



Test Report issued under the responsibility of:

Intertek

TEST REPORT

IEC 62368-1

Audio/video, information and communication technology equipment

Part 1: Safety requirements

Report Number : 161200822SHA-003

Date of issue : 2017-04-21

Total number of pages : 105

Applicant's name : GlobTek, Inc.

Address : 186 Veterans Dr. Northvale, NJ 07647 USA

Test specification:

Standard..... : IEC 62368-1:2014 (Second Edition)

Test procedure : CB Scheme

Non-standard test method : N/A

Test Report Form No. : IEC62368_1B

Test Report Form(s) Originator..... : UL(US)

Master TRF : 2014-03

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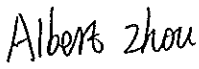
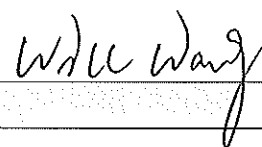
If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

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	ITE POWER SUPPLY	
Trade Mark		
Manufacturer	Same as applicant	
Model/Type reference	GT*961200P**** and GT*96900P**** (Refer to page 7 for details)	
Ratings	Input: 100-240V~, 50-60Hz, 1.5A; Output: 12-54VDC, Max. 9.2A, Max. 120W Refer to page 7 for details.	
Testing procedure and testing location:		
<input checked="" type="checkbox"/> CB Testing Laboratory:	Intertek Testing Services Shanghai	
Testing location/ address	Building No. 86, 1198 Qinzhou Road (North) 200233 Shanghai CHINA	
<input type="checkbox"/> Associated CB Testing Laboratory:	N/A	
Testing location/ address		
Tested by (name + signature)	Albert Zhou (Engineer)	
Approved by (name + signature)	Will Wang (Mandated Reviewer)	
<input type="checkbox"/> Testing procedure: TMP/CTF Stage 1	N/A	
Testing location/ address		
Tested by (name + signature)		
Approved by (name + signature)		
<input type="checkbox"/> Testing procedure: WMT/CTF Stage 2	N/A	
Testing location/ address		
Tested by (name + signature)		
Witnessed by (name + signature)		
Approved by (name + signature)		
<input type="checkbox"/> Testing procedure: SMT/CTF Stage 3 or 4	N/A	
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):**Appendix No.1: Photos of product; from page 73 to 86, total 14 pages.****Appendix No.2: Group differences for the CENELEC countries and national differences for USA and Canada; from page 87 to 105, total 19 pages.****Summary of testing:****From the result of our examination and tests in the submitted samples, conclude they comply with the requirements of the standard IEC 62368-1:2014 (Second Edition) & EN 62368-1:2014.****Tests performed (name of test and test clause):**

All applicable tests as described in Test Case and Measurement Sections were performed.

Maximal ambient temperature as specified by the manufacturer: +40°C.

5.2 Classification and limits of electrical energy sources

5.3.2 Accessibility to electrical energy sources and safeguards

5.4.1.4 Maximum operating temperatures for materials, components and systems

5.4.1.8 Determination of working voltage

5.4.1.10.3 Ball pressure test

5.4.2 Clearances

5.4.3 Creepage distances

5.4.8 Humidity conditioning

5.4.9 Electric strength test

5.7.2.1 Measurement of touch current

6.2.2.2 Power measurement for worst-case load fault

6.2.2.3 Power measurement for worst-case source fault

6.4.3.3 Single Fault Conditions test

B.2.5 Input test

B.3.5 Maximum load at output terminals

F.3.10 Permanence of markings

G.5.3.3 Overload test of Transformers

Q.1.2 Limited power sources

T.2 Steady force test, 10 N

T.4 Steady force test, 100 N

T.7 Drop test

T.8 Stress relief test

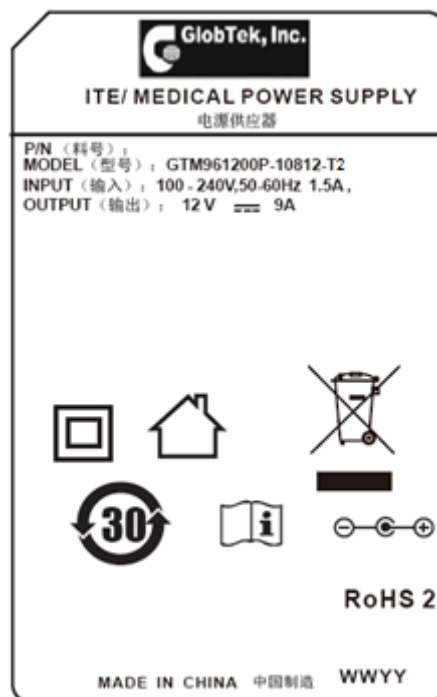
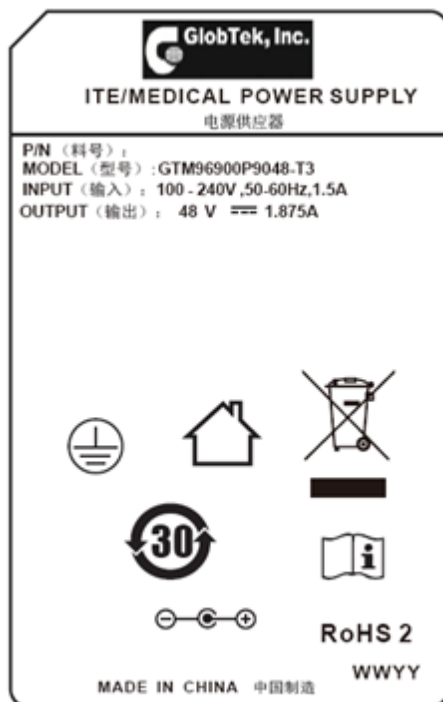
Remark:

From the result of our examination and tests in the submitted samples, conclude they comply with the requirements of the standard IEC 62368-1:2014 (Second Edition)

Testing location:Intertek Testing Services Shanghai
Building No.86, 1198 Qinzhou Road
(North), 200233 Shanghai, China**Summary of compliance with National Differences:****List of countries addressed****Group difference for CENELEC countries and national differences USA and Canada are considered.**☒ **The product fulfils the requirements of IEC 62368-1:2014 (Second Edition) & EN 62368-1:2014.**

Copy of marking plate(s):

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.

**Remark:**

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

Other models are with similar label as corresponding above models except different model name and output ratings.

TEST ITEM PARTICULARS:	
Classification of use by	<input checked="" type="checkbox"/> Ordinary person <input type="checkbox"/> Instructed person <input type="checkbox"/> Skilled person <input type="checkbox"/> Children likely to be present
Supply Connection	<input checked="" type="checkbox"/> AC Mains <input type="checkbox"/> DC Mains <input type="checkbox"/> External Circuit - not Mains connected - <input type="checkbox"/> ES1 <input type="checkbox"/> ES2 <input checked="" type="checkbox"/> ES3
Supply % Tolerance	<input checked="" type="checkbox"/> +10%/-10% <input type="checkbox"/> +20%/-15% <input type="checkbox"/> +____%/ -____% <input type="checkbox"/> None
Supply Connection – Type	<input checked="" type="checkbox"/> pluggable equipment type A - <input type="checkbox"/> non-detachable supply cord <input checked="" type="checkbox"/> appliance coupler <input type="checkbox"/> direct plug-in <input type="checkbox"/> mating connector <input type="checkbox"/> pluggable equipment type B - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> permanent connection <input type="checkbox"/> mating connector <input type="checkbox"/> other: building-in equipment shall be evaluated in end system (see also general product information).
Considered current rating of protective device as part of building or equipment installation	16A (20A for Noth America) Installation location: <input checked="" type="checkbox"/> building; <input type="checkbox"/> equipment
Equipment mobility	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input checked="" type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in <input type="checkbox"/> rack-mounting <input type="checkbox"/> wall-mounted
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other: _____
Class of equipment	<input checked="" type="checkbox"/> Class I <input checked="" type="checkbox"/> Class II <input type="checkbox"/> Class III
Access location	<input type="checkbox"/> restricted access location <input checked="" type="checkbox"/> N/A
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
Manufacturer's specified maximum operating ambient	40°C
IP protection class	<input checked="" type="checkbox"/> IPX0 <input type="checkbox"/> IP____
Power Systems	<input checked="" type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT – ____ V _{L-L}
Altitude during operation (m)	<input type="checkbox"/> 2000 m or less <input checked="" type="checkbox"/> ≤5000 m
Altitude of test laboratory (m)	<input type="checkbox"/> 2000 m or less <input checked="" type="checkbox"/> ≤50 m
Mass of equipment (kg)	<input checked="" type="checkbox"/> Approx. 0.40 kg (For model: GT*96900P series, GT*961200P series)

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..... :	2016-12-12
Date (s) of performance of tests..... :	2016-12-12 to 2017-02-16
GENERAL REMARKS:	
<p>"(See Enclosure #)" refers to additional information appended to the report.</p> <p>"(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p> <p>When determining for test conclusion, measurement uncertainty of tests has been considered.</p> <p>Through the report, model GTM96900P9012-T2, GTM96900P9015-T3, GTM96900P9054-T2, GTM961200P12015-T3 and GTM961200P12054-T2 were tested as typical models for all tests.</p> <p>This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.</p> <p>The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.</p>	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC60068-2-2:	
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	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)	1. GlobTek (Suzhou) Co., Ltd Building 4, No. 76 JinLing East Road, Suzhou Industrial Park, Suzhou, JiangSu, 215021, China 2. GlobTek, Inc. 186 Veterans Dr. Northvale, NJ 07647 USA
GENERAL PRODUCT INFORMATION:	

General product information:

Product covered by this report is ITE power supply module. GT*96900P series for Limited Power Source (LPS) application.

Desktop power supplies are provided with suitable external enclosure. The top and bottom parts of the enclosure are ultrasonic welded and screws.

The products were tested to be suitable for connection to ≤ 16 A (IEC) and ≤ 20 A (USA) branch circuit in series. The unit is approved for TN mains star connections. The unit provides internally two fuse locations, the first fuse F1 is required, the second fuse F2 is optional.

The power supplies are rated class I or class II.

All the types are designed for continuous operation.

Model Similarity:**GT*961200P**** and GT*96900P******

The 1st “*” part can be ‘M’ or ‘-’ or ‘H’ for market identification and not related to safety.

The 2nd “*” denotes the rated output wattage designation, which can be “-01” to “-120”, with interval of 1 and “-” can be omitted, “-01” stands for 1W, “-120” stands for 120W.

The 3rd “*” denote the standard rated output voltage designation, which can be “12” to “54” or “12.0” to “54.0” in 0.1V increments, “12” or “12.0” stands for 12V, “54” or “54.0” stands for 54V.

The 4th “*”

- =T2 means desktop class II with C8 AC inlet
- =T2A means desktop class II with C18 AC inlet
- =T3 means desktop class I with C14 AC inlet
- =T3TAB means desktop class I with C14 AC inlet and housing with a tab.
- =T3A means desktop class I with C6 AC inlet

The last * denote any six character such as “0-9” or “A-Z” or “()[]” or “-” or blank for marketing purposes

Model list:

GT*961200P** and GT*96900P**** Desktop models**

Model	Input	Output Voltage	Max. output current	Max. output power
GT*96900P**-T2/T2A/T3/T3A/T3TAB*	100-240V~, 50-60Hz, 1.5A	12-54Vdc	7.5A	90W
GT*961200P**-T2/T2A/T3/T3A/T3TAB*		12-54Vdc	9.2A	120W

Abbreviations used in the report:

- normal conditions	N.C.	- single fault conditions	S.F.C
- functional insulation	FI	- basic insulation	BI
- double insulation	DI	- supplementary insulation	SI
- between parts of opposite polarity	BOP	- reinforced insulation	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)
Primary circuit	ES3
Output circuit	ES1

Electrically-caused fire (Clause 6):

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

Example: Battery pack (maximum 85 watts):

PS2

Source of power or PIS	Corresponding classification (PS)
Primary circuit	PS3
Output circuit	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	None

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)
Edges and corners of enclosure	MS1
Mass of the unit	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)
External surfaces	TS1 for accessible part

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

Supplementary Information:

(1) See attached energy source diagram for additional details.

(2) "N" – Normal Condition; "A" – Abnormal Condition; "S" Single Fault

4	GENERAL REQUIREMENTS		P
4.1.1	Acceptance of materials, components and subassemblies	See appended table 4.1.2	P
4.1.2	Use of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment. See also Annex G	P
4.1.3	Equipment design and construction	Evaluation of safeguards regarding limiting the outputs to fulfill ES1, and protection in regard to risk of ignition, mechanical-caused injury and thermal burn considered.	P
4.1.15	Markings and instructions	(See Annex F)	P
4.4.4	Safeguard robustness	See below.	P
4.4.4.2	Steady force tests	(See Annex T.2 and 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	The external enclosure cannot be opened without damaging the product.	N/A
4.4.4.6	Glass Impact tests	No such 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	After tests of 4.4.4.2, 4.4.4.3, 4.4.4.7, no safeguard damaged.	P
4.5	Explosion	No explosion occurs during normal/abnormal operation and single fault conditions	P
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard	The conductors will be connected by pluggable connector or wire terminals.	P
4.6.2	10 N force test applied to	Internal components and wiring.	P
4.7	Equipment for direct insertion into mains socket - outlets	Not direct plug-in plug	N/A
4.7.2	Mains plug part complies with the relevant		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	standard.....:		
4.7.3	Torque (Nm)		N/A
4.8	Products containing coin/button cell batteries	No coin/button cell batteries used.	N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery		
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.....:	No likelihood of conductive object entering into enclosure.	P

5	ELECTRICALLY-CAUSED INJURY		P
5.2.1	Electrical energy source classifications.....:	(See appended table 5.2)	P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current.....:	(See appended table 5.2)	P
5.2.2.3	Capacitance limits		N/A
5.2.2.4	Single pulse limits	No such single pulses generated in the EUT or applied to it.	N/A
5.2.2.5	Limits for repetitive pulses	No such repetitive pulses within the EUT	N/A
5.2.2.6	Ringling signals	No such ringing signals within the EUT	N/A
5.2.2.7	Audio signals	No such audio signals	N/A
5.3	Protection against electrical energy sources	See table "OVERVIEW OF EMPLOYED SAFEGUARDS"	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	No opening for enclosure.	P
	a) Test with test probe from Annex V	No access with test probe to any ES3 circuit or parts.	P
	b) Electric strength test potential (V)		N/A
	c) Air gap (mm)		N/A
5.3.2.4	Terminals for connecting stripped wire	No stripped wire used.	N/A
5.4	Insulation materials and requirements		P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.2	Properties of insulating material	The choice and application have taken into account as specified in this Clause 5 and Annex T and natural rubber, hygroscopic materials or asbestos are not used as insulation.	P
5.4.1.3	Humidity conditioning	No hygroscopic material used.	N/A
5.4.1.4	Maximum operating temperature for insulating materials	Considered to be class 130 (B)	P
5.4.1.5	Pollution degree	2	
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound	Pollution degree 2 is applied. No insulating compound applied (however see 5.5.4).	N/A
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions	No such transformer.	N/A
5.4.1.7	Insulation in circuits generating starting pulses	No such starting pulses.	N/A
5.4.1.8	Determination of working voltage	(See appended table 5.4.1.8)	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	The bobbin materials of each transformer are phenolic which is acceptable without test. For other parts see appended table 5.4.1.10.3.	P
5.4.2	Clearances	The highest value of 5.4.3.3 and 5.4.2.3 be used.	P
5.4.2.2	Determining clearance using peak working voltage	Temporary overvoltage 2000V _{peak} assumed.	P
5.4.2.3	Determining clearance using required withstand voltage	(See appended table 5.4.2.2, 5.4.2.4 and 5.4.3)	P
	a) a.c. mains transient voltage	2500 V _{pk} considered for Overvoltage Cat. II	—
	b) d.c. mains transient voltage	Not d.c. mains.	—
	c) external circuit transient voltage	No such transient	—
	d) transient voltage determined by measurement :		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test	Using procedure 2 to determine the clearance according to 5.4.2.3.	N/A
5.4.2.5	Multiplication factors for clearances and test voltages		N/A
5.4.3	Creepage distances	(See appended table 5.4.2.2, 5.4.2.4 and 5.4.3)	P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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	Approved Opto-coupler used	P
5.4.4.4	Solid insulation in semiconductor devices	Approved Opto-coupler used	P
5.4.4.5	Cemented joints		N/A
5.4.4.6	Thin sheet material	2 layers insulation tape used for secondary heat-sink and transformer as reinforce insulation	P
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material		P
	Number of layers (pcs)	2 layers	P
5.4.4.6.3	Non-separable thin sheet material	No such insulation used within the EUT	N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components	See G.5.3 and G.6.1 only.	P
5.4.4.9	Solid insulation at frequencies >30 kHz	For bobbin of T1: $V_w = E_p \cdot K \cdot d = 17 \cdot 0.71 \cdot 0.45 = 5431.5V$ exceeds $2 \cdot 1.2 \cdot 540V = 1296V$ (Peak working voltage at high frequency $V_{pw} = 540V$ which is highest peak measured for T1).	P
5.4.5	Antenna terminal insulation	No antenna terminal used.	N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (M Ω)		N/A
5.4.6	Insulation of internal wire as part of supplementary safeguard	No such insulation of internal wire as part of supplementary safeguard.	N/A
5.4.7	Tests for semiconductor components and for cemented joints	No tests necessary –see only 5.4.4.4.	N/A
5.4.8	Humidity conditioning		P
	Relative humidity (%)	93%	—
	Temperature (°C)	40°C	—
	Duration (h)	120h (as client's requirement)	—
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	(See appended table 5.4.9)	P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.9.2	Test procedure for routine tests	Should be considered and conducted during production at factory.	N/A
5.4.10	Protection against transient voltages between external circuit	No such external circuits	N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test		N/A
5.4.10.2.3	Steady-state test.....		N/A
5.4.11	Insulation between external circuits and earthed circuitry	No such external circuit.	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	See below.	P
5.5.2	Capacitors and RC units	Approved Y capacitor (CY1) provided. See G.11.1.	P
5.5.2.1	General requirement		P
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector.....	No capacitor provided before diode bridge, no test required.	N/A
5.5.3	Transformers	(See Annex G.5.3)	P
5.5.4	Optocouplers	Approved Optocoupler used	P
5.5.5	Relays	No such component provided	N/A
5.5.6	Resistors		N/A
5.5.7	SPD's	VDR used between L and N	P
5.5.7.1	Use of an SPD connected to reliable earthing	No such use	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	No such external circuits.	N/A
5.6	Protective conductor		

