no hazards.
T901 pin 1-2	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
T901 pin 3-5	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
T901 pin 7-9	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
+18V output to earth	s-c	264	5 min	F901	0.04	--	--	Unit shutdown, recoverable No damage No hazards
Speaker	s-c	264	5 min	F901	0.36	--	--	EUT operated normally except for speakers, no hazards.
Supplementary information:								

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Clause	Requirement + Test	Result - Remark	Verdict

1. The unit passed 4000V hi-pot test between primary and accessible output connector after single fault test above.
2. In fault column, where s-c=short-circuited, o-c=open-circuited, o-l = overload.
3. For fuse opened conditions were tested with each source of fuse.
4. For component damaged conditions have been repeated twice (three tests total) with same result.
5. Temp. limit of transformer according to table G.3 is 175°C - 10 - (40°C - Tamb) (worst case) for Class B.

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		
- Explosion of the battery		
- Emission of flame or expulsion of molten metal		
- Electric strength tests of equipment after completion of tests		
Supplementary information:		

Annex M.4	**Table: Additional safeguards for equipment containing secondary lithium batteries**				N/A
Battery/Cell No.	Test conditions	Measurements			Observation
		U	I (A)	Temp (C)	
	Normal				
	Abnormal				
	Single fault –SC/OC				
	Normal				

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Clause	Requirement + Test	Result - Remark	Verdict

	Abnormal				
	Single fault – SC/OC				
Supplementary Information:					

Battery identification	Charging at T_{lowest} (°C)	Observation	Charging at $T_{highest}$ (°C)	Observation
Supplementary Information:				

Annex Q.1	**TABLE: Circuits intended for interconnection with building wiring (LPS)**					P
Note: Measured UOC (V) with all load circuits disconnected: see below						
Output Circuit	Components	U_{oc} (V)	I_{sc} (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
Circuit output tested: Test on +18V output on power board 715GD270						
Note: Measured Uoc (V) with all load circuits disconnected:						
See above	Normal condition	18.7	5.3	8	86.0	100
See above	Single fault condition (R916 SC)	18.7	5.3	8	86.6	100
See above	Single fault condition (R911 SC)	0 *	0 *	8	0 *	100
See above	Single fault condition (R905 SC)	0 *	0 *	8	0 *	100
See above	Single fault condition (C915 SC)	0 *	0 *	8	0 *	100
See above	Single fault condition (D911 Pin 2-3 SC)	0 *	0 *	8	0 *	100
See above	Single fault condition (R915 SC)	0 *	0 *	8	0 *	100
Circuit output tested: data ports on power board 715GD270						
Note: Measured Uoc (V) with all load circuits disconnected:						
HDMI (CN501) pin 18 to GND	Normal condition	4.7	0 (can't loaded)	8	0 (can't loaded)	100

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Clause	Requirement + Test		Result - Remark			Verdict
HDMI (CN501) others pins to GND	Normal condition	0	--	8	--	100
DP (CN503) pin 20 to GND	Normal condition	3.3	0.82	8	2.2	100
DP (CN503) pin 20 to GND	Single fault condition (U541 SC pin 2-3)	5.0	0.82	8	3.2	100
DP (CN503) others pins to GND	Normal condition	0	--	8	--	100
VGA (CN101) pin 12,15 to GND	Normal condition	5.0	0 (can't loaded)	8	0 (can't loaded)	100
VGA (CN101) others pins to GND	Normal condition	0	--	8	--	100
Audio port (CN601) pin 1,2 to GND	Normal condition	0.2	0 (can't loaded)	8	0 (can't loaded)	100
Audio port (CN601) others pins to GND	Normal condition	0	--	8	--	100
Circuit output tested: Test on +18V output on power board 715GD262						
Note: Measured Uoc (V) with all load circuits disconnected:						
See above	Normal condition	18.7	4.8	8	78.0	100
See above	Single fault condition (R916 SC)	18.7	4.8	8	78.2	100
See above	Single fault condition (R911 SC)	0 *	0 *	8	0 *	100

IEC 62368-1						
Clause	Requirement + Test		Result - Remark			Verdict
See above	Single fault condition (R905 SC)	0 *	0 *	8	0 *	100
See above	Single fault condition (C915 SC)	0 *	0 *	8	0 *	100
See above	Single fault condition (D911 Pin 2-3 SC)	0 *	0 *	8	0 *	100
See above	Single fault condition (R915 SC)	0 *	0 *	8	0 *	100
Circuit output tested: data ports on power board 715GD262						
Note: Measured Uoc (V) with all load circuits disconnected:						
HDMI (CN502) pin 18 to GND	Normal condition	4.9	0 (can't loaded)	8	0 (can't loaded)	100
HDMI (CN502) others pins to GND	Normal condition	0	--	8	--	100
DP (CN503) pin 20 to GND	Normal condition	3.3	0.8	8	2.2	100
DP (CN503) pin 20 to GND	Single fault condition (U541 SC pin 2-3)	5.0	0.8	8	3.2	100
DP (CN503) others pins to GND	Normal condition	0	--	8	--	100
Circuit output tested: data ports on USB board 715G9632						
Note: Measured Uoc (V) with all load circuits disconnected:						
USB FC (CN1105) pin 1 to GND	Normal condition	5.1	2.7	8	9.9	100
USB FC (CN1105) pin 1 to GND	Single fault condition (R1111 SC)	5.1	2.7	8	9.9	100

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Clause	Requirement + Test	Result - Remark	Verdict

USB FC (CN1105) others pins to GND	Normal condition	0	--	8	--	100
USB (CN1106) pin 1 to GND	Normal condition	5.0	2.7	8	10.1	100
USB (CN1106) pin 1 to GND	Single fault condition (R1130 SC)	5.0	2.7	8	10.1	100
USB (CN1106) others pins to GND	Normal condition	0	--	8	--	100

Supplementary Information:

1) Input Voltage is 264Vac, 60Hz. SC=short circuit, OC=open circuit.
2) * means Unit shut down.
3) Test performed with main board and USB board is according to client's request.

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	The clearance and creepage distances do not be reduced below the required values.
External plastic enclosure	See table 4.1.2	See table 4.1.2	250	5	All safeguards remained effective.
Internal metal enclosure	See table 4.1.2	See table 4.1.2	30	5	All safeguards remained effective.
Bottom of internal metal enclosure	See table 4.1.2	See table 4.1.2	250	5	All safeguards remained effective.

Supplementary information:

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

T.6, T.9	TABLE: Impact tests				P
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation	
External plastic enclosure	See table 4.1.2	See table 4.1.2	1300	All safeguards remained effective.	
Supplementary information:					

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

T.8	TABLE: Stress relief test					P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
Whole unit	See table 4.1.2	See table 4.1.2	70	7	All safeguards remained effective.	
Supplementary information:						

List of test equipment used:

A completed list of used test equipment shall be provided in the Test Reports when a Customer's Testing Facility according to CTF stage 1 or CTF stage 2 procedure has been used.
Note: This page may be removed when CTF stage 1 or CTF stage 2 are not used. See also clause 4.8 in OD 2020 for more details.

Clause	Test description	Equipment No.
☒ 5.2	Classification of electrical energy sources	921061908143 (OR 2318011076), 2340, 921091603167, 21880307041, 21E10610099
☒ 5.3.2	Accessibility to electrical energy sources and safeguards (Accessibility test)	21820711002, 21AZ0711002, 21AZ0711003
☒ 5.4.1.4, 6.3.2, 9.0, B.2.6	Maximum operating temperature test (Heating test)	921061908143 (OR 2318011076), 2340, 21Z80105001, 921321806007 (OR 921321911010 OR 921322003011), 2209-006185 (OR 2209-006184)
☒ 5.4.1.8	Determination of working voltage	921061908143 (OR 2318011076), 2340, 921091603167
☒ 5.4.2.2, 5.4.2.4 and 5.4.3	Minimum Clearances/Creepage distance	21AJ0102049
☒ 5.4.8	Humidity test	921451911023, 21470208035
☒ 5.4.9	Electric strength test	21470208035
☒ 5.5.2.2	Safeguards against capacitance discharge test	921061908143 (OR 2318011076), 2340, 921091603167, 21E10610099
☒ 5.6.6.2	Resistance of the protective bonding system (Ground continuity test)	21470208035
☒ 5.7.2.2, 5.7.4	Earthed accessible conductive part test	21880307041
☒ 6.2.2	Electrical Power Source (PS) measurements for classification	921061908143 (OR 2318011076), 2340, 21E10610099, 921621912275, 21580403031
☒ 6.4.8.3.3	Top Openings in Fire Enclosure	21AJ0102049
☒ 6.4.8.3.4	Bottom Openings in Fire Enclosure	21AJ0102049
☒ 8.6	Stability test	21F11801244
☒ Annex B.2.5	Input test	921061908143 (OR 2318011076), 2340, 2209-006185 (OR 2209-006184)

☒ Annex B.3	Simulated abnormal operating and single fault conditions	921061908143 (OR 2318011076), 2340, 21Z80105001, 921321806007 (OR 921321911010 OR 921322003011), 921621912275, 21580403031, 2209-006185 (OR 2209-006184)
☒ Annex B.4	Simulated abnormal operating and single fault conditions	921061908143 (OR 2318011076), 2340, 21Z80105001, 921321806007 (OR 921321911010 OR 921322003011), 921621912275, 21580403031
☒ Annex F.3.10	Test for permanence of markings	N/A
☒ Annex P.4	Adhesive test	921452004025
☒ Annex Q.1	Limited power source test (LPS)	921061908143 (OR 2318011076), 2340, 21E10610099, 921621912275, 21580403031
☒ Annex M	Batteries	921061908143 (OR 2318011076), 2340, 21E10610099, 921621912275, 21580403031
☒ Annex T.2, T.3	Steady force test, 10N, 30 N	21AK0305009
☒ Annex T.5	Steady force test, 250 N	21AK0305010
☒ Annex T.6	Enclosure impact test	21F1004002, 21SP0711057
☒ Annex T.8	Stress relief test	21360306007

Equipment list mentioned on above table

Equipment No.	Object Description	Range Used	Manufacturer	Model number	Interval in months G/C	Next date G/C
21360306007	Oven	Input: 380W,50Hz, output: Temp Range:50℃-200℃,	Terchy	CK-290	12	09-Dec-2022
921452004025	high-low temperature test chamber	-40~150°C	Keheng	WGDW-225	12	11-Apr-2023
921061908143	AC Power Source	Input: 110/220 ±15 % output: 0-300Vac,47-63Hz	APC	KDF-11005G	12	07-Sep-2022
2318011076	AC Power Source	Input: 110/220V ±15 % output: 0-300Vac,47-63Hz	APC	AFC-0.5KW	12	09-Dec-2022
921620801054	Electronic load	Input: 220VAC, 50 Hz or 60 Hz±2% output: Maximum , 300W, 60V, 60A	Prodigit	AN23103M	12	21-Apr-2023
921621912275	Electronic load	Input:220VAC, 50 Hz or 60 Hz±2% output: Maximum, 300W, 60V, 60A	Prodigit	3311F*2+3312F*2+ 3300F	12	06-Dec-2022

21470208035	Hi-pot/Grounding tester	Input: 220VAC, 50 Hz or 60 Hz±2%. output: Maximum, 0.05-5KVAC, 0.05-6KVDC, 0.1-10Ma, current: (Ground-Earth) 3.0-30.0Aac	Zentech	9032A	12	08-Dec-2022
21880307041	Leakage current meter	Input: Two (2) 9 volt, NEDA type 1604A alka line batteries, Output Sensitivity: Full scale meter deflection equals 1 volt RMS (measured with a 1M_, 12 pF load), Voltage Range: 0-300 volts (AC or DC), Current Range: 10MIU,3MIU,1MIU	Simpson	SIMPSON-228	12	23-Feb-2023
921321806007	Temperature recorder	Input: 100-240VAC, 50Hz or 60Hz±2% output: -200-1370°C, k Type	Yokogawa	DR-230	12	28-Jul-2023
921321911010	Temperature recorder	Input: 100-240VAC, 50 Hz or 60 Hz±2% output: -200-1370°C,k Type	Yokogawa	GP-20-(50)	12	21-Apr-2023
921322003011	Temperature recorder	Input: 100-240VAC, 50 Hz or 60 Hz±2% output: -200-1370°C,k Type	Yokogawa	GP-20-(100)	12	2-Mar-2023
921091603167	Oscillograph	Bandwidth:1GHz Maximum Memory:5MB Maximum Sample Rate:5GS/s	Tektronix	MSO4104B-L	12	08-Dec-2022
21AK0305009	Push pull gage	Output: Max. 100N	ALGOL	AN-100	12	11-Nov-2022
21AK0305010	Push pull gage	Output: Max. 50kg	ALGOL	AK-50	12	11-Nov-2022
921100511007	Push pull gage	Output: Max. 200N	ALGOL	NK-200	12	26-May-2023
21580403031	Multimeter	Input: 4 alkaline battery, NEDA,15A, Output: Voltmeter Range: 0-1000 volts (AC or DC), Current Range:0-10A	FLUKE	189	12	24-Jan-2023
21E10610099	Thermo-Hygrograph	Temperature Range:-35-45°C, Humidity:30%-100%RH, Recording period:7d	Shanghai Meteorlogical Instrument	ZJ 1-2B	12	28-Jun-2023
21AJ0102049	Digital Vernier caliper	Input: 1.5V Button cell, 0-200mm, Minimum resolution:0.01mm, Range:0-200mm	Mitutoyo	0-200	12	15-Jan-2023
21820711002	test pin	19.8°C/54RH	Excel	19JE	12	12-Oct-2022
21AZ0711002	Inflexible test finger	19.8°C/54RH	Excel	P-10.05	12	12-Oct-2022
21AZ0711003	Flexible test finger	19.8°C/54RH	Excel	P-10.04	12	12-Oct-2022
2182-0711003	test pin	19.8°C/54RH	Excel	HLP-01	12	12-Oct-2022
21SP0711057	Steel ball	500g	Excel	500g	12	12-Oct-2022
21SP0711056	Ball stress	20.2°C/60%RH	Excel	0-3KG	12	12-Oct-2022

2340	Power meter	Input: 200-250Vac, 50/60Hz or 60Hz output: Current Range: 0-20A, Voltage Range: 0-500Vac	IDRC	Cp-320A	12	11-Oct-2022
2209-006185	Video pattern Generator	Input: 90-132/180-250Vac, 50/60 Hz,1.5A Fuse: T2A/250V Output: Range: 3.126-250MHz	Chroma	2325	12	01-Dec-2022
2209-006184	Video pattern Generator	Input: 90-132/180-250VAC, 50/60 Hz, 1.5A Fuse: T2A/250V Output: Range: 3.126-250MHz	Chroma	2325	12	01-Dec-2022
21AP1704170	Electronic balance	Weight: 0.1g-150kg	YINZHAN (英展)	XK3150(W)	12	03-Jan-2023
921071009013 (1020-2006779)	TV Leakage current meter	Input: 115-230VAC±10%, Max. Current: 5A,50-60HZ, Output: Current Range 0-7.0A	TaiGe	TG7623	12	30-Aug-2022
21Z80105001	Timer	/	Shanghai Stopwatch Factory	/	12	28-Sep-2022
21F11801244	Angle gauge	0-90°	NIIGATA SEIKI	/	12	23-Feb-2023
921451911023	Humidity Chamber	+20~60°C	Keheng	KTH-1800-(+20)-TP	12	16-Nov-2022
21F1004002	Steel ruler	0-5m	/	/	24	28-Sep-2023

Statement of Measurement Uncertainty

The Test Report shall include a statement concerning the uncertainty of the measurement systems used for the tests conducted when it is required by the standard, client or other authorities.
In such cases, the table below is to be used for reporting U of M.

