Ref. Certif. No.

SE-117838

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	LCD Monitor
Name and address of the applicant	TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, China
Name and address of the manufacturer	Same as applicant
Name and address of the factory Note: *When more than one factory, please report on page 2*	☒ Additional Information on page 2
Ratings and principal characteristics	100-240V~ 50/60Hz 1.5A Class I
Trademark / Brand (if any)	AOC
Customer's Testing Facility (CTF) Stage used	-
Model / Type Ref.	27G4ZR, 27G4ZRE, ***27**********, ***27G**********
Additional information (if necessary may also be reported on page 2)	☒ Additional Information on page 2
A sample of the product was tested and found to be in conformity with	IEC 62368-1:2014
As shown in the Test Report Ref. No. which forms part of this Certificate	2509B1409SHA-001

This CB Test Certificate is issued by the National Certification Body

Intertek Semko AB
Torshamnsgatan 43
Box 1103
SE-164 22 Kista, Sweden

Date: 27 October, 2025

intertek

Signature:

Gary Hu

Factories

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

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

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

4. TPV Display Technology (China) Co., Ltd.
No. 106 Jinghai 3 Rd., BDA Beijing City 100176, China

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

6. L&T Display Technology (Fujian) Ltd
Optoelectronic Park, Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, China

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

8. TPV Technology (Thailand) Company Limited
No.267, Mu 7, Tha Tum Sub-District, Si Maha Pho District, Prachin Buri Province, Thailand

Additional information

Explanation of model ***27***********, ***27G**********:
The symbol “*” can be 0-9, A-Z, a-z, “+”, “-”, “/”, “\”, sign absence or blank, which is not influencing on safety.

The group and national differences for the CENELEC countries, and the national differences for USA, Canada, Australia/New Zealand and Japan have been checked.

Date: 27 October, 2025

Signature:

Test Report issued under the responsibility of:

intertek
Total Quality. Assured.

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

Report Number ..... :	2509B1409SHA-001
Date of issue ..... :	October 23, 2025
Total number of pages ..... :	122 pages
Name of Testing Laboratory preparing the Report ..... :	Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Applicant's name ..... :	TPV Electronics (Fujian) Co., Ltd.
Address ..... :	Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, 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.....:		TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R.China	
Model/Type reference .....:		27G4ZR, 27G4ZRE, ***27**********, ***27G********** (The symbol "*" can be 0-9, A-Z, a-z, "+", "-", "/", "\", sign absence or blank, which is not influencing on safety.)	
Ratings .....:		100-240V ~ 50/60Hz 1.5A Class I	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	Intertek Testing Services (Shanghai FTZ) Co., Ltd.	
Testing location/ address .....:		Building 86, No.1198, Qinzhou North Road, Shanghai, China	
Tested by (name, function, signature) .....:		Peter Lin (Engineer)	Peter.Lin
Approved by (name, function, signature) .....:		Jacky Shu (Mandated Reviewer)	Jacky Shu
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :			
Tested by (name, function, signature) .....:			
Approved by (name, function, signature) .....:			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address .....:			
Tested by (name, function, signature) .....:			
Witnessed by (name, function, signature) .....:			
Approved by (name, function, signature) .....:			
☐	**Testing procedure: CTF Stage 3 :**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address .....:			
Tested by (name, function, signature) .....:			
Witnessed by (name, function, signature) .....:			
Approved by (name, function, signature) .....:			
Supervised by (name, function, signature).....:			

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

Summary of testing:

All tests are performed and the most disadvantageous results are recorded. We conclude that the appliances comply with this standard.

Tests performed (name of test and test clause):

5.2, Classification of electrical energy sources
5. 3.2, Accessibility to electrical energy sources and safeguards (Accessibility test)
5.4.1.4, 6.3.2,9.0, B.2.6, Maximum operating temperature test (Heating test)
5.4.1.8, Determination of working voltage
5.4.8, Humidity test
5.4.9, Electric strength test
5.5.2.2, Safeguards against capacitance discharge test
5.6.6.2, Resistance of the protective bonding system (Ground continuity test)
5.7.2.2, 5.7.4, Earthed accessible conductive part test
6.2.2, Power source circuit classifications
8.7, Wall or ceiling mount loading test
9.2.5 Temperature measurements
B.2.5, Input test
B.3, Simulated abnormal operating conditions test
B.4, Simulated single fault conditions test
Annex F.3, Durability, legibility and permanence of markings
P2.2, Safeguards against entry of foreign object
P.4, Adhesive test
Annex Q.1, Limited power sources
T.2, T.3, T.5, Steady force test, 10N, 30N, 250N
T.6, Enclosure impact test
T.8, Stress relief test

Testing location:

Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Building 86, No.1198, Qinzhou North Road, Shanghai, China

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

The group and national differences for the CENELEC countries have been checked.
National differences for USA, Canada, Australia/New Zealand and Japan have also been checked.

☒ **The product fulfils the requirements of** J3000(H25) IEC 62368-1:2014 and EN 62368-1:2014+A11: 2017.

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

☐ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

Procedure number, issue date and title:

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

☒ **Statement not required by the standard used for type testing**

(Note: When IEC or ISO standard requires a statement concerning the uncertainty of the measurement systems used for tests, this should be reported above. The informative text in parenthesis should be delete in both cases after selecting the applicable option)

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: For other models, marking plates are the same except for model name.

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 ..... :	20A 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) ..... :	☐ 2000m or less ☒ 5000m
Altitude of test laboratory (m) ..... :	☒ 2000m or less ☐ ___m
Mass of equipment (kg) ..... :	☒ Approx. 5.1kg (with type a pedestal:1.88kg) Type b pedestal:0.79kg

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 .....:	September 2, 2025
Date (s) of performance of tests .....:	September 2, 2025 to October 23, 2025

General remarks:

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

Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.

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

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When determining the test conclusion, the Measurement Uncertainty of test has been considered.

The samples submitted from for evaluation are representative of the products from each factory.

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 Province, P.R.China 2.TPV Electronics (Fujian) Co., Ltd. Shangzheng, Yuan Hong Road, Fuqing City, Fujian Province, P.R.China 3.TPV Electronics (Fujian) Co., Ltd. Optoelectronic Park, Rongqiao Economic and Technological Development Zone,Fuqing City,Fujian Province, PRC 4.TPV Display Technology (China) Co., Ltd. No.106 Jinghai 3 Rd., BDA, Beijing City 100176 P.R. China 5.TPV Display Technology (Wuhan) Co., Ltd. Unique No.11 Zhuankou Development District of Economic Technological Development Zone Wuhan City,P.R.China 6.L&T Display Technology (Fujian) Ltd. Optoelectronic Park, Rongqiao Economic and Technological Development Zone,Fuqing City,Fujian Province, PRC 7.Envision Indústria de Produtos Eletrônicos Ltda. Av. Torquato Tapajós, 2236, Flores - CEP 69058-830 - Manaus/AM – Brasil 8.TPV Technology (Thailand) Co., Ltd. No.267 Mu7, Tha Tum Sub- District, Si Maha Pho District,Prachin Buri Province, Thailand

General product information and other remarks:
Product Description – The equipments under test (EUTs) are 27” Class I LCD Monitor, with LED backlight and building-in power supply for general office use. For the product listed in this report HDMI function, DP function and headset jack function were treated as optional function. The EUT have the following features: 1. The internal metal chassis is considered as fire enclosure, which is covered all parts. 2. The external plastic enclosure is regarded as mechanical and electrical enclosure, made of min. HB material. 3. Building-in power supply board 715GF928 with DC/DC converter circuit. Maximum recommended ambient (Tma): 40℃ The requirements of BS EN IEC 62368-1: 2014+A11:2017 are same as EN IEC 62368-1: 2014+A11:2017. BS EN 62368-1:2014+A11:2017 is also considered in this report.
Model Differences – All models are identical except for model designation.
Additional application considerations – (Considerations used to test a component or sub-assembly) – N/A

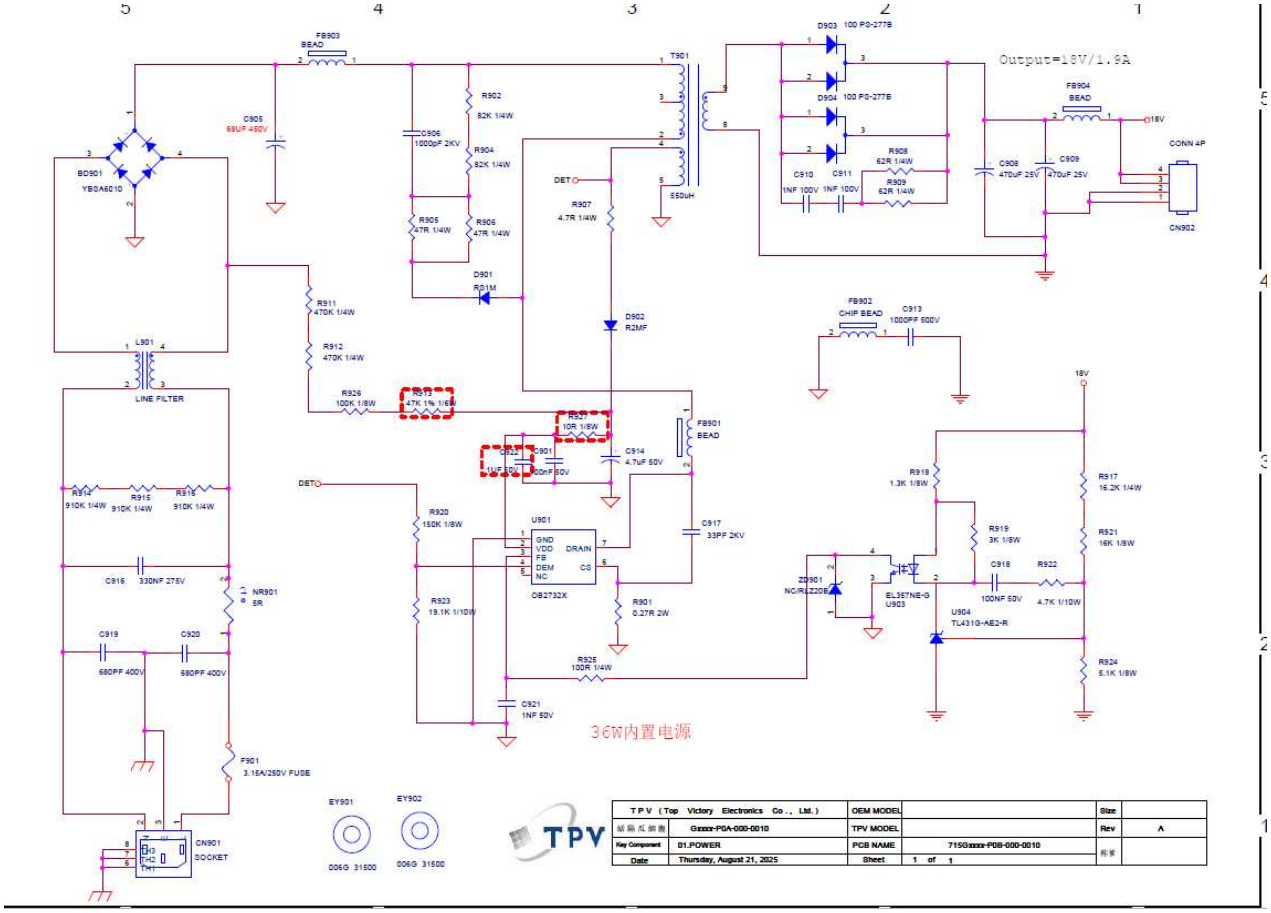
ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.) (Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.	
Electrically-caused injury (Clause 5): (Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification) Example: +5 V dc input ES1	
Source of electrical energy	**Corresponding classification (ES)**
L/N pin of appliance inlet	ES3
Primary circuit	ES3
DC output of power board	ES1
Electrically-caused fire (Clause 6): (Note: List sub-assembly or circuit designation and corresponding energy source classification) Example: Battery pack (maximum 85 watts): PS2	
Source of power or PIS	**Corresponding classification (PS)**
Primary circuit	PS3
DC output of 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**
--	--
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)**
All accessible parts	TS1
Radiation (Clause 10) (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product RS1	
Type of radiation	**Corresponding classification (RS)**
Indicating lights	RS1

ENERGY SOURCE DIAGRAM

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

☒ ES ☒ PS ☒ MS ☒ TS ☒ RS

See “Source of electrical energy” and “Source of power or PIS” on previous page for details.



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	--	--	Bleeding resistor
Ordinary	ES3: Primary circuit	Air gap	Enclosure	Transformer Y-cap Photo coupler
Ordinary	ES1: DC output of power board	--	--	--
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
Combustible materials inside Primary circuit	PS3	Ignition not occur	Fire enclosure	--
Combustible materials supplied by DC output of power board	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
--	--	--	--	--
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary	MS1: Sharp edges and corners	--	--	--
Ordinary	MS1: Equipment mass	--	--	--
Ordinary	MS3: Wall mount	--	--	Compliance with test 8.7
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	TS1: Accessible parts	--	--	--
10.1	Radiation			

Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	RS1: Indicating lights	--	--	--
Supplementary Information:				
(1) See attached energy source diagram for additional details. (2) “N” – Normal Condition; “A” – Abnormal Condition; “S” Single Fault				

IEC 62368-1			
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		P
4.4.4.2	Steady force tests.....:	(See Annex T.4, T.5)	P
4.4.4.3	Drop tests .....:		N/A
4.4.4.4	Impact tests .....:	(See Annex T.6)	P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....:		N/A
4.4.4.6	Glass Impact tests .....:		N/A
4.4.4.7	Thermoplastic material tests.....:	(See Annex T.8)	P
4.4.4.8	Air comprising a safeguard.....:		N/A
4.4.4.9	Accessibility and safeguard effectiveness		P
4.5	Explosion	No explosion occurs during normal/abnormal operation and single fault conditions.	P
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard		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
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.....:		—

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.8.4	Battery Compartment Mechanical Tests .....:		N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object.....:	(See Annex P)	P
5	**ELECTRICALLY-CAUSED INJURY**		P
5.2.1	Electrical energy source classifications.....:	(See appended table 5.2)	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 .....:	(See appended table 5.2)	P
5.2.2.4	Single pulse limits .....:		N/A
5.2.2.5	Limits for repetitive pulses .....:		N/A
5.2.2.6	Ringing signals .....:		N/A
5.2.2.7	Audio signals .....:		N/A
5.3	Protection against electrical energy sources		P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		P
5.3.2.1	Accessibility to electrical energy sources and safeguards		P
5.3.2.2	Contact requirements		P
	a) Test with test probe from Annex V.....:	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
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	Certified sources of optical isolators used.	P
5.4.1.5.3	Thermal cycling	Certified sources of optical isolators used.	P
5.4.1.6	Insulation in transformers with varying dimensions		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage	(See appended table 5.4.2.2, 5.4.2.4 and 5.4.3)	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 are Phenolic that is accepted without further tests.	P
5.4.1.10.2	Vicat softening temperature ..... :	(See appended table 5.4.1.10.2)	N/A
5.4.1.10.3	Ball pressure ..... :	(See appended table 5.4.1.10.3)	P
5.4.2	Clearances		P
5.4.2.2	Determining clearance using peak working voltage	(See appended table 5.4.2.2)	P
5.4.2.3	Determining clearance using required withstand voltage ..... :	(See appended table 5.4.2.3)	P
	a) a.c. mains transient voltage ..... :	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	(See appended table 5.4.2.4)	P
5.4.2.5	Multiplication factors for clearances and test voltages ..... :		P
5.4.3	Creepage distances ..... :	(See appended table 5.4.3)	P
5.4.3.1	General		P
5.4.3.3	Material Group ..... :	IIIb	—
5.4.4	Solid insulation		P
5.4.4.2	Minimum distance through insulation ..... :	(See appended table 5.4.4.2)	P
5.4.4.3	Insulation compound forming solid insulation	Alternative by 5.4.4.4.	N/A
5.4.4.4	Solid insulation in semiconductor devices	Complies with Clause G.12.	P
5.4.4.5	Cemented joints		P
5.4.4.6	Thin sheet material	See below	P
5.4.4.6.1	General requirements	See below	P
5.4.4.6.2	Separable thin sheet material	(See appended Table 5.4.9)	P
	Number of layers (pcs) ..... :	2	P
5.4.4.6.3	Non-separable thin sheet material		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material ..... :	(See appended Table 5.4.9)	N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.4.9	Solid insulation at frequencies >30 kHz .....:	(See appended Table 5.4.4.9)	P
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ).....:		—
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	Complied.	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		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).....:		—
	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

