Test Report issued under the responsibility of:

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

Report Number ..... **:**	200300053TWN-001
Date of issue..... :	April 9, 2020
Total number of pages..... :	114pages
Applicant's name.....:	GlobTek, Inc.
Address ..... :	186 Veterans Dr Nortvale, NJ07647, USA
Test specification:	
Standard ..... :	IEC 62368-1:2014 (Second Edition)
Test procedure ..... :	CB Scheme
Non-standard test method..... :	N/A
Test Report Form No..... :	IEC 62368_1B
Test Report Form(s) Originator ..... :	UL (US)
Master TRF..... :	2014-03

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.

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Test Item description ..... :	ICT/ITE power supply
Trade Mark ..... :	GlobTek, Inc.
Manufacturer ..... :	Same as applicant
Model/Type reference ..... :	1) GT*46401-**** (Replaceable plug) 2) GT*46401-***-W2Z* (Fixed plug) (See general product information on page 6 to 7)
Ratings ..... :	Input: 100-240Vac, 50-60Hz, 1.0A Output: 12 Vdc, 3 A max or 12.1-15 Vdc or 3 A max or 15.1-19 Vdc, 2.66 A max or 19.1-24 Vdc, 2.1 A max., Class II

Testing procedure and testing location:			
☒	CB Testing Laboratory:	Intertek Testing Services Taiwan Ltd.	
Testing location/ address ..... :		5F, No. 423, Ruiguang Rd., Neihu District, Taipei 114, Taiwan	
☐	Associated CB Testing Laboratory:		
Testing location/ address ..... :			
Tested by (name + signature) ..... :		Ken Ko Project Handler	Ken Ko
Approved by (name + signature) ..... :		Jerry Tsai, Reviewer	Jerry Tsai
☐	Testing procedure: TMP/CTF Stage 1		
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Approved by (name + signature) ..... :			
☐	Testing procedure: WMT/CTF Stage 2		
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Witnessed by (name + signature) ..... :			
Approved by (name + signature) ..... :			
☐	Testing procedure: SMT/CTF Stage 3 or 4		
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Approved by (name + signature) ..... :			
Supervised by (name + signature) ..... :			

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

1) Transformer specification (5 pages)
2) National Differences (32 pages)
3) Enclosure Drawing (2 pages)
4) Photo (9 pages)

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
- Steady force test (4.4.4.2, T.4) - Drop tests (4.4.4.3, T.7) - Stress relief test (4.4.4.7, T.8) - Torque test (direct plug-in equipment) (4.7) - Steady-State Voltage and Current (5.2.2.2) - Accessible ES1 circuits separated from other ES circuits using components (5.2.1.1) - Temperature measurements (5.4.1.4, 6.3.2, 9) - Determination of working voltage (5.4.1.8) - Ball pressure test (5.4.1.10.3) - Clearance and Creepage Distance Measurement (5.4.2, 5.4.3, T.2) - Humidity test (5.4.8) - Electric strength tests (5.4.9.1) - Stored discharge on capacitors (5.5.2.2) - Input test (B.2.5) - Abnormal Operating and Fault Conditions (B.3, B.4) - Test for the permanence of markings (F.3.10) - Transformer overload test (G.5.3.3) - Limited power sources (Q.1)	Intertek Testing Services Taiwan Ltd.

Summary of compliance with National Differences:

List of countries addressed

For IEC 62368-1:2014 (2nd edition) and EN 62368-1:2014+A11:2017:

Group differences, special national deviations of all CENELEC countries, AU and US.

Explanation of CENELEC countries: Austria (AT), Belgium (BE), Bulgaria (BG), Croatia (HR), Cyprus (CY), Czech Republic (CZ), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Germany (DE), Greece (GR), Hungary (HU), Iceland (IS), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Netherlands (NL), Norway (NO), Poland (PL), Portugal (PT), Romania (RO), Spain (ES), Slovakia (SK), Slovenia (SI), Sweden (SE), Switzerland (CH) and United Kingdom (GB)

Explanation of used codes for National Differences: Australia (AU), Japan (JP) and United States of America (US).

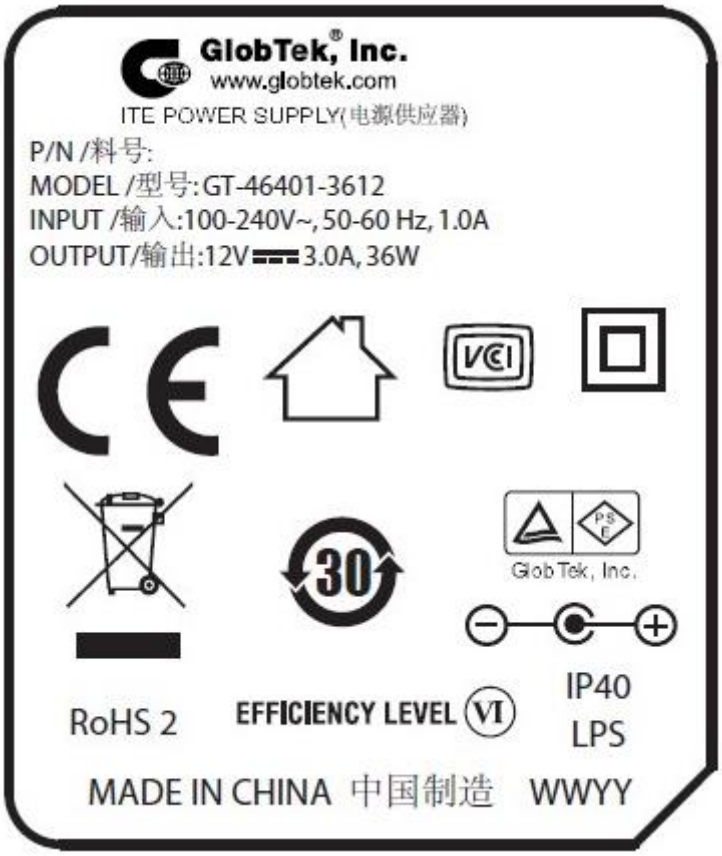
All country differences listed in the CB Bulletin are covered by the Common Modifications, Special National Conditions, National Deviations, and National Requirements noted above except for the following countries which are documented in Country Differences. Attachments attached to this report: refer to appendix 2 for details.

Compliance with the National requirements of “(countries)” as given in CB Bulletin of IECEE website dated April 2019 was confirmed.

☒ **The product fulfils the requirements of** IEC 62368-1:2014 (2nd edition) and EN 62368-1:2014+A11:2017.

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.



Model name and rating see as below:

Model	Output Voltage	Max. Output current	Max. power
GT*46401-*12** GT*46401-*12*-W2Z*	12V	3A	36W
GT*46401-*15** GT*46401-*15*-W2Z*	12.1~15V	3A	40W
GT*46401-*19** GT*46401-*19*-W2Z*	15.1~19V	2.66A	40W
GT*46401-*24** GT*46401-*24*-W2Z*	19.1~24V	2.1A	40W

Note:

1. The above markings are the minimum requirements required by the safety. For the finalproduction samples, the additional markings which do not give rise to misunderstanding may be added.
2. When the equipment is vended to EUROPE, manufacturers and importers shall indicate on the electrical equipment their name, registered trade name or registered trade mark and the postal address at which they can be contacted or, where that is not possible, on its packaging or in a document accompanying the electrical equipment.

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 ..... :	16 A (20A for US and Canada); Installation location: ☒ building; ☒ equipment
Equipment mobility ..... :	☐ movable ☐ hand-held ☒ transportable ☐ stationary ☐ for building-in ☒ direct plug-in ☐ rack-mounting ☐ wall-mounted
Over voltage category (OVC) ..... :	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other: _____
Class of equipment ..... :	☐ Class I ☒ Class II ☐ Class III
Access location ..... :	☐ restricted access location ☒ N/A
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maxium operating ambient :	40 °C
IP protection class ..... :	☒ IPX0 ☐ IP___
Power Systems ..... :	☒ TN ☒ TT ☒ IT - _230_ V_{L-L}
Altitude during operation (m) ..... :	☐ 2000 m or less ☒ _4000_ m
Altitude of test laboratory (m) ..... :	☒ 2000 m or less ☐ _____ m
Mass of equipment (kg) ..... :	☒ 0.24 kg max

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..... :	--
Date (s) of performance of tests..... :	--

GENERAL REMARKS:

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

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

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

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**
Name and address of factory (ies) ..... :	1. GlobTek, Inc. 186 Veterans Dr. Northvale, NJ 07647 USA 2. GlobTek (Suzhou) Co., Ltd. Building 4, No. 76, Jin Ling East Rd., Suzhou Industrial Park, Suzhou,JiangSu 215021, China

GENERAL PRODUCT INFORMATION:

Product Description –

The product is a Direct plug-in equipment for Class II intended for use with Audio/video, information and communication technology equipment, there electronic components mounted on PWB, and housed in a thermoplastic enclosure by ultrasonic welding.
The product was investigated to the following additional standards: UL62368-1 which were based on UL 1310 Class 2 Power Units (Mechanical Requirements on blades only);
- Direct plug-in blade securement test
- Direct plug-in security of input contacts
- Direct plug-in resistance to crushing
- Direct plug-in rod pressure test
- Direct plug-in input blade endurance
- Weight and moment determination: (direct plug-in unit)

For models GT*46401-***- * and GT*46401-***-W2Z* provided with six different type plug, there are for appliance to difference country used as below:
- US plug: Test conjunction in this report.
- UK Plug: shall be evaluated when submitted to national approval.
- AU Plug: shall be evaluated when submitted to national approval.
- KR Plug: shall be evaluated when submitted to national approval.
- JP Plug: shall be evaluated when submitted to national approval.
- EU Plug: shall be evaluated when submitted to national approval.

This report is copy report of CBTR Ref. No. _PSE107-0201_, CB Test Certificate Ref. No._DK-74809-UL_. based on previously conducted testing and the review of product construction, no test necessary.

This report has been amended (Technical Amendment), due to the following:

Changed model name from “6A-xxxWPxx” to “GT*46401-***”.

1. Added new model name GT*46401-***-W2Z*
2. Added product Differences
3. Added two alternative Bleeder resistor source :RM series, HHV
4. Added two alternative Bobbin source :4130, CP-J-8800
5. Added three alternative Tape source : PZ CT WF, JY25-A, LY-XX, 370S
6. Added six alternative Triple Insulation wire source :TIW-M, TEX-E, TIW-2, E&B-XXXB E&B-XXXB-1, CB-TIW, DTIW-B
7. Added two Transformer manufacturer
8. Revise Choke and Transformer manufacturer name
9. Add three factory
10. Update table G.5.3.2 Transformer specification

Model Differences –

All models are similar except for input means (Replaceable snap-fit plug or Fixed plug), output rating, secondary winding of transformer (T1), and component (C1, R1) rating, see table 4.1.2 and below.

For

Models	Input Rated	Output Rated	Transformer (T1)	C1	Input means
GT*46401-*12** GT*46401-*12*-W2Z*	100-240~, 50-60 Hz, 1.0 A	12 V/ 3A max	XF00936 (For 12-17.9 V) XF00945 (For 18-22 V) XF00946 (For 22.1-24 V)	68 uF (for 36 W) or 82 uF (for 40 W)	Replaceable snap-fit plug/ Fixed plug
GT*46401-*15** GT*46401-*15*-W2Z*		12.1 V~15 V/ 3 A max			Replaceable snap-fit plug/ Fixed plug
GT*46401-*19** GT*46401-*19*-W2Z*		15.1 V~19 V/ 2.66 A max			Replaceable snap-fit plug/ Fixed plug
GT*46401-*24** GT*46401-*24*-W2Z*		19.1 V~24 V/ 2.1 A max			Replaceable snap-fit plug/ Fixed plug

Note:

GT*46401-**** (Replaceable plug); GT*46401-***-W2Z* (Fixed plug)

(The 1st "*" part can be 'M' or '-' or 'H' for market identification and not related to safety.)

(The 2rd "*" denotes the rated output wattage designation, with a maximum value of "40".)

(The 3th "*" denotes the standard rated output voltage designation, which can be "12", "15", "19", "24".)

(The 4th "*"is optional deviation, subtracted from standard output voltage, which can be "-0.1" to "-4.9" with interval of 0.1, or blank to indicate no voltage different.)

(Z designates type of plug and can be E for European plug, U for British plug, blank for North American / Japan plug/Taiwan plug, C for Chinese plug, I for India plug, A for Australia plug, K for Korea plug, AR for Argentina plug, BR for Brazilian plug, SA or AF for South African plug.)

(-W2Z can be optional, when it is blank, denote to be with replaceable plug)

(The last "*" denote any six character means "0-9","A-Z","()","[ ]","–" or blank for marketing purposes.)

1. The above markings are the minimum requirements required by the safety. For the finalproduction samples, the additional markings which do not give rise to misunderstanding may be added.

2. When the equipment is vended to EUROPE, manufacturers and importers shall indicate on the electrical equipment their name, registered trade name or registered trade mark and the postal address at which they can be contacted or, where that is not possible, on its packaging or in a document accompanying the electrical equipment.