This page may be removed from the final Test Report when not required. See also clause 4.8 in OD 2020 for more details.

Clause #	Parameter/ Measurement / test method	Requirement % or k	Calculated U of M*

*Note: Calculations leading to the reported value are on file with the NCB

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

5.4.1.8	TABLE: Working voltage measurement				P
Location		RMS voltage (V)	Peak voltage (V)	Frequency (Hz)	Comments
Tested with power board 715GD270					
T901 Pin 1 to pin 6		220	358	--	
T901 Pin 1 to pin 8		220	404	--	
T901 Pin 2 to pin 6		220	374	--	
T901 Pin 2 to pin 8		218	350	--	
T901 Pin 3 to pin 6		256	520	--	
T901 Pin 3 to pin 8		**270**	**544**	**219K**	**Max. Vpeak & Max. Vrms**
T901 Pin 5 to pin 6		222	418	--	
T901 Pin 5 to pin 8		220	418	--	
C913 primary pin – secondary pin		214	340	--	
Tested with power board 715GD262					
T901 Pin 1 to pin 6		215	356	--	
T901 Pin 1 to pin 8		215	388	--	
T901 Pin 2 to pin 6		216	364	--	
T901 Pin 2 to pin 8		214	344	--	
T901 Pin 3 to pin 6		260	520	--	
T901 Pin 3 to pin 8		**271**	**544**	**213K**	**Max. Vpeak & Max. Vrms**
T901 Pin 5 to pin 6		217	404	--	
T901 Pin 5 to pin 8		217	352	--	
C913 primary pin – secondary pin		214	344	--	
Supplementary information:					
Input Voltage is 264Vac, 60Hz.					

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Clause	Requirement + Test	Result - Remark	Verdict

6.4.8.3.3, 6.4.8.3.4 & P.2.2	**Table: enclosure openings**	**P**

Location	Size (mm)	Comments
Internal metal chassis as fire enclosure		
Top	1) One rectangle opening above USB board: Max. 149.2mm x 24.7mm; 2) One rectangle opening above power board Max. 33.0mm x 30.33mm	1) No opening was fall in Volume of PS3 component shown as Figure 41 and 42 of this standard. No hazards. 2) Opening is covered by V-0 Mylar sheet. And no opening was fall in Volume of PS3 component shown as Figure 41 and 42 of this standard. No hazards.
Rear	1) Two circle openings above main board and power board: 2x Ø3.9 mm 2) Two rectangle openings above USB board and power board: Max. 149.2 mm x 38.22 mm Max. 33.0 mm x 30.33 mm	1) Openings do not exceed 5mm in any dimension. No hazards. 2) No opening was fall in Volume of PS3 component shown as Figure 41 and 42 of this standard. No hazards.
Left	No opening.	--
Right	No opening.	--
Bottom	No opening.	--

G.5.3.2	TABLE: transformers						P
Loc.	Tested insulation	Working voltage peak / V	Working voltage rms / V	Required electric strength	Required clearance / mm	Required creepage distance / mm	Required distance thr. insul.
T901	Input terminal to output winding (RI)	**544**	271	AC 4000V	4.5	5.5	Min. 2 layers tape
T901	Input terminal to output terminal (RI)	**544**	271	AC 4000V	4.5	5.5	Min. 2 layers tape
T901	Input winding to output winding (RI)	**544**	271	AC 4000V	4.5	5.5	Min. 2 layers tape
T901	Input winding to output terminal (RI)	**544**	271	AC 4000V	4.5	5.5	Min. 2 layers tape

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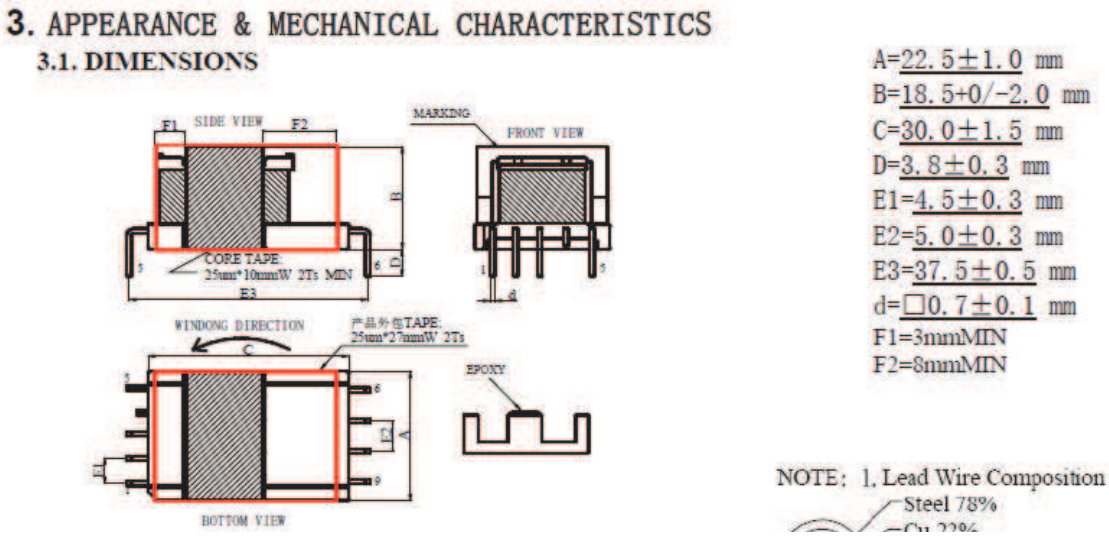
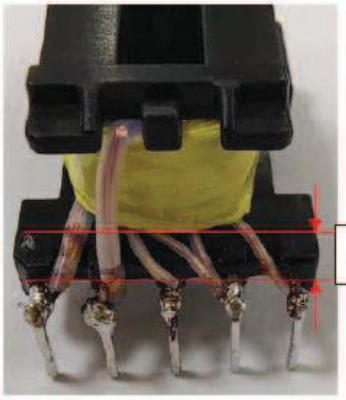
Clause	Requirement + Test			Result - Remark			Verdict
T901	Output winding to Core (RI)	**544**	271	AC 4000V	4.5	5.5	Min. 2 layers tape
T901	Output terminal to Core (RI)	**544**	271	AC 4000V	4.5	5.5	Min. 2 layers tape
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
T901	Input terminal to output winding (RI)			AC 4000V	Triple insulation wire used	Triple insulation wire used	--
T901	Input terminal to output terminal (RI)			AC 4000V	37.5	37.5	--
T901	Input winding to output winding (RI)			AC 4000V	Triple insulation wire used	Triple insulation wire used	--
T901	Input winding to output terminal (RI)			AC 4000V	7.5	7.5	--
T901	Output winding to Core (RI)			AC 4000V	Triple insulation wire used	Triple insulation wire used	--
T901	Output terminal to Core (RI)			AC 4000V	9.0	9.0	--
Supplementary information: All sources of transformer were checked with same construction.							

G.5.3.2	TABLE: transformers	P

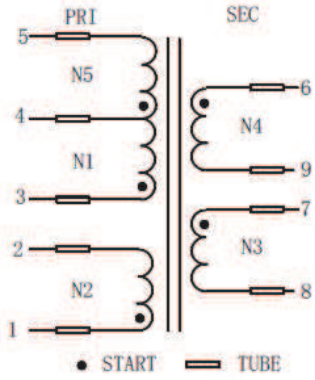
Construction:



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



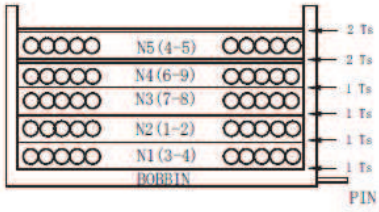
3.4. SCHEMATIC:



PIN	Tube length
1, 3, 4, 5, 6, 7	7mm MIN
2, 8, 9	15mm MIN

Note: PIN6,7 & 8,9 可以连锡;

3.5. WINDING CONSTRUCTION:



Mylay tape: 0.025mm t *10.0mmW
1.) ALL PIN ADDED TUBE,
2.) TUBE over winding 2.5mm min;

3.6. WINDING MODE:

No.	COIL	TERMINAL	WIRE GAUGE	WIRE TYPE	TUNS	WINDING METHOD	TAPE 1Ts
1	N1	3--4	Φ0.30 mm	UEW	25	CLOSED	1Ts
2	N2	1--2	Φ0.28 mm×4	UEW	6	SPACE	1Ts
3	N3	7--8	Φ0.35 mm×2	TIW-M	7	CLOSED	1Ts
4	N4	6--9	Φ0.35 mm×2	TIW-M	7	CLOSED	2Ts
5	N5	4--5	Φ0.30 mm	UEW	24	CLOSED	2Ts

Concentric windings on phenolic bobbin. Triple insulation wire is used on secondary windings. Core is considered as primary part. Primary windings and secondary windings are separated by triple insulation wire and insulation tape. All terminals are covered by tube.

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IEC62368_1D - ATTACHMENT			
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
Attachment Form No.....:	EU_GD_IEC62368_1D_II
Attachment Originator .....:	Nemko AS
Master Attachment.....:	Date 2021-02-04

	CENELEC COMMON MODIFICATIONS (EN)		—
	Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2014 are prefixed "Z".		—
CONTENTS	**Add** the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations Annex ZD (informative) IEC and CENELEC code designations for flexible cords		P
	Delete all the "country" notes in the reference document (IEC 62368-1:2014) according to the following list:		P
	For special national conditions, see Annex ZB.		P
1	**Add** the following note: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.	Added.	P
4.Z1	**Add** the following new subclause after 4.9:		P

0.2.1	Note	1	Note 3	4.1.15	Note
4.7.3	Note 1 and 2	5.2.2.2	Note	5.4.2.3.2.2 Table 13	Note c
5.4.2.3.2.4	Note 1 and 3	5.4.2.5	Note 2	5.4.5.1	Note
5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3
5.7.5	Note	5.7.6.1	Note 1 and 2	10.2.1 Table 39	Note 2, 3 and 4
10.5.3	Note 2	10.6.2.1	Note 3	F.3.3.6	Note 3

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Clause	Requirement + Test	Result - Remark	Verdict
	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.		
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.	Added.	N/A
10.2.1	**Add** the following to [c] and [d] in table 39: For additional requirements, see 10.5.1.	No such radiation from the equipment.	N/A
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,*	LED indicator used.	N/A

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IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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.		
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.	No such x-radiation generated from the equipment.	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	No such consideration for the purpose of personal music players.	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.		P
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.		P

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IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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.		
ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		P
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”	See copy of marking plate.	P
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	The equipment is not direct plug-in equipment.	N/A
5.2.2.2	**Denmark** After the 2nd paragraph add the following: A warning (marking **safeguard**) for high **touch current** is required if the **touch current** exceeds the limits of 3,5 mA a.c. or 10 mA d.c.	No high touch current.	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	No TNV circuits.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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.		
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).	Considered.	P

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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.	No such resistors.	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.	Considered.	P
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.	Considered.	P
5.6.5.1	To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm^2 to 1,5 mm^2 in cross-sectional area.	Rated current not exceed 10A.	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.	No high protective conductor current.	N/A
5.7.6.1	**Norway and Sweden** To the end of the subclause the following is added: The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation 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	Not such system.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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.”.		
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 .	No external circuits.	N/A
B.3.1 and B.4	**Ireland and United Kingdom** The following is applicable: To protect against excessive currents and short-	The equipment is not direct plug-in equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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		
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	No power supply cord provided.	N/A
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	The equipment is not direct plug-in equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	also apply.		
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.	No power supply cord provided.	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	No power supply cord provided.	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.	No power supply cord provided.	N/A
ZC	**ANNEX ZC, NATIONAL DEVIATIONS (EN)**		P
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	No CRT within the equipment.	N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 62368-1
DENMARK NATIONAL DIFFERENCES
Audio/video, information and communication technology equipment –
Part 1: Safety requirements

Differences according to.....:	DS/EN 62368-1:2014
Attachment Form No.....:	DK_ND_IEC62368_1D
Attachment Originator .....:	UL (Demko)
Master Attachment.....:	2021-02-04

	National Differences		—
4.1.15	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: “Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord.”	Added. See copy of marking plate.	P
5.2.2.2	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.	Added.	N/A
5.6.1	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.	Added. No socket outlet is provided.	N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.5	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.	Added.	N/A
5.7.6.2	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.	Added.	N/A
G.4.2	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	Added.	N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT
IEC 62368-1
U.S.A. AND CANADA NATIONAL DIFFERENCES
(Audio/video, information and communication technology equipment – Part 1: Safety requirements)

Differences according to.....:	CSA/UL 62368-1:2014
TRF template used: .....:	IECEE OD-2020-F3, Ed. 1.1
Attachment Form No.....:	US_CA_ND_IEC62368_1D
Attachment Originator .....:	UL(US)
Master Attachment.....:	Dated 2021-02-04

