IEC IECEE CB SCHEME

Ref. Certif. No.

JPTUV-083261

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

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product Produit	SWITCHING ADAPTER
Name and address of the applicant Nom et adresse du demandeur	Shenzhen Fujia Appliance Co., Ltd. Bldg. B1#, Xujingchang Technology Ind. Park, Haoye Road, Xinhe, Village, Fuyong Town Baoan District, Shenzhen, Guangdong 518103, P. R. China
Name and address of the manufacturer Nom et adresse du fabricant	Shenzhen Fujia Appliance Co., Ltd. Bldg. B1#, Xujingchang Technology Ind. Park, Haoye Road, Xinhe, Village, Fuyong Town Baoan District, Shenzhen, Guangdong 518103, P. R. China
Name and address of the factory Nom et adresse de l'usine	Shenzhen Fujia Appliance Co., Ltd. Bldg. B1#, Xujingchang Technology Ind. Park, Haoye Road, Xinhe, Village, Fuyong Town Baoan District, Shenzhen, Guangdong 518103, P. R. China
Ratings and principal characteristics Valeurs nominales et charactéristiques principales	Input : AC 100-240V; 50/60Hz; 1.5A Max; Class I Output: refer to test report
Trademark (if any) Marque de fabrique (si elle existe)	Trademark of Shenzhen Fujia Appliance Co., Ltd.
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	N/A
Model / Type Ref. Ref. de type	FJ-SW2017xxxyyyy (xxx and yyyy = refer to the test report)
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page)	For model differences, refer to the test report
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 62368-1:2014 See Test Report for National Differences
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	50098919 001

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification

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Signature: Dipl.-Ing. Univ. S. O. Steinke

Test Report issued under the responsibility of:

TÜVRheinland®

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

Report Number ..... :	50098919 001
Date of issue ..... :	September 21, 2017
Total number of pages ..... :	90 Pages
Applicant's name ..... :	Shenzhen Fujia Appliance Co., LTD.
Address ..... :	Bldg. B1, Xujingchang Technology, Ind. Park, Haoye Road, Xinhe Village, Fuyong Town Baoan, District, Shenzhen, Guangdong 518103, P.R. China
Test specification:	
Standard ..... :	IEC 62368-1:2014 (Second Edition)
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No ..... :	IEC62368_1B
Test Report Form(s) Originator ..... :	UL (US)
Master TRF ..... :	2014-03

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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..... :		SWITCHING ADAPTER	
Trade Mark ..... :			
Manufacturer..... :		Same as applicant	
Model/Type reference..... :		FJ-SW2017xxxyyyy (for definition of variables xxx, yyyy see table A on page 6 for details)	
Ratings..... :		Input: 100-240V~, 50/60Hz, 1.5A Max. Output: See table B on page 7 for details	
Testing procedure and testing location:			
☒	CB Testing Laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.	
Testing location/ address..... :		East of F/1, F/2~F/4, Building 1, Cybio Technology Building No. 6 Langshan No.2 Road, North Hi-tech Industry Park 518057 Shenzhen Nanshan District CHINA	
☐	Associated CB Testing Laboratory:	N/A	
Testing location/ address..... :		N/A	
Tested by (name + signature)..... :		Jericho Cheng	
Approved by (name + signature) ..... :		Sommy Chen	
☐	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)..... :			
Witnessed by (name + signature)..... :			
Approved by (name + signature) ..... :			
Supervised by (name + signature)..... :			

List of Attachments (including a total number of pages in each attachment):
Attachment 1: National Differences (14 pages)
Attachment 2: Photo documentation (11 pages)

Summary of testing:

Tests performed (name of test and test clause):
All applicable tests as described in Test Case and Measurement Sections were performed.

- Maximal ambient temperature as specified by the manufacturer: +45°C.
- Test samples without serial numbers.
- Load conditions used during testing see appended table B.2.5 for details.
- The equipment is specified to be operated up to 5000m above sea level.