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

- normal conditions	**N.C .**	- single fault conditions	**S.F.C**
- functional insulation	**OP**	- basic insulation	**BI**
- double insulation	**DI**	- supplementary insulation	**SI**
- between parts of oppositepolarity	**BOP**	- single fault conditions	**RI**

Indicate used abbreviations (if any)

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)**
X capacitor connected between L and N	ES3
All circuits except for output circuits (connector)	ES3
Output circuit (connector)	ES1
Electrically-caused fire (Clause 6): (Note: List sub-assembly or circuit designation and corresponding energy source classification) Example: Battery pack (maximum 85 watts): PS2	
Source of power or PIS	**Corresponding classification (PS)**
All circuits except for output circuits (connector)	PS3, Arching PIS, Resistive PIS
Output circuit (connector)	PS2
Injury caused by hazardous substances (Clause 7) (Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.) Example: Liquid in filled component Glycol	
Source of hazardous substances	**Corresponding chemical**
N/A	N/A
Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.) Example: Wall mount unit MS2	
Source of kinetic/mechanical energy	**Corresponding classification (MS)**
Sharp edges and corners	MS1
Equipment mass (<7kg)	MS1
Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.) Example: Hand-held scanner – thermoplastic enclosure TS1	
Source of thermal energy	**Corresponding classification (TS)**
Plastic enclosure	TS1
Output connector	TS1
Inside component surface	TS3
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)**
N/A	N/A

ENERGY SOURCE DIAGRAM
Indicate which energy sources are included in the energy source diagram. Insert diagram below
☐ ES ☐ PS ☐ MS ☐ TS ☐ RS

OVERVIEW OF EMPLOYEDSAFEGUARDS				
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: The circuit connected to AC mains	N/A	N/A	Plastic enclosure, See 5.4.2, 5.4.3, 5.5.3, 5.5.4
Ordinary	ES3: Capacitor connected between L and N	N/A	N/A	See 5.5.2.2
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
PCB	PS3	See 6.3	V-1 or better	N/A
Plastic enclosure	PS3	See 6.3	V-0	N/A
Output wiring	PS2	N/A	N/A	See 6.5
The other components/materials	PS3	See 6.3	See 6.4.5, 6.4.6	N/A
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
N/A	N/A	N/A	N/A	N/A
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	TS3: inside component surface	N/A	N/A	Enclosure
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
Supplementary Information: (1) See attached energy source diagram for additional details. (2) “N” – Normal Condition; “A” – Abnormal Condition; “S” Single Fault				

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Clause	Requirement + Test	Result - Remark	Verdict

4	**GENERAL REQUIREMENTS**		P
4.1.1	Acceptance of materials, components and subassemblies		P
4.1.2	Use of components		P
4.1.3	Equipment design and construction		P
4.1.15	Markings and instructions.....:	(See Annex F)	P
4.4.4	Safeguard robustness		P
4.4.4.2	Steady force tests.....:	(See Annex T.4)	P
4.4.4.3	Drop tests .....:	(See Annex T.7)	P
4.4.4.4	Impact tests .....:		N/A
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....:		N/A
4.4.4.6	Glass Impact tests.....:	No glass used	N/A
4.4.4.7	Thermoplastic material tests.....:	(See Annex T.8)	P
4.4.4.8	Air comprising a safeguard.....:	(See Annex T)	P
4.4.4.9	Accessibility and safeguard effectiveness		P
4.5	Explosion		N/A
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard		P
4.6.2	10 N force test applied to .....:	(See appended table 5.4.2.2)	P
4.7	Equipment for direct insertion into mains socket - outlets		P
4.7.2	Mains plug part complies with the relevant standard.....:	US plug: The dimension complied with the requirement of ANSI/NEMA WD6 and testing complied with UL1310 as below: a) Weight and Moment test: W=232.36 g (≦794 g) S=18.73 mm X=32.2 mm Y=35.6 mm Z=15.53 mm WY/Z=532.65 g (≦1361 g) WY/s=441.65 g (≦1361 g) WX=7482.0 gm (≦57104 g) b) Blade securement test Result: Blade 1: 0.01mm Blade 2: 0.01mm	P

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Clause	Requirement + Test	Result - Remark	Verdict
		Blade 1 and 2 : 0.01mm The blades did not loosen by more than 2.4 mm or pull out All testing repeat two samples c) Security of input contacts Result: Blade 1: 0.01mm Blade 2: 0.01mm The blades did not loosen to a degree that would introduce a risk of a fire or an electric shock All testing repeat two samples d) Resistance to crushing Result: There was no splitting, cracking or shattering of the enclosure that would expose internal wiring or hazardous live parts e) Rod pressure: Result: The equipment was connected to 264Vac, 60Hz, during this test, peak voltage or touch current were monitored between earth ground and all parts of the enclosure (the outer foil wrap). Max. voltage=10.1Vpk, No indication of dielectric breakdown f) The perimeter of the face section from which the blades project do not less than 5.1 mm from any point on either blade g) The replaceable plug modules were repeat for 6000 cycles with the unit de-energized. before cycling / after cycling Input plug holder (near blade=45.4°C/ 46.3°C Ambient air=30.1°C/ 29.4°C	
4.7.3	Torque (Nm) .....:	The worst case result as below: 0.155 Nm (EU plug)	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.8	Products containing coin/button cell batteries		N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery.....:		—
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)	N/A
5	**ELECTRICALLY-CAUSED INJURY**		P
5.2.1	Electrical energy source classifications.....:	See Energy source identification and classification table.	P
5.2.2	ES1, ES2 and ES3 limits		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 .....:	(See appended table 5.2)	P
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.....:	Figure V.1, V.2 can¡¦t contact any bare internal conductive part	P
	b) Electric strength test potential (V) .....:		N/A
	c) Air gap (mm) .....:		N/A
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		P
5.4.1.3	Humidity conditioning .....:	(See 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 .....:	2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A
5.4.1.5.3	Thermal cycling		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage		P
5.4.1.9	Insulating surfaces		P
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		P
5.4.1.10.2	Vicat softening temperature ..... :		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 peak	—
	b) d.c. mains transient voltage ..... :	N/A	—
	c) external circuit transient voltage ..... :	N/A	—
	d) transient voltage determined by measurement ..... :	N/A	—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test		N/A
5.4.2.5	Multiplication factors for clearances and test voltages ..... :	1.29	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 ..... :	IIIa/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	Certified optocouplers used.	P
5.4.4.4	Solid insulation in semiconductor devices		P
5.4.4.5	Cemented joints	Certified optocouplers used.	P
5.4.4.6	Thin sheet material	Insulation tape wrapped on outer of T2 used as reinforced insulation	P
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material	(See appended Table 5.4.9)	P
	Number of layers (pcs) ..... :	Min. 2 layers	P
5.4.4.6.3	Non-separable thin sheet material		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material ..... :		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		P

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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	Certified optocouplers used.	N/A
5.4.8	Humidity conditioning		P
	Relative humidity (%).....:	93% RH	—
	Temperature (°C) .....:	40 °C	—
	Duration (h).....:	120 h	—
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		
5.5.1	General		P
5.5.2	Capacitors and RC units		P
5.5.2.1	General requirement		P

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Clause	Requirement + Test	Result - Remark	Verdict
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	(See sub-clause 5.4)	P
5.5.5	Relays		N/A
5.5.6	Resistors	Approved bleeding resistors used	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		N/A
5.6.2	Requirement for protective conductors		N/A
5.6.2.1	General requirements		N/A
5.6.2.2	Colour of insulation		N/A
5.6.3	Requirement for protective earthing conductors		N/A
	Protective earthing conductor size (mm^2) .....:		—
5.6.4	Requirement for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm^2). .....:		—
	Protective current rating (A)..... :		—
5.6.4.3	Current limiting and overcurrent protective devices		N/A
5.6.5	Terminals for protective conductors		N/A
5.6.5.1	Requirement		N/A
	Conductor size (mm^2), nominal thread diameter (mm). .....:		N/A
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective system		N/A
5.6.6.1	Requirements		N/A
5.6.6.2	Test Method Resistance (Ω).....:		N/A
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks		P
5.7.2.1	Measurement of touch current .....:	Instrument indicating peak voltage used.	P
5.7.2.2	Measurement of prospective touch voltage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.7.3	Equipment set-up, supply connections and earth connections		P
	System of interconnected equipment (separate connections/single connection) .....:	Single connection equipment	—
	Multiple connections to mains (one connection at a time/simultaneous connections) .....:	N/A	—
5.7.4	Earthed conductive accessible parts.....:		N/A
5.7.5	Protective conductor current		N/A
	Supply Voltage (V).....:		—
	Measured current (mA).....:		—
	Instructional Safeguard.....:		N/A
5.7.6	Prospective touch voltage and touch current due to external circuits		N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits		N/A
	a) Equipment with earthed external circuits Measured current (mA).....:		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....:		N/A

6	**ELECTRICALLY- CAUSED FIRE**		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications		P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault ... :	(See appended table 6.2.2)	N/A
6.2.2.3	Power measurement for worst-case power source fault..... :	(See appended table 6.2.2)	N/A
6.2.2.4	PS1 ..... :	(See appended table 6.2.2)	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	Arcing and Resistive PIS are considered exist in all circuits	P
6.2.3.1	Arcing PIS ..... :	(See appended table 6.2.3.1)	N/A
6.2.3.2	Resistive PIS ..... :	(See appended table 6.2.3.2)	N/A
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

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Clause	Requirement + Test	Result - Remark	Verdict
6.3.1 (b)	Combustible materials outside fire enclosure		P
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Method of control fire spread used	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	General		N/A
6.4.3.2	Supplementary Safeguards		N/A
	Special conditions if conductors on printed boards are opened or peeled		N/A
6.4.3.3	Single Fault Conditions..... :		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 .....…:	Components other than PCB and wires are: - mounted on PCB rated V-1 or better, or - made of V-2/VTM-2 or better. (See appended tables 4.1.2 and Annex G)	P
6.4.6	Control of fire spread in PS3 circuit		P
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.1	General.....:		N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers		P
6.4.8.1	Fire enclosure and fire barrier material properties		P
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure		P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.3.1	Fire enclosure and fire barrier openings		P
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions(mm) .....:	No openings	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).....:	No openings	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Flammability tests for the bottom of a fire enclosure .....:		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c) .....:		N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating .....:	Enclosure is V-0 material.	P
6.5	Internal and external wiring		P
6.5.1	Requirements	VW-1 or FT-1 wires used, which considered to equivalent to IEC/TS 60695-11-21.	P
6.5.2	Cross-sectional area (mm^2) .....:	(see appended table 4.1.2)	—
6.5.3	Requirements for interconnection to building wiring .....:		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	Output terminal complies with Annex Q.1	P
7	**INJURY CAUSED BY HAZARDOUS SUBSTANCES**		N/A
7.2	Reduction of exposure to hazardous substances		N/A
7.3	Ozone exposure		N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions ..... :		—
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010) .....:		—
7.6	Batteries.....:		N/A
8	**MECHANICALLY-CAUSED INJURY**		P
8.1	General		P
8.2	Mechanical energy source classifications		P
8.3	Safeguards against mechanical energy sources		N/A
8.4	Safeguards against parts with sharp edges and corners		N/A
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts	No moving parts	N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard..... :		—
8.5.4	Special categories of equipment comprising moving parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks .....:		N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard.....:		—
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N) .....:		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test.....:		N/A
8.6	Stability		N/A
8.6.1	Product classification	MS1	P
	Instructional Safeguard.....:	N/A	—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force .....:		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt.....:		—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force).....:		N/A
	Position of feet or movable parts.....:		—
8.7	Equipment mounted to wall or ceiling		N/A
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) .....:		N/A
8.7.2	Direction and applied force.....:		N/A
8.8	Handles strength		N/A
8.8.1	Classification		N/A
8.8.2	Applied Force .....:		N/A
8.9	Wheels or casters attachment requirements		N/A
8.9.1	Classification		N/A
8.9.2	Applied force .....:		—
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.....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
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		P
9.3	Safeguard against thermal energy sources		P
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard		P
9.4.2	Instructional safeguard .....:		N/A
10	**RADIATION**		N/A
10.2	Radiation energy source classification		N/A
10.2.1	General classification		N/A
10.3	Protection against laser radiation		N/A
	Laser radiation that exists equipment:		—
	Normal, abnormal, single-fault..... :		N/A
	Instructional safeguard ..... :		—
	Tool..... :		—
10.4	Protection against visible, infrared, and UV radiation		N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons .....:		N/A
10.4.1.b)	RS3 accessible to a skilled person.....:		N/A
	Personal safeguard (PPE) instructional safeguard.....:		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1 . :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10.4.1.d)	Normal, abnormal, single-fault conditions .....:		N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque.....:		N/A
10.4.1.f)	UV attenuation.....:		N/A
10.4.1.g)	Materials resistant to degradation UV .....:		N/A
10.4.1.h)	Enclosure containment of optical radiation.....:		N/A
10.4.1.i)	Exempt Group under normal operating conditions.....:		N/A
10.4.2	Instructional safeguard .....:		N/A
10.5	Protection against x-radiation	No x-radiation	N/A
10.5.1	X- radiation energy source that exists equipment:		N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards.....:		N/A
	Instructional safeguard for skilled person..... :		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation .....:		—
	Abnormal and single-fault condition ..... :		N/A
	Maximum radiation (pA/kg)..... :		N/A
10.6	Protection against acoustic energy sources	No 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)..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A) ..... :		—
B	**NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS**		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements ..... :	(See summary of testing & appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers ..... :		N/A
B.2.3	Supply voltage and tolerances		P
B.2.5	Input test ..... :	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements ..... :	(See appended table B.3)	P
B.3.2	Covering of ventilation openings		N/A
B.3.3	D.C. mains polarity test		N/A
B.3.4	Setting of voltage selector ..... :	Full range.	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		P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited ..... :		N/A
B.4.3	Motor tests		N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature ..... :		N/A
B.4.4	Short circuit of functional insulation		P
B.4.4.1	Short circuit of clearances for functional insulation		P
B.4.4.2	Short circuit of creepage distances for functional insulation		P
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		P
B.4.6	Short circuit or disconnect of passive components		P
B.4.7	Continuous operation of components		N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions		P

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Clause	Requirement + Test	Result - Remark	Verdict
B.4.9	Battery charging under single fault conditions.... :		N/A
C	**UV RADIATION**		N/A
C.1	Protection of materials in equipment from UV radiation		N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A
D	**TEST GENERATORS**		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A
E	**TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS**		N/A
E.1	Audio amplifier normal operating conditions		N/A
	Audio signal voltage (V).....:		—
	Rated load impedance (Ω) .....:		—
E.2	Audio amplifier abnormal operating conditions		N/A
F	**EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS**		P
F.1	General requirements		P
	Instructions – Language ..... :	English checked	—
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		P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification .....:	See copy of marking plate for details	—
F.3.2.2	Model identification .....:	See copy of marking plate for details	—
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 for details	—

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.3.4	Rated voltage ..... :	See copy of marking plate for details	—
F.3.3.4	Rated frequency ..... :	See copy of marking plate for details	—
F.3.3.6	Rated current or rated power..... :	See copy of marking plate for details	—
F.3.3.7	Equipment with multiple supply connections		N/A
F.3.4	Voltage setting device	Full range.	N/A
F.3.5	Terminals and operating devices		P
F.3.5.1	Mains appliance outlet and socket-outlet markings ..... :		N/A
F.3.5.2	Switch position identification marking..... :	No switch used	N/A
F.3.5.3	Replacement fuse identification and rating markings ..... :	Fuse is not replaceable by ordinary person, however fuse marking on PCB adjacent to fuse: FS1 T 2AL/250V	N/A
F.3.5.4	Replacement battery identification marking ..... :		N/A
F.3.5.5	Terminal marking location		N/A
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment		N/A
F.3.6.1.1	Protective earthing conductor terminal		N/A
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		N/A
F.3.6.2	Class II equipment (IEC60417-5172)		P
F.3.6.2.1	Class II equipment with or without functional earth		P
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking .....:	IP0	—
F.3.8	External power supply output marking	See copy of marking plate	P
F.3.9	Durability, legibility and permanence of marking		P
F.3.10	Test for permanence of markings	The label was subjected to the permanence of marking test, 15 sec. for water and 15 sec. for petroleum spirit. After each test, the marking remained legible.	P