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.6.2	Requirement for protective conductors	Class I AC inlet used for models GT*96900P**-T3/T3A/T3TAB* and GT*961200P**-T3/T3A/T3TAB*	P
5.6.2.1	General requirements		P
5.6.2.2	Colour of insulation	Green/Yellow wire used	P
5.6.3	Requirement for protective earthing conductors		P
	Protective earthing conductor size (mm ²)	AC inlet used	--
5.6.4	Requirement for protective bonding conductors		P
5.6.4.1	Protective bonding conductors		P
	Protective bonding conductor size (mm ²).	See appended table used	--
	Protective current rating (A)	16A (20A for US and CA)	--
5.6.4.3	Current limiting and overcurrent protective devices		P
5.6.5	Terminals for protective conductors	AC inlet direct connect to protective bonding wire	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		P
5.6.6.1	Requirements		P
5.6.6.2	Test Method Resistance.....	20mΩ, 0.8V, 40A, 2mins	P
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks	Figure 4 of IEC 60990 was used in determining of the limit of ES1.	P
5.7.2.1	Measurement of touch current	(See appended table 5.7.2.2, 5.7.4)	P
5.7.2.2	Measurement of prospective touch voltage		N/A
5.7.3	Equipment set-up, supply connections and earth connections		N/A
	System of interconnected equipment (separate connections/single connection)		—
	Multiple connections to mains (one connection at a time/simultaneous connections)		—
5.7.4	Earthed conductive accessible parts	Considered only for model GT*96900P**-T3/T3A/T3TAB* and GT*961200P**-T3/T3A/T3TAB*	P
5.7.5	Protective conductor current		P
	Supply Voltage (V).....	See appended table	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Measured current (mA).....:	See appended table	—
	Instructional Safeguard.....:		N/A
5.7.6	Prospective touch voltage and touch current due to external circuits	No external circuits.	N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits	No external circuits.	N/A
	a) Equipment with earthed external circuits Measured current (mA).....:		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA)		N/A

6	ELECTRICALLY- CAUSED FIRE		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications	PS (power source) classification determined by measuring the maximum power in Figures 34 and 35 for load and power source circuits.	P
6.2.2.1	General	See the following details.	P
6.2.2.2	Power measurement for worst-case load fault ... :	(See appended table 6.2.2)	P
6.2.2.3	Power measurement for worst-case power source fault	(See appended table 6.2.2)	P
6.2.2.4	PS1		N/A
6.2.2.5	PS2	(See appended table 6.2.2)	P
6.2.2.6	PS3	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS	(See appended table 6.2.3.1)	P
6.2.3.2	Resistive PIS	(See appended table 6.2.3.2)	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 C for unknown materials	No ignition and no such temperature attained within the equipment. (See appended table 5.4.1.4, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure	Only output wire and connector complying to 6.4.5.	N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Method by control of fire spread applied, Fire enclosure provided.	P

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Clause	Requirement + Test	Result - Remark	Verdict
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	Compliance detailed as follows: <ul style="list-style-type: none"> - <u>Printed board</u>: rated min. V-1 - <u>Wire insulation (tubing)</u>: complying with Clause 6 (See Table 4.1.2 for wiring used). - <u>All other components</u>: at least V-2 except for mounted on min. V-1 material or small parts of combustible material. - <u>Isolating transformer</u>: complying with G.5.3. 	P
6.4.5.2	Supplementary safeguards :	(See appended tables 4.1.2 and Annex G)	P
6.4.6	Control of fire spread in PS3 circuit	Compliance detailed as follows: <ul style="list-style-type: none"> - <u>Parts as in 6.4.5 above including wiring</u> - Fire enclosure rated V-0 used. 	P
6.4.7	Separation of combustible materials from a PIS	Fire enclosure provided.	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	No specific barrier provided.	N/A
6.4.8	Fire enclosures and fire barriers	See below.	P
6.4.8.1	Fire enclosure and fire barrier material properties	The V-0 fire enclosure is used the overall enclosure.	P
6.4.8.2.1	Requirements for a fire barrier	No fire barrier used.	N/A
6.4.8.2.2	Requirements for a fire enclosure	The V-0 fire enclosure is used the overall enclosure as above.	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	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm)		N/A
	Flammability tests for the bottom of a fire enclosure		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c)		N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating	Fire enclosure is made of V-0 material.	N/A
6.5	Internal and external wiring		P
6.5.1	Requirements	Output cord provided.	P
6.5.2	Cross-sectional area (mm ²)	Less than 0.5 mm ² UL Approved output cord used.	
6.5.3	Requirements for interconnection to building wiring	(See Annex Q.)	N/A
6.6	Safeguards against fire due to connection to additional equipment		P
	External port limited to PS2 or complies with Clause Q.1	Output complies with Clause Q.1.	P

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES		P
7.2	Reduction of exposure to hazardous substances	No hazardous chemicals within the equipment.	P
7.3	Ozone exposure	No ozone production within the equipment.	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	No battery used.	N/A

8	MECHANICALLY-CAUSED INJURY		P
8.1	General	No moving parts in the equipment – see below regarding edges and corners.	P
8.2	Mechanical energy source classifications	MS1	P
8.3	Safeguards against mechanical energy sources		N/A
8.4	Safeguards against parts with sharp edges and corners	Edges and corners of the enclosure are rounded.	P
8.4.1	Safeguards		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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
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	Classification MS1 according to table 35, line 5 and no stability requirements.	N/A
8.6.1	Product classification		N/A
	Instructional Safeguard		—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt		—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force).....		N/A
	Position of feet or movable parts.....		—
8.7	Equipment mounted to wall or ceiling		N/A
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

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Clause	Requirement + Test	Result - Remark	Verdict
8.9	Wheels or casters attachment requirements		N/A
8.9.1	Classification		N/A
8.9.2	Applied force		—
8.10	Carts, stands and similar carriers		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force		—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N)		—
8.10.6	Thermoplastic temperature stability (C)		N/A
8.11	Mounting means for rack mounted equipment		N/A
8.11.1	General		N/A
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable <i>N</i>		N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas	No such parts.	N/A
	Button/Ball diameter (mm)		—

9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications	No part considered to be accessible other than enclosure. The equipment evaluated by temperature test (see table 5.4.1.4).	P
9.3	Safeguard against thermal energy sources	Temperature of enclosure classed as TS1.	P
9.4	Requirements for safeguards		N/A
9.4.1	Equipment safeguard		N/A
9.4.2	Instructional safeguard		N/A

10	RADIATION		N/A
10.2	Radiation energy source classification	Only indication LED used, No such radiation generated from the equipment.	N/A
10.2.1	General classification	See the following details.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10.3	Protection against laser radiation	No such radiation generated from the equipment.	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	No such radiation generated from the equipment.	N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons :		N/A
10.4.1.b)	RS3 accessible to a skilled person..... :		N/A
	Personal safeguard (PPE) instructional safeguard..... :		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1 . :		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions :		N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque..... :		N/A
10.4.1.f)	UV attenuation..... :		N/A
10.4.1.g)	Materials resistant to degradation UV :		N/A
10.4.1.h)	Enclosure containment of optical radiation..... :		N/A
10.4.1.i)	Exempt Group under normal operating conditions..... :		N/A
10.4.2	Instructional safeguard :		N/A
10.5	Protection against x-radiation	No such x-radiation generated from the equipment	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	Not such an equipment.	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

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

B	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements.....	(See summary of testing for tested models, each loaded according to its output ratings. See also appended table B.2.5.)	P
	Audio Amplifiers and equipment with audio amplifiers	Not such equipment.	N/A
B.2.3	Supply voltage and tolerances	+10 % and -10 % considered.	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 & B.4)	P
B.3.2	Covering of ventilation openings		N/A
B.3.3	D.C. mains polarity test	The EUT is not connected to a D.C. mains	N/A
B.3.4	Setting of voltage selector	No voltage selector was used.	N/A
B.3.5	Maximum load at output terminals	(See appended table B.3 & B.4)	P
B.3.6	Reverse battery polarity	No battery within the EUT	N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.	Not such equipment.	N/A
B.3.8	Safeguards functional during and after abnormal operating conditions	All safeguards remained effective.	P

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Clause	Requirement + Test	Result - Remark	Verdict
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited	No such device used.	N/A
B.4.3	Motor tests	No motors used.	N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature		--
B.4.4	Short circuit of functional insulation	See below.	P
B.4.4.1	Short circuit of clearances for functional insulation	(See appended table B.3 & B.4)	P
B.4.4.2	Short circuit of creepage distances for functional insulation	(See appended table B.3 & B.4)	P
B.4.4.3	Short circuit of functional insulation on coated printed boards	No coated printed boards used.	N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors	(See appended table B.3 & B.4 for faults on semiconductor components)	P
B.4.6	Short circuit or disconnect of passive components	(See appended table B.3 & B.4)	P
B.4.7	Continuous operation of components	The EUT is continuous operating type and no such components intended for short time operation or intermittent operation	N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions		P
B.4.9	Battery charging under single fault conditions ... :	No battery involved in the EUT	N/A

C	UV RADIATION		N/A
C.1	Protection of materials in equipment from UV radiation	No UV generated from the equipment.	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

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Clause	Requirement + Test	Result - Remark	Verdict
E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		N/A
E.1	Audio amplifier normal operating conditions	Not such equipment.	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	See below.	P
	Instructions – Language	English	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1	Letter symbols for quantities and units are complied with IEC 60027-1.	N/A
F.2.2	Graphic symbols IEC, ISO or manufacturer specific	Graphical symbols are complied with IEC 60417, ISO 3864-2, ISO 7000 or ISO 7010.	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	The required marking is located on the enclosure of the equipment and is easily visible.	P
F.3.2	Equipment identification markings	See copy of marking plate.	P
F.3.2.1	Manufacturer identification	See copy of marking plate.	—
F.3.2.2	Model identification	See model list.	—
F.3.3	Equipment rating markings	See the following details.	P
F.3.3.1	Equipment with direct connection to mains	The equipment is direct connected to AC mains, see F.3.3.3 to F.3.3.6.	P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage.....	AC	—
F.3.3.4	Rated voltage	See copy of marking plate.	—
F.3.3.4	Rated frequency	See copy of marking plate.	—
F.3.3.6	Rated current or rated power	See copy of marking plate.	—
F.3.3.7	Equipment with multiple supply connections	Only one mains supply connection provided.	N/A
F.3.4	Voltage setting device	No voltage setting device.	N/A
F.3.5	Terminals and operating devices	See below.	P
F.3.5.1	Mains appliance outlet and socket-outlet markings	No outlet used.	N/A
F.3.5.2	Switch position identification marking	No switch used.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.5.3	Replacement fuse identification and rating markings..... :	The fuse is located within the equipment and not replaceable by an ordinary person or an instructed person. The fuse is marked with F1, F2: T3.15A 250V	P
F.3.5.4	Replacement battery identification marking :	No such battery on the equipment. See sub-clause F.5	N/A
F.3.5.5	Terminal marking location		N/A
F.3.6	Equipment markings related to equipment classification	See below.	P
F.3.6.1	Class I Equipment	For models GT*96900P**-T3/T3A/T3TAB* and GT*961200P**-T3/T3A/T3TAB*	P
F.3.6.1.1	Protective earthing conductor terminal		P
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		P
F.3.6.2	Class II equipment (IEC60417-5172)	For models GT*96900P**-T2/T2A* and GT*961200P**-T2/T2A*	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 :	IPX0.	—
F.3.8	External power supply output marking	See copy of marking plate.	P
F.3.9	Durability, legibility and permanence of marking	Marking is considered to be legible and easily discernible. See also the following details.	P
F.3.10	Test for permanence of markings	The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. And then again for 15 sec. With the cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was no curling and lifting of the label edge. After each test, the marking remained legible.	P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking		N/A
	b) Instructions given for installation or initial use		P
	c) Equipment intended to be fastened in place		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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	No such terminals provided.	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	No such symbols used as a safeguard considered.	N/A
	i) Permanently connected equipment not provided with all-pole mains switch	Not permanently connected equipment.	N/A
	j) Replaceable components or modules providing safeguard function	No such markings.	P
F.5	Instructional safeguards	No instructional safeguard is considered as necessary.	N/A
	Where "instructional safeguard" is referenced in the test report it specifies the required elements, location of marking and/or instruction	No instructional safeguard required in the equipment.	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 relay 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-off 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 link used.	N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H) :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Single Fault Condition		—
	Test Voltage (V) and Insulation Resistance (Ω). :		—
G.3.3	PTC Thermistors	No PTC thermistor used.	N/A
G.3.4	Overcurrent protection devices	Fuse provided, see only G.3.5.	N/A
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	See below	P
G.4.2	Mains connector configuration	Approved AC inlet used	P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely	Output connector can not insertion into mains socket outlet	P
G.5	Wound Components		P
G.5.1	Wire insulation in wound components.....	Approved Insulated wire used as Reinforced insulation for secondary winding of T1.	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°	Separated by tube or tape, See photo document for details.	P
G.5.1.2 b)	Construction subject to routine testing	The routine tests are to be considered for the production based on the relevant approval	N/A
G.5.2	Endurance test on wound components	Not applied for.	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).....	The transformer meets the requirements given in G.5.3.2 and G.5.3.3.	P
	Position.....	T1	—
	Method of protection	See G.5.3.3.	—
G.5.3.2	Insulation	Primary windings and secondary windings are separated by Reinforced insulation (The core is considered as primary part as it is not isolated from Primary)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Protection from displacement of windings.....:	The end-turn of each winding is fixed by insulating tape	—
G.5.3.3	Overload test	(See appended table B.3 & B.4)	P
G.5.3.3.1	Test conditions	Tested in the complete equipment as an SMPS.	P
G.5.3.3.2	Winding Temperatures testing in the unit	(See appended table B.3&B.4)	P
G.5.3.3.3	Winding Temperatures - Alternative test method	Alternative test method was not considered.	N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements	No motor used.	N/A
	Position		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days)		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V)		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h)		N/A
	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

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Clause	Requirement + Test	Result - Remark	Verdict
G.6.1	General	Triple insulated winding in T1 secondary windings used as reinforced safeguard in the isolating transformer that has separately complied with Annex J. See Appended table 4.1.2. No other wires used in the EUT.	P
G.6.2	Solvent-based enamel wiring insulation	Insulation does not rely on solvent-based enamel.	P
G.7	Mains supply cords		N/A
G.7.1	General requirements		N/A
	Type.....:		—
	Rated current (A)		—
	Cross-sectional area (mm ²), (AWG)..... :		—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N)		—
G.7.3.2.2	Strain relief mechanism failure		N/A
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	No such wire.	N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	Varistors		P
G.8.1	General requirements		P
G.8.2	Safeguard against shock	(see appended table 4.1.2)	P
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test	Clause 6.4.1 is not applicable.	N/A
G.8.3.3	Temporary overvoltage		N/A
G.9	Integrated Circuit (IC) Current Limiters		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.9.1 a)	Manufacturer defines limit at max. 5A.	No IC current limiter provided within the equipment.	N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA		--
G.9.1 d)	IC limiter output current (max. 5A)		--
G.9.1 e)	Manufacturers' defined drift		--
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	Resistors		N/A
G.10.1	General requirements	No such resistor as safeguard used	N/A
G.10.2	Resistor test		N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	Capacitor and RC units		P
G.11.1	General requirements	(see appended table 4.1.2) Y1-capacitor used as Reinforced safeguard which complies with IEC/EN 60384-14.	P
G.11.2	Conditioning of capacitors and RC units	Y1 capacitor complied as environmental category at least 40/100/21 (21 days humidity) or 30/125/56 (56 days humidity) and in any case at 40°C	P
G.11.3	Rules for selecting capacitors	The selection followed with tables G.9 and G.12. Y1 capacitor bridging Reinforced insulation with rated voltage at least 250V tested with impulse 8kV peak and 4kV rms	P
G.12	Optocouplers		P
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results)		P
	Type test voltage Vini	(see appended table 4.1.2)	—
	Routine test voltage, Vini,b	(see appended table 4.1.2)	—
G.13	Printed boards		P

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Clause	Requirement + Test	Result - Remark	Verdict
G.13.1	General requirements	See the following details.	P
G.13.2	Uncoated printed boards	The insulation between conductors on the outer surfaces of an uncoated printed board complied with the minimum clearance and creepage requirements	P
G.13.3	Coated printed boards	No coated printed board or multilayer board applied for within the equipment.	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		P
	Distance through insulation	Min. 0.4mm	P
	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	No coating on component terminals considered to affect creepage or clearances.	N/A
G.15	Liquid filled components		N/A
G.15.1	General requirements	No such device provided within the equipment.	N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	IC including capacitor discharge function (ICX)		N/A
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
b)	Impulse test using circuit 2 with U_c = to transient voltage		N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A
D2)	Capacitance		—
D3)	Resistance		—

H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N/A
H.1	General	No telephone ringing signal generated within the equipment.	N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringing signal		N/A
H.3.1.1	Frequency (Hz)		—
H.3.1.2	Voltage (V)		—
H.3.1.3	Cadence; time (s) and voltage (V)		—
H.3.1.4	Single fault current (mA):.....		—
H.3.2	Tripping device and monitoring voltage		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V)		—

J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		P
	General requirements	Triple insulated winding wiring used as reinforced safeguard in the isolating transformer that has been evaluated to Annex J as follows: Requirements of Annex U of IEC 60950-1/A2 are identical to Annex J of this standard (for wires providing Reinforced insulation). See Table 4.1.2.	P

K	SAFETY INTERLOCKS		N/A
K.1	General requirements	No safety interlock provided.	N/A
K.2	Components of safety interlock safeguard mechanism		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location)		N/A
K.7.2	Overload test, Current (A)		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test		N/A

L	DISCONNECT DEVICES		P
L.1	General requirements	AC mains plug used as disconnect device.	P
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized	When AC plug is disconnected no hazardous voltage in the equipment.	P
L.4	Single phase equipment	The mains plug disconnects both poles simultaneously.	P
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices	See above	P
L.8	Multiple power sources	Only one a.c. mains connection.	N/A

M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		N/A
M.1	General requirements	No battery used.	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) .. :		--
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

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Clause	Requirement + Test	Result - Remark	Verdict
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance		--
M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature		--
M.4.2.2 b)	Single faults in charging circuitry		--
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		N/A
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method)		--
M.6.2	Leakage current (mA)		--
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

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Clause	Requirement + Test	Result - Remark	Verdict
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume V_z (m ³ /s)..... :		--
M.8.2.3	Correction factors..... :		--
M.8.2.4	Calculation of distance d (mm) :		--
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) :		N/A

N	ELECTROCHEMICAL POTENTIALS		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		N/A
P.1	General requirements		N/A
P.2.2	Safeguards against entry of foreign object	No opening	N/A
	Location and Dimensions (mm) :		—
P.2.3	Safeguard against the consequences of entry of foreign object		N/A
P.2.3.1	Safeguards against the entry of a foreign object		N/A
	Openings in transportable equipment		N/A
	Transportable equipment with metalized plastic parts :		N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) :		N/A
P.3	Safeguards against spillage of internal liquids	No such 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	No such construction.	N/A
P.4.2 a)	Conditioning testing		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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	See appended table Annex Q.1	P
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		P
	- Regulating network limited output under normal operating and simulated single fault condition	A regulating network limits the output in compliance with table Q.1 both under normal operating conditions and after any single fault.	P
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method	See appended table Annex Q.1	P
Q.2	Test for external circuits – paired conductor cable	No such circuit for connection to the EUT	N/A
	Maximum output current (A) :		--
	Current limiting method..... :		--

R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General requirements	No such consideration.	N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)). :		N/A

S	TESTS FOR RESISTANCE TO HEAT AND FIRE		P
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W	Approved fire enclosure with V-0 material used.	P
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material		—
	Wall thickness (mm)		—
	Conditioning (°C)		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material		—
	Wall thickness (mm)		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials	See Table 4.1.2 only.	P
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)	—
T.3	Steady force test, 30 N		—
T.4	Steady force test, 100 N	(See appended table T.4)	—
T.5	Steady force test, 250 N		—
T.6	Enclosure impact test	Transportable equipment	N/A
	Fall test		N/A
	Swing test		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
T.7	Drop test	(See appended table T7)	P
T.8	Stress relief test	(See appended table T8)	—
T.9	Impact Test (glass)	No glass used.	N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J)		—
	Height (m)		—
T.10	Glass fragmentation test		N/A
T.11	Test for telescoping or rod antennas	No such antennas provided within the equipment.	N/A
	Torque value (Nm)		—
U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N/A
U.1	General requirements	No CRT provided.	N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen.....		N/A
V	DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)		P
V.1	Accessible parts of equipment	No access with test probes to any hazardous parts	P
V.2	Accessible part criterion		P