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Clause	Requirement + Test	Result - Remark	Verdict
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		P
5.5.5	Relays		N/A
5.5.6	Resistors	(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		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	Protective bonding wire complied with 5.6 and the minimum sizes in table 31	P
	Protective bonding conductor size (mm^2). .....:	1.1	—
	Protective current rating (A) ..... :	20	—
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

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Clause	Requirement + Test	Result - Remark	Verdict
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		P
5.7.2.1	Measurement of touch current .....:	(See appended table 5.7.4)	P
5.7.2.2	Measurement of prospective touch voltage		P
5.7.3	Equipment set-up, supply connections and earth connections		P
	System of interconnected equipment (separate connections/single connection) .....:	Single equipment.	—
	Multiple connections to mains (one connection at a time/simultaneous connections) .....:	Single equipment.	—
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).....:	0.544	—
	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).....:		-
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....:		-
6	**ELECTRICALLY- CAUSED FIRE**		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications		P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault ... :	(See appended table 6.2.2)	P
6.2.2.3	Power measurement for worst-case power source fault..... :	(See appended table 6.2.2)	P

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Clause	Requirement + Test	Result - Remark	Verdict
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 ..... :	(See appended table 6.2.3.1)	P
6.2.3.2	Resistive PIS ..... :	(See appended table 6.2.3.2)	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials ..... :	(See appended table 5.4.1.5, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure	(See appended table 5.4.1.5, 6.3.2, 9.0, B.2.6)	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	See 6.4.3.3.	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
6.4.5.2	Supplementary safeguards ..... :	(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 tables 6.2.3.1 and 6.2.3.2)	P
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier	Providing fire enclosure for PS3 circuit.	P
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		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8.2.2	Requirements for a fire enclosure	Metal enclosure and V-0 Mylar sheet used as fire enclosure.	N/A
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 table 6.4.8.3.3, 6.4.8.3.4 & P.2.2 for 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 above	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 or Min. V-0	P
6.5	Internal and external wiring		P
6.5.1	Requirements	Internal and external wiring complies with the recommended performance requirements of the applicable IEC 60332 standards or with the requirements of IEC/TS 60695-11-21, Wire complying with UL 2556 VW-1	P
6.5.2	Cross-sectional area (mm^2) .....:		—
6.5.3	Requirements for interconnection to building wiring .....:	(See Annex Q.)	N/A
6.6	Safeguards against fire due to connection to additional equipment		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) .....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
7.6	Batteries.....:	(See Annex M)	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		N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard..... :		—
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks .....:	(See Annex F.4 and Annex K)	N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard.....:		—
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N) .....:		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test.....:	(See appended table 8.5.5.2)	N/A
8.6	Stability		N/A
8.6.1	Product classification	MS1	N/A
	Instructional Safeguard.....:		—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force.....:		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt.....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force).....:		N/A
	Position of feet or movable parts.....:		—
8.7	Equipment mounted to wall or ceiling		P
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) .....:	See below	P
8.7.2	Direction and applied force.....:	Test 2: 32.2N plied 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
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 below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
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; - backlight of LCD panel	P
10.3	Protection against laser radiation		N/A
	Laser radiation that exists in the equipment:		—
	Normal, abnormal, single-fault..... :		N/A
	Instructional safeguard ..... :		—
	Tool..... :		—
10.4	Protection against visible, infrared, and UV radiation		N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons .....:		N/A
10.4.1.b)	RS3 accessible to a skilled person.....:		N/A
	Personal safeguard (PPE) instructional safeguard.....:		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1 . :		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions ..... :	(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

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Clause	Requirement + Test	Result - Remark	Verdict
	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 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 ..... :		N/A
B.2.3	Supply voltage and tolerances	Considered	P
B.2.5	Input test..... :	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P

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Clause	Requirement + Test	Result - Remark	Verdict
B.3.1	General requirements..... :	(See appended table B.3)	P
B.3.2	Covering of ventilation openings	(See appended table B.3)	P
B.3.3	D.C. mains polarity test		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.		N/A
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
B.4.2	Temperature controlling device open or short-circuited ..... :	(See appended table B.4)	P
B.4.3	Motor tests		N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature ..... :	(See Clause G.5)	N/A
B.4.4	Short circuit of functional insulation	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

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Clause	Requirement + Test	Result - Remark	Verdict
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A
D	**TEST GENERATORS**		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A
E	**TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS**		N/A
E.1	Audio amplifier normal operating conditions		N/A
	Audio signal voltage (V) .....:		—
	Rated load impedance (Ω) .....:		—
E.2	Audio amplifier abnormal operating conditions		N/A
F	**EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS**		P
F.1	General requirements		P
	Instructions – Language .....:	English.	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1		P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	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		P
F.3.3.1	Equipment with direct connection to mains		P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage.....:	See 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

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.4	Voltage setting device		N/A
F.3.5	Terminals and operating devices	See below.	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 ..... :	Primary F901, T3.15AL/250V are marked adjacent to the fuse.	P
F.3.5.4	Replacement battery identification marking ..... :		N/A
F.3.5.5	Terminal marking location		P
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment	See below	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		N/A
	b) Instructions given for installation or initial use	Provided in user manual.	P
	c) Equipment intended to be fastened in place		N/A
	d) Equipment intended for use only in restricted access area		N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard	The instruction is provided in the user's manual.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	g) Protective earthing conductor current exceeding ES 2 limits	Not exceed the ES2 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
F.5	Instructional safeguards	No instructional safeguard is referenced in this test report.	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		P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions.....:		N/A
G.4	**Connectors**		P
G.4.1	Spacings	The appliance inlet complied with IEC 60320-1.	P
G.4.2	Mains connector configuration .....:	The appliance inlet complied with IEC 60320-1.	P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		P
G.5	**Wound Components**		P
G.5.1	Wire insulation in wound components.....	Approved triple insulated wire used for winding of transformers	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°		P
G.5.1.2 b)	Construction subject to routine testing		N/A
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s) .....:		—
	Temperature (°C) .....:		—
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	**Transformers**		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1).....:	Meet the requirements in G.5.3.2 and G.5.3.3.	P
	Position.....:	T901	—
	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	Meet the requirements in G.5.3.2 and G.5.3.3.	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

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days) .....:		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V).....:		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h) .....:		N/A
	Electric strength test (V).....:		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature .....:		N/A
	Electric strength test (V) .....:		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h) .....:		N/A
	Electric strength test (V).....:		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage .....:		—
G.6	**Wire Insulation**		P
G.6.1	General		P
G.6.2	Solvent-based enamel wiring insulation		N/A
G.7	**Mains supply cords**		N/A
G.7.1	General requirements		N/A
	Type.....:		—
	Rated current (A).....:		—
	Cross-sectional area (mm^2), (AWG)..... :		—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N) .....:		—
G.7.3.2.2	Strain relief mechanism failure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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
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 ..... :	(See appended table B.3)	N/A
G.8.3.3	Temporary overvoltage ..... :	(See appended table B.3)	N/A
G.9	**Integrated Circuit (IC) Current Limiters**		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.		N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA ..... :		—
G.9.1 d)	IC limiter output current (max. 5A) ..... :		—
G.9.1 e)	Manufacturers' defined drift ..... :		—
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	**Resistors**		N/A
G.10.1	General requirements		N/A
G.10.2	Resistor test		N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	**Capacitor and RC units**		P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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
G.11.3	Rules for selecting capacitors	The selection followed with tables G.9 and G.12.	P
G.12	**Optocouplers**		P
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results).....:	The optocouplers used in the equipment are complied with IEC/EN 60747-5-2 that complied with the requirements of IEC 60747-5-5. (see appended table 4.1.2)	P
	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 .....:	(See appended table 5.4.4.5)	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

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Clause	Requirement + Test	Result - Remark	Verdict
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	**IC including capacitor discharge function (ICX)**		N/A
a)	Humidity treatment in accordance with 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		P

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Clause	Requirement + Test	Result - Remark	Verdict
K	**SAFETY INTERLOCKS**		N/A
K.1	General requirements		N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance .....:		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method .....:		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) .....:		N/A
K.7.2	Overload test, Current (A) .....:		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test .....:		N/A
L	**DISCONNECT DEVICES**		P
L.1	General requirements	Appliance Inlet as disconnect device.	P
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized		P
L.4	Single phase equipment		P
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		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

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance .....:		N/A
M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature .....:		—
M.4.2.2 b)	Single faults in charging circuitry .....:		—
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
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

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume *V*z (m^3/s)..... :		—
M.8.2.3	Correction factors..... :		—
M.8.2.4	Calculation of distance *d* (mm) ..... :		—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) ..... :		N/A
N	**ELECTROCHEMICAL POTENTIALS**		P
	Metal(s) used ..... :	Pollution degree considered	—
O	**MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES**		P
	Figures O.1 to O.20 of this Annex applied..... :	Considered	—
P	**SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS**		P
P.1	General requirements	See below.	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		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

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts	Adhesive for Ripple Capacitors is considered as safeguard. Adhesive for Mylar sheet is considered as safeguard.	P
P.4.2 a)	Conditioning testing		P
	Tc (°C) ..... :	100	—
	Tr (°C) ..... :	100	—
	Ta (°C) ..... :	(See appended table 5.4.1.4, 6.3.2, 9.0, B.2.6)	—
P.4.2 b)	Abrasion testing ..... :	(See G.13.6.2)	N/A
P.4.2 c)	Mechanical strength testing ..... :	(See Annex T)	N/A
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)	N/A
Q.1.1 b)	Impedance limited output		P
	- Regulating network limited output under normal operating and simulated single fault condition		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		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

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material .....:		—
	Wall thickness (mm).....:		—
	Conditioning (°C).....:		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material .....:		—
	Wall thickness (mm).....:		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	~~Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W~~ 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)	P
T.3	Steady force test, 30 N .....:	(See appended table T.3)	P
T.4	Steady force test, 100 N .....:		N/A
T.5	Steady force test, 250 N .....:	(See appended table T.5)	P
T.6	Enclosure impact test	(See appended table T.6)	P

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

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

4.1.2	**TABLE: List of critical components**	P

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Cord set: According to the manufacturer's declaration, the unit will be supplied with a power attachment cord and plug which meet the national requirements which have been approved to relevant national and international standards.					
Power cord set (Saudi Arabia) (Optional)					
Power plug (10A)	Fund Resources	BS-01J	10A/250V	BS1363 SASO 2203:2018	Intertek CN-GSOG- 20180506
Alt.	Honglin	HL-044	10A/250V	BS 1363 SASO 2203:2018	Intertek CN-GSOG- 2016011R5
Alt.	Honglin	HL-044s	10A/250V	BS 1363-1 SASO 2203:2018	Intertek CN-GSOG- 20171110R2
Alt.	ASAP	A12-0136-AC2, A12-0137-AC2	10A/250V	BS 1363 SASO 2203:2018	CVC RZKSA1810536 26-M1
Alt.	SANGLE	DTII-3P-22	10A/250V	BS 1363 SASO 2203:2018	CVC RZKSA2011598 13
Alt.	I-SHENG	SP-62, SP-65	10A/250V	BS 1363 SASO 2203:2018	CVC 2017GTC322302 7128-M3(R1) CVC RZKSA1910604 25-M1
Alt.	Interchangeable	Interchangeabl e	10A/250V	BS 1363 SASO 2203:2018	CVC
Power connector (10A)	Honglin	HL-026, HL-029, HL-029L	10A/250V	IEC/EN 60320- 1	ENEC 35-101702
Alt.	Honglin	HL-026S	10A/250V	IEC/EN 60320- 1:2015	ENEC 35-100964
Alt.	ASAP	A12-0012-AC2, A12-0056-AC2	10A/250V	IEC/EN 60320- 1	VDE40048182

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt.	I-SHENG	IS-14	10A/250V	IEC/EN 60320-1	Intertek Licence No. 443 ENEC/FI 2017044 284423-3
Alt.	Interchangeable	Interchangeable	10A/250V	IEC/EN 60320-1	CVC, VDE, ENEC, ASTA
Power cord	Honglin	H03VV-F, H05VV-F	3x0.75 mm² 3x0.75-1.5 mm²	EN 50525-2-11	VDE40022785
Alt.	Honglin	H03VV-F, H05VV-F	3x0.75 mm² 3x0.75-1.5 mm²	EN 50525-2-11	VDE40022785
Alt.	Fund Resources	H03VV-F, H05VV-F	3x0.5…0.75 mm² 3x0.75…2.5 mm²	EN 50525-2-11	VDE40031233
Alt.	ASAP	H03VV-F, H05VV-F	3x0.5…0.75 mm² 3x0.75…2.5 mm²	EN 50525-2-11	VDE40027103
Alt.	CHANGZHOU HONGCHANG ELECTRONICS CO LTD	H03VV-F, H05VV-F	3x0.5…0.75 mm² 3x0.75…2.5 mm²	EN 50525-2-11	VDE124978
Alt.	I-SHENG	H03VV-F, H05VV-F	3x0.5…0.75 mm² 3x0.75…2.5 mm²	EN 50525-2-11	VDE 40015762
Internal metal enclosure	Interchangeable	Interchangeable	Metal, thickness 0.61mm	IEC/EN62368-1	None
Plastic enclosure	Orinko Advanced Plastics Co., Ltd	ABS-3070H, HIPS-2000, ABS-340(X)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E328304 and test with appliance
Alt	CHI MEI CORPORATION	PA-757(+), PC-345(+)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E56070 and test with appliance
Alt	CHI MEI CORPORATION	PA-756S	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E56070 and test with appliance
Alt	CHI MEI CORPORATION	PC-540H, PC-540(Y)(a)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E56070 and test with appliance

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity 1)
Alt	LG CHEM LTD	XG569(#)	1 HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E67171 and test with appliance
Alt	LG CHEM LTD	GP1000, GP1000(Z), AF312T, AF365(&), HF350, HF380	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E67171 and test with appliance
Alt	GRAND PACIFIC PETROCHEMICAL CORP	D-150	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E88637 and test with appliance
Alt	INEOS Styrolution Polymers (Foshan) Company Limited	3441	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E314268 and test with appliance
Alt.	INEOS Styrolution Polymers (Foshan) Company Limited	260-XX	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E314268 and test with appliance
Alt.	HUIZHOU WOTE ADVANCED MATERIALS CO LTD	2100	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E310240 and test with appliance
Alt.	SABIC JAPAN L L C	C6600(GG)(X)(VS)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E207780 and test with appliance
Alt.	KINGFA SCI & TECH CO LTD	CK-61(M) (##), GAR-011(II)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E171666 and test with appliance
Alt.	KINGFA SCI & TECH CO LTD	5197, 4418, HIPS-4418, HIPS-5197, HIPS-3399, HIPS-CM(ee), HIPS-HG(ee)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E171666 and test with appliance

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt.	KINGFA SCI & TECH CO LTD	GAR-011C, HP-126, ABS-660, ABS-122, GAR-332, H12, G360, GAR-322, GAR-220, GAR-011, CK-55(M) (##), CK-58(M) (##), GAR-011C, GAR-011(ww)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E171666 and test with appliance
Alt.	UNIC TECHNOLOGY CORP	UR-3006+(R35), UR-3006+(R90), UR-3006+(RXX), UR-200+, UP-700+	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E135175 and test with appliance
Alt.	PONTEX POLYBLEND CO LTD	AFE5000N, AFE5100N, 9004BK	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E205938 and test with appliance
Alt.	WISTRON ADVANCED MATERIALS (KUNSHAN) CO LTD	GA65, GA85, GA35, GC(t), GA1(e), GA(M)(b)(c), AO(t), AO8505	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E359575 and test with appliance
Alt.	SHENZHEN FUHENG NEW MATERIAL CO LTD	HIPS-568	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E234833 and test with appliance
Alt.	LOTTE CHEMICAL CORPORATION	ABF-0200E, SD-0150(+), NH-1017SG(+), BF-0670(+), NH-1017(p), HG-0760(+), LX-0957(+)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E115797 and test with appliance