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Clause	Requirement + Test	Result - Remark	Verdict
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking		N/A
	b) Instructions given for installation or initial use		P
	c) Equipment intended to be fastened in place		N/A
	d) Equipment intended for use only in restricted access area		N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard		N/A
	g) Protective earthing conductor current exceeding ES2 limits		N/A
	h) Symbols used on equipment		P
	i) Permanently connected equipment not provided with all-pole mains switch		N/A
j)	j) Replaceable components or modules providing safeguard function		N/A
F.5	Instructional safeguards		N/A
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction		N/A
G	**COMPONENTS**		P
G.1	**Switches**		N/A
G.1.1	General requirements	No switch used	N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	**Relays**		N/A
G.2.1	General requirements	No relays used	N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
G.3	**Protection Devices**		P
G.3.1	Thermal cut-offs	No thermal cut-offs used	N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691	No thermal links used	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H) ..... :		—
	Single Fault Condition ..... :		—
	Test Voltage (V) and Insulation Resistance (Ω) . :		—
G.3.3	PTC Thermistors		N/A
G.3.4	Overcurrent protection devices		P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions..... :		N/A
G.4	**Connectors**		P
G.4.1	Spacings		P
G.4.2	Mains connector configuration .....:		N/A
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		P
G.5	**Wound Components**		P
G.5.1	Wire insulation in wound components.....	(See Annex J)	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°	The insulation tape or tube is provided for winding of transformer to protect against mechanical stress.	P
G.5.1.2 b)	Construction subject to routine testing		P
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s).....:		—
	Temperature (°C).....:		—
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	**Transformers**		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1) .....:	See G.5.3.3 and G5.3.3	P
	Position.....:	(See appended table 4.1.2)	—
	Method of protection .....:	Over current protection by circuit design.	—
G.5.3.2	Insulation		P
	Protection from displacement of windings.....:	Triple insulation wire used and insulation tapes provided.	—
G.5.3.3	Overload test ..... :	(See append table B.3)	P
G.5.3.3.1	Test conditions		P
G.5.3.3.2	Winding Temperatures testing in the unit		P

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.3.3.3	Winding Temperatures - Alternative test method		N/A
G.5.4	**Motors**		N/A
G.5.4.1	General requirements		N/A
	Position .....:		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days) .....:		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V) .....:		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h) .....:		N/A
	Electric strength test (V) .....:		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature .....:		N/A
	Electric strength test (V) .....:		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h).....:		N/A
	Electric strength test (V) .....:		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage .....:		—
G.6	**Wire Insulation**		P
G.6.1	General		P
G.6.2	Solvent-based enamel wiring insulation	Solvent-based enamel winding is not considered basic 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

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N).....:		—
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm)....:		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry..... :		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g) .....:		—
	Diameter (m).....:		—
	Temperature (°C).....:		—
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	**Varistors**		N/A
G.8.1	General requirements		N/A
G.8.2	Safeguard against shock		N/A
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test.....:		N/A
G.8.3.3	Temporary overvoltage.....:		N/A
G.9	**Integrated Circuit (IC) Current Limiters**		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.		N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA .....:		—
G.9.1 d)	IC limiter output current (max. 5A) .....:		—
G.9.1 e)	Manufacturers' defined drift .....:		—
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	**Resistors**		P
G.10.1	General requirements		P
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

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Clause	Requirement + Test	Result - Remark	Verdict
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	**Capacitor and RC units**		P
G.11.1	General requirements		P
G.11.2	Conditioning of capacitors and RC units		P
G.11.3	Rules for selecting capacitors		P
G.12	**Optocouplers**		N/A
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results) ..... :		N/A
	Type test voltage Vini .....:		—
	Routine test voltage, Vini,b .....:		—
G.13	**Printed boards**		P
G.13.1	General requirements		P
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction) .....:		—
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation ..... :		N/A
	Number of insulation layers (pcs).....:		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
G.14	**Coating on components terminals**		N/A
G.14.1	Requirements ..... :		N/A
G.15	**Liquid filled components**		N/A
G.15.1	General requirements		N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	**IC including capacitor discharge function (ICX)**		N/A
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N/A
b)	Impulse test using circuit 2 with Uc = to transient voltage .....:		N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage .....:		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A
D2)	Capacitance .....:		—
D3)	Resistance .....:		—
H	**CRITERIA FOR TELEPHONE RINGING SIGNALS**		N/A
H.1	General		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	Certified triple insulation wire used.	P
K	**SAFETY INTERLOCKS**		N/A
K.1	General requirements		N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
K.5	Fail-safe		N/A
	Compliance ..... :		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method ..... :		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) ..... :		N/A
K.7.2	Overload test, Current (A) ..... :		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test ..... :		N/A
L	**DISCONNECT DEVICES**		P
L.1	General requirements		P
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized		N/A
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
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance .....:		N/A
M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature ..... :		—
M.4.2.2 b)	Single faults in charging circuitry..... :		—
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		N/A
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method) .....:		N/A
M.6.2	Leakage current (mA) .....:		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume *Vz* (m^3/s).....:		—
M.8.2.3	Correction factors.....:		—
M.8.2.4	Calculation of distance *d* (mm) .....:		—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) .....:		N/A
N	**ELECTROCHEMICAL POTENTIALS**		N/A
	Metal(s) used.....:		—
O	**MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES**		P
	Figures O.1 to O.20 of this Annex applied .....:	Considered	—
P	**SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS**		P
P.1	General requirements		P
P.2.2	Safeguards against entry of foreign object		P
	Location and Dimensions (mm) .....:	No openings	—
P.2.3	Safeguard against the consequences of entry of foreign object		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
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts		N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C) .....:		—
	Tr (°C).....:		—
	Ta (°C).....:		—
P.4.2 b)	Abrasion testing .....:		N/A
P.4.2 c)	Mechanical strength testing .....:		N/A
Q	**CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING**		P
Q.1	Limited power sources		P
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- Regulating network limited output under normal operating and simulated single fault condition	(See appended table Annex Q.1)	P
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method		P
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A) .....:		—
	Current limiting method .....:		—
R	**LIMITED SHORT CIRCUIT TEST**		N/A
R.1	General requirements		N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)). .....:		N/A
S	**TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material.....:		—
	Wall thickness (mm) .....:		—
	Conditioning (°C) .....:		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material.....:		—
	Wall thickness (mm) .....:		—
	Conditioning (°C) .....:		—
	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

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Clause	Requirement + Test	Result - Remark	Verdict
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material.....:		—
	Wall thickness (mm).....:		—
	Conditioning (test condition), (°C).....:		—
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	After every test specimen was not consumed completely		N/A
	After fifth flame application, flame extinguished within 1 min		N/A
T	**MECHANICAL STRENGTH TESTS**		P
T.1	General requirements		P
T.2	Steady force test, 10 N ..... :	(See appended table T.2)	P
T.3	Steady force test, 30 N ..... :		N/A
T.4	Steady force test, 100 N ..... :	(See appended table T.4)	P
T.5	Steady force test, 250 N ..... :	(See appended table T.5)	N/A
T.6	Enclosure impact test	(See appended table T.6)	N/A
	Fall test		N/A
	Swing test		N/A
T.7	Drop test ..... :	(See appended table T.7)	P
T.8	Stress relief test..... :	(See appended table T.8)	P
T.9	Impact Test (glass)		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J).....:		—
	Height (m).....:		—
T.10	Glass fragmentation test.....:		N/A
T.11	Test for telescoping or rod antennas		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

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

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

4.1.2	TABLE: List of critical components				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[6]
Plastic enclosure and Plug holder	SABIC INNOVATIVE PLASTICS US L L C	915R (GG)	Min. V-0, min. 2.0 mm thickness, 120 °C	UL 94, UL 746C,	UL,
(Alternative)	SABIC JAPAN L L C	945 (GG)	Min. V-0, min. 2.0 mm thickness, 120 °C	UL 94, UL 746C,	UL,
(Alternative)	LG CHEM (GUANGZHOU) ENGINEERING PLASTICS CO LTD	LUPOY EF- 1006F(m)	Min. V-0, min. 2.0 mm thickness, 115 °C	UL 94, UL 746C,	UL,
(Alternative)	COVESTRO DEUTSCHLAN D AG \[PC RESINS]	FR6005 + (z)	Min. V-0, min. 2.0 mm thickness, 105 °C	UL 94, UL 746C,	UL,
(Alternative)	SILVER AGE ENGINEERING PLASTICS (DONGGUAN) CO LTD	PC2330	Min. V-0, min. 2.0 mm thickness, 115 °C	UL 94, UL 746C,	UL,
PCB	Interchangeable	Interchangeable	Min. V-0, min 130 °C	UL 796	UL
Fuse (F1)	Conquer Electronics Co Ltd	MST-series	T2AL, 250 Vac	IEC/EN 60127-1 IEC/EN 60127-3 ANSI/UL 248-1 ANSI/UL 248-14	VDE, UL
(Alternative)	Ever Island Electric Co Ltd & Walter Electric	2010 series	T2AL, 250 Vac	IEC/EN 60127-1 IEC/EN 60127-3 ANSI/UL 248-1 ANSI/UL 248-14	VDE, UL
(Alternative)	Hollyland Co Ltd.	5ET	T2AL, 250 Vac	IEC/EN 60127-1 IEC/EN 60127-3 ANSI/UL 248-1 ANSI/UL 248-14	VDE, UL
(Alternative)	Bel Fuse Inc.	RST-series	T2AL, 250 Vac	IEC/EN 60127-1 IEC/EN 60127-3 ANSI/UL 248-1 ANSI/UL 248-14	VDE, UL
(Alternative)	Littelfuse Wickmann Werke	392	T2AL, 250 Vac	IEC/EN 60127-1 IEC/EN 60127-3 ANSI/UL 248-1 ANSI/UL 248-14	VDE, UL

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

	Dongguan Better Electronics Technology Co., Ltd.	932	T2AL, 250 Vac	IEC/EN 60127-1 IEC/EN 60127-3 ANSI/UL 248-1 ANSI/UL 248-14	VDE, UL
X-capacitor (CX1) (optional)	Cheng Tung Industrial Co Ltd	CTX	Max. 0.33 uF, Min. 250 V, 105 °C, X1 or X2	IEC 60384-14 EN 60384-14: 2013, UL 60384-14	ENEC, UL
(Alternative)	Ultra Tech Xiphi Enterprise Co Ltd	HQX	Max. 0.33 uF, Min. 250 V, 110 °C, X1 or X2	IEC 60384-14 EN 60384-14: 2013, UL 60384-14	VDE, UL
(Alternative)	Tenta Electric Industrial Co Ltd	MEX	Max. 0.33 uF, Min. 250 V, 100 °C, X1 or X2	IEC 60384-14 EN 60384-14: 2013, UL 60384-14	VDE, UL
(Alternative)	Joey Electronics (Dong Guan) Co Ltd	MPX	Max. 0.33 uF, Min. 250 V, 105 °C, X1 or X2	IEC 60384-14 EN 60384-14: 2013, UL 60384-14	VDE, UL
(Alternative)	Carli Electronics Co Ltd	MPX	Max. 0.33 uF, Min. 250 V, 100 °C, X1 or X2	IEC 60384-14 EN 60384-14: 2013, UL 60384-14	VDE, UL
(Alternative)	Xiangtai Electronic (Shenzhen) Co Ltd.	MKP/MPX	Max. 0.33 uF, Min. 250 V, 110 °C, X1 or X2	IEC 60384-14 EN 60384-14: 2013, UL 60384-14	VDE, UL
Bleeder resistor (RS1, RS2)	Tzai Yuan	HSMD********* , SMD*********	Max. 1.5 MΩ, min. 1/4 W	IEC 62368-1 (ed.1), UL 62368-1	CB by UL, UL
(Alternative)	Prosperity	FVS03, TF06V, FVS05, TF08V, FVS06, TF12V, FVS20, TF20V, FVS25, TF25V	Max. 1.5 MΩ, min. 1/4 W	IEC 62368-1:2014, UL 62386-1	CB by UL, UL
(Alternative)	Ralec	RTV05, RTV06, RTV12, RTV20, RTV25	Max. 1.5 MΩ, min. 1/4 W	IEC 62368-1:2014	CB by UL, UL

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

(Alternative)	FUTABA ELECTRONICS (SU ZHOU) CO., LTD.	RM series	Max. 1.5 MΩ, min. 1/4 W	IEC 62368-1:2014	CB by UL, UL
(Alternative)	Yageo Components (Suzhou)	HHV	Max. 1.5 MΩ, min. 1/4 W	IEC 62368-1:2014	CB by UL, UL
Bleeder resistor (RS3)	Tzai Yuan	HSMD********* , SMD*********	Max. 510 KΩ, min. 1/4 W	IEC 62368-1:2014, UL 62368-1	CB by UL, UL
(Alternative)	Prosperity	FVS03, TF06V, FVS05, TF08V, FVS06, TF12V, FVS20, TF20V, FVS25, TF25V	Max. 510 KΩ, min. 1/4 W	IEC 62368-1:2014, UL 62368-1	CB by UL, UL
(Alternative)	Ralec	RTV05, RTV06, RTV12, RTV20, RTV25	Max. 510 KΩ, min. 1/4 W	IEC 62368-1:2014	CB by UL, UL
(Alternative)	FUTABA ELECTRONICS (SU ZHOU) CO., LTD.	RM series	Max. 510 KΩ, min. 1/4 W	IEC 62368-1:2014	CB by UL, UL
(Alternative)	Yageo Components (Suzhou)	HHV	Max. 510 KΩ, min. 1/4 W	IEC 62368-1:2014	CB by UL, UL
Choke (LF1)	Globtek ENG Electric Co Ltd	NF00124	130 °C	--	--
Choke (LF2)	Globtek ENG Electric Co Ltd	NF00125	130 °C	--	--
Bridge Diode (BD1)	Interchangeable	Interchangeable	Min. 4 A, min. 600 V	--	--
Storage Capacitor (C1)	Interchangeable	Interchangeable	68/ 82 uF, min 400 V, min 105 °C,	--	--
MOSFET (Q1)	Interchangeable	Interchangeable	Min. 6 A, min. 600 V	--	--
Photo coupler (U1)	Everlight Electronics Co Ltd	EL817	Dti=0.5 mm Int. dcr=6.0 mm Ext. dcr= 7.7 mm, thermal cycling test, 110 °C,	IEC/EN 60950-1, EN 60747-5-5 UL 1577	VDE, UL

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Clause	Requirement + Test	Result - Remark	Verdict

