Ref. Certif. No.

SI-8618

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

CB TEST CERTIFICATE

Product	ITE POWER SUPPLY
Name and address of the applicant	GlobTek, Inc. 186 Veterans Drive, Northvale NJ 07647, New Jersey, USA
Name and address of the manufacturer	GlobTek, Inc. 186 Veterans Drive, Northvale NJ 07647, New Jersey, USA
Name and address of the factory	See next page.
Note: When more than one factory, please report on page 2	☒ Additional Information on page 2
Ratings and principal characteristics	Input: 100-240 V~; 50-60 Hz; 1.0 A Output: 12-24 Vdc; Max. 3 A; Max. 40 W
Trademark / Brand (if any)	GlobTek, Inc.
Customer's Testing Facility (CTF) Stage used	
Model / Type Ref.	GT-46400-WWVV-X.X-TZ (see next page for nomeclature)
Additional information (if necessary may also be reported on page 2)	Unit also complies with EN 62368-1:2014 + A11:2017.
	☐ Additional Information on page 2
A sample of the product was tested and found to be in conformity with	IEC 62368-1:2014 (Second Edition)
As shown in the Test Report Ref. No. which forms part of this Certificate	T223-0024/21, dated 2021-05-19

This CB Test Certificate is issued by the National Certification Body

SIQ Ljubljana, Mašera-Spasićeva ulica 10, SI-1000 Ljubljana, Slovenia
T +386 1 4778 100, F +386 1 4778 444, info@siq.si, www.siq.si

SIQ Ljubljana is accredited by Slovenian Accreditation with accreditation number CP-001 in the field of certification of products, processes and services.

Date: 2021-05-19

Signature: Bojan Pečavar

Factory locations (continued):

1) GlobTek, Inc. 186 Veterans Dr. Northvale, NJ 07647, New Jersey USA

2) GlobTek (Suzhou) Co. Ltd.,
Building 4, No. 76 JinLing East Road,Suzhou Industrial Park,
Suzhou JiangSu, 215021, China

Ratings and principal characteristics (continued):

GT-46400-WWVV-X.X-TZ

WW is the standard output wattage, with a maximum value of "40",

VV is the standard rated output voltage designation, with a value of "12" "15" "19"and "24";

-X.X denote the output voltage differentiator, subtracting X.X volts from standard output voltage VV in 0.1V increments, the actual output voltage range is 12-24Vdc, blank is to indicate the no voltage different.

Z can be 2 or 3 or 3A, 2 means C8 inlet type, 3 means C14 inlet type, 3A means C6 inlet type.

Model	Output Voltage	Max. Output current	Max. power
GT-46400-WW12-TZ	12V	3A	36W
GT-46400-WW15-X.X-TZ	12.1~15V	3A	40W
GT-46400-WW19-X.X-TZ	15.1~19V	2.66A	40W
GT-46400-WW24-X.X-TZ	19.1~24V	2.1A	40W

Additional information (if necessary)

Date: 2021-05-19

Signature: Bojan Pečavar

Test Report issued under the responsibility of:

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

Report Number.....:	T223-0024/21
Date of issue.....:	2021-05-19
Total number of pages.....:	174 pages
Applicant's name.....:	**GlobTek, Inc.**
Address.....:	186 Veterans Drive, Northvale NJ 07647, New Jersey, 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

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test Item description ..... :	ITE Power Supply
Trade Mark ..... :	GlobTek, Inc.
Manufacturer ..... :	GlobTek, Inc. 186 Veterans Drive, Northvale NJ 07647, New Jersey, USA
Model/Type reference ..... :	GT-46400-WWVV-X.X-TZ WW is the standard output wattage, with a maximum value of "40", VV is the standard rated output voltage designation, with a value of "12" "15" "19"and "24"; -X.X denote the output voltage differentiator, subtracting X.X volts from standard output voltage VV in 0.1V increments, the actual output voltage range is 12-24Vdc, blank is to indicate the no voltage different. Z can be 2 or 3 or 3A, 2 means C8 inlet type, 3 means C14 inlet type, 3A means C6 inlet type.
Ratings ..... :	Input：100-240 V~; 50-60 Hz; 1.0 A Output: 12-24 Vdc; Max. 3 A; Max. 40 W See also General Product Information for details.

Model	Output Voltage	Max. Output current	Max. power
GT-46400-WW12-TZ	12V	3A	36W
GT-46400-WW15-X.X-TZ	12.1~15V	3A	40W
GT-46400-WW19-X.X-TZ	15.1~19V	2.66A	40W
GT-46400-WW24-X.X-TZ	19.1~24V	2.1A	40W

Testing procedure and testing location:			
☒	CB Testing Laboratory:	SIQ Ljubljana *SIQ Ljubljana is accredited by Slovenian Accreditation with accreditation number LP-009 in the field of testing.*	
Testing location/ address .....:		Mašera-Spasićeva ulica 10, SI-1000 Ljubljana Slovenia	
☐	Associated CB Testing Laboratory:		
Testing location/ address .....:			
Tested by (name + signature) .....:		Luka Košir	
Approved by (name + signature).....:		Boštjan Glavič	
☐	Testing procedure: TMP/CTF Stage 1		
Testing location/ address ..... :			
Tested by (name + signature) .....:			
Approved by (name + signature).....:			
☐	Testing procedure: WMT/CTF Stage 2		
Testing location/ address .....:			
Tested by (name + signature) .....:			
Witnessed by (name + signature) .....:			
Approved by (name + signature).....:			
☐	Testing procedure: SMT/CTF Stage 3 or 4		
Testing location/ address .....:			
Tested by (name + signature) .....:			
Approved by (name + signature).....:			
Supervised by (name + signature) .....:			

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

1. National differences according to IEC 62368-1:2014 (Second Edition) – Enclosure No. 1 (47 pages)
2. Pictures of the unit – Enclosure No. 2 (9 pages)
3. Technical documentation – schematics, layouts, transformer data – Enclosure No. 3 (25 pages)
4. Additional Test Data – Enclosure No. 4 (7 pages)

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
- Steady force test (4.4.4.2, T.5) - Enclosure Impact Test (4.4.4.4, T.6) - Drop Test (4.4.4.3, T.7) - Stress relief test (4.4.4.7, T.8) - Steady-State Voltage and Current (5.2.2.2) - Accessible ES1 circuits separated from other ES circuits using components (5.2.1.1) - Temperature Tests (5.4.1.4, 6.3.2, 9) - Determination of working voltage (5.4.1.8) - Clearance and Creepage Distance Measurement (5.4.2, 5.4.3, T.2) - Humidity Conditioning (5.4.8) - Electric Strength (5.4.9.1) - Stored discharge on capacitors (5.5.2.2) - Earthed Accessible Conductive Parts (5.7.4) - Protective Conductor Current (5.7.5) - Input test (B.2.5) - Abnormal Operating and Fault Conditions (B.3, B.4) - Test for the permanence of markings (F.3.10) - Limited power sources (Q.1)	**SIQ Ljubljana** **Mašera-Spasićeva ulica 10,** **SI-1000 Ljubljana, Slovenia**

Summary of compliance with National Differences:

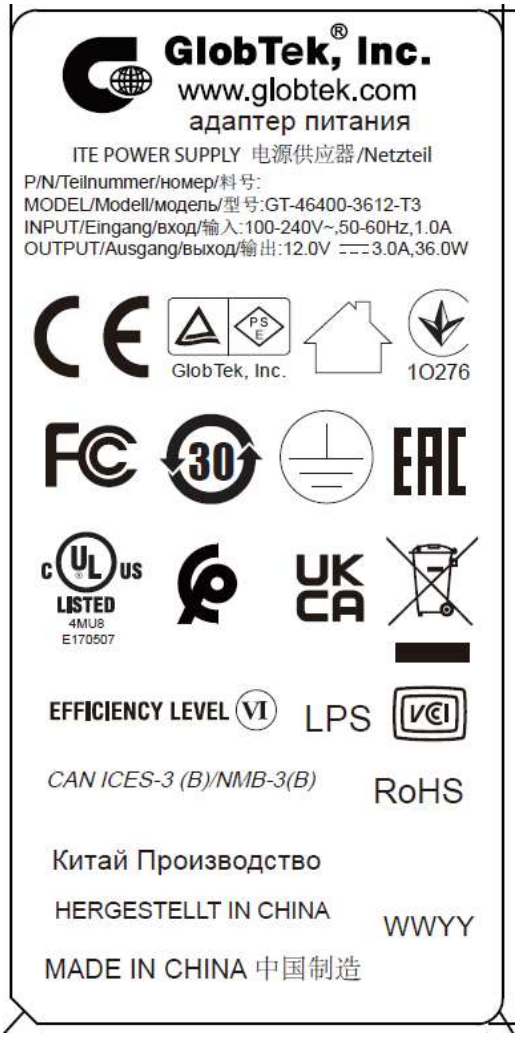
List of countries addressed

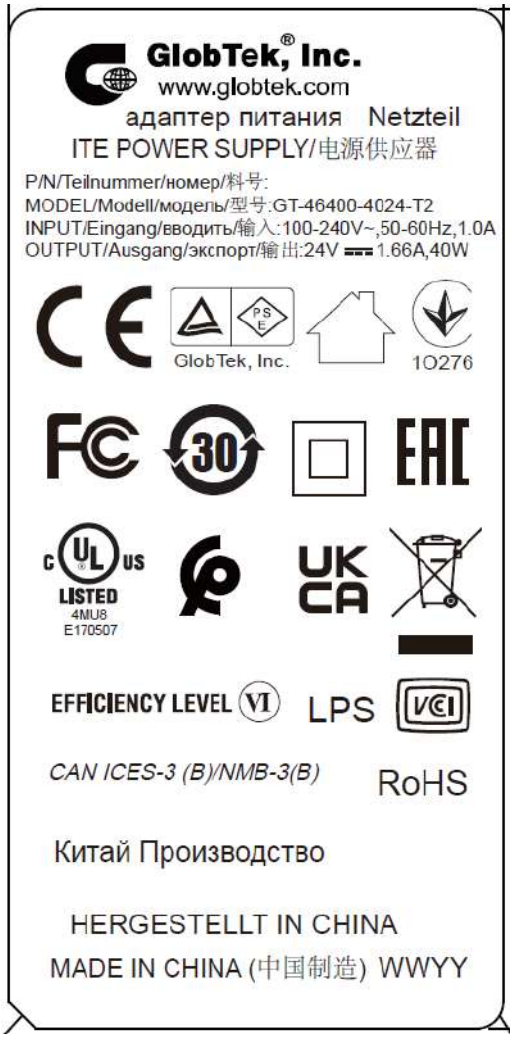
EU group differences, Canada, United States, Australia and New Zealand
CENELEC member countries (EU group differences): Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Japan, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, and the United Kingdom.

☒ **The product fulfils the requirements of CAN/CSA C22.2 No. 62368-1-14.**
☒ **The product fulfils the requirements of EN 62368-1:2014 + A11: 2017**
☒ **The product fulfils the requirements of UL 62368-1, Second Edition.**
☒ **The product fulfils the requirements of AS/NZS 62368.1:2018**
☒ **The product fulfils the requirements of BS EN 62368-1:2014 + A11:2017**

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.





TEST ITEM PARTICULARS:	
Classification of use by..... :	☒ Ordinary person ☐ Instructed person ☐ Skilled person ☒ Children likely to be present
Supply Connection..... :	☒ AC Mains ☐ DC Mains ☐ External Circuit - not Mains connected - ☐ ES1 ☐ ES2 ☐ ES3
Supply % Tolerance ..... :	☒ +10%/-10% ☐ +20%/-15% ☐ +____%/ -_____% ☐ None
Supply Connection – Type ..... :	☒ pluggable equipment type A - ☐ non-detachable supply cord ☒ appliance coupler ☐ direct plug-in ☐ mating connector ☐ pluggable equipment type B - ☐ non-detachable supply cord ☐ appliance coupler ☐ permanent connection ☐ mating connector ☐ other:_____
Considered current rating of protective device as part of building or equipment installation ..... :	20 A (for UL and CSA) for building; 2A (for equipment) Installation location: ☒ building; ☒ equipment
Equipment mobility ..... :	☒ movable ☐ hand-held ☐ transportable ☐ stationary ☐ for building-in ☐ direct plug-in ☐ rack-mounting ☐ wall-mounted
Over voltage category (OVC) ..... :	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other: _____
Class of equipment ..... :	☒ Class I ☒ Class II ☐ Class III
Access location ..... :	☐ restricted access location ☒ N/A
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maxium operating ambient :	40°C
IP protection class ..... :	☒ IPX0 ☐ IP___
Power Systems ..... :	☒ TN ☐ TT ☒ IT - 230 V L-L (for Noway)
Altitude during operation (m) ..... :	☐ 2000 m or less ☒ 5000 m
Altitude of test laboratory (m) ..... :	☐ 2000 m or less ☒ 300 m
Mass of equipment (kg) ..... :	☒ approx. 0,208 kg
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.....:	2021-01-04
Date (s) of performance of tests.....:	From 2021-01-04 to 2021-01-11
GENERAL REMARKS:	
"(See Enclosure #)" refers to additional information appended to the report. **"(See appended table)" refers to a table appended to the report.** **Throughout this report a ☒ comma / ☐ point is used as the decimal separator.**	
Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:	☒ **Yes** ☐ **Not applicable**
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies) .....:	1) GlobTek, Inc. 186 Veterans Dr. Northvale, NJ 07647, New Jersey USA 2) GlobTek (Suzhou) Co. Ltd. Building 4, No. 76 JinLing East Road,Suzhou Industrial Park, Suzhou JiangSu, 215021, China

GENERAL PRODUCT INFORMATION:

Product Description –

The equipment is desktop switchmode power supply either Class I or Class II. The equipment is intended for use with Audio/video, information and communication technology equipment. Electronic components are mounted on PWB, and housed in a thermoplastic enclosure by ultrasonic welding.

Model Differences –

Class I

All models are identical except for output rating, type of appliance Inlet (Z can be 3 or 3A, 3 means C14 inlet type, 3A means C6 inlet type) and transformer with secondary winding, see below:

Model name	Input	Output	Difference	Transformer T1
GT-46400-3612-T3/T3A	100-240V~, 50-60Hz, 1.0A	12Vdc, 3.0A	C1: 82µF R10: 0.56ohms	XF00928
GT-46400-3012-T3/T3A		12Vdc, 2.50A	C1: 68 µF R10: 0.51-0.62ohms	
GT-46400-4015-T3/T3A		15Vdc, 2.66A	C1: 82 µF R10: 0.51ohms	XF00942
GT-46400-3015-T3/3A		15Vdc, 2.0A	C1: 68 µF R10: 0.68ohms	
GT-46400-4019-T3/3A		19Vdc, 2.1A	C1: 82 µF R10: 0.56ohms	XF00943

GT-46400-3019-T3/3A		19Vdc, 1.57A	C1: 68 µF R10: 0.75ohms	
GT-46400-4024-T3/3A		24Vdc, 1.66A	C1: 82 µF R10: 0.56ohms	XF00944
GT-46400-3024-T3/3A		24Vdc, 1.25A	C1: 68 µF R10: 0.75ohms	

Class II

All models are identical except for output rating and transformer with secondary wire, please see below.

PCB type B identical PCB type A except removed D8, add sec. choke (L1) and PCB re-layout.

Model name	Input	Output	Difference	PCB Type	Transformer T1
GT-46400-3612-T2	100-240V~, 50-60Hz, 1.0A	12Vdc, 3.0A	C1: 82uF R10: 0.56ohms	A	XF00928
GT-46400-3012-T2		12Vdc, 2.5A	C1: 68uF R10: 0.51-0.62 ohms	A	
GT-46400-3315-2.0-T2		13Vdc, 2.53A	C1: 82uF R10: 0.56ohms	A	
GT-46400-2615-2.0-T2		13Vdc, 2.0A	C1: 68uF R10: 0.62ohms	A	
GT-46400-4015-T2		15Vdc, 2.66A	C1: 82uF R10: 0.51ohms Alternate PCB layout type B (removed D8, add sec. choke (L1) and PCB re-layout)	A or B	XF00942
GT-46400-3015-T2		15Vdc, 2.0A	C1: 68uF R10: 0.68 ohms Alternate PCB layout type B (removed D8, add sec. choke (L1) and PCB re-layout)	A or B	
GT-46400-4019-T2		19Vdc, 2.1A	C1: 82uF R10: 0.56ohms	A	XF00943
GT-46400-3019-T2		19Vdc, 1.57A	C1: 68uF R10: 0.75 ohms	A	
GT-46400-4024-T2		24Vdc, 1.66A	C1: 82uF R10:	A	XF00944

			0.56ohms		
GT-46400-3024-T2		24Vdc, 1.25A	C1: 68uF R10: 0.75 ohms	A	XF00944

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

The product was tested according to the standard IEC 62368-1:2014 (2nd Edition) and/or EN 62368-1:2014 + A11:2017.

Additionally, the product was also evaluated according to the standards CSA C22.2 No. 62368-1:2014 and UL 62368-1:2014 (2nd Edition) and fulfils the requirements of these standards.

1. The product was tested to be suitable for connection to 20 A (for building) and 2A (for equipment).
2. All secondary output circuits are separated from mains by reinforced insulation and rated ES1 and PS2.
3. Appliance inlet on the unit can be used as a disconnect device.
4. The power supply is rated Class I or Class II.
5. The transformer T1 provides reinforced insulation. This transformer is built up to fulfil the requirement of insulation class B.
6. The equipment has been evaluated for use in a Pollution Degree 2 and overvoltage category II environment and a maximum altitude of 5000 m.
7. The product was evaluated for a maximum ambient of 40°C

This report has been judged on basis of two CB test reports:

1. CB test report No. PSE107-0204, issued 2018-07-05, by PSE INC., TAIWAN / 9F-1, No.80, Sec. 2, Guang Fu Rd., San Chung Distr., New Taipei City, TAIWAN CHINESE TAIPEI

2. CB test report No. PSE107-0203, issued 2018-07-05, by PSE INC., TAIWAN / 9F-1, No.80, Sec. 2, Guang Fu Rd., San Chung Distr., New Taipei City, TAIWAN CHINESE TAIPEI

Trademark was changed to Globtek and model names were changed to Globtek model name nomenlature.

After review following tests were repeated:

- Construction check
- 5.2 Classification of electrical energy source
- 5.4.2, 5.4.3, T.2 Clearance and Creepage Distance Measurement (for 5000m)
- 5.4.9 Electric strength test
- 5.6.6.2 Resistance of protective conductors and terminations
- 5.7 Prospective touch voltage, touch current and protective conductor current

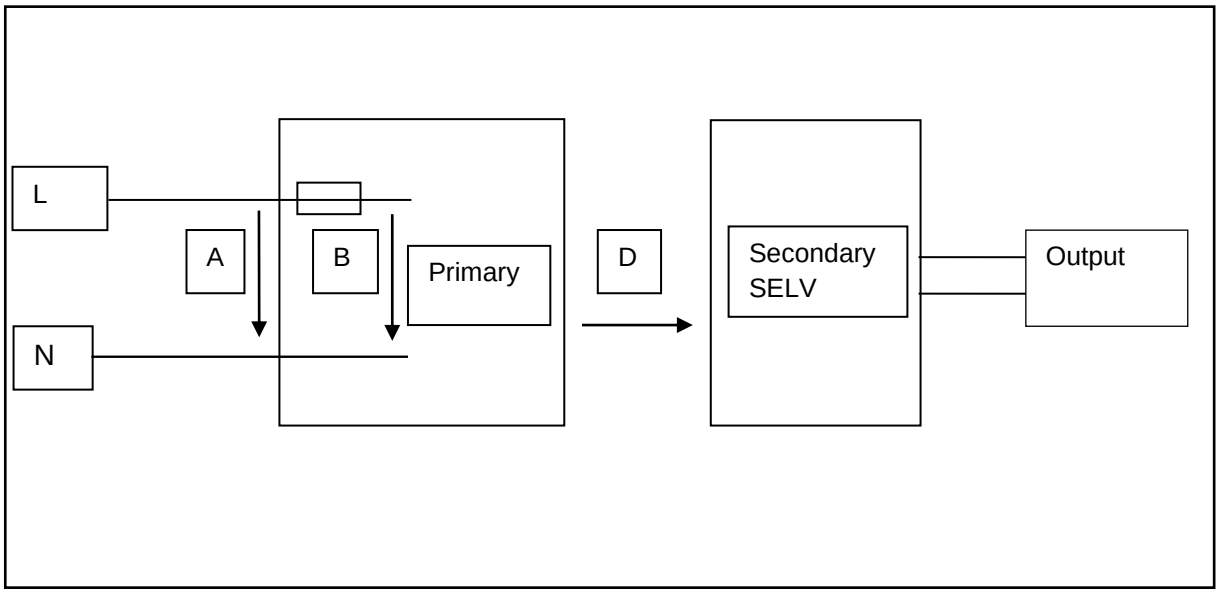
Japan national deviations were added.

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.) (Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.	
Electrically-caused injury (Clause 5): (Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification) Example: +5 V dc input ES1	
Source of electrical energy	**Corresponding classification (ES)**
X capacitor connected between L and N	ES3
All circuits except for output circuits (connector)	ES3
Output circuit (connector)	ES1
Electrically-caused fire (Clause 6): (Note: List sub-assembly or circuit designation and corresponding energy source classification) Example: Battery pack (maximum 85 watts): PS2	
Source of power or PIS	**Corresponding classification (PS)**
All circuits except for output circuits (connector)	PS3, Arching PIS, Resistive PIS
Output circuit (connector)	PS2
Injury caused by hazardous substances (Clause 7) (Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.) Example: Liquid in filled component Glycol	
Source of hazardous substances	**Corresponding chemical**
N/A	N/A
Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.) Example: Wall mount unit MS2	
Source of kinetic/mechanical energy	**Corresponding classification (MS)**
Sharp edges and corners	MS1
Equipment mass	MS1
Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.) Example: Hand-held scanner – thermoplastic enclosure TS1	
Source of thermal energy	**Corresponding classification (TS)**
Plastic Enclosure	TS1
Output Connector	TS1
Inside component surface	TS3
Radiation (Clause 10) (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product RS1	
Type of radiation	**Corresponding classification (RS)**
LED indicator	RS1

ENERGY SOURCE DIAGRAM

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

☒ **ES** ☒ **PS** ☒ **MS** ☒ **TS** ☐ **RS**



Description of the circuits and accesible parts:

AC input: ES3 (steady state), PS3

Primary circuit: ES3, PS3

Output of the unit: ES1, PS2

Complete enclosure: TS1

Mass, edges/corners: MS1

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

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

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

4	**GENERAL REQUIREMENTS**		P
4.1.1	Acceptance of materials, components and subassemblies		P
4.1.2	Use of components		P
4.1.3	Equipment design and construction		P
4.1.15	Markings and instructions.....:	(See Annex F)	P
4.4.4	Safeguard robustness		P
4.4.4.2	Steady force tests.....:	(See Annex T.4, T.5)	P
4.4.4.3	Drop tests.....:	(See Annex T.7)	P
4.4.4.4	Impact tests.....:	(See Annex T.6)	P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....:		N/A
4.4.4.6	Glass Impact tests .....:		N/A
4.4.4.7	Thermoplastic material tests.....:	(See Annex T.8)	P
4.4.4.8	Air comprising a safeguard.....:	(See Annex T)	P
4.4.4.9	Accessibility and safeguard effectiveness		P
4.5	Explosion		P
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard		P
4.6.2	10 N force test applied to .....:	(See appended table 5.4.2.2)	P
4.7	Equipment for direct insertion into mains socket – outlets		N/A
4.7.2	Mains plug part complies with the relevant standard.....:		N/A
4.7.3	Torque (Nm).....:		N/A
4.8	Products containing coin/button cell batteries		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 openings	P

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

5	**ELECTRICALLY-CAUSED INJURY**		P
5.2.1	Electrical energy source classifications.....:	See Energy source identification and classification table.	P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current.....:	(See appended table 5.2)	P
5.2.2.3	Capacitance limits .....:	(See appended table 5.2)	P
5.2.2.4	Single pulse limits.....:		N/A
5.2.2.5	Limits for repetitive pulses.....:	(See appended table 5.2)	P
5.2.2.6	Ringing signals .....:		N/A
5.2.2.7	Audio signals .....:		N/A
5.3	Protection against electrical energy sources		P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		P
5.3.2.1	Accessibility to electrical energy sources and safeguards		P
5.3.2.2	Contact requirements	No openings	P
	a) Test with test probe from Annex V .....:		N/A
	b) Electric strength test potential (V).....:		N/A
	c) Air gap (mm) .....:		N/A
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		P
5.4.1.3	Humidity conditioning .....:		P
5.4.1.4	Maximum operating temperature for insulating materials .....:		P
5.4.1.5	Pollution degree.....:	2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage		P
5.4.1.9	Insulating surfaces		P
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		N/A
5.4.1.10.2	Vicat softening temperature.....:		N/A
5.4.1.10.3	Ball pressure .....:		N/A
5.4.2	Clearances		P

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.2.2	Determining clearance using peak working voltage	(See appended table 5.4.2.2)	P
5.4.2.3	Determining clearance using required withstand voltage ..... :	(See appended table 5.4.2.3)	P
	a) a.c. mains transient voltage..... :	2500 Vpk	—
	b) d.c. mains transient voltage ..... :	N/A	—
	c) external circuit transient voltage..... :	N/A	—
	d) transient voltage determined by measurement... :	N/A	—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test		N/A
5.4.2.5	Multiplication factors for clearances and test voltages..... :		N/A
5.4.3	Creepage distances..... :	(See appended table 5.4.3)	P
5.4.3.1	General		P
5.4.3.3	Material Group ..... :	Material group IIIb considered.	—
5.4.4	Solid insulation		P
5.4.4.2	Minimum distance through insulation ..... :	(See appended table 5.4.4.2)	P
5.4.4.3	Insulation compound forming solid insulation	Certified optocoupler used.	P
5.4.4.4	Solid insulation in semiconductor devices		P
5.4.4.5	Cemented joints	Certified optocoupler used.	P
5.4.4.6	Thin sheet material		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 min.	P
5.4.4.6.3	Non-separable thin sheet material		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material .....:		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		P
5.4.4.9	Solid insulation at frequencies >30 kHz.....:	(See appended Table 5.4.4.9)	P
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ).....:		—
5.4.6	Insulation of internal wire as part of supplementary safeguard .....:		N/A
5.4.7	Tests for semiconductor components and for cemented joints	Certified optocouplers used.	N/A
5.4.8	Humidity conditioning		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Relative humidity (%) ..... :	93%	—
	Temperature (°C) ..... :	40°C	—
	Duration (h) ..... :	120 h	—
5.4.9	Electric strength test..... :	(See appended table 5.4.9) Electric strength tests were conducted after 5.4.8 humidity conditioning test for each manufacturer source in table 4.1.2.	P
5.4.9.1	Test procedure for a solid insulation type test		P
5.4.9.2	Test procedure for routine tests		P
5.4.10	Protection against transient voltages between external circuit		N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test..... :		N/A
5.4.10.2.3	Steady-state test ..... :		N/A
5.4.11	Insulation between external circuits and earthed circuitry..... :		N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage U_{op} (V) ..... :		—
	Nominal voltage U_{peak} (V) ..... :		—
	Max increase due to variation U_{sp} ..... :		—
	Max increase due to ageing ΔU_{sa} ..... :		—
	$U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$ ..... :		—
5.5	Components as safeguards		
5.5.1	General		P
5.5.2	Capacitors and RC units		P
5.5.2.1	General requirement		P
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector ..... :	(See appended table 5.5.2.2)	P
5.5.3	Transformers	(See Annex G.5.3)	P
5.5.4	Optocouplers	(See sub-clause 5.4)	P
5.5.5	Relays		N/A
5.5.6	Resistors	Approved bleeding resistors used.	P
5.5.7	SPD's		N/A
5.5.7.1	Use of an SPD connected to reliable earthing		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable.....:		N/A
5.6	Protective conductor		P
5.6.2	Requirement for protective conductors		P
5.6.2.1	General requirements		P
5.6.2.2	Colour of insulation		P
5.6.3	Requirement for protective earthing conductors		N/A
	Protective earthing conductor size (mm^2) .....:		—
5.6.4	Requirement for protective bonding conductors		P
5.6.4.1	Protective bonding conductors	Protective bonding conductor complies with conductor size in table G.5.	P
	Protective bonding conductor size (mm^2). .....:	0.75mm2 / 18AWG wire was used.	—
	Protective current rating (A) .....:	16A (20A for North America).	—
5.6.4.3	Current limiting and overcurrent protective devices		N/A
5.6.5	Terminals for protective conductors		P
5.6.5.1	Requirement		N/A
	Conductor size (mm^2), nominal thread diameter (mm).....:		N/A
5.6.5.2	Corrosion		P
5.6.6	Resistance of the protective system	Not applicable.	N/A
5.6.6.1	Requirements		N/A
5.6.6.2	Test Method Resistance (Ω).....:		N/A
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks		P
5.7.2.1	Measurement of touch current.....:	Instrument indicating peak voltage used.	P
5.7.2.2	Measurement of prospective touch voltage		N/A
5.7.3	Equipment set-up, supply connections and earth connections		P
	System of interconnected equipment (separate connections/single connection).....:	Single connection.	—
	Multiple connections to mains (one connection at a time/simultaneous connections) .....:	N/A	—
5.7.4	Earthed conductive accessible parts .....:	(See appended table 5.7.2.2, 5.7.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.7.5	Protective conductor current		P
	Supply Voltage (V) .....:	264	—
	Measured current (mA) .....:	0,44	—
	Instructional Safeguard .....:	(See F.4 and F.5)	N/A
5.7.6	Prospective touch voltage and touch current due to external circuits		N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits		N/A
	a) Equipment with earthed external circuits Measured current (mA) .....:		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....:		N/A