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Clause	Requirement + Test	Result - Remark	Verdict

4.1.2	TABLE: List of critical components					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹	
Enclosure	SABIC INNOVATIVE PLASTICS B V	HF500R	PC, V-0, Min. thickness: 2.0mm, 125°C	IEC 62368-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329	
Alt. use	TEIJIN CHEMICALS LTD	LN-1250P LN-1250G	PC, Min. V-0, Min. thickness: 2.0mm, 115°C	IEC 62368-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E50075	
Alt. use	SABIC INNOVATIVE PLASTICS B V	945 (GG)	PC, V-0, Min. thickness: 2.0mm, 120°C	IEC 62368-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329	
Appliance inlet CN1 Class I units(C6 type)	Zhejiang LECI Electronics Co., Ltd.	DB-6	2.5A, 250Vac	IEC/EN 60320-1	VDE 40032465	
Alt. use	Rich Bay Co., Ltd.	R-30790	2.5A, 250Vac	IEC/EN 60320-1	VDE 40030381	
Alt. use	Sun Fair Electric Wire & Cable (HK) Co. Ltd.	S-02	2.5A, 250Vac	IEC/EN 60320-1	VDE 40034448	
Alt. use	TECX-UNIONS Technology Corporation	TU-333	2.5A, 250Vac	IEC/EN 60320-1	ENEC 00633	
Alt. use	Rong Feng Industrial Co., Ltd.	RF-190	2.5A, 250Vac	IEC/EN 60320-1	VDE 40030379	
Alt. use	Inalways Corporation	0724	2.5A, 250Vac	IEC/EN 60320-1	ENEC 2010080	
Alt. use	Zhe Jiang Bei Er jia	ST-A04-002	2.5A, 250Vac	IEC/EN 60320-1	VDE 40016045	
Alt. use	Shenzhen Delikang Electronics Technology Co. Ltd.	CDJ-2	2.5A, 250Vac	IEC/EN 60320-1	VDE 40015580	
Appliance inlet CN1 Class I units (C14 type)	Zhejiang LECI Electronics Co., Ltd.	DB-14	10A, 250Vac	IEC/EN 60320-1	VDE 40032137	
Alt. use	Rich Bay Co., Ltd.	R-301SN	10A, 250Vac	IEC/EN 60320-1	VDE 40030228	

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Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	Sun Fair Electric Wire & Cable (HK)Co. Ltd.	S-03	10A, 250Vac	IEC/EN 60320-1	VDE 40034447
Alt. use	TECX-UNIONS Technology Corporation	TU-301-S, TU-301-SP	10A, 250Vac	IEC/EN 60320-1	ENEC 00647
Alt. use	Rong Feng Industrial Co., Ltd.	SS-120	10A, 250Vac	IEC/EN 60320-1	VDE 40028101
Alt. use	Inalways Corporation	0711	10A, 250Vac	IEC/EN 60320-1	ENEC 2010084
Alt. use	Zhe Jiang Bei Er jia	ST-A01-003J	10A, 250Vac	IEC/EN 60320-1	VDE 40013388
Appliance inlet CN1 Class II units (C8 type)	Zhejiang LECI Electronics Co., Ltd.	DB-8	2.5A, 250Vac	IEC/EN 60320-1	VDE 40032028
Alt. use	Rich Bay Co., Ltd.	R-201SN90	2.5A, 250Vac	IEC/EN 60320-1	VDE 40030384
Alt. use	Sun Fair Electric Wire & Cable (HK)Co. Ltd.	S-01	2.5A, 250Vac	IEC/EN 60320-1	VDE 40034449
Alt. use	TECX-UNIONS Technology Corporation	SO-222	2.5A, 250Vac	IEC/EN 60320-1	VDE 40043268
Alt. use	Rong Feng Industrial Co., Ltd.	RF-180	2.5A, 250Vac	IEC/EN 60320-1	VDE 40030168
Alt. use	Inalways Corporation	0721	2.5A, 250Vac	IEC/EN 60320-1	ENEC 2010087
Alt. use	Zhe Jiang Bei Er jia	ST-A03-005	2.5A, 250Vac	IEC/EN 60320-1	VDE 40014833
Alt. use	Shenzhen Delikang Electronics Technology Co. Ltd.	CDJ-8	2.5A, 250Vac	IEC/EN 60320-1	VDE 40025531
Appliance inlet CN1 Class II units (C18 type)	Rong Feng Industrial Co.,Ltd	SS-120	10A, 250V	IEC/EN 60320-1	VDE 40028101

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Clause	Requirement + Test		Result - Remark		Verdict
PCB	WALEX ELECTRONIC (WUXI) CO LTD	T2, T2A, T2B T4	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E154355
Alt. use	DONGGUAN HE TONG ELECTRONICS CO LTD	CEM1 2V0 FR4	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E243157
Alt. use	CHEERFUL ELECTRONIC (HK) LTD	02 03 03A	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E199724
Alt. use	DONGGUAN DAYSUN ELECTRONIC CO LTD	DS2	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E251754
Alt. use	SUZHOU CITY YILIHUA ELECTRONICS CO LTD	YLH-1	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E251781
Alt. use	SHANGHAI AREX PRECISION ELECTRONIC CO LTD	02V0 04V0	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E186016
Alt. use	BRITE PLUS ELECTRONICS (SUZHOU) CO LTD	DKV0-3A DGV0-3A	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E177671
Alt. use	KUOTIANG ENT LTD	C-2 C-2A	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E227299
Alt. use	SHENZHEN TONGCHUANG XIN ELECTRONICS CO LTD	TCX	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E250336
Alt. use	PACIFIC WIN INDUSTRIAL LTD	PW-02 PW-03	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E228070
Alt. use	YUANMAN PRINTED CIRCUIT CO LTD	1V0	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E74757
Alt. use	SUZHOU XINKE ELECTRONICS CO LTD	XK-2, XK-3	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E231590

IEC 62368-1

Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	KUNSHAN CITY HUA SHENG CIRCUIT BOARD CO LTD	HS-S	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E229877
Alt. use	JIANGSU DIFEIDA ELECTRONICS CO LTD	DFD-1	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E213009
Alt. use	HUIZHOU SHUNJIA ELECTRONICS CO LTD	SJ-B	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E320884
Alt. use	SHANGHAI H-FAST ELECTRONIC CO LTD	211001,411001	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL E337862
Alt. use	Interchangeabl	Interchangeabl	min. V-0, 130°C	IEC 62368-1 UL 796	Tested with appliance UL
Mylar Insulating sheet used between the transformer and secondary D53,D54	TORAY INDUSTRIES INC	Lumirror H10	VTM-2, min. 0.4 mm thickness, 105°C	IEC/EN 62368-1 UL 94 UL 746 A/B/C/D	Tested within appliance UL E86511
Alt.	SKC CO LTD	SH71S	VTM-2, min. 0.4 mm thickness, 105°C	IEC/EN 62368-1 UL 94 UL 746 A/B/C/D	Tested within appliance UL E74359
Alt.	FORMEX,DIV OF IL TOOL WORKS INC, FRMRLY FASTEX, DIV OF IL TOOL WORKS INC	FORMEX GK series	V-0, min. 0.4 mm thickness, 115°C	IEC/EN 62368-1 UL 94 UL 746 A/B/C/D	Tested within appliance UL E121855
Alt.	SABIC INNOVATIVE PLASTICS US L L C	FR60 series FR63 series FR65 series FR7 series FR700 series	V-0, min. 0.4 mm thickness, 130°C	IEC/EN 62368-1 UL 94 UL 746 A/B/C/D	Tested within appliance UL E121562
Alt.	MIANYANG LONGHUA FILM CO LTD	PP-BK-20 PP-BK-17 PP-BK-18	VTM-0, min. 0.4 mm thickness, 80°C	IEC/EN 62368-1 UL 94 UL 746 A/B/C/D	Tested within appliance UL E254551
Alt.	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX PP WT-10 series	VTM-0, min. 0.4 mm thickness, 110°C	IEC/EN 62368-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E315185

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt.	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX FRPC-1860B	VTM-0, Min. 0.4mm thickness, 80°C	IEC/EN 62368-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E315185
Insulating tape wrapping around the heatsink (Use insulation tape will not use Insulating tube)	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350F-1 1350T-1	Min.130°C	IEC/EN 62368-1 UL 510	Tested with appliance UL E17385
Alt.	BONDTEC PACIFIC CO LTD	370S	Min.130°C	IEC/EN 62368-1 UL 510	Tested with appliance UL E175868
Alt.	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ CT	Min.130°C	IEC/EN 62368-1 UL 510	Tested with appliance UL E165111
Alt.	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A	Min.130°C	IEC/EN 62368-1 UL 510	Tested with appliance UL E246950
Alt.	CHANG SHU LIANG YI TAPE INDUSTRY CO LTD	LY-XX	Min.130°C	IEC/EN 62368-1 UL 510	Tested with appliance UL E246820
Insulating tube used on Class I AC inlet pin or heatsink (Heatsink using insulating tube not use insulation tape)	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR RSFR-H RSFR-HPF	600V, 125°C	IEC/EN 62368-1 UL 224	Tested within appliance UL E203950
Alt.	QIFURUI ELECTRONICS CO	QFR-h	600V, 125°C	IEC/EN 62368-1 UL 224	Tested within appliance UL E225897
Alt.	DONGGUAN SALIPT CO LTD	SALIPT S-901-300 SALIPT S-901-600	Min. 300V, 125°C	IEC/EN 62368-1 UL 224	Tested within appliance UL E209436
Alt.	GUANGZHOU KAIHENG ENTERPRISE GROUP	K-2 (+) K-2 (CB)	Min. 300V, 125°C	IEC/EN 62368-1 UL 224	Tested within appliance UL E214175

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt.	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-HFT	Min. 300V, 125°C	IEC/EN 62368-1 UL 224	Tested within appliance UL E180908
Fuse (F1, F2) (F2 is optional)	Conquer Electronics Co., Ltd.	MST series	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017118 UL E82636
Alt. use	Ever Island Electric Co., Ltd. And Walter Electric	2010, ICP	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40018781 UL E220181
Alt. use	Bel Fuse Ltd.	RST-Serie(s)	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40011144 UL E20624
Alt. use	Cooper Bussmann LLC	SS-5	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40015513 UL E19180
Alt. use	Shenzhen Lanson Electronics Co. Ltd.	SMT	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40012592 UL E221465
Alt. use	Das & Sons International Ltd.	385T series	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40008524 UL E205718
Alt. use	Dongguan Better Electronics Technology Co., Ltd.	932	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40033369 UL E300003
Alt. use	Hollyland Company Limited	5ET	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40015669 UL E156471
Alt. use	Sunny East Enterprise Co. Ltd.	CFD-Serie(s)	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40030246 UL E133774
Alt. use	Conquer Electronics Co., Ltd.	MET series	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017157 UL E82636

IEC 62368-1

Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	Zhongshan Lanbao Electrical Appliances Co., Ltd.	RTI-10 Serie(s)	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017009 UL E213695
Y capacitor (CY1, CY2) (Optional)	TDK CORPORATION	CD	Y1, AC250V, 125°C, Max.2200pF	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40029780 UL E37861
Alt. use	Success Electronics Co., Ltd.	SE	Y1, AC250V, 125°C, Max.2200pF	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40037211 VDE 40020002 UL E114280
Alt. use	Success Electronics Co., Ltd.	SB	Y1, AC250V, 125°C, Max.2200pF	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40037221 VDE 40020001 UL E114280
Alt. use	Murata Mfg. Co., Ltd.	KX	Y1, AC250V, 125°C, Max.2200pF	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40002831 UL E37921
Alt. use	Walsin Technology Corp.	AH	Y1, AC250V, 125°C, Max.2200pF	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40001804 UL E146544
Alt. use	JYA-NAY Co., Ltd.	JN	Y1, AC250V, 125°C, Max.2200pF	IEC/EN 60384-14 UL 60384-14 UL 1414	ENEC/ HN 69242987 UL E201384
Alt. use	Haohua Electronic Co.	CT 7	Y1, AC250V, 125°C, Max.2200pF	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40003902 UL E233106
Alt. use	Jyh Chung Electronic Co., Ltd.	JD	Y1, AC250V, 125°C, Max.2200pF	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 137027 UL E187963
Alt. use	Jerro Electronics Corp.	JX-series	Y1, AC250V, 125°C, Max.2200pF	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40032158 UL E333001

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Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	WELSON INDUSTRIAL CO LT D	WD	Y1, AC250V, 125°C, Max.2200pF	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40016157
X capacitor (CX1) (Optional)	Cheng Tung Industrial Co., Ltd.	CTX	Min. 300VAC, 110°C, X1 or X2, Max. 0.22µF	IEC 62368-1 UL 60384-14 UL 1414	Tested with appliance UL E193049
Alt. use	Tenta Electric Industrial Co. Ltd.	MEX	Min. 300VAC, 110°C, X1 or X2, Max. 0.22µF	IEC 62368-1 UL 60384-14 UL 1414	VDE 119119 UL E222911
Alt. use	Joey Electronics (Dong Guan) Co., Ltd.	MPX	Min. 300VAC, 110°C, X1 or X2, Max. 0.22µF	IEC 62368-1 UL 60384-14 UL 1414	VDE 40032481 UL E216807
Alt. use	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	Min. 300VAC, 110°C, X1 or X2, Max. 0.22µF	IEC 62368-1 UL 60384-14 UL 1414	VDE 40015608 UL E183780
Alt. use	Yuo Yu Electronics Co. Ltd.	MPX	Min. 300VAC, 110°C, X1 or X2, Max. 0.22µF	IEC 62368-1 UL 60384-14 UL 1414	VDE 40032392 UL E200119
Alt. use	Sinhua Electronics (Huzhou) Co., Ltd.	MPX	Min. 300VAC, 110°C, X1 or X2, Max. 0.22µF	IEC 62368-1 UL 60384-14 UL 1414	VDE 40014686 UL E237560
Alt. use	Jiangsu Xinghua Huayu Electronics Co., Ltd.	MPX - Series	Min. 300VAC, 110°C, X1 or X2, Max. 0.22µF	IEC 62368-1 UL 60384-14 UL 1414	VDE 40022417 UL E311166
Alt. use	Dain Electronics Co., Ltd.	MEX, MPX, NPX	Min. 300VAC, 110°C, X1 or X2, Max. 0.22µF	IEC 62368-1 UL 60384-14 UL 1414	VDE 40018798 UL E147776
Alt. use	Shenzhen Jinghao Capacitor Co., Ltd.	CBB62B	Min. 300VAC, 110°C, X1 or X2, Max. 0.22µF	IEC 62368-1 UL 60384-14 UL 1414	VDE 40018690 UL E252286
Alt. use	Foshan Shunde Chuang Ge Electronic Industrial Co., Ltd.	MKP-X2	Min. 300VAC, 110°C, X1 or X2, Max. 0.22µF	IEC 62368-1 UL 60384-14 UL 1414	VDE 40008922
Alt. use	Okaya Electric Industries Co. LTD	RE-Series	Min. 300VAC, 110°C, X1 or X2, Max. 0.22µF	IEC 62368-1 UL 60384-14 UL 1414	VDE 40028657

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Clause	Requirement + Test			Result - Remark	Verdict
Alt. use	VISHAY Capacitors Belgium NV	F 1772	Min. 300VAC, 110°C, X1 or X2, Max. 0.22µF	IEC 62368-1 UL 60384-14 UL 1414	VDE 40005095
Alt. use	Winday Electronic Industrial Co., Ltd.	MPX series	Min. 300VAC, 110°C, X1 or X2, Max. 0.22µF	IEC 62368-1 UL 60384-14 UL 1414	VDE 40018071
Bleeder resistance	Interchangeable	Interchangeable	R1, R2: Max. 2MΩ; R1A, R2A: Max. 4.7MΩ	IEC 62368-1	Tested with appliance
Photo coupler (U2)	Everlight Electronics Co., Ltd.	EL817	Dti=0.5mm Int. , dcr=6.0mm EXT.dcr=7.7mm, thermal cycling test, 110°C	IEC/EN 60747-5-5	VDE 132249
Alt. use	Lite-On Technology Corporation	LTV-817	Dti=0.8mm Int. , EXT.dcr=7.8mm, thermal cycling test, 100 °C	IEC/EN 60747-5-5	VDE 40015248
Varistor MOV1 (Optional)	Thinking Electronic Industrial Co., Ltd.	TVR10471K, TVR14471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 005944
Alt. use	Centra Science Corp.	10D471K, 14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 4008220
Alt. use	Success Electronics Co., Ltd.	SVR10D471K SVR14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40030401
Alt. use	Walsin Technology Co., Ltd.	14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40010090
Alt. use	Lien Shun Electronics Co., Ltd.	14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40005858
Alt. use	Ceramate Techn. Co., Ltd.	GNR10D471K GNR14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40031745
Alt. use	Brightking (Shenzhen) Co., Ltd.	14D471K 10D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40027827

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Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	Joyin Co., Ltd.	JVR10N471K JVR14N471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 005937
Earthing wire for Class I model	KUNSHAN NEW ZHICHENG ELECTRONICS TECHNOLOGIE S CO LTD	1015, 1007, 1185	Min. 18 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E237831
Alt. use	ZHUANG SHAN CHUAN ELECTRICAL PRODUCTS (KUNSHAN) CO LTD	1015, 1007, 1185	Min. 18 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E333601
Alt. use	DONGGUAN CHUANTAI WIRE PRODUCTS CO LTD	1015, 1007, 1185	Min. 18 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E315628
Alt. use	YONG HAO ELECTRICAL INDUSTRY CO LTD	1015, 1007, 1185	Min. 18 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E240426
Alt. use	DONGGUAN GUNEETAL WIRE & CABLE CO LTD	1015, 1007, 1185	Min. 18 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E204204
Alt. use	SHENG YU ENTERPRISE CO LTD	1015, 1007, 1185	Min.18 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E219726
Alt. use	KUNSHAN XINGHONGME NG ELECTRONIC CO LTD	1015, 1007, 1185	Min. 18 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E315421
Alt. use	SUZHOU YEMAO ELECTRONIC CO LTD	1015, 1007, 1185	Min. 18 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E353532
Output cord	Interchangeable	Interchangeable	Min. 24AWG, min. 300Vac, min. 80°C	IEC/EN 60950-1 UL 758	Tested with appliance UL approved
Output cord guard	Interchangeable	Interchangeable	Min. V-1	UL94, UL746C	Tested with appliance UL approved
Transformer (T1)	ENG / GlobTek / BOAM / HAOPUWEI	See attachment for details	Class B, with critical component listed below	IEC 62368-1	Tested with appliance