IEC 62368-1 - US and Canadian National Differences Special National Conditions based on Regulations and Other National Differences			
1.1	All equipment is to be designed to allow installation according to the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, for such equipment marked or otherwise identified, installation is allowed per the Standard for the Protection of Information Technology Equipment, ANSI/NFPA 75.	In accordance with the National Electrical Code (NEC) and the Canadian Electrical Code (CEC) part 1 CAN/CSA C22.1, ANSI/NFPA 70, and unless marked or otherwise identified, the Standard for Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	P
1.4	Additional requirements apply to some forms of power distribution equipment, including sub-assemblies.	Considered.	P
4.1.17	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the NEC.	Not exceeding 3.05 m.	N/A
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC generally are required to have special construction features and identification markings.		N/A
4.8	Lithium coin / button cell batteries have modified special construction and performance requirements.	No such batteries.	N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.6.3	Protective earthing conductors comply with the minimum conductor sizes in Table G.5, except as required by Table G.7ADV.1 for cord connected equipment, or Annex DVH for permanently connected equipment	No such parts.	N/A
5.7.7	Equipment intended to receive telecommunication ringing signals complies with a special touch current measurement tests.	No TNV circuits within the equipment.	N/A
6.5.1	PS3 wiring outside a fire enclosure complies with single fault testing in B.4, or be current limited per one of the permitted methods.	No such parts.	N/A
Annex F (F.3.3.8)	Output terminals provided for supply of other equipment, except mains, supply are marked with a maximum rating or references to which equipment it is permitted to be connected.	No DC output connector is provided.	N/A
Annex G (G.7.1)	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.	The equipment is not permanent connection equipment.	N/A
Annex G (G.7.3)	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.	No power supply cord provided.	N/A
	Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.	See above.	N/A
Annex G (G.7.5)	Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Power supply cords are required to be no longer than 4.5 m in length if used in ITE Rooms.	See above.	N/A
Annex H.2	Continuous ringing signals under normal operating conditions up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	No TNV circuits within the equipment.	N/A
Annex H.4	For circuits with other than ringing signals and with voltages exceeding 42.4 V_{peak} or 60 V d.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.	No TNV circuits within the equipment.	N/A
Annex M	Battery packs for stationary applications comply with special component requirements.	No such parts.	N/A
Annex DVA (1)	Equipment intended for use in spaces used for environmental air are subjected to special flammability requirements for heat and visible smoke release.	The equipment not intended to be used within such environments.	N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	For ITE room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	Not such equipment.	N/A
	Consumer products designed or intended primarily for children 12 years of age or younger are subject to additional requirements in accordance with U.S. & Canadian Regulations.	The equipment is not for children used.	N/A
	Baby monitors additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.	Not a baby monitors.	N/A
Annex DVA (5.6.3)	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered.	P
Annex DVA (6.3)	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30.	No flammable liquids within the equipment.	N/A
Annex DVA (6.4.8)	For ITE room applications, enclosures with combustible material measuring greater than 0.9 m^2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less. For equipment with the same dimensions for other applications, an external surface that is not a fire enclosure requires a min. flammability classification of V-1.	No such application.	N/A
Annex DVA (10.3.1)	Equipment with lasers meets the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No such parts.	N/A
Annex DVA (10.5.1)	Equipment that produces ionizing radiation complies with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No such parts.	N/A
Annex DVA (F.3.3.3)	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. Additional considerations apply for voltage ratings that exceed the attachment cap rating or are lower than the “Normal Operating Condition” in Table 2 of CAN/CSA C22.2 No. 235.”	Single phase only.	N/A
Annex DVA (F.3.3.5)	Equipment identified for ITE (computer) room installation is marked with the rated current	Not such application.	N/A
Annex DVA (G.1)	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position	No such parts.	N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVA (G.3.4)	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.	No standard supply outlets, receptacles, medium-base or smaller lampholders provided.	N/A
Annex DVA (G.4.2)	Equipment with isolated ground (earthing) receptacles complies with NEC 250.146(D) and CEC 10-112 and 10-906(8).	No such parts.	N/A
Annex DVA (G.4.3)	Where a fuse is used to provide Class 2 or Class 3 current limiting, it is not operator-accessible unless it is non- interchangeable.	No such parts.	N/A
Annex DVA (G.5.3)	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.	No such parts.	N/A
Annex DVA (G.5.4)	Motor control devices are required for cord-connected equipment with a mains-connected motor if the equipment is rated more than 12 A, or if the equipment has a nominal voltage rating greater than 120 V, or if the motor is rated more than 1/3 hp (locked rotor current over 43 A).	No such parts.	N/A
Annex DVA (Annex M)	For ITE room applications, equipment with battery systems capable of supplying 750 VA for five minutes have a battery disconnect means that may be connected to the ITE room remote power-off circuit.	Not such application.	N/A
Annex DVA (Q)	Wiring terminals intended to supply Class 2 outputs according to the NEC or CEC Part 1are marked with the voltage rating and “Class 2” or equivalent; marking is located adjacent to the terminals and visible during wiring.	Not applicable for the equipment.	N/A
Annex DVB (1)	Additional requirements apply for equipment used for entertainment purposes intended for installation in general patient care areas of health care facilities.	Not such application.	N/A
Annex DVC (1)	Additional requirements apply for equipment intended for mounting under kitchen cabinets.	Not such application.	N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVE (4.1.1)	Some equipment, components, sub-assemblies and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material requirements. Components required to comply include: appliance couplers, attachment plugs, battery back-up systems, battery packs, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultra-capacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), ground-fault current interrupters, interconnecting cables, data storage equipment, printed wiring, protectors for communications circuits, receptacles, surge protective devices, vehicle battery adapters, wire connectors, and wire and cables.	UL approved components used. Refer to table 4.1.2 of IEC 62368-1 test report for details.	P
Annex DVH	Equipment for permanent connection to the mains supply is subjected to additional requirements.	The equipment is not permanently connected equipment.	N/A
Annex DVH (DVH.1)	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains are in accordance with the NEC/CEC.	Pluggable equipment type A.	N/A
Annex DVH (DVH.3.2)	Terminals for permanent wiring, including protective earthing terminals, are suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and are specially marked when specified.	No terminals for permanent wiring.	N/A
Annex DVH (DVH.3.2)	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).	No wire binding screws.	N/A
Annex DVH (DVH.4)	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	The equipment is not permanently connected equipment.	N/A
Annex DVH (DVH 5.5)	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, complies with special earthing, wiring, marking and installation instruction requirements.	The equipment not connected to a centralized d.c. power system.	N/A
Annex DVI (6.7)	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses.	No TNV circuits within the equipment.	N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVJ (10.6.1)	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.	No TNV circuits within the equipment.	N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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

Differences according to.....: J62368-1 (2020)

TRF template used: .....: IECEE OD-2020-F3, Ed. 1.1

Attachment Form No.....: JP_ND_IEC62368_1D

Attachment Originator .....: UL (JP)

Master Attachment .....: Date 2021-02-04

	National Differences		—
4.1.2	Where the component, or a characteristic of a component, is a safeguard or a part of a safeguard, components shall comply with the requirements of this standard or, where specified in a requirements clause, with the safety aspects of the relevant JIS component standards or IEC component standards, or components shall have properties equivalent to or better than these.	Complied.	P
5.6.1	Mains socket-outlet and appliance outlet shall comply with Clause G.4.2A if they are incorporated as part of the equipment.	Not such equipment.	N/A
5.6.2.1	Mains connection of class 0I equipment: Instructional safeguard in accordance with Clause F.3.6.1A; Mains plug having a lead wire for protective earthing connection of class 0I equipment; Independent main protective earthing terminal installed by ordinary person.	Class I equipment considered.	N/A
5.6.2.2	This requirement does not apply to internal conductor of the cord set that is covered by the sheath of mains cord and is formed together with mains plug and appliance connector.		P

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.6.3	In case of class 0I equipment using power supply cord having two conductors (no earthing conductor), the conductor of protective earthing lead wire shall comply with either of the following: – use of annealed copper wire with 1.6 mm diameter or corrosion-inhibiting metal wire having size and strength that are equivalent to or more than the above copper wire – single core cord or single core cab tire cable with 1.25 mm^2 or more cross-sectional area	Class I equipment considered.	N/A
5.7.3	For class 0I equipment that is provided with mains socket-outlet in the configuration as specified in JIS C 8282 series or JIS C 8303, or otherwise being considered to comply with relevant regulations, or that is provided with mains appliance outlet as specified in JIS C 8283-2-2 for the purpose of interconnection, the measurement is conducted on the system of the interconnected equipment having a single connection to the mains.	Class I equipment considered.	N/A
5.7.4	In case of class 0I equipment, touch current shall not exceed 1.41 mA peak or for sinusoidal wave, 1.0 mA r.m.s. when measured using the network specified in Figure 4 of IEC 60990.	Class I equipment considered.	N/A
6.4.3.3	A fuse complying with JIC C 6575 series or a fuse having equivalent characteristics shall open within 1 s. For Class A fuse of JIS C 6575, replace “2.1 times” by “1.35 times” and in case of Class B fuse of JIS C 6575, replace “2.1 times” by “1.6 times”. A fuse not complying with JIS C 6575 series shall be tested with the breaking capacity taken into account.		N/A
8.5.4.2.1	Only three-phase stationary equipment rated more than 200 V ac can be considered as being for use in locations where children are not likely to be present, when complying with Clause F.4.	No moving parts.	N/A
8.5.4.2.2	For equipment installed where children may be present, an instructional safeguard shall be provided by easily understandable wording in accordance with Clause F.5, except that element 3 is optional.		N/A
8.5.4.2.4	The media destruction device is tested according to Clause V.1.2 with applicable jointed test probes to the opening. And then the wedge probe per Figure V.4 shall not contact any moving part.		N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
8.5.4.2.5	The wedge probe of Figure V.4 and applicable jointed test probes specified in Clause V.1.2 shall not contact any moving part. Instructional safeguard shall not be used instead of equipment safeguard for preventing access to hazardous moving parts.		N/A
9.2.6, Table 38	Handles, Knobs, grips, etc. and external surfaces either held, touched or worn against the body in normal use (> 1 min) [b,c]	No such part.	N/A
F.3.5.1	Instructional safeguard of class 0I equipment in accordance with Clause F.5 when a mains socket-outlet as specified in JIS C 8282 series, JIS C 8303 or relevant regulation to which class I equipment can be connected is provided in accordance with Clause G.4.2A except for the cases where the socket-outlet is accessible only to skilled persons.		N/A
F.3.5.3	If the fuse is necessary for the safeguard function, the symbols indicating pre-arcing time-current characteristic.	No replaceable fuse.	N/A
F.3.6.1A	Marking for class 0I equipment The requirements of Clauses F.3.6.1.1 and F.3.6.1.3 shall be applied to class 0I equipment. For class 0I equipment, a marking of instructions and instructional safeguard shall be provided regarding the earthing connection.		N/A
F.3.6.2.1	Symbols, IEC 60417-5172 (2003-02) or IEC 60417-6092 (2011-10), shall not be used for class I equipment or class 0I equipment.		P
F.4	Instruction for audio equipment with terminals classified as ES3 in accordance with Table E.1, and for other equipment with terminals marked in accordance with F.3.6.1 and F.3.6.1A. Installation instruction for the protective earthing connection for class 0I equipment provided with independent main protective earthing terminal, where the cord for the protective earthing connection is not provided within the package for the equipment.	Not audio equipment.	N/A
G.3.2.1	The thermal link when tested as a separate component, shall comply with the requirements of JIS C 6691 or have properties equivalent to or better than that.	No such component.	N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
G.3.4	Except for devices covered by Clause G.3.5, overcurrent protective devices used as a safeguard shall comply with the relevant part of JIS C 6575 (corresponding to IEC60127) or shall have equivalent characteristics. If there are no applicable IEC standards, overcurrent protective devices used as a safeguard shall comply with their applicable IEC standards.	Approved fuse used.	P
G.4.1	This requirement is not applicable to Clauses G.4.2 and G.4.2A.	Approved AC inlet used.	P
G.4.2	Mains connector shall comply with JIS C 8282 series, JIS C 8283 series, JIS C 8285, JIS C 8303 or IEC 60309 series. Mains plugs and socket-outlets shall comply with JIS C 8282 series, JIS C 8303, IEC 60309 series, or have equivalent or better performance. A power supply cord set provided with appliance connector that can fit appliance inlet complying with JIS C 8283-1 shall comply with JIS C 8286. Construction preventing mechanical stress not to transmit to the soldering part of inlet terminal. Consideration for an equipment rated not more than 125 V provided with Type C14 and C18 appliance coupler complying with JIS C 8283 series.		P
G.4.2A	Mains socket-outlet and interconnection coupler provided with the class II, class I and class 0I equipment respectively.		N/A
G.7.1	A mains supply cord need not include the protective earthing conductor for class 0I equipment provided with independent protective earthing conductor.		N/A
G.8.3.3	Withstand 1,71 × 1.1 × U_0 for 5 s.	No varistor.	N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT

IEC 62368-1

(AUSTRALIA / NEW ZEALAND) NATIONAL DIFFERENCES

(**Audio/video, information and communication technology equipment**)

Differences according to .....: AS/NZS 62368.1:2018

TRF template used: ..... : IECEE OD-2020-F3, Ed. 1.1

Attachment Form No. .....: AU_NZ_ND_IEC62368_1D

Attachment Originator.....: JAS-ANZ

Master Attachment .....: 2021-12-21

	National Differences		--
Appendix ZZ	Variations to IEC 62368-1:2014 (ED. 2.0) for Australia and New Zealand		P
ZZ1 Scope	This Appendix lists the normative variations to IEC 62368-1:2014 (ED. 2.0)		P
ZZ2 Variations	The following modifications are required for Australian/New Zealand conditions:		P
2	*Add* the following to the list of normative references: The following normative documents are referenced in Appendix ZZ: -AS/NZS 3112, *Approval and test specification—Plugs and socket-outlets* -AS/NZS 3123, *Approval and test specification—Plugs, socket-outlets and couplers for general industrial application* -AS/NZS 3191, *Electric flexible cords* -AS/NZS 60065, *Audio, video and similar electronic apparatus—Safety requirements* *(IEC 60065:2015 (ED.8.0) MOD)* -AS/NZS 60320.1, *Appliance couplers for household and similar general purposes,* *Part 1: General requirements (IEC 60320-1, Ed.2.1 (2007) MOD)* -AS/NZS 60320.2.2, *Appliance couplers for household and similar general purposes* *Part 2.2: Interconnection couplers for household and similar equipment (IEC 60320-2-* *2, Ed.2.0 (1998) MOD)* -AS/NZS 60695.2.11, *Fire hazard testing, Part 2.11: Glowing/hot wire based test methods—Glow-wire flammability test method for end-products* -AS/NZS 60695.11.5, *Fire hazard testing, Part*	Added.	P

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	11.5: Test flames—Needle-flame test method—Apparatus, confirmatory test arrangement and guidance -AS/NZS 60695.11.10, *Fire hazard testing, Part 11.10: Test flames—50 W* *horizontal and vertical flame test methods* -AS/NZS 60884.1, *Plugs and socket-outlets for household and similar purposes,* *Part 1: General requirements* -AS/NZS 60950.1:2015, *Information technology equipment—Safety*, Part 1: *General requirements (IEC 60950-1, Ed.2.2 (2013), MOD)* IEC 61032:1997, *Protection of persons and equipment by enclosures—Probes for* *verification* -AS/NZS 61558.1:2008 (including Amendment 2:2015), *Safety of Power Transformers,* *Power Supplies, Reactors and Similar Products, Part 1: General requirements and* *tests (IEC 61558-1 Ed 2.1, MOD)* -AS/NZS 61558.2.16, *Safety of transformers, reactors, power supply units and similar* *products for voltages up to 1 100 V, Part 2.16:* *Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units.*		
4.1.1	**Application of requirements and acceptance of materials, components and subassemblies** 1 *Replace* the text 'IEC 60950-1' with 'AS/NZS 60950.1:2015'. 2 *Replace* the text 'IEC 60065' with 'AS/NZS 60065'.	Replaced.	P
4.7	**Equipment for direct insertion into mains socket-outlets**		N/A
4.7.2	**Requirements** *Delete* the text of the second paragraph and *replace* with the following: Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flat-pin socket-outlet complying with AS/NZS 3112 shall comply with the requirements in AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets.	Deleted.	N/A
4.7.3	**Compliance Criteria** *Delete* the first paragraph and Note 1 and Note 2 and *replace* with the following: *Compliance is checked by inspection and, if necessary, by the tests in AS/NZS 3112.*	Deleted.	N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.8	*Delete* existing clause title and *replace* with the following: **4.8 Products containing coin/button cell batteries**		N/A
4.8.1	**General** 1 Second dashed point, *delete* the text and *replace* with the following: – include coin/button cell batteries with a diameter of 32 mm or less. 2 After the second dashed point, *insert* the following Note: NOTE 1: Batteries are specified in IEC 60086-2. 3 After the third dashed point, *renumber* the existing Note as 'NOTE 2'. 4 Fifth dashed point, *delete* the word 'lithium'.		N/A
4.8.2	**Instructional Safeguard** First line, *delete* the word 'lithium'.		N/A
4.8.3	**Construction** First line, after the word 'Equipment' *insert* the words 'containing one or more coin/button batteries and'		N/A
4.8.5	**Compliance criteria** *Delete* the first paragraph and *replace* with the following: *Compliance is checked by applying a force of 30 N +/-1 N for 10 s to the battery compartment door/cover by a rigid test finger according to test probe 11 of IEC 61032:1997 at the most unfavourable place and in the most unfavourable direction. The force shall be applied in one direction at a time.*	Deleted.	N/A
5.4.10.2	**Test methods**		N/A
5.4.10.2.1	**General** *Delete* the first paragraph and *replace* with the following: In Australia only, the separation is checked by the test of both Clause 5.4.10.2.2 and Clause 5.4.10.2.3. In New Zealand, the separation is checked by the test of either Clause 5.4.10.2.2 or Clause 5.4.10.2.3.	Deleted.	N/A
Table 29	*Replace* the table with the following:		N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Parts	Impulse test		Steady state test	
	New Zealand	Australia	New Zealand	Australia
Parts indicated in Clause 5.4.10.1 a) [a]	2.5 kV 10/700 µs	7.0 kV for hand-held telephones and headsets, 2.5 kV for other equipment. 10/700 µs	1.5 kV	3 kV
Parts indicated in Clause 5.4.10.1 b) and c) [b]	1.5 kV 10/700 µs [c]		1.0 kV	1.5 kV

[a] Surge suppressors shall not be removed.