(Alternative)	Lite-On Technology Corp	LTV-817	Dti=0.8 mm Ext. dcr= 7.8 mm, thermal cycling test, 100 °C,	IEC/EN 60950-1, EN 60747-5-5 UL 1577	VDE, UL
(Alternative)	Bright Led Electronics Corp	BPC-817 A/B/C/D/L BPC-817 S BPC-817 M	Dti=0.4 mm Ext. dcr= 7.0 mm, thermal cycling test, 100 °C,	IEC/EN 60950-1, EN 60747-5-5 UL 1577	VDE, UL
(Alternative)	Cosmo Electronics Corp	K1010	Dti=0.6 mm Int. dcr=4.0 mm Ext. dcr= 5.0 mm, thermal cycling test, 115 °C,	IEC/EN 60950-1, EN 60747-5-5 UL 1577	VDE, UL
(Alternative)	Renesas Electronics Corporation	PS2561-1	Dti=0.4 mm Ext. dcr= 7.0 mm, thermal cycling test, 100 °C,	IEC/EN 60950-1, EN 60747-5-5 UL 1577	VDE, UL
(Alternative)	SHENZHEN ORIENT COMPONENTS CO LTD	ORPC-817Mx, ORPC-817Sx, ORPC-817x	Dti=0.4 mm Ext. dcr= 7.6 mm, thermal cycling test, 110 °C,	IEC/EN 60950-1, EN 60747-5-5 UL 1577	VDE, UL
Bridging-Capacitor (CY1) (optional)	Walsin Technology Corp	AH	Max. 1000 pF, min. 250 V, 125 °C, Y1	IEC 60384-14, EN 60384-14:2013, UL 60384-14	VDE, UL
(Alternative)	Success Electronics Co Ltd	SE, SB, SF	Max. 1000 pF, min. 250 V, 125 °C, Y1	IEC 60384-14, EN 60384-14:2013, UL 60384-14	VDE, UL
(Alternative)	TDK CORPORATION	CD	Max. 1000 pF, min. 250 V, 125 °C, Y1	IEC 60384-14, EN 60384-14:2013, UL 60384-14	VDE, UL
(Alternative)	Haohua Electronic Co	CT 7	Max. 1000 pF, min. 250 V, 125 °C, Y1	IEC 60384-14, EN 60384-14:2013, UL 60384-14	VDE, UL
(Alternative)	Xiangtail Electronic (Shenzhen) Co Ltd	YO-series	Max. 1000 pF, min. 250 V, 125 °C, Y1	IEC 60384-14, EN 60384-14:2013, UL 60384-14	VDE, UL
(Alternative)	MURATA MFG CO LTD	KX	Max. 1000 pF, min. 250 V, 125 °C, Y1	IEC 60384-14, EN 60384-14:2013, UL 60384-14	VDE, UL

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Clause	Requirement + Test	Result - Remark	Verdict

(Alternative)	Juhong ELE company	JB series	Max. 1000 pF, min. 250 V, 125 °C, Y1	IEC 60384-14, EN 60384-14:2013, UL 60384-14	VDE, UL
Current sense resistor (R1)	Interchangeable	Interchangeable	Min 0.27 ohm, 2 W.	--	--
Transformer (T1)	GlobTek ENG Electric Co Ltd	XF00936 (12-17.9 V) XF00945 (18-22 V) XF00946 (22.1-24 V)	Class B	--	--
(Alternative)	WUXI HAOPUWEI ELECTRONICS CO.,LTD	XF00936 (12-17.9 V) XF00945 (18-22 V) XF00946 (22.1-24 V)	Class B	--	--
(Alternative)	Shandong Boam Electric Co.,Ltd	XF00936 (12-17.9 V) XF00945 (18-22 V) XF00946 (22.1-24 V)	Class B	--	--
- Bobbin	Chang Chun Plastics Co Ltd	T375J, T375HF	Phenolic, V-0, min. thickness 0.71 mm, 150 °C	UL94, UL 746C	UL
(Alternative)	Sumitomo Bakelite Co Ltd	PM9820	Phenolic, V-0, min. thickness 0.71 mm, 150 °C	UL94, UL 746C	UL
(Alternative)	Chang Chun Plastics Co., Ltd.	4130	Phenolic, V-0, min. thickness 0.71 mm, 150 °C	UL94, UL 746C	UL
(Alternative)	HITACHI CHEMICAL CO LTD	CP-J-8800	Phenolic, V-0, min. thickness 0.71 mm, 150 °C	UL94, UL 746C	UL
- Tape	3M Company Electrical Markets DIV (EMD)	1350F-(#), 1350T-1, 44	130 °C	UL510	UL
(Alternative)	Bondtec Pacific Co Ltd	370S	130 °C	UL510	UL
(Alternative)	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ, CT, WF	130 °C	UL510	UL
(Alternative)	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A	130 °C	UL510	UL
(Alternative)	Chang Shu Liang Yi Tape Industry Co Ltd	LY-XX	130 °C	UL510	UL
- Triple Insulation wire	Great Leoflon	TRW(B) series	130 °C	IEC/EN 60950-1 UL 2353	VDE, UL
(Alternative)	COSMOLINK CO. Ltd.	TIW-M	130 °C	IEC/EN 60950-1 UL 2353	VDE, UL

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Clause	Requirement + Test	Result - Remark	Verdict

(Alternative)	Furukawa Electric Co., Ltd. Electronics & Automotive Systems Company Global Business Development Division	TEX-E	130 °C	IEC/EN 60950-1 UL 2353	VDE, UL
(Alternative)	TOTOKU ELECTRIC CO LTD	TIW-2	130 °C	IEC/EN 60950-1 UL 2353	VDE, UL
(Alternative)	E&B TECHNOLOGY CO LTD	E&B-XXXB E&B-XXXB-1	130 °C	IEC/EN 60950-1 UL 2353	VDE, UL
(Alternative)	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-TIW	130 °C	IEC/EN 60950-1 UL 2353	VDE, UL
(Alternative)	SHENZHEN JIUDING NEW MATERIAL CO LTD	DTIW-B	130 °C	IEC/EN 60950-1 UL 2353	VDE, UL
Output Cord	Interchangeable	Interchangeable	Max. 3.05 m. VW-1 or FT-1, min 80 °C, min 30 V, min 20 AWG	UL758	UL
Strain Relief	Interchangeable	Interchangeable	V-1 or better	UL94, UL 746C	UL
LED Barrier (Optional)	Sabic Innovative Plastics US L L C	945 (GG)	Min. V-0, min. 1.0 mm thickness, 120 °C	UL94, UL 746C	UL
Supplementary information: 1. Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

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Clause	Requirement + Test	Result - Remark	Verdict

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

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

4.8.4.2 **TABLE: Stress Relief test** —

Part	Material	Oven Temperature (°C)	Comments

4.8.4.3 **TABLE: Battery replacement test** —

Battery part no. ..... : —

Battery Installation/withdrawal	Battery Installation/Removal Cycle	Comments
	1	
	2	
	3	
	4	
	5	
	6	
	8	
	9	
	10	

4.8.4.4 **TABLE: Drop test** —

Impact Area	Drop Distance	Drop No.	Observations
		1	
		2	
		3	

4.8.4.5 **TABLE: Impact** —

Impacts per surface	Surface tested	Impact energy (Nm)	Comments

4.8.4.6 **TABLE: Crush test** —

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

Supplementary information:

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Clause	Requirement + Test	Result - Remark	Verdict

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

5.2	Table: Classification of electrical energy sources					P
5.2.2.2 –Steady State Voltage and Current conditions						
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				U (Vrms or Vpk)	I (Apk or Arms) / Hz	
1	264Va.c. 60Hz	+15V- RTN Output (+/-) – Earth Enclosure with foil – Earth (GT*46401-*15*-W2Z*)	Normal	1) 15.09 Vdc	-- / --	ES1
			Abnormal: Over load	1) 15.02 Vdc	2) 0.158 mApk 3) 0.01 mApk / --	
			Abnormal: Output short	1) 0	2) 0.158 mApk 3) 0.01 mApk / --	
			Single fault when shut down	1) 0	2) 0.158 mApk 3) 0.01 mApk / --	
			Single fault CS7 SC	1) 15.8 Vdc	2) 0.158 mApk 3) 0.01 mApk / --	
			Single fault D3 SC	1) 15.8 Vdc	2) 0.158 mApk 3) 0.01 mApk / --	
2	264Va.c. 60Hz	+19V- RTN Output (+/-) – Earth Enclosure with foil – Earth (GT*46401-*19*-W2Z*)	Normal	1) 19.21 Vdc	-- / --	ES1
			Abnormal: Over load	1) 19.15 Vdc	2) 0.158 mApk 3) 0.01 mApk / --	
			Abnormal: Output short	1) 0	2) 0.158 mApk 3) 0.01 mApk / --	
			Single fault when shut down	1) 0	2) 0.158 mApk 3) 0.01 mApk / --	
			Single fault CS7 SC	1) 19.21 Vdc	2) 0.158 mApk 3) 0.01 mApk / --	
			Single fault D3 SC	1) 19.21 Vdc	2) 0.158 mApk 3) 0.01 mApk / --	
3	264Va.c. 60Hz	+24V- RTN Output (+/-) – Earth Enclosure with foil – Earth (GT*46401-*24*-	Normal	1) 24.08 Vdc	-- / --	ES1
			Abnormal: Over load	1) 23.93 Vdc	2) 0.158 mApk 3) 0.01 mApk / --	
			Abnormal: Output short	1) 0	2) 0.158 mApk 3) 0.01 mApk / --	

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

		W2Z*)	Single fault when shut down	1) 0	2) 0.158 mApk 3) 0.01 mApk	--	
			Single fault CS7 SC	1) 26.0 Vdc	2) 0.158 mApk 3) 0.01 mApk	--	
			Single fault D3 SC	1) 26.0 Vdc	2) 0.158 mApk 3) 0.01 mApk	--	

5.2.2.3 - Capacitance Limits

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Capacitance, nF	Upk (V)	
1	264Va.c. 60Hz	CX1	Normal	CX1=max. 33nF+20%	374	ES3
			Abnormal	--	--	
			Single fault – SC/OC	--	--	

5.2.2.4 - Single Pulses

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

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)	
1	264Va.c. 60Hz	+24V- RTN Output (+/-) – Earth Enclosure with foil – Earth	Normal	--	--	--	--
			Abnormal	--	--	--	
			Single fault – SC/OC	1) 568	1) 28	2) 0.14 mApk 3) 0.01 mApk	

Test Conditions:

Normal –

Abnormal -

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

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.4, 6.3.2, 9.0, B.2.6	**TABLE: Temperature measurements**					P
	Supply voltage (V) ..... :	90 V/ 60 Hz Horizontal	90 V/ 60 Hz Vertical	264 V/ 60 Hz Horizontal	264 V/ 60 Hz Vertical	—
	Ambient T_{min} (°C) ..... :					—
	Ambient T_{max} (°C) ..... :					—
	Tma (°C) ..... :					—
Maximum measured temperature T of part/at:		T (°C)				Allowed T_{max} (°C)
Model: GT*46401-*15*-W2Z* / Output load 15 Vdc/ 2.66 A						
Input plug holder		54.8	57.1	49.5	49.5	105
LF2 coil		76.0	80.2	51.6	51.6	105
CX1 body		81.0	83.5	63.2	63.2	100
LF1 coil		100.4	99.9	67.1	67.1	105
PCB near BD1		107.8	104.2	67.1	67.1	130
HS1 near BD1		109.5	105.6	70.4	70.4	130
C1 body		95.4	94.3	76.1	76.1	105
HS1 near Q1		110.8	106.4	77.5	77.5	130
CY1 body		97.4	92.6	86.1	86.1	125
U1 body		72.7	70.1	85.6	85.6	100
T1 primary side coil		102.4	98.9	86.6	86.6	110
T1 secondary side coil		100.3	96.2	85.9	85.9	110
T1 core		100.1	95.9	77.6	77.6	110
HS3 near D3		102.8	97.7	79.3	79.3	130
C3 body		82.4	78.5	77.8	76.0	85
Inside of plastic enclosure near T1		80.7	74.2	74.9	71.3	105
Ambient air		40.0	40.0	40.0	40.0	--
Test Ambient air		29.4	28.9	28.7	28.6	--
Output wire		56.1	52.5	51.9	50.5	77
Surface of plastic enclosure near T1		56.9	49.2	52.2	47.5	77
Ambient air		25.0	25.0	25.0	25.0	--
Model: GT*46401-*19*-W2Z* / Output load 19 Vdc/ 2.1 A						
Input plug holder		54.9	57.3	49.8	52.6	105
LF2 coil		78.9	81.5	66.9	70.1	105
CX1 body		82.5	84.1	70.2	73.3	100
LF1 coil		98.9	98.2	77.9	79.5	105
PCB near BD1		105.7	102.6	87.4	87.4	130
HS1 near BD1		108.7	105.0	89.2	88.7	130

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

5.4.1.4, 6.3.2, 9.0, B.2.6	**TABLE: Temperature measurements**					P
	Supply voltage (V) ..... :	90 V/ 60 Hz Horizontal	90 V/ 60 Hz Vertical	264 V/ 60 Hz Horizontal	264 V/ 60 Hz Vertical	—
	Ambient T_{min} (°C) ..... :					—
	Ambient T_{max} (°C) ..... :					—
	Tma (°C) ..... :					—
Maximum measured temperature T of part/at:		T (°C)				Allowed T_{max} (°C)
C1 body		93.3	91.8	79.9	81.9	105
HS1 near Q1		109.3	105.4	90.9	90.3	130
CY1 body		94.8	91.5	90.6	89.1	125
U1 body		70.5	69.5	66.6	67.4	100
T1 primary side coil		99.0	96.3	93.9	94.1	110
T1 secondary side coil		98.1	94.9	94.3	93.8	110
T1 core		95.8	92.2	93.5	92.1	110
HS3 near D3		98.3	93.3	96.6	93.5	130
C3 body		77.6	74.7	74.8	73.7	85
Inside of plastic enclosure near T1		78.5	72.4	75.6	71.4	105
Ambient air		40.0	40.0	40.0	40.0	--
Test Ambient air		28.7	28.2	28.1	27.7	--
Output wire		55.7	52.6	52.6	51.5	77
Surface of plastic enclosure near T1		56.3	48.7	53.7	48.2	77
Ambient air		25.0	25.0	25.0	25.0	--
Model: GT*46401-*24*-W2Z* / Output load 24 Vdc/ 1.66 A						
Input plug holder		53.2	57.3	49.2	53.0	105
LF2 coil		75.6	79.3	64.0	68.1	105
CX1 body		77.6	80.7	65.6	69.2	100
LF1 coil		95.0	95.1	73.2	75.5	105
PCB near BD1		101.3	98.6	80.8	81.5	130
HS1 near BD1		105.4	102.0	81.5	82.0	130
C1 body		85.1	84.4	73.1	75.4	105
HS1 near Q1		105.6	102.1	82.6	82.9	130
CY1 body		89.8	86.2	85.7	84.7	125
U1 body		66.8	66.1	63.0	63.8	100
T1 primary side coil		95.1	92.1	92.2	91.9	110
T1 secondary side coil		91.9	89.7	87.8	88.6	110
T1 core		90.6	87.9	88.8	88.9	110

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements					P
	Supply voltage (V) ..... :	90 V/ 60 Hz Horizontal	90 V/ 60 Hz Vertical	264 V/ 60 Hz Horizontal	264 V/ 60 Hz Vertical	—
	Ambient T_{min} (°C) ..... :					—
	Ambient T_{max} (°C) ..... :					—
	Tma (°C) ..... :					—