IEC 62368-1

Clause	Requirement + Test		Result - Remark		Verdict
- Magnet wire	PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO LTD	UEWN/U (UL E201757)	MW28-C, 130°C	IEC 62368-1	Tested with appliance
Alt. use	PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO LTD	UEWS/U (UL E201757)	MW75-C, 130°C	IEC 62368-1	Tested with appliance
Alt. use	JUNG SHING WIRE CO LTD	UEW-4 (UL E174837)	MW75C, 130°C	IEC 62368-1	Tested with appliance
Alt. use	JUNG SHING WIRE CO LTD	UEY-2 (UL E174837)	MW28-C, 130°C	IEC 62368-1	Tested with appliance
Alt. use	JIANGSU HONGLIU MAGNET WIRE TECHNOLOGY CO LTD	2UEW/130 (UL E335065)	MW75-C, 130°C	IEC 62368-1	Tested with appliance
Alt. use	CHANGZHOU DAYANG WIRE & CABLE CO LTD	2UEW/130 (UL E158909)	MW75-C, 130°C	IEC 62368-1	Tested with appliance
Alt. use	WUXI JUFENG COMPOUND LINE CO LTD	2UEWB (UL E206882)	MW75#, 130°C	IEC 62368-1	Tested with appliance
Alt. use	JIANGSU DARTONG M & E CO LTD	UEW (UL E237377)	MW 75-C, 130°C	IEC 62368-1	Tested with appliance
Alt. use	SHANDONG SAINT ELECTRIC CO LTD	UEW/130 (UL E194410)	MW75#, 130°C	IEC 62368-1	Tested with appliance
Alt. use	ZHEJIANG LANGLI ELECTRIC EQUIPMENTS CO LTD	UEW (UL E222214)	MW 79#, 130°C	IEC 62368-1	Tested with appliance
-Triple-insulated wire (Secondary)	Great Leoflon Industrial Co., Ltd.	TRW (B) Serie(s)	Class B, reinforced insulation	IEC 60950-1 UL 2353 UL 60601-1	VDE 136581 UL E211989
- Alt. use	COSMOLINK CO. Ltd.	TIW-M Serie(s)	Class B, reinforced insulation	IEC 60950-1 UL 2353 UL 60601-1	VDE 138053 UL E213764

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Clause	Requirement + Test		Result - Remark		Verdict
- Alt. use	Furukawa Electric Co., Ltd. Electronics & Automotive Systems Company Global Business Development Division	TEX-E	Class B, reinforced insulation	IEC 60950-1 UL 2353 UL 60601-1	VDE 006735 UL E206440
- Alt. use	TOTOKU ELECTRIC CO LTD	TIW-2	Reinforced insulation, rated 130° C (Class B)	UL 2353 UL60950-1 UL 60601-1	VDE 40005152 UL E249037
- Alt. use	E&B TECHNOLOGY CO LTD	E&B-XXXB E&B-XXXB-1	Reinforced insulation, Class B	IEC 60950-1 UL 2353 UL 60601-1	VDE 40023473 UL E315265
- Alt. use	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-TIW	Reinforced insulation, Class B	IEC 60950-1 UL 2353 UL 60601-1	Tested with appliance UL E249037
- Alt. use	SHENZHEN JIUDING NEW MATERIAL CO LTD	DTIW-B	Reinforced insulation, Class B	IEC 60950-1 UL 2353 UL 60601-1	VDE 40037495 UL E357999
-Bobbin	CHANG CHUN PLASTICS CO LTD	T375J T375HF	V-0, 150°C, thickness 0,45 mm min.	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E59481
- Alt. use	CHANG CHUN PLASTICS CO LTD	4130	V-0, 140°C, thickness 0,74 mm min.	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E59481
- Alt. use	SUMITOMO BAKELITE CO LTD	PM-9820	V-0, 150°C, thickness 0,45 mm min.	IEC 62368-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E41429
- Alt. use	HITACHI CHEMICAL CO LTD	CP-J-8800	V-0, 150°C, thickness 0,45 mm min.	IEC 62368-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E42956
-Insulating tape	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350F-1 1350T-1 44	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E17385
- Alt. use	BONDTEC PACIFIC CO LTD	370S	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E175868

IEC 62368-1

Clause	Requirement + Test		Result - Remark		Verdict
- Alt. use	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ CT WF	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E165111
- Alt. use	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E246950
- Alt. use	CHANG SHU LIANG YI TAPE INDUSTRY CO LTD	LY-XX	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E246820
-PTFE tubing	GREAT HOLDING INDUSTRIAL CO LTD	TFT / TFS	Min. 300V, 200°C	IEC 60950-1	Tested with appliance UL E156256
-Alt. use	SHENZHEN WOER HEAT- SHRINKABLE MATERIAL CO LTD	WF	600V, 200°C	IEC 60950-1	Tested with appliance UL E203950
-Alt. use	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-TT-T / CB- TT-S	Min. 300V, 200°C	IEC 60950-1	Tested with appliance UL E180908

Supplementary information:

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

Attachment for transformer as below:

Product Model	Voltage range	Transformer model
GT*96900P series and GT*961200P series	12-13.4V	TF047
	13.5-14.9V	TF075
	15-16.9V	TF048
	17-18.9V	TF076
	19-21.3V	TF072
	21.4-23.9V	TF077
	24-27.4V	TF049
	27.5-31.4V	TF078
	31.5-36V	TF073
	36.1-41.9V	TF079
	42-48V	TF050
	48.1-54V	TF074

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

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 ¹⁾	Parameters			ES Class
				U (Vrms or Vpk)	I (Apk or Arms)	Hz	
Model: GTM961200P12054-T2							
1	264Va.c. 60Hz	Primary circuits supplied by a.c. mains supply	Normal	--	--	--	ES3
			Abnormal	--	--	--	
			Single fault	--	--	--	
2	264Va.c., 60Hz	T1 secondary pin 9 to B	Normal	117Vpk	--	60	ES3
3	264Va.c., 60Hz	T1 secondary (Pin B and D54)	Normal	57.2Vdc	--	DC	ES1
			Single fault: D54 short-circuit	0	--	--	
Note: Input voltage: 264Vac, 60Hz							

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

5.2.2.3 - Capacitance Limits

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Capacitance, nF	Upk (V)	
1	264V	AC inlet	Normal	220	20	ES1
2	264V	AC inlet	Single fault(R1A open)	220	20	ES2
3	264V	AC inlet	Single fault(R1)	220	116	ES2

Overall capacity:--

Limit: --

5.2.2.4 - Single Pulses

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

5.2.2.5 - Repetitive Pulses

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

Test Conditions:

Normal – Full load and no load.

Abnormal – Overload output

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

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements				P
		Supply voltage (V) :	90	264	—
		Ambient T _{min} (°C) :	40	40	—
		Ambient T _{max} (°C) :	40	40	—
		Tma (°C) :	40	40	—
Maximum measured temperature T of part/at:			T (°C)		Allowed T _{max} (°C)
Model: GTM96900P9012-T2					

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Clause	Requirement + Test		Result - Remark		Verdict

1.AC Inlet	59.8	--	54.6	--	70
2.Varistor MOV1	70.9	--	60.9	--	85
3.Line chock of LF1	83.4	--	69.1	--	130
4.X-capacitor CX1	83.9	--	68.9	--	100
5.Line chock of LF2	94.4	--	72.7	--	130
6.PCB under BD1	84.9	--	70.3	--	130
7.Line chock of L1	92.0	--	75.3	--	130
8.Line chock of L2	104.5	--	80.1	--	130
9.PCB under Q1	97.5	--	80.4	--	130
10.PCB under Q3	93.7	--	80.1	--	130
11.E-capacitor C4	94.6	--	80.9	--	105
12.Opto coupler U2	97.7	--	88.4	--	100
13.T1 coil	102.0	--	91.0	--	110
14.T1 core	97.1	--	85.7	--	110
15.Line chock of L3	98.7	--	88.0	--	130
16.Y-capacitor CY1	79.8	--	71.7	--	125
17.Y-capacitor CY2	85.2	--	78.5	--	125
18.Line chock of L4	85.7	--	80.5	--	130
19.E-capacitor C41	93.4	--	86.8	--	105
20.PCB under D53	100.5	--	92.5	--	130
21.Output wire	70.4	--	67.3	--	80
22.Plastic enclosure inside near T1	85.8	--	74.7	--	Ref.
23.Plastic enclosure outside near T1	71.3	--	66.1	--	77*
24.Ambient	40.0	--	40.0	--	--

Model: GTM96900P9015-T3

1.AC Inlet	55.9	--	58.1	--	70
2. PE wire	73.7	--	71.9	--	105
3.Varistor MOV1	60.1	--	62.4	--	85
4.Line chock of LF1	68.1	--	70.0	--	130
5.X-capacitor CX1	68.8	--	71.0	--	100
6.Line chock of LF2	70.8	--	73.2	--	130
7.PCB under BD1	68.6	--	72.2	--	130
8.Line chock of L1	74.2	--	76.6	--	130
9.Line chock of L2	76.3	--	78.9	--	130
10.PCB under Q1	77.9	--	80.2	--	130
11.PCB under Q3	78.2	--	80.3	--	130
12.E-capacitor C4	77.7	--	79.9	--	105

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Clause	Requirement + Test		Result - Remark		Verdict
13.Opto coupler U2	86.0	--	87.8	--	100
14.T1 coil	91.0	--	93.0	--	110
15.T1 core	90.3	--	92.5	--	110
16.Line chock of L3	90.3	--	92.2	--	130
17.Y-capacitor CY1	70.1	--	74.3	--	125
18.Y-capacitor CY2	76.0	--	79.5	--	125
19.Line chock of L4	78.2	--	80.5	--	130
20.E-capacitor C41	83.8	--	85.2	--	105
21.PCB under D53	88.1	--	89.7	--	130
22.Output wire	65.1	--	67.9	--	80
23.Plastic enclosure inside near T1	75.3	--	78.5	--	Ref.
24.Plastic enclosure outside near T1	64.0	--	70.4	--	77*
25.Ambient	40.0	--	40.0	--	--
Model: GTM96900P9054-T2					
1.AC Inlet	49.3	--	49.2	--	70
2.Varistor MOV1	66.7	--	57.8	--	85
3.Line chock of LF1	76.7	--	64.6	--	130
4.X-capacitor CX1	82.8	--	69.2	--	100
5.Line chock of LF2	89.1	--	71.8	--	130
6.PCB under BD1	41.4	--	39.9	--	130
7.Line chock of L1	92.4	--	73.1	--	130
8.Line chock of L2	91.8	--	74.7	--	130
9.PCB under Q1	95.0	--	79.0	--	130
10.PCB under Q3	94.1	--	77.2	--	130
11.E-capacitor C4	89.0	--	75.7	--	105
12.Opto coupler U2	87.6	--	79.2	--	100
13.T1 coil	98.2	--	87.4	--	110
14.T1 core	95.7	--	80.3	--	110
15.Line chock of L3	94.6	--	85.2	--	130
16.Y-capacitor CY1	73.1	--	66.1	--	125
17.Y-capacitor CY2	75.0	--	68.9	--	125
18.Line chock of L4	70.8	--	66.0	--	130
19.E-capacitor C41	77.5	--	72.4	--	105
20.PCB under D53	82.1	--	76.2	--	130
21.Output wire	58.1	--	56.5	--	80
22.Plastic enclosure inside near T1	84.5	--	72.0	--	Ref.
23.Plastic enclosure outside near T1	64.8	--	58.3	--	77*

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Clause	Requirement + Test		Result - Remark		Verdict
24.Ambient	40.0	--	40.0	--	--
Model: GTM961200P12015-T3					
1.AC Inlet	58.3	--	55.7	--	70
2. PE wire	99.1	--	90.6	--	105
3.Varistor MOV1	65.6	--	50.7	--	85
4.Line chock of LF1	84.2	--	60.1	--	130
5.X-capacitor CX1	89.3	--	66.0	--	100
6.Line chock of LF2	104.6	--	70.5	--	130
7.PCB under BD1	107.8	--	74.4	--	130
8.Line chock of L1	100.3	--	71.5	--	130
9.Line chock of L2	110.4	--	91.8	--	130
10.PCB under Q1	104.8	--	77.1	--	130
11.PCB under Q3	103.8	--	74.4	--	130
12.E-capacitor C4	102.0	--	79.3	--	105
13.Opto coupler U2	97.3	--	78.8	--	100
14.T1 coil	104.9	--	94.8	--	110
15.T1 core	103.1	--	87.5	--	110
16.Line chock of L3	108.7	--	91.7	--	130
17.Y-capacitor CY1	91.3	--	74.4	--	125
18.Y-capacitor CY2	91.8	--	77.1	--	125
19.Line chock of L4	82.7	--	69.5	--	130
20.E-capacitor C41	90.2	--	81.5	--	105
21.PCB under D53	102.3	--	88.8	--	130
22.Output wire	67.7	--	60.0	--	80
23.Plastic enclosure inside near T1	82.5	--	72.1	--	Ref.
24.Plastic enclosure outside near T1	65.2	--	60.7	--	77*
25.Ambient	40.0	--	40.0	--	--
Model: GTM961200P12054-T2					
1.AC Inlet	53.2	--	47.4	--	70
2.Varistor MOV1	68.5	--	54.2	--	85
3.Line chock of LF1	81.5	--	62.8	--	130
4.X-capacitor CX1	88.4	--	66.7	--	100
5.Line chock of LF2	97.7	--	70.7	--	130
6.PCB under BD1	99.7	--	73.3	--	130
7.Line chock of L1	105.3	--	75.5	--	130
8.Line chock of L2	100.6	--	74.4	--	130
9.PCB under Q1	110.2	--	81.7	--	130

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

10.PCB under Q3	104.2	--	80.8	--	130
11.E-capacitor C4	96.3	--	75.1	--	105
12.Opto coupler U2	95.6	--	81.9	--	100
13.T1 coil	100.9	--	93.9	--	110
14.T1 core	93.0	--	89.3	--	110
15.Line chock of L3	123.2	--	101.6	--	130
16.Y-capacitor CY1	91.3	--	78.5	--	125
17.Y-capacitor CY2	87.2	--	75.5	--	125
18.Line chock of L4	79.2	--	71.2	--	130
19.E-capacitor C41	87.6	--	77.8	--	105
20.PCB under D53	90.7	--	80.1	--	130
21.Output wire	62.3	--	58.6	--	80
22.Plastic enclosure inside near T1	82.8	--	75.6	--	Ref.
23.Plastic enclosure outside near T1	69.5	--	68.3	--	77*
24.Ambient	40.0	--	40.0	--	--

Supplementary information: * Temperature limit for TS1 of accessible enclosure according to Table 38.

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

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

Note 3: Temperature limits are calculated as follows:

Winding components providing safety isolation:

Class B → T_{max} = 120 - 10=110°C

Temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
--	--	--	--	--	--	--	--

5.4.1.8	Table: working voltage measurement				P
Location		RMS voltage (V)	Peak voltage (V)	Comments	
Model: GTM96900P12054-T2					
Transformer T1 pin 1		Transformer T1 pin 9	209	436	
Transformer T1 pin 1		Transformer T1 pin B,11	240	488	
Transformer T1 pin 1		Transformer T1 pin A	277	540	Max. working voltage
Transformer T1 pin 2		Transformer T1 pin 9	189	380	
Transformer T1 pin 2		Transformer T1 pin B,11	175	328	
Transformer T1 pin 2		Transformer T1 pin A	175	344	
Transformer T1 pin 5		Transformer T1 pin 9	182	408	

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.8	Table: working voltage measurement				P
Transformer T1 pin 5	Transformer T1 pin B,11	175	352		
Transformer T1 pin 5	Transformer T1 pin A	182	404		
Transformer T1 pin 6	Transformer T1 pin 9	190	440		
Transformer T1 pin 6	Transformer T1 pin B,11	177	384		
Transformer T1 pin 6	Transformer T1 pin A	177	380		
optocoupler U2 pin 1	optocoupler U2 pin 3	178	388		
optocoupler U2 pin 1	optocoupler U2 pin 4	178	368		
optocoupler U2 pin 2	optocoupler U2 pin 3	175	358		
optocoupler U2 pin 2	optocoupler U2 pin 4	174	364		
CY1 primary pin	CY2 secondary pin	177	352		
supplementary information:					
Test voltage: 240V					
Test frequency: 60Hz					

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

5.4.1.10.3	TABLE: Ball pressure test of thermoplastics			P
Allowed impression diameter (mm)	≤ 2 mm			—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)	
Enclosure (HF500R)	SABIC INNOVATIVE PLASTICS B V	125	1.4	
Enclosure (945(GG))	SABIC INNOVATIVE PLASTICS B V	125	1.3	
Enclosure (LN-1250P)	TEIJIN CHEMICALS LTD	125	1.5	
Enclosure (LN-1250G)	TEIJIN CHEMICALS LTD	125	1.5	
Supplementary information: The bobbin material of transformer (T1) are phenolic, no test is needed.				

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance	P
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Clause	Requirement + Test	Result - Remark	Verdict
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Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz)	Required cl (mm)	cl (mm) ²	Required ³ cr (mm)	cr (mm)
L to N before fuse(FI)	340	240	<30	2.3	3.6	2.4	3.6
Two poles of fuse(FI)	340	240	<30	2.3	2.8	2.4	2.8
CY1 Primary circuits to secondary circuits(BI)	340	240	>30	2.3	5.4	3.0	5.4
CY2 Primary circuits to secondary circuits(SI)	340	240	>30	2.3	4.4	3.0	4.4
Primary to functional earth (Class I) (RI)	340	240	<30	4.5	6.2	6.0	6.2
Live parts to Enclosure parts(RI)	340	240	<30	4.5	8.0	6.6	8.0
Live parts to accessible parts(RI)	340	240	>30	4.5	6.9	6.6	6.9
U2 Primary circuits to secondary circuits(RI)	340	240	>30	4.5	8.0	6.6	8.0
Primary circuit to secondary circuits (PCB trace under T1) (RI)	540	277	>30	4.5	11.0	6.6	11.0
Transformer Primary winding to secondary winding(RI)	540	277	>30	4.5	11.7	6.6	11.7
Transformer Primary winding to core(RI)	540	277	>30	4.5	9.5	6.6	9.5

Supplementary information:

B=Basic insulation, S=Supplementary insulation, R=Reinforced insulation.

Material group: IIIa/IIIb

1. Required value was multiplied by the factor 1,48 due to the maximum specified altitude of 5000m
2. Required creepage not less than required clearance
3. Minimum 0.4 mm thick Mylar sheet or two layers of insulating tape wrap around internal conductive parts along the enclosure joint. This method is applied only to the model sold to high elevation region. Otherwise, the clearance and creepage distance is measured as 5.7/5.7 mm.
4. Two layers of insulating tape or two layers of insulating tube wrap around the heatsink.

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage			P
	Overvoltage Category (OV):			II
	Pollution Degree:			2
Clearance distanced between:		Required withstand voltage	Required cl (mm)	Measured cl (mm)
See table 5.4.2.2, 5.4.2.4 and 5.4.3 above.		--	--	--
Supplementary information: Limits in previous table for clearance selected based on Table 15 for Required Withstand Voltage 2.5kV (mains transient voltage 2.5kV).				

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

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Clause	Requirement + Test	Result - Remark	Verdict

--	--	--	--
--	--	--	--
Supplementary information: Using procedure 2 to determine the clearance.			

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 (Hz)	Material	Required DTI (mm)	DTI (mm)	
Enclosure	420	>30K	Plastic	0.4	See appended table 4.1.2	
Bobbin of T1	540	>30K	Phenolic	0.4	See appended table 4.1.2	
Insulation tape on T1 and secondary heat-sink	540	>30K	--	2 layers	See appended table 4.1.2	
Insulation sheet	540	>30K	Phenolic	0.4	See appended table 4.1.2	
Supplementary information: 1. See also sub-clause 5.4.4.9.						