[b] Surge suppressors may be removed, provided that such devices pass the impulse test of Clause 5.4.10.2.2 when tested as components outside the equipment.

[c] During this test, it is allowed for a surge suppressor to operate and for a sparkover to occur in a GDT.

5.4.10.2.2	After the first paragraph, *insert* new Notes 201 and 202 as follows: NOTE 201 For Australia, the 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines. NOTE 202 For Australia, the value of 2.5 kV for Clause 5.4.10.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.		N/A
5.4.10.2.3	After the first paragraph, *insert* new Notes 201 and 202 as follows: NOTE 201 For Australia, where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used. NOTE 202 The 3 kV and 1.5 kV values for Australia have been determined considering the low frequency induced voltages from the power supply distribution system.		N/A
6	**Electrically-caused fire**		P
6.1	**General** After the first paragraph, *insert* the following new paragraph: Alternatively, the requirements of Clauses 6.2 to 6.5.2 are considered to be fulfilled if the equipment complies with the requirements of Clause 6.202	Added.	P
6.6	After Clause 6.6, *add* the new Clauses 6.201 and 6.202 as follows: **6.201 External power supplies, docking stations and other similar devices** and **6.202 Resistance to fire—Alternative tests** (see special national conditions)		N/A
8.5.4	**Special categories of equipment comprising moving parts**		N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
8.5.4.1	**Large data storage equipment** In the first dashed row and the second dashed rows *replace* 'IEC 60950-1:2005' with 'AS/NZS 60950.1:2015'.		N/A
8.6	**Stability of equipment**		P
8.6.1 and Table 36	**Requirements** 1. Table 36, *insert* Footnote c at the end of the 'Glass slide' heading, and *add* a new Footnote c after the text of Footnote b in the last row of Table 36 as follows: [c] The glass slide test is not applicable to floor standing equipment, even though the equipment may have controls or a display. 2. Table 36, fifth row, *insert* '[201]' at the end of 'No stability requirements' 3. Table 36, ninth row, *insert* '[201]' at the end of 'No stability requirements' 4. Table 36, *add* the following new footnote: [201] MS2 and MS3 television sets and display devices, designed only for fixing to a wall, ceiling or equipment rack, are not subjected to stability requirements only if the instructional safeguard of Clause 8.6.1.201 is provided. Otherwise, the glass slide requirements of Clause 8.6.4 and horizontal force requirements of Clause 8.6.5 apply. 5. Second paragraph beneath Table 36, *delete* the words 'MS2 and MS3 television sets' and *replace* with 'MS2 and MS3 television sets and display devices'	Considered.	P
8.6.1	After Clause 8.6.1 *add* the following new clauses: **8.6.1.201 Instructional safeguard for fixed-mount television sets** (see special national conditions)	Added. No such equipment.	N/A
Annex F Paragraph F.3.5.1	**Mains appliance outlet and socket-outlet markings** *Replace* 'IEC 60320-2-2' with 'AS/NZS 60320.2.2'.	Replaced.	N/A
Annex G Paragraph G.4.2	**Mains connectors** 1 In the second line *insert* 'or AS/NZS 3123' after 'IEC 60906-1'. 2 In the second line *insert* 'or AS/NZS 60320 series' after 'IEC 60320 series' 3 *Add* the following new paragraph: 10 A or 15 A 250 V flat pin plugs for the connection of equipment to mains-powered socket-outlets for household or similar general use shall comply with AS/NZS 3112 or AS/NZS 60884.1.	Added.	P

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Clause	Requirement + Test	Result - Remark	Verdict
Paragraph G.5.3.1	**Transformers, General** 1 In the third dashed point *replace* 'IEC 61558-1 and the relevant parts of IEC 61558-2' with 'AS/NZS 61558-1 and the relevant parts of AS/NZS 61558.2' 2 In the fourth dashed point *replace* 'IEC 61558-2-16' with 'AS/NZS 61558.2.16'.	Considered.	P
Paragraph G.7.1	**Mains supply cords, General** In the fourth dashed paragraph, *replace* 'IEC 60320-1' with 'AS/NZS 60320.1'	Considered.	P
Table G.5	**Sizes of conductors** 1 In the second row, first column, *delete* '6' and *replace* with '7.5' 2 In the second row, second column, *delete* '0,75' and *replace* with '0.75[b] 3 *Delete* Note 1. 4 *Replace* 'NOTE 2' with 'NOTE:'. 5 *Delete* the text of 'Footnote b' and *replace* with the following: [b] This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the entry to the plug does not exceed 2 m (0.5 mm2 three-core supply flexible cords are not permitted; see AS/NZS 3191). 6 In Footnote c *replace* 'IEC 60320-1' with 'AS/NZS 60320.1' 7 In Footnote d *replace* 'IEC 60320-1' with 'AS/NZS 60320.1'	Considered.	P
Annex M **Paragraph M.3.2**	**Protection circuits for batteries provided within the equipment, Test method** After the first dashed point *add* the following Note: NOTE 201: In cases where the voltage source is provided by power from an unassociated power source, consideration should be given to the effects of possible single fault conditions in the unassociated equipment. If the power source is unknown then it should be assumed that the maximum limit of SELV may be applied to the source input under assumed single fault conditions in the source when assessing the charging circuit in the equipment under test.	No such construction.	N/A
	Special national conditions (if any)		

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Clause	Requirement + Test	Result - Remark	Verdict
6.201	**External power supplies, docking stations and other similar devices** For external power supplies, docking stations and other similar devices, during and after abnormal operating conditions and during single fault conditions the output voltage— – at all ES1 outlets or connectors shall not increase by more than 10% of its rated output voltage under normal operating condition; and – of a USB outlet or connector shall not increase by more than 3 V or 10% of its rated output voltage under normal operating conditions, whichever is higher. For equipment with multiple rated output voltages, the requirements apply with the equipment configured for each rated output voltage in turn. NOTE: This is intended to reduce the possibility of battery fire or explosion in attached equipment or accessories when charging secondary lithium batteries. *Compliance shall be checked by measurement, taking into account the abnormal* *operating conditions of Annex B.3 and the simulated single-fault conditions of Annex B.4*	Complied.	P
6.202	**Resistance to fire—Alternative tests**		N/A
6.202.1	**General** Parts of non-metallic material shall be resistant to ignition and spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames from inside the equipment, or the following: a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1 mm in width regardless of length. b) The following parts which would contribute negligible fuel to a fire: – small mechanical parts, the mass of which does not exceed 4 g, such as mounting parts, gears, cams, belts and bearings; – small electrical components, such as capacitors with a volume not exceeding 1 750 mm3, integrated circuits, transistors and optocoupler packages, if these components are mounted on	The alternative method is not used.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	material of flammability category V-1, or better, according to AS/NZS 60695.11.10. NOTE: In considering how to minimize propagation of fire and what 'small parts' are, account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating the fire from one part to another.		
	Compliance shall be checked by the tests of Clauses 6.202.2, 6.202.3 and 6.202.4. For the base material of printed boards, compliance shall be checked by the test of Clause 6.202.5. The tests shall be carried out on parts of non-metallic material which have been removed from the equipment. When the glow-wire test is carried out, the parts shall be placed in the same orientation as they would be in normal use. These tests are not carried out on internal wiring.		N/A
6.202.2	**Testing of non-metallic materials** Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550°C. Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glow-wire test shall be not carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the relevant part is not thinner than the sample tested.		N/A
6.202.3	**Testing of insulating materials** Parts of insulating material supporting Potential Ignition Sources shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750°C. The test shall be also carried out on other parts of insulating material which are within a distance of 3 mm of the connection. NOTE: Contacts in components such as switch contacts are considered to be connections		N/A
	For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test. However, parts shielded by a barrier which meets the needle-flame test need not be tested		N/A
	The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

following modifications:

Clause of AS/NZS 60695.11.5	Change
9 Test procedure	
9.2 Application of needle-flame	*Delete* the first and second paragraphs and *replace* with the following: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of Figure 1. If possible the flame shall be applied at least 10 mm from a corner. The duration of application of the test flame shall be 30 s □1 s.
9.3 Number of test specimens	*Replace* with the following: The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.
11 Evaluation of test results	*Replace* with the following: The duration of burning (tb) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.

The needle-flame test shall not be carried out on parts of material classified as

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Clause	Requirement + Test	Result - Remark	Verdict
	V-0 or V-1 according to AS/NZS 60695.11.10, provided that the relevant part is not thinner than the sample tested.		
6.202.4	**Testing in the event of non-extinguishing material** If parts, other than enclosures, do not withstand the glow wire tests of Clause 6.202.3, by failure to extinguish within 30 s after the removal of the glow wire tip, the needle-flame test detailed in Clause 6.202.3 shall be made on all parts of non-metallic material which are within a distance of 50 mm or which are likely to be impinged upon by flame during the tests of Clause 6.202.3. Parts shielded by a separate barrier which meets the needle-flame test need not be tested. NOTE 1: If the enclosure does not withstand the glow-wire test the equipment is considered to have failed to meet the requirements of Clause 6.202 without the need for consequential testing. NOTE 2: If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the equipment, the equipment is considered to have failed to meet the requirements of Clause 6.202 without the need for consequential testing. NOTE 3: Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting, in contact with, or in close proximity to, connections.		N/A
6.202.5	**Testing of printed boards** The base material of printed boards shall be subjected to the needle-flame test of Clause 6.202.3. The flame shall be applied to the edge of the board where the heat sink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge, consisting of broken perforations, unless the edge is less than 3 mm from a potential ignition source. The test is not carried out if— – the printed board does not carry any potential ignition source; – the base material of printed boards, on which the available apparent power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category V-1 or better according to AS/NZS 60695.11.10, or the printed boards are protected by an enclosure meeting the flammability category V-0 according to AS/NZS 60695.11.10, or made of metal, having openings only for connecting wires		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	which fill the openings completely; or – the base material of printed boards, on which the available equipment power at a connection exceeds 15 VA operating at a voltage exceeding 400 V (peak) a.c. or d.c. under normal operating conditions, and base material of printed boards supporting spark gaps which provides protection against overvoltages, is of flammability category V-0 according to AS/NZS 60695.11.10 or the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely. *Conformance shall be determined using the smallest thickness of the material.* NOTE: Available apparent power is the maximum apparent power which can be drawn from the supplying circuit through a resistive load whose value is chosen to maximize the apparent power for more than 2 min when the circuit supplied is disconnected.		
6.202.6	**For open circuit voltages greater than 4 kV** Potential ignition sources with open circuit voltages exceeding 4 kV (peak) a.c. or d.c. under normal operating conditions shall be contained in a FIRE ENCLOSURE which shall comply with flammability category V-1 or better according to AS/NZS 60695.11.10.		N/A
8.6.1.201	**8.6.1.201 Instructional safeguard for fixed-mount television sets** MS2 and MS3 television sets and display devices designed only for fixed mounting to a wall of ceiling or equipment rack shall, where required in Table 36, footnote 201, have an instructional safeguard in accordance with Clause F.5 which may be on the equipment or included in the installation instructions or equivalent document accompanying the equipment. The elements of the instructional safeguard shall be as follows: – element 1a: not available; – element 2: ‘Stability Hazard’ or equivalent wording; – element 3: ‘The television set may fall, causing serious personal injury or death’ or equivalent text; – element 4: the following or equivalent text: To prevent injury, this television set must be securely attached to the floor/wall in accordance with the installation instructions	Not only for fixed mounting uses.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.6.1.202	**Restraining device** MS2 and MS3 television sets and display devices that are not solely fixed-mounted should be provided with a restraining device such as a fixing point to facilitate restraining the equipment from toppling forward. The restraining device shall be capable of withstanding a pull of 100 N in all directions without damage. Where a restraining device is provided, instructions shall be provided in the instructions for installation or instructions for use to ensure correct and safe installation.	MS1 equipment	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

AS_NZS_3112:2017_Appendix J ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT **AS_NZS_3112:2017_+A1:2021 Appendix J** **AUSTRALIAN / NEW ZEALAND NATIONAL DIFFERENCES** **(Approval and test specification—Plugs and socket-outlets)**			
Differences according to .....:	AS_NZS_3112:2017_Amendment 1:2021_Appendix J		
TRF template used: ..... :	IECEE OD-2020-F3, Ed. 1.1		
Attachment Form No. .....: **Attachment Originator**.....: **Master Attachment** .....:	AS_NZS_3112:2017_Appendix J JAS-ANZ 2021-11		
NOTE	**This TRF only relates to Appendix J requirements**		N/A
	National Differences		N/A
	APPENDIX J INTEGRAL OR DETACHABLE PLUG PORTIONS OF EQUIPMENT FOR INSERTION INTO SOCKET-OUTLETS		N/A
J1 SCOPE	General: This Appendix specifies additional dimensional and constructional requirements for detachable plug portions, or equipment incorporating integral supply pins or equipment incorporating detachable plug portions. This Appendix shall be read in conjunction with Section 2 of this Standard. For the purposes of this Appendix, where the term 'plug' is used in Section 2 it shall be taken to mean the plug portion of equipment or the detachable plug portion. The equipment shall comply with the relevant product Standard. The tests and requirements specified in this Appendix are in addition to any test and requirements of the relevant product Standard for the equipment. (AS/NZS 3112:2017/A1:2021)		N/A

J2	DEFINITION	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

J2.1	Detachable plug portion A plug portion that is detachable from the equipment and with connections including the following standardized outputs and other contacts (a) Type A (see Figure J1): A detachable plug portion with a connection intended for plugging directly into equipment. The connection being via the equipment group 1 appliance inlet within the scope of AS/NZS 60320.1. (b) Type B (see Figure J2): A detachable plug portion with a non-standardized connection intended for plugging directly into equipment (c) Type C (see Figure J3): A detachable plug portion with a connection intended for use with an adaptor connected to a flexible cord so as to replicate a supply plug and flexible cord configuration. The connection being via a group 1 appliance outlet within scope of AS/NZS 60320.2.2, which is integral with the plug portion (AS/NZS 3112:2017)	N/A
J2.2	Integral plug portion A plug portion that is integral to the equipment enclosure and is not detachable (AS/NZS 3112:2017)	N/A
J2.3	Plug portion A plug portion is that portion of equipment with pins for insertion into a socket-outlet, including the plug pins, terminals of the plug pins, external dimensions of the 'maximum projection' and any connections of a detachable plug portion. (AS/NZS 3112:2017/A1:2021)	N/A