6	**ELECTRICALLY- CAUSED FIRE**		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications	All circuits are considered PS3 except for the circuits of output connector complied with Annex Q.1.	P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault....:	(See appended table 6.2.2)	N/A
6.2.2.3	Power measurement for worst-case power source fault .....:	(See appended table 6.2.2)	N/A
6.2.2.4	PS1 .....:	(See appended table 6.2.2)	N/A
6.2.2.5	PS2 .....:	(See appended table 6.2.2)	P
6.2.2.6	PS3 .....:	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources	Arcing and Resistive PIS are considered exist in all circuits.	P
6.2.3.1	Arcing PIS .....:	See 6.2.3	N/A
6.2.3.2	Resistive PIS .....:	See 6.2.3	N/A
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials ..... :	(See appended table 5.4.1.5, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure		N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Control fire spread.	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		N/A
6.4.5.2	Supplementary safeguards .....:	Components other than PCB and wires are: - mounted on PCB rated V-1 or better, or - made of V-2/VTM-2 or better. (See appended tables 4.1.2 and Annex G)	P
6.4.6	Control of fire spread in PS3 circuit		P
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.1	General .....:		N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers		P
6.4.8.1	Fire enclosure and fire barrier material properties		P
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure		P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.3.1	Fire enclosure and fire barrier openings		P
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm) .....:	No openings.	N/A
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) .....:	No openings.	N/A
	Flammability tests for the bottom of a fire enclosure .....:		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c) .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating.....:	Fire enclosure is made of min. V-0 materials.	P
6.5	Internal and external wiring		P
6.5.1	Requirements	VW-1 or FT-1 wires used, which considered to equivalent to IEC/TS 60695-11-21.	P
6.5.2	Cross-sectional area (mm^2) .....:	N/A	—
6.5.3	Requirements for interconnection to building wiring ..... :		N/A
6.6	Safeguards against fire due to connection to additional equipment		N/A
	External port limited to PS2 or complies with Clause Q.1		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
7	**INJURY CAUSED BY HAZARDOUS SUBSTANCES**		N/A
7.2	Reduction of exposure to hazardous substances		N/A
7.3	Ozone exposure		N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions .....:		—
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010)..... :		—
7.6	Batteries.....:		N/A
8	**MECHANICALLY-CAUSED INJURY**		P
8.1	General		P
8.2	Mechanical energy source classifications		P
8.3	Safeguards against mechanical energy sources		N/A
8.4	Safeguards against parts with sharp edges and corners		N/A
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts		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		P
8.6.1	Product classification	MS1	N/A
	Instructional Safeguard.....:	N/A	—
8.6.2	Static stability		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.6.2.2	Static stability test		N/A
	Applied Force .....:		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt.....:		—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force).....:		N/A
	Position of feet or movable parts .....:		—
8.7	Equipment mounted to wall or ceiling		N/A
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) .....:		N/A
8.7.2	Direction and applied force .....:		N/A
8.8	Handles strength		N/A
8.8.1	Classification		N/A
8.8.2	Applied Force .....:		N/A
8.9	Wheels or casters attachment requirements		N/A
8.9.1	Classification		N/A
8.9.2	Applied force.....:		—
8.10	Carts, stands and similar carriers		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard .....:		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force.....:		—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N) .....:		—
8.10.6	Thermoplastic temperature stability (°C).....:		N/A
8.11	Mounting means for rack mounted equipment		N/A
8.11.1	General		N/A
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable *N* ..... :		N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas		N/A
	Button/Ball diameter (mm) ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
9	**THERMAL BURN INJURY**		P
9.2	Thermal energy source classifications		P
9.3	Safeguard against thermal energy sources		P
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard		P
9.4.2	Instructional safeguard .....:		N/A

10	**RADIATION**		P
10.2	Radiation energy source classification		P
10.2.1	General classification		P
10.3	Protection against laser radiation		N/A
	Laser radiation that exists equipment:		—
	Normal, abnormal, single-fault.....:		N/A
	Instructional safeguard .....:		—
	Tool .....:		—
10.4	Protection against visible, infrared, and UV radiation		N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons .....:		N/A
10.4.1.b)	RS3 accessible to a skilled person.....:		N/A
	Personal safeguard (PPE) instructional safeguard.....:		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1 . :		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions .....:		N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque.....:		N/A
10.4.1.f)	UV attenuation .....:		N/A
10.4.1.g)	Materials resistant to degradation UV .....:		N/A
10.4.1.h)	Enclosure containment of optical radiation.....:		N/A
10.4.1.i)	Exempt Group under normal operating conditions.....:		N/A
10.4.2	Instructional safeguard .....:		N/A
10.5	Protection against x-radiation		N/A
10.5.1	X- radiation energy source that exists equipment :		N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards.....:		N/A
	Instructional safeguard for skilled person ..... :		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation ..... :		—

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

B	**NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS**		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements .....:	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers.....:		N/A
B.2.3	Supply voltage and tolerances		P
B.2.5	Input test .....:	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements .....:	(See appended table B.3)	P
B.3.2	Covering of ventilation openings		N/A
B.3.3	D.C. mains polarity test		N/A
B.3.4	Setting of voltage selector.....:	Full range.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
B.3.5	Maximum load at output terminals ..... :	See appended table B.3.	P
B.3.6	Reverse battery polarity		N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions		P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited ..... :		N/A
B.4.3	Motor tests		N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature ..... :		N/A
B.4.4	Short circuit of functional insulation		P
B.4.4.1	Short circuit of clearances for functional insulation		P
B.4.4.2	Short circuit of creepage distances for functional insulation		P
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		P
B.4.6	Short circuit or disconnect of passive components		P
B.4.7	Continuous operation of components		N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions		P
B.4.9	Battery charging under single fault conditions.... :		N/A
C	**UV RADIATION**		N/A
C.1	Protection of materials in equipment from UV radiation		N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A
D	**TEST GENERATORS**		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A

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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		N/A
	Audio signal voltage (V) ..... :		—
	Rated load impedance (Ω) ..... :		—
E.2	Audio amplifier abnormal operating conditions		N/A
F	**EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS**		P
F.1	General requirements		P
	Instructions – Language ..... :	Reviewed only English markings/instructions. May be provided in other languages upon request from the manufacturer.	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1		P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations		P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification ..... :	See copy of marking plate.	—
F.3.2.2	Model identification ..... :	See copy of marking plate.	—
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains		P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage ..... :	See copy of marking plate.	—
F.3.3.4	Rated voltage ..... :	See copy of marking plate.	—
F.3.3.4	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		N/A
F.3.4	Voltage setting device		N/A
F.3.5	Terminals and operating devices		N/A
F.3.5.1	Mains appliance outlet and socket-outlet markings..... :		N/A
F.3.5.2	Switch position identification marking ..... :		N/A
F.3.5.3	Replacement fuse identification and rating markings..... :	Fuse is not replaceable by ordinary person, however fuse marking on PCB adjacent to fuse: F1 T2A 250V	P
F.3.5.4	Replacement battery identification marking..... :		N/A
F.3.5.5	Terminal marking location		P

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment	Appliance inlet used (for Class I model).	P
F.3.6.1.1	Protective earthing conductor terminal	The unit is not permanently connected.	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)		N/A
F.3.6.2.1	Class II equipment with or without functional earth		N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking .....:	IPX0	—
F.3.8	External power supply output marking	See copy of marking plate.	P
F.3.9	Durability, legibility and permanence of marking		P
F.3.10	Test for permanence of markings		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
	d) Equipment intended for use only in restricted access area		N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard		P
	g) Protective earthing conductor current exceeding ES 2 limits		N/A
	h) Symbols used on equipment		N/A
	i) Permanently connected equipment not provided with all-pole mains switch		N/A
j)	j) Replaceable components or modules providing safeguard function		N/A
F.5	Instructional safeguards		N/A
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction		N/A
G	**COMPONENTS**		P
G.1	**Switches**		N/A
G.1.1	General requirements		N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.2	**Relays**		N/A
G.2.1	General requirements		N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
G.3	**Protection Devices**		P
G.3.1	Thermal cut-offs		N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691		N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H) .....:		—
	Single Fault Condition .....:		—
	Test Voltage (V) and Insulation Resistance (Ω) .:		—
G.3.3	PTC Thermistors		N/A
G.3.4	Overcurrent protection devices		P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions .....:	(See appended Table B.4)	N/A
G.4	**Connectors**		P
G.4.1	Spacings		P
G.4.2	Mains connector configuration .....:	Appliance inlet is complied with IEC60320-1	P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		P
G.5	**Wound Components**		P
G.5.1	Wire insulation in wound components	(See Annex J)	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°	The insulation tape or tube is provided for winding of transformer to protect against mechanical stress.	P
G.5.1.2 b)	Construction subject to routine testing		P
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.2.2	Heat run test		N/A
	Time (s).....:		—
	Temperature (°C).....:		—
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	**Transformers**		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1).....:	See G.5.3.2 and G.5.3.3	P
	Position.....:	(See appended table 4.1.2)	—
	Method of protection .....:	Over current protection by circuit design.	—
G.5.3.2	Insulation		P
	Protection from displacement of windings..... :	Triple insulation wire used and insulation tapes provided.	—
G.5.3.3	Overload test .....:	Output overload cover TR overload	P
G.5.3.3.1	Test conditions		P
G.5.3.3.2	Winding Temperatures testing in the unit		P
G.5.3.3.3	Winding Temperatures - Alternative test method		N/A
G.5.4	**Motors**		N/A
G.5.4.1	General requirements		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

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage ..... :		—
G.6	**Wire Insulation**		P
G.6.1	General		P
G.6.2	Solvent-based enamel wiring insulation	Solvent-based enamel winding is not considered basic insulation.	N/A
G.7	**Mains supply cords**		N/A
G.7.1	General requirements	No power supply cord provided.	N/A
	Type ..... :		—
	Rated current (A)..... :		—
	Cross-sectional area (mm^2), (AWG) ..... :		—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N) ..... :		—
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm) ... :		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry ..... :		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g) ..... :		—
	Diameter (m) ..... :		—
	Temperature (°C) ..... :		—
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	**Varistors**		P
G.8.1	General requirements		P
G.8.2	Safeguard against shock		P
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test ..... :		N/A
G.8.3.3	Temporary overvoltage ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.9	**Integrated Circuit (IC) Current Limiters**		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.		N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA .....:		—
G.9.1 d)	IC limiter output current (max. 5A).....:		—
G.9.1 e)	Manufacturers' defined drift .....:		—
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	**Resistors**		N/A
G.10.1	General requirements	Certified sources of bleeder resistors used. (See appended table 4.1.2)	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		P
G.11.2	Conditioning of capacitors and RC units		P
G.11.3	Rules for selecting capacitors	Certified capacitors used. Refer to List of critical components.	P
G.12	**Optocouplers**		N/A
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results) ..... :		N/A
	Type test voltage Vini .....:		—
	Routine test voltage, Vini,b .....:		—
G.13	**Printed boards**		P
G.13.1	General requirements		P
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction) .....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation.....:		N/A
	Number of insulation layers (pcs) .....:		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
G.14	**Coating on components terminals**		N/A
G.14.1	Requirements .....:		N/A
G.15	**Liquid filled components**		N/A
G.15.1	General requirements		N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	**IC including capacitor discharge function (ICX)**		N/A
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N/A
b)	Impulse test using circuit 2 with Uc = to transient voltage .....:		N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage .....:		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A
D2)	Capacitance .....:		—
D3)	Resistance .....:		—
H	**CRITERIA FOR TELEPHONE RINGING SIGNALS**		N/A
H.1	General		N/A
H.2	Method A		N/A
H.3	Method B		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
H.3.1	Ringing signal		N/A
H.3.1.1	Frequency (Hz) ..... :		—
H.3.1.2	Voltage (V) ..... :		—
H.3.1.3	Cadence; time (s) and voltage (V) ..... :		—
H.3.1.4	Single fault current (mA): ..... :		—
H.3.2	Tripping device and monitoring voltage..... :		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V) ..... :		—
J	**INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION**		P
	General requirements	Certified triple insulation wire used.	P
K	**SAFETY INTERLOCKS**		N/A
K.1	General requirements		N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance..... :		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method ..... :		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) ..... :		N/A
K.7.2	Overload test, Current (A) ..... :		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test ..... :		N/A
L	**DISCONNECT DEVICES**		P
L.1	General requirements		P
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized		N/A
L.4	Single phase equipment		P
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		N/A
L.8	Multiple power sources		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M	**EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS**		N/A
M.1	General requirements		N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method) .. :		N/A
M.3	Protection circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Tests		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance ..... :		N/A
M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
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

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Clause	Requirement + Test	Result - Remark	Verdict
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method) .....:		N/A
M.6.2	Leakage current (mA) .....:		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume *Vz* (m^3/s).....:		—
M.8.2.3	Correction factors .....:		—
M.8.2.4	Calculation of distance *d* (mm) .....:		—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) .....:		N/A
N	**ELECTROCHEMICAL POTENTIALS**		P
	Metal(s) used.....:	Metal alloy utilized and electrochemical potention is less than 0.6V.	—
O	**MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES**		P
	Figures O.1 to O.20 of this Annex applied .....:	Pollution degree considered.	—
P	**SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS**		P
P.1	General requirements		P
P.2.2	Safeguards against entry of foreign object		P
	Location and Dimensions (mm) .....:	No openings.	—
P.2.3	Safeguard against the consequences of entry of foreign object		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

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Clause	Requirement + Test	Result - Remark	Verdict
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) ..... :		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts		N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C)..... :		—
	Tr (°C) ..... :		—
	Ta (°C) ..... :		—
P.4.2 b)	Abrasion testing ..... :		N/A
P.4.2 c)	Mechanical strength testing ..... :		N/A
Q	**CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING**		P
Q.1	Limited power sources		P
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		P
	- Regulating network limited output under normal operating and simulated single fault condition	(see appended tables Annex Q.1)	P
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method		P
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A) ..... :		—
	Current limiting method..... :		—
R	**LIMITED SHORT CIRCUIT TEST**		N/A
R.1	General requirements		N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)). ..... :		N/A
S	**TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material ..... :		—
	Wall thickness (mm) ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Conditioning (°C) .....:		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material.....:		—
	Wall thickness (mm) .....:		—
	Conditioning (°C) .....:		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material.....:		—
	Wall thickness (mm) .....:		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W	Steady state power <4000W.	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 5.4.2.2, 5.4.2.4 and 5.4.3)	P
T.3	Steady force test, 30 N ..... :		N/A
T.4	Steady force test, 100 N ..... :		N/A
T.5	Steady force test, 250 N ..... :	(See appended table T5)	P
T.6	Enclosure impact test	(See appended table T6).	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Fall test		P
	Swing test		N/A
T.7	Drop test .....:	(See appended table T7)	P
T.8	Stress relief test .....:	(See appended table T8)	P
T.9	Impact Test (glass)		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J) .....:		—
	Height (m).....:		—
T.10	Glass fragmentation test.....:		N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm) .....:		—
U	**MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFECTS OF IMPLOSION**		N/A
U.1	General requirements		N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen..... :		N/A
V	**DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)**		P
V.1	Accessible parts of equipment		P
V.2	Accessible part criterion		P

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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 conformity1
1) Enclosure	SABIC INNOVATIVE PLASTICS US L L C	915R (GG), 945	Min. V-0, min. 2.0 mm thickness, 120 C	UL 94, UL 746C	UL
(Alternate)	SABIC JAPAN L L C	945 (GG)	Min. V-0, min. 2.0 mm thickness, 120 C	UL 94, UL 746C	UL
(Alternate)	LG CHEM (GUANGZHOU) ENGINEERING PLASTICS CO LTD	LUPOY EF-1006F(m)	Min. V-0, min. 2.0 mm thickness, 115 C	UL 94, UL 746C	UL
(Alternate)	COVESTRO DEUTSCHLAN D AG [PC RESINS]	FR6005 + (z)	Min. V-0, min. 2.0 mm thickness, 105 C	UL 94, UL 746C	UL
(Alternate)	SILVER AGE ENGINEERING PLASTICS (DONGGUAN) CO LTD	PC2330	Min. V-0, min. 2.0 mm thickness, 115 C	UL 94, UL 746C	UL
2) PCB	Walex electronic (Wuxi) Co., Ltd.	T2, T2A, T2B T4	Min. V-0, min. 130 C	UL 796	UL E154355
(Alternate)	Interchangeable	Interchangeable	Min. V-0, min. 130 C	UL 796	UL
3) Appliance Inlet (for T3 series)	Tecx-Unions	TU-301-SP, TU-301 Series including TU-301-A, TU-301-AP, TU-301-S, TU-301-AP-A and TU-301-AL	10A, 250Vac (C14 type)	IEC/EN 60320-1, UL 498	ENEC, UL
(Alternate)	Zhejiang LECI	DB-14, DB-14-1, DB-14-2, DB-14-3, DB-14-5, DB-14-6, DB-14-1-7, DB-14-8, DB-14-10	10A, 250Vac (C14 type)	IEC/EN 60320-1, UL 498	VDE, UL
(Alternate)	Zhe Jiang Bei Er jia	ST-A01-003J, ST-A01-001L, ST-A01-002L, ST-A01-003K	10A, 250Vac (C14 type)	IEC/EN 60320-1, UL 498	VDE, UL

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Clause	Requirement + Test	Result - Remark	Verdict

(Alternate)	Sun Fair	S-03	10A, 250Vac (C14 type)	IEC/EN 60320-1, UL 498	VDE, UL
(Alternate)	Echo	AC-P01, AC-P03, AC-P06, AC-P07	10A, 250Vac (C14 type)	IEC/EN 60320-1, UL 498	VDE, UL
4) Appliance Inlet (for T3A series)	Tecx-Unions	TU-333	2.5A, 250Vac (C6 type)	IEC/EN 60320-1, UL 498	ENEC, UL
(Alternate)	Sun Fair	S-02	2.5A, 250Vac (C6 type)	IEC/EN 60320-1, UL 498	VDE, UL
(Alternate)	Zhejiang LECI	DB-6, DB-6-2, DB-6-3, DB-6-4, DB-6-5, DB-6-2BP27P27	2.5A, 250Vac (C6 type)	IEC/EN 60320-1, UL 498	VDE, UL
(Alternate)	Zhe Jiang Bei Er jia	ST-A04-002, ST-A04-001	2.5A, 250Vac (C6 type)	IEC/EN 60320-1, UL 498	VDE, UL
5) Appliance Inlet (for T2 series)	TECX-UNIONS TECHNOLOGY CORP	SO-222	2.5A, 250Vac (C8 type)	IEC/EN 60320 1, UL 498	ENEC, UL
(Alternate)	SUN FAIR ELECTRIC WIRE & CABLE (HK) CO LTD	S-01	2.5A, 250Vac (C8 type)	IEC/EN 60320 1, UL 498	VDE, UL
(Alternate)	ZHEJIANG LECI ELECTRONICS CO LTD	DB-8	2.5A, 250Vac (C8 type)	IEC/EN 60320 1, UL 498	VDE, UL
(Alternate)	ZHE JIANG BEI ER JIA ELECTRONIC CO LTD	ST-A03-005, ST-A03-002, ST-A03-004	2.5A, 250Vac (C8 type)	IEC/EN 60320 1, UL 498	VDE, UL
6) Fuse (F1)	Conquer	MST-series	T2A, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3 ANSI/UL 248-1 ANSI/UL 248-14	VDE, UL
(Alternate)	Ever Island	2010 series	T2A, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3 ANSI/UL 248-1 ANSI/UL 248-14	VDE, UL
(Alternate)	Hollyland	5ET-series	T2A, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3 ANSI/UL 248-1 ANSI/UL 248-14	VDE, UL

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Clause	Requirement + Test	Result - Remark	Verdict

(Alternate)	Bel	RST series	T2A, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3 ANSI/UL 248-1 ANSI/UL 248-14	VDE, UL
(Alternate)	Cooper Bussmann	SS-5	T2A, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3 ANSI/UL 248-1 ANSI/UL 248-14	VDE, UL
(Alternate)	Littelfuse Wickmann	392	T2A, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3 ANSI/UL 248-1 ANSI/UL 248-14	VDE, UL
(Alternate)	Dongguan Better	932	T2A, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3 ANSI/UL 248-1 ANSI/UL 248-14	VDE, UL
7) Varistor (MOV1) (Optional)	Centra Science	CNR- 14V511K, CNR-14D511K	320Vac, 410Vdc, 85 C (Flame class of body coating complied with V-0)	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2 IEC 60950-1:2013, Annex Q., UL 1449	VDE, UL
(Alternate)	Centra Science	CNR- 10V471K, CNR-14D471K	300Vac, 385Vdc, 85°C (Flame class of body coating complied with V-O)	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2 IEC 60950-1:2013, Annex Q., UL 1449	VDE, UL
(Alternate)	Joyin	10N511K, 14N511K, 14S511K	320Vac, 418Vdc, 85°C (Flame class of body coating complied with V-O)	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2 IEC 60950-1:2013, Annex Q., UL 1449	VDE, UL
(Alternate)	Joyin	14N471K, 10N471K	300Vac, 385Vdc, 85°C (Flame class of body coating complied with V-0)	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2 IEC 60950-1:2013, Annex Q., UL 1449	VDE, UL

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Clause	Requirement + Test	Result - Remark	Verdict

(Alternate)	Thinking	TVR 14471, TVR 10471-V	300Vac, 385Vdc, 85°C (Flame class of body coating complied with V-0)	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2 IEC 60950-1:2013, Annex Q., UL 1449	VDE, UL
(Alternate)	Thinking	TVR 14511	320Vac, 410Vdc, 85°C (Flame class of body coating complied with V-O)	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2 IEC 60950-1:2013, Annex Q., UL 1449	VDE, UL
(Alternate)	Success	SVR10D471 K xxxxH, SVR14D471K xxxxH	300Vac, 385Vdc, 85°C (Flame class of body coating complied with V-0)	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2 IEC 60950-1:2013, Annex Q., UL 1449	VDE, UL
(Alternate)	Success	SVR14D511K xxxxH, SVR10D511K xxxxH	320Vac, 415Vdc, 85°C (Flame class of body coating complied with V-0)	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2 IEC 60950-1:2013, Annex Q., UL 1449	VDE, UL
8) Choke (NF1)	GlobTek or ENG	NF00025	105°C	--	--
9) X-Capacitor (CX1) (optional) (X1 or X2 type)	Cheng Tung	CTX	Max. 0.33µF, Min. 250 V, 100°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL
(Alternate)	Dain	MPX	Max. 0.33µF, Min. 250 V, 100°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL
(Alternate)	Ultra Tech Xiphi	HQX	Max. 0.33µF, Min. 250 V, 100°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL

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Clause	Requirement + Test	Result - Remark	Verdict

(Alternate)	Tenta	MEX	Max. 0.33µF, Min. 250 V, 100°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL
(Alternate)	Joey	MPX	Max. 0.33µF, Min. 250 V, 105°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL
(Alternate)	Xiangtai	MKP/ MPX	Max. 0.33µF, Min. 250 V, 110°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL
(Alternate)	Carli	MPX	Max. 0.33µF, Min. 250 V, 100°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL
10) Bleeder Resistors (R1, R2)	Tzai Yuan	HSMD, SMD	Max. 2MQ min. 1/4W	IEC 62368-1 (ed.1), UL 62368-1	CB by UL, UL
(Alternate)	FUTABA ELECTRONICS (SUZHOU) CO.,LTD.	RM series	Max. 2MQ min. 1/4W	IEC 60065-1 (ed.1), UL 1676	CB by Intertek Semko, UL
(Alternate)	Prosperity	FVS03, TF06V, FVS05, TF08V, FVS06, TF12V, FVS20, TF20V, FSV25, TF25V	Max. 2MQ, min. 1/4W	IEC 62368-1:2014, UL 62386-1	CB by UL, UL
(Alternate)	Yageo	RV0603, RV0805, RV1206, HHV series	Max. 2MQ, min. 1/4W	IEC 62368-1:2014	CB by UL
11) Choke (NF2)	Globtek or ENG	NF00124	105°C	--	--
12) Bridging Rectifier (BD1)	LITEON	KBP206G	Min. 2A, min. 600V	IEC/EN 62368-1	Accepted
(Alternate)	Interchangeable	Interchangeable	Min. 2A, min. 600V	--	--
13) Storage Capacitor (C1) (for above 36W models)	Guanzuo	SK	82µF, min. 400V, 105°C	IEC/EN 62368-1	Accepted
(Alternate)	Interchangeable	Interchangeable	82µF, min. 400V, 105°C	--	--
14) Storage Capacitor (C1) (for 30W or below 30W models)	Guanzuo	SK	68µF, min. 400V, 105°C	IEC/EN 62368-1	Accepted

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Clause	Requirement + Test	Result - Remark	Verdict

(Alternate)	Interchangeable	Interchangeable	68µF, min. 400V, 105°C	--	--
15) Transistor (Q1)	SILAN	SVF6N60F	Min. 6A, min. 600V	IEC/EN 62368-1	Accepted
(Alternate)	Interchangeable	Interchangeable	Min. 6A, min. 600V	--	--
16) Photo Coupler (PC1)	Everlight	EL817	Dti=0.5mm Int. dcr=6.0mm Ext. dcr= 7.7mm, thermal cycling test, 110°C	IEC/EN 60950-1 EN 60747-5-5 UL 1557	VDE, Fimko, UL
(Alternate)	Lite-On	LTV-817	Dti =0.8mm Ext. dcr=7.8mm, thermal cycling test, 110°C	IEC/EN 60950-1 EN 60747-5-5 UL 1557	VDE, Fimko, UL
(Alternate)	Bright Led	BPC-817 A/B/C/D/L BPC-817 S BPC-817 M	Dti=0.4mm Ext. dcr=7.0mm, thermal cycling test, 100°C	IEC/EN 60950-1 EN 60747-5-5 UL 1557	VDE, Fimko, UL
(Alternate)	COSMO	K1010	Dti=0.6mm Int. dcr=4.0mm Ext. dcr=5.0mm, thermal cycling test, 115°C	IEC/EN 60950-1 EN 60747-5-5 UL 1557	VDE, Fimko, UL
(Alternate)	Renesas	PS2561-1	Dti=0.4mm Ext. dcr= 7.0mm, thermal cycling test, SOOOV, 100°C	IEC/EN 60950-1 EN 60747-5-5 UL 1557	VDE, Fimko, UL
(Alternate)	SHENZHEN ORIENT COMPONENTS CO LTD	ORPC-817Mx, ORPC-817Sx, ORPC-817x	Dti=0.4mm Ext. dcr= 7.6mm, thermal cycling test, 110°C	IEC/EN 60950-1, EN 60747-5-5 UL 1577	VDE, UL
17) Bridging Capacitor (CY1) (Y1 type) (Optional)	Walsin	AH	Max. 2200pF, Min. 250 V, min. 125°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL
(Alternate)	Success	SE, SB, SF	Max. 2200pF, Min. 250 V, min. 125°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL
(Alternate)	TDK	CD	Max. 2200pF, Min. 250 V, min. 125°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL

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Clause	Requirement + Test	Result - Remark	Verdict