5.2	Electrical energy source classifications
5.4.1.4, 6.3.2, 9.0, B.2.6	Maximum operating temperatures for materials, components and systems
5.4.1.8	Determination of working voltage
5.4.1.10.3	Ball pressure test
5.4.2.2, 5.4.2.4 & 5.4.3	Minimum Clearances/Creepage distance
5.4.8	Humidity conditioning
5.4.9	Electric strength test
5.5.2.2	Stored discharge on capacitors
5.6.6.2	Ground continuity test
5.7.2.2, 5.7.4	Earthed accessible conductive part test
6.2.2	Electrical power sources (PS) measurements for classification
9.2	Thermal energy source Classifications
B.2.5	Input tests
B.3	Simulated Abnormal operating condition tests
B.4	Simulated single fault conditions
F.3.9	Durability, legibility and permanence of markings
G.5.3.2	Transformer insulation
G.5.3.3	Transformer overload
Q.1.2	Limited power sources
T.2	Steady force test, 10 N
T.4	Steady force test, 100 N
T.5	Steady force test, 250 N
T.6	Impact test
T.7	Drop test
T.8	Stress relief test

Testing location:
Unless otherwise indicated, all tests were performed at the location stated in “Testing procedure and testing location”.

Remark: If not otherwise specified, tests were performed on models FJ-SW20170906000, FJ-SW20171096000, FJ-SW20172003250, FJ-SW20175401200, FJ-SW20173301970 and FJ-SW20170506000 to represent other similar models.	

Summary of compliance with National Differences:

EU Group Differences, EU Special National Conditions, AT, BE, CH, CZ, DE, FI, FR, GB, GR, HU, IT, NL, NO, PL, SE, SI, SK, US, CA

Explanation of used codes: AT=Austria, BE=Belgium, CH=Switzerland, CZ=Czech Republic, DE=Germany, FI=Finland, FR=France, GB=United Kingdom, GR=Greece, HU=Hungary, IT=Italy, NL=The Netherlands, NO=Norway, PL=Poland, SE=Sweden, SI=Slovenia, SK=Slovakia, US= United States of America, CA=Canada.

For National Differences see end of this test report.

☒ The product fulfils the requirements of EN 62368-1:2014. CSA C22.2 No. 62368-1-14, UL 62368-1:2014.

Copy of marking plate(s):

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



Notes: Since similar label used, only label for model above listed to represent other similar ones.

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: building-in equipment shall be evaluated in end system (see also general product information).
Considered current rating of protective device as part of building or equipment installation	US, CA: 20 A; UK: 13 A; Others: 16 A Installation location: ☒ building; ☐ equipment
Equipment mobility	☒ movable ☐ hand-held ☒ transportable ☐ stationary ☐ for building-in ☐ direct plug-in ☐ rack-mounting ☐ wall-mounted
Over voltage category (OVC)	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other: _____
Class of equipment	☒ Class I ☐ Class II ☐ Class III
Access location	☐ restricted access location ☒ N/A
Pollution degree (PD)	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maximum operating ambient	45℃
IP protection class	☒ IPX0 ☐ IP___
Power Systems	☒ TN ☐ TT ☐ IT - 230 V L-L
Altitude during operation (m)	☐ 2000 m or less ☒ 5000 m
Altitude of test laboratory (m)	☒ 2000 m or less ☐ _____ m
Mass of equipment (kg)	☒ Approx. 0. 256kg max.

POSSIBLE TEST CASE VERDICTS:	
- test case does not apply to the test object..... :	N/A
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)
TESTING:	
Date of receipt of test item..... :	September 08, 2017
Date (s) of performance of tests..... :	September 08, 2017 to September 18, 2017
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) ..... :	Shenzhen Fujia Appliance Co., LTD. Bldg. B1, Xujingchang Technology, Ind. Park, Haoye Road, Xinhe Village, Fuyong Town Baoan, District, Shenzhen, Guangdong 518103, P.R. China

GENERAL PRODUCT INFORMATION:

1. This test report covers model series FJ-SW2017xxxyyyy which are desk-top type switching adaptor intended to use for information technology equipment or Audio and Video equipment.
2. The bottom enclosure is secured to top enclosure by screws and mechanical clamping method.
3. The specified Max. ambient temperature is +45°C.
4. The power supply cord set was not evaluated together with the apparatus. A suitable certified power cord set shall be selected when the apparatus is sold.
5. For AC inlet, either C6 type or C14 type used. Only different inlet type, do not impact the size of the enclosure.

6 Components RT1, LF1, RV1, CY2, CY3, CY4, C24, C26, R27, R33, OP2, L3, LF3, LED, U5, R31, R24, R43, R44, R42, C20, D7, C23, ZD3 are optional. It does not impact the performance of the product whether to use them or not. If not otherwise specified, tests were performed with all these components provided.

Table A: Definition of variables:

Variable:	Range of variable:	Content:
xxx	050-090, 095-195, 200-330, 360-540	'xxx' are 3 digits indicating 10 times the output voltage value in V. For example, 050 represents the output voltage is 5.0Vdc, 540 represents the output voltage is 54.0Vdc.
yyyy	0100 to 6000	'yyyy' are 4 digits indicating 1000 times the output current value in A. For example, 0100 represents the output current is 0.1A, 6000 represents the output current is 6.0 A.