J3	**REQUIREMENTS FOR THE PLUG PORTION**	N/A

J3.1	General The following provisions apply to the dimensional and constructional requirements of plug portions of equipment and any detachable connection between the plug portion and the equipment:		N/A
(a)	For detachable plug portions intended for connection to the equipment in multiple orientations, the relevant tests are performed in the most onerous orientation.		N/A
(b)	For Type A detachable plug portion, the relevant requirements of AS/NZS 3105:2014 are applicable, in addition to conformance with relevant clauses of this Appendix		N/A
(c)	For Type B detachable plug portions, the conformance is shown by the relevant clauses of		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	this Appendix.		
(d)	For Type C detachable plug portions, conformance is shown by assessment to Section 2 _of this Standard (plugs) and relevant clauses of this Appendix (AS/NZS 3112:2017)		N/A
J3.2	**Plug pins of plug portions** The requirements of Clause 2.2 are applicable for plug pins.		N/A
2.2	PLUG PINS		N/A
2.2.1	Current carrying parts of plug pins of metal having sufficient mechanical strength, electrical conductivity and resistance to corrosion adequate for the intended use		N/A
	Plug pin material?		--
2.2.2	Pins that may become detached from plug yet remain attached to cord conductors; not possible for plug to be assembled with any pin located in a position other than that intended		N/A
	Plug made of resilient insulating material; pins and terminals held securely in position (AS/NZS 3112:2017)		N/A
2.2.3	Plug pins adequately proportioned throughout and portion adjacent to the connection designed to not introduce a stress concentration which may lead to a fracture of the pin, and suitably shaped to prevent abrasion or cutting of conductor strands due to flexure in normal use		N/A
	Exposed ends of plug pins have a lead-in, bevel or radius to facilitate entry into socket-outlets and to operate shutters		N/A
	Round pins have a semi-circular end profile		N/A
	Flat-pins with the following profile are deemed to comply:		--
(a)	Flat-pins with a radius on the end with side bevels may have a width and thickness profile as specified in Figure 2.1(h)		N/A
(b)	Flat-pins square on the end with corner and side bevels may have a width and thickness profile as specified in Figure 2.1(i)		N/A
(c)	Flat-pins square on the end with corner bevels and a radius on the sides may have a width and		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	thickness profile as specified in Figure 2.1(j)		
	Contact portion of the pins smooth and free from openings or indentations		N/A
	Flat pin plugs having a longitudinal seam or opening in the contact portion of one face; width not exceeding 0.3 mm and		N/A
	Thickness not exceeding 1.58 mm		N/A
	Exposed portion of earthing pins and pins other than insulated pins free from any non-metallic coverings or coatings (AS/NZS 3112:2017)		N/A
2.2.4	Live parts of insulated pin plugs not exposed when plug is partially or fully engaged with associated socket		N/A
	Compliance by measurement to Figure 2.4	(see appended table)	N/A
	Lacquer, enamel or sprayed insulating coating not considered to be insulation material		N/A
	All live pins on low voltage plugs except for those shown in Figure 2.1 (a2), (b) and (g) of the insulated pin type		N/A
	Colour green or green / yellow not used for insulation of insulated pins (AS/NZS 3112:2017)		N/A

J3.3	**Ratings and dimensions for low-voltage plug portions** Requirements of clauses 2.8.1 and 2.8.4 apply for rating and dimensions	N/A

2.8	Ratings and Dimensions of Low Voltage Plugs		--
2.8.1	Low voltage flat-pin plugs and low voltage plugs having one round earth pin and two flat pins or two round live pins and one flat earth pin, having ratings up to and including 20A; compliance with Figure 2.1	(see appended results)	N/A
	Rating of plug	___A	--
	Nominal dimensions covering disposition of pins checked by gauge of Appendix A		N/A
	Distance between live pin and edge of moulding to not less than 9 mm		N/A
	Measured distance	___mm	--
	No point on plug face protrudes more than 0.5 mm		N/A
	Measured protrusion	___mm	--
	Dimensional requirements of Figure 2.1(e2) did not		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	applied to plugs with greater than three pins (AS/NZS 3112:2017)		
2.8.4	Low voltage plugs comply with dimensions of Figure 2.1	(see appended table 2.8.1)	N/A
	Disposition of pins checked by gauge complying with Appendix A, B or F as appropriate		N/A
	Low voltage plug having rating up to 15A and of the Figure 2.1 (a1), (c), (d), (f) or (g) type; comply with dimensional requirements of Figure 2.1 (e1 and e2)		N/A
	20A plug of Figure 2.1(a2) type complies with dimensional requirements of Figure 2.1 (e2)		N/A
	Plugs with insulated pins need not comply with dimension R20.0 ± 1 mm requirement of Figure 2.1 (e3) provided there is at least 9mm from the edge of the live pins to the edge of the plug face Figure 2.1(e3). (AS/NZS 3112:2017)		N/A
J3.4	**Internal connections for plug portions** Requirements of clause 2.9 apply for internal connections; unless requirements contained in the relevant product standard (AS/NZS 3112:2017)		N/A
2.9	INTERNAL CONNECTIONS		N/A
	Plug provided with earthing connections designed and constructed so that when plug is correctly wired and assembled:		N/A
(a)	Loose terminal screw or conductive material cannot bridge any live or earthed parts		N/A
(b)	Earthing parts effectively isolated from contact with live conductor which may become detached		N/A
(c)	Live parts effectively isolated from contact with any earthing conductor which may become detached		N/A
	Any connections for auxiliary devices comply with above requirements (AS/NZS 3112:2017)		N/A
J3.5	**Arrangement of earthing connections for plug portions** Requirements of clause 2.10 apply for arrangement of earthing connections		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.10	Arrangement of earthing connections		N/A
	Earthing pin radial to the circle embracing the pins (AS/NZS 3112:2017)		N/A
J3.6	**Configuration of plug portions** Requirements of clause 2.12.6 apply for configuration of the plug portion (AS/NZS 3112:2017)		N/A
2.12	Marking		--
2.12.6	Configuration of plugs		N/A
	Pins disposed so that configuration, as viewed from the pins, is earth, neutral and active in a clockwise direction		N/A
	Where there is no earthing pin; live pins conform to this configuration (AS/NZS 3112:2017)		N/A
J4	**Tests**		N/A
J4.1	General Plug portions of equipment shall be subjected to the following tests and unless stated otherwise, shall comply with the requirements specified in Section 2 for each test. The number of test samples shall be in accordance with Table J1 For equipment with a detachable plug portion, the assessment(s) of Table J1 tests 2, 3, 5, 10 and 11 shall be conducted on the— (a) assembled equipment with the detachable plug portion connected; and (b) the detachable plug portion after it has been separated from the equipment (AS/NZS 3112:2017/A1:2021)		N/A
J4.2	**High voltage test** The requirements of Clause 2.13.3 are applicable unless requirements are contained in the relevant product standard (AS/NZS 3112:2017)		N/A
2.13.3	Test No.1 - High voltage test		N/A
	Plug withstands without failure electric strength test as specified (AS/NZS 3112:2017)	(see appended table)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

J4.3	**Mechanical strength**	N/A
J4.3.1	**Tumbling barrel test** The tumbling barrel test is applied to determine the mechanical strength of the plug portions and equipment having integral or detachable plug portions. For equipment with a detachable plug portion, the detachable plug portion may become detached during the test. If this occurs the detachable plug portion shall be reassembled with the equipment when the pins are straightened as per (a) and (b) below. Three samples that have not been subjected to any previous test are tested to the requirements of Clause 2.13.7.1, however the test is modified as follows:	N/A
	A sample is dropped— (a) 500 times if the mass of the specimen does not exceed 250 g. The pins being straightened after each 100 drops and at the completion of the test to pass through the appropriate gauge of Figure A1, Figure B1 or Figure F1; and (b) 250 times if the mass of the specimen exceeds 250 g. The pins being straightened after each 25 drops and at the completion of the test to pass through the appropriate gauge of Figures A1, Figure B1 or Figure F1. (AS/NZS 3112:2017/A1:2021)	N/A

2.13.7.1	Test No.2 – Tumbling barrel test		N/A
	Three plugs tested as specified in tumbling barrel as specified		N/A
	Mass of sample	grams	--
	Number of drops	500 / 250	--
	After the test, samples show no damage and in particular:		N/A
(a)	Live parts not exposed to the standard test finger		N/A
(b)	Earth pin resistance complies with clause 3.14.7; resistance not exceeding 0.1 Ω		N/A
	Measured earth pin resistance	___Ω	--
(c)	Functions affecting safety not impaired		N/A
(d)	No live part detached or loosened		N/A
(e)	Pins not broken or showing signs of cracking (AS/NZS 3112:2017)		N/A

J4.3.2	Test No.3 **Impact test.** Plug portions and equipment having integral plug portions or detachable plug portions shall withstand lateral impact forces. All samples that were subjected to the tests in Paragraph J4.3.1 shall be tested as	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	follows:		
	(a) The sample shall be positioned at the centre of a steel plate with a thickness of at least 6 mm. Apertures in the steel plate for the plug pins to pass through shall conform to the corresponding socket Standard. The sample shall be held against the steel plate by clamping all the pins.		N/A
	(b) Samples shall be subjected to blows, with an impact energy of 1.0 ± 0.05 J by any means having the same performance as the spring-operated impact-test apparatus of AS/NZS 3100.		N/A
	(c) Three blows shall be applied to every point that is most likely to directly or indirectly stress the enclosure joints of the sample		N/A
	Compliance shall be checked by Paragraph J4.3.3		N/A
J4.3.3	**Specific compliance criteria** This Paragraph provides the common compliance assessment criteria for tests specified in Paragraphs J4.3.1 and J4.3.2.		N/A
	For equipment with an integral plug portion, the assessment(s) shall be made on the complete equipment.		N/A
	For equipment with a detachable plug portion, the assessment(s) shall be conducted on the— (a) assembled equipment with the detachable plug portion connected; and (b) the detachable plug portion after it has been separated from the equipment		N/A
	Following each test the samples shall comply with Clause 2.13.7.1		N/A
	(a) assembled equipment with the detachable plug portion connected;		N/A
	(a) Live parts shall not have become exposed to the standard test finger.		N/A
	(b) For earth pins, the resistance of the plug/socket-outlet circuit shall be such that conformance with Clause 3.14.7 is maintained The resistance shall not exceed 0.1 Ω.	___ Ω.	N/A
	(c) Any other function affecting safety shall not be impaired		N/A
	(d) No live part shall have become detached or loosened, to the extent that a hazardous situation is created		N/A
	The sample shall conform to the ‘Guarding of live		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	parts' requirements of AS/NZS 3100:2015 cl 5.1.		
	Following each test, no internal conductive material or conductive part shall have become detached or loosened, to the extent that it creates a hazardous situation. The sample shall conform to the 'Separation of live parts from non-current-carrying conductive parts' requirements of AS/NZS 3100. *NOTE Specific attention is drawn to the separation of any live parts to exposed metal parts or low voltage to extra low voltage parts*.		N/A
	(e) The pins shall be inspected with normal, or corrected to normal, vision. Insulation may be removed if necessary. Pins shall not be broken or show cracking.		N/A
	(b) the detachable plug portion after it has been separated from the equipment.		N/A
	(a) Live parts shall not have become exposed to the standard test finger.		N/A
	(b) For earth pins, the resistance of the plug/socket-outlet circuit shall be such that conformance with Clause 3.14.7 is maintained The resistance shall not exceed 0.1 Ω.	___ Ω.	N/A
	(c) Any other function affecting safety shall not be impaired		N/A
	(d) No live part shall have become detached or loosened, to the extent that a hazardous situation is created		N/A
	(e) The pins shall be inspected with normal, or corrected to normal, vision. Insulation may be removed if necessary. Pins shall not be broken or show cracking.		N/A
	The sample shall conform to the 'Guarding of live parts' requirements of AS/NZS 3100:2015 cl 5.1.		N/A
	Following each test, no internal conductive material or conductive part shall have become detached or loosened, to the extent that it creates a hazardous situation. The sample shall conform to the 'Separation of live parts from non-current-carrying conductive parts' requirements of AS/NZS 3100. *NOTE Specific attention is drawn to the separation of any live parts to exposed metal parts or low voltage to extra low voltage parts*. (AS/NZS 3112:2017/A1:2021)		N/A
J4.3.4	**Pin bending test** The pins of the plug portion of three samples not subjected to any previous tests shall be tested for compliance with the pin bending test of Clause 2.13.7.2		N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	(AS/NZS 3112:2017/A1:2021)		
2.13.7.2	Test No.4 – Pin bending test		N/A
	All flat–pin plugs rated up to and including 15 A shall be subjected to the pin bending test		N/A
	Three samples are subjected by clamping the plug in a rigid holding block and applying the bending force as specified		N/A
	After the test the pins shall not be broken off. (AS/NZS 3112:2017)		N/A
J4.8.3	Test No.5 **Plug portion detachment requirements**		N/A
	For all Type B or C devices and for Type A devices where the outlet of the detachable plug portion is parallel to the plug supply pins, disengagement of the detachable plug portion from the equipment shall require at least two simultaneous independent actions or the use of a tool.		N/A
	Disengagement of the detachable plug portion requires two simultaneous independent actions, or		N/A
	The plug portion and the equipment/adaptor shall be connected and disconnected 50 times (100 strokes).		N/A
	Compliance is verified by inspection and the plugging test.		N/A
	During the test plug portion was not separated		N/A
	The test of AS/NZS 3112 ‘temperature rise test’ for plugs shall be conducted immediately after the above test without disturbing the sample. (AS/NZS 3112:2017/A1:2021)		N/A
J4.4	**Temperature rise test** The relevant requirements of Clause 2.13.8 are applicable for the temperature rise test, except that the test current shall be that specified in the relevant product standard		N/A
	The temperature rise of the pins shall not exceed 45 K irrespective of the temperature rise of parts specified in end-product standards.		N/A
	For detachable plug portions the temperature rise of terminals and contacts shall not exceed 45 K. (AS/NZS 3112:2017)		N/A
2.13.8	Test No.6 – Temperature rise test		N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

(a)	Non-rewireable plugs tested as delivered with minimum cross-sectional area of conductor size for each respective current rating		N/A
(b)	Rewireable plugs fitted with PVC flexible cords having minimum cross-sectional area specified in manufacturer's instructions		N/A
	Terminal screws or nuts tightened with torque equal to two-thirds of value specified in Table 2.2.		N/A
	Conductors have length of at least 1 m		N/A
	Plug tested in draught free environment as specified using clamping units as specified in Figure 2.10		N/A
	Plug fitted with cord and inserted into socket-outlet as specified		N/A
	Test Current		N/A
	Temperature of terminals and contacts of detachable plug portion not exceeding 45 K (AS/NZS 3112:2017)	(see appended table)	N/A

J4.5	**Securement of pins of the plug portion** The requirements of Clause 2.13.9 are applicable for the securement of pins. (AS/NZS 3112:2017)	N/A

2.13.9	Test No.7. Securement of pins		N/A
2.13.9.1	Movement of pins		N/A
	Plug pins clamped 5 ± 0.5 mm from pin face; test equipment and sample pre-conditioning for 1 h at 40 ± 1°C		N/A
	Force of 18 ± 1 N applied to pin 14 ± 0.5 mm from plug face; applied gradually over 10 s and maintained for 10 s; applied in four directions		N/A
	Maximum deflection during test not exceeding 2.0 mm	(see appended results)	N/A
	Any distortion 5 minutes after test does not prevent insertion of plug into standard gauge(s) (AS/NZS 3112:2017 + A1:2021)		N/A
2.13.9.2	Fixing of pins		N/A
	Plug heated to 50 ± 2°C for 1h		N/A
	Force of 60 ± 0.6 N applied to each pin over 10 s and maintained for 10 minutes; applied in two directions along length of pin		N/A
	Maximum displacement during test not exceeding		N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	2.4 mm		
	Maximum measured displacement		--
	Pin returns to within 0.8 mm of nominal length within 5 minutes of removal of test force (AS/NZS 3112:2017)		N/A
J4.6	**Tests on the insulation material of insulated pin-plug portions** The requirements of Clause 2.13.13 are applicable for insulating material of insulated plug pins. (AS/NZS 3112:2017)		N/A
2.13.13	Test No.8 Tests for insulation material of insulated pin plugs		N/A
2.13.13.1	Material of pin-insulation resistant to stresses at temperature likely to occur		N/A
2.13.13.2	Pressure test at high temperature		N/A
	Specimen tested as per Figure 2.5 with force of 2.5 N applied as specified; maintained for 2 h at 160 ± 5°C; removed and cooled by immersion in water within 10 s		N/A
	Thickness of insulation at point of impression not reduced by more than 50%		N/A
	Initial thickness	mm	--
	Thickness after test	mm	--
	No visible cracks on insulation material		N/A
	Dimension of insulating material not below minimum size in Figure 2.4 (AS/NZS 3112:2017)		N/A
2.13.13.3	Static damp heat test		N/A
	Specimen subjected to two damp heat cycles in accordance with AS 60068.2.30; Db (12 + 12h), 95% RH, 25 ± 3°C; 40°C		N/A
	After this treatment and recovery to room temperature; specimen subjected to:		N/A
(a)	Insulation resistance test in accordance with clause 2.13.2 (e)	(see appended table)	N/A
(b)	High voltage test in accordance with clause 2.13.3	(see appended table)	N/A
(c)	Abrasion test in accordance with clause 2.13.13.6		N/A
2.13.13.4	Low temperature test		N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