(Alternate)	Haohua	CT 7	Max. 2200pF, Min. 250 V, min. 125°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL
(Alternate)	Xiangtai	YO-series	Max. 2200pF, Min. 250 V, min. 125°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL
(Alternate)	Juhong EIE	JB-series	Max. 2200pF, Min. 250 V, min. 85°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL
(Alternate)	MURATA MFG CO LTD	KX	Max. 2200pF, Min. 250 V, min. 125°C	IEC 60384-14 EN 60384-14: 2013 UL 60384-14	VDE, UL
18) LPS resistor (R10) (for 12, 19, 24V models)	Tzai Yuan Enterprise Co., Ltd.	HSMD OR SMD	0.56ohm, 2W.	--	--
(Alternate)	Interchangeable	Interchangeable	0.56ohm, 2W.	--	--
19) LPS resistor (R10) (for 15V models)	Tzai Yuan Enterprise Co., Ltd.	HSMD OR SMD	0.51ohm, 2W.	--	--
(Alternate)	Interchangeable	Interchangeable	0.51ohm, 2W.	--	--
20) LPS resistor (R10) for 15V models output wattage up to 30W)	Tzai Yuan Enterprise Co., Ltd.	HSMD OR SMD	0.51-0.62 ohm, 2W	--	--
(Alternate)	Interchangeable	Interchangeable	0.51-0.62 ohm, 2W	--	--
21) LPS resistor (R10) (for 15V models output wattage up to 30W)	Tzai Yuan Enterprise Co., Ltd.	HSMD OR SMD	0.68ohm, 2W.	--	--
(Alternate)	Interchangeable	Interchangeable	0.68ohm, 2W.	--	--
22) LPS resistor (R10) for 19V ,24Vmodels output wattage up to 30W)	Tzai Yuan Enterprise Co., Ltd.	HSMD OR SMD	0.75ohm, 2W.	--	--
(Alternate)	Interchangeable	Interchangeable	0.75ohm, 2W.	--	--
23) Transformer (T1) (for 12-14.9V models)	GlobTek or ENG	XF00928	Class B	--	--
24) Transformer (T1) (for 15-18V models)	GlobTek or ENG	XF00942	Class B	--	--

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Clause	Requirement + Test	Result - Remark	Verdict

25) Transformer (T1) (for 18.1-21V models)	GlobTek or ENG	XF00943	Class B	--	--
26) Transformer (T1) (for 21.1-24V models)	GlobTek or ENG	XF00944	Class B	--	--
Bobbin	Chang Chun	T375J, T375HF	Phenolic, V-0, min. thickness 0.71 mm, 150°C	UL94, UL746C	UL
(Alternate)	Sumitomo Bakelite	PM-9820, PM-9830	Phenolic, V-0, min. thickness 0.71 mm, 150°C	UL94, UL746C	UL
Tape	3M Company	1350F-1, 1350-1	130°C	UL 510	UL
(Alternative)	Liang YI	LY-XX	130°C	UL 510	UL
(Alternative)	Yahua	CT	130°C	UL 510	UL
(Alternate)	BONDTEC PACIFIC	370S	130°C	UL 510	UL
Triple Insulation	Great Leoflon	TRW(B) series	130°C	IEC/EN 60950-1 UL2353	VDE, UL
27) Insulation tape for Heat Sink	3M Company	1350T-1	130°C	UL 510	UL
(Alternative)	Interchangeable	Interchangeable	130°C, min., 4000Vdc dielectric strength test	UL 510	UL
28) Output Cord	Jhi Wei Electric Wire & Cable Co., Ltd.	Style 2468	Max. 3.05m. VW-1 or FT-1, min 80°C, min. 60V, min., 20AWG	UL 758	E157717
(Alternate)	Interchangeable	Interchangeable	Max. 3.05m. VW-1 or FT-1, min 80°C, min. 60V, min., 20AWG	UL 758	UL
29) Strain Relief	Sabic	PC 945	V-1 or better	UL 94, UL 746C	UL E45329
(Alternate)	Interchangeable	Interchangeable	V-1 or better	UL 94, UL 746C	UL
30) Bonding Conductor (optional for class I model)	ZHUANG SHAN CHUAN ELECTRICAL PRODUCTS (KUNSHAN) CO LTD	1185	Green/Yellow, 18 AWG min.	UL 758	UL E333601
(Alternate)	Interchangeable	Interchangeable	Green/Yellow, 18 AWG min.	UL 758	UL
31) LED barrier (optional)	Sabic Innovative Plastics US L L	945 (GG)	Min. V-0, min., 1.0 mm thickness, 120°C	UL 94, UL 746C	UL

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

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

2) Description line content is optional. Main line description needs to clearly detail the component used for testing

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Clause	Requirement + Test	Result - Remark	Verdict

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

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

4.8.4.2	**TABLE: Stress Relief test**		—
Part	**Material**	**Oven Temperature (°C)**	**Comments**
--	--	--	--

4.8.4.3	**TABLE: Battery replacement test**	—
Battery part no.....:		—
Battery Installation/withdrawal	Battery Installation/Removal Cycle	Comments
	1	-
	2	-
	3	-
	4	-
	5	-
	6	-
	8	-
	9	-
	10	-

4.8.4.4	**TABLE: Drop test**		—
Impact Area	Drop Distance	Drop No.	Observations
		1	
		2	
		3	

4.8.4.5	**TABLE: Impact**		—
Impacts per surface	**Surface tested**	**Impact energy (Nm)**	**Comments**

4.8.4.6	**TABLE: Crush test**		—
Test position	**Surface tested**	**Crushing Force (N)**	**Duration force applied (s)**

Supplementary information:

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Clause	Requirement + Test	Result - Remark	Verdict

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

5.2	Table: Classification of electrical energy sources					P
5.2.2.2 – Steady State Voltage and Current conditions						
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				U (Vrms or Vpk)	I (Apk or Arms) / Hz	
For Class I units						
1	264Vac/ 60Hz	1) +24V - RTN 2) Accessible enclosure (with metal foil) to earth (Model: GT-46400-4024-T3/3A)	Normal	1) 24.17Vdc	2) 0.01mA —	ES1
			Abnormal (output overload)	1) 23.89Vdc	2) 0.01mA —	
			Abnormal (output short)	1) 0	2) 0.01mA —	
			Single fault- (when fuse open)	1) 0	2) 0.01mA —	
			Single fault- (when shutdown)	1) 0	2) 0.01mA —	
			Single fault- D8 SC	1) 0	2) 0.01mA —	
			Single fault- 012 SC	1) 0	2) 0.01mA —	
2	264Vac/ 60Hz	1) +15V - RTN 2) Accessible enclosure (with metal foil) to earth (Model: GT-46400-4015-T3/T3A)	Normal	1) 15.22Vdc	2) 0.01mA —	ES1
			Abnormal (output overload)	1) 15.14Vdc	2) 0.01mA —	
			Abnormal (output short)	1) 0	2) 0.01mA —	
			Single fault- D8 SC	1) 0	2) 0.01mA —	
			Single fault- R21 SC	1) 16.14	2) 0.01mA —	
3	264Vac/ 60Hz	1) +12V - RTN 2) Accessible enclosure (with metal foil) to earth	Normal	1) 12.31Vdc	2) 0.01mA —	ES1
			Abnormal (output overload)	1) 12.06Vdc	2) 0.01mA —	
			Abnormal (output short)	1) 0	2) 0.01mA —	

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Clause	Requirement + Test	Result - Remark	Verdict

		(Model: GT-46400-3612-T3/T3A)	Single fault- D8 SC	1) 0	2) 0.01mA	—	
			Single fault- R21 SC	1) 12.4	2) 0.01mA	—	
For Class II units							
1	264Vac/ 60Hz	+24V - RTN Output (+ / -) to Earth Accessible enclosure (with metal foil) to earth (Model: GT-46400-3024-T2)	Normal	—	—	—	ES1
			Abnormal	—	—	—	
			Single fault- (when cycle protection)	1) 520	1) 28.4	2) 0.432mA pk 3) 0.01mA	
2	264Vac/ 60Hz	+15V - RTN Output (+ / -) to Earth Accessible enclosure (with metal foil) to earth (Model: GT-46400-3015-T2)	Normal	—	—	—	ES1
			Abnormal	—	—	—	
			Single fault- (when cycle protection)	1) 504	1) 17.4	2) 0.432mA pk 3) 0.01mA	
3	264Vac/ 60Hz	+12V - RTN Output (+ / -) to Earth Accessible enclosure (with metal foil) to earth (Model: GT-46400-3012-T2)	Normal	—	—	—	ES1
			Abnormal	—	—	—	
			Single fault- (when cycle protection)	1) 330	1) 16.6	2) 0.432mA pk 3) 0.01mA	

Supplementary information:

a.c. mains considered ES3.

(*) Circuits complied with with ES1 following Simulated Abnormal Operating Conditions/ Test Simulated Single Fault Condition. See Tables B.3 and B.4

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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	240Vac / 60Hz	CX1	Normal	CX1=max. 330 (+20%)	340	ES3
			Abnormal	--	--	
			Single fault – SC/OC	--	--	

5.2.2.4 - Single Pulses

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

5.2.2.5 - Repetitive Pulses

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

Test Conditions:

Normal –

Abnormal -

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

No X-Capacitors used.

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements (Class I unit)					P
	Supply voltage (V) :	90V/ 60Hz	90V/ 60Hz	264V/ 60Hz	264V/ 60Hz	--
	Ambient Tmin (°C) :	—	—	—	—	--
	Ambient Tmax (°C) :	—	—	—	—	--
	Ambient Tma (°C) :	—	—	—	—	
Maximum measured temperature T of part/at:		T (°C)				Allowed Tmax (°C)
Test Condition		Label on bottom	Label on top	Label on bottom	Label on top	—
Model: GT-46400-4024-T3/3A		—	—	—	—	—
Inlet body		59.8	58.5	53.0	52.4	65
Earth wire body		77.1	75.5	69.1	68.6	80
MOV1 body		66.9	65.4	58.3	58.0	80
PCB body near BD1		104.5	103.8	82.5	82.8	130
NF2 coil		91.9	91.7	71.8	72.5	105
CX1 body		80.5	80.1	69.0	69.3	100
NF1 coil		81.6	79.4	68.4	67.7	105
C1 body		91.2	89.9	77.5	77.3	105
HS1 body near Q1		99.4	99.2	82.5	82.2	130
PC1 body		87.8	87.0	83.7	84.4	100
T1 primary side coil		94.2	93.5	90.4	91.0	110
T1 secondary side coil		86.8	86.1	84.7	85.0	110
T1 core		90.9	90.4	84.2	86.5	110
HS1 body near D8		85.5	84.3	82.1	82.5	130
CY1 body		74.6	74.2	70.9	70.6	85
Inside enclosure body near T1		66.6	64.3	64.4	62.5	105
Ambient Air		40.0	40.0	40.0	40.0	—
—		—	—	—	—	—
Output wire body		50.6	51.2	48.8	50.2	77
Surface of enclosure body near T1		46.0	46.9	43.6	45.3	77
Test ambient air		25.0	25.0	25.0	25.0	—
Model: GT-46400-3024-T3/3A		—	—	—	—	—
C1 body		76.8	77.4	74.0	73.5	105
Ambient air		40.0	40.0	40.0	40.0	—
Model: GT-46400-4015-T3/T3A		—	—	—	—	—

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Clause	Requirement + Test	Result - Remark	Verdict

Inlet body	59.4	58.7	55.2	53.0	65
Earth wire body	75.0	74.9	71.9	70.4	80
MOV1 body	61.1	62.5	56.5	55.6	80
PCB body near BD1	97.1	98.1	85.6	84.0	130
NF2 coil	88.9	90.8	75.1	73.6	105
CX1 body	78.7	80.2	71.8	70.5	100
NF1 coil	78.5	79.0	70.1	67.9	105
C1 body	88.0	88.9	79.8	78.4	105
HS1 body near Q1	89.2	90.3	86.7	85.4	130
PC1 body	87.3	88.9	87.4	87.0	100
T1 primary side coil	90.7	91.2	91.7	91.2	110
T1 secondary side coil	91.4	92.1	93.4	93.2	110
T1 core	87.6	88.5	90.4	90.6	110
HS1 body near D8	84.8	86.5	83.6	83.8	130
CY1 body	71.8	70.8	72.5	71.6	85
Inside enclosure body near T1	69.1	67.8	69.4	67.5	105
Ambient Air	40.0	40.0	40.0	40.0	—
—	—	—	—	—	—
Output wire body	46.7	49.2	49.5	49.1	77
Surface of enclosure body near T1	45.6	50.6	46.6	49.9	77
Test ambient air	25.0	25.0	25.0	25.0	—
Model: GT-46400-3612-T3/T3A	—	—	—	—	—
Inlet body	58.5	58.0	55.4	55.1	65
Earth wire body	72.2	71.5	70.0	68.7	105
MOV1 body	62.1	62.3	58.5	58.6	85
PCB body near BD1	95.7	97.2	89.0	90.1	130
NF2 coil	84.2	86.7	75.2	77.1	105
CX1 body	78.1	79.1	73.2	73.4	85
NF1 coil	76.5	76.5	70.5	70.0	105
C1 body	86.6	87.7	80.0	80.2	105
HS1 body near Q1	89.1	90.7	92.9	95.0	130
PC1 body	86.4	88.5	85.7	86.6	100
T1 primary side coil	90.1	91.5	90.5	91.2	110
T1 secondary side coil	84.7	86.5	85.3	84.8	110
T1 core	85.0	86.2	86.5	86.8	110
HS1 body near D8	85.6	88.0	83.7	84.2	130

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Clause	Requirement + Test	Result - Remark	Verdict

CY1 body	73.4	72.4	74.7	73.5	85
Inside enclosure body near T1	68.4	67.3	68.0	66.4	105
Ambient Air	40.0	40.0	40.0	40.0	—
—	—	—	—	—	—
Output wire body	50.1	51.4	50.9	50.7	77
Surface of enclosure body near T1	45.8	50.5	46.3	49.8	77
Test ambient air	25.0	25.0	25.0	25.0	—
Supplementary information:					

5.4.1.4, 6.3.2, 9.0, B.2.6	**TABLE: Temperature measurements (Class II unit)**					**P**
	Supply voltage (V) :	90V/ 60Hz	90V/ 60Hz	264V/ 60Hz	264V/ 60Hz	--
	Ambient Tmin (°C) :	—	—	—	—	--
	Ambient Tmax (°C) :	—	—	—	—	--
	Ambient Tma (°C) :	—	—	—	—	
Maximum measured temperature T of part/at:		T (°C)				Allowed Tmax (°C)
Test Condition		Label on bottom	Label on top	Label on bottom	Label on top	—
Model: GT-46400-4024-T2		—	—	—	—	—
Inlet body		59.8	58.5	53.0	52.4	65
Earth wire body		77.1	75.5	69.1	68.6	80
MOV1 body		66.9	65.4	58.3	58.0	80
PCB body near BD1		104.5	103.8	82.5	82.8	130
NF2 coil		91.9	91.7	71.8	72.5	105
CX1 body		80.5	80.1	69.0	69.3	100
NF1 coil		81.6	79.4	68.4	67.7	105
C1 body		91.2	89.9	77.5	77.3	105
HS1 body near Q1		99.4	99.2	82.5	82.2	130
PC1 body		87.8	87.0	83.7	84.4	100
T1 primary side coil		94.2	93.5	90.4	91.0	110
T1 secondary side coil		86.8	86.1	84.7	85.0	110
T1 core		90.9	90.4	84.2	86.5	110
HS1 body near D8		85.5	84.3	82.1	82.5	130
CY1 body		74.6	74.2	70.9	70.6	85
Inside enclosure body near T1		66.6	64.3	64.4	62.5	105

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Clause	Requirement + Test	Result - Remark			Verdict
CY2 body	83.5	81.9	79.3	79.5	125
Ambient Air	40.0	40.0	40.0	40.0	—
—	—	—	—	—	—
Output wire body	50.6	51.2	48.8	50.2	77
Surface of enclosure body near T1	46.0	46.9	43.6	45.3	77
Test ambient air	25.0	25.0	25.0	25.0	—
Model: GT-46400-3024-T2	—	—	—	—	—
C1 body	76.8	77.4	74.0	73.5	105
Ambient air	40.0	40.0	40.0	40.0	—
Model: GT-46400-4015-T2	—	—	—	—	—
Inlet body	59.4	58.7	55.2	53.0	65
Earth wire body	75.0	74.9	71.9	70.4	80
MOV1 body	61.1	62.5	56.5	55.6	80
PCB body near BD1	97.1	98.1	85.6	84.0	130
NF2 coil	88.9	90.8	75.1	73.6	105
CX1 body	78.7	80.2	71.8	70.5	100
NF1 coil	78.5	79.0	70.1	67.9	105
C1 body	88.0	88.9	79.8	78.4	105
HS1 body near Q1	89.2	90.3	86.7	85.4	130
PC1 body	87.3	88.9	87.4	87.0	100
T1 primary side coil	90.7	91.2	91.7	91.2	110
T1 secondary side coil	91.4	92.1	93.4	93.2	110
T1 core	87.6	88.5	90.4	90.6	110
HS1 body near D8	84.8	86.5	83.6	83.8	130
CY1 body	71.8	70.8	72.5	71.6	85
Inside enclosure body near T1	69.1	67.8	69.4	67.5	105
CY2 body	84.9	86.4	83.2	82.9	125
Ambient Air	40.0	40.0	40.0	40.0	—
—	—	—	—	—	—
Output wire body	46.7	49.2	49.5	49.1	77
Surface of enclosure body near T1	45.6	50.6	46.6	49.9	77
Test ambient air	25.0	25.0	25.0	25.0	—
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.4, 6.3.2, 9.0, B.2.6	**TABLE: Temperature measurements** **Accessible parts - see above table**					P
	Supply voltage (V) .....:	--	--	--	--	—
	Ambient T_{min} (°C) .....:	--	--	--	--	—
	Ambient T_{max} (°C) .....:	--	--	--	--	—
	Tma (°C) .....:	--	--	--	--	—
Maximum measured temperature T of part/at:		T (°C)				Allowed T_{max} (°C)
--		--	--	--	--	--

Supplementary information:

Note 1: Tma should be considered as directed by appliable requirement

Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9)

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

Supplementary information:

5.4.1.10.3	**TABLE: Ball pressure test of thermoplastics**			N/A
Allowed impression diameter (mm) .....:		≤ 2 mm		—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)	
--	--	--	--	

Supplementary information:

Phenolic material used which acceptable without test.

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance	P

Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz)[1]	Required cl (mm)	cl (mm)[2]	Required[3] cr (mm)	cr (mm)
For Class I units							
Functional / basic and supplementary insulation							
L → HS1 Before F1	420	250	—	2.3	9.9	2.5	9.9
Line trace - Neutral trace Before F1	420	250	—	2.3	9.9	2.5	9.9
F1 trace - F1 trace	420	250	—	2.3	4.9	2.5	4.9
Reinforced / double insulation							
HS1 → Access part of enclosure	420	250	59.3	4.5	6.5	5.0	6.5
MOV1 → Access part of enclosure	420	250	59.3	4.5	6.2	5.0	6.2
Between CY1	420	250	59.3	4.5	8.5	5.0	8.5
NF1 → HS2 (with tape)	420	250	59.3	4.5	8.2	5.0	8.2
CY1 → R20	420	250	59.3	4.5	6.3	5.0	6.3
C4 → PC1(2)	420	250	59.3	4.5	6.7	5.0	6.7
CY2 → PC1(1)	420	250	59.3	4.5	6.6	5.0	6.6
Between PC1	420	250	59.3	4.5	8.0	5.0	8.0
Between CY1	420	250	59.3	4.5	7.5	5.0	7.5
Between CY2	420	250	59.3	4.5	7.2	5.0	7.2
T1 core → D9	536	323	59.3	4.5	9.2	6.5	9.2
T1 core → C8	536	323	59.3	4.5	8.6	6.5	8.6
T1 Primary to secondary	536	323	59.3	4.5	7.9	6.5	7.9
T1 secondary to core	536	323	59.3	4.5	8.8	6.5	8.0
For class II units							
Functional / basic and supplementary insulation:							
Line trace - Neutral trace Before F1	420	250	—	2.3	9.9	2.5	9.9
F1 trace - F1 trace	420	250	—	2.3	4.9	2.5	4.9
Reinforced insulation:							
HS1 → Access part of enclosure	420	250	59.3	4.5	6.5	5.0	6.5
MOV1 → Access part of enclosure	420	250	59.3	4.5	6.2	5.0	6.2
Between CY1	420	250	59.3	4.5	8.5	5.0	8.5
NF1 → HS2 (with tape)	420	250	59.3	4.5	8.2	5.0	8.2

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Clause	Requirement + Test	Result - Remark	Verdict

CY1 → R20	420	250	59.3	4.5	6.3	5.0	6.3
C4 → PC1(2)	420	250	59.3	4.5	6.7	5.0	6.7
CY2 → PC1(1)	420	250	59.3	4.5	6.6	5.0	6.6
Between PC1	420	250	59.3	4.5	8.0	5.0	8.0
Between CY1	420	250	59.3	4.5	7.5	5.0	7.5
Between CY2	420	250	59.3	4.5	7.2	5.0	7.2
T1 core → D9	536	323	59.3	4.5	9.2	6.5	9.2
T1 core → C8	536	323	59.3	4.5	8.6	6.5	8.6
T1 Primary to secondary	536	323	59.3	4.5	7.9	6.5	7.9
T1 secondary to core	536	323	59.3	4.5	8.8	6.5	8.0

Supplementary information:

Note 1: Only for frequency above 30 kHz

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

Note 3: Provide Material Group: III/a/IIIb

Note 4: PCB type B identical PCB type A except removed D8, add sec. choke (L1) and PCB re-layout on secondary side.

All component considered above 10N / 5sec

*Calculated values for 5000 m altitude (multiplication factor 1,48)

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Clause	Requirement + Test	Result - Remark	Verdict

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

Clearance distanced between:	Required withstand voltage	Required cl (mm)	Measured cl (mm)
Basic/Supplementary[1)]	2500	2.3	[1)]
Reinforced[1)]	2500	4.5	[1)]

Supplementary information:

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

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

Test voltage applied between:	Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No
Functional / basic and supplementary insulation			
--	--	--	--
Reinforced / double insulation			
--	--	--	--

Supplementary information:

Clause 5.4.2.2 and 5.4.2.3 applied.

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.4.2, 5.4.4.5 c) 5.4.4.9	**TABLE: Distance through insulation measurements**	P

Distance through insulation di at/of:	Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)
For Class I units:					
Tubing (on intel wire) (Basic Insulation)	420	59.3	1)	0.4	1)
Photo Coupler (PC1) (Reinforced Insulation)	420	59.3	1)	0.4	1)
Insulation tape (HS2) (Reinforced Insulation)	536	59.3	1)	2 layers	2 layers min.
Enclosure (Reinforced Insulation)	536	59.3	1)	0.4	1)
For Class II units:					
Photo Coupler (PC1) (Reinforced Insulation)	420	59.3	1)	0.4	1)
Insulation tape (HS2) (Reinforced Insulation)	536	59.3	1)	2 layers	2 layers min.
Enclosure (Reinforced Insulation)	536	59.3	1)	0.4	1)

Supplementary information*

1) See appended table 4.1.2.

2) According to clause 5.4.4.9*

3) For Tubing (basic Insulation):
Kr=0.35, Vpw=420Vp. Required electric strengh test voltage* 1.2*420/0.35=1440Vpeak
For Insulation tape (Reinforced Insulation)*
Kr=0.46, Vpw=536Vp. Required electric strengh test voltage* 1.2*2*536/0.46=2797Vpeak
For Photo Coupler (Reinforced Insulation)*
Kr=0.35, Vpw=420Vp. Required electric strengh test voltage* 1.2*2*420/0.35=2880Vpeak
For Plastic enclosure (Reinforced Insulation)*
Kr=0.35, Vpw=536Vp. Required electric strengh test voltage* 1.2*2*536/0.35=3676Vpeak

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Class I:				
Functional:				
--		--	--	--
Basic/supplementary:				
Tubing (on intel wire) (see appended tables 4.1.2)		AC (pk)	2500	No
Reinforced:				
Unit: Primary to enclosure with foil		DC	4000	No
Unit: primary to secondary		DC	4000	No
Photo Coupler (PC1) (see appended tables 4.1.2)		AC (pk)	4000	No
Enclosure (see appended tables 4.1.2)		AC (pk)	4000	No
One layer of insulation tape (T1) (Insulation tape for Heat Sink)		AC (pk)	4000	No
T1: Primary to Secondary		AC (pk)	4000	No
T1: Core to Secondary		AC (pk)	4000	No
Routine Tests:				
T1: Primary to Secondary		AC	3750	No

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Clause	Requirement + Test	Result - Remark	Verdict

Class II units:			
Functional:			
—	—	—	—
Basic/supplementary:			
—	—	—	—
Reinforced:			
Unit: primary to enclosure with foil	DC	4000	No
Unit: primary to secondary	DC	4000	No
Photo Coupler (PC1) (see appended tables 4.1.2)	AC (pk)	4000	No
Enclosure (see appended tables 4.1.2)	AC (pk)	4000	No
One layer of insulation tape (T1) (Insulation tape for Heat Sink)	AC (pk)	4000	No
T1: Primary to Secondary	AC (pk)	4000	No
T1: Core to Secondary	AC (pk)	4000	No
Routine Tests:			
T1: Primary to Secondary	AC	3750	No
Supplementary information: 1. By applying an d.c. voltage in one polarity and then repeat it in reverse polarity. 2. See supplementary information of appended table 5.4.4.9. 3. All testing including after Humidity test required of clause 5.4.8, there are including unit, transformer and all material of transformer, see appended tables 4.1.2			

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Clause	Requirement + Test	Result - Remark	Verdict

5.5.2.2	TABLE: Stored discharge on capacitors				P
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification
264,60	Phase to Neutral	N	—	38	ES1
264,60	Phase to Neutral	R4 open	—	70	ES1

Supplementary information:

X-capacitors installed for testing are: CX1=0.33μF

☒ bleeding resistor rating: R1, R2 (Max. 2Mohm, min. 1/4W)

☐ ICX: /

Notes:

A. Test Location:

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

B. Operating condition abbreviations:

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

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

5.6.6.2	TABLE: Resistance of protective conductors and terminations				N/A
Accessible part		Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)
--		--	--	--	--
Supplementary information: The resistance of protective bonding path did not exceed 0,1 Ohm.					

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part (Class I units)	P
Supply voltage ..... :	264 Vac / 60Hz	—
Location	Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)
	1 (NP/RP)	Max. 0.23 mApk
	2*	N/A
	3	N/A
	4	N/A
	5	N/A
	6	N/A
	8	N/A

Supplementary Information:

Notes:

[1] Supply voltage is the anticipated maximum Touch Voltage

[2] Earthed neutral conductor [Voltage differences less than 1% or more]

[3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3

[4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable.

[5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.

Faults:

1: PE of not reliable earthed equipment disconnected. Normal and reverse polarity.

2: Neutral of single-phase equipment open. Normal and reverse polarity.

3: EUT use on IT systems shall be tested with each phase conductor faulted to earth (switch g)

4: Three phase equipment should be tested with each phase conductor open, one at the time.

5: Single phase equipment use on IT system or on 3P delta-system shall be tested with a 3P power system, with each phase faulted to PE, one at the time in combination with normal and reverse polarity and separately with each phase conductor open one at the time and in combination with normal and reverse polarity.

6: Three phase equipment for use on centre-earthed delta supply systems shall be tested on a delta supply system with each delta-leg centre-earthed, one at the time.

8: Accessible conductive parts which are only incidentally electrically connected to other parts shall be tested for both when connected electrically to other parts and when not. Examples of such parts: doors and assemblies attached by metal hinges, adhesively-bonded labels which have an accessible conductive part etc.

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

6.2.2	Table: Electrical power sources (PS) measurements for classification				N/A
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s*)	PS Classification
--	--	Power (W) :	--	--	--
		V_A (V) :			
		I_A (A) :			
Supplementary Information: All circuits within the equipment are considered as PS3. For output circuits see appended table Q.1.					

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)			N/A
Location	Open circuit voltage After 3 s (Vp)	Measured r.m.s current (Irms)	Calculated value (V_p x I_{rms})	Arcing PIS? Yes / No
--	--	--	--	--
Supplementary information: An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V_p) and normal operating condition rms current (I_{rms}) is greater than 15. All internal circuits considered PS3 arcing PIS.				

6.2.3.2	Table: Determination of Potential Ignition Sources (Resistive PIS)				N/A
Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured wattage or VA During first 30 s (W / VA)	Measured wattage or VA After 30 s (W / VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No
--	--	--	--	--	--
Supplementary Information: A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter. If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification. A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, or (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault. All internal circuits considered PS3, resistive PIS.					