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt.	LOTTE CHEMICAL CORPORATION	BF-0677(+), BF-0675(+), GC-0700(+++), LX-0951(+)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E115797 and test with appliance
Alt.	QINGDAO HAIER NEW MATERIAL R & D CO LTD	HRABS-HG, HRABS-RS	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E230779 and test with appliance
Alt.	GUO HENG(DONGGUAN) PLASTIC TECHNOLOGY CO LTD	YOUHO(####)(Y), YOUHO(1302)(B), YOUHO(1303)(B), YOUHO(1304)(B), YOUHO(1333)(B), YOUHO(1303)(OP), YOUHO13(##)(YY) , YOUHO1312B	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E471190 and test with appliance
Alt.	RUNYE(CHONGQING) NEW MATERIALS CO.,LTD	GU-022	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E514505 and test with appliance
Alt.	WISTRON ADVANCED MATERIALS (KUNSHAN) CO LTD	AO(t)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E359575 and test with appliance
Alt.	GuangDong TPIPLASTIC Co Ltd	ABS 810R(**)	HB, thickness min. 1.6mm	UL 94 IEC/EN62368-1	UL E529703 and test with appliance
Alt.	UNIC TECHNOLOGY CORP.	UR-3006(R95)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E135175 and test with appliance
Alt.	RUNYE(CHONGQING) NEW MATERIALS CO.,LTD	Ecorex® RN -+(R #)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E514505 and test with appliance
Alt.	TEIJIN CHEMICALS PLASTIC COMPOUNDS SHANGHAI LTD	MN-3600H(#)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E244324 and test with appliance

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt.	TEIJIN LIMITED RESIN AND PLASTIC	TN-7500(c)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E98529 and test with appliance
Alt.	UNIC TECHNOLOGY CORP	UR-7085+(R90)	HB, thickness min. 1.5mm	UL 94 IEC/EN62368-1	UL E135175 and test with appliance
Alt.	Interchangeable	Interchangeable	HB or better, thickness 1.5mm	UL 94:2016 IEC 60695-11-10:2013(2nd Edition)	UL or other EU certification
Base stand (optional)	LOTTE ADVANCED MATERIALS CO LTD	SD-0150(+)	HB or better	UL 94 IEC/EN62368-1	UL E115797 and tested with appliance
Alt.	Interchangeable	Interchangeable	HB or better	UL 94:2016 IEC 60695-11-10:2013(2nd Edition)	UL or other EU certification
PCB	Three Sun	SMS-1	V-0, 105℃, min. 1.34 mm thickness	UL 796 IEC/EN 62368-1	UL E217670 and tested with appliance
Alt.	Interchangeable	Interchangeable	V-0 or better Min. 105℃, min. 1.34 mm thickness	UL 796:2016 IEC 60695-11-10:2013(2nd Edition)	UL or other EU certification
LCD Panel	L&T	LM270********** ******(* can be A to Z, a to z, 0 to 9, '+', '–', '\', '/', ',', sign absence or blank)	27”	IEC/EN 62368-1	Tested with appliance
Alt.	AUO	M270********** *****(* can be A to Z, a to z, 0 to 9, '+', '–', '\', '/', ',', sign absence or blank)	27”	IEC/EN 62368-1	Tested with appliance

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity 1)
Alt.	AUO	P270**********(* can be A to Z, a to z, 0 to 9, '+', '–', '\', '/', ',', sign absence or blank)	27”	IEC/EN 62368-1	Tested with appliance
Alt.	AUO	LM270**********(* can be A to Z, a to z, 0 to 9, '+', '–', '\', '/', ',', sign absence or blank)	27”	IEC/EN 62368-1	Tested with appliance
Alt.	INNOLUX	M270**********(* can be A to Z, a to z, 0 to 9, '+', '–', '\', '/', ',', sign absence or blank)	27”	IEC/EN 62368-1	Tested with appliance
Alt.	TPV	TPM270********(* can be A to Z, a to z, 0 to 9, '+', '–', '\', '/', ',', sign absence or blank)	27”	IEC/EN 62368-1	Tested with appliance
Alt.	TPV	TPT270********(* can be A to Z, a to z, 0 to 9, '+', '–', '\', '/', ',', sign absence or blank)	27”	IEC/EN 62368-1	Tested with appliance
Alt.	BOE	MV270*********(* can be A to Z, a to z, 0 to 9, '+', '–', '\', '/', ',', sign absence or blank)	27”	IEC/EN 62368-1	Tested with appliance

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity 1)
Alt.	BOE	ME270********** *******(* can be A to Z, a to z, 0 to 9, '+', '–', '\', '/', ',', sign absence or blank)	27”	IEC/EN 62368-1	Tested with appliance
Alt.	SHARP	LQ270********** ******(* can be A to Z, a to z, 0 to 9, '+', '–', '\', '/', ',', sign absence or blank)	27”	IEC/EN 62368-1	Tested with appliance
Alt.	SAMSUNG	LTM270********** ********(* can be A to Z, a to z, 0 to 9, '+', '–', '\', '/', ',', sign absence or blank)	27”	IEC/EN 62368-1	Tested with appliance
Alt.	LGD	LM270********** ******(* can be A to Z, a to z, 0 to 9, '+', '–', '\', '/', ',', sign absence or blank)	27”	IEC/EN 62368-1	Tested with appliance
Alt.	Panda	LM270********** ******(* can be A to Z, a to z, 0 to 9, '+', '–', '\', '/', ',' or blank)	27”	IEC/EN 62368-1	Tested with appliance
Insulation Sheet (between power board and panel, between power board and metal cover	SICHUAN DONGFANG INSULATING MATERIAL CO LTD	DFR700, DFR700F, DFR700-83, DFR700-83A, DFR700-83B, DFR117, DFR117ECOA, DFR117ECOB, DFR117ECOC	Polycarbonate, thickness: Min.0.4mm V-0, 80℃	UL 94 IEC/EN 62368-1	UL E199019 Tested with appliance

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity 1)
Alt.	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX FRPC-870B, KLX FRPC-870BF, KLX FRPC-870BH, KLX FRPC-870BFH, KLX FRPC-83B, KLX FRPC-83, KLX FRPC-F70, KLX FRPC-700B, KLX FRPC-700BF, KLX FRPC-60, KLX FRPC-60H, KLX FRPC-63, KLX FRPC-63H, KLX FRPC-65, KLX FRPC-65H KLX FRPC-1870B	Polycarbonate, thickness: Min.0.4mm V-0, 80℃	UL 94 IEC/EN 62368-1	UL E315185 Tested with appliance

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt.	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX FRPC-1860, KLX FRPC-1860B, KLX FRPC-1860-83, KLX FRPC-1860-83B, KLX FRPC-1860-1, KLX FRPC-1860-NTC, KLX FRPC-1860B-NTC, KLX FRPC-1860B-3, KLX FRPC-1870B-K, KLX FRPC-1860B-HY, KLX FRPC-1860-HY, KLX FRPC-1860B-K, KLX FRPC-1860-K, KLX FRPC-1860W	Polycarbonate, thickness: Min.0.4mm V-0, 80℃	UL 94 IEC/EN 62368-1	UL E315185 Tested with appliance
Alt.	Sichuan Longhua Film Co Ltd	PC-770, PC-770 A, PC-770-60B, PC-770-60B-A, PC-770-63B, PC-770-63B-A, PC-770-65B, PC-770-65B-A, PC-770-83B, PC-770F, PC-770F-A	Polycarbonate, thickness: Min. 0.4mm V-0, 80℃	UL 94 IEC/EN 62368-1	UL E254551 Tested with appliance

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt.	KunShan Dobesty Optoelectronic Materials Co Ltd	PC9821B, PC9832B, PC9842B, DB98HD, DB98, PC9821BK1, PC9832BK1, PC9821W1, PC98MNb1	Polycarbonate, thickness: Min. 0.4mm V-0, 80℃	UL 94 IEC/EN 62368-1	UL E339070 Tested with appliance
Alt.	SUZHOU OMAY OPTICAL MATERIALS CO LTD	SE42B SE42B-F	Polycarbonate, thickness: Min.0.4mm V-0, 80℃	UL 94 IEC/EN 62368-1	UL E249605 Tested with appliance
Alt.	JINGMEN GORUN TECHNOLOGY CO LTD	HF70, HE70(x)(#)	Polycarbonate, thickness: Min.0.4mm V-0, 80℃	UL 94 IEC/EN 62368-1	UL E305163 Tested with appliance
Alt.	SHENZHEN TEESUN TECHNOLOGY CO LTD	TS-FR370DL, TS-FR370F, TS-FR383H, TS-FR360H	Polycarbonate, thickness: 3.0mm V-0, 80℃	UL 94 IEC/EN 62368-1	UL E329660 Tested with appliance
Alt.	Ningbo Exciport New Material Co., Ltd	GZEFR99 GZEFR99A	Min. 0.4mm thickness, Min. V-0, 80°C	UL 94 IEC/EN 62368-1	UL E524218 Tested with appliance
Alt.	Hunan Dobesty Optical Material Co Ltd	DB98KJ	Min. 0.4mm thickness, Min. V-0, 80°C	UL 94 IEC/EN 62368-1	UL E524866 Tested with appliance
Alt.	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX FRPC-1880B	Min. 0.4mm thickness, Min. V-0, 125°C	UL 94 IEC/EN 62368-1	UL E315185 Tested with appliance
Adhesive for Insulation Sheet	3M	55236, 94489A, 55230, 55235	80℃	UL969 IEC/EN 62368-1	UL E256906 and tested with appliance
Alt	3M	9495MP	80℃,	UL969 IEC/EN 62368-1	UL: MH26206 and tested with appliance
Alt	XIAMEN LABAO OPTICS & ELECTRONICS CO LTD	TD-10, LA9120	80℃,	UL969 IEC/EN 62368-1	UL: E349099 and tested with appliance

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt	NITTO DENKO CORP	GA835	80℃	UL969 IEC/EN 62368-1	UL:MH13557 and tested with appliance
Alt	TESA SE	68646	80℃	UL969 IEC/EN 62368-1	UL:MH25809 and tested with appliance
Alt	DEXERIALS CORP	G4000	80℃	UL969 IEC/EN 62368-1	UL:MH15431 and tested with appliance
Alt	SYMBIO INC	DS50-A, DS50L	80℃	UL969 IEC/EN 62368-1	UL:MH13008 and tested with appliance
Alt	Fujian Youyi Adhesive Tape Group Co Ltd	YS310	80℃	UL 969 IEC/EN 62368-1	UL:E532174 and tested with appliance
Power Supply: power board 715GF928:					
AC-Inlet (CN901)	Zhang Jia Gang-Hua Jie	SA-4S series	10A, 250Vac	IEC/EN 60320-1 UL 60320-1	VDE 40003610 UL E154342
Alt.	Rong Feng Industrial Co Ltd	SS-120 SS-7B	10A, 250Vac	IEC/EN 60320-1 UL 60320-1	VDE 40028101 UL E102641
Alt.	DELIKANG/Douling	CDJ-3	10A, 250Vac	IEC/EN 60320-1 UL 60320-1	VDE 40010513 UL E217394
Alt.	DELIKANG/Douling	CDJ-3-1	10A, 250Vac	IEC/EN 60320-1 UL 60320-1	VDE 40015913 UL E217394
Alt.	Yueqing Hongchang	DB-14 series	10A, 250Vac	IEC/EN 60320-1 UL 60320-1	VDE 40028645 UL E327347
Alt.	Interchangeable	Interchangeable	10A, 250Vac	IEC/EN 60320-1	UL, EU certification mark
Fuse (F901)	Conquer Electronics Co., Ltd.	MST	T3.15AL, 250Vac	IEC/EN 60127-1: 2006 + A1: 2011 + A2: 2015 IEC/EN 60127-3: 2015 UL 248-1 UL 248-14	VDE 40017118 UL E82636

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt.	Conquer	MET	T3.15AL, 250Vac	IEC/EN 60127-1: 2006 + A1: 2011 + A2: 2015 IEC/EN 60127-3: 2015 UL 248-1 UL 248-14	VDE 40017157 UL E82636
Alt.	Suzhou Walter Electronic Co. Ltd.	2010	T3.15AL, 250Vac	IEC/EN 60127-1: 2006 + A1: 2011 + A2: 2015 IEC/EN 60127-3: 2015 UL 248-1 UL 248-14	VDE 40018781 UL E56092
Alt.	Littelfuse Inc.	392	T3.15AL, 250Vac	IEC/EN 60127-1: 2006 + A1: 2011 + A2: 2015 IEC/EN 60127-3: 2015 UL 248-1 UL 248-14	VDE 126983 UL E67006
Alt.	Cooper Bussmann LLC	SS-5	T3.15AL, 250Vac	IEC/EN 60127-1: 2006 + A1: 2011 + A2: 2015 IEC/EN 60127-3: 2015 UL 248-1 UL 248-14	VDE 40015513 UL E19180
Alt.	DONGGUAN BETTER ELECTRONICS TECHNOLOGY CO LTD	932	T3.15AL, 250Vac	IEC/EN 60127-1: 2006 + A1: 2011 + A2: 2015 IEC/EN 60127-3: 2015 UL 248-1 UL 248-14	VDE 4003336) UL E300003

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt.	Littelfuse Inc.	382	T3.15AL, 250Vac	IEC/EN 60127-1: 2006 + A1: 2011 + A2: 2015 IEC/EN 60127-3: 2015 UL 248-1 UL 248-14	VDE 40018249 UL E67006
Alt.	Cooper Bussmann LLC	SR-5	T3.15AL, 250Vac	IEC/EN 60127-1: 2006 + A1: 2011 + A2: 2015 IEC/EN 60127-3: 2015 UL 248-1 UL 248-14	VDE 122052 UL E19180
Alt.	Walter	2000	T3.15AL, 250Vac	IEC/EN 60127-1: 2006 + A1: 2011 + A2: 2015 IEC/EN 60127-3: 2015 UL 248-1 UL 248-14	VDE 40018790 UL E56092
Alt.	Suzhou Walter Electronic Co. Ltd.	2010	T3.15AL, 250Vac	IEC/EN 60127-1: 2006 + A1: 2011 + A2: 2015 IEC/EN 60127-3: 2015 UL 248-1 UL 248-14	VDE 40018781 UL E56092
Alt.	Suzhou Walter Electronic Co., Ltd.	2410LT	T3.15AL, 250Vac	IEC 60127-1: 2006 + A1 + A2; EN 60127-1: 2006 + A1 + A2; IEC 60127-7: 2015; EN 60127-7: 2016	UL E56092 TUV Rheinland (R 50485936)

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt.	Suzhou Walter Electronic Co., Ltd.	2040	T3.15AL, 250Vac	EN 60127-1:2006+A1+A2 EN 60127-4:2005+A1+A2	UL E56092 TUV Rheinland J 50426356
Alt.	SUZHOU WALTER ELECTRONIC CO LTD	1032ST	T3.15AL, 250Vac	EN 60127-7:2016 EN 60127-1:2006+A1+A2 UL 248-1 UL 248-14	TUV Rheinland R 50406605 UL (E56092)
Alt.	LITTELFUSE INC	443	T3.15AL, 250Vac	EN 60127-1:2006+A1 EN 60127-7:2013 UL 248-1 UL 248-14	TUV Rheinland AN 50310552 UL E10480
Alt.	Interchangeable	Interchangeable	T3.15AL, 250Vac	IEC/EN 60127-1: 2006 + A1: 2011 + A2: 2015 IEC/EN 60127-3: 2015	UL, EU certification mark
Y-cap (C919, C920) (Y1 type) (optional)	TDK	CD	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40029780 UL E37861
Alt.	TDK	CS	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40029781 UL E37861
Alt.	Murata	KH	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40002796 UL E37921
Alt.	Murata	KX	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40002831 UL E37921
Alt.	Walsin (Pan Overseas)	AC	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40001829 UL E146544
Alt.	Walsin (Pan Overseas)	AH	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40001804 UL E146544
Alt.	Hongming	F	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40036246 UL E154899