	Plug maintained at –15 ± 2°C for minimum of 24 h and returned to room temperature; after which specimen subjected to:		N/A
(a)	Insulation resistance test in accordance with clause 2.13.2 (e)	(see appended table)	N/A
(b)	High voltage test in accordance with clause 2.13.3	(see appended table)	N/A
(c)	Abrasion test in accordance with clause 2.13.13.6		N/A
2.13.13.5	Impact test at low temperature		N/A
	Specimen maintained at –15 ± 2°C for 24 h		N/A
	Specimen placed in position and subjected to impact test as per Figure 2.6; mass of 100 ±1 g falling through 100 mm		N/A
	Four impacts applied; specimen rotated through 90° between impacts		N/A
	After return to room temperature; no visible cracks of insulating material		N/A
2.13.13.6	Abrasion test		N/A
	Plug held in clamp and tested as per Figure 2.7; pin loaded at 4 N; 20 000 movements		N/A
	After test; pins show no damage affecting safety or impairing further use of the plug		N/A
	Insulating sleeve not punctured or rucked up (AS/NZS 3112:2017)		N/A

J4.7	Test no.9 **Equipment with a plug portion intended to be supported by the contacts of a socket-outlet**		N/A
	Equipment with pins intended to be introduced into fixed socket-outlets not imposing undue strain on socket-outlet		N/A
	Applied torque not exceeding 0.25 Nm		N/A
	Measured torque (AS/NZS 3112:2017)	Nm	--

J4.8	**Additional requirements for detachable plug portions**		N/A
J4.8.1	Test no.10 **Access to live parts**		N/A
	Small test finger of Figure 13 of IEC 61032 was not possible to contact live parts with the force of 20N		N/A
	incorrectly assemble the plug portion was not possible (AS/NZS 3112:2017)		N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

J4.8.2	Test No.11 **Construction of detachable contacts where the input current of the equipment exceeds 0.2 A**		N/A
	Contacts of the equipment shall be such that they make and maintain, under normal service conditions, satisfactory electrical and mechanical contact with the corresponding contact of the detachable plug portion.		N/A
	For connections intended to accommodate pins, contact shall be made on two surfaces diametrically opposite, except if a single spring-assisted contact is used.		N/A
	Contacts shall not rely exclusively on the resilience of the contact material and shall have an opposite face of material other than thermoplastic or resilient insulating material.		N/A
	The alignment and contact-making properties of contacts shall be independent of terminal screws		N/A
	The effectiveness of the contacts shall be independent of pressure from any thermoplastic or resilient moulding.		N/A
	Effectiveness of the contacts independent of pressure from thermoplastic or resilient moulding checked by J4.8.3		N/A
	Visual inspection to determine interference between metal contacts and thermoplastic or resilient moulding to provide supplementary contact pressure to metal contacts (AS/NZS 3112:2017)		N/A

J4.8.4	**Resistance of insulating material to heat and fire**		N/A
J4.8.4.1	Test no.12 Resistance to heat For Type B detachable plug portions parts of non-metallic material, parts of insulating material supporting live parts including connections, and parts of thermoplastic material providing supplementary insulation or reinforced insulation, shall be sufficiently resistant to heat if their deterioration could cause the appliance to fail to comply with this Standard.		N/A
	Ball pressure test at		N/A
(a)	75°C ± 2°C, for external parts;		N/A
(b)	125°C ± 2°C, for parts supporting live parts.		N/A
J4.8.4.2	Test no.13 **Resistance to fire**		N/A
	Plug portions comply with resistance to fire requirements of AS/NZS 3100 as follows:		N/A
	The glow wire test temperature ‘T’ for ‘retaining parts’ of fixed socket outlets shall be 750 C (AS/NZS 3112:2017)		N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

TABLES OF RESULTS

2.2.4	TABLE: Dimensions of insulation on insulated pin plugs		N/A
Dimension (Figure 2.1 designation)		Measured (mm)	Allowed (mm)
Phase pin			8.7 ± 0.5
Neutral pin			8.7 ± 0.5

2.8.1	TABLE: Dimensions of plugs- 10A (a1)		N/A
Dimension (Figure 2.1 designation)		Measured (mm)	Allowed (mm)
Phase and neutral pin width (A)			6.35 ± 0.15
Earth pin width (B)			6.35 ± 0.15
Pin thickness (C)			1.63 + 0.15, -0.05
Pin disposition (D)			checked by test gauge
Pin disposition (E)			checked by test gauge
Phase and neutral pin length (F)			17.06 ± 0.4
Earth pin length (G)			19.94 ± 0.8
Pin boss radius - maximum			21.0 max
Pin boss height			8.6 min

2.8.1	TABLE: Dimensions of plugs- 15A (a1)		N/A
Dimension (Figure 2.1 designation)		Measured (mm)	Allowed (mm)
Phase and neutral pin width (A)			6.35 ± 0.15
Earth pin width (B)			9.08 ± 0.15
Pin thickness (C)			1.63 + 0.15, -0.05
Pin disposition (D)			checked by test gauge
Pin disposition (E)			checked by test gauge
Phase and neutral pin length (F)			17.06 ± 0.4
Earth pin length (G)			19.94 ± 0.8
Pin boss radius - maximum			21.0 max
Pin boss height			8.6 min

2.8.1	TABLE: Dimensions of plugs-20A (a2)		N/A
Dimension (Figure 2.1 designation)		Measured (mm)	Allowed (mm)

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Phase and neutral pin width (A)		9.08 ± 0.15
Earth pin width (B)		9.08 ± 0.15
Pin thickness (C)		1.63 + 0.15, -0.05
Pin disposition (D)		checked by test gauge
Pin disposition (E)		checked by test gauge
Phase and neutral pin length (F)		17.06 ± 0.4
Earth pin length (G)		19.94 ± 0.8
Pin boss radius - maximum		21.0 max
Pin boss height		8.6 min

2.8.1	TABLE: Projection from plug face centroid		N/A
Direction of projection		Measured (mm)	Allowed (mm)
Left			≤ 21.9 or ≥ 27.0
Right			≤ 21.9 or ≥ 27.0
Up			≤ 21.9 or ≥ 27.0
Down			≤ 21.9 or ≥ 27.0

2.13.3	TABLE: Test No. 1 – High voltage test		N/A
Test voltage applied between:		Test voltage (V)	Breakdown
All poles of the plug; taken in pairs		1000	Yes / No
Live poles of the plug and any external metal		3500	Yes / No
Live poles of the plug and the earthing terminal		1000	Yes / No
Live poles of the plug and a flexible electrode		3500	Yes / No
Live poles and metal foil applied around insulation on pins		1250	Yes / No

2.13.8	TABLE: Test No. 6 - Temperature rise test		N/A
	Ambient temperature	°C	
	Test current	A	
Measured part		dT measured (K)	dT allowed (K)
Active (phase) terminal			45
Neutral terminal			45
Earthing terminal			45
2.13.9.1	TABLE: Movement of pins		N/A
	Earth and neutral pins clamped – phase pin loaded		

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Force direction	Measured deflection (mm)	Allowed deflection (mm)
Force towards neutral plane parallel to pin plane		2.0
Force from neutral plane parallel to pin plane		2.0
Force outwards at 90° to pin plane		2.0
Force inwards at 90° to pin plane		2.0

2.13.9.1	TABLE: Movement of pins		N/A
	Phase and neutral pins clamped – earth pin loaded		
Force direction		Measured deflection (mm)	Allowed deflection (mm)
Force inwards parallel to pin plane			2.0
Force outwards parallel to pin plane			2.0
Force towards neutral			2.0
Force towards phase			2.0

2.13.9.1	TABLE: Movement of pins		N/A
	Phase and earth pins clamped – neutral pin loaded		
Force direction		Measured deflection (mm)	Allowed deflection (mm)
Force towards phase plane parallel to pin plane			2.0
Force from phase plane parallel to pin plane			2.0
Force outwards at 90° to pin plane			2.0
Force inwards at 90° to pin plane			2.0

2.13.13.3	TABLE: Test No.13(b) – Insulation resistance test after static damp heat test		N/A
Applied between:		Insulation resistance (MΩ)	Minimum required (MΩ)
Live poles and metal foil applied around insulation on pins			5

2.13.13.3	TABLE: Test No.1 – High voltage test after static damp heat test		N/A
Test voltage applied between:		Test voltage (V)	Breakdown
Live poles and metal foil applied around insulation on pins		1250	Yes / No

2.13.13.4	TABLE: Test No.1 – Insulation resistance test after low temperature test	N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Applied between:	Insulation resistance (MΩ)	Minimum required (MΩ)
Live poles and metal foil applied around insulation on pins		5

2.13.13.4	TABLE: Test No.1 – High voltage test after low temperature test		N/A
Test voltage applied between:		Test voltage (V)	Breakdown
Live poles and metal foil applied around insulation on pins		1250	Yes / No

J4.8.4.1	TABLE: Test no.12 Resistance to heat		N/A
Component tested		Temperature (°C)	Diameter of impression (mm)

Conformance is checked by subjecting the relevant part to the ball pressure test of IEC 60695-10-2.

J4.8.4.2	TABLE: Test no.13 Resistance to Fire	N/A
	Plug portions shall comply with the requirements for resistance to fire in accordance with AS/NZS 3100:2017 Annex A. The glow-wire test temperature 'T' shall be 750°C.	

Glow-wire testing was conducted in accordance with IEC 60695-2-10 and IEC 60695-2-11.

Test specimens arranged so that the surface in contact with the tip of the glow-wire was vertical and glow wire tip applied to surface of the specimen likely to be subjected to thermal stresses in normal use.

A layer of white pine board and wrapping tissue was placed beneath the sample at 200mm ± 5mm distance.

SPECIMEN NUMBER	1	2	3	4
SPECIMEN DESCRIPTION				
Material				
Colour				
Test specimen				
Glow wire tip temperature (°C)	750	750	750	750
Duration of glow wire application (t_a) (s)	30	30	30	30
OBSERVATIONS				
Duration from beginning of glow-wire tip application to ignition of specimen or layer (t_i) (s)				

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Duration from beginning of glow-wire tip application to when flames extinguish (t_e) (s)				
Maximum height of flames after initial 1s (to nearest 5 mm) (mm)				
Flame impingement on other parts				
Degree of tip penetration				
Degree of specimen distortion				
Scorching of pinewood board				
EVALUATION CRITERIA				
Visible flame or sustained glowing				
Visible Flame Duration in Seconds during test.				
Duration of flaming or glowing after tip removal (max. allowable 30 s) (s)				
Surrounding parts burned away completely (not permitted)				
Ignition of wrapping tissue layer (not permitted)				
RESULTS If parts tested withstand the glow-wire test, but during the test produce a flame that persists for longer than 2 s, then the consequential needle flame test of AS/NZS 3100:2017 Annex A 6.1.5 applies.				

LEGEND:

CE	Complete Equipment	SA	Sub Assembly	SE	Self Extinguished
EBD	Emitted Burning Droplets	SBD	Specimen Burned and Distorted	SMD	Specimen Melted and Distorted
ME	Manually Extinguished	SC	Separate Component	SS	Specimen Scorched
NA	Not Applicable	SCC	Specimen Completely Consumed	WPNI	Wall Penetrated but no Ignition
NI	No Ignition	X	Flame Appeared for an Instant		

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Glow-wire testing was conducted in accordance with IEC 60695-2-10 and IEC 60695-2-11.

Test specimens arranged so that the surface in contact with the tip of the glow-wire was vertical and glow wire tip applied to surface of the specimen likely to be subjected to thermal stresses in normal use.A layer of white pine board and wrapping tissue was placed beneath the sample at 200mm ± 5mm distance.

SPECIMEN NUMBER	5	6	7	8
SPECIMEN DESCRIPTION				
Material				
Colour				
Test specimen				
Glow wire tip temperature (°C)				
Duration of glow wire application (t_a) (s)	30	30	30	30
OBSERVATIONS				
Duration from beginning of glow-wire tip application to ignition of specimen or layer (t_i) (s)				
Duration from beginning of glow-wire tip application to when flames extinguish (t_e) (s)				
Maximum height of flames after initial 1s (to nearest 5 mm) (mm)				
Flame impingement on other parts				
Degree of tip penetration				
Degree of specimen distortion				
Scorching of pinewood board				
EVALUATION CRITERIA				
Visible flame or sustained glowing				
Visible Flame Duration in Seconds during test.				
Duration of flaming or glowing after tip removal (max. allowable 30 s) (s)				
Surrounding parts burned away completely (not permitted)				
Ignition of wrapping tissue layer (not permitted)				

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

RESULTS If parts tested withstand the glow-wire test, but during the test produce a flame that persists for longer than 2 s, then the consequential needle flame test of AS/NZS 3100:2017 Annex A 6.1.5 applies				

LEGEND:
CE Complete Equipment
EBD Emitted Burning Droplets
ME Manually Extinguished
NA Not Applicable
SA Sub Assembly
SBD Specimen Burned and Distorted
SC Separate Component
SCC Specimen Completely Consumed
SE Self Extinguished
SMD Specimen Melted and Distorted
SS Specimen Scorched
WPNI Wall Penetrated but no Ignition
NI No Ignition
X Flame Appeared for an Inst

	TABLE: Needle- flame test (NFT)				N/A
Object/ Part No./ Material	**Manufacturer/ trademark**	**Duration of application of test flame (ta); (s)**	**Ignition of specified layer Yes/No**	**Duration of burning (tb) (s)**	**Verdict**

Supplementary information:
- NFT not relevant (or applicable) for Parts of material classified as V-0 or V-1
- NFT not relevant (or applicable) for Base material of PCBs classified as V-0 or if relevant VTM-0

	PHOTOGRAPHS	

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Appendix	Appendix 12, J3000(H25) Special National conditions, National deviation and other information according to MITI Ordinance No. 85.		—
1	General requirement When equipment provides with appliance inlet complying with JIS C 8283-1(2008), soldered parts of appliance inlet is not applied by force during insert or removal of connector. This is not applied when inlet body is fixed itself and not fixed by solder.	Inlet is fixed by adequate mechanical construction, not rely on soldering.	P
2	Requirement for equipment		—
2.1	Heater Appliances When diode is used in parallel for adjustment of power, the equipment shall remain safe for operation under open condition of one diode.	Not electric stove.	N/A
	The current rating of one diode shall be more than main current. The diodes connected in parallel are same type.		N/A
	The heating test specified by clause 11 of JIS C 9335-2-30(2006) under open condition of one diode shall comply with the requirements.		N/A
2.2	Electric heater with glowing heating elements	Not electric stove.	N/A
	Surface treatment by paint or adhesive on protective frame or protective mesh shall not be used.		N/A
	Caution marking like below shall be on - easily visible place of the equipment or - Instruction manual 「注意　当該機器から、使用初期段階で揮発性有機化合物及びカルボニル化合物が最も放散するおそれがあるため、その際には十分換気を行うこと。」		N/A
3	Components used in equipment	No such equipment /components.	N/A
3.1	Motor capacitors used in ventilating fan, electric fan, air conditioner, electric washing machine, refrigerator or electric freezer shall be comply with - capacitors with protective elements or protective mechanism complying with JIS C 4908(2007) - P2 capacitor complying with IEC 60252-1(2001) Capacitor complying with below is acceptable		N/A
	Enclosed by metal or ceramic		N/A
	No non-metallic materials within 50 mm from capacitor surface		N/A