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:	Voltage shape (AC, DC)	Test voltage (Vpeak)	Breakdown Yes / No	
Basic/supplementary:				
Line to Neutral (with fuse disconnect)	AC	2500	No	
Reinforced:				
Primary circuit to body (RI)	AC	4000	No	
Primary circuit to functional earth(RI)	AC	4000	No	
Primary circuit to secondary circuit (RI)	AC	4000	No	
Primary winding to secondary winding of T1 (RI)	AC	4000	No	
Primary winding to core (RI)	AC	4000	No	
Insulation tape around transformer per layer (RI)	AC	4000	No	
Insulation sheet (RI)	AC	4000	No	
Supplementary information: 1) Each source of insulation tape tested, see appended table 4.2.1 for detail.				

5.5.2.2	TABLE: Stored discharge on capacitors	P
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Clause	Requirement + Test	Result - Remark	Verdict

Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification
264V, 60Hz	AC inlet	N	No switch	20V	ES1
264V, 60Hz	AC inlet	S(R1 open)	No switch	116V	ES2
264V, 60Hz	AC inlet	S(R1A open)	No switch	116V	ES2

Supplementary information:

The end system may be pluggable equipment type A. Limit of ES1 applied for mains terminal as accessible part.

X-capacitors installed for testing are: CX1: Max. 0.22 μ F

☐ bleeding resistor rating: R1=R2=2M Ω R1A=R2A=4.7M Ω

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 (Bleeder Resistor open circuit)

5.6.6.2	TABLE: Resistance of protective conductors and terminations				P
Accessible part		Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)
AC inlet inside to outside		40A	2min	0.8V	20m Ω
Supplementary Information:					

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		P
Supply voltage		264Vac	—
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)
L, N to output terminal(Class I)		1 (e closed, normal and reverse polarity p)	0.082
L, N to output terminal(Class I)		2* (netural open (switch n), earth intact and normal polarity, again in reverse polarity (switch p)	0.134
L, N to output terminal(Class I, CY1 short circuit)		1 (e closed, normal and reverse polarity p)	0.132
L, N to output terminal(Class I, CY1 short circuit)		2* (netural open (switch n), earth intact and normal polarity, again in reverse polarity (switch p)	0.150
L, N to output terminal(Class II)		1 (e closed, normal and reverse polarity p)	0.082

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Clause	Requirement + Test	Result - Remark	Verdict
L, N to output terminal(Class II)	2* (netural open (switch n), earth intact and normal polarity, again in reverse polarity (switch p)	0.254	
L, N to output terminal(Class II, CY1 short circuit)	1 (e closed, normal and reverse polarity p)	0.132	
L, N to output terminal(Class II, CY1 short circuit)	2* (netural open (switch n), earth intact and normal polarity, again in reverse polarity (switch p)	0.182	
--	3 (for IT system, each phase conductor faulted to earth, one at a time (switch g)	--	
--	4 (for three-phase, each phase conductor open, one at a time switches l)	--	
--	5 (IT power system or three phase delta system)	--	
--	6 (three-phase for use on centre-earthed dalta supply system)	--	
--	8 (incidental electrically connected to other parts)	--	
L, N to output terminal(Class I)	1 (e open, normal and reverse polarity p)	0.082	
L, N to output terminal(Class I)	2* (netural open (switch n), earth intact and normal polarity, again in reverse polarity (switch p)	0.134	
L, N to output terminal(Class I, CY1 short circuit)	1 (e open, normal and reverse polarity p)	0.132	
L, N to output terminal(Class I, CY1 short circuit)	2* (netural open (switch n), earth intact and normal polarity, again in reverse polarity (switch p)	0.150	
L, N to output terminal(Class II)	1 (e open, normal and reverse polarity p)	0.082	
L, N to output terminal(Class II)	2* (netural open (switch n), earth intact and normal polarity, again in reverse polarity (switch p)	0.254	
L, N to output terminal(Class II, CY1 short circuit)	1 (e open, normal and reverse polarity p)	0.132	
L, N to output terminal(Class II, CY1 short circuit)	2* (netural open (switch n), earth intact and normal polarity, again in reverse polarity (switch p)	0.182	
Notes: [1] Supply voltage is the anticipated maximum Touch Voltage [2] Earthed neutral conductor [Voltage differences less than 1% or more] [3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3 [4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable. [5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler)			

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Clause	Requirement + Test	Result - Remark	Verdict

provided.

- a) Not considered IT power system.
- b) Not three phase equipment.
- c) Not IT power system or three phase delta system.
- d) Not three-phase for use on centre-earthed delta supply system.
- e) Not such parts.

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
Model: GTM96900P9012-T2					
Output (See 6.2.2.2)	Normal operation	Power (W) :	86.2	86.2	PS2
		V _A (V) :	12.04	12.04	
		I _A (A) :	7.80	7.80	
R12 (See 6.2.2.3)	Short circuit	Power (W) :	86.2	86.2	PS2
		V _A (V) :	12.04	12.04	
		I _A (A) :	7.80	7.80	
Model: GTM96900P9015-T3					
Output (See 6.2.2.2)	Normal operation	Power (W) :	93.2	93.2	PS2
		V _A (V) :	15.09	15.09	
		I _A (A) :	6.4	6.4	
R12 (See 6.2.2.3)	Short circuit	Power (W) :	93.2	93.2	PS2
		V _A (V) :	15.09	15.09	
		I _A (A) :	6.4	6.4	
Model: GTM96900P9054-T2					
Output (See 6.2.2.2)	Normal operation	Power (W) :	94.8	94.8	PS2
		V _A (V) :	54.1	54.1	
		I _A (A) :	1.73	1.73	
R12 (See 6.2.2.3)	Short circuit	Power (W) :	94.8	94.8	PS2
		V _A (V) :	54.1	54.1	
		I _A (A) :	1.73	1.73	
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

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 (Vp x Irms)	Arcing PIS? Yes / No	
See below	--	--	--	--	
Supplementary information: The primary components and T1 having soldered pins in mains circuit (>50V peak) are considered as arcing PIS. 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 (Vp) and normal operating condition rms current (Irms) is greater than 15.					

6.2.3.2	Table: Determination of Potential Ignition Sources (Resistive PIS)				P
Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured wattage or VA During first 30 s (W / VA)	Measured wattage or VA After 30 s (W / VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No
--	--	--	--	--	Yes
Supplementary Information: All power dissipating components in primary and secondary circuit are considered as resistive PIS A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter. A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, <u>or</u> (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.					

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

IEC 62368-1			
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	
Model: GTM96900P9012-T2								
90Vac, 50 Hz	1.118	--	100.5	--	F1	1.118	Max normal load	
100Vac, 50 Hz	0.998	--	99.92	--	F1	0.998		
240Vac, 50 Hz	0.428	1.5	98.00	--	F1	0.428		
264Vac, 50 Hz	0.393	1.5	97.87	--	F1	0.393		
90Vac, 60 Hz	1.118	1.5	100.6	--	F1	1.118		
100Vac, 60 Hz	1.002	1.5	100.0	--	F1	1.002		
240Vac, 60 Hz	0.430	--	98.10	--	F1	0.430		
264Vac, 60 Hz	0.395	--	98.03	--	F1	0.395		
Model: GTM96900P9015-T3								
90Vac, 50 Hz	1.117	--	100.8	--	F1	1.117	Max normal load	
100Vac, 50 Hz	1.008	--	100.1	--	F1	1.008		
240Vac, 50 Hz	0.429	1.5	98.21	--	F1	0.429		
264Vac, 50 Hz	0.393	1.5	98.14	--	F1	0.393		
90Vac, 60 Hz	1.118	1.5	100.0	--	F1	1.118		
100Vac, 60 Hz	1.014	1.5	100.3	--	F1	1.014		
240Vac, 60 Hz	0.430	--	98.36	--	F1	0.430		
264Vac, 60 Hz	0.396	--	98.28	--	F1	0.396		
Model: GTM96900P9054-T2								
90Vac, 50 Hz	1.126	--	101.4	--	F1	1.126	Max normal load	
100Vac, 50 Hz	1.009	--	100.7	--	F1	1.009		
240Vac, 50 Hz	0.431	1.5	98.67	--	F1	0.431		
264Vac, 50 Hz	0.394	1.5	98.49	--	F1	0.394		
90Vac, 60 Hz	1.119	1.5	100.8	--	F1	1.119		
100Vac, 60 Hz	1.004	1.5	100.1	--	F1	1.004		
240Vac, 60 Hz	0.431	--	98.41	--	F1	0.431		
264Vac, 60 Hz	0.396	--	98.65	--	F1	0.396		
Model: GTM961200P12015-T3								
90Vac, 50 Hz	1.561	--	140.3	--	F1	1.561	Max normal load	
100Vac, 50 Hz	1.381	--	138.0	--	F1	1.381		
240Vac, 50 Hz	0.571	1.5	131.3	--	F1	0.571		
264Vac, 50 Hz	0.528	1.5	131.1	--	F1	0.528		

IEC 62368-1			
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
90Vac, 60 Hz	1.564	1.5	140.6	--	F1	1.564	
100Vac, 60 Hz	1.401	1.5	138.6	--	F1	1.401	
240Vac, 60 Hz	0.582	--	131.9	--	F1	0.582	
264Vac, 60 Hz	0.531	--	131.7	--	F1	0.531	
Model: GTM961200P12054-T2							
90Vac, 50 Hz	1.486	--	133.9	--	F1	1.486	Max normal load
100Vac, 50 Hz	1.332	--	132.9	--	F1	1.332	
240Vac, 50 Hz	0.571	1.5	129.3	--	F1	0.571	
264Vac, 50 Hz	0.521	1.5	129.0	--	F1	0.521	
90Vac, 60 Hz	1.492	1.5	134.5	--	F1	1.492	
100Vac, 60 Hz	1.344	1.5	133.5	--	F1	1.344	
240Vac, 60 Hz	0.573	--	129.8	--	F1	0.573	
264Vac, 60 Hz	0.525	--	129.6	--	F1	0.525	
Supplementary information: The maximum measured current under rated voltage did not exceed 110% of the rated current.							

B.3 & B.4	TABLE: Abnormal operating and fault condition tests							P
Ambient temperature (°C)					25°C, if not specified			—
Power source for EUT: Manufacturer, model/type, output rating ..					--			—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
GT*96900P series, GT*961200P series								
BD1	SC	264	1s	F1	0	Type K	--	Fuse opened immediately no hazard
C2	SC	264	1s	F1	0	Type K	--	Fuse opened immediately no hazard
Q1 pinG-S	SC	264	30min	F1	0.525	Type K	--	Unit work normally no hazard
Q1 pinG-D	SC	264	1s	F1	0	Type K	--	Fuse opened immediately no hazard
Q1 pinD-S	SC	264	1s	F1	0	Type K	--	Fuse opened immediately no hazard

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
Q2 pinG-S	SC	264	30min	F1	0.017	Type K	--	Unit shutdown immediately recoverable no hazard
Q2 pinG-D	SC	264	1s	F1	0	Type K	--	Fuse opened immediately no hazard
Q2 pinD-S	SC	264	1s	F1	0	Type K	--	Fuse opened immediately no hazard
Q3 pinG-S	SC	264	30min	F1	0.021	Type K	--	Unit shutdown immediately recoverable no hazard
Q3 pinG-D	SC	264	1s	F1	0	Type K	--	Fuse opened immediately no hazard
Q3 pinD-S	SC	264	1s	F1	0	Type K	--	Fuse opened immediately no hazard
T1 pin1-2	SC	264	1s	F1	0	Type K	--	Fuse opened immediately no hazard
T1 pin5-6	SC	264	30min	F1	0.021	Type K	--	Unit shutdown immediately recoverable no hazard
T1 pin 9-B	SC	264	30min	F1	0.027	Type K	--	Unit shutdown immediately recoverable no hazard
T1 pin A-10	SC	264	30min	F1	0.025	Type K	--	Unit shutdown immediately recoverable no hazard
U1 pin3-21	SC	264	30min	F1	0.102	Type K	--	Unit shutdown immediately recoverable no hazard
U1 pin3-8	SC	264	30min	F1	0.528	Type K	--	Unit work normally, no hazard
R12	SC	264	30min	F1	0.525	Type K	--	Unit work normally, no hazard
D54	SC	264	30min	F1	0.021	Type K	--	Unit shutdown immediately recoverable no hazard
C41	SC	264	30min	F1	0.103	Type K	--	Unit shutdown immediately recoverable no hazard
Output	SC	264	30min	F1	0.036	Type K	--	Unit shutdown immediately recoverable no hazard
GT*96900P series								

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
Output (12V series)	OL	264	1h	F1	Max. 0.418A	Type K	--	Load to 7.8A, EUT protected immediately, no hazards. Temperature recorded: T1 winding = 106°C
Output (15V series)	OL	264	1h	F1	Max. 0.423A	Type K	--	Load to 6.4A, EUT protected immediately, no hazards. Temperature recorded: T1 winding = 97.4°C
Output (54V series)	OL	264	1h	F1	Max. 0.419	Type K	--	Load to 1.73A, EUT protected immediately, no hazards. Temperature recorded: T1 winding = 90.6°C
GT*961200P series								
Output (15V series)	OL	264	1h	F1	Max. 0.648A	Type K	--	Load to 10.0A, EUT protected immediately, no hazards. Temperature recorded: T1 winding = 120.0°C
Output (54V series)	OL	264	1h	F1	0.651A	Type K	--	Load to 2.65A, EUT protected immediately, no hazards. Temperature recorded: T1 winding = 109.6°C
<p>Supplementary information:</p> <p>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.</p> <p>1) SC: Short-circuited; OC: Open-circuited; OL: Overloaded; BL: Blocked.</p> <p>2) The test result shown all safeguards remained effective and didn't lead to a single fault condition during abnormal operating condition; In addition all safeguards complied with applicable requirements in this standard after restoration of normal operating conditions.</p> <p>3) The test result showed no Class 1 or 2 energy source become Class 3 level during and after single fault condition.</p> <p>4) The overloaded condition is applied according to annex G.5.3.3.</p> <p>Winding Limit for T1: 175-10=165°C</p>								

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

Annex Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)					P
Note: Measured UOC (V) with all load circuits disconnected:						
Output Circuit	Components	U _{oc} (V)	I _{sc} (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
Model: GTM96900P9012-T2						
Output	Normal condition	12.04	7.8	8	86.2	100
Output	U2 pin1 O-C	0	0	8.0	0	100
Output	U2 pin3-4 S-C	0	0	8.0	0	100
Output	R12 S-C	12.04	7.8	8	86.2	100
Model: GTM96900P9015-T3						
Output	Normal condition	15.06	6.4	8	94.8	100
Output	U2 pin1 O-C	0	0	8.0	0	100
Output	U2 pin3-4 S-C	0	0	8.0	0	100
Output	R12 S-C	15.06	6.4	8	94.8	100
Model: GTM96900P9054-T2						
Output	Normal condition	54.10	1.73	8	93.2	100
Output	U2 pin1 O-C	0	0	8.0	0	100
Output	U2 pin3-4 S-C	0	0	8.0	0	100
Output	R12 S-C	54.10	1.73	8	93.2	100
Supplementary Information: SC=Short circuit						

T.2, T.3, T.4, T.5	TABLE: Steady force test					P
Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation	
Enclosure top, closed to transformer (T.4)	Plastics	2.0	100	5	Enclosure remained intact, no crack/opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Enclosure side (T.4)	Same as above	2.0	100	5	Enclosure remained intact, no crack/opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	

IEC 62368-1					
Clause	Requirement + Test			Result - Remark	Verdict
Enclosure bottom, closed to transformer (T.4)	Same as above	2.0	100	5	Enclosure remained intact, no crack/opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.
Internal components (T.2)	--	--	10	5	No insulation breakdown. No reduction the clearances and creepage distances
Supplementary information:					

T.6, T.9	TABLE: Impact tests				N/A
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation	
--	--	--	--	--	
Supplementary information:					

T.7	TABLE: Drop tests				P
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation	
Three side of enclosure	Hardwood	15mm	1000mm	After the drop test, no open was found for the enclosure	
Supplementary information:					

T.8	TABLE: Stress relief test				P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation
Enclosure	Plastics	2.0mm	104	7	Enclosure remained intact, no cracking/opening developed in the enclosure joint. Internal ES3, TS3 were not accessible after test. No insulation breakdown.
Supplementary information:					

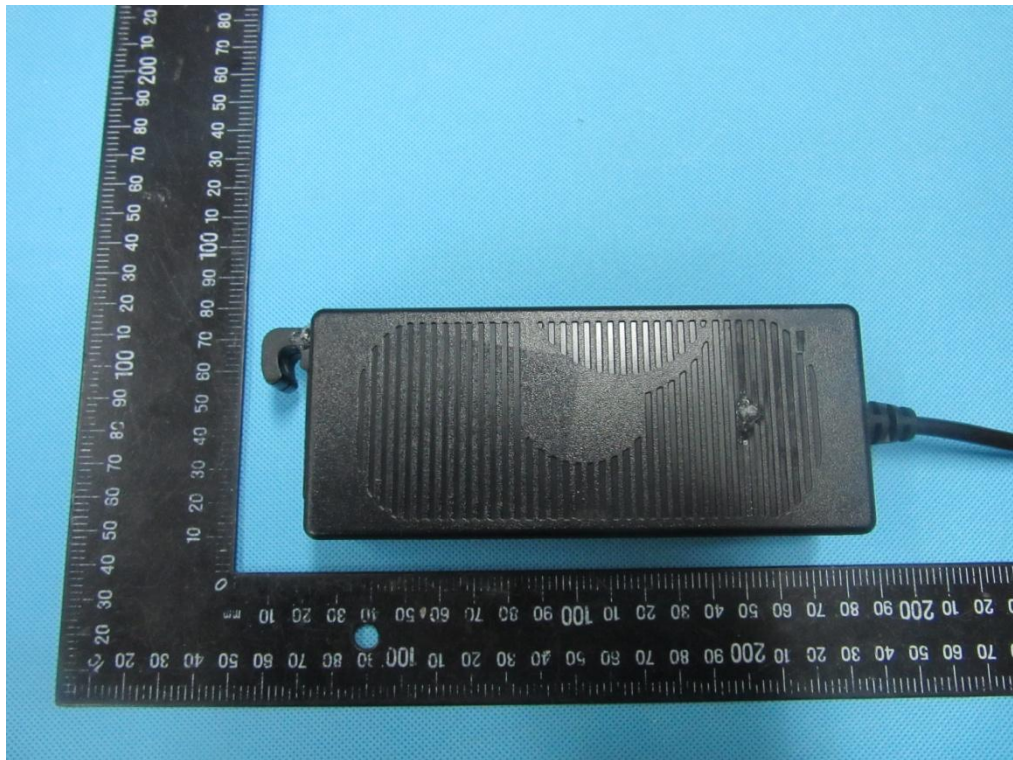
IEC 62368-1

Clause	Requirement + Test	Result - Remark	Verdict
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		TABLE: transformers (T1)						P
Loc.	Tested insulation	Working voltage peak / V	Working voltage rms / V	Required electric strength	Required clearance / mm	Required creepage distance / mm	Required distance thr. insul.	
Transformer Primary winding to secondary winding(RI)	Reinforced insulation	540	277	4000Vpk	4.5	6.6	Insulated wnding used	
Transformer Primary winding to core(RI)	Reinforced insulation	540	277	4000Vpk	4.5	6.6	Insulated wnding used	
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers	
Transformer Primary winding to secondary winding(RI)	Primary to secondary			4000Vpk	11.7	11.7	---	
Transformer Primary winding to core(RI)	Secondary to core			4000Vpk	9.5	9.5	---	
Supplementary information:								
1. Each transformer model is identical in insulation construction including clearance and creepage except number of turns per coil.								
2. Altitude correction factor for clearances for an altitude of 5000 m (based on IEC 60664-1:2007): 1.48.								
3. Core is regarded as secondary parts.								