Maximum measured temperature T of part/at:	T (°C)				Allowed T_{max} (°C)
HS3 near D3	90.3	86.0	88.8	86.9	130
C3 body	74.7	72.1	72.4	71.5	85
Inside of plastic enclosure near T1	78.0	73.2	74.3	71.6	105
Ambient air	40.0	40.0	40.0	40.0	--
Test Ambient air	29.1	28.6	28.4	28.2	--
Output wire	50.9	48.3	48.0	47.3	77
Surface of plastic enclosure near T1	56.8	50.8	52.8	49.2	77
Ambient air	25.0	25.0	25.0	25.0	--
Enclosure outside near T2	57.7	59.8	54.1	56.4	77
Ambient	25.0	25.0	25.0	25.0	--

Supplementary information:

Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class
—	—	—	—	—	—	—	—

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

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

supplementary information:

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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)
Input plug holder / 915R (GG)	See appended table 4.1.2	125	1.55
Input plug holder / 945R (GG)	See appended table 4.1.2	125	1.08
Input plug holder / LUPOY EF-1006F(m)	See appended table 4.1.2	125	1.39
Input plug holder / FR6005 + (z)	See appended table 4.1.2	125	1.29
Input plug holder / PC2330	See appended table 4.1.2	125	1.3
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)
Basic/supplementary:	--	--	--	--	--	--	--
Between the two ends of fuse (FS1)	420	250	--	2.0 (1.5 x 1.29)	3.7	2.5	3.7
Under fuse (FS1) trace	420	250	--	2.0 (1.5 x 1.29)	2.9	2.5	2.9
Line trace to Neutral trace (Before fuse (FS1))	420	250	--	2.0 (1.5 x 1.29)	6.7	2.5	6.7
Reinforced insulation:	--	--	--	--	--	--	--
CY1 trace to U1(2) trace	420	250	68.5	3.9 (3.0 x 1.29)	8.1	5.0	8.1
CY1(Pri.) to HS2	420	250	68.5	3.9 (3.0 x 1.29)	7.2	5.0	7.2
C2 to U1(2)	420	250	68.5	3.9 (3.0 x 1.29)	8.5	6.5	8.5
T1 core (with 2 layers tape) to HS2	534	323	68.5	3.9 (3.0 x 1.29)	8.6	5.0	8.6
N trace to Accessible part	420	250	68.5	3.9 (3.0 x 1.29)	5.7	5.0	5.7
Input plug to Accessible edge	420	250	68.5	3.9 (3.0 x 1.29)	10.1	5.0	10.1
Under U1 trace	420	250	68.5	3.9 (3.0 x 1.29)	7.7	5.0	7.7
Under CY1 trace	420	250	68.5	3.9 (3.0 x 1.29)	7.2	5.0	7.2

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Clause	Requirement + Test	Result - Remark	Verdict

Replaceable Plug holder to Accessible part	420	250	68.5	3.9 (3.0 x 1.29)	5.4	5.0	5.4

Supplementary information:

Note 1: Only for frequency above 30 kHz;

Note 2: See table 5.4.2.4 if this is based on electric strength test;

Note 3: Provide Material Group;

All component considered above 10N / 5sec

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage			P
	Overvoltage Category (OV): OVC II			
	Pollution Degree: 2			
Clearance distanced between:		Required withstand voltage	Required cl (mm)	Measured cl (mm)
Basic/supplementary[1)]		2500	2.0 (1.5 x 1.29)	[1)]
Reinforced[1)]		2500	3.0 (3.0 x 1.29)	[1)]

Supplementary information:

1) See appended table 5.4.2.2, 5.4.2.4 and 5.4.3 for measurements.

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

Supplementary information:

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements					P
Distance through insulation di at/of:		Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)
Photo Coupler (U1) (Reinforced Insulation)		420	68.5	1)	0.4	1)
Insulation tape (T1) (Reinforced Insulation)		524	68.5	Other	2 layers	2 layers
Enclosure (Reinforced Insulation)		524	68.5	Other	0.4	1)

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:
1) See appended table 4.1.2.
2) According to clause 5.4.4.9:
For Optical Isolator (Reinforced Insulation):
Kr=0.35, Vpw=420 Vp. Required electric strengh test voltage: 1.2*2*420/0.35=2880 Vpeak
For Insulation tape (Reinforced Insulation):
Kr=0.46, Vpw=524 Vp. Required electric strengh test voltage: 1.2*2*524/0.46=2734 Vpeak
For Enclosure (Reinforced Insulation):
Kr=0.35, Vpw=524 Vp. Required electric strengh test voltage: 1.2*2*524/0.35=3594 Vpeak

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Functional:				
--		--	--	--
Basic/supplementary:				
--		--	--	--
Reinforced:				
Primary / enclosure with foil		DC	4000	No
Unit: primary to secondary		DC	4000	No
Photo Coupler (U1) (see appended tables 4.1.2)		AC(peak)	4000	No
Enclosure (see appended tables 4.1.2)		AC(peak)	4000	No
T1: Primary to Secondary		AC(peak)	4000	No
Transformer T2: core to sec. winding		AC(peak)	4000	No
T1: Core to Secondary		AC(peak)	4000	No
Routine Tests:				
--		--	--	--

Supplementary information:
1. By applying an d.c. voltage in one polarity and then repeat it in reverse polarity.
2. See supplementary information of appended table 5.4.4.9.
3. All testing including after Humidity test required of clause 5.4.8, there are including unit, transformer and all material of transformer, see appended tables 4.1.2

5.5.2.2	TABLE: Stored discharge on capacitors				P
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch positionOn or off	Measured Voltage (after 2 seconds)	ES Classification
264 VAC, 60 Hz	Phase to Neutral	N	--	24	ES1
264 VAC, 60 Hz	Phase to Neutral	S (RS3 opened)	--	38	ES1

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

X-capacitors installed for testing are: CX1 = 0.33 uF.

☒ bleeding resistor rating: RX1 = RX2 = 1.5 Mohm.

☐ ICX:

Notes:

A. Test Location:

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

B. Operating condition abbreviations:

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

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

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		N/A
Supply voltage .....:			—
Location		Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)
		1	
		2*	
		3	
		4	
		5	
		6	
		8	

Supplementary Information:

[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] IEC 60990, sub-clause 6.2.2.7, Fault 7 not applicable.

[5] (*) IEC 60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.

6.2.2	Table: Electrical power sources (PS) measurements for classification				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s*)	PS Classification
A		Power (W) :			

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Clause	Requirement + Test	Result - Remark	Verdict

		V_A (V) :				
		I_A (A) :				

Supplementary Information:

(*) Measurement taken only when limits at 3 seconds exceed PS1 limits

All circuits within the equipment are considered as PS3. For output circuits see appended table Q.1.

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)	P

Location	Open circuit voltage After 3 s (Vp)	Measured r.m.s current (Irms)	Calculated value (V_p x I_{rms})	Arcing PIS? Yes / No

Supplementary information:

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

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 conductors and devices are considered as PIS.

8.5.5	TABLE: High Pressure Lamp	N/A

Description	Values	Energy Source Classification
Lamp type.....:		—
Manufacturer .....:		—
Cat no. .....:		—
Pressure (cold) (MPa).....:		MS_

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Clause	Requirement + Test	Result - Remark	Verdict

Pressure (operating) (MPa) .....:		MS_
Operating time (minutes) .....:		—
Explosion method .....:		—
Max particle length escaping enclosure (mm) .:		MS_
Max particle length beyond 1 m (mm).....:		MS_
Overall result .....:		
Supplementary information:		

B.2.5	TABLE: Input test						P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
90 V, 50 Hz	0.80	--	41.0	--	FS1	0.80	Model : GT*46401-*12*-W2Z* OP:12 Vdc / 3.0 A
90 V, 60 Hz	0.82	--	41.0	--	FS1	0.82	
100 V, 50 Hz	0.74	1.0	40.0	--	FS1	0.74	
100 V, 60 Hz	0.76	1.0	40.0	--	FS1	0.76	
240 V, 50 Hz	0.42	1.0	41.0	--	FS1	0.42	
240 V, 60 Hz	0.43	1.0	41.0	--	FS1	0.43	
264 V, 50 Hz	0.39	--	40.0	--	FS1	0.39	
264 V, 60 Hz	0.40	--	40.0	--	FS1	0.40	
90 V, 50 Hz	0.86	--	46.5	--	FS1	0.86	Model : GT*46401-*15*-W2Z* OP:15 Vdc / 2.66 A
90 V, 60 Hz	0.87	--	46.4	--	FS1	0.87	
100 V, 50 Hz	0.80	1.0	45.0	--	FS1	0.80	
100 V, 60 Hz	0.82	1.0	45.0	--	FS1	0.82	
240 V, 50 Hz	0.46	1.0	46.5	--	FS1	0.46	
240 V, 60 Hz	0.47	1.0	46.4	--	FS1	0.47	
264 V, 50 Hz	0.44	--	45.0	--	FS1	0.44	
264 V, 60 Hz	0.44	--	46.5	--	FS1	0.44	
90 V, 50 Hz	0.87	--	46.0	--	FS1	0.87	Model : GT*46401-*19*-W2Z* OP:19 Vdc / 2.1 A
90 V, 60 Hz	0.89	--	46.0	--	FS1	0.89	
100 V, 50 Hz	0.80	1.0	45.0	--	FS1	0.80	
100 V, 60 Hz	0.82	1.0	45.0	--	FS1	0.82	
240 V, 50 Hz	0.46	1.0	46.0	--	FS1	0.46	
240 V, 60 Hz	0.46	1.0	46.0	--	FS1	0.46	
264 V, 50 Hz	0.43	--	45.0	--	FS1	0.43	
264 V, 60 Hz	0.43	--	45.0	--	FS1	0.43	
90 V, 50 Hz	0.86	--	45.6	--	FS1	0.86	Model : GT*46401-*24*-W2Z* OP: 20 Vdc / 2.0 A
90 V, 60 Hz	0.88	--	45.4	--	FS1	0.88	
100 V, 50 Hz	0.79	1.0	45.0	--	FS1	0.79	
100 V, 60 Hz	0.81	1.0	45.0	--	FS1	0.81	
240 V, 50 Hz	0.46	1.0	45.6	--	FS1	0.46	
240 V, 60 Hz	0.46	1.0	45.4	--	FS1	0.46	
264 V, 50 Hz	0.43	--	45.0	--	FS1	0.43	
264 V, 60 Hz	0.43	--	45.0	--	FS1	0.43	
90 V, 50 Hz	0.87	--	46.0	--	FS1		Model : GT*46401-

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Clause	Requirement + Test	Result - Remark	Verdict

B.2.5	TABLE: Input test						P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
90 V, 60 Hz	0.90	--	45.0	--	FS1		*24*-W2Z*
100 V, 50 Hz	0.80	1.0	45.0	--	FS1		OP: 24 Vdc / 1.66 A
100 V, 60 Hz	0.83	1.0	44.0	--	FS1		
240 V, 50 Hz	0.45	1.0	45.0	--	FS1		
240 V, 60 Hz	0.45	1.0	45.0	--	FS1		
264 V, 50 Hz	0.42	--	44.0	--	FS1		
264 V, 60 Hz	0.44	--	44.0	--	FS1		
Supplementary information:--							

B.3	TABLE: Abnormal operating condition tests								P
Ambient temperature (°C) ..... :					25				—
Power source for EUT: Manufacturer, model/type, output rating . :					See appended table 4.1.2				—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation	
15 V to RTN (GT*46401-*15*-W2Z*)	Short	240 Vac	30 min	FS1	0.03		--	1)	
15 V (GT*46401-*15*-W2Z*)	O-L	240 Vac	3 hr 30 min	FS1	0.55		T1 coil: 102.6 °C, Tma 40.0 °C Enclosure: 27.3 °C, O/P wire: 25.3 °C, Tmab 25.0 °C	Max. loaded current was 3.2 A, and ran for thermal equilibrium under it. When loaded 3.4 A output shut down immediately. No damage, no hazard	
19 V to RTN (GT*46401-*19*-W2Z*)	Short	240 Vac	30 min	FS1	0.03		--	1)	
19 V (GT*46401-*19*-W2Z*)	O-L	240 Vac	4 hr 26 min	FS1	0.57		T1 coil: 104.7 °C, Tma 40.0 °C Enclosure: 29.2 °C, O/P wire: 25.8 °C, Tmab 25.0 °C	Max. loaded current was 2.4 A, and ran for thermal equilibrium under it. When loaded 2.6 A output shut down immediately. No damage, no hazard	
24 V to RTN (GT*46401-*24*-W2Z*)	Short	240 Vac	30 min	FS1	0.03		--	1)	

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Clause	Requirement + Test	Result - Remark	Verdict

24 V (GT*46401-*24*-W2Z*)	O-L	240 Vac	3 hr 26 min	FS1	0.58		T1 coil: 111.7 °C, Tma 40.0 °C Enclosure: 25.6 °C, O/P wire: 24.6 °C, Tmab 25.0 °C	Max. loaded current was 2.2 A, and ran for thermal equilibrium under it. When loaded 2.3 A output shut down immediately. No damage, no hazard

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.

Abbreviations used:

NC: Cheesecloth remain intact

NT: Tissue paper remains intact

NB: No indication of dielectric breakdown

CT: Constant temperatures were obtained

ASRE: All safeguards remained effectively

All ES measurement refer to table 5.2

1) After 1 sec, Unit shutdown, NT, NB, NC, ASRE

Note: According to heating results, 90V and 264V did not too much disparity, so as to evaluate 240V only for Clause B.3, disregard of 90V unless 240V overload test temperature result were closed to limit.