IEC 62368_1D ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Non-metallic material within 50 mm from capacitor surface comply with needle frame test of JIS C 9335-1(2003), Annex E		N/A
	Non-metallic material within 50 mm from capacitor surface comply with V-1 test of JIS C 60965-11-10(2006).		N/A
3.2	Plug directly inserted to outlet used refrigerator or electric freezer. Shall comply with - Face contact with outlet shall have CTI with more than 400 according to JIS C 2134(2007) or - Supporting material of blades shall comply with glow wire test by temperature of 750ºC according to JIS C 60695-2-11(2004) or JIS C 60695-2-12(2004). Materials having glow wire frame temperature of 775 ºC are acceptable.		N/A

Product: LCD MONITOR

Type Designation: 27E3UM, 27E3********, Q27E3******** (* can be 0-9, A-Z, a-z, –, \, /, + or blank, represent different sales region and enclosure colour for marketing purpose)

Figure 1. Overview

Figure 2. Overview

Product: LCD MONITOR

Type Designation: 27E3UM, 27E3********, Q27E3******** (* can be 0-9, A-Z, a-z, –, \, /, + or blank, represent different sales region and enclosure colour for marketing purpose)

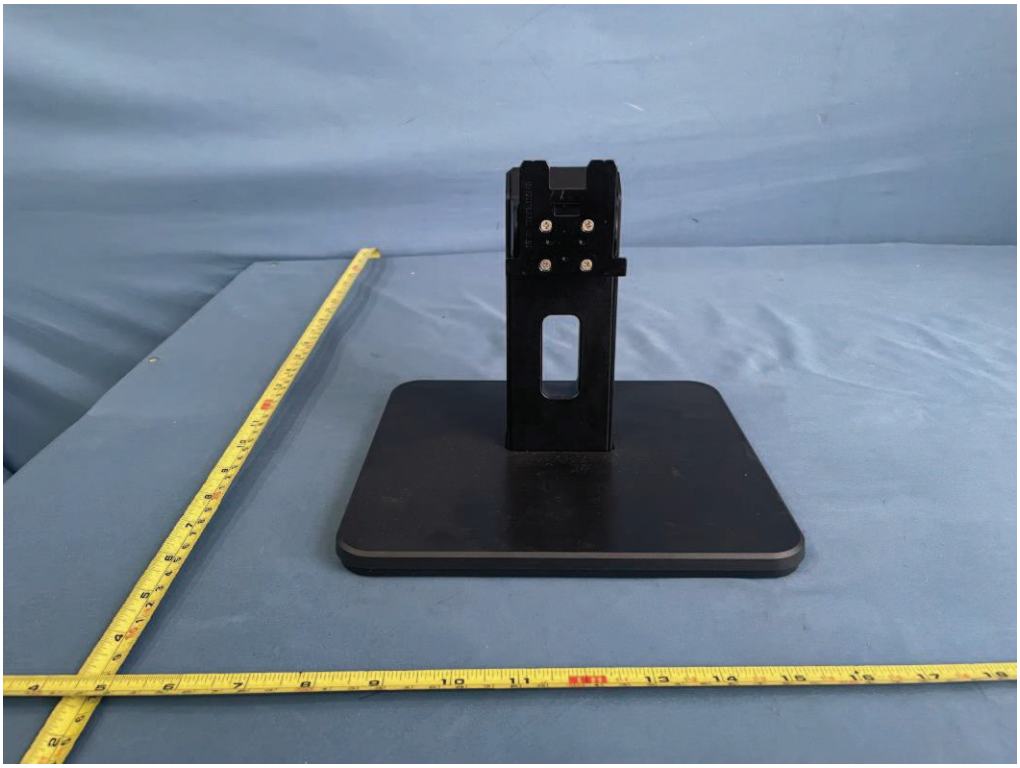

Figure 3. Base stand

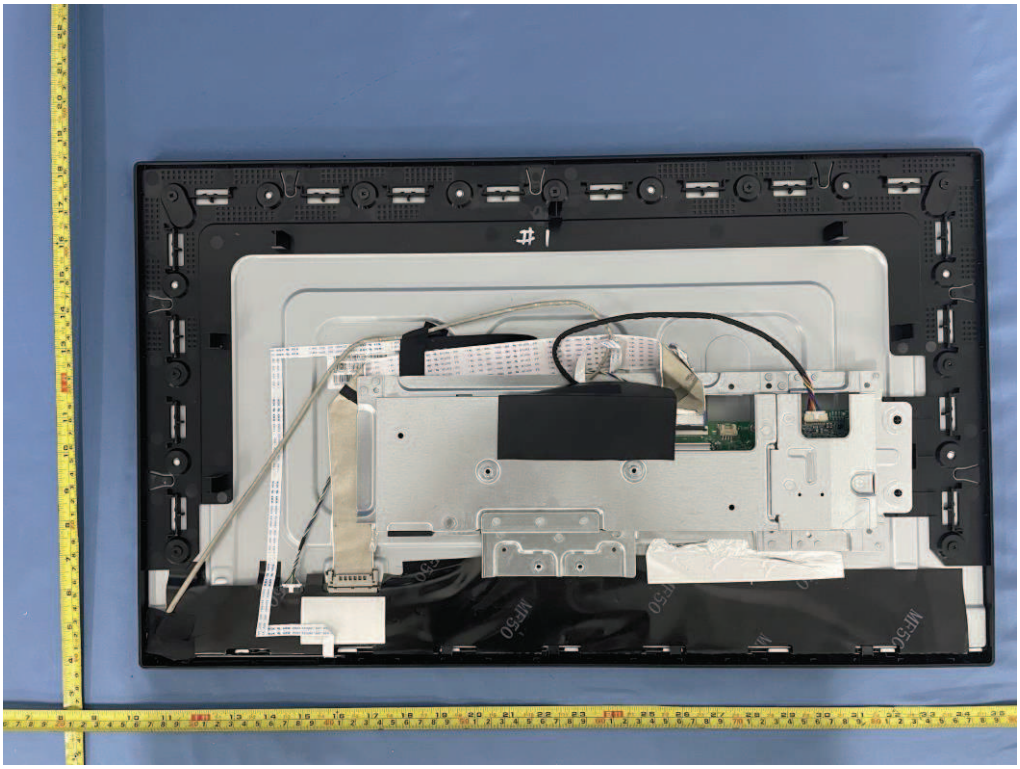

Figure 4. Metal enclosure

Product: LCD MONITOR

Type Designation: 27E3UM, 27E3********, Q27E3******** (* can be 0-9, A-Z, a-z, –, \, /, + or blank, represent different sales region and enclosure colour for marketing purpose)

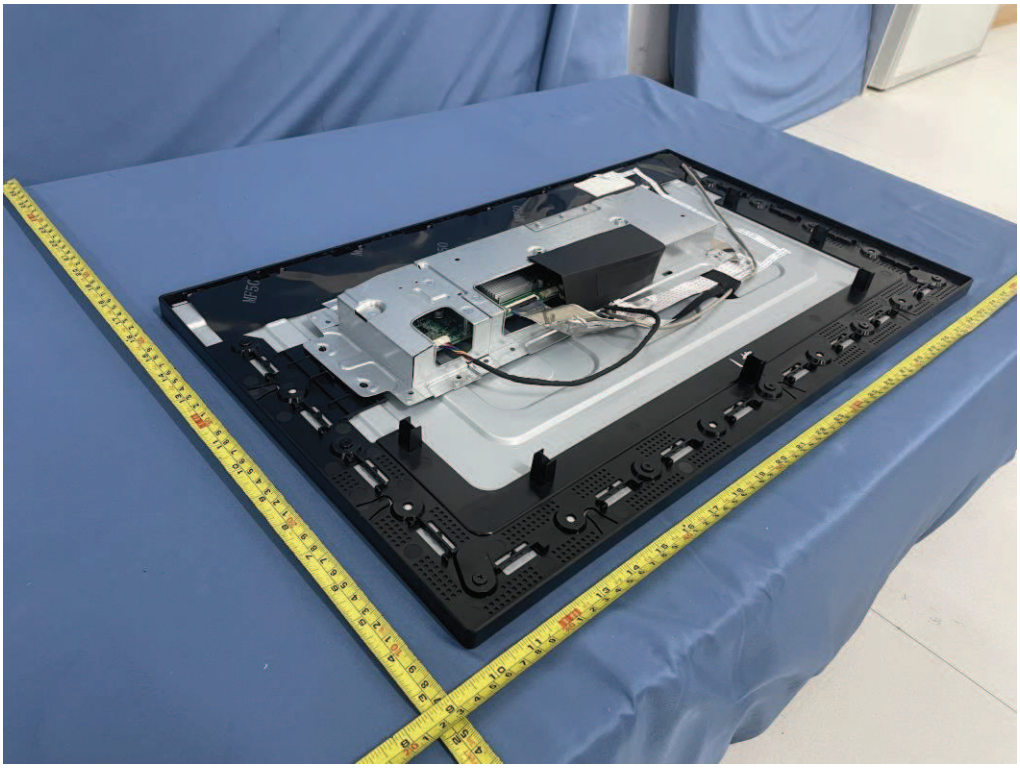

Figure 5. Metal enclosure

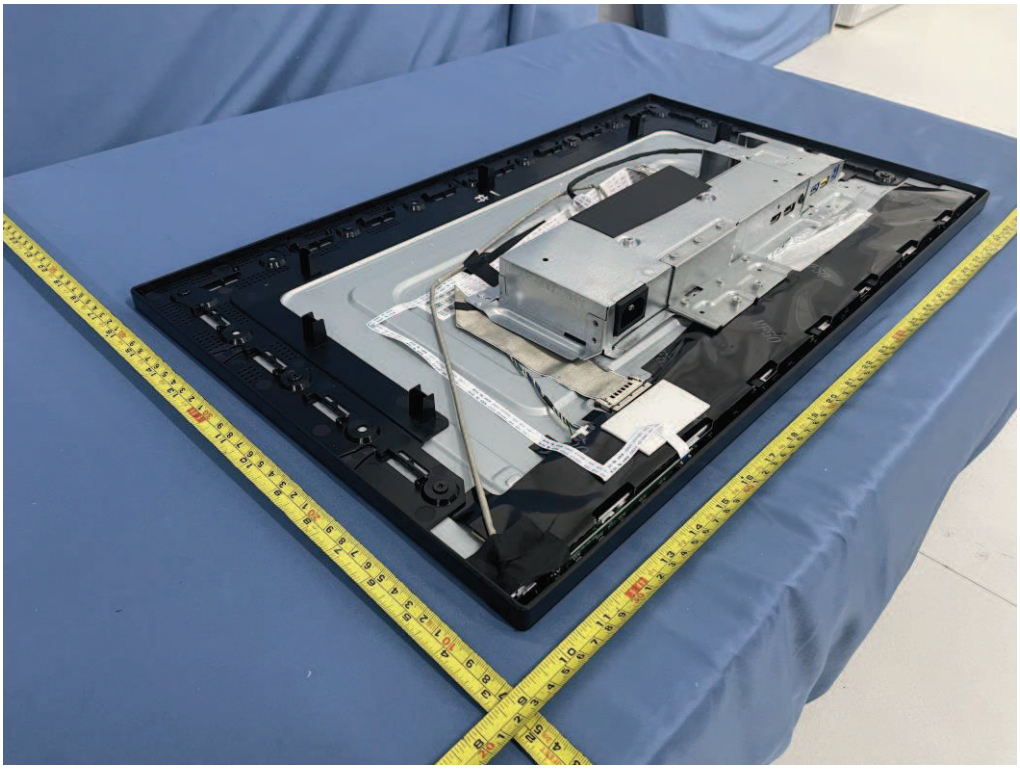

Figure 6. Metal enclosure

Product: LCD MONITOR

Type Designation: 27E3UM, 27E3********, Q27E3******** (* can be 0-9, A-Z, a-z, –, \, /, + or blank, represent different sales region and enclosure colour for marketing purpose)

Figure 7. Data ports

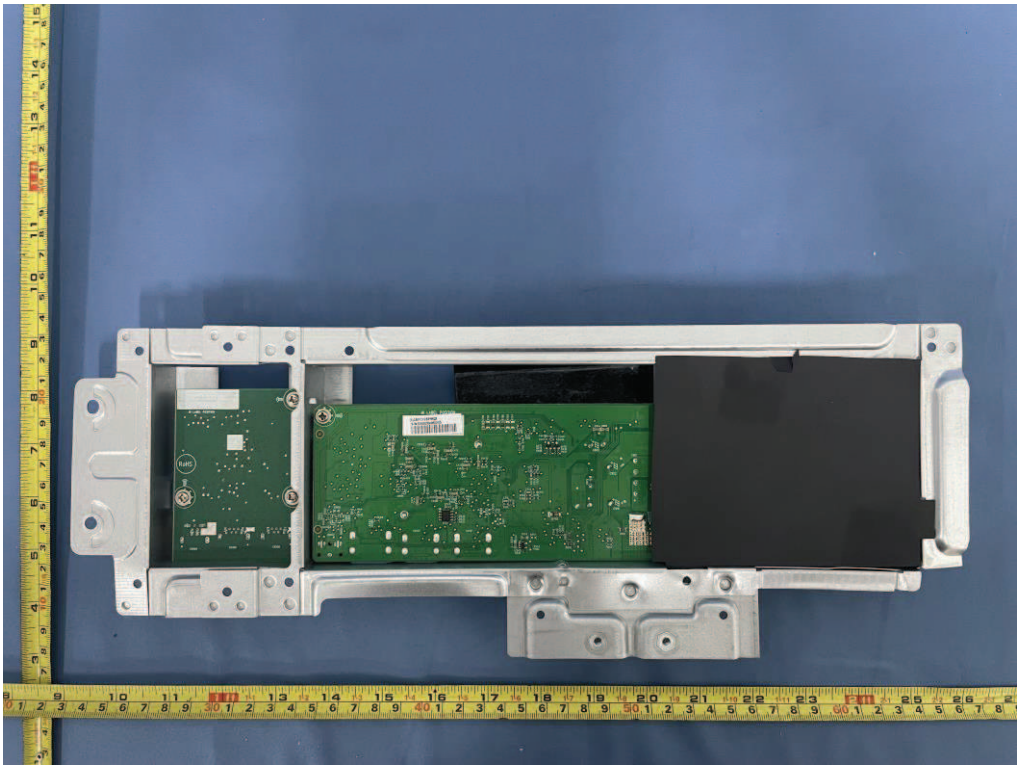

Figure 8. Internal view of metal enclosure

Product: LCD MONITOR

Type Designation: 27E3UM, 27E3********, Q27E3******** (* can be 0-9, A-Z, a-z, –, \, /, + or blank, represent different sales region and enclosure colour for marketing purpose)