Note: --

Table B: Model list:

Type designation	Output Voltage range (Vdc)	Output Current Range (A)	Max. Output power (W)	Transformer
FJ-SW2017xxxyyyy (xxx= 050-090, yyyy= 0100-6000)	5.0-9.0	0.1-6.0	54	2017-T1 (Sec winding: Φ0.45mm*6P*3Ts)
FJ-SW2017xxxyyyy (xxx= 095-195, yyyy= 0100-6000)	9.5-19.5	0.1-6.0	65	2017-T2 (Sec winding: Φ0.45mm*4P*6Ts)
FJ-SW2017xxxyyyy (xxx = 200-330, yyyy= 0100 - 3250)	20.0-33.0	0.1-3.25	65	2017-T3 (Sec winding: Φ0.50mm*2P*10Ts)
FJ-SW2017xxxyyyy (xxx = 360-540, yyyy= 0100 - 1800)	36.0-54.0	0.1-1.80	65	2017-T4 (Sec winding: Φ0.45mm*2P*18Ts)
Note: The rated output voltage is rising in steps of 0.1V. The rated output current is rising in steps of 0.01A. Output voltage multiplied with output current are only tested up to the max. output power.				

Table C: Component difference list:

(1)

Difference	C7, C22	Q4
FJ-SW2017xxxyyyy (xxx= 050-090)	Min. 10V	Min. 40V, Min. 40A
FJ-SW2017xxxyyyy (xxx= 095-195)	Min. 16V	Min. 80V, Min. 40A
FJ-SW2017xxxyyyy (xxx = 200-330)	Min. 25V	Min. 150V, Min. 10A
FJ-SW2017xxxyyyy (xxx = 350-540)	Min. 35V	Min. 300V, Min. 10A
Note: None		

(2)

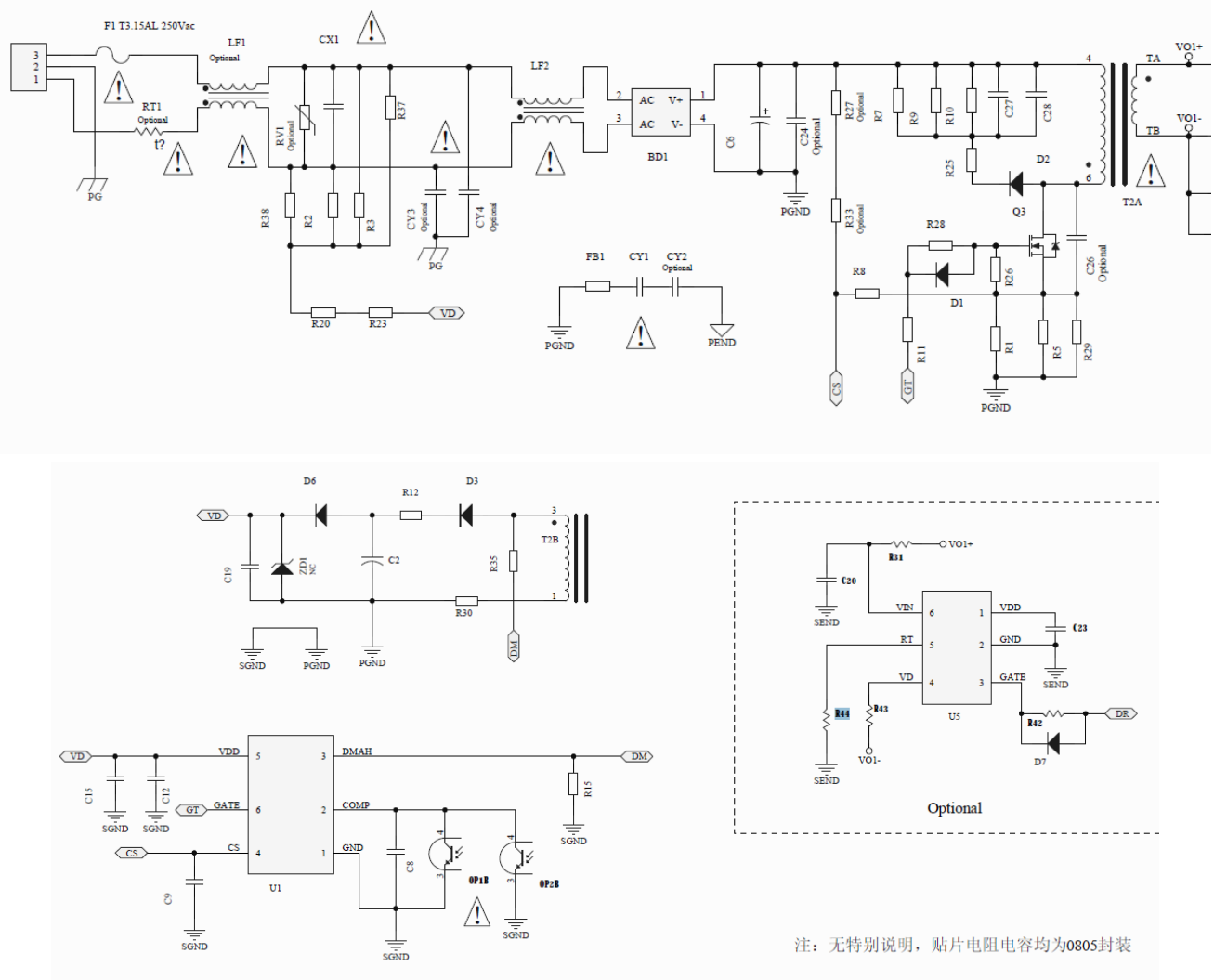
Opto-coupler OP2	Output voltage>33Vdc	Output voltage≤33Vdc
	Provided	Optional