B.4	**TABLE: Fault condition tests**							P
Ambient temperature (°C) .....:					25, if not stated below			—
Power source for EUT: Manufacturer, model/type, output rating :					See appended table 4.1.2			—
Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Model: GT*46401-*24*-W2Z*								
T1 (1-2)	S	240 Vac	30 min	FS1	0.03	--	--	1)
T1 (3-4)	S	240 Vac	30 min	FS1	0.03	--	--	1)
T1 (6-7)	S	240 Vac	30 min	FS1	0.03	--	--	1)
U1 (1-2)	S	240 Vac	30 min	FS1	0.03~ 0.27	--	--	Unit cycle protection NT,NB,NC, ASRE
U1 (3-4)	S	240 Vac	30 min	FS1	0.03	--	--	1)
U1 (1)	OC	240 Vac	30 min	FS1	0.03~ 0.27	--	--	Unit cycle protection NT,NB,NC, ASRE

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Clause	Requirement + Test	Result - Remark	Verdict

US1 (2-5)	S	240 Vac	30 min	FS1	0.03	--	--	CD(Q1,R1), unit shutdown, repeat 2 times, results were the same, NT,NB,NC, ASRE
Q1 (G-S)	S	240 Vac	1 sec	FS1	0.03	--	--	1)
Q1 (G-D)	S	240 Vac	1 sec	FS1	0	--	--	IP(FS1), CD(Q1), NT,NB,NC, ASRE
Q1 (D-S)	S	240 Vac	1 sec	FS1	0	--	--	IP(FS1), CD(Q1, R1), NT,NB,NC, ASRE
C1	S	240 Vac	1 sec	FS1	0	--	--	IP(FS1), NT,NB,NC, ASRE
BD1	S	240 Vac	1 sec	FS1	0	--	--	IP(FS1), NT,NB,NC, ASRE
Model: GT*46401-*19*-W2Z*								
T1 (1-2)	S	240 Vac	30 min	FS1	0.03	--	--	1)
T1 (3-4)	S	240 Vac	30 min	FS1	0.03	--	--	1)
T1 (6-7)	S	240 Vac	30 min	FS1	0.03	--	--	1)
Model: GT*46401-*15*-W2Z*								
T1 (1-2)	S	240 Vac	30 min	FS1	0.03	--	--	1)
T1 (3-4)	S	240 Vac	30 min	FS1	0.03	--	--	1)
T1 (6-7)	S	240 Vac	30 min	FS1	0.03	--	--	1)

Supplementary information:

Abbreviations used:

NC: Cheesecloth remain intact

NT: Tissue paper remains intact

NB: No indication of dielectric breakdown

IP: Internal protection operated (list component) repeat all fuse (see appended tables 4.1.2) one time, result were the same

CT: Constant temperatures were obtained

CD: Components damaged (list damaged components)

ASRE: All safeguards remained effectively

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

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Clause	Requirement + Test	Result - Remark	Verdict

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

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

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

Battery/Cell No.	Test conditions	Measurements			Observation
		U	I (A)	Temp (C)	
	Normal				
	Abnormal				
	Single fault –SC/OC				
Supplementary Information:					

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

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Clause	Requirement + Test	Result - Remark	Verdict

Annex Q.1	**TABLE: Circuits intended for interconnectionwith building wiring (LPS)**					P
Note: Measured UOC (V) with all load circuits disconnected:						
Output Circuit	Components	Uoc (V)	I_{sc} (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
12 VDC output	Normal operation	12.06	3.7	8.0	45	100
12 VDC output	SC (RS29)	--	0	8.0	0	100
12 VDC output	OC (RS13)	--	0	8.0	0	100
12 VDC output	SC (U1 pin 1-2)	--	0	8.0	0	100
12 VDC output	SC (R1)	--	0	8.0	0	100
12 VDC output	SC (RS26)	--	3.7	8.0	45	100
12 VDC output	SC (RS13)	--	0	8.0	0	100
15 VDC output	Normal operation	15.09	3.4	8.0	51.1	100
15 VDC output	SC (RS29)	--	0	8.0	0	100
15 VDC output	OC (RS13)	--	0	8.0	0	100
15 VDC output	SC (U1 pin 1-2)	--	0	8.0	0	100
15 VDC output	SC (R1)	--	0	8.0	0	100
15 VDC output	SC (RS26)	--	3.4	8.0	51.1	100
15 VDC output	SC (RS13)	--	0	8.0	0	100
19 VDC output	Normal operation	19.28	2.7	8.0	49.8	100
19 VDC output	SC (RS29)	--	0	8.0	0	100
19 VDC output	OC (RS13)	--	0	8.0	0	100
19 VDC output	SC (U1 pin 1-2)	--	0	8.0	0	100
19 VDC output	SC (R1)	--	0	8.0	0	100

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Clause	Requirement + Test	Result - Remark	Verdict

19 VDC output	SC (RS26)	--	2.7	8.0	49.8	100
19 VDC output	SC (RS13)	--	0	8.0	0	100
24 VDC output	Normal operation	24.08	2.3	8.0	55.1	100
24 VDC output	SC (RS29)	--	0	8.0	0	100
24 VDC output	OC (RS13)	--	0	8.0	0	100
24 VDC output	SC (U1 pin 1-2)	--	0	8.0	0	100
24 VDC output	SC (R1)	--	0	8.0	0	100
24 VDC output	SC (RS26)	--	2.3	8.0	55.1	100
24 VDC output	SC (RS13)	--	0	8.0	0	100

Supplementary Information:
SC=Short circuit, OC=Open circuit. # means F1 opened immediately;
& means USB-C output shut down immediately.

T.2, T.3, T.4, T.5	TABLE: Steady force test	P

Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation
External / front	1)	1)	100	5	2)
External / right	1)	1)	100	5	2)
External / left	1)	1)	100	5	2)

Supplementary information:
1) See appended table 4.1.2
2) No cracking, class 3 energy sources did not become accessible and all safeguards remain effective, No indication of dielectric breakdown

T.6, T.9	TABLE: Impact tests	N/A

Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation

Supplementary information:

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Clause	Requirement + Test	Result - Remark	Verdict

T.7	TABLE: Drop tests				P
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation	
Top	1)	1)	1000	2)	
Side	1)	1)	1000	2)	
Bottom	1)	1)	1000	2)	

Supplementary information:

1) See appended table 4.1.2

2) No cracking, class 3 energy sources did not become accessible and all safeguards remain effective, No indication of dielectric breakdown

T.8	TABLE: Stress relief test				P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation
Enclosure	1)	1)	91	7	2)

Supplementary information:

1) See appended table 4.1.2

2) No shrinkage, warpage, or other distortion, class 3 energy sources did not become accessible. All safeguards remain effective.

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.8	TABLE: Working voltage measurements			N/A
Location		RMS voltage (V)	Peak voltage (V)	Comments
Model: GT*46401-*15*-W2Z* / OP: 15 Vdc / 2.66 A				
T1(1-6)		169	348	--
T1(1-7, RTN)		171	392	--
T1(2-6)		170	360	--
T1(2-7, RTN)		167	344	--
T1(3-6)		256	412	--
T1(3-7, RTN)		254	364	--
T1(4-6)		303	488	--
T1(4-7, RTN)		319	516	**Max Vpk Vrms**
Model: GT*46401-*24*-W2Z* / OP: 20 Vdc / 2.0 A				
T1(1-6)		169	348	--
T1(1-7, RTN)		171	406	--
T1(2-6)		173	367	--
T1(2-7, RTN)		169	344	--
T1(3-6)		257	428	--
T1(3-7, RTN)		254	360	--
T1(4-6)		300	488	--
T1(4-7, RTN)		323	519	**Max Vpk Vrms**
Model: GT*46401-*24*-W2Z* / OP: 24 Vdc / 1.66 A				
T1(1-6)		168	344	--
T1(1-7, RTN)		172	400	--
T1(2-6)		173	368	--
T1(2-7, RTN)		167	344	--
T1(3-6)		259	436	--
T1(3-7, RTN)		256	364	--
T1(4-6)		298	484	--
T1(4-7, RTN)		321	524	**Max Vpk Vrms**

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Clause	Requirement + Test	Result - Remark	Verdict

U1(3-1)	170	352	--
U1(3-2)	170	352	--
U1(4-1)	170	352	--
U1(4-2)	170	352	--
CY1(P-S)	167	340	--
Supplementary information: The following terminals were connected to earth: RTN			

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Clause	Requirement + Test	Result - Remark	Verdict

5.2.1.1	TABLE: Evaluation of voltage limiting components in ES circuits		P
Test voltage / Frequency	240 Vac / 60 Hz		
Component (measured between)	**Max. voltage (V) (normal operation)**		**Comments**
	V peak	**V d.c.**	
Model: GT*46401-*15*-W2Z* / OP: 15 Vdc / 2.66 A			
T1 (6 to RTN)	54	--	--
RS23 to RTN	54	--	--
CS7 to RTN	--	15.8	CS7
D3 to RTN	--	15.8	D3
Model: GT*46401-*24*-W2Z* / OP: 20 Vdc / 2.0 A			
T1 (6 to RTN)	72.9	--	--
RS23 to RTN	66.4	--	--
CS7 to RTN	--	22.6	CS7
D3 to RTN	--	22.6	D3
Model: GT*46401-*24*-W2Z* / OP: 24 Vdc / 1.66 A			
T1 (6 to RTN)	74	--	--
RS23 to RTN	74	--	--
CS7 to RTN	--	26.0	CS7
D3 to RTN	--	26.0	D3
Supplementary information: The following terminals were connected to earth: RTN			

G.5.3.2	TABLE: Transformer

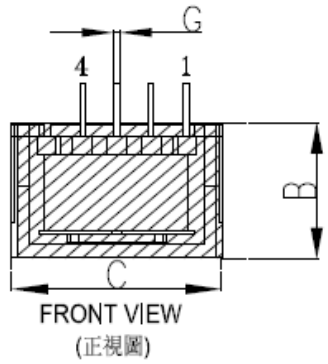
Materials list of XF00936 / XF00945 / XF00946

NO.	COMPONET	MATERIALS	MANUFACTURES	REMARKS
1	CORE	EE22， TP4	TDG HOLDING CO.,LTD OR EQUIV	--
		HC44	SHENZHEN CHINA MAGNETIC ELECTRONIC CO., LTD	
		JPP4	SHENZHEN JLW ELECTRONIC CO., LTD	
2	BOBBIN	EE2218,10PIN PM9820	Sumitomo Bakelite CO.,LTD	E41429
		T375J,T375HF	CHANG CHUN PLASTICS PRODUCTS.,LTD	E59481
		4130	Chang Chun Plastics Co., Ltd.	E59481
		CP-J-8800	HITACHI CHEMICAL CO LTD	E42956
3	WIRE	UEW	JIANGSU DARTONG M&E CO.,LTD	E237377
		UEW	SHANDONG SAINT ELECTRIC CO .,LTD	E194410
	TRIPLE WIRE	TEX-E	FURUKAWA ELECTRIC CO.,LTD	E206440
		TRW(B) series	Great Leoflon INDUSTRIAL	E211989
		TIW-M	COSMOLINK CO. Ltd.	E213764
		TIW-2	TOTOKU ELECTRIC CO LTD	E166483
		E&B-XXXB E&B-XXXB-1	E&B TECHNOLOGY CO LTD	E315265
		CB-TIW	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	E249037
		DTIW-B	SHENZHEN JIUDING NEW MATERIAL CO LTD	E357999
4	INSULATION TAPE	PZ CT WF	JINGJIANG YAHUA PRESSURESENSITIVE GLUE CO.,LTD	E165111
		1350F-(#), 1350T-1,44	3M Company Electrical Markets DIV (EMD)	
		JY25-A	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	E246950
		LY-XX	Chang Shu Liang Yi Tape Industry Co Ltd	E246820
5	VARNISH	DVB-2085(C)	NOROO PAINT&COATINGS CO.,LTD	E93947
6	TUBE	PTFE TFL,TFS,TFT	Great Holding Industrial co.,ltd	E156256
7	ABUMPER	PLASTIC	DOGNGUAN YUANYANG PLASTIC PRODUCTS CO.,LTD	E5948

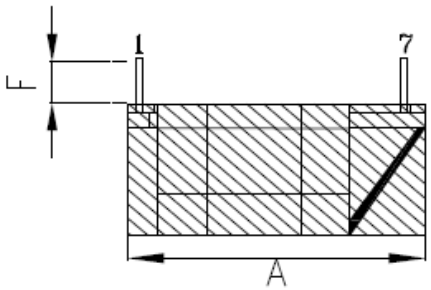
T1 Type XF00936 / XF00945 / XF00946

1,DIMENSION:

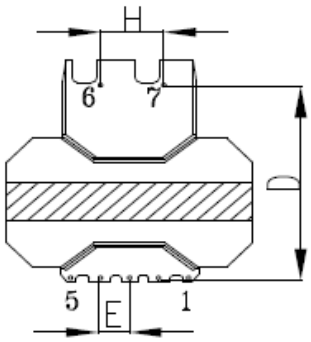
尺寸:



FRONT VIEW
(正視圖)

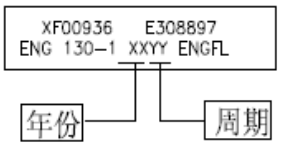


SIDE VIEW
(側視圖)



BOTTOM VIEW
(底視圖)

标签示意图



NOTE:
1. 骨架为RM10立式5+2PIN,PIN距3.0/5.0，排距26.6，骨架顶端朝机台顺时针绕线，成品PIN5剪掉1/2底于骨架档板，但不可剪断线，所有进出线加套管。
2. E1为屏蔽，需背胶，两边反折2mm最小，焊引线加套管，焊点必须平整，光滑。
3. N2尾线从骨架顶部槽穿套管引出，在绕完N4后再折回PIN6挂线.
4. N1/N3分别密绕2层，层与层之间须加1TS层间胶带。
5. 组装磁芯及底部加一个胶套后,在PIN6侧面磁芯处贴一块15mm*40mm长的胶带,上下面反折紧贴在磁芯及底部胶套面，再包8mm*2TS胶带固定，再含浸，烘烤。
6. 成品沿线包包20mm*2TS胶带.
7. 标签贴在产品顶部磁芯胶带上，字头朝PIN6-7侧，其中XXYY表示年份周期.
8. 所有绕组绕线平整，胶带圈数须包足。所有胶带不能有破损。

ITEM 项目	mm(公制) 公制单位
A	31.0MAX
B	21.5MAX
C	31.5MAX
D	26.6±0.5
E	3.0±0.5
F	3.0±0.3
G	0.8±0.1
H	5.0±0.5

T1 Type XF00936

2.WINDING ORDER:

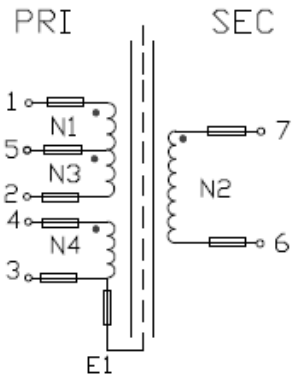
卷繞順序:

WINDING 繞組	始端 PIN	位置	終端 PIN	位置	WIRE 漆線線徑 2UEW	WDG. TURNS 卷繞圈數	檔牆膠帶規格		鐵氟龍套管 S	F	線頭線尾膠帶（mm）規格用量（0.025*7mm）		TAPE 膠帶 (0.025*11mm)	REMARK 備註
N1	1		5		0.30mm*2P	29Ts			#23	#23			1Ts	密繞2层，加层间胶带
E1	3				0.025mm*8mmCU	0.9Ts			#28				1Ts	居中绕
N2	7		6		TEX-E0.9mm*1P	7Ts			#17	#17			1Ts	密绕
N3	5		2		0.30mm*2P	20Ts			#23	#23			1Ts	密绕2层，加层间胶带
N4	4		3		0.30mm*1P	9Ts			#28	#28			1Ts	居中密绕

3.SCHEMATIC:

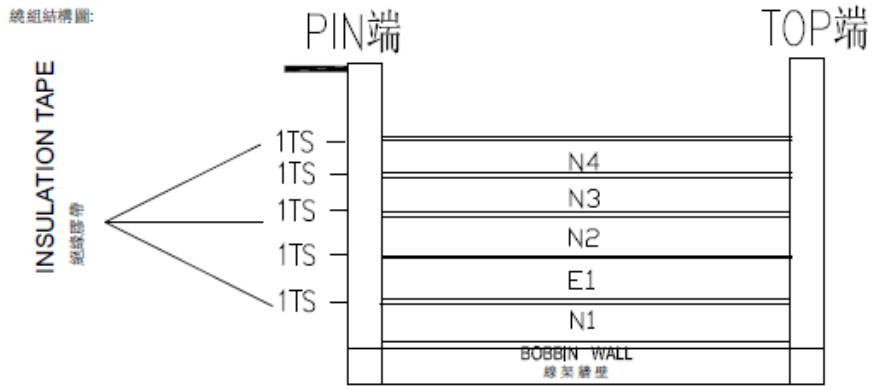
線路圖:

● START
▭ TUBE



4.WINDING CONSTRUCTION:

繞組結構圖:



T1 Type XF00945

2.WINDING ORDER:

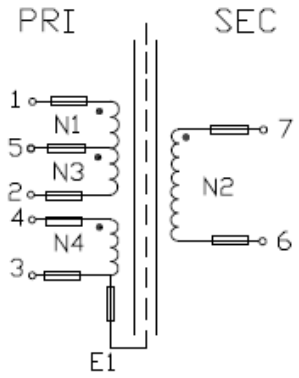
卷繞順序:

WINDING 繞組	始端 PIN	位置	終端 PIN	位置	WIRE 銅線線徑 2UEW	WDG. TURNS 卷繞層數	檔牆膠帶規格		鐵氟龍套管 S	F	線頭線尾膠帶（mm） 規格用量（0.025*7mm）		TAPE 膠帶 （0.025*11mm	REMARK 備註
N1	1		5		0.30mm*2P	29Ts			#23	#23			1Ts	密繞2层,加层间胶带
E1	3				0.025mm*8mmCU	0.9Ts			#28				1Ts	居中绕
N2	7		6		TEX-E0.8mm*1P	9Ts			#18	#18			1Ts	密绕
N3	5		2		0.30mm*2P	20Ts			#23	#23			1Ts	密绕2层,加层间胶带
N4	4		3		0.30mm*1P	9Ts			#28	#28			1Ts	居中密绕

3.SCHEMATIC:

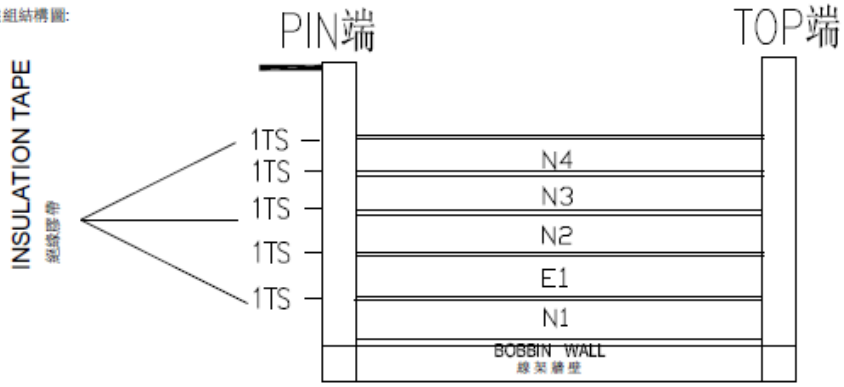
線路圖:

● START
▭ TUBE



4.WINDING CONSTRUCTION:

繞組結構圖:



T1 Type XF00946

2.WINDING ORDER:

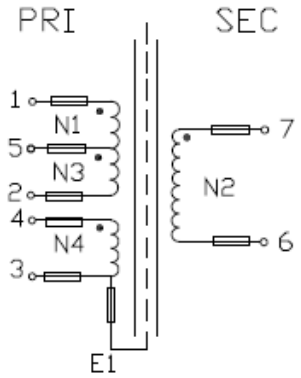
卷繞順序:

WINDING 繞組	始端 PIN	位置	終端 PIN	位置	WIRE 銅線線徑 2UEW	WDG. TURNS 卷繞圈數	檔牆膠帶規格		鐵氟龍套管 S	F	線頭線尾膠帶（mm） 規格用量（0.025*7mm）		TAPE 膠帶 （0.025*11mm）	REMARK 備註
N1	1		5		0.30mm*2P	29Ts			#23	#23			1Ts	密绕2层,加层间胶带
E1	3				0.025mm*8mmCU	0.9Ts			#28				1Ts	居中绕
N2	7		6		TEX-E0.65mm*1P	10Ts			#19	#19			1Ts	密绕
N3	5		2		0.30mm*2P	20Ts			#23	#23			1Ts	密绕2层,加层间胶带
N4	4		3		0.30mm*1P	9Ts			#28	#28			1Ts	居中密绕

3.SCHEMATIC:

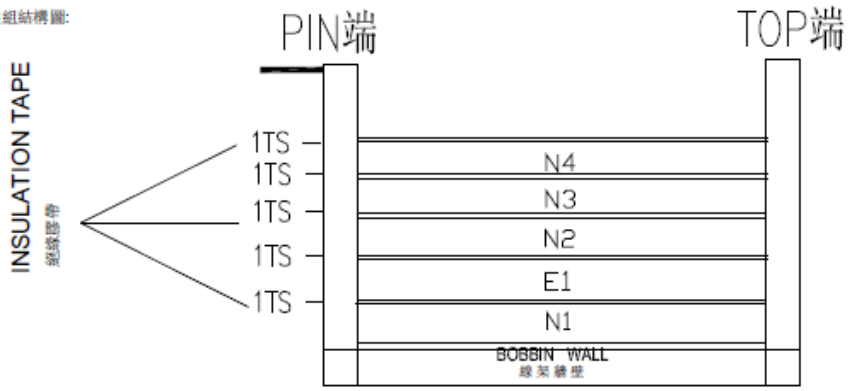
線路圖:

● START
▭ TUBE



4.WINDING CONSTRUCTION:

繞組結構圖:



National differences			
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_IEC 62368_1B_II

Attachment Originator .....: Nemko AS

Master Attachment.....: Date 2017-09-22

	CENELEC COMMON MODIFICATIONS (EN)	—
	Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2014 are prefixed "Z".	P
contents	**Add** the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations Annex ZD (informative) IEC and CENELEC code designations for flexible cords	P
	Delete all the "country" notes in the reference document (IEC 62368-1:2014) according to the following list:	P
	For special national conditions, see Annex ZB.	—
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.	N/A

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

National differences			
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.		P
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.		P
10.2.1	Add the following to [c] and [d] in table 39: For additional requirements, see 10.5.1.		N/A

National differences			
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

National differences			
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.		
ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		—
4.1.15	**Denmark, Finland, Norway** and **Sweden** To the end of the subclause the following is added: **Class I pluggable equipment type A** intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and **accessible** parts, have a marking stating that the equipment shall be connected to an earthed **mains** socket-outlet. The marking text in the applicable countries shall be as follows: In **Denmark**: “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”	The equipment is Class II equipment	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	The equipment is direct plug-in equipment and it complied with the torque test	P

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

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

National differences			
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

National differences			
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

National differences			
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.	Complied	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.	The equipment is direct plug-in equipment	N/A
G.7.1	**Ireland** To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard		N/A
G.7.2	**Ireland and United Kingdom** To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm^2 is allowed for equipment which is rated over 10 A and up to and including 13 A.		N/A

National differences			
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

National differences			
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

Attachment Form No. ..... : AU_NZ_ND_IEC 62368_1B

Attachment Originator..... : JAS-ANZ

Master Attachment ..... : 2019-02-04

	National Differences		—
Appendix ZZ	Variations to IEC 62368-1:2014 (ED. 2.0) for Australia and New Zealand		—
ZZ1 Scope	This Appendix lists the normative variations to IEC 62368-1:2014 (ED. 2.0)		—
ZZ2 Variations	The following modifications are required for Australian/New Zealand conditions:		—
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*		P

National differences			
Clause	Requirement + Test	Result - Remark	Verdict
	-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)* 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.*		
.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

National differences			
Clause	Requirement + Test	Result - Remark	Verdict
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** 1 Second dashed point, *delete* the text and *replace* with the following: – include coin/button cell batteries with a diameter of 32 mm or less. 2 After the second dashed point, *insert* the following Note: NOTE 1: Batteries are specified in IEC 60086-2. 3 After the third dashed point, *renumber* the existing Note as 'NOTE 2'. 4 Fifth dashed point, *delete* the word 'lithium'.	No batter	N/A
4.8.2	**Instructional Safeguard** First line, *delete* the word 'lithium'.		N/A
4.8.3	**Construction** First line, after the word 'Equipment' *insert* the words 'containing one or more coin/button batteries and'		N/A
4.8.5	**Compliance criteria** *Delete* the first paragraph and *replace* with the following: *Compliance is checked by applying a force of 30 N +/-1 N for 10 s to the battery compartment door/cover by a rigid test finger according to test probe 11 of IEC 61032:1997 at the most unfavourable place and in the most unfavourable* *direction. The force shall be applied in one direction at a time.*		N/A
5.4.10.2	**Test methods**		N/A

National differences			
Clause	Requirement + Test	Result - Remark	Verdict

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

National differences			
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**		N/A
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		N/A
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'.	Not Large data storage equipment	N/A
8.6	**Stability of equipment**		N/A

National differences			
Clause	Requirement + Test	Result - Remark	Verdict
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
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)		N/A
Annex F Paragraph F.3.5.1	**Mains appliance outlet and socket-outlet markings** *Replace* 'IEC 60320-2-2' with 'AS/NZS 60320.2.2'.		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.		N/A

National differences			
Clause	Requirement + Test	Result - Remark	Verdict
Paragraph G.5.3.1	**Transformers, General** 1 In the third dashed point *replace* 'IEC 61558-1 and the relevant parts of IEC 61558-2' with 'AS/NZS 61558-1 and the relevant parts of AS/NZS 61558.2' 2 In the fourth dashed point *replace* 'IEC 61558-2-16' with 'AS/NZS 61558.2.16'.		P
Paragraph G.7.1	**Mains supply cords, General** In the fourth dashed paragraph, *replace* 'IEC 60320-1' with 'AS/NZS 60320.1'		N/A
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'		P
Annex M **Paragraph M.3.2**	**Protection circuits for batteries provided within the equipment, Test method** After the first dashed point *add* the following Note: NOTE 201: In cases where the voltage source is provided by power from an unassociated power source, consideration should be given to the effects of possible single fault conditions in the unassociated equipment. If the power source is unknown then it should be assumed that the maximum limit of SELV may be applied to the source input under assumed single fault conditions in the source when assessing the charging circuit in the equipment under test.	No batter	N/A
	Special national conditions (if any)		P

National differences			
Clause	Requirement + Test	Result - Remark	Verdict
6.201	**External power supplies, docking stations and other similar devices** For external power supplies, docking stations and other similar devices, during and after abnormal operating conditions and during single fault conditions the output voltage— – at all ES1 outlets or connectors shall not increase by more than 10% of its rated output voltage under normal operating condition; and – of a USB outlet or connector shall not increase by more than 3 V or 10% of its rated output voltage under normal operating conditions, whichever is higher. For equipment with multiple rated output voltages, the requirements apply with the equipment configured for each rated output voltage in turn. NOTE: This is intended to reduce the possibility of battery fire or explosion in attached equipment or accessories when charging secondary lithium batteries. *Compliance shall be checked by measurement, taking into account the abnormal* *operating conditions of Annex B.3 and the simulated single-fault conditions of Annex B.4*		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 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;		N/A

National differences			
Clause	Requirement + Test	Result - Remark	Verdict
	– 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

National differences			
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

National differences			
Clause	Requirement + Test	Result - Remark	Verdict
	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.
9.3 Number of test specimens	*Replace* with the following: The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.
11 Evaluation of test results	*Replace* with the following: The duration of burning (tb) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.

The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10, provided that the relevant part is not thinner than the sample tested.

National differences			
Clause	Requirement + Test	Result - Remark	Verdict
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

National differences			
Clause	Requirement + Test	Result - Remark	Verdict
6.202.5	**Testing of printed boards** The base material of printed boards shall be subjected to the needle-flame test of Clause 6.202.3. The flame shall be applied to the edge of the board where the heat sink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge, consisting of broken perforations, unless the edge is less than 3 mm from a potential ignition source. The test is not carried out if— – the printed board does not carry any potential ignition source; – the base material of printed boards, on which the available apparent power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category V-1 or better according to AS/NZS 60695.11.10, or the printed boards are protected by an enclosure meeting the flammability category V-0 according to AS/NZS 60695.11.10, or made of metal, having openings only for connecting wires 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.		N/A
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.	No voltages more than 4 kV	N/A

National differences			
Clause	Requirement + Test	Result - Remark	Verdict
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		P
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.	Sales to New Zealand and Australia need an additional evaluation.	N/A

National differences			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 62368-1 2th Ed.
U.S.A. NATIONAL DIFFERENCES
Audio/video, information and communication technology equipment – Part 1: Safety requirements

Differences according to.....:	CSA/UL 62368-1:2014
Attachment Form No.....:	US&CA_ND_IEC623681B
Attachment Originator .....:	UL(US)
Master Attachment.....:	Date 2015-06

Clause	Requirement + Test	Result - Remark	Verdict
IEC 62368-1 - US and Canadian National Differences **Special National Conditions based on Regulations and Other National Differences**			
1.1	All equipment is to be designed to allow installation according to the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, for such equipment marked or otherwise identified, installation is allowed per the Standard for the Protection of Information Technology Equipment, ANSI/NFPA 75.		P
1.4	Additional requirements apply to some forms of power distribution equipment, including sub-assemblies.		P
4.1.17	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the NEC.		N/A

National differences			
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.		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	The EUT is a Class II equipment	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.	The DC output connector is provided. See copy of marking plate of IEC 62368-1 test report.	P
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

National differences			
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.		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.		N/A
Annex M	Battery packs for stationary applications comply with special component requirements.		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.		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.		N/A

National differences			
Clause	Requirement + Test	Result - Remark	Verdict
	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.		N/A
	Baby monitors additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
Annex DVA (5.6.3)	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered.	P
Annex DVA (6.3)	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30.		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.		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).		N/A
Annex DVA (10.5.1)	Equipment that produces ionizing radiation complies with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A

National differences			
Clause	Requirement + Test	Result - Remark	Verdict
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.”		N/A
Annex DVA (F.3.3.5)	Equipment identified for ITE (computer) room installation is marked with the rated current		N/A
Annex DVA (G.1)	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position		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.		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).		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.		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.		N/A