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Clause	Requirement + Test	Result - Remark	Verdict

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

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
Class I units:							
—	—	—	—	—	—	—	Model No.: GT-46400-3612-T3/T3A
90/50Hz	0.80	—	41.0	—	F1	0.80	12Vdc 3A
100/50Hz	0.74	1.0	41.0	—	F1	0.74	12Vdc 3A
240/50Hz	0.44	1.0	41.0	—	F1	0.44	12Vdc 3A
254/50Hz	0.43	—	41.0	—	F1	0.43	12Vdc 3A
264/50Hz	0.42	—	41.0	—	F1	0.42	12Vdc 3A
90/60Hz	0.83	—	41.0	—	F1	0.83	12Vdc 3A
100/60Hz	0.77	1.0	41.0	—	F1	0.77	12Vdc 3A
240/60Hz	0.44	1.0	41.0	—	F1	0.44	12Vdc 3A
254/60Hz	0.42	—	41.0	—	F1	0.42	12Vdc 3A
264/60Hz	0.41	—	41.0	—	F1	0.41	12Vdc 3A
—	—	—	—	—	—	—	Model No.: GT-46400-4015-T3/T3A
90/50Hz	0.88	—	45	—	F1	0.88	15dc 2.7A
100/50Hz	0.76	1.0	45	—	F1	0.76	15dc 2.7A
240/50Hz	0.48	1.0	45	—	F1	0.48	15dc 2.7A
254/50Hz	0.46	—	45	—	F1	0.46	15dc 2.7A
264/50Hz	0.45	—	45	—	F1	0.45	15dc 2.7A
90/60Hz	0.90	—	46	—	F1	0.90	15dc 2.7A
100/60Hz	0.78	1.0	45	—	F1	0.78	15dc 2.7A
240/60Hz	0.47	1.0	45	—	F1	0.47	15dc 2.7A
254/60Hz	0.45	—	45	—	F1	0.45	15dc 2.7A
264/60Hz	0.44	—	45	—	F1	0.44	15dc 2.7A
—	—	—	—	—	—	—	Model No.: GT-46400-4019-T3/3A
90/50Hz	0.86	—	44	—	F1	0.86	19Vdc 2.1A
100/50Hz	0.79	1.0	44	—	F1	0.79	19Vdc 2.1A
240/50Hz	0.47	1.0	44	—	F1	0.47	19Vdc 2.1A
254/50Hz	0.45	—	44	—	F1	0.45	19Vdc 2.1A
264/50Hz	0.44	—	44	—	F1	0.44	19Vdc 2.1A
90/60Hz	0.89	—	44	—	F1	0.89	19Vdc 2.1A
100/60Hz	0.82	1.0	44	—	F1	0.82	19Vdc 2.1A
240/60Hz	0.46	1.0	44	—	F1	0.46	19Vdc 2.1A

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Clause	Requirement + Test	Result - Remark	Verdict

B.2.5	TABLE: Input test						P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
Class I units:							
254/60Hz	0.44	—	44	—	F1	0.44	19Vdc 2.1A
264/60Hz	0.43	—	44	—	F1	0.43	19Vdc 2.1A
—	—	—	—	—	—	—	Model No.: GT-46400-4024-T3/3A
90/50Hz	0.88	—	45	—	F1	0.88	24Vdc 1.7A
100/50Hz	0.81	1.0	45	—	F1	0.81	24Vdc 1.7A
240/50Hz	0.47	1.0	44	—	F1	0.47	24Vdc 1.7A
254/50Hz	0.45	—	44	—	F1	0.45	24Vdc 1.7A
264/50Hz	0.44	—	44	—	F1	0.44	24Vdc 1.7A
90/60Hz	0.90	—	45	—	F1	0.90	24Vdc 1.7A
100/60Hz	0.84	1.0	45	—	F1	0.84	24Vdc 1.7A
240/60Hz	0.46	1.0	44	—	F1	0.46	24Vdc 1.7A
254/60Hz	0.44	—	44	—	F1	0.44	24Vdc 1.7A
264/60Hz	0.43	—	44	—	F1	0.43	24Vdc 1.7A

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Clause	Requirement + Test	Result - Remark	Verdict

Class II units:							
—	—	—	—	—	—	—	Model No.: GT-46400-3612-T2
90/50Hz	0.80	—	41.0	—	F1	0.80	12Vdc 3A
100/50Hz	0.74	1.0	41.0	—	F1	0.74	12Vdc 3A
240/50Hz	0.44	1.0	41.0	—	F1	0.44	12Vdc 3A
254/50Hz	0.43	—	41.0	—	F1	0.43	12Vdc 3A
264/50Hz	0.42	—	41.0	—	F1	0.42	12Vdc 3A
90/60Hz	0.83	—	41.0	—	F1	0.83	12Vdc 3A
100/60Hz	0.77	1.0	41.0	—	F1	0.77	12Vdc 3A
240/60Hz	0.44	1.0	41.0	—	F1	0.44	12Vdc 3A
254/60Hz	0.42	—	41.0	—	F1	0.42	12Vdc 3A
264/60Hz	0.41	—	41.0	—	F1	0.41	12Vdc 3A
—	—	—	—	—	—	—	Model No.: GT-46400-4015-T2
90/50Hz	0.88	—	45	—	F1	0.88	15Vdc 2.7A
100/50Hz	0.76	1.0	45	—	F1	0.76	15Vdc 2.7A
240/50Hz	0.48	1.0	45	—	F1	0.48	15Vdc 2.7A
254/50Hz	0.46	—	45	—	F1	0.46	15Vdc 2.7A
264/50Hz	0.45	—	45	—	F1	0.45	15Vdc 2.7A
90/60Hz	0.90	—	46	—	F1	0.90	15Vdc 2.7A
100/60Hz	0.78	1.0	45	—	F1	0.78	15Vdc 2.7A
240/60Hz	0.47	1.0	45	—	F1	0.47	15Vdc 2.7A
254/60Hz	0.45	—	45	—	F1	0.45	15Vdc 2.7A
264/60Hz	0.44	—	45	—	F1	0.44	15Vdc 2.7A
—	—	—	—	—	—	—	Model No.: GT-46400-4019-T2
90/50Hz	0.86	—	44	—	F1	0.86	19Vdc 2.1A
100/50Hz	0.79	1.0	44	—	F1	0.79	19Vdc 2.1A
240/50Hz	0.47	1.0	44	—	F1	0.47	19Vdc 2.1A
254/50Hz	0.45	—	44	—	F1	0.45	19Vdc 2.1A
264/50Hz	0.44	—	44	—	F1	0.44	19Vdc 2.1A
90/60Hz	0.89	—	44	—	F1	0.89	19Vdc 2.1A
100/60Hz	0.82	1.0	44	—	F1	0.82	19Vdc 2.1A
240/60Hz	0.46	1.0	44	—	F1	0.46	19Vdc 2.1A
254/60Hz	0.44	—	44	—	F1	0.44	19Vdc 2.1A
264/60Hz	0.43	—	44	—	F1	0.43	19Vdc 2.1A

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Clause	Requirement + Test	Result - Remark	Verdict

—	—	—	—	—	—	—	Model No.: GT-46400-4024-T2
90/50Hz	0.88	—	45	—	F1	0.88	24Vdc 1.7A
100/50Hz	0.81	1.0	45	—	F1	0.81	24Vdc 1.7A
240/50Hz	0.47	1.0	44	—	F1	0.47	24Vdc 1.7A
254/50Hz	0.45	—	44	—	F1	0.45	24Vdc 1.7A
264/50Hz	0.44	—	44	—	F1	0.44	24Vdc 1.7A
90/60Hz	0.90	—	45	—	F1	0.90	24Vdc 1.7A
100/60Hz	0.84	1.0	45	—	F1	0.84	24Vdc 1.7A
240/60Hz	0.46	1.0	44	—	F1	0.46	24Vdc 1.7A
254/60Hz	0.44	—	44	—	F1	0.44	24Vdc 1.7A
264/60Hz	0.43	—	44	—	F1	0.43	24Vdc 1.7A

Supplementary information:

The steady-state input current did not exceed the rated current at the rated voltage by more than 10% under the maximum normal load.

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

B.3	TABLE: Abnormal operating condition tests (class I units)							P
Ambient temperature (°C) .....:					40 (Tma) / 25 (Tamb)			—
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
Model: GT-46400-4024-T3/3A	—	—	—	—	—	—	—	—
+24V - RTN	Overload	264Vac	6h:56m	F1	0.50	T1 coil Enclosure near T1 Output wire Tamb	104.0 61.0 52.0 25.0	CT at 2.3A, increased to 2.5A, unit shutdown, NT, NB, NC, ASRE
+24V - RTN	Short	264Vac	30min	F1	0.03	—	—	After 1 sec unit shutdown, NT, NB, NC, ASRE
Model: GT-46400-4015-T3/T3A	—	—	—	—	—	—	—	—
+15V - RTN	Overload	264Vac	6h:59m	F1	0.64	T1 coil Enclosure near T1 Output wire Tamb	90.0 73.0 57.0 25.0	CT at 3.8A, increased to 3.9A, unit shutdown, NT, NB, NC, ASRE
+15V - RTN	Short	264Vac	30min	F1	0.03-0.04	—	—	After 1 sec cycle protection, NT, NB, NC, ASRE
Model: GT-46400-3612-T3/T3A	—	—	—	—	—	—	—	—
+12V - RTN	Overload	264Vac	6h:36m	F1	0.45	T1 coil Enclosure near T1 Output wire Tamb	93.0 69.0 55.0 25.0	CT at 3.8A, increased to 4.0A, unit shutdown, NT, NB, NC, ASRE
+12V - RTN	Short	264Vac	30min	F1	0.03-0.04	—	—	After 1 sec cycle protection, NT, NB, NC, ASRE

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

B.3	TABLE: Abnormal operating condition tests (class I units)								P
Ambient temperature (°C) .....:						40 (Tma) / 25 (Tamb)			—
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	

Supplementary Information:

Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column “Abnormal/Fault.” Specify if test condition by indicating “Abnormal” then the condition for a Clause B.3 test or “Single Fault” then the condition for Clause B.4.

Abbreviations used:

NC: Cheesecloth remain intact

NT: Tissue paper remains intact

NB: No indication of dielectric breakdown

IP: Internal protection operated (list component)

CT: Constant temperatures were obtained

CD: Components damaged (list damaged components)

ASRE: All safeguards remained effectively

All ES measurement refer to table 5.2

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

B.4	TABLE: Fault condition tests (Class I)							P
Ambient temperature (°C) .....:				40 (Tma) / 25 (Tamb)				—
Power source for EUT: Manufacturer, model/type, output rating ..:				—				—
Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Model: GT-46400-4024-T3/3A	—	—	—	—	—	—	—	—
BD1 (L-+)	Short	264Vac	1sec	F1	0	—	—	IP (F1), NT, NB, NC, ASRE
C1	Short	264Vac	1sec	F1	0	—	—	IP (F1), NT, NB, NC, ASRE
Q1 (G-D)	Short	264Vac	1sec	F1	0	—	—	IP (F1), CD (Q1) NT, NB, NC, ASRE
Q1 (S-D)	Short	264Vac	1sec	F1	0	—	—	IP (F1), CD (Q1) NT, NB, NC, ASRE
Q1 (G-S)	Short	264Vac	30min	F1	0.036	—	—	1)
PC1 (3-4)	Short	264Vac	30min	F1	0.036	—	—	1)
PC1 (1-2)	Short	264Vac	30min	F1	0.03-0.15	—	—	2)
PC1 (1)	Open	264Vac	30min	F1	0.03-0.15	—	—	2)
T1 (6-7)	Short	264Vac	1sec	F1	0	—	—	IP (F1), CD (R10) NT, NB, NC, ASRE
T1 (3-4)	Short	264Vac	30min	F1	0.03-0.15	—	—	2)
U1 (2-5)	Short	264Vac	1sec	F1	0	—	—	CD (U1), repeat additional 2times, the result was same, NT, NB, NC, ASRE
Model: GT-46400-4015-T3/T3A	—	—	—	—	—	—	—	—
T1 (6-7)	Short	264Vac	30min	F1	0.03-0.15	—	—	2)
T1 (3-4)	Short	264Vac	30min	F1	0.03-0.15	—	—	2)
Model: GT-46400-3612-T3/T3A	—	—	—	—	—	—	—	—
T1 (6-7)	Short	264Vac	30min	F1	0.03-0.15	—	—	2)
T1 (3-4)	Short	264Vac	30min	F1	0.03-0.15	—	—	2)

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

Supplementary information:

Abbreviations used:

NC: Cheesecloth remain intact

NT: Tissue paper remains intact

NB: No indication of dielectric breakdown

IP: Internal protection operated (list component), repeat all fuse (see appended table 1.5.1) test 1 time, test results were same.

TC: Touch current

CT: Constant temperatures were obtained

CD: Components damaged (list damaged components)

ASRE: All safeguards remained effectively

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

2) After 1 sec cycle protection, NT, NB, NC, ASRE

All ES measurement refer to table 5.2

B.3	**TABLE: Abnormal operating condition tests (class II units)**							P
Ambient temperature (°C) .....:						40 (Tma) / 25 (Tamb)		—
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
Model: GT-46400-4024-T2 (test by PCB type A)	—	—	—	—	—	—	—	—
+24V - RTN	Overload	264Vac	6h:56m	F1	0.50	T1 coil Enclosure near T1 Output wire Tamb	104.0 61.0 52.0 25.0	CT at 2.3A, increased to 2.5A, unit shutdown, NT, NB, NC, ASRE
+24V - RTN	Short	264Vac	30min	F1	0.03	—	—	After 1 sec unit shutdown, NT, NB, NC, ASRE
Model: GT-46400-4015-T2 (test by PCB type A)	—	—	—	—	—	—	—	—

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

B.3	TABLE: Abnormal operating condition tests (class II units)								P
Ambient temperature (°C) .....:						40 (Tma) / 25 (Tamb)			—
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	
+15V - RTN	Overload	264Vac	6h:59m	F1	0.64	T1 coil Enclosure near T1 Output wire Tamb	90.0 73.0 57.0 25.0	CT at 3.8A, increased to 3.9A, unit shutdown, NT, NB, NC, ASRE	
+15V - RTN	Short	264Vac	30min	F1	0.03-0.04	—	—	After 1 sec cycle protection, NT, NB, NC, ASRE	
Model: GT-46400-3612-T2 (test by PCB type A)	—	—	—	—	—	—	—	—	
+12V - RTN	Overload	264Vac	6h:36m	F1	0.45	T1 coil Enclosure near T1 Output wire Tamb	93.0 69.0 55.0 25.0	CT at 3.8A, increased to 4.0A, unit shutdown, NT, NB, NC, ASRE	
+12V - RTN	Short	264Vac	30min	F1	0.03-0.04	—	—	After 1 sec cycle protection, NT, NB, NC, ASRE	

Supplementary Information:

Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column “Abnormal/Fault.” Specify if test condition by indicating “Abnormal” then the condition for a Clause B.3 test or “Single Fault” then the condition for Clause B.4.

Abbreviations used:

NC: Cheesecloth remain intact

NT: Tissue paper remains intact

NB: No indication of dielectric breakdown

IP: Internal protection operated (list component)

CT: Constant temperatures were obtained

CD: Components damaged (list damaged components)

ASRE: All safeguards remained effectively

All ES measurement refer to table 5.2

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

B.4	TABLE: Fault condition tests (Class II)		P
Ambient temperature (°C) ..... :		40 (Tma) / 25 (Tamb)	—
Power source for EUT: Manufacturer, model/type, output rating . :		—	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Model: GT-46400-4024-T2	—	—	—	—	—	—	—	—
BD1 (L-+)	Short	264Vac	1sec	F1	0	—	—	IP (F1), NT, NB, NC, ASRE
C1	Short	264Vac	1sec	F1	0	—	—	IP (F1), NT, NB, NC, ASRE
Q1 (G-D)	Short	264Vac	1sec	F1	0	—	—	IP (F1), CD (Q1) NT, NB, NC, ASRE
Q1 (S-D)	Short	264Vac	1sec	F1	0	—	—	IP (F1), CD (Q1) NT, NB, NC, ASRE
Q1 (G-S)	Short	264Vac	30min	F1	0.036	—	—	1)
PC1 (3-4)	Short	264Vac	30min	F1	0.036	—	—	1)
PC1 (1-2)	Short	264Vac	30min	F1	0.03-0.15	—	—	2)
PC1 (1)	Open	264Vac	30min	F1	0.03-0.15	—	—	2)
T1 (6-7)	Short	264Vac	1sec	F1	0	—	—	IP (F1), CD (R10) NT, NB, NC, ASRE
T1 (3-4)	Short	264Vac	30min	F1	0.03-0.15	—	—	2)
U1 (2-5)	Short	264Vac	1sec	F1	0	—	—	CD (U1), repeat additional 2times, the result was same, NT, NB, NC, ASRE
Model: GT-46400-4015-T2	—	—	—	—	—	—	—	—
T1 (6-7)	Short	264Vac	30min	F1	0.03-0.15	—	—	2)
T1 (3-4)	Short	264Vac	30min	F1	0.03-0.15	—	—	2)
Model: GT-46400-3612-T2	—	—	—	—	—	—	—	—
T1 (6-7)	Short	264Vac	30min	F1	0.03-0.15	—	—	2)
T1 (3-4)	Short	264Vac	30min	F1	0.03-0.15	—	—	2)

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

Supplementary information:

Abbreviations used:

NC: Cheesecloth remain intact

NT: Tissue paper remains intact

NB: No indication of dielectric breakdown

IP: Internal protection operated (list component), repeat all fuse (see appended table 1.5.1) test 1 time, test results were same.

TC: Touch current

CT: Constant temperatures were obtained

CD: Components damaged (list damaged components)

ASRE: All safeguards remained effectively

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

2) After 1 sec cycle protection, NT, NB, NC, ASRE

All ES measurement refer to table 5.2

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

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

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

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Clause	Requirement + Test	Result - Remark	Verdict

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

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

Supplementary Information:

Battery identification	Charging at T_{lowest} (°C)	Observation	Charging at $T_{highest}$ (°C)	Observation
--	--	--	--	--

Supplementary Information:

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

Annex Q.1	**TABLE: Circuits intended for interconnection with building wiring (LPS) (Class I units)**						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 No.: GT-46400-4024-T3/3A	
24V	Normal condition	24.17	2.54	8	57.67	100	
24V	Single fault: R11 SC	—	2.62	8	59.13	100	
24V	Single fault: R11 OC	—	0	8	0	100	
24V	Single fault: PC1 (1-2) SC	—	0	8	0	100	
24V	Single fault: PC1 (1) OC	—	0	8	0	100	
24V	Single fault: R18 SC	—	0	8	0	100	
24V	Single fault: R10 SC	—	0	8	0	100	
24V	Single fault: R12 SC	—	3.48	8	48.3	100	
24V	Single fault: R12 OC	—	0	8	0	100	
—	—	—	—	—	—	Model No.: GT-46400-4015-T3/T3A	
15V	Normal condition	15.22	4.10	8	60.00	100	
15V	Single fault: R11	—	4.09	8	59.65	100	
15V	Single fault: R11 OC	—	0	8	0	100	
15V	Single fault: PC1 (1-2) SC	—	0	8	0	100	
15V	Single fault: PC1 (1) OC	—	0	8	0	100	
15V	Single fault: R18 SC	—	0	8	0	100	
15V	Single fault: R10 SC	—	0	8	0	100	
15V	Single fault: R12 SC	—	5.18	8	76.10	100	
15V	Single fault: R12 OC	—	0	8	0	100	
—	—	—	—	—	—	Model No.: GT-46400-3612-T3/T3A	
12V	Normal condition	12.31	4.25	8	51.36	100	
12V	Single fault: R11 SC	—	4.21	8	50.06	100	

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Clause	Requirement + Test	Result - Remark	Verdict

12V	Single fault: R11 OC	—	0	8	0	100
12V	Single fault: PC1 (1-2) SC	—	0	8	0	100
12V	Single fault: PC1 (1) OC	—	0	8	0	100
12V	Single fault: R18 SC	—	0	8	0	100
12V	Single fault: R10 SC	—	0	8	0	100
12V	Single fault: R12 SC	—	5.5	8	64.10	100
12V	Single fault: R12 OC	—	0	8	0	100
—	—	—	—	—	—	Model No.: 6A-301DB12
12V	Normal condition	12.15	4.18	8	49	100
Supplementary Information: SC=Short circuit, OC=Open circuit Input Voltage: 264Vac, 60Hz						

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

Annex Q.1	**TABLE: Circuits intended for interconnection with building wiring (LPS) (Class II units)**						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 No.: GT-46400-4024-T2	
24V	Normal condition	24.17	2.54	8	57.67	100	
24V	Single fault: R11 SC	—	2.62	8	59.13	100	
24V	Single fault: R11 OC	—	0	8	0	100	
24V	Single fault: PC1 (1-2) SC	—	0	8	0	100	
24V	Single fault: PC1 (1) OC	—	0	8	0	100	
24V	Single fault: R18 SC	—	0	8	0	100	
24V	Single fault: R10 SC	—	0	8	0	100	
24V	Single fault: R12 SC	—	3.48	8	48.3	100	
24V	Single fault: R12 OC	—	0	8	0	100	
—	—	—	—	—	—	Model No.: GT-46400-4015-T2	
15V	Normal condition	15.22	4.10	8	60.00	100	
15V	Single fault: R11 SC	—	4.09	8	59.65	100	
15V	Single fault: R11 OC	—	0	8	0	100	
15V	Single fault: PC1 (1-2) SC	—	0	8	0	100	
15V	Single fault: PC1 (1) OC	—	0	8	0	100	
15V	Single fault: R18 SC	—	0	8	0	100	
15V	Single fault: R10 SC	—	0	8	0	100	
15V	Single fault: R12 SC	—	5.18	8	76.10	100	
15V	Single fault: R12 OC	—	0	8	0	100	
—	—	—	—	—	—	Model No.: GT-46400-3612-T2	
12V	Normal condition	12.31	4.25	8	51.36	100	
12V	Single fault: R11 SC	—	4.21	8	50.06	100	

IEC 62368-1						
Clause	Requirement + Test		Result - Remark			Verdict
12V	Single fault: R11 OC	—	0	8	0	100
12V	Single fault: PC1 (1-2) SC	—	0	8	0	100
12V	Single fault: PC1 (1) OC	—	0	8	0	100
12V	Single fault: R18 SC	—	0	8	0	100
12V	Single fault: R10 SC	—	0	8	0	100
12V	Single fault: R12 SC	—	5.5	8	64.10	100
12V	Single fault: R12 OC	—	0	8	0	100
—	—	—	—	—	—	Model No.: GT-46400-3012-T2
12V	Normal condition	12.15	4.18	8	49	100
Supplementary Information: SC=Short circuit, OC=Open circuit Input Voltage: 264Vac, 60Hz						

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

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 side	1)	1)	250N	5	2)
Enclosure / bottom side	1)	1)	250N	5	2)
Enclosure / right side	1)	1)	250N	5	2)

Supplementary information:

1) See appended table 4.1.2

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

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

T.6, T.9	TABLE: Impact tests				N/A
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation	
Enclosure/ top side	1)	1)	1300	2)	
Enclosure/ bottom side	1)	1)	1300	2)	
Enclosure/ right side	1)	1)	1300	2)	

Supplementary information:

1) See appended table 4.1.2.

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

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

Supplementary information:

1) See appended table 4.1.2.

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

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

T.8	TABLE: Stress relief test					P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
Enclosure	1)	1)	80	7	2)	

Supplementary information:

1) See appended table 4.1.2.

2) No shrinkage, warpage, or other distortion, class 3 energy sources did not become accessible and all safeguards remain effective, No indication of dielectric breakdown

Enclosure No. 1

National differences according to IEC 62368-1:2014 (Second Edition)

(47 pages including this cover page)

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

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

Attachment Form No .....: EU_GD_IEC62368_1B_II

Attachment Originator .....: Nemko AS

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

	CENELEC COMMON MODIFICATIONS (EN)	**P**
	Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2014 are prefixed "Z".	P
CONTENT S	**Add** the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations Annex ZD (informative) IEC and CENELEC code designations for flexible cords	P

	Delete all the "country" notes in the reference document (IEC 62368-1:2014) according to the following list:						P
	0.2.1	**Note 1**	**Note 3**	**4.1.15**	**Note**		
	4.7.3	**Note 1 and 2**	**5.2.22**	**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 2and 3**	
	5.7.5	**Note**	**5.7.6.1**	**Note 1 and 2**	**10.2.1 Table 39**	**Note 2, 3and 4**	
	10.5.3	**Note 2**	**10.6.2.1**	**Note 3**	**F.3.3.6**	**Note 3**	
	For special national conditions, see Annex ZB.						
1	**Add** the following note: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.						P

4.Z1	**Add** the following new subclause after 4.9: To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. **mains**, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for **pluggable equipment type B** or **permanently connected equipment**, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for **pluggable equipment type A** the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		P
5.4.2.3.2.4	**Add** the following to the end of this subclause: The requirement for interconnection with **external circuit** is in addition given in EN 50491-3:2009.		N/A
10.2.1	Add the following to [c] and [d] in table 39: For additional requirements, see 10.5.1.		N/A
10.5.1	**Add** the following after the first paragraph: *For RS 1 compliance is checked by measurement under the following conditions:* *In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or presets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.* NOTE Z1 Soldered joints and paint lockings are examples of adequate locking. *The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm^2, at any point 10 cm from the outer surface of the apparatus.* *Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is*		N/A

	maintained for 1 h, at the end of which the measurement is made. For RS1, the dose-rate shall not exceed 1 pSv/h taking account of the background level. NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.		
10.6.1	Add the following paragraph to the end of the subclause: EN 71-1:2011,4.20 and the related tests methods and measurement distances apply.		N/A
10.Z1	Add the following new subclause after 10.6.5. 10.Z1 Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz). For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand-held and body-mounted devices, attention is drawn to EN 50360 and EN 50566		N/A
G.7.1	Add the following note: NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.		N/A

Bibliography	Add the following standards: Add the following notes for the standards indicated: IEC 60130-9 NOTE Harmonized as EN 60130-9. IEC 60269-2 NOTE Harmonized as HD 60269-2. IEC 60309-1 NOTE Harmonized as EN 60309-1. IEC 60364 NOTE some parts harmonized in HD 384/HD 60364 series. IEC 60601-2-4 NOTE Harmonized as EN 60601-2-4. IEC 60664-5 NOTE Harmonized as EN 60664-5. IEC 61032:1997 NOTE Harmonized as EN 61032:1998 (not modified). IEC 61508-1 NOTE Harmonized as EN 61508-1. IEC 61558-2-1 NOTE Harmonized as EN 61558-2-1. IEC 61558-2-4 NOTE Harmonized as EN 61558-2-4.		P
	IEC 61558-2-6 NOTE Harmonized as EN 61558-2-6. IEC 61643-1 NOTE Harmonized as EN 61643-1. IEC 61643-21 NOTE Harmonized as EN 61643-21. IEC 61643-311 NOTE Harmonized as EN 61643-311. IEC 61643-321 NOTE Harmonized as EN 61643-321. IEC 61643-331 NOTE Harmonized as EN 61643-331.		