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt.	Haohua	CT7	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40013601 UL E233106
Alt.	Yinan Don's Electronic Component Co., Ltd.	CT81	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 135256 UL E145038
Alt.	Success Electronics Co., Ltd.	SE	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 122995 UL E114280
Alt.	Success Electronics Co., Ltd.	SB	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40037221 UL E114280
Alt.	Kunshan Wansheng	CT7	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40012143 UL E249006
Alt.	XIAMEN WANMING ELECTRONICS CO LTD	CK	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL 60384-14	VDE 40034438 ENEC-04533 UL E221839
Alt.	Interchangeable	Interchangeable	Max. 680pF, 250Vac, 85°C min.	IEC/EN 60384-14: 2016	UL, EU certification mark
Y-cap (C913) (Y1 type) (optional)	TDK	CD	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40029780 UL E37861
Alt.	TDK	CS	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40029781 UL E37861
Alt.	Murata	KH	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40002796 UL E37921
Alt.	Murata	KX	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40002831 UL E37921
Alt.	Walsin (Pan Overseas)	AC	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40001829 UL E146544
Alt.	Walsin (Pan Overseas)	AH	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40001804 UL E146544
Alt.	Hongming	F	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40036246 UL E154899

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt.	Haohua	CT7	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40013601 UL E233106
Alt.	Yinan Don's Electronic Component Co., Ltd.	CT81	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 135256 UL E145038
Alt.	Success Electronics Co., Ltd.	SE	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 122995 UL E114280
Alt.	Success Electronics Co., Ltd.	SB	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40037221 UL E114280
Alt.	Kunshan Wansheng	CT7	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL1414	VDE 40012143 UL E249006
Alt.	XIAMEN WANMING ELECTRONICS CO LTD	CK	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14 UL 60384-14	VDE 40034438 ENEC-04533 UL E221839
Alt.	Interchangeable	Interchangeable	Max. 1500pF, 250Vac, 85°C min.	IEC/EN 60384-14: 2016	UL, EU certification mark
X- Cap. (C916(X2 or X1 type) (optional)	Ultra Tech Xiphi	HQX	Max. 0.33μF, 250Vac min.; 110°C min.	IEC/EN 60384-14 UL1414	VDE 40015608 UL E183780
Alt.	Europtronic	MPX	Max. 0.33μF, 250Vac min.; 110°C min.	IEC/EN 60384-14 UL1414	VDE 40018238 UL E211347
Alt.	Europtronic	MPX2	Max. 0.33μF, 250Vac min.; 110°C min.	IEC/EN 60384-14 UL1414	VDE 40025981 UL E211347
Alt.	XIAMEN FARATRONIC CO LTD	MKP62	Max. 0.33μF, 250Vac min.; 110°C min.	IEC/EN 60384-14 UL1414	VDE 40000358 UL E186600
Alt.	KEMET ELECTRONICS ITALIA SRL	R.46	Max. 0.33μF, 250Vac min.; 110°C min.	IEC/EN 60384-14 UL1414	ENEC V4413 UL E97797
Alt.	LIOW GU ELECTRONICS Industry Co Ltd	GS-L	Max. 0.33μF, 250Vac min.; 110°C min.	IEC/EN 60384-14 UL1414	VDE 40023391 UL E186321 ENEC HN 69291428

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt.	AIHUA INFINITY CAPACITORS (SG) PTE. LTD.	FX, FX2, FXT, FXB, FXM, FXQ	Max. 0.33μF, 250Vac min.; 110°C min.	IEC/EN 60384-14 UL1414	VDE 40051583 UL E500538
Alt.	EPCOS	B3292#	Max. 0.33μF, 250Vac min.; 110°C min.	IEC/EN 60384-14 UL1414	VDE 40010694 UL E97863
Alt.	NANJING TENGEN RONG GUANG DA ELECTRONIC SALES CO LTD	MKP	Max. 0.33μF, 250Vac min.; 110°C min.	IEC/EN 60384-14 UL1414	VDE 40049725 UL E502081
Alt.	JINGHAO	CBB62B	Max. 0.33μF, 250Vac min.; 110°C min.	IEC/EN 60384-14 UL1414	VDE 40018690 UL E252286
Alt.	Interchangeable	Interchangeable	Max. 0.33μF, 250Vac min.; 110°C min.	IEC/EN 60384-14: 2016	UL, EU certification mark
Photo Coupler (U903)	Sharp	PC123	Ext. > 8.0mm int.cr=thermal cycling 3) Di> 0.4mm AC 3000V, min. 100°C	IEC 60747-5-5: 2007 + A1:2013 EN 60747-5-5: 2011+A1:2015 ANSI/UL 1577	VDE 40008087 UL E64380 Nemko P09211293
Alt.	Everlight	EL817, EL817M, EL1013	Ext.= 7.7mm Int.= 6.0mm Di= 0.5mm AC 3000V, min. 100°C	IEC 60747-5-5: 2007 + A1:2013 EN 60747-5-5: 2011+A1:2015 ANSI/UL 1577	VDE 132249 UL E214129 Nemko P11214765/A1
Alt.	Renesas Electronics Corporation	PS2561-1, PS2561L-1, PS2561L1-1, PS2561L2-1	Ext.> 7.0mm int.cr=thermal cycling 3) Di.> 0.4mm AC 3000V, min. 100°C	IEC 60747-5-5: 2007 + A1:2013 EN 60747-5-5: 2011+A1:2015 ANSI/UL 1577	VDE 40008862 UL E72422 Nemko P10212638
Alt.	Lite-on	LTV-817	Ext. cr>8.0mm, Int.cr=thermal cycling 3), Dti > 0.6 mm, AC 3000V, min. 100°C	IEC 60747-5-5: 2007 + A1:2013 EN 60747-5-5: 2011+A1:2015 ANSI/UL 1577	VDE 40015248 UL E113898

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
Alt.	Interchangeable	Interchangeable	Ext. cr>8.0mm, Int.cr=thermal cycling 3), Dti > 0.6 mm, AC 3000V, min. 100°C	EN 60747-5-2	UL, EU certification mark
PFC Choke (L901) (Optional)	TC	373G0174602S	90°C	IEC/EN 62368-1	Tested with appliance
Alt.	PH	373G0174602P	90°C	IEC/EN 62368-1	Tested with appliance
Alt.	LFDJ	373G0174602J	90°C	IEC/EN 62368-1	Tested with appliance
Alt.	HA	373G0174602H	90°C	IEC/EN 62368-1	Tested with appliance
Transformer (T901)	HA	380GL88P112H	Class B	IEC/EN 62368-1	Tested with appliance
Alt.	HA	CLT-122016	Class B	IEC/EN 62368-1	Tested with appliance
Alt.	LF	380GL88P112J	Class B	IEC/EN 62368-1	Tested with appliance
Alt.	LF	BCK-30-L022TG	Class B	IEC/EN 62368-1	Tested with appliance
Alt.	PH	380GL88P112P	Class B	IEC/EN 62368-1	Tested with appliance
Alt.	PH	PH-001220008	Class B	IEC/EN 62368-1	Tested with appliance
Alt.	ASET	380GL88P112X	Class B	IEC/EN 62368-1	Tested with appliance
Alt.	ASET	3101339222	Class B	IEC/EN 62368-1	Tested with appliance
-Bobbin	SUMITOMO BAKELITE CO LTD	PM-9630, PM-9823, PM-9750	V-0, 150°C, min. 0.45mm thick	UL 94 IEC/EN62368-1	UL E41429 and tested with appliance
Alt.	CHANG CHUN PLASTICS CO.LTD	T200HF, T200NA	V-0, 150°C, min. 0.45mm thick	UL 94 IEC/EN62368-1	UL E59481 and tested with appliance
-Triple insulation wire	KBI Cosmolink Co Ltd	TIW-M, TIW-M(XX) (for UL)	Reinforced insulation, 130°C	UL 2353 IEC/EN 62368-1	UL E213764 and tested with appliance
Alt.	SUZHOU YUSHENG ELECTRONIC CO LTD	TIW-B, TIW-B* (for UL)	Reinforced insulation, 130°C	UL 2353 IEC/EN 62368-1	UL E364920 and tested with appliance

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
-Insulation tape	JingJiang YaHua Pressure Sensitive Glue Co., Ltd	CT*(c)(g), CT*(b)(g)	PET film insulating tape, 130°C	UL 510A IEC/EN 62368-1	UL E165111 and tested with appliance
-Tube	GREAT HOLDING INDUSTRIAL CO., LTD.	TFL	PTFE, 200°C, VW-1	UL 224 IEC/EN 62368-1	UL E156256 and tested with appliance
Alt.	CHANGYUAN ELECTRONICS GROUP CO LTD	CB-TT-L	PTFE, 200°C, VW-1	UL 224 IEC/EN 62368-1	UL E180908 and tested with appliance
Bleeding resistors (R914, R915, R916)	Guangdong Fenghua Advanced Technology Holding Co., Ltd.	RS-06#xxxFT series	Max. 910 K ohm, 1/4 W	IEC/EN 62368-1	CB of Nemko NO99693
Alt	Guangdong Fenghua Advanced Technology Holding Co., Ltd.	RVS-06#xxxFT series	Max. 910 K ohm, 1/4 W	IEC/EN 62368-1	CB of Nemko NO99692
Alt	YAGEO	RV0603, RV0805, RV1206	Max. 910 K ohm, 1/4 W	IEC/EN 62368-1	CB of UL certificate no. DK-64853-UL
Alt	TZAIYUAN	HSMD********* SMD*********	Max. 910 K ohm, 1/4 W	IEC/EN 62368-1	CB of UL certificate no. DK-29431-A1-UL
Alt.	Tzai Yuan Enterprise Co., Ltd.	MGUL1/4Wseri es	Max. 910 K ohm, 1/4 W	IEC/EN 62368-1	CB issued by UL(CB cert No. DK-69874-UL)
Alt	Guangdong Fenghua Advanced Technology Holding Co., Ltd.	RVS-06********* series	Max. 910 K ohm, 1/4 W	IEC/EN 62368-1	CB of Nemko NO127737
Alt	Guangdong Fenghua Advanced Technology Holding Co., Ltd.	RS-06********* series	Max. 910 K ohm, 1/4 W	IEC/EN 62368-1	CB of Nemko NO127738
Alt.	Interchangeable	Interchangeabl e	Max. 910 K ohm, 1/4 W	IEC/EN 62368-1	UL, EU certification mark
Supplementary information:					

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity [1)]
1) Provided evidence ensures the agreed level of compliance. See OD-CB2039. 2) License available upon request					

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

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

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	Normal	18.8Vdc	-	-	ES1
			Abnormal	18.8Vdc	-	-	
			Single fault – SC/OC	18.8Vdc	-	-	
2	264V,60Hz	LED backlight	Normal	45.8Vdc	-	-	ES1
			Abnormal	45.8Vdc	-	-	
			Single fault – SC/OC	45.8Vdc	-	-	
3	264V,60Hz	All secondary port to L/N	Normal	-	0.03mApk	-	ES1
			Abnormal	-	0.03mApk	-	
			Single fault – SC/OC	-	0.03mApk	-	
4	264V,60Hz	Key button / plastic enclosure to L/N	Normal	-	0.06mApk	-	ES1
			Abnormal	-	0.06mApk	-	
			Single fault – SC/OC	-	0.06mApk	-	

5.2.2.3 - Capacitance Limits						
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Capacitance, nF	Upk (V)	
--	264V,	C916	Normal	330	373	ES3

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

	60Hz		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	--	--	--	

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, Tested with normal, abnormal and single-fault condition, and maximum value was recorded.

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements					P
	Supply voltage (V) .....:	90	90	264	264	—
	Ambient T_{min} (°C) .....:	24.8	40	24.8	40	—
	Ambient T_{max} (°C) .....:	25.0	40	25.0	40	—
	Tma (°C) .....:	40	40	40	40	—
Maximum measured temperature T of part/at:		T (°C)				Allowed T_{max} (°C)
Horizontal orientation						

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

CN901 body (on power board)	--	57.4	--	56.4	70
C919 body (on power board)	--	57.7	--	54.3	85
C920 body (on power board)	--	61.5	--	56.3	85
C913 body (on power board)	--	70.3	--	68.3	85
U903 body (on power board)	--	70.8	--	72.2	100
PCB near NR901(on power board)	--	64.3	--	57.8	105
C916 body (on power board)	--	63.5	--	58.6	110
L901 coil (on power board)	--	74.0	--	62.0	90*
C905 body (on power board)	--	68.3	--	61.9	105
T901 coil (on power board)	--	79.6	--	80.9	110*
T901 core (on power board)	--	77.8	--	80.5	For ref
Insulation sheet (component side)	--	64.6	--	65.1	80
Insulation sheet (trace side)	--	65.1	--	64.9	80
Plastic enclosure inside	--	45.9	--	45.9	For ref
Below temperatures are adjusted to ambient of 25 °C.					
Plastic enclosure outside	29.0	--	29.1	--	94
Panel surface	33.1	--	32.6	--	80
Metallic parts for accessible	33.5	--	34.3	--	70
Key surface	26.2	--	25.5	--	60
vertical orientation, 90° clockwise					

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

CN901 body (on power board)	--	57.6	--	56.1	70
C919 body (on power board)	--	61.7	--	59.3	85
C920 body (on power board)	--	63.8	--	60.0	85
C913 body (on power board)	--	71.4	--	71.9	85
U903 body (on power board)	--	67.2	--	69.8	100
PCB near NR901(on power board)	--	66.6	--	61.1	105
C916 body (on power board)	--	66.2	--	62.8	110
L901 coil (on power board)	--	77.5	--	67.3	90*
C905 body (on power board)	--	76.0	--	70.5	105
T901 coil (on power board)	--	78.4	--	82.1	110*
T901 core (on power board)	--	77.2	--	81.9	For ref
Insulation sheet (component side)	--	64.5	--	66.5	80
Insulation sheet (trace side)	--	64.4	--	66.0	80
Plastic enclosure inside	--	47.6	--	48.1	For ref
Below temperatures are adjusted to ambient of 25 °C.					
Plastic enclosure outside	30.4	--	30.9	--	94
Panel surface	32.5	--	32.8	--	80
Metallic parts for accessible	33.2	--	33.5	--	70
Key surface	26.0	--	25.4	--	60
vertical orientation, 90° anticlockwise					

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

CN901 body (on power board)	--	53.9	--	52.4	70
C919 body (on power board)	--	57.4	--	55.0	85
C920 body (on power board)	--	62.6	--	57.8	85
C913 body (on power board)	--	70.1	--	70.5	85
U903 body (on power board)	--	65.0	--	68.9	100
PCB near NR901(on power board)	--	66.6	--	59.7	105
C916 body (on power board)	--	64.6	--	59.9	110
L901 coil (on power board)	--	73.7	--	63.2	90*
C905 body (on power board)	--	65.6	--	61.2	105
T901 coil (on power board)	--	78.4	--	82.6	110*
T901 core (on power board)	--	75.2	--	80.3	For ref
Insulation sheet (component side)	--	61.6	--	63.8	80
Insulation sheet (trace side)	--	62.1	--	65.4	80
Plastic enclosure inside	--	45.8	--	46.2	For ref
Below temperatures are adjusted to ambient of 25 °C.					
Plastic enclosure outside	28.8	--	29.4	--	94
Panel surface	30.9	--	32.4	--	85
Metallic parts for accessible	33.6	--	35.6	--	70
Key surface	34.0	--	34.7	--	60

Temperature T of winding:	t1 (°C)	R1 (Ω)	t2 (°C)	R2 (Ω)	T (°C)	Allowed Tmax (°C)	Insulation class
--	--	--	--	--	--	--	--

Supplementary information: * indicated thermocouple method was used to measure the winding, so the limit value reduced 10K.

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

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

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)
Bobbin of Transformer	--	125	1.1
Supplementary information:			

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance						P
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz)[1]	Required cl (mm)	cl (mm)[2]	Required[3] cr (mm)	cr (mm)
Functional:							
FI: Between L and N before fuse ***1)***	420	250	--	2.3	4.0	2.5	4.0
FI: Between fuse two ends 1), 3)	420	250	--	2.3	3.1	2.5	3.1
Basic / supplementary:							
BI: Line (pri.) – GND 1) , 3)	420	250	--	2.3	3.1	2.5	3.1
BI: Neutral (pri.) – GND 1) , 3)	420	250	--	2.3	3.1	2.5	3.1
BI: Components side of power board (pri.) –earthed metal chassis **2)**	552	284	--	2.3	5.3	2.9	5.3
BI: C919 (pri.) – C919 (PE) ***1) , 3)***	420	250	--	2.3	8.0	2.5	8.0
BI: C920 (pri.) – C920 (PE) ***1) , 3)***	420	250	--	2.3	8.0	2.5	8.0
BI: C913 (pri.) – C913 (PE) ***1) , 3)***	420	250	--	2.3	8.0	2.5	8.0
Reinforced:							
RI: Pin side of power board (pri.) – LCD panel ***1)***	552	284	--	4.5	8.0	5.7	8.0
RI: Pri. – Sec. ***1)***	552	284	--	4.5	7.8	5.7	7.8
RI: U903(pri.) – U903 (sec.) ***1)***	420	250	--	4.5	7.8	5.0	7.8
RI: T901 (pri.) – T901 (sec.) ***1)***	552	284	--	4.5	12.4	5.7	12.4
RI: T901 (sec.) – T901 core ***1)***	552	284	--	4.5	11.5	5.7	11.5
Supplementary information: FI: Function insulation; BI: Basic insulation; SI: Supplementary insulation; RI: Reinforced insulation							

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

With the equipment to be operated at 5000m above sea level max. the minimum clearances is multiplied by the factor 1.48.