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: Input: 100-240V~, output: 5Vdc, 54Vdc Max. ES1	
Source of electrical energy	**Corresponding classification (ES)**
All circuits except for secondary circuit after Q4	ES3
Secondary circuit after Q4	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 secondary circuit after Q4	PS3
Secondary circuit after Q4	PS2
Injury caused by hazardous substances (Clause 7) (Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.) Example: Liquid in filled component Glycol	
Source of hazardous substances	**Corresponding chemical**
N/A	None
Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.) Example: Wall mount unit MS2	
Source of kinetic/mechanical energy	**Corresponding classification (MS)**
Edges and corners of enclosure	MS1
Mass of the unit	MS1
Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.) Example: Hand-held scanner – thermoplastic enclosure TS1	
Source of thermal energy	**Corresponding classification (TS)**
External surfaces	TS1
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 for indicating	RS1

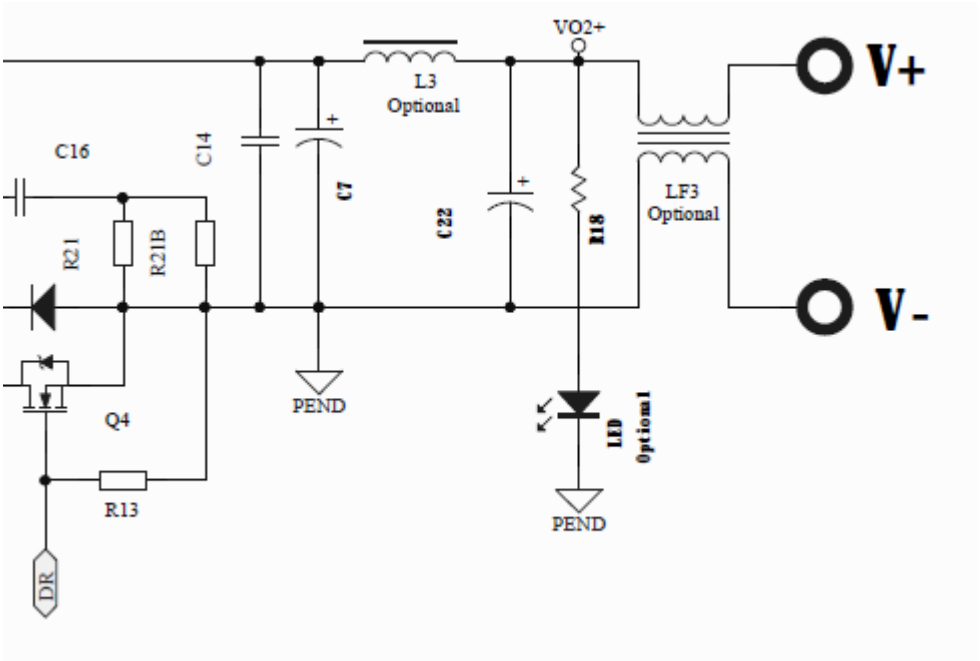
ENERGY SOURCE DIAGRAM

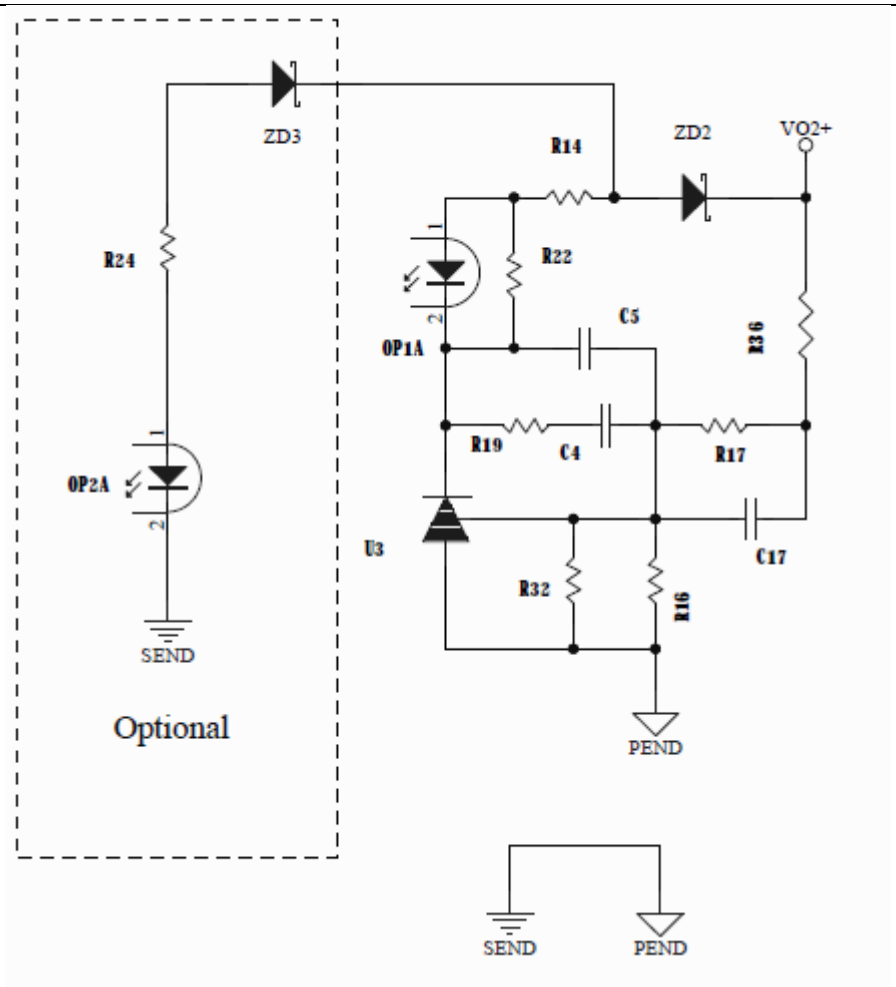
Indicate which energy sources are included in the energy source diagram. Insert diagram below