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		P
4.1.15	Denmark, Finland, Norway and Sweden To the end of the subclause the following is added: Class I pluggable equipment type A intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment shall be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Denmark: “Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord.” In Finland: "Laite on liitettava suojakoskettimilla varustettuun pistorasiaan" In Norway: “Apparatet ma tilkoples jordet stikkontakt” In Sweden: “Apparaten skall anslutas till jordat uttag”		N/A
4.7.3	United Kingdom To the end of the subclause the following is added: The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex		N/A
5.2.2.2	Denmark After the 2nd paragraph add the following: A warning (marking safeguard) for high touch current is required if the touch current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A
5.4.11.1 and Annex G			N/A

	Finland and Sweden To the end of the subclause the following is added: For separation of the telecommunication network from earth the following is applicable: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either • two layers of thin sheet material, each of which shall pass the electric strength test below, or • one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition • passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), and • is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5kV. It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: • the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11; • the additional testing shall be performed on all the test specimens as described in EN 60384-14; the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		
5.5.2.1	Norway After the 3rd paragraph the following is added: Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A
5.5.6	Finland, Norway and Sweden To the end of the subclause the following is added: Resistors used as basic safeguard or bridging basic insulation in class I pluggable equipmenttype A shall comply with G.10.1 and the test of G.10.2.		N/A

5.6.1	Denmark Add to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. Justification: In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.		N/A
5.6.4.2.1	Ireland and United Kingdom After the indent for pluggable equipment type A, the following is added: - the protective current rating is taken to be 13 A, this being the largest rating of fuse used in the mains plug.		N/A
5.6.5.1	To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm2 to 1,5 mm2 in cross-sectional area.		N/A
5.7.5	Denmark To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the protective conductor current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A
5.7.6.1	Norway and Sweden To the end of the subclause the following is added: The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation needs to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing - and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has to be provided through a device providing electrical isolation below a certain		N/A

	frequency range (galvanic isolator, see EN 60728-11)" NOTE In Norway, due to regulation for CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The		
5.7.6.2	Denmark To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA .		N/A
B.3.1 and B.4	Ireland and United Kingdom The following is applicable: To protect against excessive currents and short-circuits in the primary circuit of direct plug-in equipment, tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the direct plug-in equipment, until the requirements of Annexes B.3.1 and B.4 are met		N/A
G.4.2	Denmark To the end of the subclause the following is added: Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011.		N/A
	is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a Justification: Heavy Current Regulations, Section 6c		
G.4.2	United Kingdom To the end of the subclause the following is added: The plug part of direct plug-in equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16, and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A

G.7.1	United Kingdom To the first paragraph the following is added: Equipment which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord shall be fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768, unless exempted by those regulations. NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
G.7.1	Ireland To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard		N/A
G.7.2	Ireland and United Kingdom To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm2 is allowed for equipment which is rated over 10 A and up to and including 13 A.		N/A
ZC	**ANNEX ZC, NATIONAL DEVIATIONS (EN)**		**N/A**
10.5.2	**Germany** The following requirement applies: For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking. *Justification:* German ministerial decree against ionizing radiation (Rontgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM. **NOTE** Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int +49-531-592-6320, Internet: http://www.ptb.de		N/A

ATTACHMENT TO TEST REPORT IEC 62368-1 2th Ed. U.S.A. NATIONAL DIFFERENCES

Audio/video, information and communication technology equipment - Part 1: Safety requirements

Differences according to..... : CSA/UL 62368-1:2014

Attachment Form No ..... : US&CA_ND_IEC623681B

Attachment Originator..... : UL(US)

Master Attachment..... : Date 2015-06

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		N/A

	assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the NEC.		
	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.		P
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
5.7.7	Equipment intended to receive telecommunication ringing signals complies with a special touch current measurement tests.		N/A
6.5.1	PS3 wiring outside a fire enclosure complies with single fault testing in B.4, or be current limited per one of the permitted methods.		N/A
Annex F (F.3.3.8)	Output terminals provided for supply of other equipment, except mains, supply are marked with a maximum rating or references to which equipment it is permitted to be connected.		P
Annex G (G.7.1)	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		N/A
Annex G (G.7.3)	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
	Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
Annex G (G.7.5)	Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Power supply cords are required to be no longer than 4.5 m in length if used in ITE Rooms.		N/A
Annex H.2	Continuous ringing signals under normal operating conditions up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex H.4	For circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 V d.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A
Annex M	Battery packs for stationary applications comply with special component requirements.		N/A

Annex DVA (1)	Equipment intended for use in spaces used for environmental air are subjected to special flammability requirements for heat and visible smoke release.		N/A
	For ITE room applications, automated information storage systems with combustible media greater than 0.76 m3 (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 m2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less. For equipment with the same dimensions for other applications, an external surface that is not a fire enclosure requires a min. flammability classification of V-1.		N/A
Annex DVA (10.3.1)	Equipment with lasers meets the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
Annex DVA (10.5.1)	Equipment that produces ionizing radiation complies with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
Annex DVA (F.3.3.3)	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. Additional considerations apply for voltage ratings that exceed the attachment cap rating or are lower than the “Normal Operating Condition” in Table 2 of CAN/CSA C22.2 No. 235.”		N/A
Annex DVA (F.3.3.5)	Equipment identified for ITE (computer) room installation is marked with the rated current		N/A

Annex DVA (G.1)	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position		N/A
Annex DVA (G.3.4)	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.		N/A
Annex DVA (G.4.2)	Equipment with isolated ground (earthing) receptacles complies with NEC 250.146(D) and CEC 10-112 and 10-906(8).		N/A
Annex DVA (G.4.3)	Where a fuse is used to provide Class 2 or Class 3 current limiting, it is not operator-accessible unless it is non- interchangeable.		N/A
Annex DVA (G.5.3)	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.		N/A
Annex DVA (G.5.4)	Motor control devices are required for cord-connected equipment with a mains-connected motor if the equipment is rated more than 12 A, or if the equipment has a nominal voltage rating greater than 120 V, or if the motor is rated more than 1/3 hp (locked rotor current over 43 A).		N/A
Annex DVA (Annex M)	For ITE room applications, equipment with battery systems capable of supplying 750 VA for five minutes have a battery disconnect means that may be connected to the ITE room remote power- off circuit.		N/A
Annex DVA (Q)	Wiring terminals intended to supply Class 2 outputs according to the NEC or CEC Part 1are marked with the voltage rating and “Class 2” or equivalent; marking is located adjacent to the terminals and visible during wiring.		N/A
Annex DVB (1)	Additional requirements apply for equipment used for entertainment purposes intended for installation in general patient care areas of health care facilities.		N/A
Annex DVC (1)	Additional requirements apply for equipment intended for mounting under kitchen cabinets.		N/A
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,		P

	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.		
Annex DVH	Equipment for permanent connection to the mains supply is subjected to additional requirements.		N/A
Annex DVH (DVH.1)	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains are in accordance with the NEC/CEC.		N/A
Annex DVH (DVH.3.2)	Terminals for permanent wiring, including protective earthing terminals, are suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and are specially marked when specified.		N/A
Annex DVH (DVH.3.2)	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm2).		N/A

Annex DVH (DVH.4)	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.		N/A
Annex DVH (DVH 5.5)	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, complies with special earthing, wiring, marking and installation instruction requirements.		N/A
Annex DVI (6.7)	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses.		N/A
Annex DVJ (10.6.1)	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.		N/A

ATTACHMENT TO TEST REPORT
IEC 62368-1
(AUSTRALIA / NEW ZEALAND) NATIONAL DIFFERENCES
(Audio/video, information and communication technology equipment)

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

Attachment Form No .....: AU_NZ_ND_IEC62368_1B

Attachment Originator..... : JAS-ANZ

	National Differences		
Appendix ZZ	Variations to IEC 62368-1:2014 (ED. 2.0) for Australia and New Zealand		P
ZZ1 Scope	This Appendix lists the normative variations to IEC 62368-1:2014 (ED. 2.0)		P
ZZ2 Variations	The following modifications are required for Australian/New Zealand conditions:		P
2	*Add* the following to the list of normative references: The following normative documents are referenced in Appendix ZZ: - AS/NZS 3112, *Approval and test specification— Plugs and socket-outlets* - AS/NZS 3123, *Approval and test specification— Plugs, socket-outlets and couplers for general industrial application* - AS/NZS 3191, *Electric flexible cords* - AS/NZS 60065, *Audio, video and similar electronic apparatus—Safety requirements (IEC 60065:2015 (ED.8.0) MOD)* - AS/NZS 60320.1, *Appliance couplers for household and similar general purposes, Part 1: General requirements (IEC 60320-1, Ed.2.1 (2007) MOD)* -AS/NZS 60320.2.2, *Appliance couplers for household and similar general purposes Part 2.2: Interconnection couplers for household and similar equipment (IEC 60320-2 2, Ed.2.0 (1998) MOD)* -AS/NZS 60695.2.11, *Fire hazard testing, Part 2.11: Glowing/hot wire based test methods— Glow-wire flammability test method for endproducts* -AS/NZS 60695.11.5, *Fire hazard testing, Part 11.5: Test flames—Needle-flame test method—Apparatus, confirmatory test arrangement and guidance* - AS/NZS 60695.11.10, *Fire hazard testing, Part 11.10: Test flames—50 W horizontal and vertical flame test methods* - AS/NZS 60884.1, *Plugs and socket-outlets for household and similar purposes, Part 1: General requirements* - AS/NZS 60950.1:2015, *Information technology equipment—Safety*, Part 1: *General requirements (IEC 60950-1, Ed.2.2 (2013), MOD)*		P

	IEC 61032:1997, *Protection of persons and equipment by enclosures—Probes for verification* -AS/NZS 61558.1:2008 (including Amendment 2:2015), *Safety of Power Transformers, Power Supplies, Reactors and Similar Products, Part 1: General requirements and tests (IEC 61558-1 Ed 2.1, MOD)* -AS/NZS 61558.2.16, *Safety of transformers, reactors, power supply units and similar products for voltages up to 1 100 V, Part 2.16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units.*		
4.1.1	Application of requirements and acceptance of materials, components and subassemblies 1 *Replace* the text 'IEC 60950-1' with 'AS/NZS 60950.1:2015'. 2 *Replace* the text 'IEC 60065' with 'AS/NZS 60065'.		P
4.7	Equipment for direct insertion into mains socket-outlets		N/A
4.7.2	Requirements *Delete* the text of the second paragraph and *replace* with the following: Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flat-pin socket-outlet complying with AS/NZS 3112 shall comply with the requirements in AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets.		N/A
4.7.3	Compliance Criteria *Delete* the first paragraph and Note 1 and Note 2 and *replace* with the following: *Compliance is checked by inspection and, if necessary, by the tests in AS/NZS 3112.*		N/A
4.8	*Delete* existing clause title and *replace* with the following: 4.8 Products containing coin/button cell batteries		N/A
4.8.1	General 1 Second dashed point, *delete* the text and *replace* with the following: - include coin/button cell batteries with a diameter of 32 mm or less. 2 After the second dashed point, *insert* the following Note: NOTE 1: Batteries are specified in IEC 60086-2. 3 After the third dashed point, *renumber* the existing Note as 'NOTE 2'. 4 Fifth dashed point, *delete* the word 'lithium'.		N/A

4.8.2	Instructional Safeguard First line, delete the word 'lithium'.		N/A
4.8.3	Construction First line, after the word 'Equipment' insert the words 'containing one or more coin/button batteries and'		N/A
4.8.5	Compliance criteria Delete the first paragraph and replace with the following: Compliance is checked by applying a force of 30 N +/-1 N for 10 s to the battery compartment door/cover by a rigid test finger according to test probe 11 of IEC 61032:1997 at the most unfavourable place and in the most unfavourable direction. The force shall be applied in one direction at a time.		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General *Delete* the first paragraph and *replace* with the following: In Australia only, the separation is checked by the test of both Clause 5.4.10.2.2 and Clause 5.4.10.2.3. In New Zealand, the separation is checked by the test of either Clause 5.4.10.2.2 or Clause 5.4.10.2.3.		N/A
Table 29	*Replace* the table with the following:		N/A

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

[a] Surge suppressors shall not be removed. [b] Surge suppressors may be removed, provided that such devices pass the impulse test of Clause 5.4.10.2.2 when tested as components outside the equipment. [c] During this test, it is allowed for a surge suppressor to operate and for a sparkover to occur in a GDT.			
5.4.10.2.2	After the first paragraph, *insert* new Notes 201 and 202 as follows: NOTE 201 For Australia, the 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines. NOTE 202 For Australia, the value of 2.5 kV for Clause 5.4.10.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.		N/A
5.4.10.2.3	After the first paragraph, insert new Notes 201 and 202 as follows: NOTE 201 For Australia, where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used. NOTE 202 The 3 kV and 1.5 kV values for Australia have been determined considering the low frequency induced voltages from the power supply distribution system.		N/A
6	Electrically-caused fire		P
6.1	General After the first paragraph, insert the following new paragraph: Alternatively, the requirements of Clauses 6.2 to 6.5.2 are considered to be fulfilled if the equipment complies with the requirements of Clause 6.202		P
6.6	After Clause 6.6, *add* the new Clauses 6.201 and 6.202 as follows: 6.201 External power supplies, docking stations and other similar devices and 6.202 Resistance to fire—Alternative tests (see special national conditions)		N/A
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment In the first dashed row and the second dashed rows *replace* 'IEC 60950-1:2005' with 'AS/NZS 60950.1:2015'.		N/A
8.6	**Stability of equipment**		N/A

8.6.1 and Table 36	Requirements 1. Table 36, *insert* Footnote c at the end of the 'Glass slide' heading, and *add* a new Footnote c after the text of Footnote b in the last row of Table 36 as follows: [c] The glass slide test is not applicable to floor standing equipment, even though the equipment may have controls or a display. 2. Table 36, fifth row, *insert* '[201], at the end of 'No stability requirements' 3. Table 36, ninth row, *insert* '[201], at the end of 'No stability requirements' 4. Table 36, *add* the following new footnote: [201] MS2 and MS3 television sets and display devices, designed only for fixing to a wall, ceiling or equipment rack, are not subjected to stability requirements only if the instructional safeguard of Clause 8.6.1.201 is provided. Otherwise, the glass slide requirements of Clause 8.6.4 and horizontal force requirements of Clause 8.6.5 apply. 5. Second paragraph beneath Table 36, *delete* the words 'MS2 and MS3 television sets' and *replace* with 'MS2 and MS3 television sets and display devices'		N/A
8.6.1	After Clause 8.6.1 add the following new clauses: 8.6.1.201 Instructional safeguard for fixed- mount television sets (see special national conditions)		N/A

Annex F Paragrap h F.3.5.1	Mains appliance outlet and socket-outlet markings Replace 'IEC 60320-2-2' with 'AS/NZS 60320.2.2'.		N/A
Annex G Paragrap h G.4.2	Mains connectors 1 In the second line insert 'or AS/NZS 3123' after 'IEC 60906-1'. 2 In the second line insert 'or AS/NZS 60320 series' after 'IEC 60320 series' 3 Add the following new paragraph: 10 A or 15 A 250 V flat pin plugs for the connection of equipment to mains-powered socket-outlets for household or similar general use shall comply with AS/NZS 3112 or AS/NZS 60884.1.		N/A

Paragrap h G.5.3.1	Transformers, General 1 In the third dashed point replace 'IEC 61558-1 and the relevant parts of IEC 61558-2' with 'AS/NZS 61558-1 and the relevant parts of AS/NZS 61558.2' 2 In the fourth dashed point replace 'IEC 615582-16' with 'AS/NZS 61558.2.16'.		N/A
Paragrap h G.7.1	Mains supply cords, General In the fourth dashed paragraph, replace 'IEC 60320-1' with 'AS/NZS 60320.1'		N/A

Table G.5	Sizes of conductors 1 In the second row, first column, delete ‘6’ and replace with ‘7.5’ 2 In the second row, second column, delete ‘0,75’ and replace with ‘0.75b 3 Delete Note 1. 4 Replace ‘NOTE 2’ with ‘NOTE:’. 5 Delete the text of ‘Footnote b’ and replace with the following: bThis nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the entry to the plug does not exceed 2 m (0.5 mm2 three-core supply flexible cords are not permitted; see AS/NZS 3191). 6 In Footnote c replace ‘IEC 60320-1’ with ‘AS/NZS 60320.1’ 7 In Footnote d replace ‘IEC 60320-1’ with ‘AS/NZS 60320.1’		N/A
Annex M Paragrap h M.3.2	Protection circuits for batteries provided within the equipment, Test method After the first dashed point add the following Note:		N/A

	NOTE 201: In cases where the voltage source is provided by power from an unassociated power source, consideration should be given to the effects of possible single fault conditions in the unassociated equipment. If the power source is unknown then it should be assumed that the maximum limit of SELV may be applied to the source input under assumed single fault conditions in the source when assessing the charging circuit in the equipment under test.		
	Special national conditions (if any)		

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

6.202.1	General Parts of non-metallic material shall be resistant to ignition and spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames from inside the equipment, or the following: a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1 mm in width regardless of length. b) The following parts which would contribute negligible fuel to a fire: - small mechanical parts, the mass of which does not exceed 4 g, such as mounting parts, gears, cams, belts and bearings; - small electrical components, such as capacitors with a volume not exceeding 1 750 mm3, integrated circuits, transistors and optocoupler packages, if these components are mounted on material of flammability category V-1, or better, according to AS/NZS 60695.11.10. NOTE: In considering how to minimize propagation of fire and what 'small parts' are, account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating the fire from one part to another.		N/A
	Compliance shall be checked by the tests of Clauses 6.202.2, 6.202.3 and 6.202.4. For the base material of printed boards, compliance shall be checked by the test of Clause 6.202.5. The tests shall be carried out on parts of non-metallic material which have been removed from the equipment. When the glow-wire test is carried out, the parts shall be placed in the same orientation as they would be in normal use. These tests are not carried out on internal wiring.		N/A
6.202.2	Testing of non-metallic materials Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550°C. Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glowwire test shall be not carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the relevant part is not thinner than the sample tested.		N/A

6.202.3	Testing of insulating materials Parts of insulating material supporting Potential Ignition Sources shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750°C. The test shall be also carried out on other parts of insulating material which are within a distance of 3 mm of the connection. NOTE: Contacts in components such as switch contacts are considered to be connections		N/A

	For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test. However, parts shielded by a barrier which meets the needle-flame test need not be tested			N/A
	The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications:			N/A
	Clause of AS/NZS 60695.11.5	Change		
	9 Test procedure			
	9.2 Application of needle-flame	*Delete* the first and second paragraphs and *replace* with the following: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of Figure 1. If possible the flame shall be applied at least 10 mm from a corner. The duration of application of the test flame shall be 30 s 1 s.		
	9.3 Number of test specimens	*Replace* with the following: The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.		
	11 Evaluation of test results	*Replace* with the following: The duration of burning (tb) shall not		
		exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.		

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

	category V-1 or better according to AS/NZS 60695.11.10, or the printed boards are protected by an enclosure meeting the flammability category V-0 according to AS/NZS 60695.11.10, or made of metal, having openings only for connecting wires which fill the openings completely; or - the base material of printed boards, on which the available equipment power at a connection exceeds 15 VA operating at a voltage exceeding 400 V (peak) a.c. or d.c. under normal operating conditions, and base material of printed boards supporting spark gaps which provides protection against overvoltages, is of flammability category V-0 according to AS/NZS 60695.11.10 or the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely. Conformance shall be determined using the smallest thickness of the material. NOTE: Available apparent power is the maximum apparent power which can be drawn from the		
6.202.6	For open circuit voltages greater than 4 kV Potential ignition sources with open circuit voltages exceeding 4 kV (peak) a.c. or d.c. under normal operating conditions shall be contained in a FIRE ENCLOSURE which shall comply with flammability category V-1 or better according to AS/NZS 60695.11.10.		N/A

8.6.1.201	8.6.1.201 Instructional safeguard for fixed- mount television sets MS2 and MS3 television sets and display devices designed only for fixed mounting to a wall of ceiling or equipment rack shall, where required in Table 36, footnote 201, have an instructional safeguard in accordance with Clause F.5 which may be on the equipment or included in the installation instructions or equivalent document accompanying the equipment. The elements of the instructional safeguard shall be as follows: - element 1a: not available; - element 2: 'Stability Hazard' or equivalent wording; - element 3: 'The television set may fall, causing serious personal injury or death' or equivalent text; - element 4: the following or equivalent text: To prevent injury, this television set must be securely attached to the floor/wall in accordance with the installation instructions.	--	N/A
8.6.1.202	Restraining device MS2 and MS3 television sets and display devices that are not solely fixed-mounted should be provided with a restraining device such as a fixing point to facilitate restraining the equipment from toppling forward. The restraining device shall be capable of withstanding a pull of 100 N in all directions without damage. Where a restraining device is provided, instructions shall be provided in the instructions for installation or instructions for use to ensure correct and safe installation.	--	--

IEC 62368-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT **IEC 62368-1** **(JAPAN) NATIONAL DIFFERENCES** **(Audio/video, information and communication technology equipment – Part 1: Safety requirements)**			
Differences according to.....:	J62368-1 (2020)		
TRF template used: .....:	IECEE OD-2020-F3, Ed. 1.1		
Attachment Form No.....:	JP_ND_IEC62368_1B		
Attachment Originator .....:	UL (JP)		
Master Attachment.....:	Date 2020-11-06		
	National Differences		—

IEC 62368-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.1.2	Where the component, or a characteristic of a component, is a safeguard or a part of a safeguard, components shall comply with the requirements of this standard or, where specified in a requirements clause, with the safety aspects of the relevant JIS component standards or IEC component standards, or components shall have properties equivalent to or better than these.		P
5.6.1	Mains socket-outlet and appliance outlet shall comply with Clause G.4.2A if they are incorporated as part of the equipment.		N/A
5.6.2.1	Mains connection of class 0I equipment: Instructional safeguard in accordance with Clause F.3.6.1A; Mains plug having a lead wire for protective earthing connection of class 0I equipment; Independent main protective earthing terminal installed by ordinary person.		N/A
5.6.2.2	This requirement does not apply to internal conductor of the cord set that is covered by the sheath of mains cord and is formed together with mains plug and appliance connector.		N/A
5.6.3	In case of class 0I equipment using power supply cord having two conductors (no earthing conductor), the conductor of protective earthing lead wire shall comply with either of the following: – use of annealed copper wire with 1.6 mm diameter or corrosion-inhibiting metal wire having size and strength that are equivalent to or more than the above copper wire – single core cord or single core cab tire cable with 1.25 mm^2 or more cross-sectional area		N/A
5.7.3	For class 0I equipment that is provided with mains socket-outlet in the configuration as specified in JIS C 8282 series or JIS C 8303, or otherwise being considered to comply with relevant regulations, or that is provided with mains appliance outlet as specified in JIS C 8283-2-2 for the purpose of interconnection, the measurement is conducted on the system of the interconnected equipment having a single connection to the mains.		N/A
5.7.4	In case of class 0I equipment, touch current shall not exceed 1.41 mA peak or for sinusoidal wave, 1.0 mA r.m.s. when measured using the network specified in Figure 4 of IEC 60990.		P

IEC 62368-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
6.4.3.3	A fuse complying with JIC C 6575 series or a fuse having equivalent characteristics shall open within 1 s. For Class A fuse of JIS C 6575, replace “2.1 times” by “1.35 times” and in case of Class B fuse of JIS C 6575, replace “2.1 times” by “1.6 times”. A fuse not complying with JIS C 6575 series shall be tested with the breaking capacity taken into account.		P
8.5.4.2.1	Only three-phase stationary equipment rated more than 200 V ac can be considered as being for use in locations where children are not likely to be present, when complying with Clause F.4.		N/A
8.5.4.2.2	For equipment installed where children may be present, an instructional safeguard shall be provided by easily understandable wording in accordance with Clause F.5, except that element 3 is optional.		P
8.5.4.2.4	The media destruction device is tested according to Clause V.1.2 with applicable jointed test probes to the opening. And then the wedge probe per Figure V.4 shall not contact any moving part.		N/A
8.5.4.2.5	The wedge probe of Figure V.4 and applicable jointed test probes specified in Clause V.1.2 shall not contact any moving part. Instructional safeguard shall not be used instead of equipment safeguard for preventing access to hazardous moving parts.		N/A
9.2.6, Table 38	Handles, Knobs, grips, etc. and external surfaces either held, touched or worn against the body in normal use (> 1 min) [b,c]		N/A
F.3.5.1	Instructional safeguard of class 0I equipment in accordance with Clause F.5 when a mains socket-outlet as specified in JIS C 8282 series, JIS C 8303 or relevant regulation to which class I equipment can be connected is provided in accordance with Clause G.4.2A except for the cases where the socket-outlet is accessible only to skilled persons.		N/A
F.3.5.3	If the fuse is necessary for the safeguard function, the symbols indicating pre-arcing time-current characteristic.		N/A
F.3.6.1A	Marking for class 0I equipment The requirements of Clauses F.3.6.1.1 and F.3.6.1.3 shall be applied to class 0I equipment. For class 0I equipment, a marking of instructions and instructional safeguard shall be provided regarding the earthing connection.		N/A

IEC 62368-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
F.3.6.2.1	Symbols, IEC 60417-5172 (2003-02) or IEC 60417-6092 (2011-10), shall not be used for class I equipment or class 0I equipment.		P
F.4	Instruction for audio equipment with terminals classified as ES3 in accordance with Table E.1, and for other equipment with terminals marked in accordance with F.3.6.1 and F.3.6.1A. Installation instruction for the protective earthing connection for class 0I equipment provided with independent main protective earthing terminal, where the cord for the protective earthing connection is not provided within the package for the equipment.		N/A
G.3.2.1	The thermal link when tested as a separate component, shall comply with the requirements of JIS C 6691 or have properties equivalent to or better than that.		N/A
G.3.4	Except for devices covered by Clause G.3.5, overcurrent protective devices used as a safeguard shall comply with the relevant part of JIS C 6575 (corresponding to IEC60127) or shall have equivalent characteristics. If there are no applicable IEC standards, overcurrent protective devices used as a safeguard shall comply with their applicable IEC standards.		P
G.4.1	This requirement is not applicable to Clauses G.4.2 and G.4.2A.		N/A
G.4.2	Mains connector shall comply with JIS C 8282 series, JIS C 8283 series, JIS C 8285, JIS C 8303 or IEC 60309 series. Mains plugs and socket-outlets shall comply with JIS C 8282 series, JIS C 8303, IEC 60309 series, or have equivalent or better performance. A power supply cord set provided with appliance connector that can fit appliance inlet complying with JIS C 8283-1 shall comply with JIS C 8286. Construction preventing mechanical stress not to transmit to the soldering part of inlet terminal. Consideration for an equipment rated not more than 125 V provided with Type C14 and C18 appliance coupler complying with JIS C 8283 series.		N/A
G.4.2A	Mains socket-outlet and interconnection coupler provided with the class II, class I and class 0I equipment respectively.		N/A
G.7.1	A mains supply cord need not include the protective earthing conductor for class 0I equipment provided with independent protective earthing conductor.		N/A

IEC 62368-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
G.8.3.3	Withstand 1,71 × 1.1 × U_0 for 5 s.		