1) Measured on solder side.

2) Measured on component side.

3) There is a slot > 1 mm under component.

Glued component: C905.

The CTI rating of PCB is material group IIIb (CL.2.10.4)

Note 1: Only for frequency above 30 kHz
Note 2: See table 5.4.2.4 if this is based on electric strength test
Note 3: Provide Material Group

5.4.2.3	**TABLE: Minimum Clearances distances using required withstand voltage**		**P**
	Overvoltage Category (OV):		II
	Pollution Degree:		2

Clearance distanced between:	Required withstand voltage	Required cl (mm)	Measured cl (mm)
functional (same as table 5.4.2.2)	2500V	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
Basic(same as table 5.4.2.2)	2500V	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
Reinforced(same as table 5.4.2.2)	2500V	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:			

5.4.2.4	**TABLE: Clearances based on electric strength test**	**N/A**

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)
Bobbin of transformer	552	--	See table 4.1.2	0.4/1layer	Min. 0.45
Optocoupler	552	--	See table 4.1.2	0.4/1layer	Min. 0.4
Insulation sheet	552	--	See table 4.1.2	0.4/1layer	Min. 0.4
Supplementary information:					

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

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Basic/supplementary:		--	--	--
Basic: Primary – PE		AC	2500Vpk	No
Reinforced:		--	--	--
Reinforced: Primary – Secondary output		AC	4000Vpk	No
Reinforced: L/N to plastic enclosure with metal foil		AC	4000Vpk	No
Reinforced: T901 Primary – Secondary **)		AC	4000Vpk	No
Reinforced: T901 Secondary – Core **)		AC	4000Vpk	No
2 layers of insulation tape used in T901 **)		AC	4000Vpk	No
Optocoupler		AC	4000Vpk	No
Insulation Sheet (between power board and LCD panel)		AC	4000Vpk	No
Supplementary information: *) For all models list in this report **) For all sources of T901. Note: The tests mentioned above were performed after humidity 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
264V/50Hz	Line-Neutral	N	--	36	ES1
Supplementary information: X-capacitors installed for testing are: see table 4.1.2 for detail - bleeding resistor rating: see table 4.1.2 for detail - ICX: Notes: A. Test Location: Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth B. Operating condition abbreviations: N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition					

5.6.6.2	TABLE: Resistance of protective conductors and terminations	P

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

Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)
PE terminal of AC inlet to internal Metal enclosure	40	2	0.240	0.006
PE terminal of AC inlet to internal Metal enclosure	32	2	0.192	0.006
PE terminal of ac inlet to C919	40	2	0.160	0.004
PE terminal of ac inlet to C919	32	2	0.128	0.004
PE terminal of ac inlet to C920	40	2	0.160	0.004
PE terminal of ac inlet to C920	32	2	0.128	0.004
PE terminal of ac inlet to C913	40	2	0.320	0.008
PE terminal of ac inlet to C913	32	2	0.256	0.008
Supplementary information:				

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		P
Supply voltage .....:		264V	—
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 secondary connector, Neutral to secondary connector, Line to plastic enclosure with copper foil, Neutral to plastic enclosure with copper foil		1	0.544Max.
		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.

IEC 62368-1			
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	DC output of power board	Power (W) :	--	--	PS2 (See Table Annex Q.1)
		V_A (V) :	--	--	
		I_A (A) :	--	--	
B	Primary circuit	Power (W) :	--	--	PS3
		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
*	*	*	*	Yes
Supplementary information: An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V_p) and normal operating condition rms current (I_{rms}) is greater than 15. (*) 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
*	*	*	*	--	Yes
Supplementary Information: A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter. If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification. A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, or (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault. (*) All circuits are regarded as Resistive PIS.					

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Clause	Requirement + Test	Result - Remark	Verdict

8.5.5	TABLE: High Pressure Lamp	N/A

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
Power board 715GF928 and main board 715GF893 (HDMI mode):								
90	50	0.543	—	28.9	—	F901	0.543	Max. contrast,Max brightness. operated continuously.
90	60	0.527	—	28.8	—	F901	0.527	Same as above.
100	50	0.494	1.5	28.6	—	F901	0.494	Same as above.
100	60	0.479	1.5	28.5	—	F901	0.479	Same as above.
240	50	0.249	1.5	28.4	—	F901	0.249	Same as above.
240	60	0.244	1.5	28.3	—	F901	0.244	Same as above.
264	50	0.233	—	28.5	—	F901	0.233	Same as above.
264	60	0.228	—	28.4	—	F901	0.228	Same as above.
Power board 715GF928 and main board 715GF893 (DP mode):								
90	50	0.537	—	28.4	—	F901	0.537	Max. contrast,Max brightness. operated continuously.
90	60	0.521	—	28.3	—	F901	0.521	Same as above.
100	50	0.486	1.5	28.3	—	F901	0.486	Same as above.
100	60	0.471	1.5	28.3	—	F901	0.471	Same as above.
240	50	0.246	1.5	28.2	—	F901	0.246	Same as above.
240	60	0.241	1.5	28.1	—	F901	0.241	Same as above.
264	50	0.230	—	28.3	—	F901	0.230	Same as above.
264	60	0.226	—	28.3	—	F901	0.226	Same as above.
Supplementary information:								
All tests were tested on max. comsuption LCD panel.								

B.3	TABLE: Abnormal operating condition tests	P

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Clause	Requirement + Test	Result - Remark	Verdict

Ambient temperature (°C) .....:							See below.	—
Power source for EUT: Manufacturer, model/type, output rating ..:							--	—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Ventilation openings	Blocked	264	4.0H	F901	0.233	-	T901 Coil=70.8°C, T901 Core=68.4°C, Plastic enclosure outside =32.3°C, Metallic parts for accessible =35.2°C, Key surface=38.5°C, Panel surface =40.5°C, Ambient=25.9°C.	No hazard, no extremely high temperature
T901	Overload	264	4.0H	F901	0.363	-	T901 Coil=87.9°C, T901 Core=83.5°C, Plastic enclosure outside =32.6°C, Metallic parts for accessible =35.8°C, Key surface=38.9°C, Panel surface =39.5°C, Ambient=25.7°C.	Output overload to 1.6A. No hazard, no extremely high temperature .
Supplementary information: Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column “Abnormal/Fault.” Specify if test condition by indicating “Abnormal” then the condition for a Clause B.3 test or “Single Fault” then the condition for Clause B.4.								

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Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) .....:		25	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
BD901 pin1-4	S-C	264	< 1 sec	F901	>10.5→0 *)	—	—	Fuse open immediately, no hazards.
C905	S-C	264	< 1 sec	F901	>10.5→0 *)	—	—	Fuse open immediately, no hazards.
C909	S-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards
R908	S-C	264	5 min	F901	0.15	—	—	Unit operated normally. no damage. no hazards.
C911	S-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards
D903	S-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards
U901 pin 3-7	S-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards
U901 pin 1-7	S-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards
U901 pin 1-3	S-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards
U903 pin1-2	S-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards
U903 pin3-4	S-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards
U903 pin1	O-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards

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Clause	Requirement + Test	Result - Remark	Verdict

D901	S-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards
R901	S-C	264	5 min	F901	0.15	—	—	Unit operated normally. no damage. no hazards.
T901 pin 1-2	S-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards
T901 pin 4-5	S-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards
T901 pin 9-8	S-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards
+18V output to earth	S-C	264	5 min	F901	0.04	—	—	Unit shutdown, No damage, No hazards
Supplementary information: S-C = Short Circuit, O-C = Open Circuit.								

Annex M.3	**TABLE: Batteries**	N/A

Annex M.4	**Table: Additional safeguards for equipment containing secondary lithium batteries**	N/A

Annex Q.1	**TABLE: Circuits intended for interconnection with building wiring (LPS)**					**P**
Note: Measured UOC (V) with all load circuits disconnected:						
Output Circuit	Components	U_{oc} (V)	I_{sc} (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
For power board 715GF928						
T901	Overload	18.1	2.7	≤ 8.0	46.4	≤ 100
T901	R901 S-C	18.1	5.3	≤ 8.0	91.5	≤ 100
For main board 715GF893						
CN5101 (HDMI)	Overload	4.9	0	≤ 8.0	0	≤ 100
CN5201 (HDMI)	Overload	4.9	0	≤ 8.0	0	≤ 100
CN5501 (DP)	Overload	3.3	0.8	≤ 8.0	2.6	≤ 100

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Clause	Requirement + Test	Result - Remark	Verdict

CN5501 (DP)	U5502 pin1-5 S-C	3.3	3.7	≤ 8.0	7.1	≤ 100
Supplementary Information: 1. S-C=short circuit						

T.2, T.3, T.4, T.5	TABLE: Steady force test				P
Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation
Internal components	--	--	10	5	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.
Supplementary information:					

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

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External plastic enclosure	See table 4.1.2	See table 4.1.2	70	7	All safeguards remained effective.
Supplementary information:					

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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)	P
	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	-
	Delete all the "country" notes in the reference document (IEC 62368-1:2014) according to the following list:	-

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

	For special national conditions, see Annex ZB.		-
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.		-

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

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Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	**Add** the following after the first paragraph: *For RS 1 compliance is checked by measurement under the following conditions:* *In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or presets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.* NOTE Z1 Soldered joints and paint lockings are examples of adequate locking. *The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus.* *Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.* *For RS1, the dose-rate shall not exceed 1 µSv/h taking account of the background level.* NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.		N/A
10.6.1	**Add** the following paragraph to the end of the subclause: EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.		N/A
10.Z1	**Add** the following new subclause after 10.6.5. **10.Z1 Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz** The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz). For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand-held and body-mounted devices, attention is drawn to EN 50360 and EN 50566		N/A
G.7.1	**Add** the following note: NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.		N/A

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

Bibliography	**Add** the following standards: **Add** the following notes for the standards indicated: IEC 60130-9 NOTE Harmonized as EN 60130-9. IEC 60269-2 NOTE Harmonized as HD 60269-2. IEC 60309-1 NOTE Harmonized as EN 60309-1. IEC 60364 NOTE some parts harmonized in HD 384/HD 60364 series. IEC 60601-2-4 NOTE Harmonized as EN 60601-2-4. IEC 60664-5 NOTE Harmonized as EN 60664-5. IEC 61032:1997 NOTE Harmonized as EN 61032:1998 (not modified). IEC 61508-1 NOTE Harmonized as EN 61508-1. IEC 61558-2-1 NOTE Harmonized as EN 61558-2-1. IEC 61558-2-4 NOTE Harmonized as EN 61558-2-4. IEC 61558-2-6 NOTE Harmonized as EN 61558-2-6. IEC 61643-1 NOTE Harmonized as EN 61643-1. IEC 61643-21 NOTE Harmonized as EN 61643-21. IEC 61643-311 NOTE Harmonized as EN 61643-311. IEC 61643-321 NOTE Harmonized as EN 61643-321. IEC 61643-331 NOTE Harmonized as EN 61643-331.		N/A
ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		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”		N/A
4.7.3	**United Kingdom** To the end of the subclause the following is added: The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex		P

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Clause	Requirement + Test	Result - Remark	Verdict
5.2.2.2	**Denmark** After the 2nd paragraph add the following: A warning (marking **safeguard**) for high **touch current** is required if the **touch current** exceeds the limits of 3,5 mA a.c. or 10 mA d.c.	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 from earth the following is applicable: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either • two layers of thin sheet material, each of which shall pass the electric strength test below, or • one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition • passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), and • is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5kV. It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: • the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11; • the additional testing shall be performed on all the test specimens as described in EN 60384-14; the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		N/A
5.5.2.1	**Norway** After the 3rd paragraph the following is added: Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A

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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.		N/A
5.6.1	**Denmark** **Add** to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. *Justification:* In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.		N/A
5.6.4.2.1	**Ireland and United Kingdom** After the indent for **pluggable equipment type A**, the following is added: – the **protective current rating** is taken to be 13 A, this being the largest rating of fuse used in the **mains** plug.		P
5.6.5.1	To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm^2 to 1,5 mm^2 in cross-sectional area.		N/A
5.7.5	**Denmark** To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the **protective conductor current** exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A

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

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Clause	Requirement + Test	Result - Remark	Verdict

5.7.6.2	**Denmark** To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA .		N/A
B.3.1 and B.4	**Ireland and United Kingdom** The following is applicable: To protect against excessive currents and short-circuits in the primary circuit of **direct plug-in equipment**, tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the **direct plug-in equipment**, until the requirements of Annexes B.3.1 and B.4 are met		N/A
G.4.2	**Denmark** To the end of the subclause the following is added: Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a *Justification:* Heavy Current Regulations, Section 6c		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	**United Kingdom** To the end of the subclause the following is added: The plug part of direct plug-in equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16, and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		P
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.		P
G.7.1	**Ireland** To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard		N/A
G.7.2	**Ireland and United Kingdom** To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm^2 is allowed for equipment which is rated over 10 A and up to and including 13 A.		P

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Clause	Requirement + Test	Result - Remark	Verdict

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

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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
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IEC 62368-1 - US and Canada 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.		N/A
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.*		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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
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	Not provide in this product.	N/A
5.7.7	Equipment intended to receive telecommunication ringing signals complies with a special touch current measurement tests.		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.		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.		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.		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.		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.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

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.		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.	No such parts.	N/A
	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.	No such parts.	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.	No such parts.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Baby monitors additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.	No such parts.	N/A
Annex DVA (5.6.3)	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	No such parts.	N/A
Annex DVA (6.3)	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30.		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.	NA
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

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Clause	Requirement + Test	Result - Remark	Verdict
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
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 applicable for the equipment.	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

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Clause	Requirement + Test	Result - Remark	Verdict
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
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

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Clause	Requirement + Test	Result - Remark	Verdict
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
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

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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

	National Differences		P
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 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)*	Added.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	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'.		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.		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.*		N/A
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** 4 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

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Clause	Requirement + Test	Result - Remark	Verdict

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.*		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.		N/A
Table 29	*Replace* the table with the following:		N/A

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

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Clause	Requirement + Test	Result - Remark	Verdict
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
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**		N/A
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'		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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)		PN/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'.		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
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

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Clause	Requirement + Test	Result - Remark	Verdict
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.		N/A
	Special national conditions (if any)		N/A
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*		N/A
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		NA

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Clause	Requirement + Test	Result - Remark	Verdict
	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 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

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Clause	Requirement + Test	Result - Remark	Verdict
	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 following modifications:		N/A

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

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Clause	Requirement + Test	Result - Remark	Verdict
	boards, it shall not exceed 15 s. The needle-flame test shall not be carried out on parts of material classified as 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 glowwire 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		N/A

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

IEC 62368-1			
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.		N/A

IEC 62368-1			
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) J3000(H25)
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.		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.		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.		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.		N/A

IEC 62368-1			
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		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.		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.		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.		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 62368-1			
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]		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.		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.		N/A
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.		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.		N/A