ES3 (All circuits except for secondary circuit after Q4)



ES1 (Secondary circuit after Q4)




ZD3
R24
OP2A
SEND
Optional
R14
ZD2
VO2+
R22
C5
OP1A
R36
R19
C4
R17
U3
C17
R32
R16
PEND
SEND
PEND

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 (during disconnection of mains plug)	ES3: stored charge on primary capacitor	N/A	N/A	X-capacitor, discharge resistors
Ordinary	ES3: primary circuit	N/A	N/A	Transformer, optocoupler, Y-capacitor, Enclosure
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source	Safeguards		
		Basic	Supplementary	Reinforced
Combustible materials within equipment	PS3: >100 Watt circuit (Primary circuit)	Equipment safeguards (Enclosure with Thickness: 1.5mm, V-0)	Equipment safeguards (Enclosure with Thickness: 1.5mm, V-0)	N/A
Material of outside enclosure	PS2: <100 Watt circuit (circuit after secondary winding of T2)	Equipment safeguards (Enclosure with Thickness: 1.5mm, V-0)	Equipment safeguards (Enclosure with Thickness: 1.5mm, V-0)	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)
Ordinary	MS1: Edges and corners	N/A	N/A	N/A
Ordinary	MS1: Mass of the unit	N/A	N/A	N/A
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	TS1: Plastic enclosure	N/A	N/A	N/A