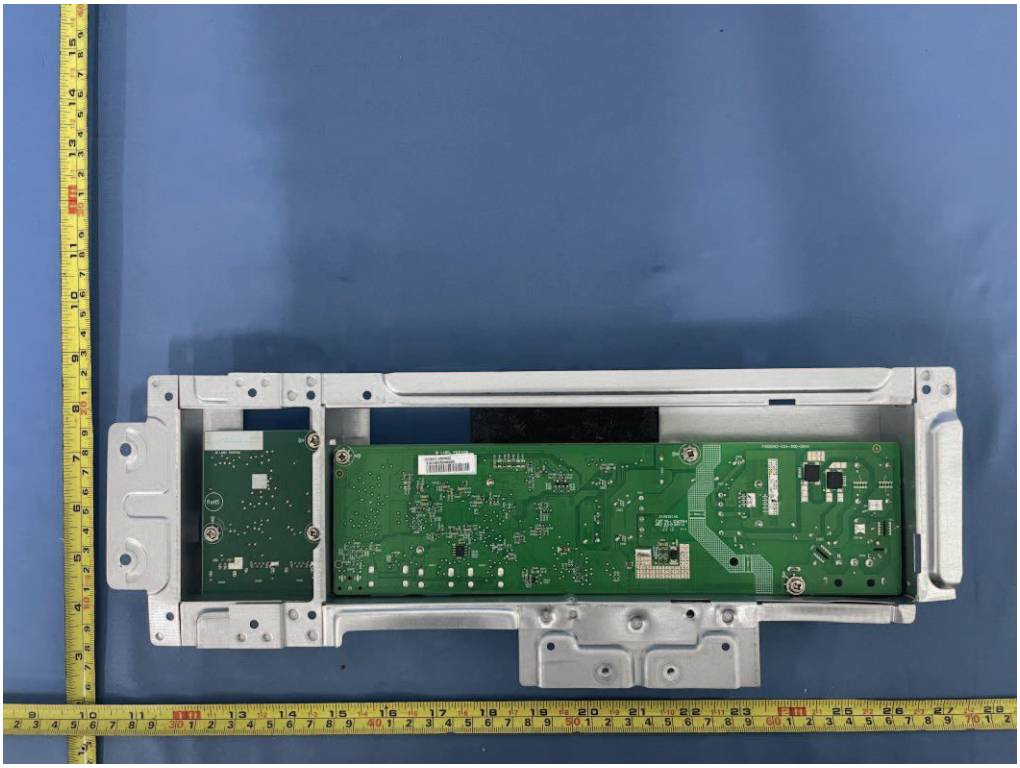

Figure 9. Internal view of metal enclosure

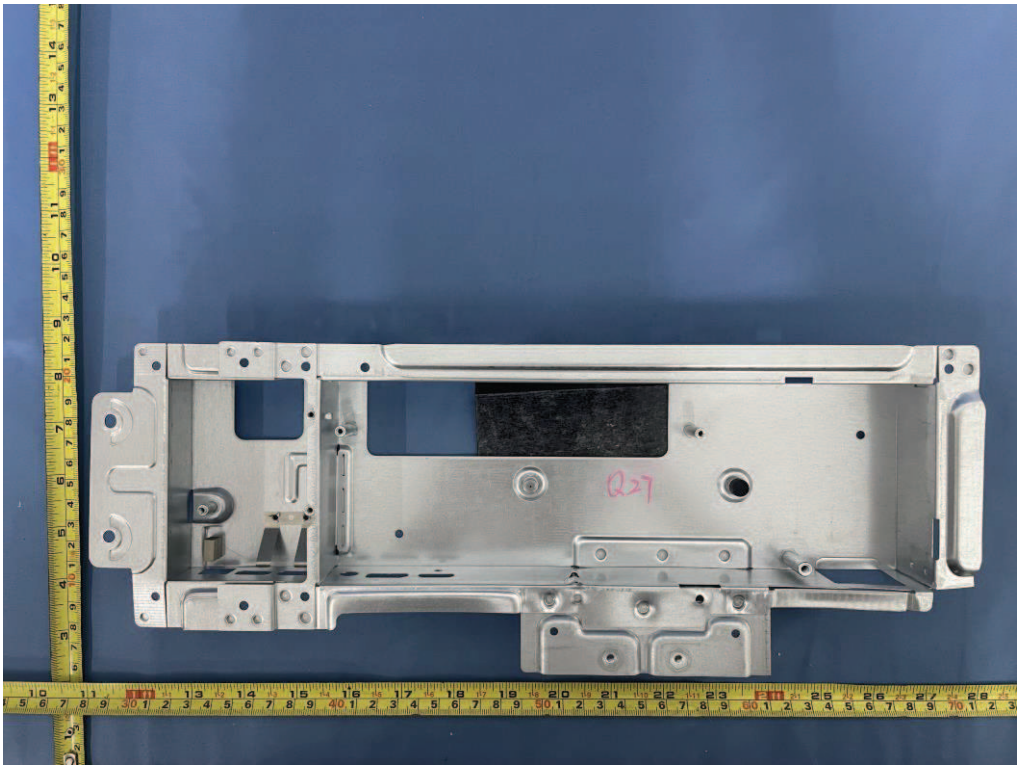

Figure 10. Internal view of metal enclosure

Product: LCD MONITOR

Type Designation: 27E3UM, 27E3********, Q27E3******** (* can be 0-9, A-Z, a-z, –, \, /, + or blank, represent different sales region and enclosure colour for marketing purpose)

Figure 11. Power board 715GD270

Figure 12. Power board 715GD270

Product: LCD MONITOR

Type Designation: 27E3UM, 27E3********, Q27E3******** (* can be 0-9, A-Z, a-z, –, \, /, + or blank, represent different sales region and enclosure colour for marketing purpose)

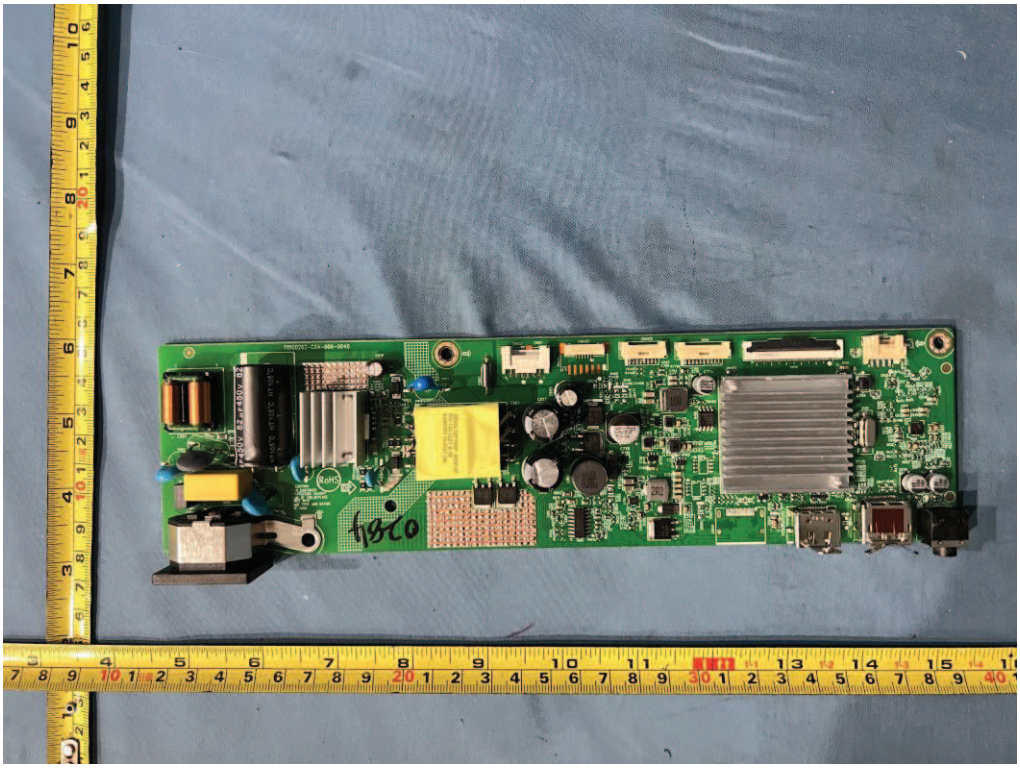

Figure 13. Power board 715GD262

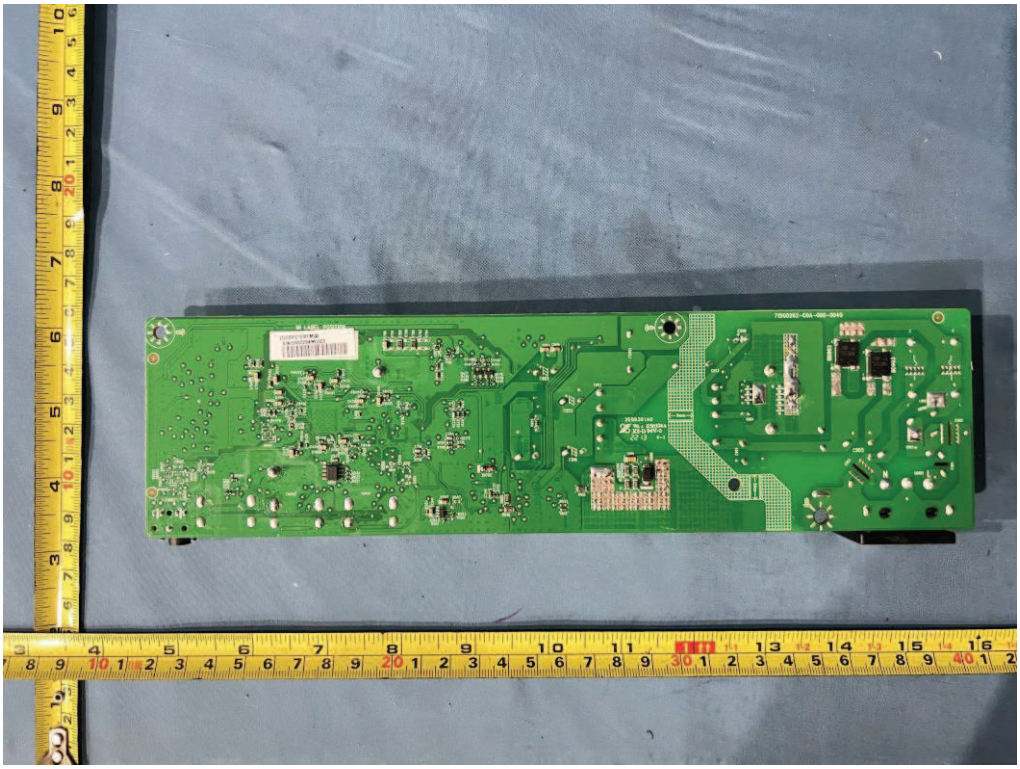

Figure 14. Power board 715GD262

Product: LCD MONITOR

Type Designation: 27E3UM, 27E3********, Q27E3******** (* can be 0-9, A-Z, a-z, –, \, /, + or blank, represent different sales region and enclosure colour for marketing purpose)

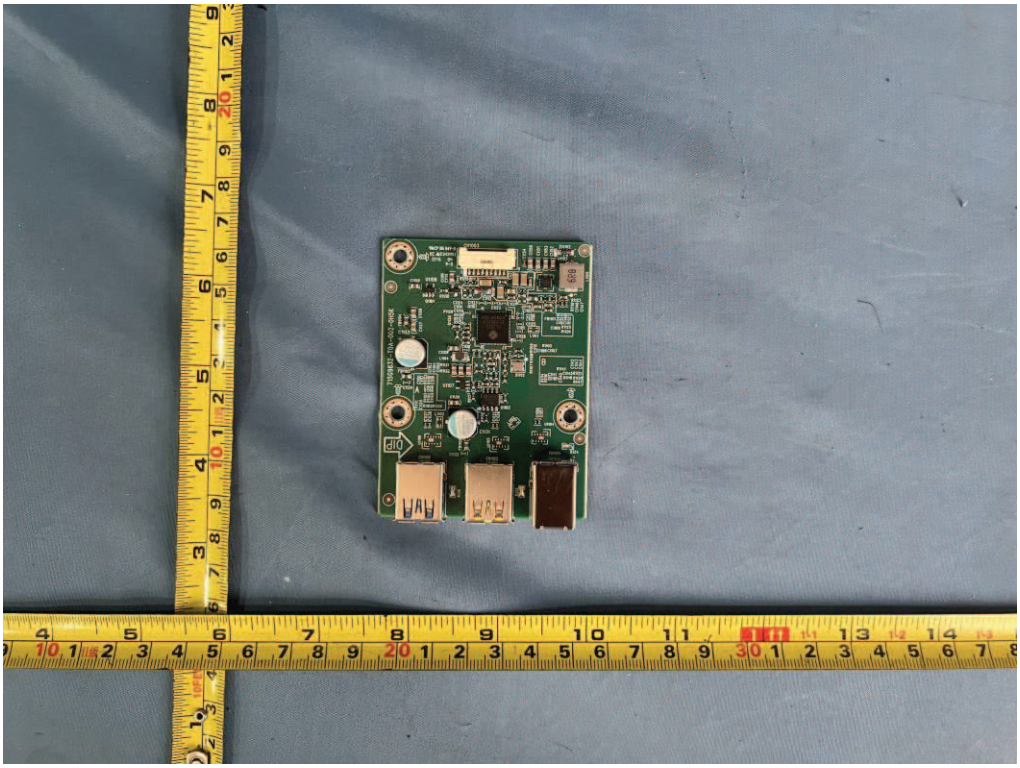

Figure 15. USB board 715G9632

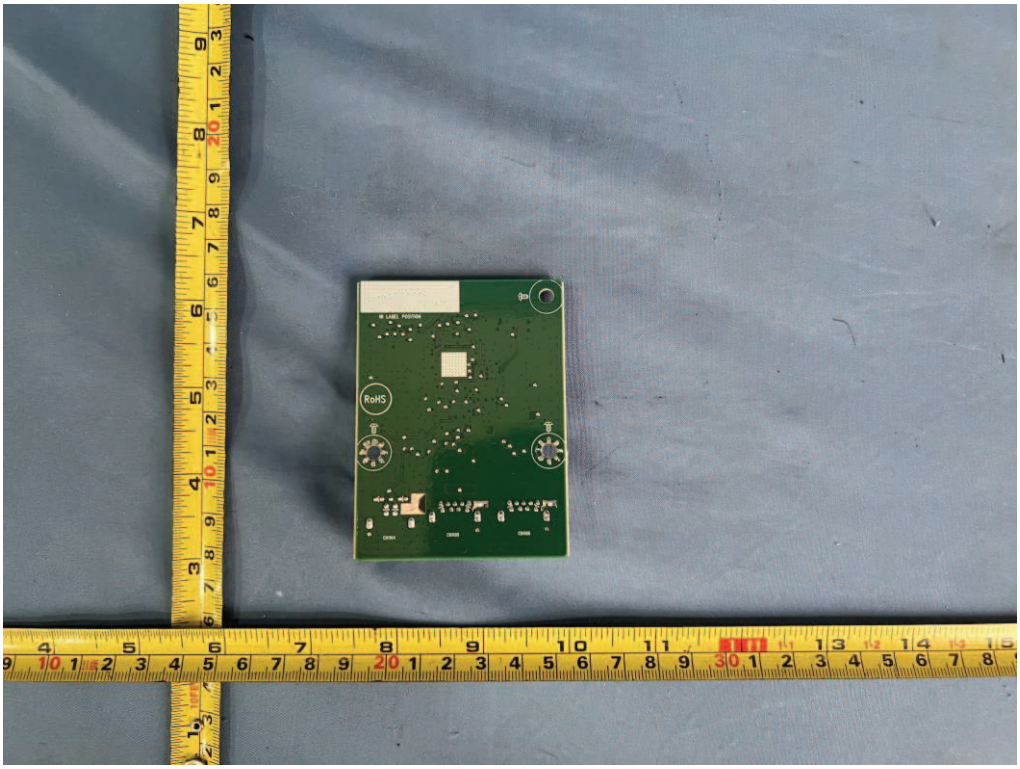

Figure 16. USB board 715G9632