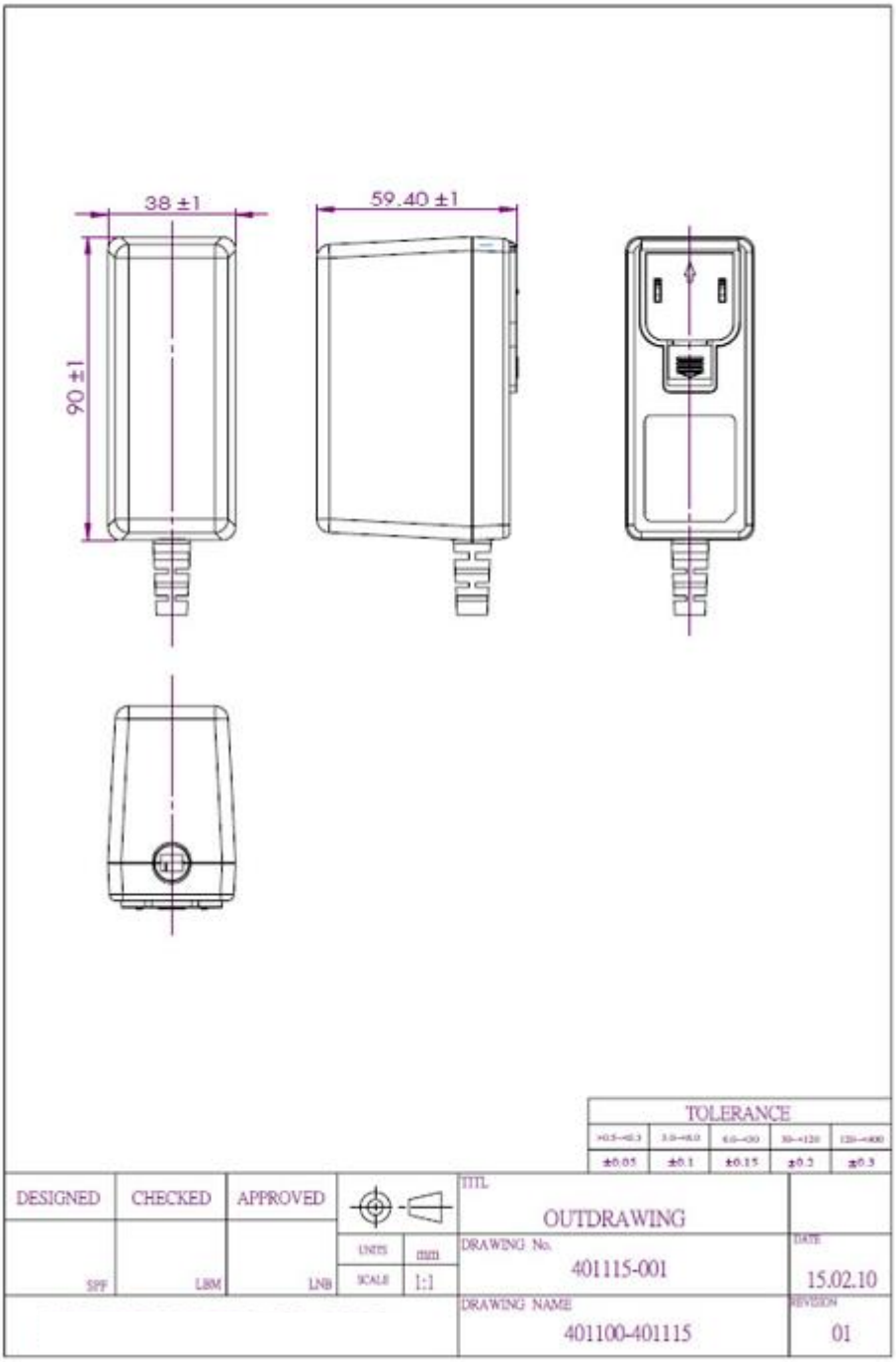
National differences			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVA (G.5.4)	Motor control devices are required for cord-connected equipment with a mains-connected motor if the equipment is rated more than 12 A, or if the equipment has a nominal voltage rating greater than 120 V, or if the motor is rated more than 1/3 hp (locked rotor current over 43 A).		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.		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.		N/A
Annex DVB (1)	Additional requirements apply for equipment used for entertainment purposes intended for installation in general patient care areas of health care facilities.		N/A
Annex DVC (1)	Additional requirements apply for equipment intended for mounting under kitchen cabinets.		N/A

National differences			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVE (4.1.1)	Some equipment, components, sub-assemblies and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material requirements. Components required to comply include: appliance couplers, attachment plugs, battery back-up systems, battery packs, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultra-capacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), ground-fault current interrupters, interconnecting cables, data storage equipment, printed wiring, protectors for communications circuits, receptacles, surge protective devices, vehicle battery adapters, wire connectors, and wire and cables.	UL approved components used. Refer to table 4.1.2 of IEC 62368-1 test report for details.	P
Annex DVH	Equipment for permanent connection to the mains supply is subjected to additional requirements.		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.		N/A
Annex DVH (DVH.3.2)	Terminals for permanent wiring, including protective earthing terminals, are suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and are specially marked when specified.		N/A

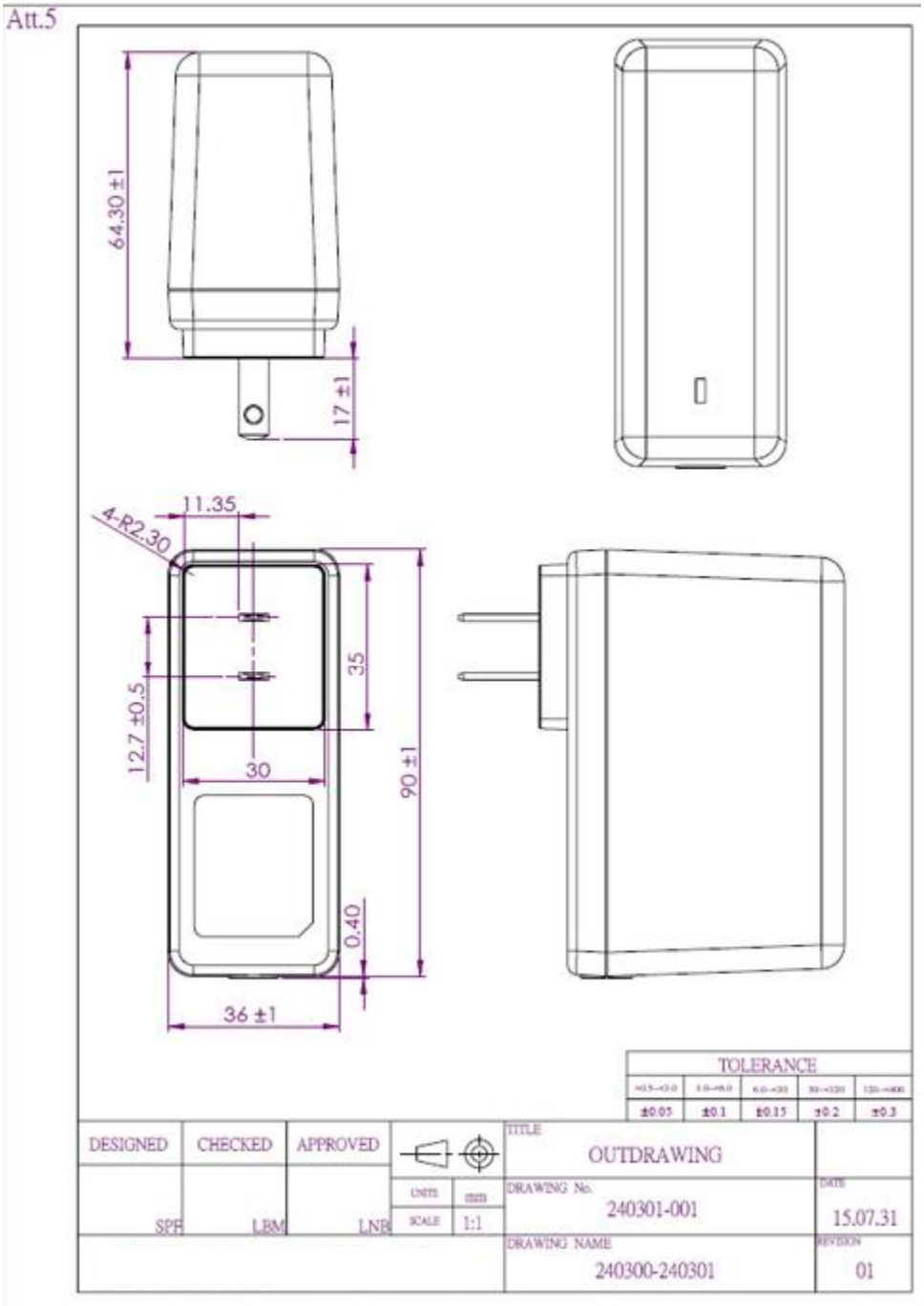
National differences			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVH (DVH.3.2)	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).		N/A
Annex DVH (DVH.4)	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.		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.		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.		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.		N/A

Enclosure Drawing

Att.2



Enclosure Drawing



Replaceable plug (United State)

Replaceable plug (United Kingdom)

Replaceable plug (Europe)

Replaceable plug (Australia)

Replaceable plug (China)

Replaceable plug (Korea)

Replaceable plug of enclosure top (all plugs)

Fixed plug (United State)

Fixed plug (United Kingdom)

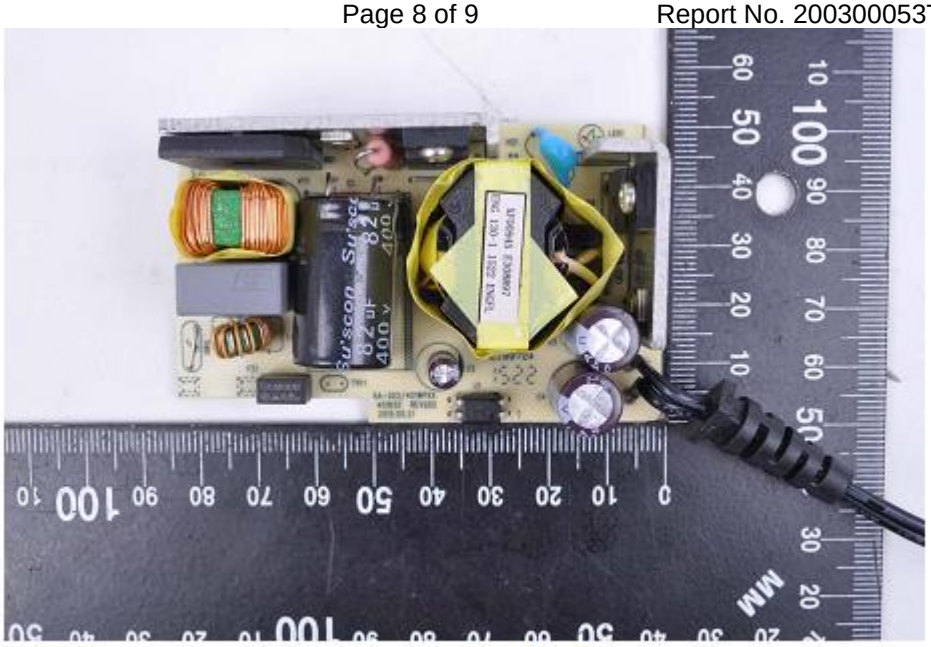
Fixed plug (Europe)

Fixed plug (Australia)

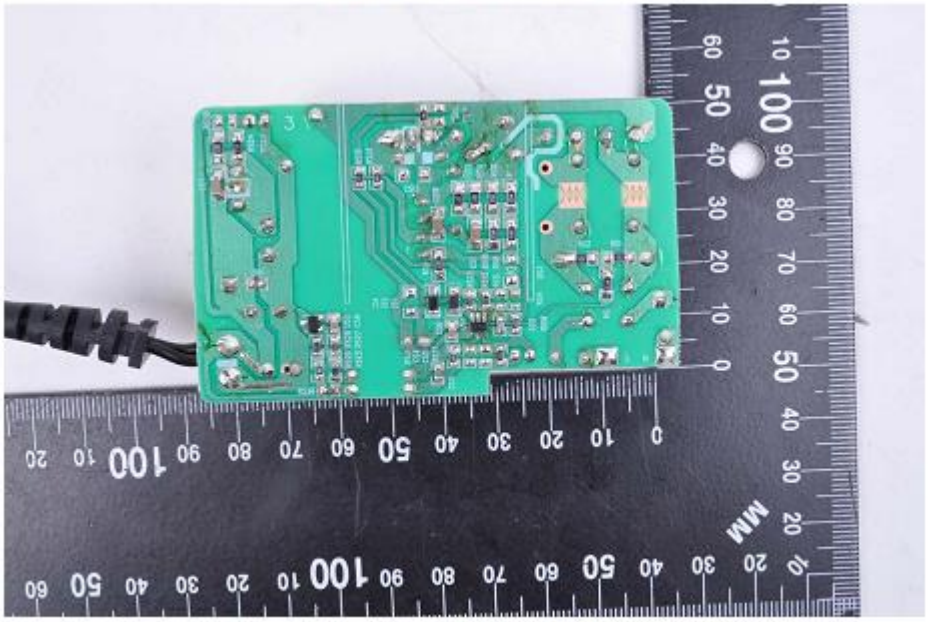
Fixed plug (China)

fixed plug of enclosure top (all plugs)

Inside view with input connection use shrapnel clip (Replaceable plug)

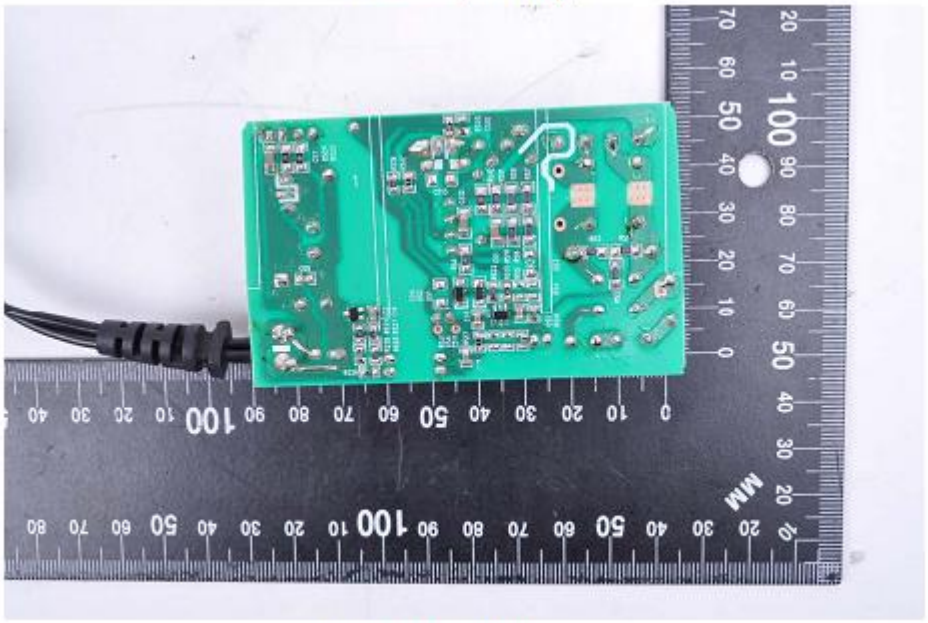


Inside view (Replaceable plug)



trace view (Replaceable plug)

Inside view (fiexed plug)



trace view (fixed plug)