Appendix No.1: Photos of product

GT*96900P series, GT*961200P series External view



GT*96900P series, GT*961200P series External view



Appendix No.1: Photos of product

GT*96900P series, GT*961200P series External view

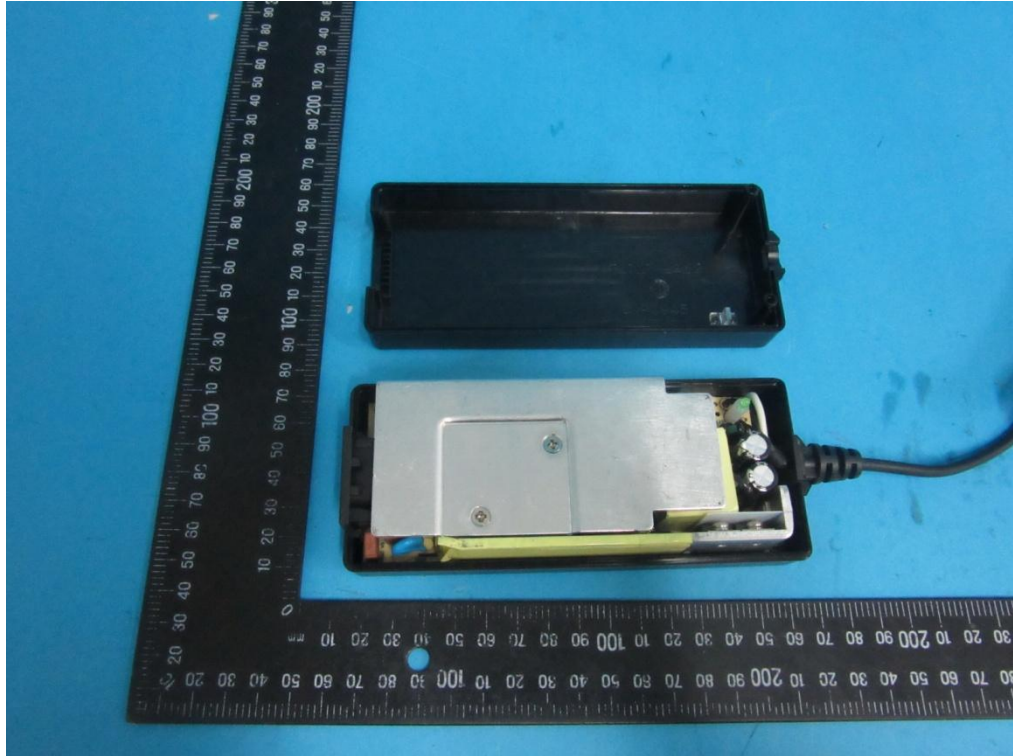


GT*96900P series, GT*961200P series External view

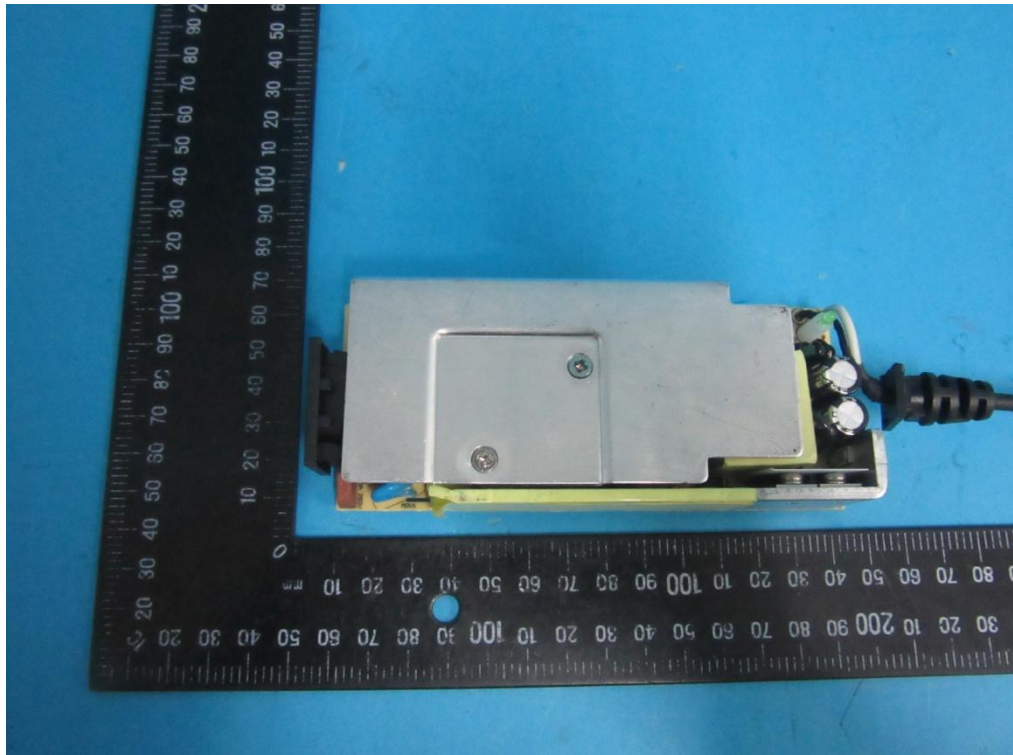


Appendix No.1: Photos of product

GT*96900P series, GT*961200P series Internal view (Class II)

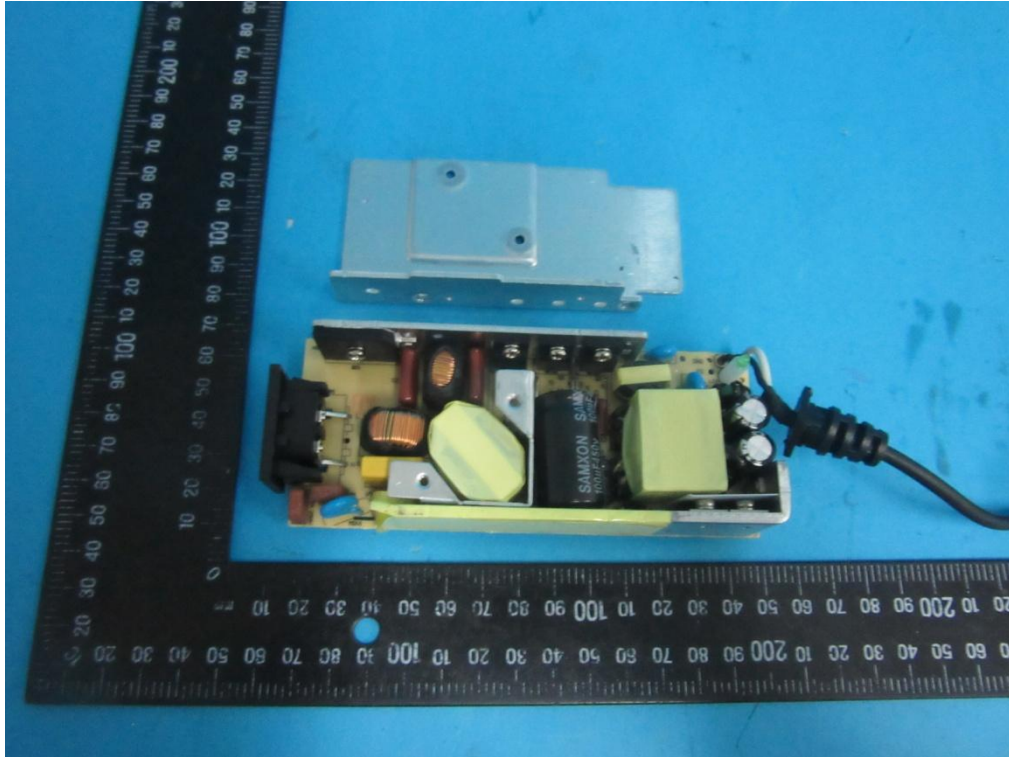


GT*96900P series, GT*961200P series Internal view (Class II)

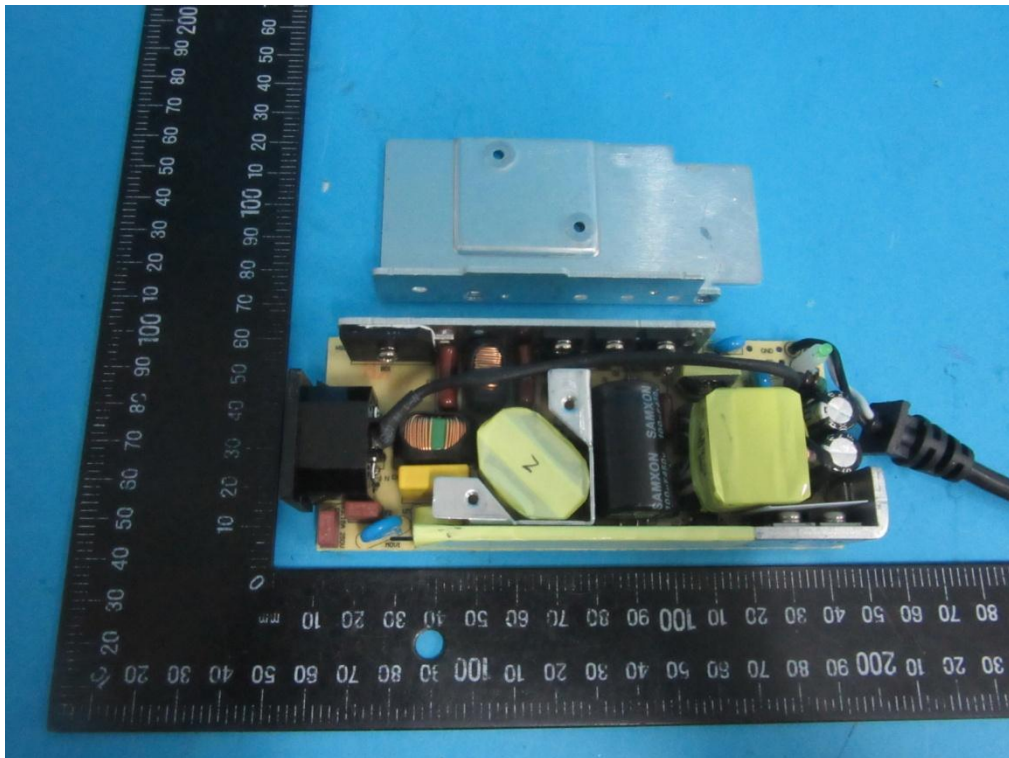


Appendix No.1: Photos of product

GT*96900P series, GT*961200P series Internal view (Class II)

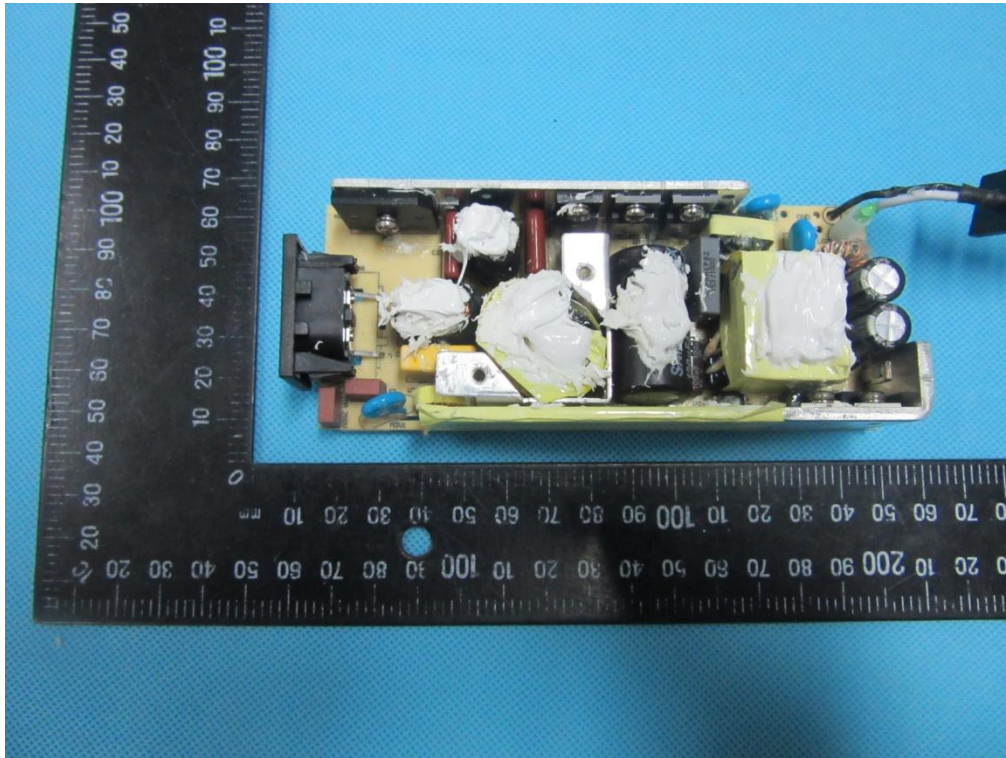


GT*96900P series, GT*961200P series Internal view (Class I)

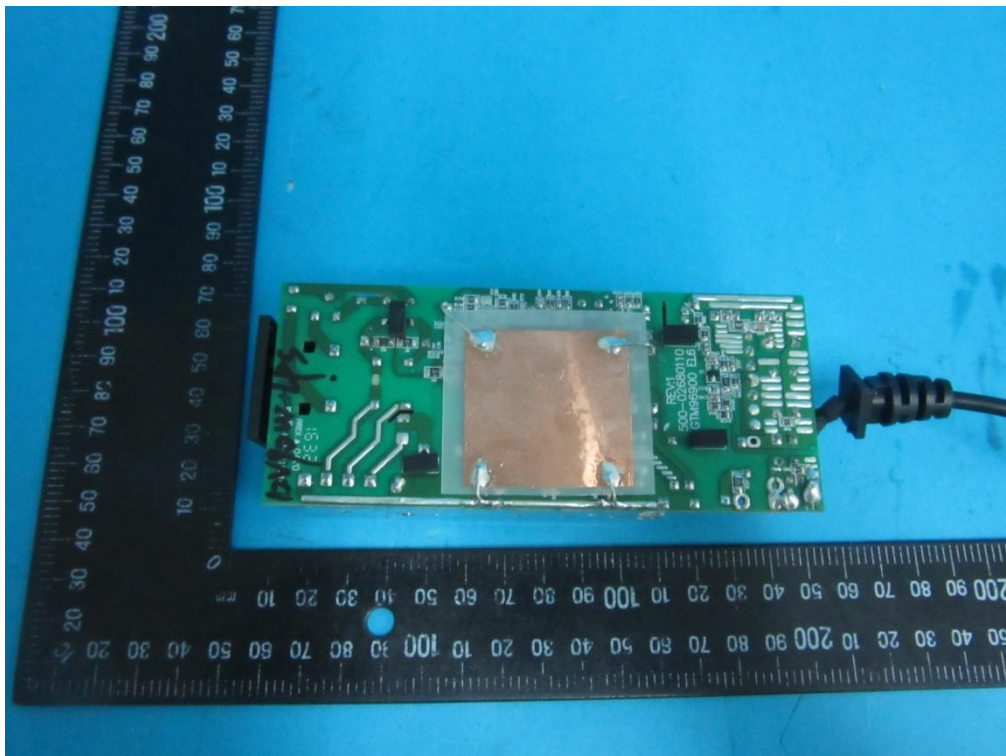


GT*96900P series, GT*961200P series Internal view (Class II)