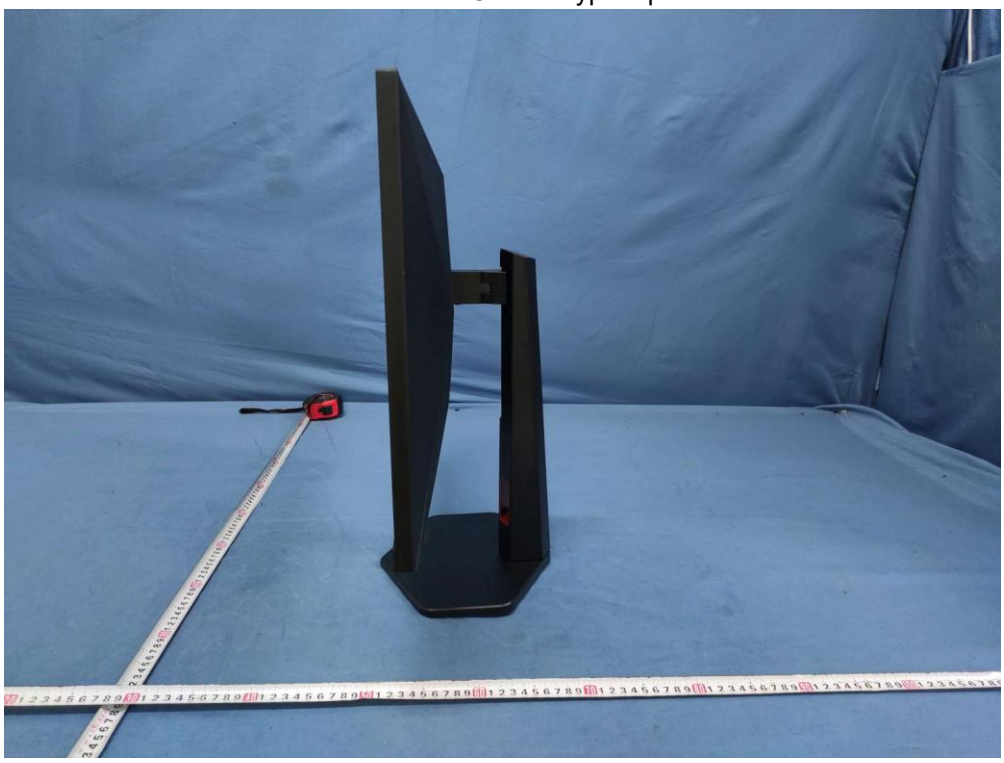
IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.3.4	Except for devices covered by Clause G.3.5, overcurrent protective devices used as a safeguard shall comply with the relevant part of JIS C 6575 (corresponding to IEC60127) or shall have equivalent characteristics. If there are no applicable IEC standards, overcurrent protective devices used as a safeguard shall comply with their applicable IEC standards.		N/A
G.4.1	This requirement is not applicable to Clauses G.4.2 and G.4.2A.		N/A
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.		N/A
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.		N/A

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

Photograph of the Equipment under test (EUT)

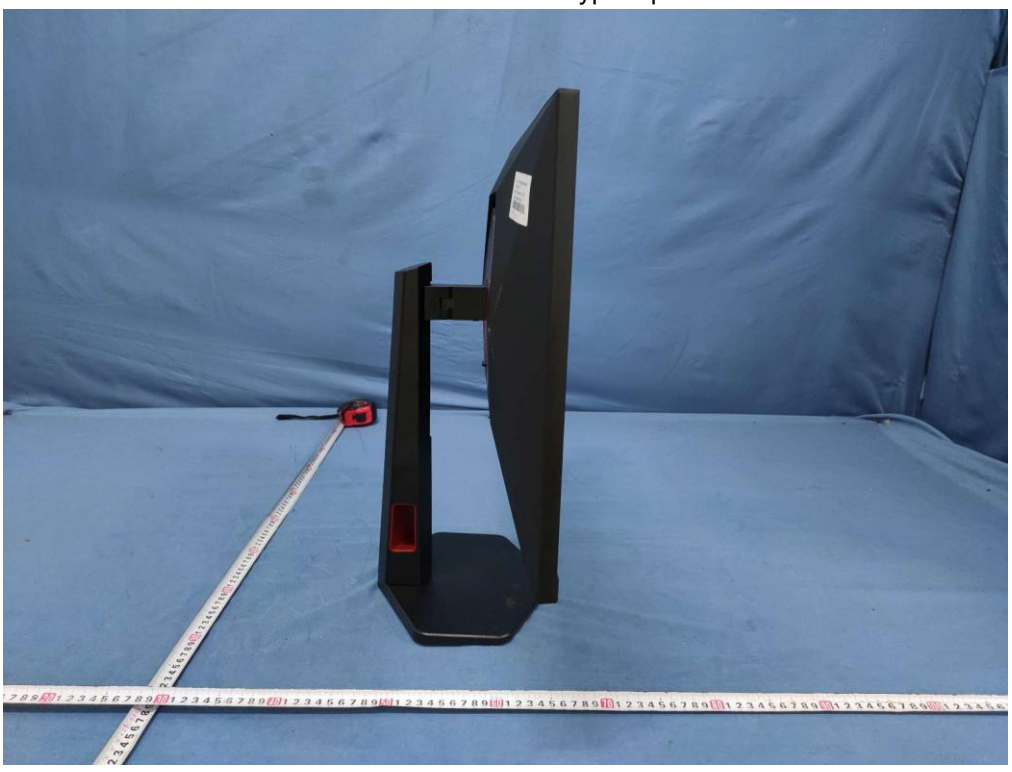
External view of EUT with type a pedestal

External view of EUT with type a pedestal

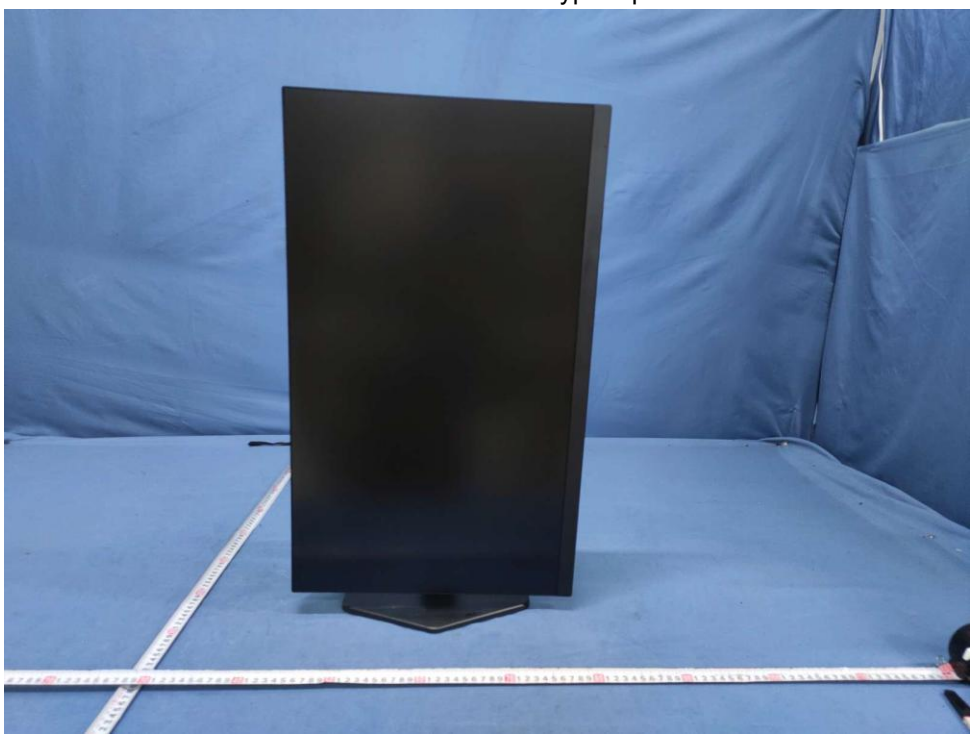


External view of EUT with type a pedestal

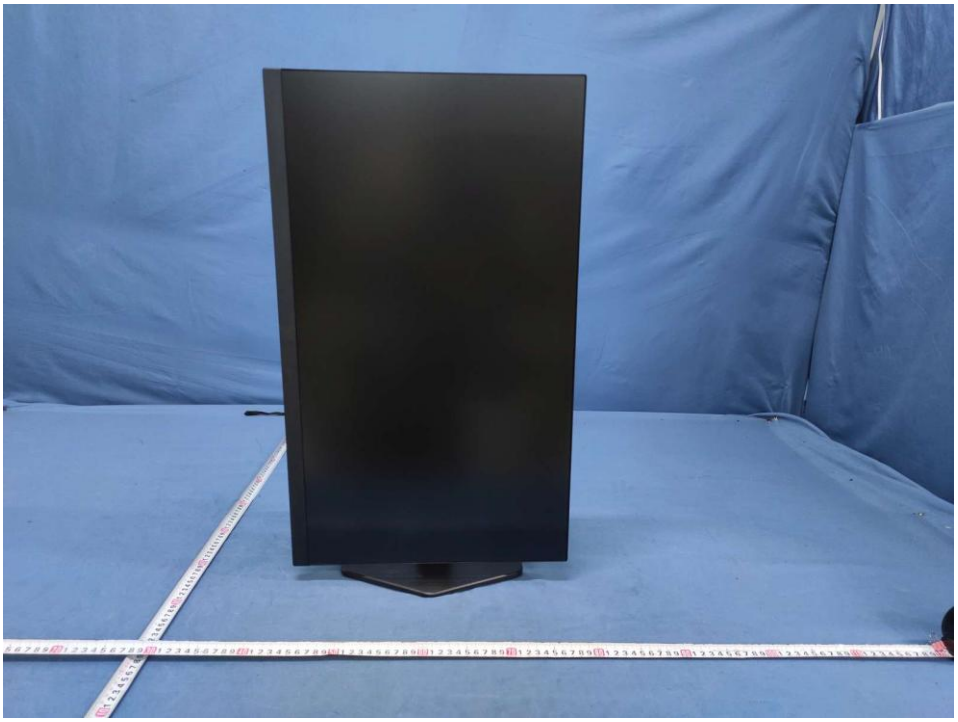
External view of EUT with type a pedestal



External view of EUT with type a pedestal



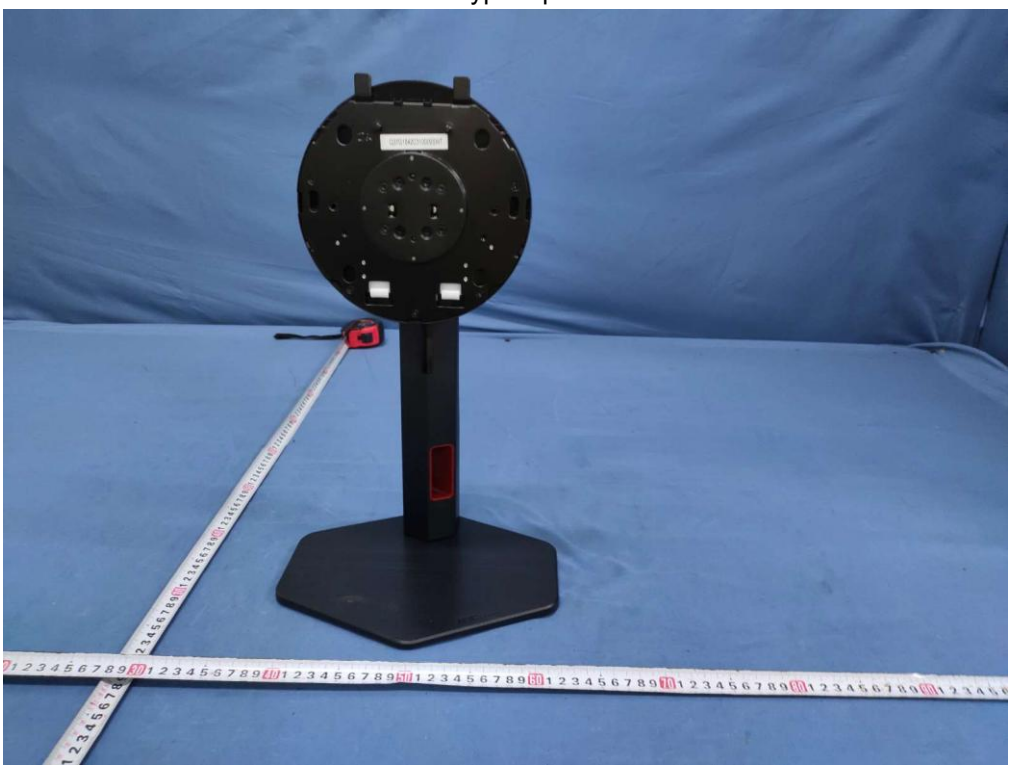
External view of EUT with type a pedestal



External view of EUT with type a pedestal

External view of EUT with type a pedestal

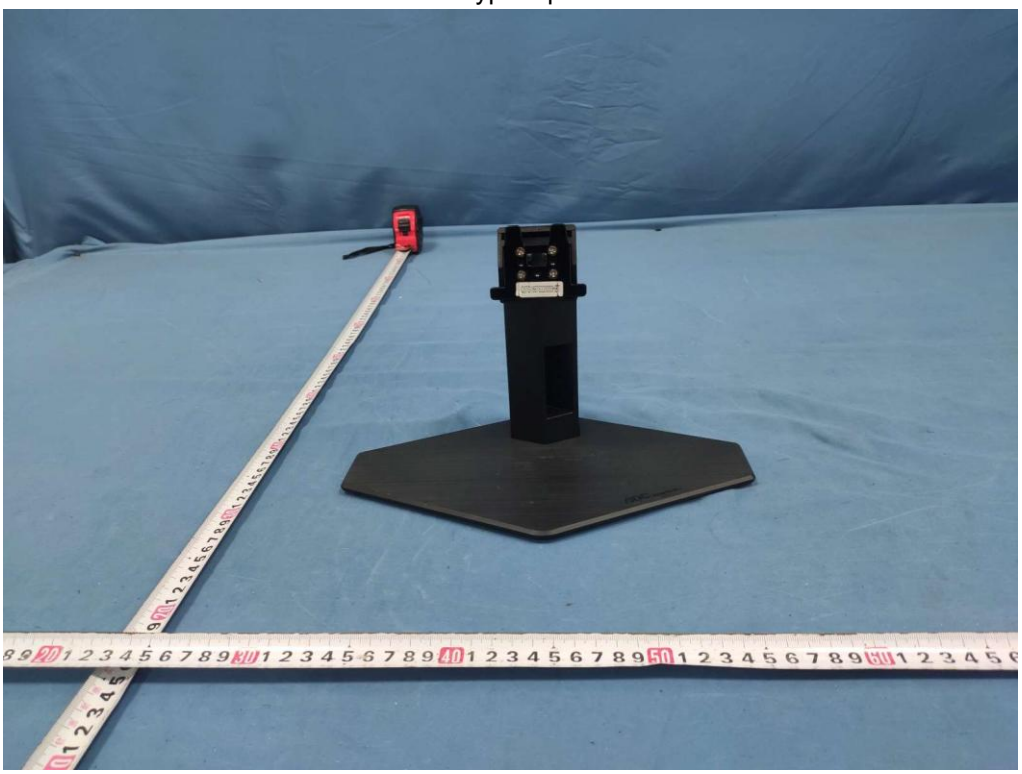
View of type a pedestal



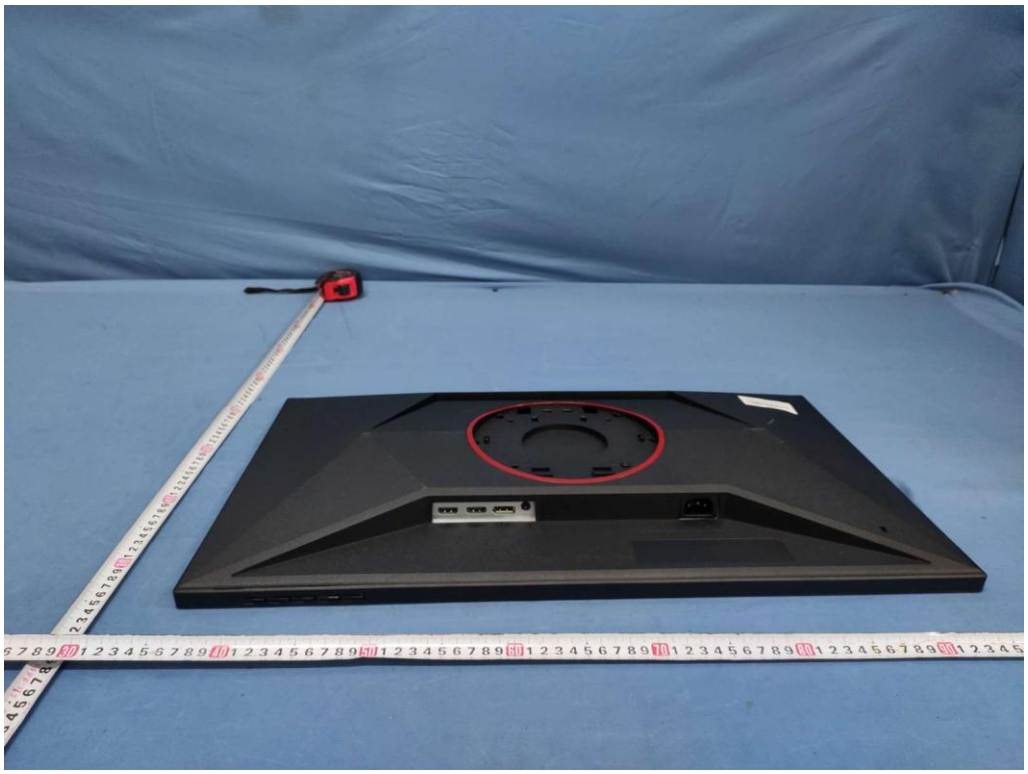
External view of EUT with type b pedestal