Country	Japan
IECEE Member NCB	IECEE-JP
IEC Standard	IEC 62368-1:2014 (Ed. 2.0)
Corresponding National Standard	J62368-1 (H30)
Regulatory Requirements	Electrical Appliances and Materials Safety Act Article 8, 9 and Appendix 12

Clause and Sub-clause	**Exact wording** Requirement + Test	Result - Remark	Verdict
3.3.15.1	Add the following new note after Note 2 to entry. Note 3 to entry: See 3.3.15.4A for class I equipment, when 2-pin adaptor with earthing lead wire or cord set having 2-pin plug with earthing lead wire is provided or recommended.		N/A
3.3.15.4A	Add the following new clause after 3.3.15.4. 3.3.15.4A Class 0I equipment Equipment having attachment plug without earthing blade, where protection against electric shock is achieved by using basic insulation and providing the protective earthing terminal or earthing lead wire in order to connect accessible conductive parts to the protective earthing conductor in the building wiring as supplementary safeguard. The above includes the equipment provided with, or recommend user to use the accessory of 2-pin plug adaptor with protective earthing lead wire that adapts class I (earthed) plug into 2-pin plug or power supply cord set having 2-pin plug with earthing lead wire. Note 1 to entry: Class 0I equipment may have a part constructed with Class II.		N/A
4.1.2	Modify the first paragraph as follows: Where the component, or a characteristic of a component, is a safeguard or a part of a safeguard, components shall comply with the		N/A

	requirements of this standard or, where specified in a requirements clause, with the safety aspects of the relevant JIS component standards or IEC component standards, or components shall have properties equivalent to or better than these. Add the following Note before Note 1 NOTE 0A Components complying with the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better properties.		
4.1.3	Add the following Note before the compliance statement: NOTE Considering the wiring circumstance in Japan, transportable or similar type of equipment that is frequently moved for intended usage, or equipment intended to be installed where the provision for earthing connection is unlikely should not be designed as class I or class 0I equipment unless it is intended to be installed by skilled persons or instructed persons.		N/A
5.4.1.4.3	Add the following as a note to Table 10: NOTE In case no data for the material is available, Appendix 4, 1.(1).b. 3 of the Interpretation on the Ministerial Ordinance stipulating Technical Specifications for Electrical Appliances is regarded as maximum temperature limit of the material.		N/A
5.4.9.2	Add the following text to the NOTE: Alternatively, routine test in production-line may be in accordance with 5.2 (electric strength test) of IEC 62911.		N/A
5.6.1	Add the following: Mains socket-outlet and appliance outlet shall comply with Clause G.4.2A if they are incorporated as part of the equipment.		N/A
5.6.2.1	Add the following to the third paragraph: Mains connection of class 0I equipment provided with instructional safeguard in accordance with Clause F.3.6.1A is considered to meet this requirement. Add the following at the end of the subclause: Mains plug having a lead wire for protective		N/A

	earthing connection of class 0I equipment shall comply with all of the following: – Not to be used for equipment having a rated voltage of 150 V or more – The lead wire for earthing is not connected to the earth by means of clip – The lead wire for earthing is at least 10 cm long If class 0I equipment provides an independent main protective earthing terminal and is intended to be installed by ordinary person, earthing wire shall be provided within the package for the equipment.		
5.6.2.2	Add the following after the first sentence. However, this requirement does not apply to internal conductor of the cord set that is covered by the sheath of mains cord and is formed together with mains plug and appliance connector.		N/A
5.6.3	Add the following after NOTE 2. In addition, for class 0I equipment using power supply cord having two conductors (no earthing conductor), the conductor of protective earthing lead wire shall also comply with either of the following: – use of annealed copper wire with 1.6 mm diameter or corrosion-inhibiting metal wire having size and strength that are equivalent to or more than the above copper wire – single core cord or single core cab tire cable with 1.25 mm^2 or more cross-sectional area Replace NOTE 3 with the following NOTE 3 Heavy duty is defined in IEC 62440.		N/A
5.6.4.2.1	Add NOTE 4 as follows: NOTE 4 In Japan, 20 A is widely used as protective current rating for mains circuit in case of mains outlet rated 20 A or less.		P
5.7.3	Change present NOTE to NOTE 1, and add the following paragraph after the NOTE 1: For class 0I equipment that is provided with mains socket-outlet in the configuration as specified in JIS C 8282 series or JIS C 8303, or otherwise being considered to comply with relevant regulations, or that is provided with mains appliance outlet as specified in JIS C 8283-2-2 for the purpose of interconnection, the		N/A

	measurement is conducted on the system of the interconnected equipment having a single connection to the mains. NOTE 2 Limits for class 0I equipment is specified in 5.7.4 NOTE 3 It is regarded as being in compliance with the relevant regulations if a connector complies with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliances.		
5.7.4	Add the following paragraph at the end of the first paragraph: In case of class 0I equipment, touch current shall not exceed 1.41 mA peak or for sinusoidal wave, 1.0 mA r.m.s. when measured using the network specified in Figure 4 of IEC 60990.		N/A
6.4.3.3	Replace the first dash paragraph with following: − a fuse complying with JIC C 6575 series or a fuse having equivalent characteristics shall open within 1 s; or NOTE 3 A fuse is considered to have equivalent characteristics to those complying with JIS C 6575 series if it complies with appendix 3 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material. Add the following before the last paragraph: A fuse having time/current characteristics other than those specified in IEC 60127 shall be tested with the characteristics taken into account. In case of Class A fuse of JIS C 6575, replace “2.1 times” by “1.35 times” and in case of Class B fuse of JIS C 6575, replace “2.1 times” by “1.6 times”. NOTE 4 The above replacements apply also to fuses having equivalent characteristics to those specified in JIS C 6575 series.		N/A
8.5.4.2.1	Add the following before NOTE 2: However, only stationary equipment that is directly connected to the three-phase supply rated more than 200 V ac can be considered for use in locations where children are not likely to be present, when complying with Clause F.4.		N/A

8.5.4.2.2	Replace the first paragraph with the following: For equipment installed where children may be present, an instructional safeguard shall be provided by easily understandable wording in accordance with Clause F.5, except that element 3 is optional. Replace the first dash with the following: − element 1a and element 2:  IEC 60417-6057 (2011-05) or  (JIS S 0101:2000, 6.2.1) and the following precautions • “The use by infants/children may cause a hazard of injury.” or equivalent 子供が使用することによって，傷害などの危害が発生するおそれがある。 Example in Japanese: • “A hand can be drawn into the mechanical section for shredding when touching the document-slot.” or equivalent Example in Japanese: 文書投入口に手を触れることによって，細断機構に引き込まれるおそれがある。 • “Clothing can be drawn into the mechanical section for shredding when touching the document-slot.” or equivalent Example in Japanese: 文書投入口に衣類が触れることによって，細断機構に引き込まれるおそれがある。 • “Hairs can be drawn into the mechanical section for shredding when touching the document-slot.” or equivalent Example in Japanese: 文書投入口に髪の毛が触れることによって，細断機構に引き込まれるおそれがある。 In case of equipment incorporating a commutator motor: • “The equipment may catch fire or explode by spraying of flammable gas.” or equivalent Example in Japanese: 可燃性ガスを噴射することによって引火又は爆発するおそれがある。 Delete the second dash.		N/A
8.5.4.2.4	Replace the first statement with the following: The media destruction device is tested according to Clause V.1.2 with applicable jointed test probes to the opening. And then, tested with		N/A

	the wedge probe of Figure V.4 applied in any direction relative to the opening:		
8.5.4.2.5	Replace the second sentence in the first paragraph with the following: The wedge probe of Figure V.4 and applicable jointed test probes specified in Clause V.1.2 shall not contact any moving part. Add the following after the second paragraph: Instructional safeguard shall not substitute an equipment safeguard for preventing access to hazardous moving parts.		N/A
9.2.6, Table 38	Replace the top row of TS2 in column of "Accessible parts" with the following: Handles, Knobs, grips, etc. and external surfaces either held, touched or worn against the body in normal use (> 1 min) [b,c]		N/A
Annex F F.3.5.1	Add the following after the second paragraph. Class 0I equipment shall be provided with an instructional safeguard in accordance with Clause F.5 when a mains socket-outlet as specified in JIS C 8282 series, JIS C 8303 or relevant regulation to which class I equipment can be connected is provided in accordance with Clause G.4.2A except for the cases where the socket-outlet is accessible only to skilled persons. NOTE Appendix 4 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is an example of the relevant regulation. The elements of the instructional safeguard shall be as follows: – element 1a: not applicable – element 2: "Only for (equipment name)" or equivalent text Example in Japanese: (equipment name)専用コンセント – element 4: "This socket-outlet is for use only with (manufacturer's name), (model number or series), (equipment name)" or equivalent text Example in Japanese: このコンセントは,(manufacturer's name), (model number or series), (equipment name)だけが接続することを意図しています。		N/A

	– element 3: “Use with other equipment may result in electric shock” or equivalent text Example in Japanese: その他の機器を接続すると感電の危険があります。 The elements shall be in the order 2, 4, and 3. The element 2 shall be marked adjacent to the mains socket-outlet. The rated voltage and assigned current or power of a mains socket-outlet need not be marked on the equipment provided with this instructional safeguard.		
Annex F F.3.5.3	Replace the third dashed paragraph with the following. – if the fuse is necessary for the safeguard function, the symbols indicating pre-arcing time-current characteristic. Example F: Fast blow T: Time-delay Ⓐ: Class A Ⓑ: Class B		N/A
Annex F F.3.6.1A	Add the following new clause after F.3.6.1.3. F.3.6.1A Marking for class 0I equipment The requirements of Clauses F.3.6.1.1 and F.3.6.1.3 also apply to class 0I equipment. For class 0I equipment, the following or equivalent instructions shall be marked on the mains plug or on the visible place of the main body. “Provide an earthing connection” Example in Japanese: “必ず接地接続を行ってください。” In addition to the above, for class 0I equipment, the following instructional safeguard shall be marked on the visible place of the main body or shall be in the text of an accompanying document. “Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains.” Example in Japanese:		N/A

	接地接続は必ず，電源プラグを電源につなぐ前に行ってください。 また，接地接続を外す場合は，必ず電源プラグを電源から切り離してから行ってください。		
Annex F F.3.6.2.1	Replace the third paragraph with the following: The above symbols shall not be used for class I equipment or class 0I equipment.		N/A
Annex F F.4	Replace the fourth dashed paragraph with the following: ‐ For audio equipment with terminals classified as ES3 in accordance with Table E.1, and for other equipment with terminals marked in accordance with F.3.6.1 and F.3.6.1A, the instructions shall require that the external wiring connected to these terminals shall be installed by a skilled person, or shall be connected by means of ready-made leads or cords that are constructed in a way that would prevent contact with any ES3 circuit. Add the following after the ninth dashed paragraph. – For class 0I equipment provided with independent main protective earthing terminal, where the cord for the protective earthing connection is not provided within the package for the equipment, if the protective earthing connection is made by instructed person or skilled person, the suitable installation instruction for the protective earthing connection shall be provided.		N/A
Annex G G.3.2.1	Replace the paragraph a) with the following. a) The thermal link when tested as a separate component, shall comply with the requirements of JIS C 6691 or have properties equivalent to or better than that. NOTE Thermal links complying with appendix 3 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material are considered to have equivalent or better properties.		N/A
Annex G G.3.4	Replace the first paragraph by the following. Except for devices covered by Clause G.3.5, overcurrent protective devices used as a safeguard shall comply with the relevant JIS harmonizing with IEC standard, or shall have equivalent or better properties. If there are no applicable JIS, they shall comply with relevant IEC standard.		N/A

	NOTE Fuses complying with appendix 3, or circuit breakers or residual current circuit breakers complying with appendix 4 of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material are considered to have equivalent or better properties.		
Annex G G.4.1	Add the following sentence at the end of this clause. This requirement is not applicable to Clauses G.4.2 and G.4.2A.		N/A
Annex G G.4.2	Replace with the following. G.4.2 Mains connectors (including mains plug and socket-outlet) Mains connector shall comply with JIS C 8282 series, JIS C 8283 series, JIS C 8285, JIS C 8303 or IEC 60309 series. Mains plugs and socket-outlets shall comply with JIS C 8282 series, JIS C 8303, IEC 60309 series, or have equivalent or better properties. NOTE Mains plug complying with appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent or better properties. A power supply cord set provided with appliance connector that can fit appliance inlet complying with JIS C 8283-1 shall comply with JIS C 8286. Equipment shall be constructed so that mechanical stress does not transmit to the soldering part of inlet terminal during insertion or removal of the connector. Construction that the body of the inlet is secured and the securement not relied on soldering only is considered to comply. When an equipment is rated not more than 125 V and complies with all the following requirements, Type C14 and C18 appliance coupler complying with JIS C 8283 series can be considered as rated 15 A – The temperature of appliance coupler does not exceed the value specified in JIS C 8283-1 under the most unfavorable normal operating condition. – " Use only designated cord set attached in this equipment " or equivalent text is described in the operating instruction. If the cord set is not provided within the package for the equipment, suitable information regarding to the cord set is		N/A

	described in the operating instruction. Example in Japanese: “この機器に同こん(梱)した指定の電源コードセットだけを使用して下さい。”		
Annex G G.4.2A	Add the following new clause after G.4.2. G.4.2A Mains socket-outlet and interconnection coupler provided with the equipment The equipment provided with mains socket-outlet configured in accordance with JIS C 8282 series, JIS C 8303 or relevant standards or with interconnection coupler configured in accordance with JIS C 8283-2-2 shall comply with the following: – Socket-outlet and interconnection coupler provided in class II equipment can connect other class II equipment only. – Socket-outlet and interconnection coupler provided in class I equipment can connect other class II equipment only, or is provided with protective earthing pole that is reliably connected to protective earthing terminal or point of the equipment. –Interconnection coupler provided in class 0I equipment can connect other class II equipment only. If the all the followings are met, class I equipment can be connected. • The interconnection coupler is provided with a protective earthing pole that is reliably connected to the protective earthing point or terminal of the equipment. • Touch current measured according to 5.7.3 as a system of interconnected equipment with one connection to the mains does not exceed the limit for class 0I equipment specified in 5.7.4. – Socket-outlet provided in class 0I equipment can connect other class II equipment only. If the socket-outlet is provided for interconnection and the all the followings are met, class I equipment can be connected. • Socket-outlet is provided with protective earthing pole that is reliably connected to protective earthing point or terminal of the equipment. • Except for socket-outlet which only skilled person can access, instructional safeguard specified in Clause F.3.5.1 is provided so that only equipment intended by the manufacturer is connected. • Touch current measured according to 5.7.3 as a system of interconnected equipment with one connection to the mains does not exceed the limited for class 0I equipment specified in 5.7.4. – Cord set for interconnection provided within		N/A

	the package for the equipment providing the interconnection coupler complying with JIS C 8283-2-2 complies with JIS C 8286. NOTE 1 Considering the wiring circumstance in Japan, transportable or similar type of equipment that is frequently moved for intended usage, class 0I equipment should not be provided with mains socket-outlet configured in accordance with JIS C 8282 series, JIS C 8303 or relevant regulation unless it is intended to be installed by skilled person. NOTE 2 Acceptable configuration of relevant regulation refers to appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance.		
Annex G G.4.3	Add following NOTE after EXAMPLE. NOTE The statement, “An example of a connector not meeting the requirements of this subclause is the so called “banana” plug” is deleted from above EXAMPLE.		N/A
Annex G G.7.1	Replace the third dashed paragraph with the following. – other types of cords may be used if they have equivalent electro-mechanical and fire safety properties as above. Add the following after NOTE 3. NOTE 3A Sheathed mains cords complying with appendix 1 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance are considered to have equivalent or better electro-mechanical and fire safety properties. Add the following after the first sentence in the paragraph after present NOTE 3: However, a mains supply cord need not include the protective earthing conductor for class 0I equipment provided with independent protective earthing conductor.		N/A
Annex G G.7.2	Add the following new NOTE 0A after the first sentence. NOTE 0A The cross-sectional area of mains cords may comply with relevant Japanese wiring regulation if it complies		N/A

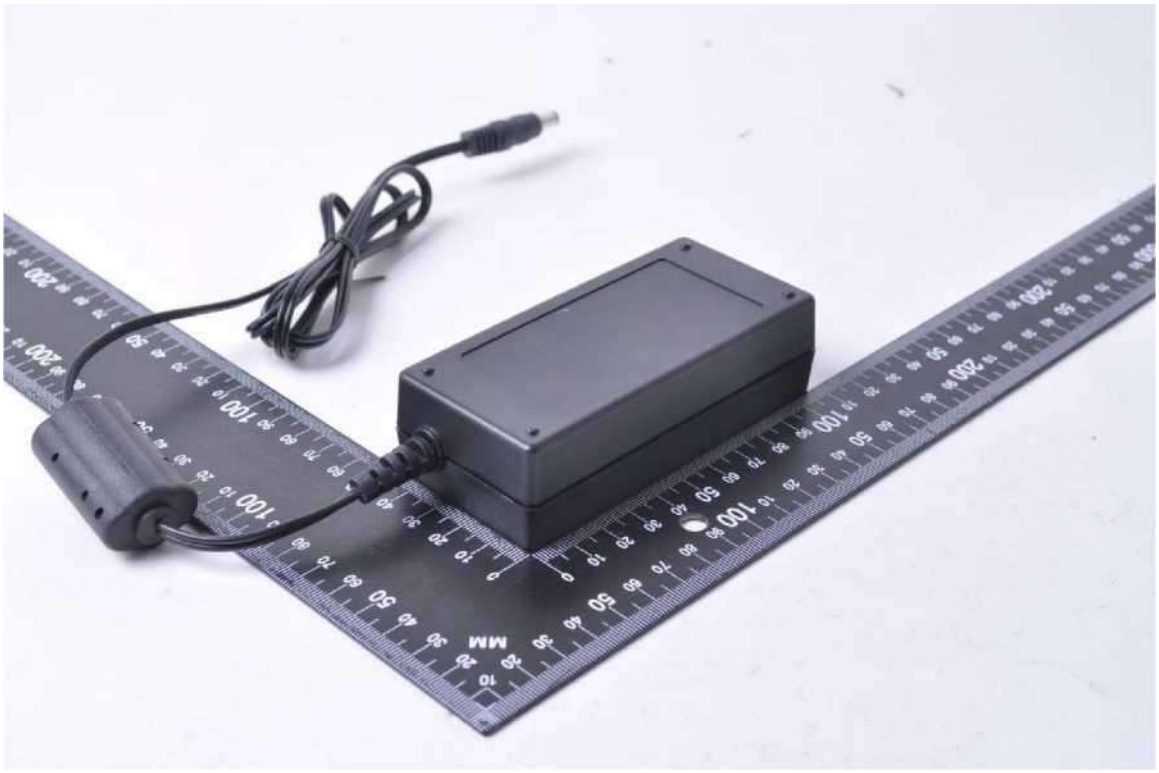
	with appendix 1 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance that is referenced in Clause G.7.1 as having equivalent or better electro-mechanical and safety properties.		
Annex G G.7.6.1	Add the following new NOTE 0A to end of this sub-clause. NOTE 0A The cross-sectional area of mains cords may comply with relevant Japanese wiring regulation if it complies with appendix 1 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance that is referenced in Clause G.7.1 as having equivalent or better electro-mechanical and safety properties.		N/A
Annex G G.8.3.3	Replace the first dotted paragraph in the first dashed paragraph with the following: • withstand 1,71 × 1.1 × U_0 for 5 s. Replace the NOTE 2 with the following. NOTE 2 For different power distribution systems, the temporary overvoltages are defined in Table B.3 of JIS C 5381-11 (TOV test parameters for Japanese systems)		N/A

Enclosure No. 2

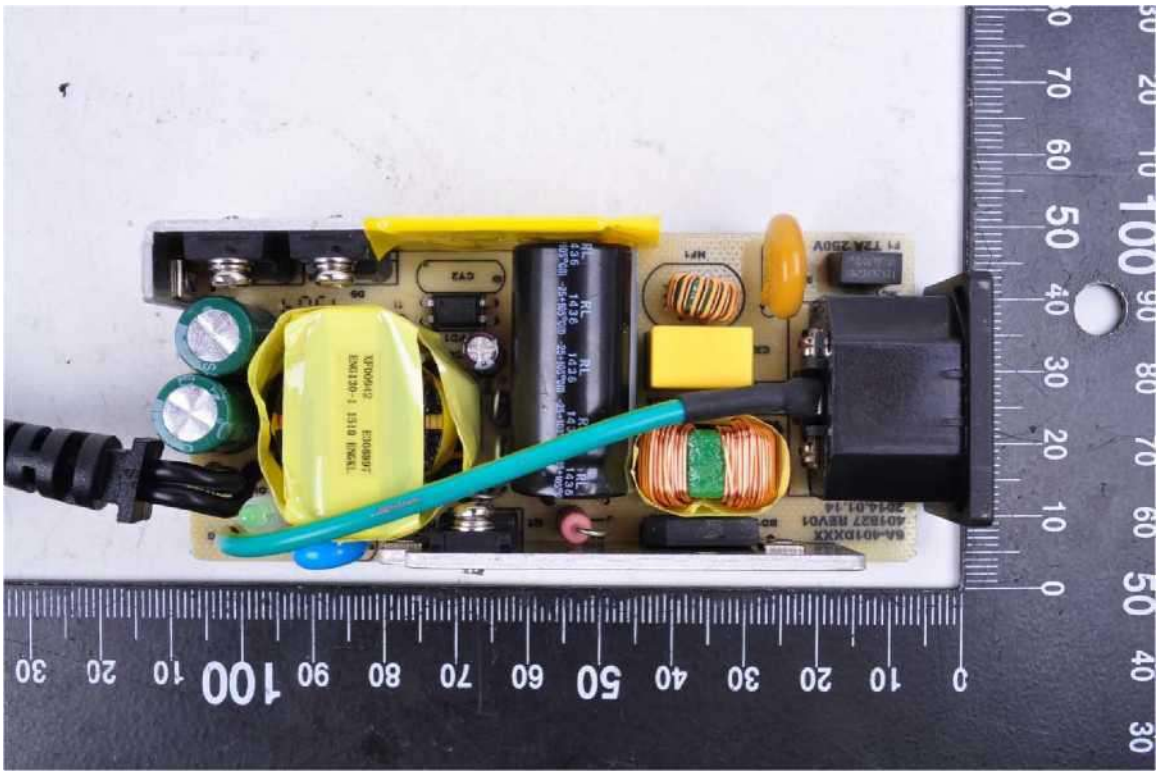
Pictures of the unit

(9 pages including this cover page)

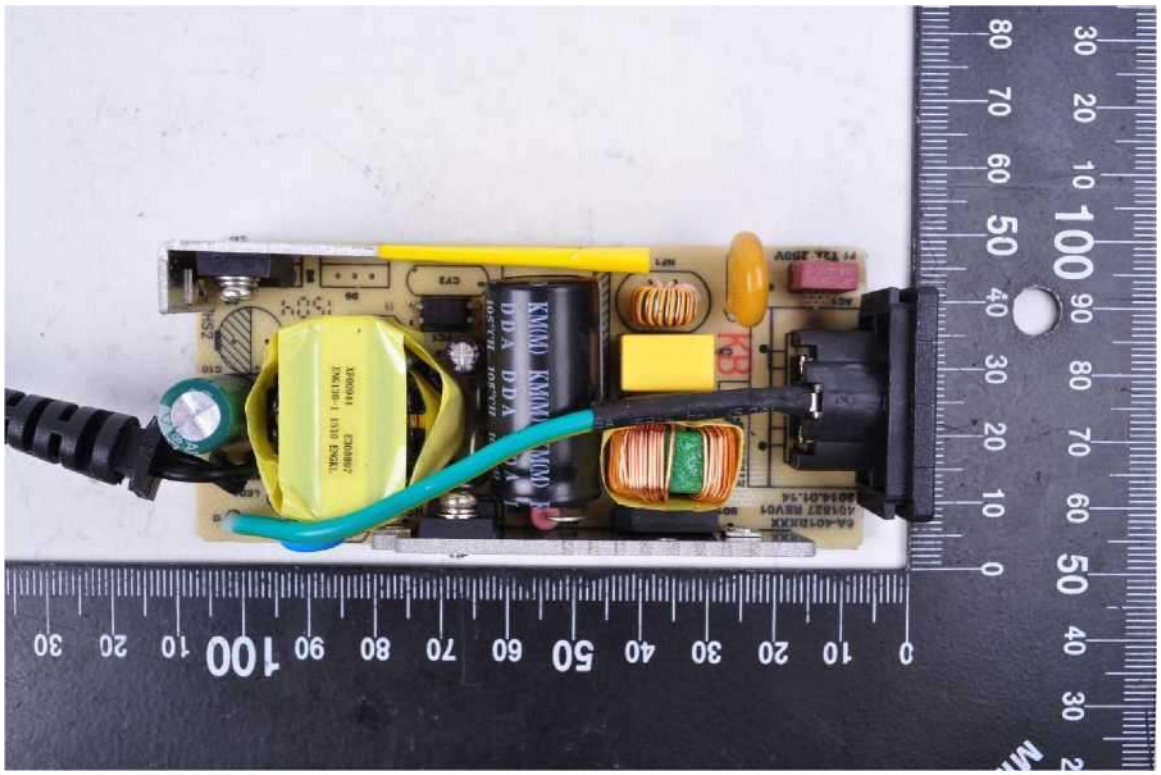
Class I units:



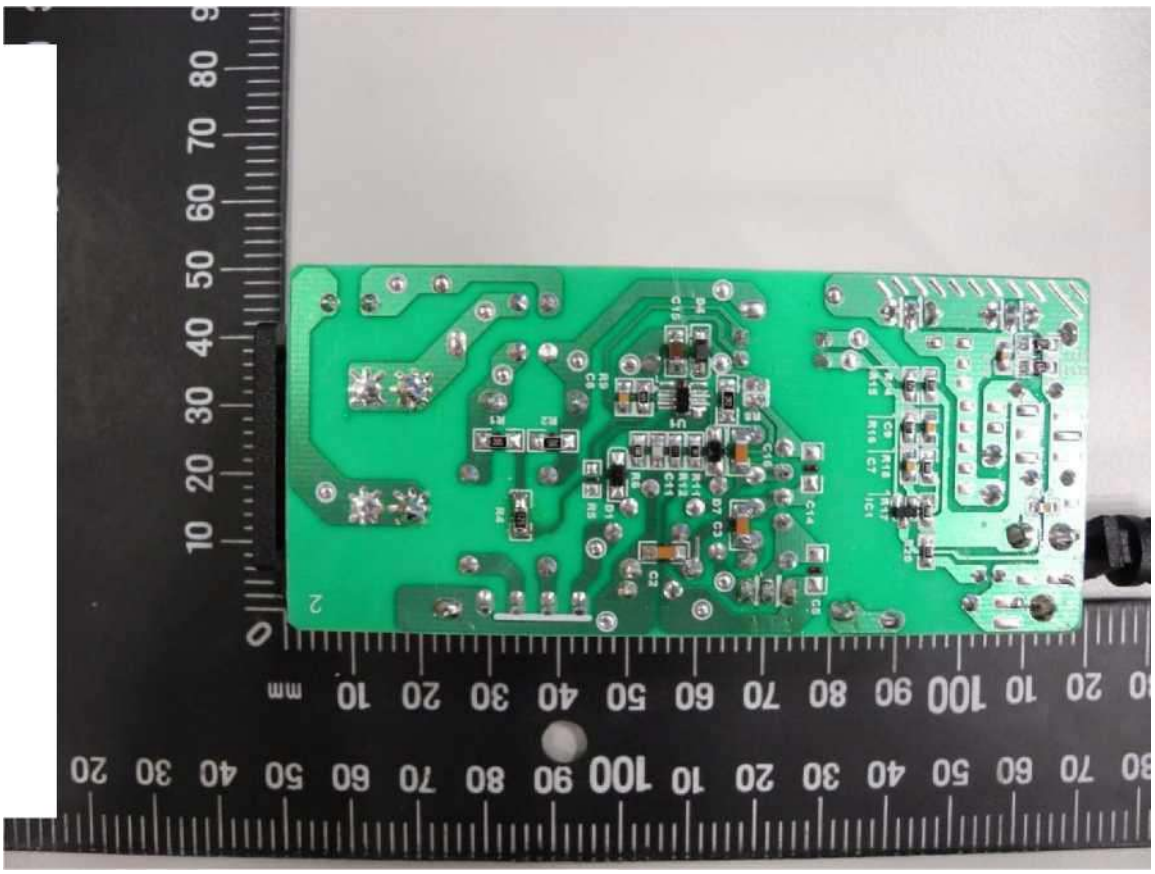
For C6 Inlet type



for C14 Inlet type (Earthing wire and output fixed by glue)

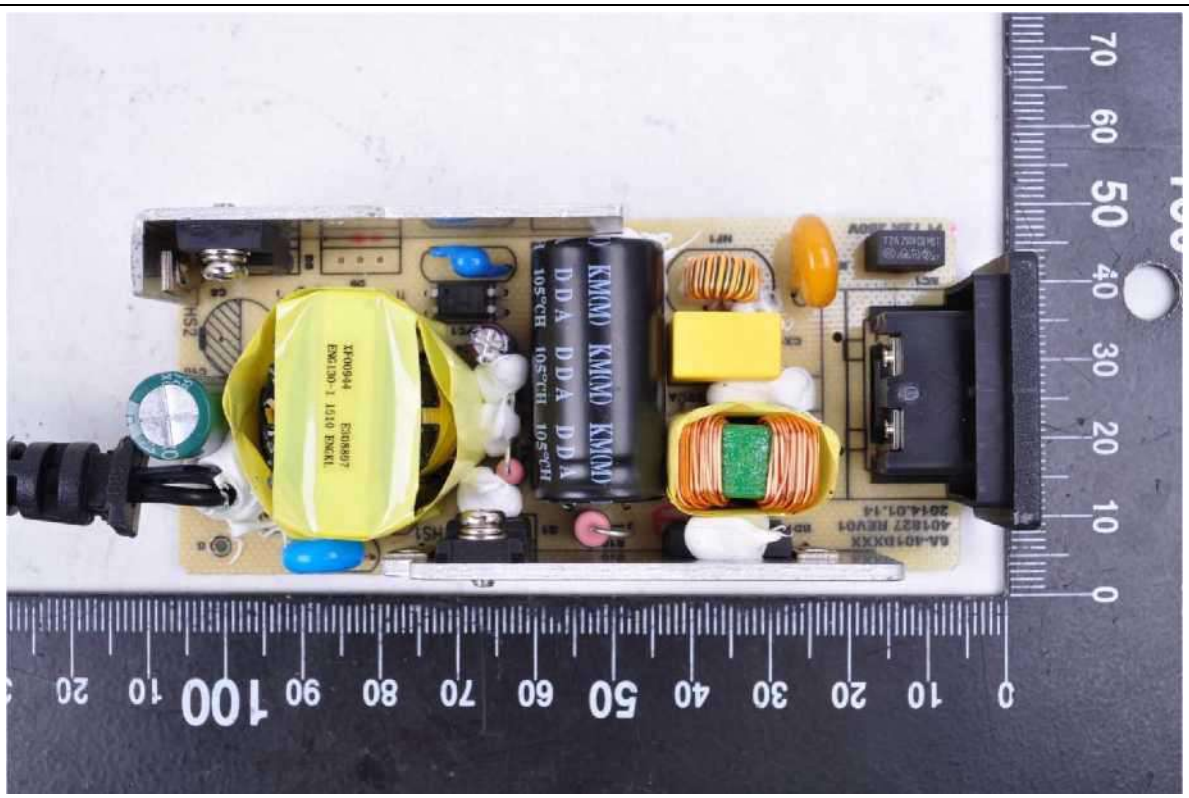


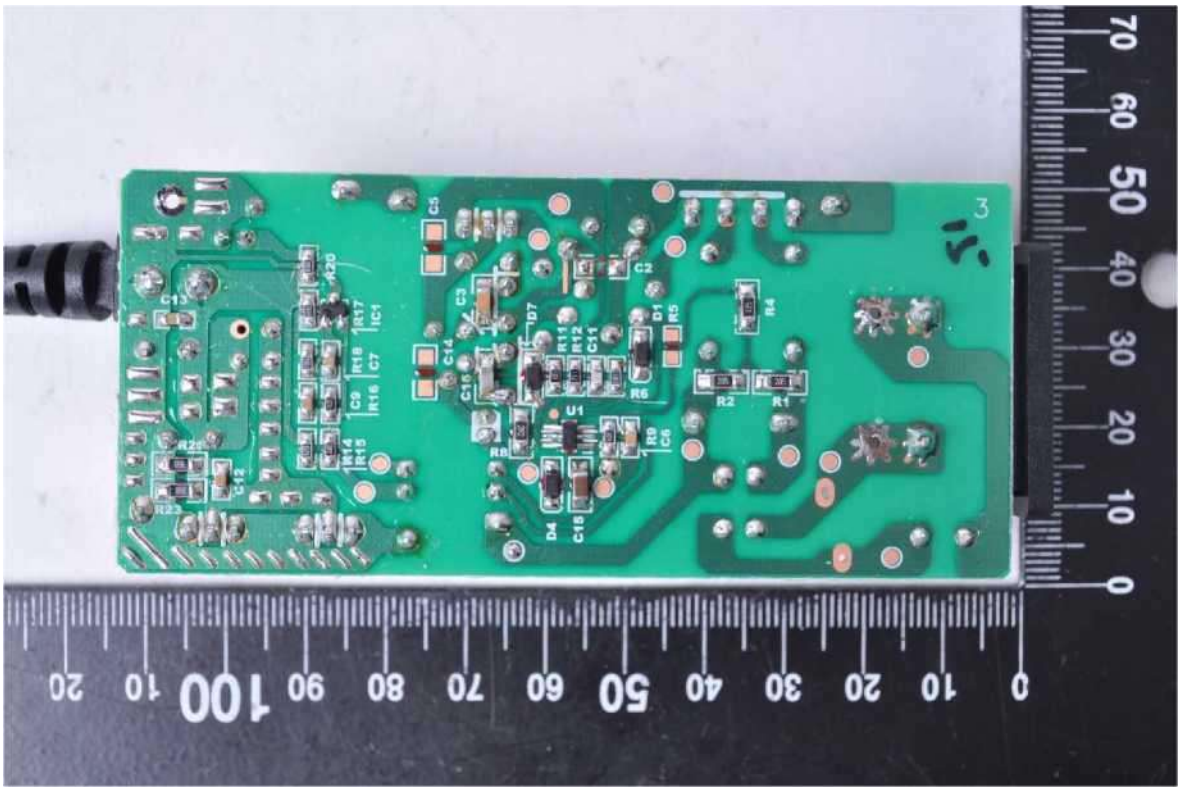
for C6 Inlet type (Earthing wire and output fixed by glue)