10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	RS1: LED for indicating	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	See appended table 4.1.2	P
4.1.2	Use of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment. See also Annex G	P
4.1.3	Equipment design and construction	Evaluation of safeguards regarding limiting the outputs to fulfill ES1 and protection in regard to risk of spread of fire, mechanical and thermal burn injury considered.	P
4.1.15	Markings and instructions.....:	(See Annex F)	P
4.4.4	Safeguard robustness	See below.	P
4.4.4.2	Steady force tests.....:	(See Annex T.2, T.4)	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.....:	The external enclosure cannot be opened without damaging the product.	N/A
4.4.4.6	Glass Impact tests .....:	No such glass used.	N/A
4.4.4.7	Thermoplastic material tests.....:	(See Annex T.8)	P
4.4.4.8	Air comprising a safeguard.....:	(See Annex T)	P
4.4.4.9	Accessibility and safeguard effectiveness	After tests of 4.4.4.2, 4.4.4.3, 4.4.4.7, no safeguard damaged.	P
4.5	Explosion	No explosion occurs during normal/abnormal operation and single fault conditions	P
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard	The wires are secured by soldering and glue so that a loosening of the terminal connection is unlikely.	P
4.6.2	10 N force test applied to .....:	See appended table 5.4.2.2, 5.4.2.4 and 5.4.3	P
4.7	Equipment for direct insertion into mains socket - outlets	Not direct plug-in equipment.	N/A
4.7.2	Mains plug part complies with the relevant standard.....:	See above	N/A
4.7.3	Torque (Nm) .....:	See above	N/A
4.8	Products containing coin/button cell batteries	No coin/button cell batteries used.	N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery.....:		—
4.8.4	Battery Compartment Mechanical Tests .....:		N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object.....:	No likelihood of conductive object entry into enclosure.	P
5	**ELECTRICALLY-CAUSED INJURY**		P
5.2.1	Electrical energy source classifications ..... :	(See appended table 5.2)	P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current ..... :	(See appended table 5.2)	P
5.2.2.3	Capacitance limits..... :	(See sub-clause 5.5.2.2)	P
5.2.2.4	Single pulse limits ..... :	No such single pulses generated in the EUT or applied to it.	N/A
5.2.2.5	Limits for repetitive pulses ..... :	No such repetitive pulses within the EUT	N/A
5.2.2.6	Ringing signals ..... :	No such ringing signals within the EUT	N/A
5.2.2.7	Audio signals ..... :	No such audio signals	N/A
5.3	Protection against electrical energy sources	See below	P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	See only 4.3 and 5.3 to 5.5 which applies to protection between the accessible parts and hazardous parts of other circuits.	P
5.3.2.1	Accessibility to electrical energy sources and safeguards	Only ES1 circuit and the enclosure (safeguard) are accessed to person.	P
5.3.2.2	Contact requirements	No opening of enclosure, no access with test probe (Figure V.1) to any ES3 circuit or parts.	P
	a) Test with test probe from Annex V..... :		P
	b) Electric strength test potential (V)..... :		N/A
	c) Air gap (mm) ..... :		N/A
5.3.2.4	Terminals for connecting stripped wire	No stripped wire used.	N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material	The choice and application have taken into account as specified in this Clause 5 and Annex T and natural rubber, hygroscopic materials or asbestos are not used as insulation.	P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.3	Humidity conditioning ..... :	No hygroscopic material used.	N/A
5.4.1.4	Maximum operating temperature for insulating materials ..... :	(See appended table 5.4.1.4)	P
5.4.1.5	Pollution degree ..... :	2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound	Pollution degree 2 is applied. No insulating compound applied (however see 5.5.4).	N/A
5.4.1.5.3	Thermal cycling	See above	N/A
5.4.1.6	Insulation in transformers with varying dimensions	No such transformer within the EUT	N/A
5.4.1.7	Insulation in circuits generating starting pulses	No such starting pulses within the EUT	N/A
5.4.1.8	Determination of working voltage	(See appended table 5.4.1.8)	P
5.4.1.9	Insulating surfaces		P
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	See only 5.4.1.10.3 below.	P
5.4.1.10.2	Vicat softening temperature ..... :		N/A
5.4.1.10.3	Ball pressure ..... :	Phenolic bobbin material used in T2 and LF2 which is acceptable without test. For bobbin material 4130(100%Virgin) (a)(b) see appended table 5.4.1.10.3.	P
5.4.2	Clearances	The highest value in Cl 5.4.2.2 and Cl 5.4.2.3 be used.	P
5.4.2.2	Determining clearance using peak working voltage	Temporary overvoltage 2000Vpeak assumed. (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 considered for Overvoltage Cat. II	—
	b) d.c. mains transient voltage ..... :	No such transient	—
	c) external circuit transient voltage ..... :	No such transient	—
	d) transient voltage determined by measurement :		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test	Using procedure 2 to determine the clearance according to 5.4.2.3.	N/A
5.4.2.5	Multiplication factors for clearances and test voltages ..... :	(See only appended tables) Specified the equipment to be operated up to 5000m above sea level. Factor 1.48 according to table 17.	P
5.4.3	Creepage distances ..... :	(See appended table 5.4.2.2, 5.4.2.4 and 5.4.3)	P
5.4.3.1	General		P
5.4.3.3	Material Group ..... :	IIIa&IIIb	—