External view of EUT with type b pedestal

View of type b pedestal

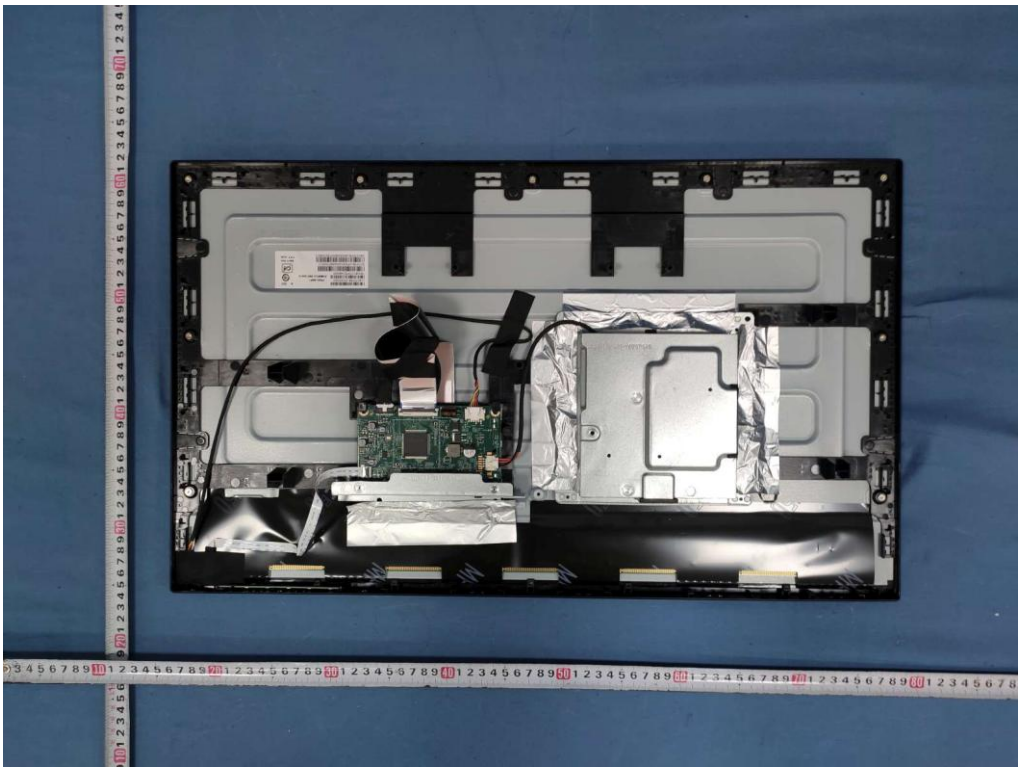


External view of EUT

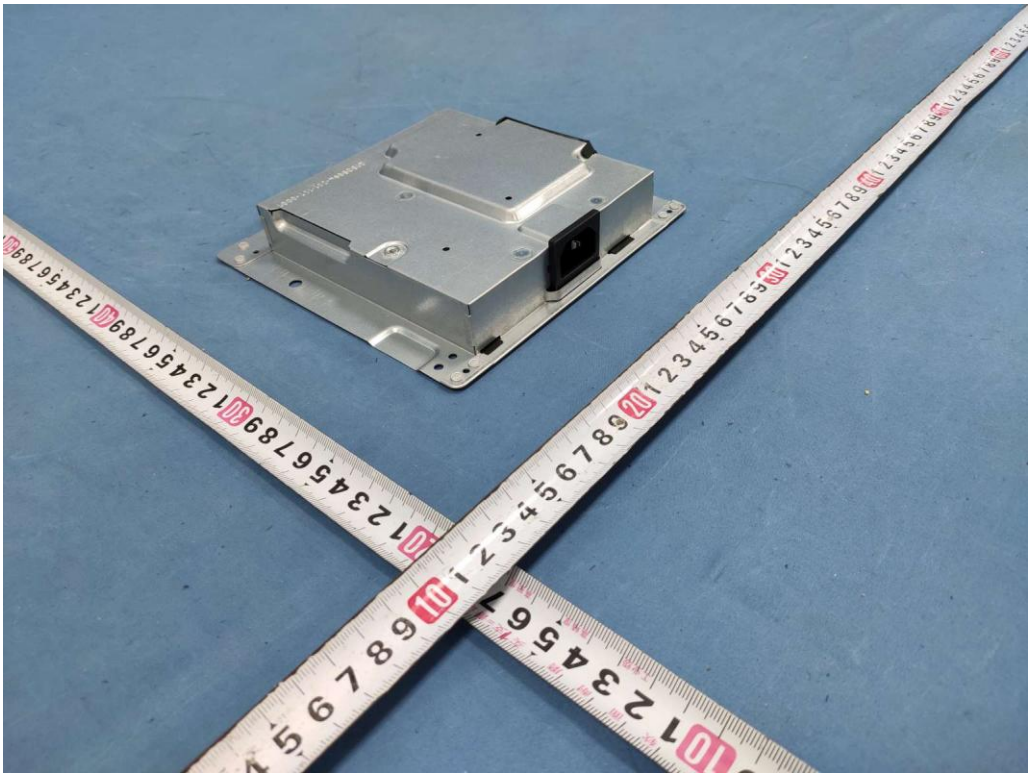


Internal view of EUT

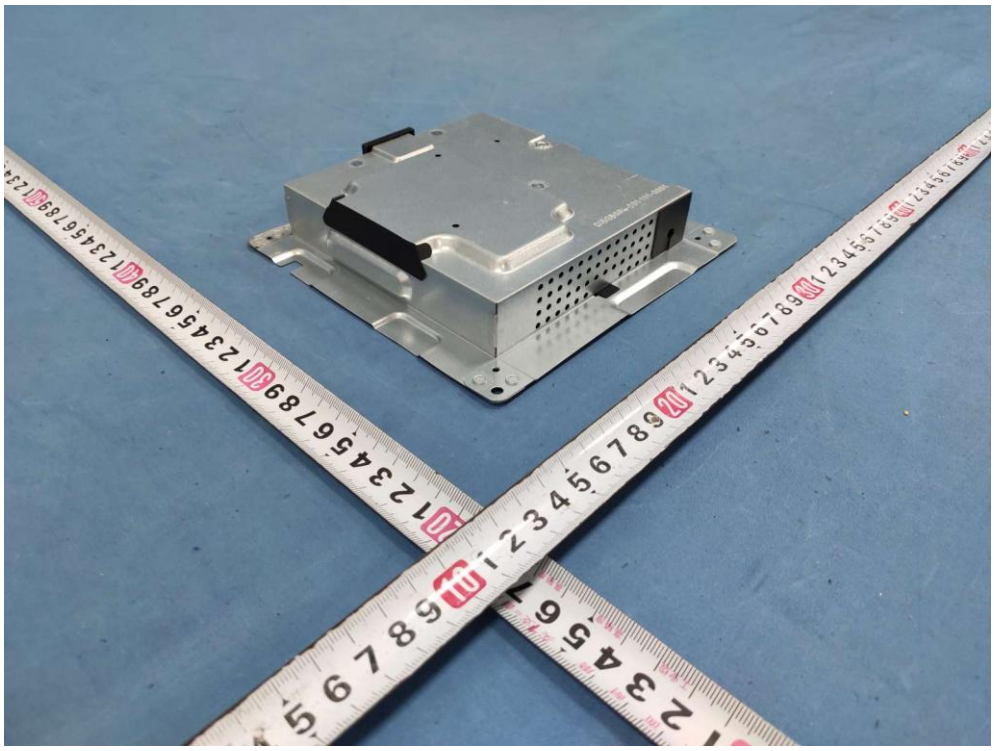
Internal view of EUT



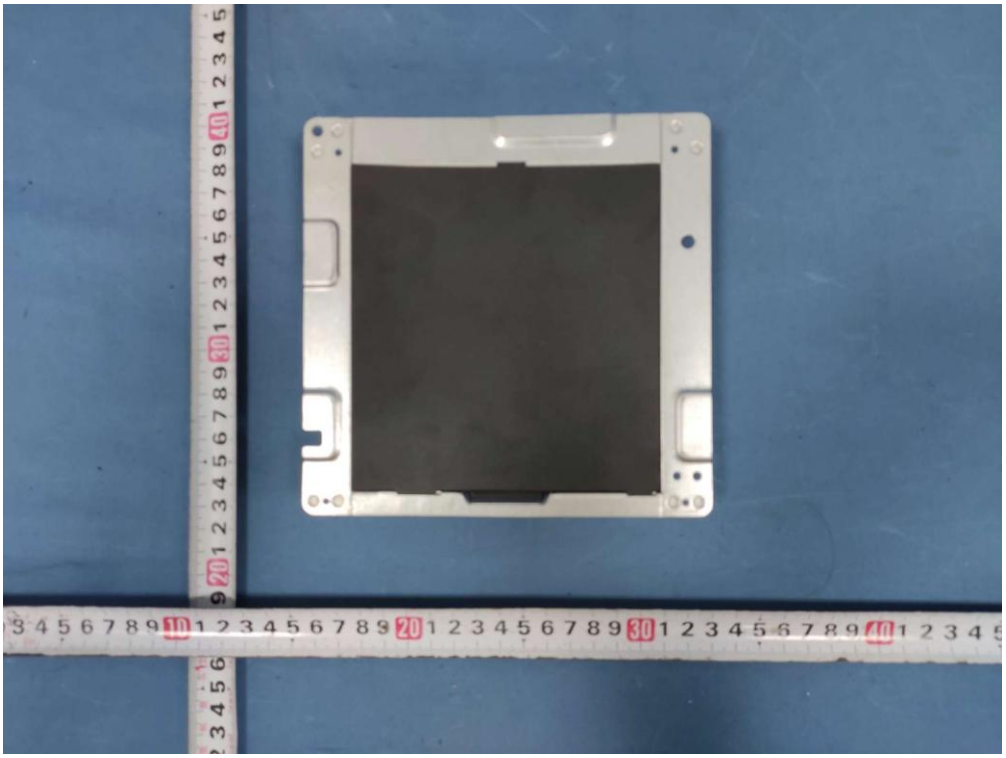
Internal view of EUT



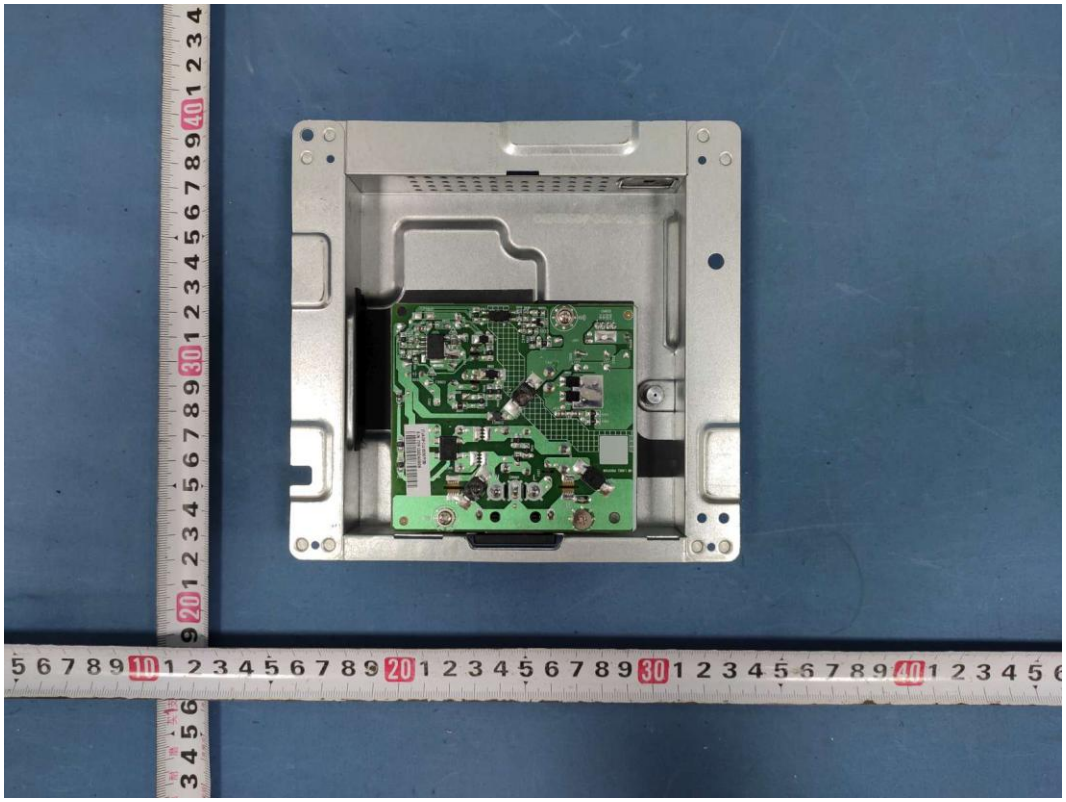
Internal view of EUT



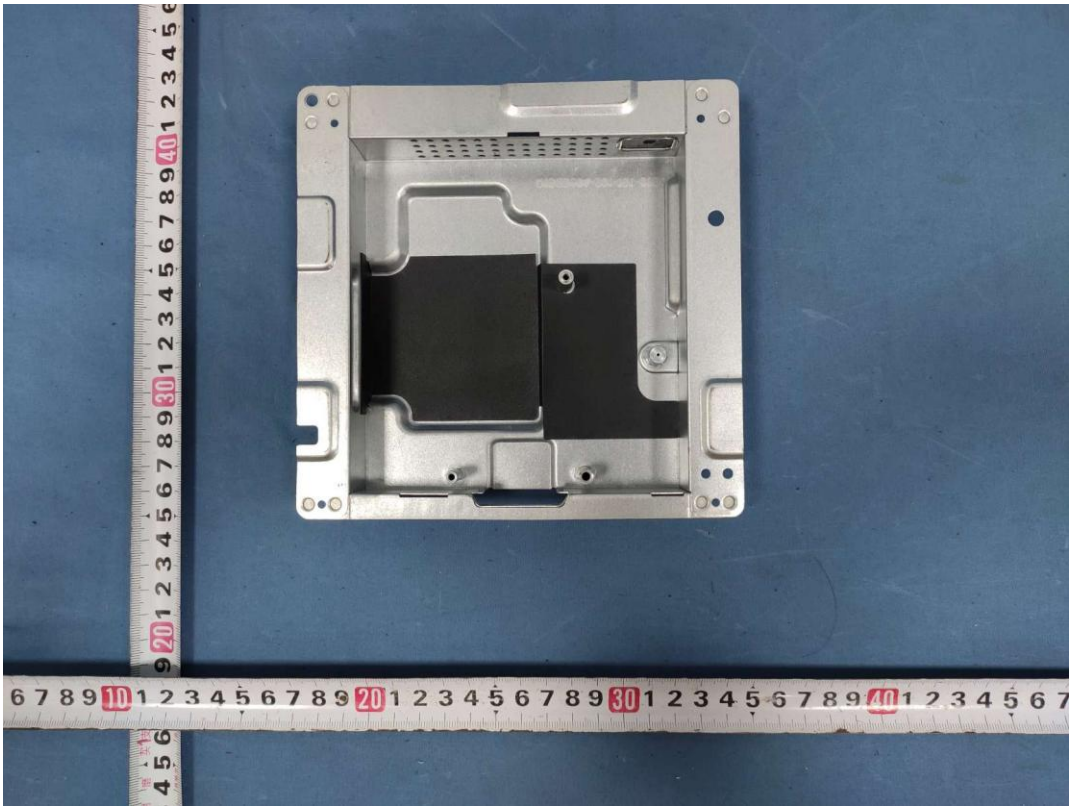
Internal view of EUT



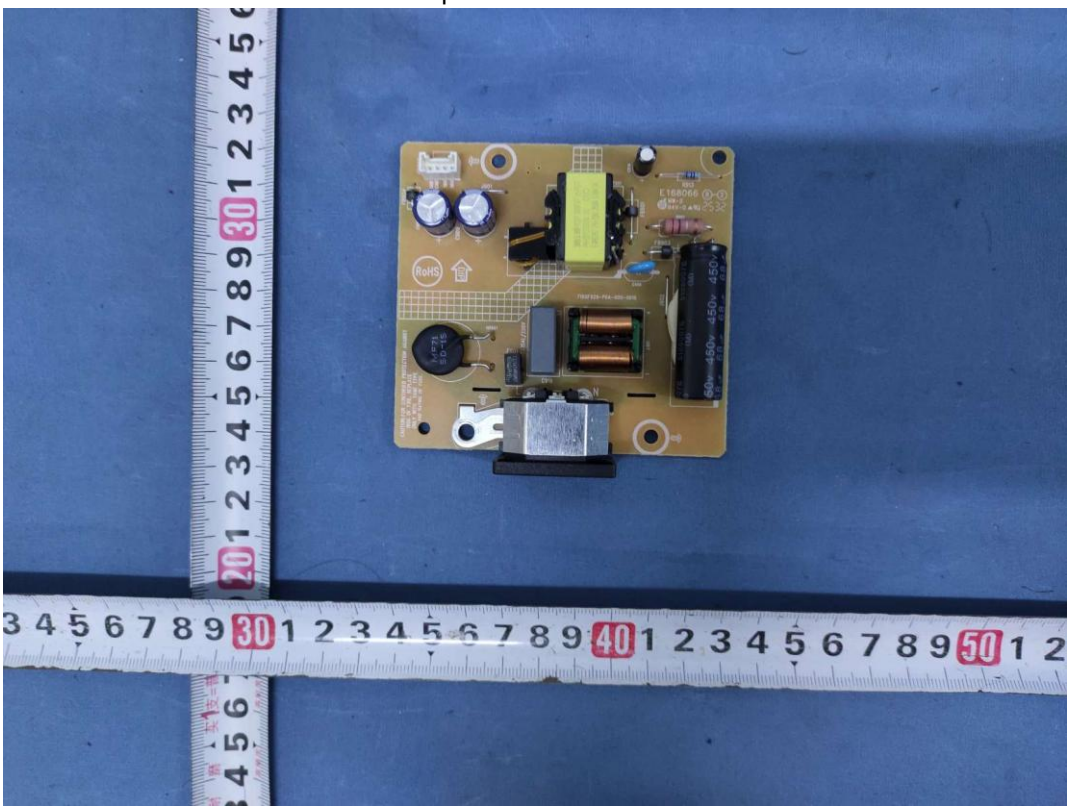
Internal view of EUT



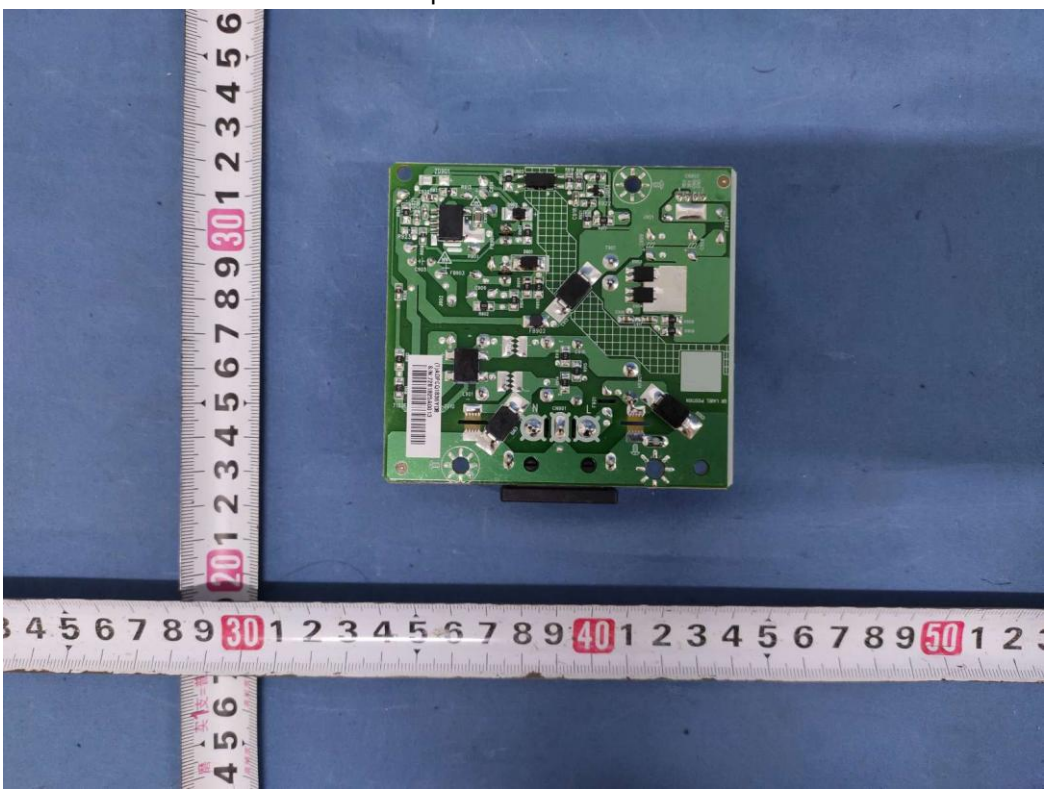
Internal view of EUT



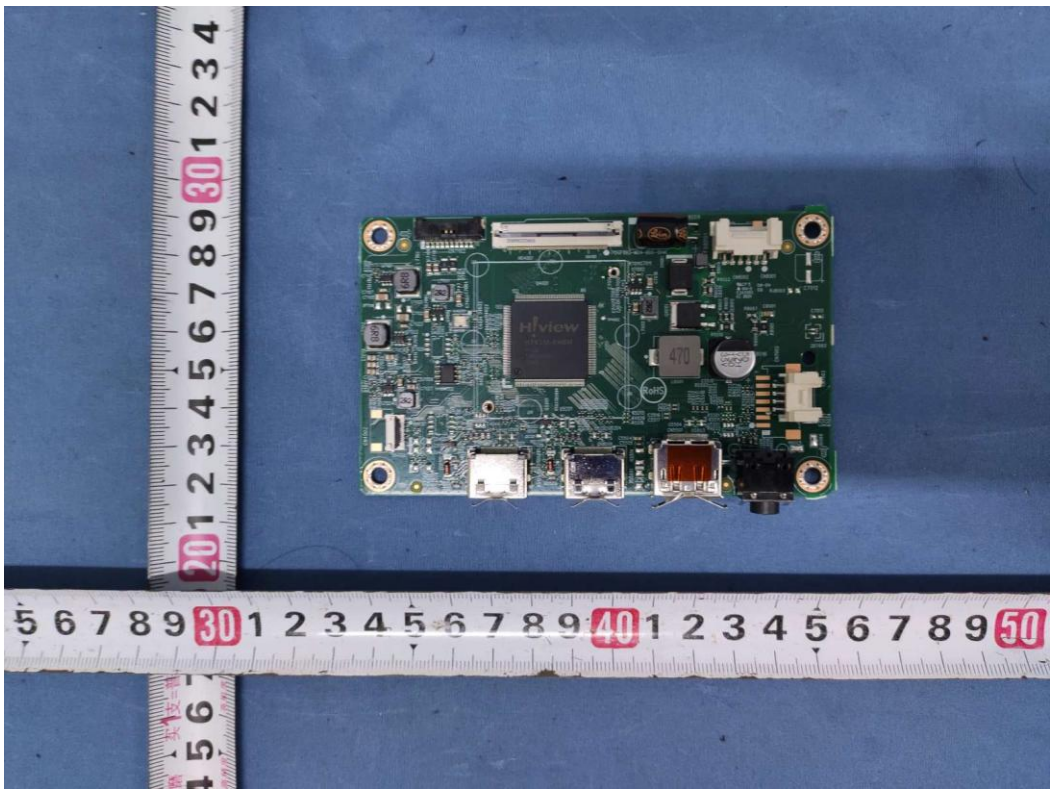
View of power board 715GF928



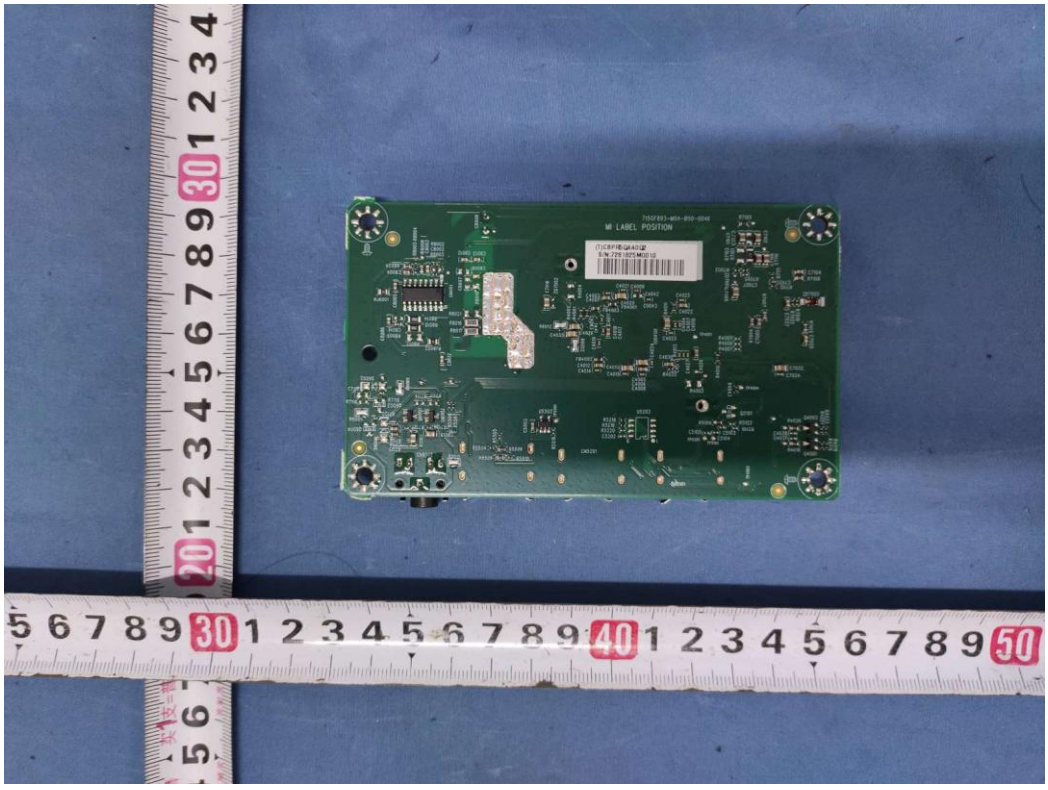
View of power board 715GF928



View of main board 715GF893



View of main board 715GF893

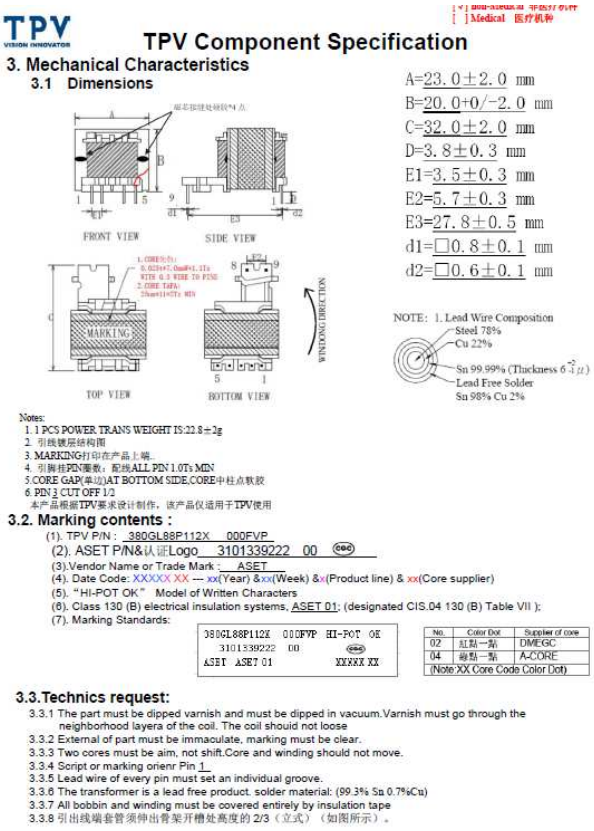
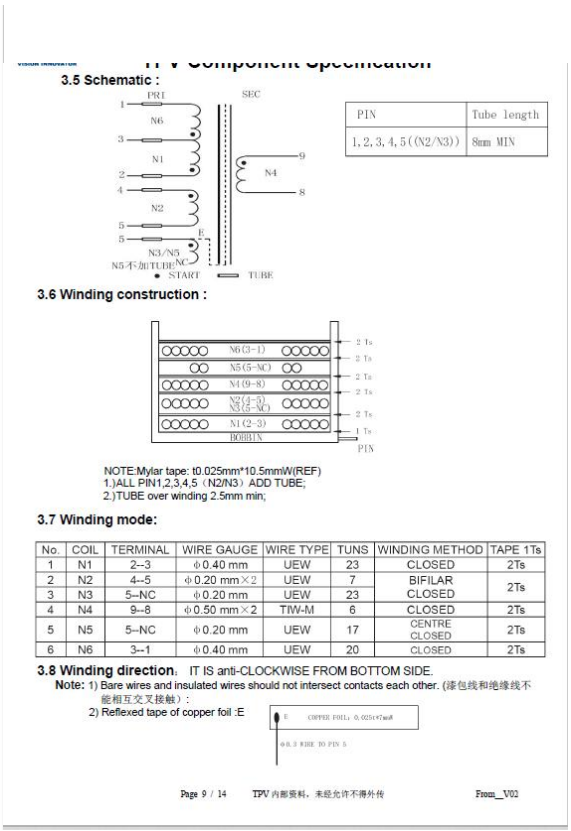


Attachment: Measurement Section

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

Location	Size (mm)	Comments
Metal cover (internal enclosure) a) horizontal orientation, b) vertical orientation, 90° clockwise c) vertical orientation, 90° anticlockwise		
a)Top b Right side c)Left	2.7mm	Numerous circular openings
a)Right side b)Bottom c)Top	--	No opening