Appendix No.1: Photos of product

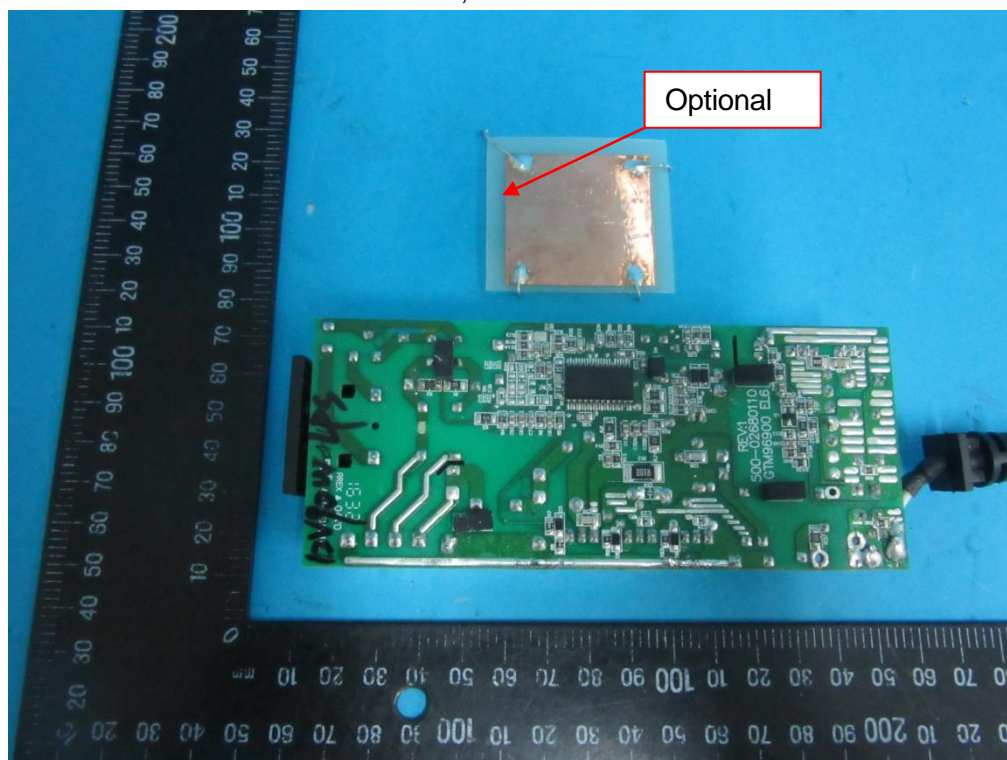


GT*96900P series, GT*961200P series PCB



Appendix No.1: Photos of product

GT*96900P series, GT*961200P series PCB

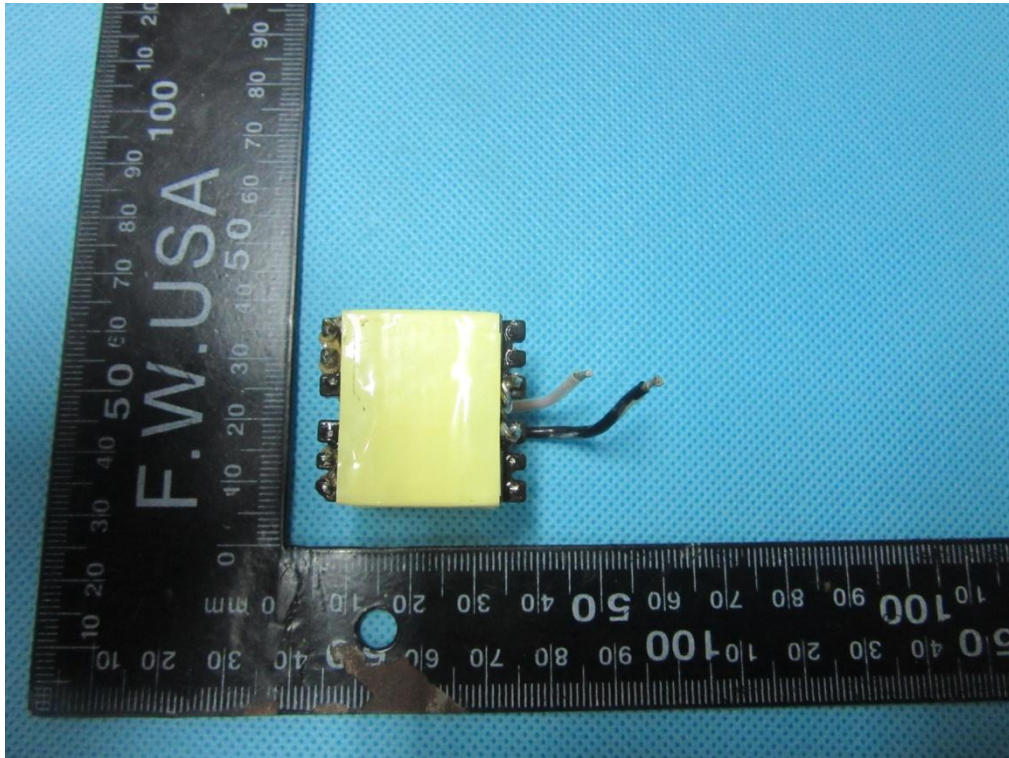


GT*96900P series, GT*961200P series Transformer

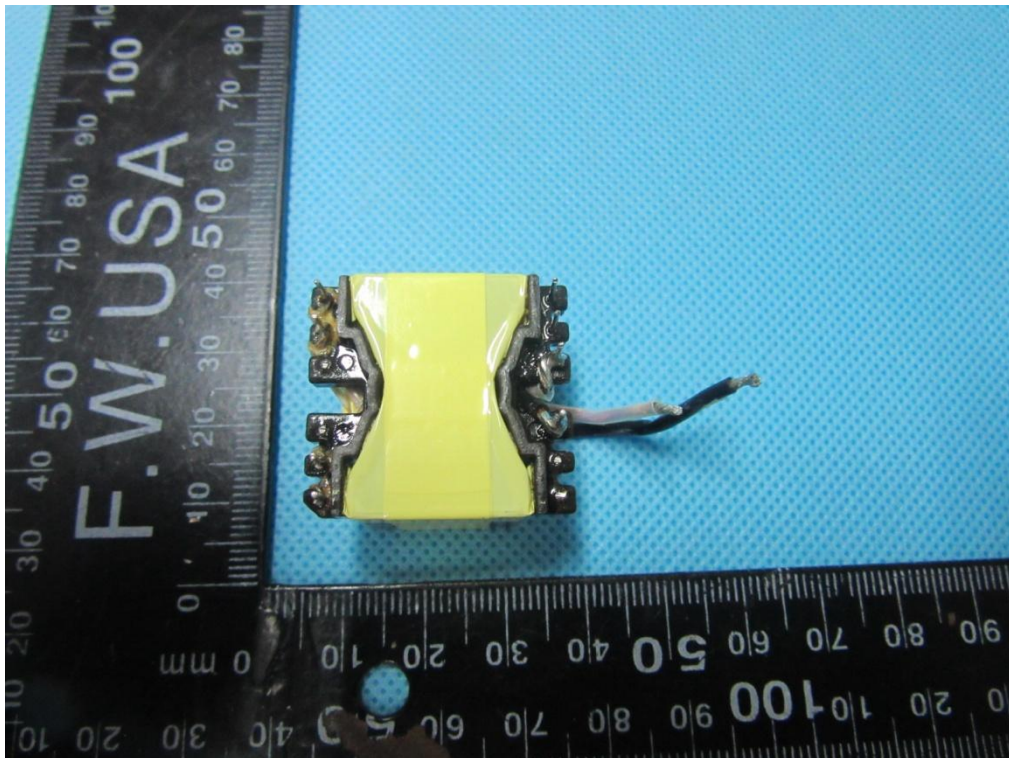


Appendix No.1: Photos of product

GT*96900P series, GT*961200P series Transformer

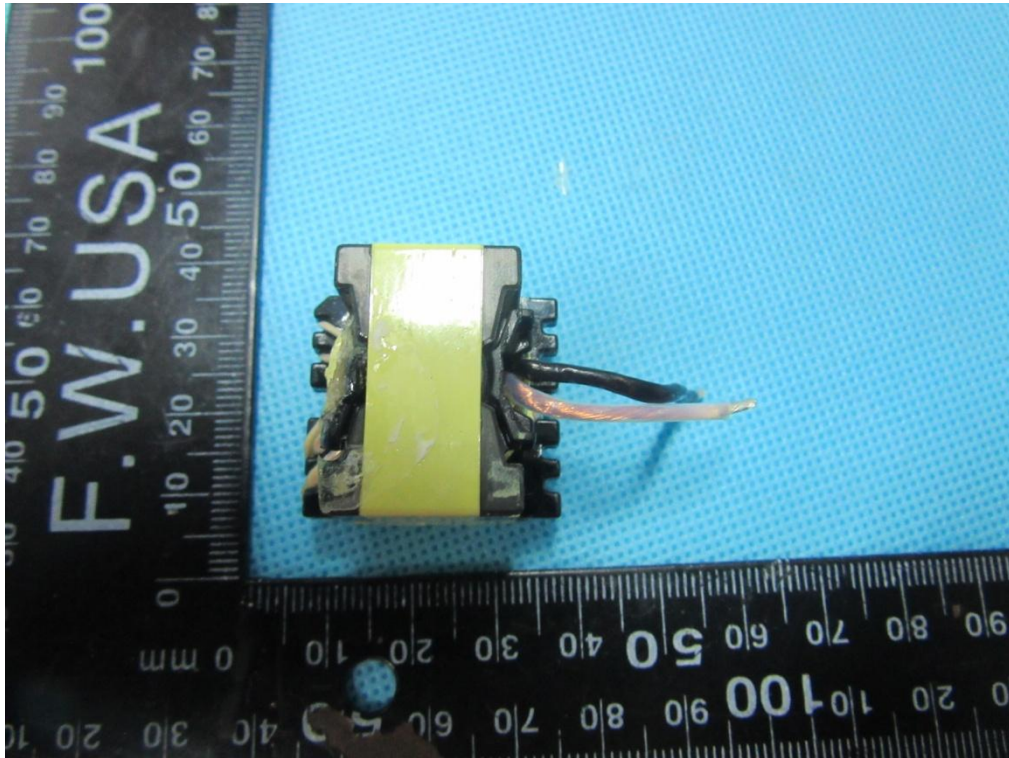


GT*96900P series, GT*961200P series Transformer

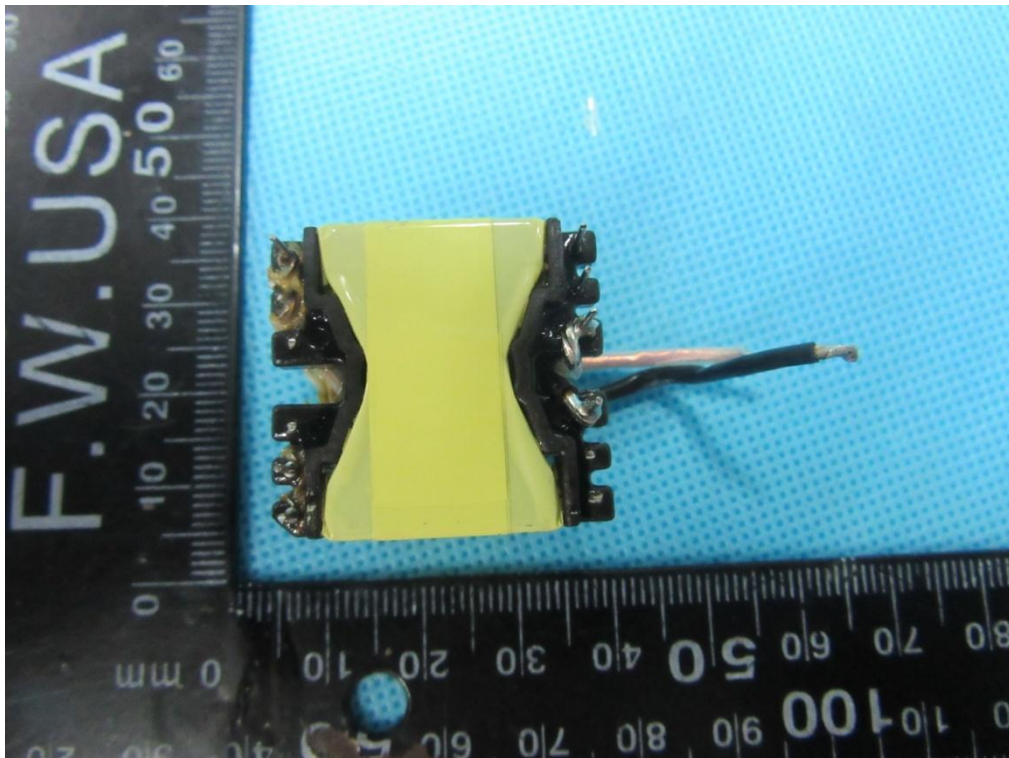


Appendix No.1: Photos of product

GT*96900P series, GT*961200P series Transformer



GT*96900P series, GT*961200P series Transformer



Appendix No.1: Photos of product

GT*96900P series, GT*961200P series Transformer

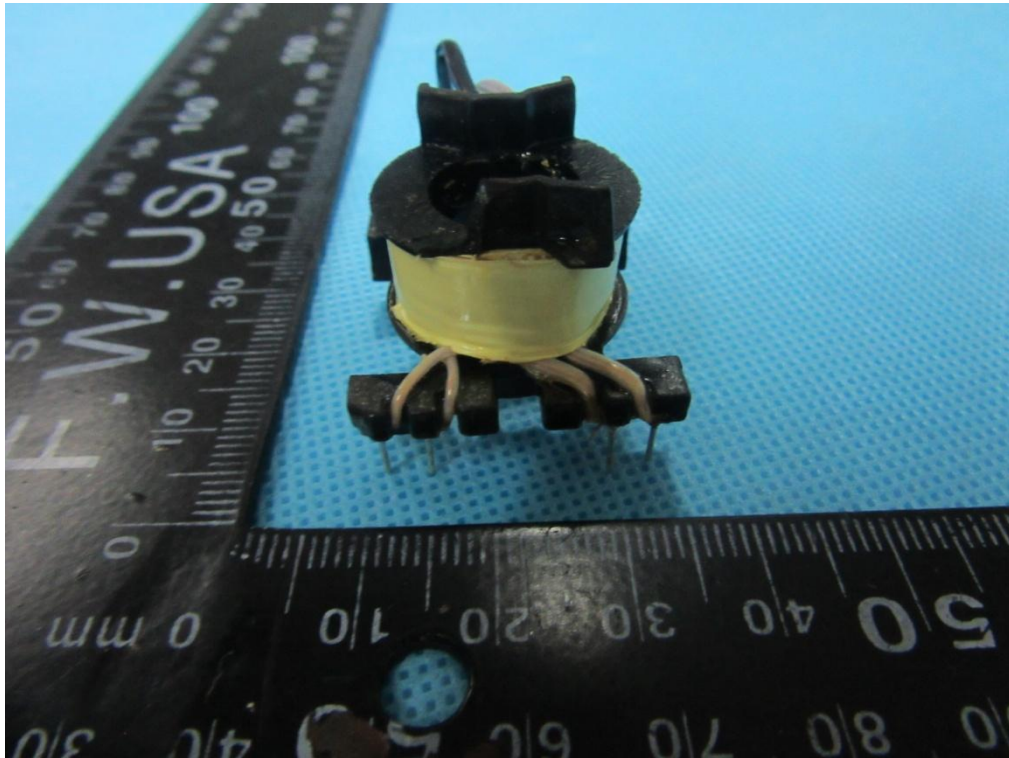


GT*96900P series, GT*961200P series Transformer

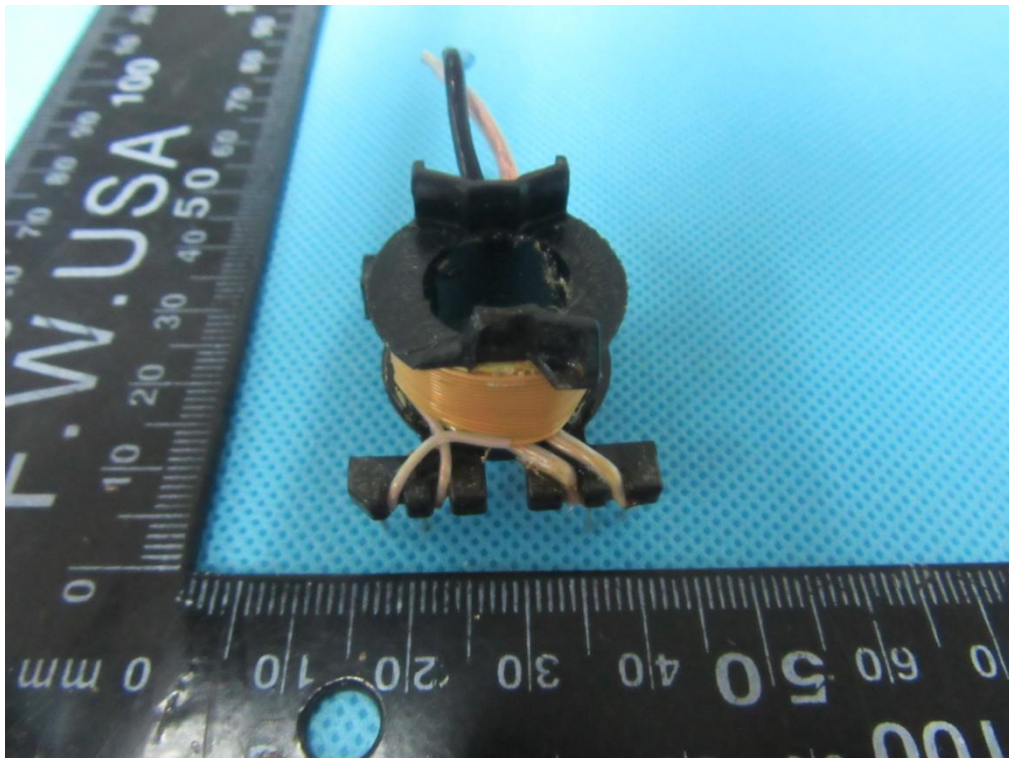


Appendix No.1: Photos of product

GT*96900P series, GT*961200P series Transformer

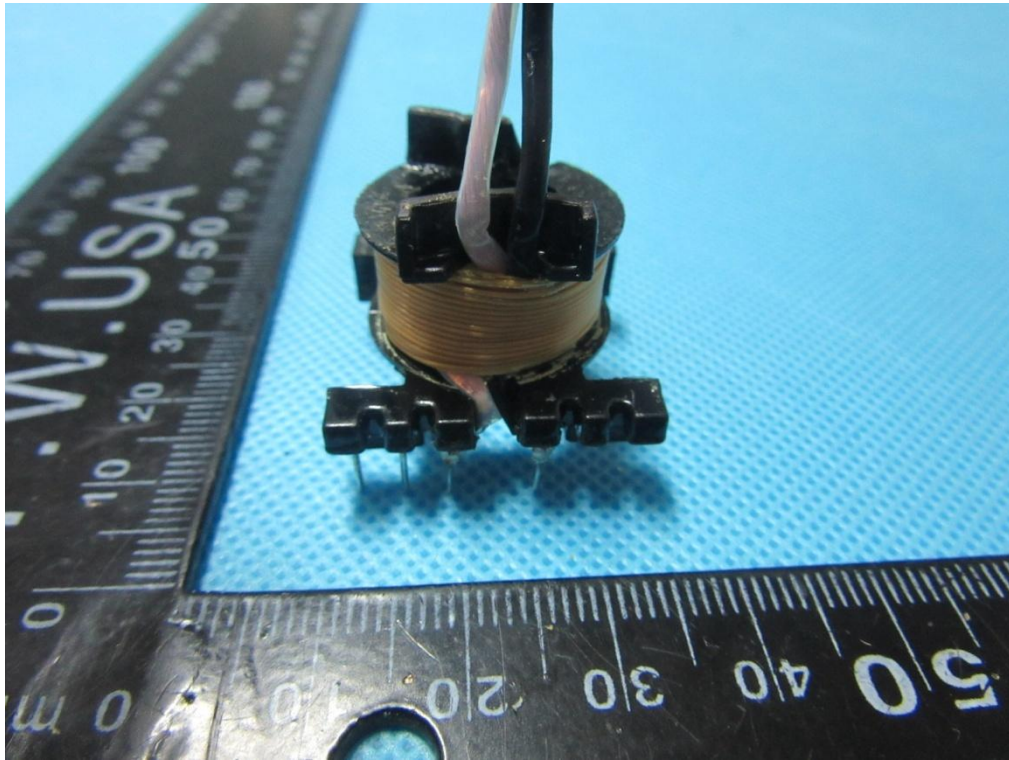


GT*96900P series, GT*961200P series Transformer

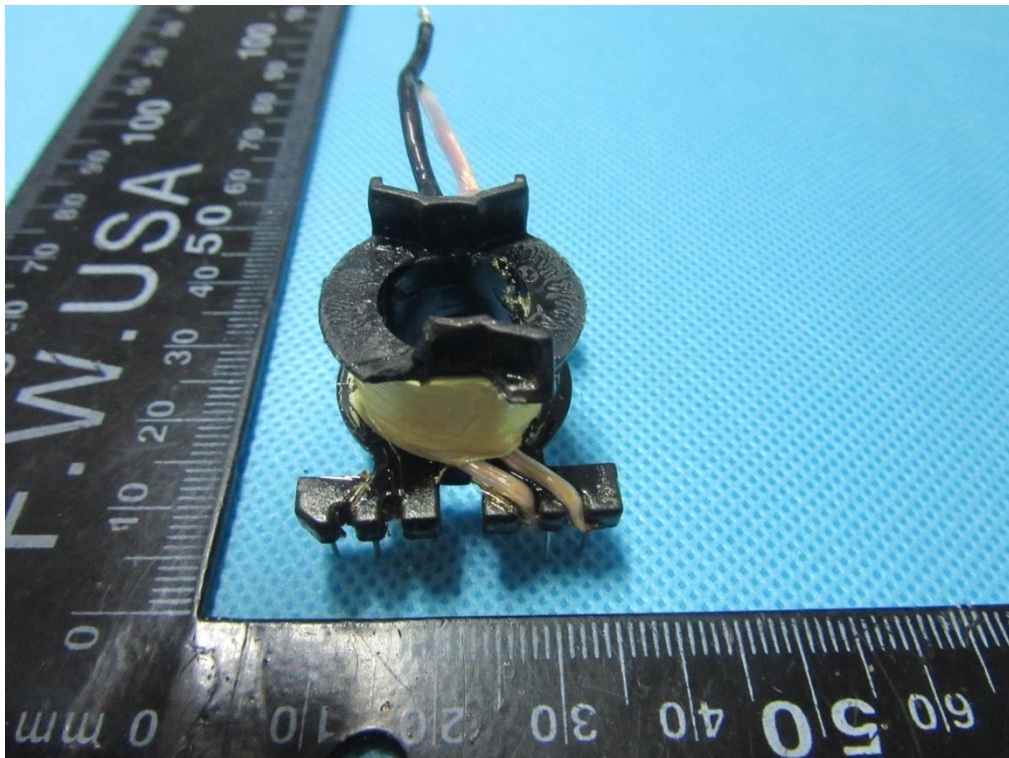


Appendix No.1: Photos of product

GT*96900P series, GT*961200P series Transformer

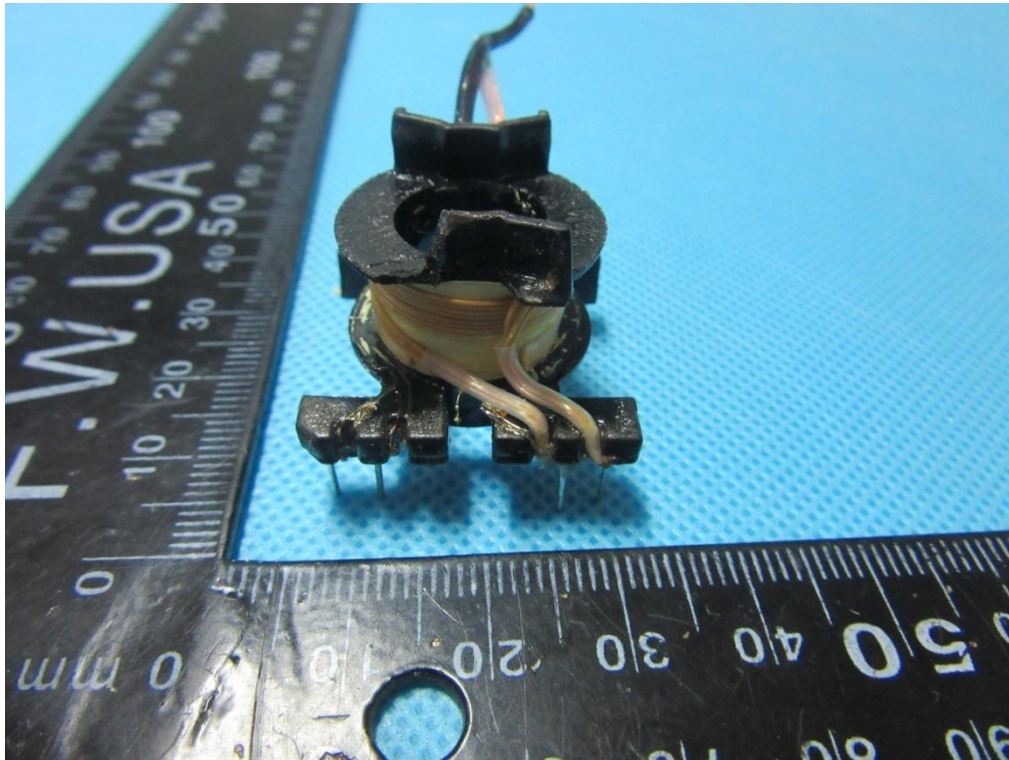


GT*96900P series, GT*961200P series Transformer

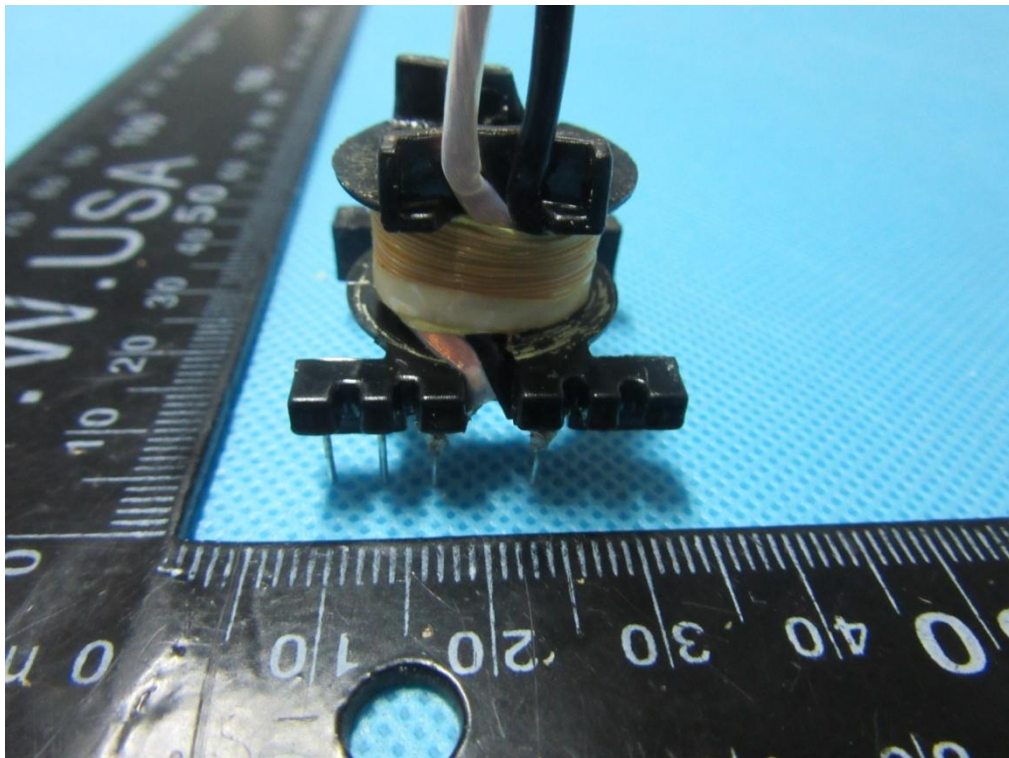


Appendix No.1: Photos of product

GT*96900P series, GT*961200P series Transformer

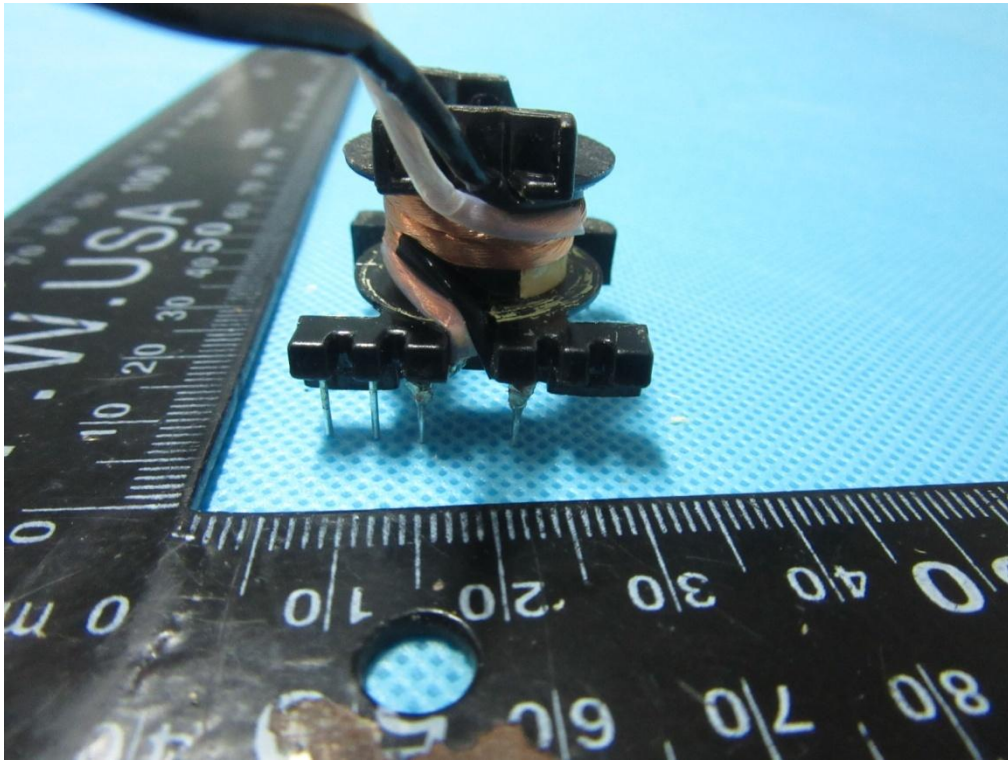


GT*96900P series, GT*961200P series Transformer

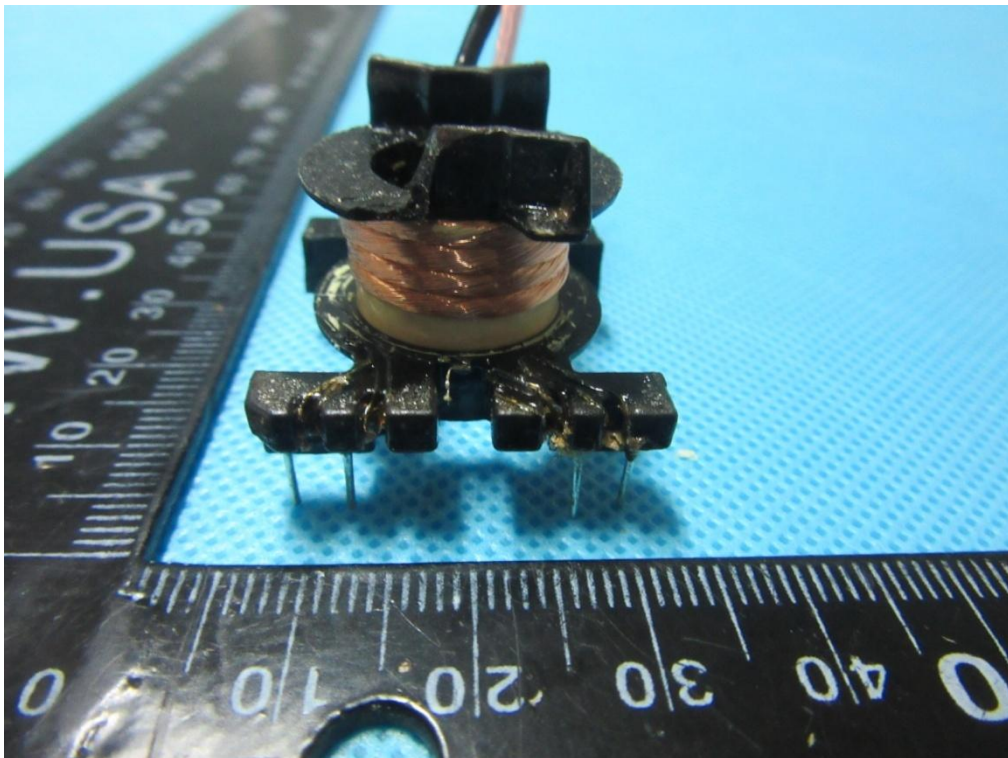


Appendix No.1: Photos of product

GT*96900P series, GT*961200P series Transformer



GT*96900P series, GT*961200P series Transformer



Appendix No.1: Photos of product

GT*96900P series, GT*961200P series Transformer



ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<p align="center">ATTACHMENT TO TEST REPORT IEC 62368-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Information technology equipment – Safety –</p>			
Part 1: General requirements			
Differences according to.....: EN 62368-1:2014 including Annex ZB and Annex ZC (Extracted from the EN standard)			

EN 62368-1:2014 – CENELEC COMMON MODIFICATIONS

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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 (normative) A-Deviations Annex ZD (informative) IEC and CENELEC code designations for flexible cords		P
General	Delete all the “country” notes in the reference document according to the following list: 0.2.1 Note 1 Note 3 4.1.15 Note 4.7.3 Note 1 and 2 5.2.2.2 Note 5.4.2.3.2.2 & Table 13 Note c 5.4.2.3.2.4 Note 1 and 3 5.4.2.5 Note 2 5.4.5.1 Note 5.5.2.1 Note 5.5.6 Note 5.6.4.2.1 Note 2 and 3 5.7.5 Note 5.7.6.1 Note 1 and 2 10.2.1 & Table 39 Note 2, 3 and 4 10.5.3 Note 2 10.6.2.1 Note 3 F.3.3.6 Note 3		P

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.	NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.		P
4.Z1	<p>Add the following new subclause after 4.9:</p> <p>To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, 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):</p> <p>a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment;</p> <p>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;</p> <p>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.</p> <p>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>	<p>Considered.</p> <p>Complied with item a) for internal fuse (F1, F2) used and for parts as described in b) reliance on the protection in the building installation.</p>	P
5.4.2.3.2.4	<p>Add the following to the end of this subclause:</p> <p>The requirement for interconnection with external circuit is in addition given in EN 50491-3:2009.</p>	No connection to external circuit.	N/A
10.2.1	<p>Add the following to c) and d) in Table 39:</p> <p>For additional requirements, see 10.5.1.</p>	No radiation.	N/A

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	<p>Add the following after the first paragraph:</p> <p><i>For RS 1 compliance is checked by measurement under the following conditions:</i></p> <p><i>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.</i></p> <p>NOTE Z1 Soldered joints and paint lockings are examples of adequate locking.</p> <p><i>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.</i></p> <p><i>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.</i></p> <p><i>For RS1, the dose-rate shall not exceed 1 µSv/h taking account of the background level.</i></p> <p>NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.</p>		N/A
10.6.2.1	<p>Add the following paragraph to the end of the subclause:</p> <p>EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.</p>		N/A

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
10.Z1	<p>Add the following new subclause after 10.6.5.</p> <p>10.Z1 Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz</p> <p>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).</p> <p>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</p>		N/A
G.7.1	<p>Add the following note:</p> <p>NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.</p>		N/A
Bibliography	Add the notes for the standards EN references indicated		N/A

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	—
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ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
4.1.15	<p>Denmark, Finland, Norway and Sweden</p> <p>To the end of the subclause the following is added:</p> <p>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.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In Denmark: "Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord."</p> <p>In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"</p> <p>In Norway: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In Sweden: "Apparaten skall anslutas till jordat uttag"</p>		N/A
4.7.3	<p>United Kingdom</p> <p>To the end of the subclause the following is added:</p> <p>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.</p> <p>Also see Annex G.4.2 of this annex</p>		N/A
5.2.2.2	<p>Denmark</p> <p>After the 2nd paragraph add the following:</p> <p>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.</p>	No high touch current measured.	N/A

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.11.1 and Annex G	<p>Finland and Sweden</p> <p>To the end of the subclause the following is added:</p> <p>For separation of the telecommunication network from earth the following is applicable:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> • 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. <p>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</p> <ul style="list-style-type: none"> • 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 1,5 kV. <p>It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> • 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; <p>the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14.</p> <p>in the sequence of tests as described in EN 60384-14.</p>		N/A
IEC62368_1B			

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.2.1	<p>Norway After the 3rd paragraph the following is added:</p> <p>Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).</p>	Considered.	P
5.5.6	<p>Finland, Norway and Sweden To the end of the subclause the following is added:</p> <p>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.</p>	No such resistor used.	N/A
5.6.1	<p>Denmark Add to the end of the subclause:</p> <p>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.</p>		N/A
5.6.4.2.1	<p>Ireland and United Kingdom After the indent for pluggable equipment type A, the following is added:</p> <p>– the protective current rating is taken to be 13 A, this being the largest rating of fuse used in the mains plug.</p>		N/A
5.6.5.1	<p>Ireland and United Kingdom To the second paragraph the following is added:</p> <p>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 mm² to 1,5 mm² in cross-sectional area.</p>		N/A