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.4	Solid insulation	See below	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	No such insulation applied.	N/A
5.4.4.4	Solid insulation in semiconductor devices	Approved optocoupler used. Requirements of G.12 met, see table 4.1.2 for listed component used.	P
5.4.4.5	Cemented joints	No such construction within the EUT	N/A
5.4.4.6	Thin sheet material	See below	P
5.4.4.6.1	General requirements	Two layers of insulation tape in and around transformer T2 are used for reinforced insulation and are not expected to be subject to handling or abrasion during ordinary or instructed person servicing.	P
5.4.4.6.2	Separable thin sheet material	Where two layers are provided as reinforced insulation any one layer passed the electric strength test for reinforced insulation	P
	Number of layers (pcs) ..... :	2	P
5.4.4.6.3	Non-separable thin sheet material	No such insulation used within the EUT	N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material..... :		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components	See G.5.3 and G.6.1	P
5.4.4.9	Solid insulation at frequencies >30 kHz ..... :	For bobbin of T2: Vw = Ep*Kr*d = 17*0.71*0.9 = 10863 V exceeds 2*1.2* 612V = 1469 V (Peak working voltage at high frequency Vpw=612V which is highest peak measured for T2). For thin sheet material between core of transformer and secondary heat sink (Reinforced): Vw = Ep*Kr*d =49*0.59*0.4 = 11564 V exceeds 2*1.2* 612V = 1469V. (Calculated based on frequency 60kHz interpolated in Table 23)	P
5.4.5	Antenna terminal insulation	No such antenna terminal used.	N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ) ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.6	Insulation of internal wire as part of supplementary safeguard..... :	No such insulation of internal wire as part of supplementary safeguard.	N/A
5.4.7	Tests for semiconductor components and for cemented joints	No tests necessary –see only 5.4.4.4.	N/A
5.4.8	Humidity conditioning	Applied by request of the client.	P
	Relative humidity (%) ..... :	93%	—
	Temperature (°C) ..... :	40°C	—
	Duration (h) ..... :	120h	—
5.4.9	Electric strength test..... :	(See appended table 5.4.9)	P
5.4.9.1	Test procedure for a solid insulation type test	Compliance was checked immediately following temperature test in 5.4.1.4 and on a sample of the transformer raised to the relevant temperature as measured during that test.	P
5.4.9.2	Test procedure for routine tests	No routine tests considered. To be considered during the relevant national approval.	N/A
5.4.10	Protection against transient voltages between external circuit	No such external circuits	N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test..... :		N/A
5.4.10.2.3	Steady-state test ..... :		N/A
5.4.11	Insulation between external circuits and earthed circuitry ..... :	No such connections for external circuit applied within the EUT	N/A
5.4.11.1	Exceptions to separation between external circuits and earth	No such connections to external circuit as above.	N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage U_{op} (V) ..... :		—
	Nominal voltage U_{peak} (V) ..... :		—
	Max increase due to variation U_{sp} ..... :		—
	Max increase due to ageing ΔU_{sa} ..... :		—
	$U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$ ..... :		—
5.5	Components as safeguards		
5.5.1	General	See below.	P
5.5.2	Capacitors and RC units	Approved X (CX1) and Y capacitor (CY1, CY2, CY3, CY4) provided. See G.11.1 for compliance and their application.	P
5.5.2.1	General requirement		P