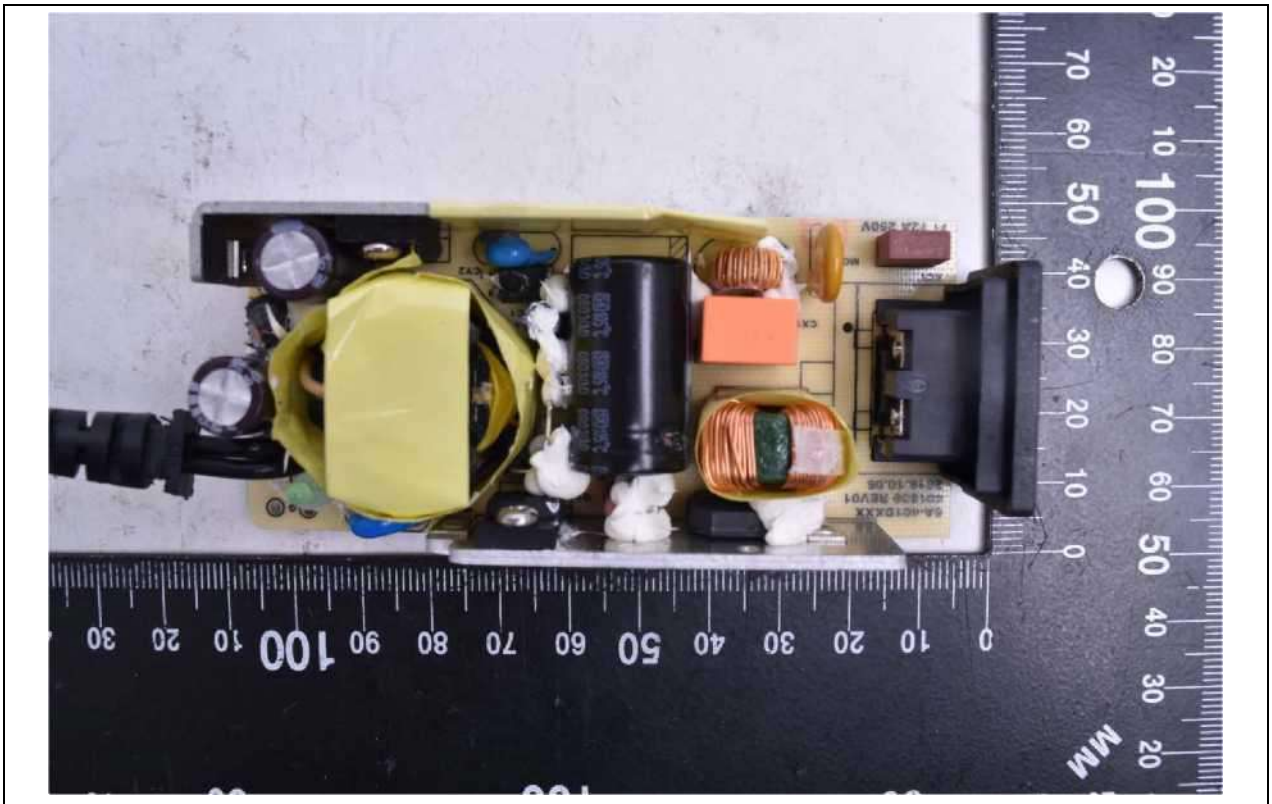
Class II units:

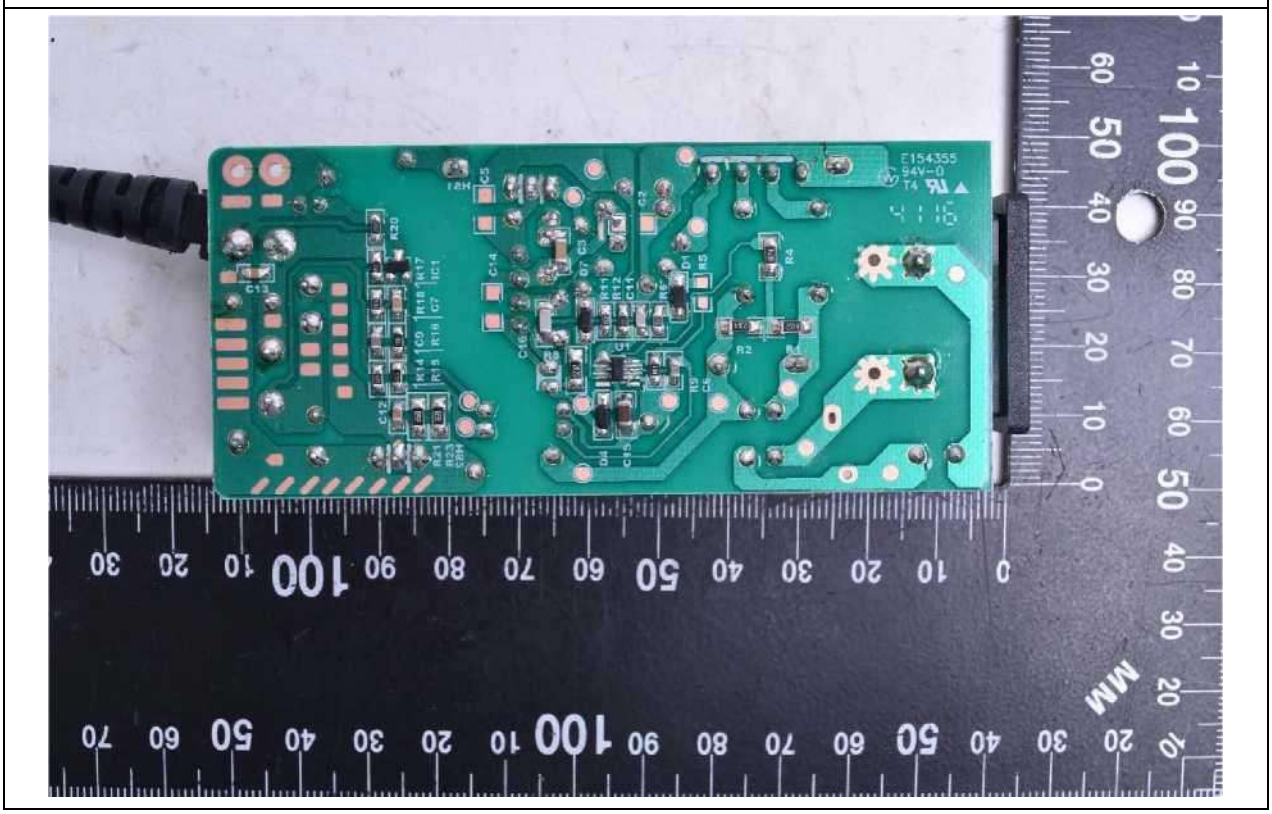
PCB Type A





PCB Type B





Enclosure No. 3

Technical documentation – schematics, layouts, transformer data (25 pages including this cover page)

SPECIFICATION

规格书

CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 13, 2015
PART NO.: 料 號	XF00928	DESIGN NO.: 編 號	FLX-589	SIZE: 規 格	RM10

Design Revision History

Rev.	Date	By	Description of Change

Notice of Deviation

Customer Request	Submitted Sample	Mass Production

Notice of Items That Shall Be Completed Before Mass Production

Description	L/T	Remark

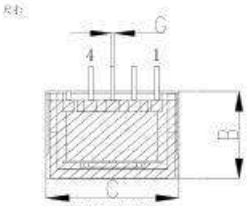
				TEXT/ 內容:				Sheet / 頁次
								第 3 頁，共 9 頁
				Drawing By 制圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	覃中順	覃中順	MXY	MXY	A0

SPECIFICATION

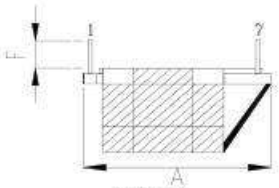
规格书

CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 13, 2015
PART NO.: 料 號	XF00928	DESIGN NO.: 編 號	FLX-589	SIZE: 規 格	RM10

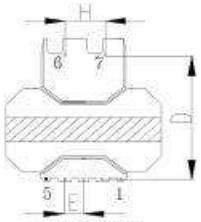
1.DIMENSION:



FRONT VIEW
(正視圖)

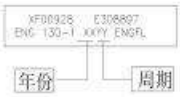


SIDE VIEW
(側視圖)



BOTTOM VIEW
(底視圖)

标签示意图



ITEM 項目	mm(公差) 公制單位
A	31.0MAX
B	21.5MAX
C	31.5MAX
D	26.6±0.5
E	3.0±0.5
F	3.5±0.5
G	0.8±0.1
H	5.0±0.5
I	
J	

NOTE: 1.骨架为RM10立式5+2PIN,PIN距3.0/5.0，排距26.6，骨架顶端朝机台顺时针绕线，成品PIN5剪掉2/3底于骨架档板，但不可剪断线，所有进出线加套管。
2.N2/N4为屏蔽，需背胶，两边反折2mm最小，焊引线加套管，焊点必须平整，光滑。
3.N3进线挂PIN7脚，出线从骨架顶部槽穿套管引出，在绕完N6后再折回PIN6挂线。
4.组装磁芯后在底部加一个胶套，再包9mm*3TS胶带固定，再含浸，烘烤。
5.成品在PIN6侧磁芯处贴一块14mm*25L的胶带，再沿线包包15mm*2TS胶带。
6.标签贴在产品顶部磁芯胶带上，字头朝PIN6-7侧，其中XXYY表示年份周期。
7.所有绕组绕线平整，膠帶圈数需包足。內外層膠帶在變壓器成型后不能有破損。

				TEXT/ 內容:				Sheet / 頁次
								第 4 頁，共 9 頁
				Drawing By 制圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	覃中順	覃中順	MXY	MXY	A0

SPECIFICATION

规格书

CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 13, 2015
PART NO.: 料 號	XF00928	DESIGN NO.: 編 號	FLX-589	SIZE: 規 格	RM10

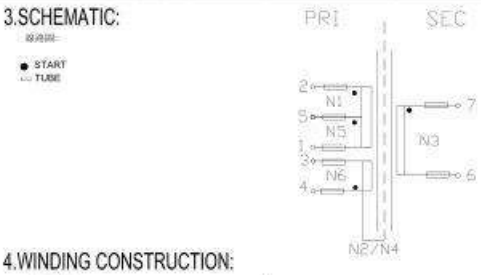
2.WINDING ORDER:

卷線順序:

WINDING	PIN		PIN		WIRE	WDG. TURNS	絕緣膠帶規格		難燃能套管 S	難燃能套管 F			TAPE 膠帶	REMARK
N1	2		5		0.30mm×2P	29Ts			#23	#23			2Ts	密繞
N2	4				0.25mm×7mmCu	0.9Ts			#28				2Ts	居中繞
N3	7		6		[illegible]	7Ts			#17	#17			2Ts	密繞
N4	4				0.25mm×7mmCu	0.9Ts			#28				2Ts	居中繞
N5	5		1		0.30mm×2P	20Ts			#23	#23			2Ts	密繞
N6	4		3		0.30mm×1P	9Ts			#26	#26			2Ts	居中密繞

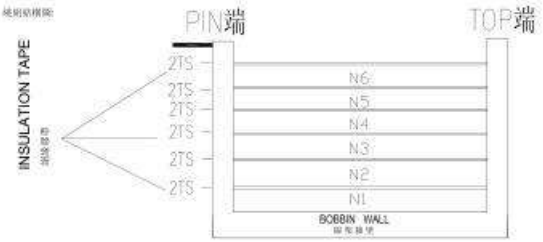
3.SCHEMATIC:

線路圖:



4.WINDING CONSTRUCTION:

繞組結構圖:



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								第 5 頁，共 9 頁
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No.	REVISION	SIGN	DATE	覃中順	覃中順	MXY	MXY	A0

SPECIFICATION 规格书					
CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 13, 2015
PART NO.: 料 號	XF00928	DESIGN NO.: 編 號	FLX-589	SIZE: 規 格	RM10

5.ELECTRICAL SPECIFICATION:

電器規格:

1. INDUCTANCE: (TEST AT @10KHz 0.25V)

電感: (測試條件 10KHz, 0.25V)

L(2-1): 1.23mH ±5%

漏感: (測試條件 10KHz, 0.25V)

L(2-1): 30uH MAX SHORT PIN3.4.6.7

电阻测试:

DCR(2-1):0.35Ω MAX

2. HI-POT:

耐電壓:

PRI TO SEC: AC3750V 5mA 2S

初级對次级的电压为 AC3750V 2S 漏電流为 5mA 最大范圍.

PRI/ SEC TO CORE: AC1250V 5mA 2S

初级次级對磁芯的电压为 AC1250V 2S 漏電流为 5mA 最大范圍.

3. INSULATION RESISTANCE:

絕緣電阻:

WINDING TO CORE 100MΩ MIN AT INPUT DC 500V

輸入 DC 500V 電壓時,初次級綫組和鐵心間絕緣電阻 100MΩ最小.

				TEXT/ 內容:				Sheet / 頁次
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				Drawing By 制圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	覃中順	覃中順	MXY	MXY	A0

SPECIFICATION
规格书

CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 13, 2015
PART NO.: 料 號	XF00928	DESIGN NO.: 編 號	FLX-589	SIZE: 規 格	RM10

6.MATERIAL LIST: 材料明細表

NO. 編號	SUB PART 使用零件	RAW MATERIAL 裸材料			
		MANUFACTURER 製造商	MATERIAL 類型	TEMP.RATING 溫度等級	UL NO UL 編號
a	WIRE 線	★JUNG SHING WIRE CO.LTD	UEW-4	130℃	E174837
			UEY-2		
		★PACIFIC ELECTRIC WIRE&CABLE CO.,LTD	UEWN/U	130℃	E201757
			UEWS/U		
b	CORE 鐵芯 RM10	★SHENZHEN CHINA MAGNETIC ELECTRONIC CO.,LTD	HC44		
		★SHENZHEN JLW ELECTRONIC CO.,LTD	JPP4		
c	BOBBIN 線架 RM10	★CHANG CHUN PLASTICS PRODUCTS CO. ,LTD	T375J	150℃	E59481
		★SUMITOMO BAKELITE	PM9820	150℃	E41429
d	VARNISH 凡立水	★ELANTAS ELECTRICAL INSULATION ELANTAS PDG INC	V1630FS		E75225
		★JOHN C.DOLPH CO.,LTD	BC-346A		E317427
e	INSULATION TAPE 絕緣膠帶	★3M COMPANY ELECTRICAL PRODUCTS DIV	1350F-(#)	130℃	E17385
			1350T-1		
		★BONDTEC PACIFIC CO.,LTD	370S	130℃	E175868
f	TRIPLE WIRE 三层绝缘线	★GREAT LEOFLON INDUSTRIAL CO LTD	TRW(B)		E211989
g	TUBE 套管	★GREAT HOLDING INDUSTRIAL CO.,LTD	TFL	600V 200℃	E156256
			TFS		
			TFT		
h	ABUMPER 胶套	★DONGGUAN YUAN YANG PLASTIC PRODUCTS CO. ,LTD	PLASTIC	130℃	E59481

				TEXT/ 內容:				Sheet / 頁次
								第 7 頁，共 9 頁
				Drawing By 制圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	覃中順	覃中順	MXY	MXY	A0

SPECIFICATION 规格书					
CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 13, 2015
PART NO.: 料 號	XF00928	DESIGN NO.: 編 號	FLX-589	SIZE: 規 格	RM10

7.TEST REPORT: 測試報告

TEM 項目	L (2-1)	L K(2-1)	DCR(1-2)	HI-POT PRI—SEC	HI-POT PRI—CORE	HI-POT SEC –CORE
UNIT 單位	mH	uH	Ω	V	V	V
SPECIFICATION 規格	1.23±5%	30 MAX	0.35 MAX	AC3750	AC1250	AC1250
CONDITION 條件	10KHz 0.25V	10KHz 0.25V		5mA 2S	5mA 5S	5mA 5S
1	1.21	12.1	0.27	OK	OK	OK
2	1.22	12.3	0.27	OK	OK	OK
3	1.22	12.1	0.27	OK	OK	OK
4	1.23	12.4	0.27	OK	OK	OK
5	1.25	12.5	0.27	OK	OK	OK
6						
7						
8						
9						
10						

TEM 項目	A	B	C	D	E	F	G	H	I	J
UNIT 單位	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
SPECIFICATION 規格	30.5	21.5	31.5	26.6	3.0	3.5	0.8	5.0		
CONDITION 條件	MAX	MAX	MAX	±0.5	± 0.5	± 0.5	± 0.1	± 0.5		
1	30.4	21.1	31.1	26.6	3.1	3.5	0.81	5.0		
2	30.4	21.1	31.2	26.6	3.1	3.4	0.81	5.0		
3	30.4	21.1	31.2	26.5	3.1	3.6	0.79	5.1		
4	30.4	21.2	31.2	26.5	3.0	3.5	0.8	5.1		
5	30.4	21.2	31.2	26.5	3.0	3.5	0.8	5.0		
6										
7										
8										
9										

				TEXT/ 內容:				Sheet / 頁次
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				Drawing By 制圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
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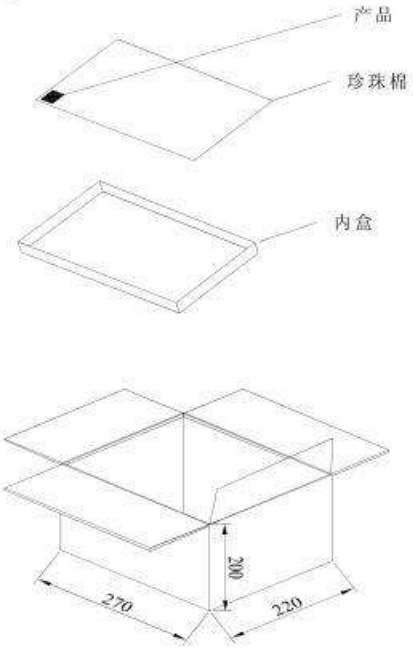
SPECIFICATION 规格书					
CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 13, 2015
PART NO.: 料 號	XF00928	DESIGN NO.: 編 號	FLX-589	SIZE: 規 格	RM10

8.PACKING:

1)产品储存条件:AT -20℃ TO 70℃,10%RH TO 90%RH

2)包装规格：产品统一方向插于珍珠海绵上，横向插 8PCS,竖向插 7PCS, 一盒 56PCS, 一箱放 5 层，一箱共 280PCS。

3)产品有效期:一年



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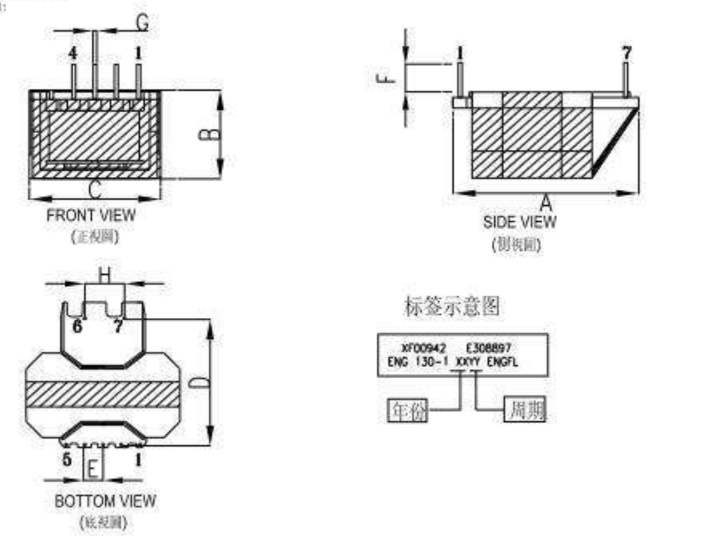
SPECIFICATION

规格书

CUSTOMER: 客戶		MODEL NO.: 型號	RM10 5+2PIN	DATE: 日期	May 22, 2015
PART NO.: 料號	XF00942	DESIGN NO.: 編號	FLX-618	SIZE: 規格	RM10

1.DIMENSION:



ITEM	
A	31.0MAX
B	21.5MAX
C	31.5MAX
D	26.6±0.5
E	3.0±0.5
F	3.5±0.5
G	0.8±0.1
H	5.0±0.5
I	
J	

NOTE:
1.骨架为RM10立式5+2PIN,PIN距3.0/5.0，排距26.6，骨架顶端朝机台顺时针绕线，成品PIN5剪掉2/3底于骨架档板，但不可剪断线，所有进出线加套管。
2.N2/N4为屏蔽，需背胶，两边反折2mm最小，焊引线加套管，焊点必须平整，光滑。
3.N3进线挂PIN7脚，出线从骨架顶部槽穿套管引出，在绕完N6后再折回PIN6挂线.
4.组装磁芯后底部加一个胶套，在PIN6侧面磁芯处贴一块14mm*25L胶带，再包9mm*3TS胶带固定，再含浸，烘烤，成品沿线包包15mm*2TS胶带
5.标签贴在产品顶部磁芯胶带上，字头朝PIN6-7侧，其中XXYY表示年份周期.
6.所有繞組繞線平整，膠帶圈數需包足。內外層膠帶在變壓器成型后不能有破損。

				TEXT/ 內容:				Sheet / 頁次
								第 4 頁，共 9 頁
				Drawing By 制圖	Designed By 設計	Reviewed By 審查	Approved By 核準	Revision 版本號
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SPECIFICATION

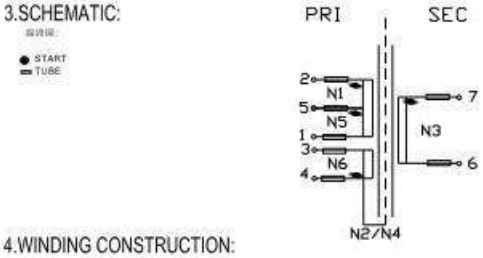
规格书

CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 22, 2015
PART NO.: 料 號	XF00942	DESIGN NO.: 編 號	FLX-618	SIZE: 規 格	RM10

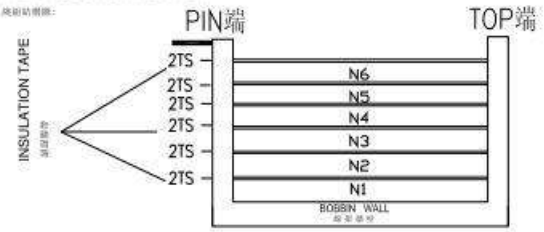
2.WINDING ORDER:

WINDING	START PIN	START	END PIN	END	WIRE	WDG. TURNS	絕緣膠帶規格		識氣能套管 S	識氣能套管 F			TAPE 膠帶	REMARK
N1	2		5		0.30mm×2P	29Ts			#23	#23			2Ts	
N2	4				0.25mm×7mmCU	0.9Ts			#28				2Ts	
N3	7		6		[illegible]	7Ts			#17	#17			2Ts	
N4	4				0.25mm×7mmCU	0.9Ts			#28				2Ts	
N5	5		1		0.30mm×2P	20Ts			#23	#23			2Ts	
N6	4		3		0.30mm×1P	7Ts			#26	#26			2Ts	

3.SCHEMATIC:



4.WINDING CONSTRUCTION:



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No.	REVISION	SIGN	DATE	章中順	章中順	MXY	MXY	A0

SPECIFICATION 规格书					
CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 22, 2015
PART NO.: 料 號	XF00942	DESIGN NO.: 編 號	FLX-618	SIZE: 規 格	RM10

5.ELECTRICAL SPECIFICATION:

電器規格:

1. INDUCTANCE: (TEST AT @10KHz 0.25V)

電感: (測試條件 10KHz, 0.25V)

L(2-1): 1.19mH ±5%

漏感: (測試條件 10KHz, 0.25V)

L(2-1): 30uH MAX SHORT PIN3.4.6.7

电阻测试:

DCR(2-1):0.35Ω MAX

2. HI-POT:

耐電壓:

PRI TO SEC: AC3750V 5mA 2S

初級對次級的电压爲 AC3750V 2S 漏電流爲 5mA 最大范圍.

PRI/ SEC TO CORE: AC1250V 5mA 2S

初級次級對磁芯的电压爲 AC1250V 2S 漏電流爲 5mA 最大范圍.

3. INSULATION RESISTANCE:

絕緣電阻:

WINDING TO CORE 100MΩ MIN AT INPUT DC 500V

輸入 DC 500V 電壓時,初次級綫組和鐵心間絕緣電阻 100MΩ最小.