a) Left side b) Top c)Bottom	--	No opening
Rear	--	No opening
a)Bottom b) Left side c)Right	--	No opening
External plastic enclosure		
Top	--	No opening
Right side	--	No opening
Left side	--	No opening
Rear	5.9 by 2.1mm max	Numerous rectangles openings. openings with louvres
Bottom	--	No opening
Note(s):--		

G.5.3.2	**TABLE: transformers T901**	P
Recurring peak voltage	552V	
Required clearance insulation		
for Reinforced	4.5mm	
Effective voltage rms	284V	
Required creepage insulation		
for Reinforced	5.7mm	
Measured min. clearances		
Pri. winding –sec winding (Reinforced)	12.4mm min.	
sec.winding –core (Reinforced)	11.5mm min.	
Measured min. creepages		
Pri. winding –sec winding (Reinforced)	12.4mm min.	

sec.winding –core (Reinforced)	11.5mm min.
Note: 1) All transformers have the same construction, they are identical except for manufacturer and type. 2) With the equipment to be operated at 5000m above sea level max. the minimum clearances is multiplied by the factor 1.48.	
Construction:  	
Pin numbers:	
Prim.	1-2-3;4-5;
Sec.	8-9
Bobbin:	
Material	Phenolic Molding Compound (PMC) - CHANG CHUN PLASTICS CO.LTD (UL E59481). Type T200HF, rated 150°C, V-0.
Thickness	Min. 0.45mm
Electric strength test	
With AC 4000V after humidity treatment	
Result	Pass