5.7.5	<p>Denmark To the end of the subclause the following is added:</p> <p>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.</p>		N/A

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.1	<p>Norway and Sweden</p> <p>To the end of the subclause the following is added:</p> <p>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.</p> <p>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.</p> <p>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:</p> <p>“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)”</p> <p>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.</p>		N/A

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>Translation to Norwegian (the Swedish text will also be accepted in Norway):</p> <p>“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.”</p> <p>Translation to Swedish:</p> <p>”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.”.</p>		N/A
5.7.6.2	<p>Denmark</p> <p>To the end of the subclause the following is added:</p> <p>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 .</p>		N/A
B.3.1 and B.4	<p>Ireland and United Kingdom</p> <p>The following is applicable:</p> <p>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.</p> <p>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</p>		N/A

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	<p>Denmark</p> <p>To the end of the subclause the following is added:</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c.</p> <p>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</p> <p>Justification: Heavy Current Regulations, Section 6c</p>		N/A

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	<p>United Kingdom</p> <p>To the end of the subclause the following is added:</p> <p>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.</p> <p>Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.</p>		N/A
G.7.1	<p>United Kingdom</p> <p>To the first paragraph the following is added:</p> <p>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.</p> <p>NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>		N/A
G.7.1	<p>Ireland</p> <p>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</p>		N/A
G.7.2	<p>Ireland and United Kingdom</p> <p>To the first paragraph the following is added:</p> <p>A power supply cord with a conductor of 1,25 mm² is allowed for equipment which is rated over 10 A and up to and including 13 A.</p>		N/A

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ZC	ANNEX (normative) A-DEVIATIONS (EN)		—
10.5.2	<p>Germany</p> <p>The following requirement applies:</p> <p>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.</p> <p><i>Justification:</i> German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM.</p> <p>NOTE : Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int+49-531-592-6320, Internet: http://www.ptb.de</p>	Not such equipment.	N/A

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
F.1	<p>Italy</p> <p>The following requirements shall be fulfilled:</p> <ul style="list-style-type: none"> • The power consumption in Watts (W) shall be indicated on TV receivers and in their instruction for use (Measurement according to EN 60555-2). <p>Note/Nota <i>EN 60555-2 has since been replaced by IEC 60107-1:1997.</i></p> <ul style="list-style-type: none"> • TV receivers shall be provided with an instruction for use, schematic diagrams and adjustments procedure in Italian language. • Marking for controls and terminals shall be in Italian language. Abbreviation and international symbols are allowed provided that they are explained in the instruction for use. • The ECC manufacturers are bound to issue a conformity declaration according to the above requirements in the instruction manual. The correct statement for conformity to be written in the instruction manual, shall be: <i>Questo apparecchio è fabbricato nella CEE nel rispetto delle disposizioni del D.M. marzo 1992 ed è in particolare conforme alle prescrizioni dell'art. 1 dello stesso D.M.</i> • The first importers of TV receivers manufactured outside EEC are bound to submit the TV receivers for previous conformity certification to the Italian Post Ministry (PP.TT). The TV receivers shall have on the backcover the certification number in the following form: D.M. 26/03/1992 xxxxx/xxxxx/S or T or pT S for stereo T for Teletext pT for retrofitable teletext <p><i>Justification:</i> Ministerial Decree of 26 March 1992 : National rules for television receivers trade.</p>	Not such equipment.	N/A

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 62368-1 2 th 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
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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.	Should be evaluated during national approval.	N/A
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC generally are required to have special construction features and identification markings.	Should be evaluated during national approval.	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		N/A

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.7	Equipment intended to receive telecommunication ringing signals complies with a special touch current measurement tests.	Not such equipment	N/A
6.5.1	PS3 wiring outside a fire enclosure complies with single fault testing in B.4, or be current limited per one of the permitted methods.		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.	Should be evaluated during national approval.	N/A
Annex G (G.7.1)	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		N/A
Annex G (G.7.3)	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.	Should be evaluated during national approval.	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.	Should be evaluated during national approval.	N/A
Annex G (G.7.5)	Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Power supply cords are required to be no longer than 4.5 m in length if used in ITE Rooms.	Should be evaluated during national approval.	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.	No battery.	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.	Not such equipment or application as below.	N/A

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	For ITE room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A
	Consumer products designed or intended primarily for children 12 years of age or younger are subject to additional requirements in accordance with U.S. & Canadian Regulations.		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.		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.		P
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
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

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVA (G.1)	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position		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.	No such fuse provided.	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
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 1 are 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

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVE (4.1.1)	Some equipment, components, sub-assemblies and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material requirements. Components required to comply include: appliance couplers, attachment plugs, battery back-up systems, battery packs, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultra-capacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), ground-fault current interrupters, interconnecting cables, data storage equipment, printed wiring, protectors for communications circuits, receptacles, surge protective devices, vehicle battery adapters, wire connectors, and wire and cables.	See Table 4.1.2.	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.	Inlet for detachable power cord.	P
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
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

ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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