				TEXT/ 內容:				Sheet / 頁次
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				Drawing By 制 圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	覃中順	覃中順	MXY	MXY	A0

SPECIFICATION 规格书					
CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 22, 2015
PART NO.: 料 號	XF00942	DESIGN NO.: 編 號	FLX-618	SIZE: 規 格	RM10

6.MATERIAL LIST: 材料明細表

NO. 編號	SUB PART 使用零件	RAW MATERIAL 裸材料			
		MANUFACTURER 製造商	MATERIAL 類型	TEMP.RATING 溫度等級	UL NO. UL 編號
a	WIRE 線	★JUNG SHING WIRE CO.LTD	UEW-4	130℃	E174837
			UEY-2		
		★PACIFIC ELECTRIC WIRE&CABLE CO.,LTD	UEWN/U	130℃	E201757
			UEWS/U		
b	CORE 鐵芯 RM10	★SHENZHEN CHINA MAGNETIC ELECTRONIC CO.,LTD	HC44		
		★SHENZHEN JLW ELECTRONIC CO.,LTD	JPP4		
c	BOBBIN 線架 RM10	★CHANG CHUN PLASTICS PRODUCTS CO. ,LTD	T375J	150℃	E59481
		★SUMITOMO BAKELITE	PM9820	150℃	E41429
d	VARNISH 凡立水	★ELANTAS ELECTRICAL INSULATION ELANTAS PDG INC	V1630FS		E75225
		★JOHN C.DOLPH CO.,LTD	BC-346A		E317427
e	INSULATION TAPE 絕緣膠帶	★3M COMPANY ELECTRICAL PRODUCTS DIV	1350F-(#)	130℃	E17385
			1350T-1		
		★BONDTEC PACIFIC CO.,LTD	370S	130℃	E175868
f	TRIPLE WIRE 三层绝缘线	★GREAT LEOFLON INDUSTRIAL CO. LTD	TRW(B)		E211989
g	TUBE 套管	★GREAT HOLDING INDUSTRIAL CO.,LTD	TFL	600V 200℃	E156256
			TFS		
			TFT		
h	ABUMPER 胶套	★DONGGUAN YUAN YANG PLASTIC PRODUCTS CO.,LTD	PLASTIC	130℃	E59481

				TEXT/ 內容:				Sheet / 頁次
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				Drawing By 制圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	章中順	章中順	MXY	MXY	A0

SPECIFICATION

规格书

CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 22, 2015
PART NO.: 料 號	XF00942	DESIGN NO.: 編 號	FLX-618	SIZE: 規 格	RM10

7.TEST REPORT: 測試報告

TEM 項目	L (2-1)	L K(2-1)	DCR(1-2)	HI-POT PRI—SEC	HI-POT PRI—CORE	HI-POT SEC –CORE
UNIT 單位	mH	uH	Ω	V	V	V
SPECIFICATION 規格	1.19±5%	30 MAX	0.35 MAX	AC3750	AC1250	AC1250
CONDITION 條件	10KHz 0.25V	10KHz 0.25V		5mA 2S	5mA 5S	5mA 5S
1	1.18	12.5	0.27	OK	OK	OK
2	1.17	12.4	0.27	OK	OK	OK
3	1.15	12.6	0.27	OK	OK	OK
4	1.16	11.9	0.27	OK	OK	OK
5	1.20	11.8	0.27	OK	OK	OK
6						
7						
8						
9						
10						

TEM 項目	A	B	C	D	E	F	G	H	I	J
UNIT 單位	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
SPECIFICATION 規格	31.0	21.5	31.5	26.6	3.0	3.5	0.8	5.0		
CONDITION 條件	MAX	MAX	MAX	±0.5	± 0.5	± 0.5	± 0.1	± 0.5		
1	30.7	21.1	31.1	26.6	3.1	3.5	0.81	5.0		
2	30.7	21.1	31.2	26.6	3.1	3.4	0.81	5.0		
3	30.6	21.1	31.2	26.5	3.1	3.6	0.79	5.1		
4	30.7	21.2	31.2	26.5	3.0	3.5	0.8	5.1		
5	30.7	21.2	31.2	26.5	3.0	3.5	0.8	5.0		
6										
7										
8										
9										

				TEXT/ 內容:				Sheet / 頁次
								第 8 頁，共 9 頁
				Drawing By 制 圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
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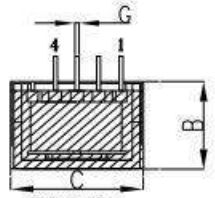
SPECIFICATION

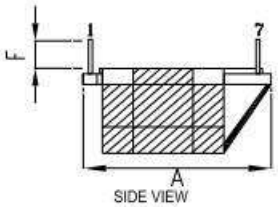
规格书

CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 20, 2015
PART NO.: 料 號	XF00943	DESIGN NO.: 編 號	FLX-617	SIZE: 規 格	RM10

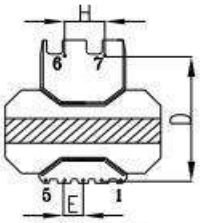
1.DIMENSION:



FRONT VIEW
(正視圖)

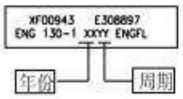


SIDE VIEW
(側視圖)



BOTTOM VIEW
(底視圖)

标签示意图



mm	inch
A	31.0MAX
B	21.5MAX
C	31.5MAX
D	26.6±0.5
E	3.0±0.5
F	3.5±0.5
G	0.8±0.1
H	5.0±0.5
I	
J	

NOTE: 1.骨架为RM10立式5+2PIN,PIN距3.0/5.0，排距26.6，骨架顶端朝机台顺时针绕线，成品PIN5剪掉2/3底于骨架档板，但不可剪断线，所有进出线加套管。
2. N2/N4为屏蔽，需背胶，两边反折2mm最小，焊引线加套管，焊点必须平整，光滑。
3.N3进线挂PIN7脚，出线从骨架顶部槽穿套管引出，在绕完N6后再折回PIN6挂线.
4.组装磁芯后底部加一个胶套，在PIN6侧面磁芯处贴一块14mm*25L胶带，再包9mm*3TS胶带固定，再含浸，烘烤，成品沿线包包15mm*2TS胶带
5.标签贴在产品顶部磁芯胶带上，字头朝PIN6－7侧，其中XXYY表示年份周期.
6.所有绕组绕线平整，膠帶圈數需包足。內外層膠帶在變壓器成型后不能有破損。

				TEXT/ 內容:				Sheet / 頁次
								第 4 頁，共 9 頁
				Drawing By 制圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	章中顺	章中顺	MXY	MXY	A0

SPECIFICATION

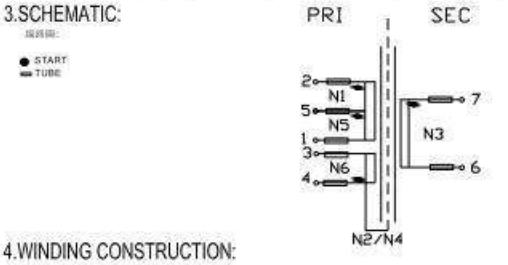
规格书

CUSTOMER: 客戶		MODEL NO.: 型號	RM10 5+2PIN	DATE: 日期	May 20, 2015
PART NO.: 料號	XF00943	DESIGN NO.: 編號	FLX-617	SIZE: 規格	RM10

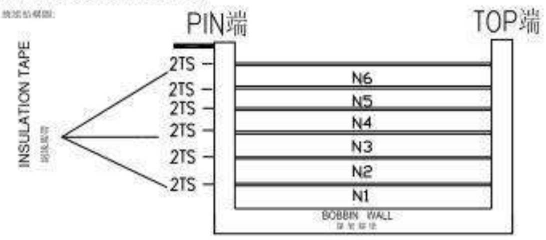
2.WINDING ORDER:

WINDING	PIN		PIN		WIRE 1UEW	WDG. TURNS			S	F			TAPE 膠帶	REMARK
N1	2		5		0.30mm*2P	29Ts			#23	#23			2Ts	密繞
N2	4			0.25mm*7mmCU		0.9Ts			#28				2Ts	居中繞
N3	7		6		[illegible]	8Ts			#17	#17			2Ts	密繞
N4	4			0.25mm*7mmCU		0.9Ts			#28				2Ts	居中繞
N5	5		1		0.30mm*2P	20Ts			#23	#23			2Ts	密繞
N6	4		3		0.30mm*1P	6Ts			#26	#26			2Ts	居中密繞

3.SCHEMATIC:



4.WINDING CONSTRUCTION:



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No.	REVISION	SIGN	DATE	覃中順	覃中順	MXY	MXY	A0

SPECIFICATION 规格书					
CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 20, 2015
PART NO.: 料 號	XF00943	DESIGN NO.: 編 號	FLX-617	SIZE: 規 格	RM10

5.ELECTRICAL SPECIFICATION:

電器規格:

1. INDUCTANCE: (TEST AT @10KHz 0.25V)

電感: (測試條件 10KHz, 0.25V)

L(2-1): 1.24mH ±5%

漏感: (測試條件 10KHz, 0.25V)

L(2-1): 30uH MAX SHORT PIN3.4.6.7

电阻测试:

DCR(2-1):0.35Ω MAX

2. HI-POT:

耐電壓:

PRI TO SEC: AC3750V 5mA 2S

初級對次級的电压为 AC3750V 2S 漏電流为 5mA 最大范圍.

PRI/ SEC TO CORE: AC1250V 5mA 2S

初级次级对磁芯的电压为 AC1250V 2S 漏電流为 5mA 最大范圍.

3. INSULATION RESISTANCE:

絕緣電阻:

WINDING TO CORE 100MΩ MIN AT INPUT DC 500V

輸入 DC 500V 電壓時,初次級繞組和鐵心間絕緣電阻 100MΩ最小.

				TEXT/ 內容:				Sheet / 頁次
								第 6 頁，共 9 頁
				Drawing By 制圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	章中顺	章中顺	MXY	MXY	A0

SPECIFICATION
规格书

CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 20, 2015
PART NO.: 料 號	XF00943	DESIGN NO.: 編 號	FLX-617	SIZE: 規 格	RM10

6.MATERIAL LIST: 材料明細表

NO. 編號	SUB PART 使用零件	RAW MATERIAL 裸材料			
		MANUFACTURER 製造商	MATERIAL 類型	TEMP.RATING 溫度等級	UL NO UL 編號
a	WIRE 線	★JUNG SHING WIRE CO.LTO	UEW-4	130℃	E174837
			UEY-2		
		★PACIFIC ELECTRIC WIRE&CABLE CO.,LTD	UEWN/U	130℃	E201757
			UEWS/U		
b	CORE 鐵芯 RM10	★SHENZHEN CHINA MAGNETIC ELECTRONIC CO.,LTD	HC44		
		★SHENZHEN JLW ELECTRONIC CO.,LTD	JP4		
c	BOBBIN 線架 RM10	★CHANG CHUN PLASTICS PRODUCTS CO. ,LTD	T375J	150℃	E59481
		★SUMITOMO BAKELITE	PM9820	150℃	E41429
d	VARNISH 凡立水	★ELANTAS ELECTRICAL INSULATION ELANTAS PDG INC	V1630FS		E75225
		★JOHN C.DOLPH CO.,LTD	BC-346A		E317427
e	INSULATION TAPE 絕緣膠帶	★3M COMPANY ELECTRICAL PRODUCTS DIV	1350F-(0)	130℃	E17385
			1350T-1		
		★BONDTEC PACIFIC CO.,LTD	370S	130℃	E175868
f	TRIPLE WIRE 三层绝缘线	★GREAT LEOFLON INDUSTRIAL CO LTD	TRW(B)		E211989
g	TUBE 套管	★GREAT HOLDING INDUSTRIAL CO.,LTD	TFL	600V 200℃	E156256
			TFS		
			TFT		
h	ABUMPER 胶套	★DONGGUAN YUAN YANG PLASTIC PRODUCTS CO. ,LTD	PLASTIC	130℃	E59481

				TEXT/ 內容:				Sheet / 頁次
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				Drawing By 制 圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	覃中順	覃中順	MXY	MXY	A0

SPECIFICATION

規格书

CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 20, 2015
PART NO.: 料 號	XF00943	DESIGN NO.: 編 號	FLX-617	SIZE: 規 格	RM10

7.TEST REPORT: 測試報告

TEM 項目	L (2-1)	L K(2-1)	DCR(1-2)	HI-POT PRI—SEC	HI-POT PRI—CORE	HI-POT SEC -CORE
UNIT 單位	mH	uH	Ω	V	V	V
SPECIFICATION 規格	1.24±5%	30 MAX	0.35 MAX	AC3750	AC1250	AC1250
CONDITION 條件	10KHz 0.25V	10KHz 0.25V		5mA 2S	5mA 5S	5mA 5S
1	1.21	12.1	0.27	OK	OK	OK
2	1.22	12.3	0.27	OK	OK	OK
3	1.22	12.1	0.27	OK	OK	OK
4	1.23	12.4	0.27	OK	OK	OK
5	1.25	12.5	0.27	OK	OK	OK
6						
7						
8						
9						
10						

TEM 項目	A	B	C	D	E	F	G	H	I	J
UNIT 單位	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
SPECIFICATION 規格	31.0	21.5	31.5	26.6	3.0	3.5	0.8	5.0		
CONDITION 條件	MAX	MAX	MAX	±0.5	± 0.5	± 0.5	± 0.1	± 0.5		
1	30.7	21.1	31.1	26.6	3.1	3.5	0.81	5.0		
2	30.7	21.1	31.2	26.6	3.1	3.4	0.81	5.0		
3	30.6	21.1	31.2	26.5	3.1	3.6	0.79	5.1		
4	30.7	21.2	31.2	26.5	3.0	3.5	0.8	5.1		
5	30.7	21.2	31.2	26.5	3.0	3.5	0.8	5.0		
6										
7										
8										
9										

				TEXT/ 內容:				Sheet / 頁次
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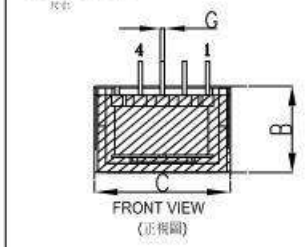
				Drawing By 制圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	章中順	章中順	MXY	MXY	A0

SPECIFICATION

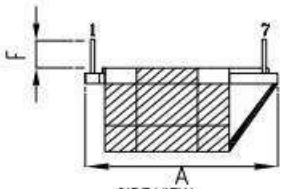
规格书

CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 22, 2015
PART NO.: 料 號	XF00944	DESIGN NO.: 編 號	FLX-619	SIZE: 規 格	RM10

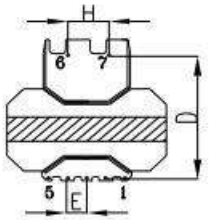
1.DIMENSION:



FRONT VIEW
(正視圖)

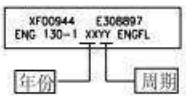


SIDE VIEW
(側視圖)



BOTTOM VIEW
(底視圖)

标签示意图



A	31.0MAX
B	21.5MAX
C	31.5MAX
D	26.6±0.5
E	3.0±0.5
F	3.5±0.5
G	0.8±0.1
H	5.0±0.5
I	
J	

NOTE:
1.骨架为RM10立式5+2PIN,PIN距3.0/5.0，排距26.6，骨架顶端朝机台顺时针绕线，成品PIN5剪掉2/3底子骨架档板，但不可剪断线，所有进出线加套管。
2.N2/N4为屏蔽，需剪胶，两边反折2mm最小，焊引线加套管，焊点必须平整，光滑。
3.N3进线挂PIN7脚，出线从骨架顶部槽穿套管引出，在绕完N6后再折回PIN6挂线.
4.组装磁芯后底部加一个胶套，在PIN6侧面磁芯处贴一块14mm*25L胶带，再包9mm*3TS胶带固定，再含浸，烘烤，成品沿线包包15mm*2TS胶带
5.标签贴在产品顶部磁芯胶带上，字头朝PIN6－7侧，其中XXYY表示年份周期.
6.所有绕组绕线平整，膠帶圈數需包足，內外層膠帶在變壓器成型后不能有破損。

				TEXT/ 內容:				Sheet / 頁次
								第 4 頁，共 9 頁
				Drawing By 制 圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	覃中順	覃中順	MXY	MXY	A0

SPECIFICATION

规格书

CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 22, 2015
PART NO.: 料 號	XF00944	DESIGN NO.: 編 號	FLX-619	SIZE: 規 格	RM10

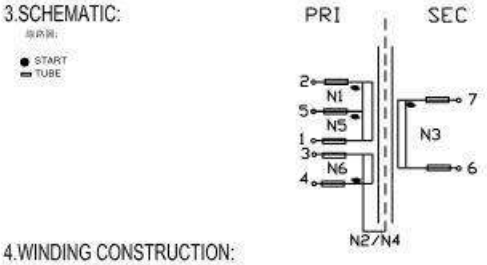
2.WINDING ORDER:

繞線順序:

WINDING	PIN		PIN		WIRE	WDG. TURNS			鐵氟龍套管 S	鐵氟龍套管 F			TAPE 膠帶	REMARK
N1	2		5		0.30mm×2P	29Ts			#23	#23			2Ts	
N2	4				0.25mm×7mmCU	0.9Ts			#28				2Ts	
N3	7		6			9Ts			#17	#17			2Ts	
N4	4				0.25mm×7mmCU	0.9Ts			#28				2Ts	
N5	5		1		0.30mm×2P	20Ts			#23	#23			2Ts	
N6	4		3		0.30mm×1P	6Ts			#26	#26			2Ts	

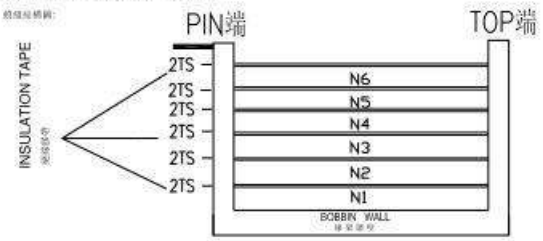
3.SCHEMATIC:

繞線圖:



4.WINDING CONSTRUCTION:

繞線結構圖:



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No.	REVISION	SIGN	DATE	章中順	章中順	MXY	MXY	A0

SPECIFICATION 规格书					
CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 22, 2015
PART NO.: 料 號	XF00944	DESIGN NO.: 編 號	FLX-619	SIZE: 規 格	RM10

5.ELECTRICAL SPECIFICATION:

電器規格:

1. INDUCTANCE: (TEST AT @10KHz 0.25V)

電感: (測試條件 10KHz, 0.25V)

L(2-1): 1.25mH ±5%

漏感: (測試條件 10KHz, 0.25V)

L(2-1): 30uH MAX SHORT PIN3.4.6.7

电阻测试:

DCR(2-1):0.35Ω MAX

2. HI-POT:

耐電壓:

PRI TO SEC: AC3750V 5mA 2S

初級對次級的电压为 AC3750V 2S 漏電流爲 5mA 最大范圍.

PRI/ SEC TO CORE: AC1250V 5mA 2S

初級次級對磁芯的电压为 AC1250V 2S 漏電流爲 5mA 最大范圍.

3. INSULATION RESISTANCE:

絕緣電阻:

WINDING TO CORE 100MΩ MIN AT INPUT DC 500V

輸入 DC 500V 電壓時,初次級綫組和鐵心間絕緣電阻 100MΩ最小.

				TEXT/ 內容:				Sheet / 頁次
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				Drawing By 制 圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	覃中順	覃中順	MXY	MXY	A0

SPECIFICATION
規格书

CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 22, 2015
PART NO.: 料 號	XF00944	DESIGN NO.: 編 號	FLX-619	SIZE: 規 格	RM10

6.MATERIAL LIST: 材料明細表

NO. 編號	SUB PART 使用零件	RAW MATERIAL 裸材料			
		MANUFACTURER 製造商	MATERIAL 類型	TEMP.RATING 溫度等級	UL NO UL 編號
a	WIRE 線	★JUNG SHING WIRE CO.LTD	UEW-4	130℃	E174837
			UEY-2		
		★PACIFIC ELECTRIC WIRE&CABLE CO.,LTD	UEWN/U	130℃	E201757
			UEWS/U		
b	CORE 鐵芯 RM10	★SHENZHEN CHINA MAGNETIC ELECTRONIC CO.,LTD	HC44		
		★SHENZHEN JLW ELECTRONIC CO.,LTD	JPP4		
c	BOBBIN 線架 RM10	★CHANG CHUN PLASTICS PRODUCTS CO.,LTD	T375J	150℃	E59481
		★SUMITOMO BAKELITE	PM9820	150℃	E41429
d	VARNISH 凡立水	★ELANTAS ELECTRICAL INSULATION ELANTAS PDG INC	V1630FS		E75225
		★JOHN C.DOLPH CO.,LTD	BC-346A		E317427
e	INSULATION TAPE 絕緣膠帶	★3M COMPANY ELECTRICAL PRODUCTS DIV	1350F-(#)	130℃	E17385
			1350T-1		
		★BONDTEC PACIFIC CO.,LTD	370S	130℃	E175868
f	TRIPLE WIRE 三层绝缘线	★GREAT LEOFLON INDUSTRIAL CO LTD	TRW(B)		E211989
g	TUBE 套管	★GREAT HOLDING INDUSTRIAL CO.,LTD	TFL	600V 200℃	E156256
			TFS		
			TFT		
h	ABUMPER 胶套	★DONGGUAN YUAN YANG PLASTIC PRODUCTS CO.,LTD	PLASTIC	130℃	E59481

請改為PC44相當品
942/943一起改

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								第 7 頁，共 9 頁
				Drawing By 制圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	章中順	章中順	MXY	MXY	A0

SPECIFICATION 規格书					
CUSTOMER: 客 戶		MODEL NO.: 型 號	RM10 5+2PIN	DATE: 日 期	May 22, 2015
PART NO.: 料 號	XF00944	DESIGN NO.: 編 號	FLX-619	SIZE: 規 格	RM10

7.TEST REPORT: 測試報告

TEM 項目	L (2-1)	L K(2-1)	DCR(1-2)	HI-POT PRI—SEC	HI-POT PRI—CORE	HI-POT SEC -CORE
UNIT 單位	mH	uH	Ω	V	V	V
SPECIFICATION 規格	1.25±5%	30 MAX	0.35 MAX	AC3750	AC1250	AC1250
CONDITION 條件	10KHz 0.25V	10KHz 0.25V		5mA 2S	5mA 5S	5mA 5S
1	1.23	12.6	0.27	OK	OK	OK
2	1.26	12.3	0.27	OK	OK	OK
3	1.27	12.7	0.27	OK	OK	OK
4	1.28	12.8	0.27	OK	OK	OK
5	1.25	12.9	0.27	OK	OK	OK
6						
7						
8						
9						
10						

TEM 項目	A	B	C	D	E	F	G	H	I	J
UNIT 單位	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
SPECIFICATION 規格	31.0	21.5	31.5	26.6	3.0	3.5	0.8	5.0		
CONDITION 條件	MAX	MAX	MAX	±0.5	± 0.5	± 0.5	± 0.1	± 0.5		
1	30.7	21.1	31.1	26.6	3.1	3.5	0.81	5.0		
2	30.7	21.1	31.2	26.6	3.1	3.4	0.81	5.0		
3	30.6	21.1	31.2	26.5	3.1	3.6	0.79	5.1		
4	30.7	21.2	31.2	26.5	3.0	3.5	0.8	5.1		
5	30.7	21.2	31.2	26.5	3.0	3.5	0.8	5.0		
6										
7										
8										
9										

				TEXT/ 內容:				Sheet / 頁次
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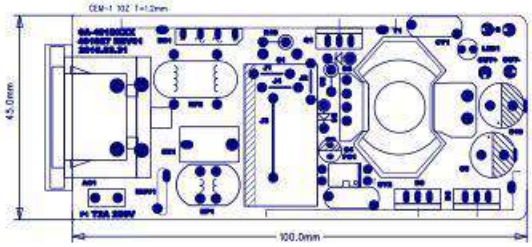
				Drawing By 制 圖	Designed By 設 計	Reviewed By 審 查	Approved By 核 準	Revision 版本號
No.	REVISION	SIGN	DATE	章中順	章中順	MXY	MXY	A0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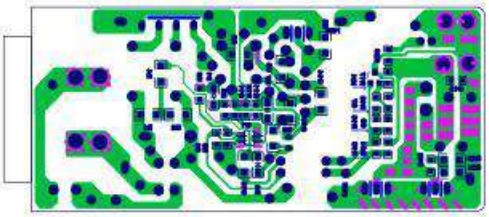
100.0mm



Enclosure No. 4

Additional Test Data
(7 pages including this cover page)

Table: Working Voltage Measurement (Class I units)

Test voltage / Frequency ..... : 240Vac / 60Hz

Location	Measured Voltage/frequency			Comments
	RMS voltage (V)	Peak voltage (V)	Hz	
—	—	—	—	Model: GT-46400-4024-T3/3A
T1 (1-6)	295	512	59.3	—
T1 (1-7)	323	536	59.3	Max RMS& Peak voltage
T1 (1-RTN)	308	536	59.3	—
T1 (2-6)	209	332	59.3	—
T1 (2-7)	213	356	59.3	—
T1 (2-RTN)	230	356	59.3	—
T1 (3-6)	212	412	59.3	—
T1 (3-7)	220	480	59.3	—
T1 (3-RTN)	193	392	59.3	—
T1 (4-6)	211	372	59.3	—
T1 (4-7)	213	432	59.3	—
T1 (4-RTN)	192	352	59.3	—
CY1 (Pri.-Sec.)	192	352	59.3	—
PC1 (3-1)	211	376	59.3	—
PC1 (3-2)	208	372	59.3	—
PC1 (4-1)	206	368	59.3	—
PC1 (4-2)	205	368	59.3	—
—	—	—	—	Model: GT-46400-4015-T3/T3A
T1 (1-6)	292	512	59.3	—
T1 (1-7)	311	528	59.3	Max RMS& Peak voltage
T1 (1-RTN)	302	528	59.3	—
T1 (2-6)	217	340	59.3	—
T1 (2-7)	218	356	59.3	—
T1 (2-RTN)	229	356	59.3	—
T1 (3-6)	206	412	59.3	—
T1 (3-7)	211	460	59.3	—
T1 (3-RTN)	194	396	59.3	—
T1 (4-6)	203	364	59.3	—
T1 (4-7)	205	412	59.3	—
T1 (4-RTN)	192	352	59.3	
—	—	—	—	Model: GT-46400-3612-T3/T3A
T1 (1-6)	281	492	59.3	—

T1 (1-7)	298	496	59.3	Max RMS& Peak voltage
T1 (1-RTN)	290	496	59.3	
T1 (2-6)	220	344	59.3	
T1 (2-7)	220	356	59.3	
T1 (2-RTN)	230	356	59.3	
T1 (3-6)	204	420	59.3	
T1 (3-7)	210	472	59.3	
T1 (3-RTN)	195	408	59.3	
T1 (4-6)	202	360	59.3	
T1 (4-7)	204	408	59.3	
T1 (4-RTN)	193	348	59.3	
Supplementary information: The following terminals were connected to earth: RTN				

TABLE: Evaluation of voltage limiting components in ES circuits (Class I units)

Test voltage / Frequency ..... : 240Vac / 60Hz

Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V peak	V d.c.	
—	—	—	Model: GT-46400-4024-T3/3A
T1 (6)-RTN	—	25.2	—
T1 (7)-RTN	90.0	—	—
D8-RTN	0	—	D8
C12-RTN	21.2	—	C12
—	—	—	Model: GT-46400-4015-T3/T3A
T1 (6)-RTN	—	17.2	—
T1 (7)-RTN	66.8	—	—
C12-RTN	55	—	—
D8-RTN	0	—	D8
R21-RTN	0	—	R21
—	—	—	Model: GT-46400-3612-T3/T3A
T1 (6)-RTN	—	13.4	—
T1 (7)-RTN	80	—	—
C12-RTN	74	—	—
D8-RTN	0	—	D8
R21-RTN	0	—	R21

supplementary information:
The following terminals were connected to earth: RTN

Table: Working Voltage Measurement (Class II units)

Test voltage / Frequency ..... : 240Vac / 60Hz

Location	Measured Voltage/frequency			Comments
	RMS voltage (V)	Peak voltage (V)	Hz	
—	—	—	—	Model: GT-46400-4024-T2
T1 (1-6)	295	512	59.3	—
T1 (1-7)	323	536	59.3	Max RMS& Peak voltage
T1 (1-RTN)	308	536	59.3	—
T1 (2-6)	209	332	59.3	—
T1 (2-7)	213	356	59.3	—
T1 (2-RTN)	230	356	59.3	—
T1 (3-6)	212	412	59.3	—
T1 (3-7)	220	480	59.3	—
T1 (3-RTN)	193	392	59.3	—

T1 (4-6)	211	372	59.3	—
T1 (4-7)	213	432	59.3	—
T1 (4-RTN)	192	352	59.3	—
CY1 (Pri.-Sec.)	192	352	59.3	—
PC1 (3-1)	211	376	59.3	—
PC1 (3-2)	208	372	59.3	—
PC1 (4-1)	206	368	59.3	—
PC1 (4-2)	205	368	59.3	—
—	—	—	—	Model: GT-46400-4015-T2
T1 (1-6)	292	512	59.3	—
T1 (1-7)	311	528	59.3	Max RMS& Peak voltage
T1 (1-RTN)	302	528	59.3	—
T1 (2-6)	217	340	59.3	—
T1 (2-7)	218	356	59.3	—
T1 (2-RTN)	229	356	59.3	—
T1 (3-6)	206	412	59.3	—
T1 (3-7)	211	460	59.3	—
T1 (3-RTN)	194	396	59.3	—
T1 (4-6)	203	364	59.3	—
T1 (4-7)	205	412	59.3	—
T1 (4-RTN)	192	352	59.3	—
—	—	—	—	Model: GT-46400-3612-T2
T1 (1-6)	281	492	59.3	—

T1 (1-7)	298	496	59.3	Max RMS& Peak voltage
T1 (1-RTN)	290	496	59.3	__
T1 (2-6)	220	344	59.3	__
T1 (2-7)	220	356	59.3	__
T1 (2-RTN)	230	356	59.3	__
T1 (3-6)	204	420	59.3	__
T1 (3-7)	210	472	59.3	__
T1 (3-RTN)	195	408	59.3	__
T1 (4-6)	202	360	59.3	__
T1 (4-7)	204	408	59.3	__
T1 (4-RTN)	193	348	59.3	__
Supplementary information: The following terminals were connected to earth: RTN				

5.2.1.1 Accessible ES1 circuits separated from other ES circuits using components

TABLE: Evaluation of voltage limiting components in ES circuits (Class II units)

Test voltage / Frequency.....: 240Vac / 60Hz

Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V peak	V d.c.	
—	—	—	Model: GT-46400-4024-T2
T1 (6)-RTN	—	25.2	—
T1 (7)-RTN	90.0	—	—
D8-RTN	0	—	D8
C12-RTN	21.2	—	C12
—	—	—	Model: GT-46400-4015-T2
T1 (6)-RTN	—	17.2	—
T1 (7)-RTN	66.8	—	—
C12-RTN	55	—	—
D8-RTN	0	—	D8
R21-RTN	0	—	R21
—	—	—	Model: GT-46400-3612-T2
T1 (6)-RTN	—	13.4	—
T1 (7)-RTN	80	—	—
C12-RTN	74	—	—
D8-RTN	0	—	D8
R21-RTN	0	—	R21

supplementary information:
The following terminals were connected to earth: RTN