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Clause	Requirement + Test	Result - Remark	Verdict
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector ..... :	(See appended table 5.5.2.2)	P
5.5.3	Transformers	(See Annex G.5.3)	P
5.5.4	Optocouplers	(See Annex G.12)	P
5.5.5	Relays	No such component provided	N/A
5.5.6	Resistors	Bleeder resistors between live and neutral located L/N used and as safeguard	P
5.5.7	SPD's	RV1 used between L and N, See also G.8, however not used as a safeguard.	P
5.5.7.1	Use of an SPD connected to reliable earthing		N/A
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable ..... :	No such external circuits.	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	Min. 18AWG yellow/green wire used from inlet earthing pin to secondary trace considered as protective bonding conductor	P
5.6.3	Requirement for protective earthing conductors	Power supply unit not provided	N/A
	Protective earthing conductor size (mm^2) .....:	See above.	—
5.6.4	Requirement for protective bonding conductors		P
5.6.4.1	Protective bonding conductors	Min. AWG 18 used for the wire connecting earth terminal to secondary.	P
	Protective bonding conductor size (mm^2).....:	The EUT rated current up to and including 1.5A; Min. AWG 18.	—
	Protective current rating (A) ..... :	Protective current rating 20A, 16A, 13A	—
5.6.4.3	Current limiting and overcurrent protective devices		P
5.6.5	Terminals for protective conductors		P
5.6.5.1	Requirement		P
	Conductor size (mm^2), nominal thread diameter (mm). .....:	See 5.6.6	P
5.6.5.2	Corrosion		P
5.6.6	Resistance of the protective system		P
5.6.6.1	Requirements		P

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Clause	Requirement + Test	Result - Remark	Verdict
5.6.6.2	Test Method Resistance .....:	(See appended table 5.6.6.2)	P
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks	Figure 4 and Figure 5 of IEC 60990:1999 was used in determining of the limit of ES1 and ES2.	P
5.7.2.1	Measurement of touch current .....:	(See appended table 5.2)	P
5.7.2.2	Measurement of prospective touch voltage		P
5.7.3	Equipment set-up, supply connections and earth connections	Clause 4, 5.3 and 5.4 of IEC 60990:1999 applied.	P
	System of interconnected equipment (separate connections/single connection) .....:	Single equipment.	—
	Multiple connections to mains (one connection at a time/simultaneous connections).....:	Single connection.	—
5.7.4	Earthed conductive accessible parts .....:	(See appended table 5.7.4)	P
5.7.5	Protective conductor current		N/A
	Supply Voltage (V) .....:		—
	Measured current (mA) .....:		—
	Instructional Safeguard .....:		N/A
5.7.6	Prospective touch voltage and touch current due to external circuits	No external circuits.	N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits	No external circuits.	N/A
	a) Equipment with earthed external circuits Measured current (mA) .....:		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....:		N/A

6	**ELECTRICALLY- CAUSED FIRE**		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications	PS (power source) classification determined by measuring the maximum power in Figures 34 and 35 for load and power source circuits.	P
6.2.2.1	General	See the following details.	P
6.2.2.2	Power measurement for worst-case load fault ... :	(See appended table 6.2.2)	P
6.2.2.3	Power measurement for worst-case power source fault ..... :	(See appended table 6.2.2)	P

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Clause	Requirement + Test	Result - Remark	Verdict
6.2.2.4	PS1 ..... :	Not PS1	N/A
6.2.2.5	PS2 ..... :	(See appended table 6.2.2)	P
6.2.2.6	PS3 ..... :	All circuit inside enclosure is claimed as PS3 (except for secondary circuit after Q4)	P
6.2.3	Classification of potential ignition sources	See the following details.	P
6.2.3.1	Arcing PIS ..... :	(See appended table 6.2.3.1)	P
6.2.3.2	Resistive PIS ..... :	(See appended table 6.2.3.1)	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 ?C for unknown materials ..... :	No ignition and no such temperature attained within the equipment. (See appended table 5.4.1.4, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure	Only output wire and output terminal complying with 6.4.5.	N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Method by control of fire spread applied, V-0 fire enclosure provided.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits	No PS1 circuits.	N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits	Method by control of fire spread applied as 6.4.1.	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

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.5	Control of fire spread in PS2 circuits	Compliance detailed as follows: − Printed board: rated min. V-0 − Wire insulation (tubing): complying with Clause 6 (See Table 4.1.2 for tubing used). The input wire and output cord are complied to UL 758 standard, which test method and testing condition equal to IEC/EN 60695-11-21. − All other components: at least V-2 except for parts mounted on min. V-1 material or small parts of combustible material (with mass less than 4g) or components complying to relevant IEC standard. − Isolating transformer: complying with G.5.3.	P
6.4.5.2	Supplementary safeguards .....:	(See appended tables 4.1.2 and Annex G)	P
6.4.6	Control of fire spread in PS3 circuit	Compliance detailed as follows: − Parts as in 6.4.5 above including wiring − Fire enclosure rated V-0 used.	P
6.4.7	Separation of combustible materials from a PIS	Fire enclosure provided.	N/A
6.4.7.1	General.....:		N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier	No specific barrier provided.	N/A
6.4.8	Fire enclosures and fire barriers	See below.	P
6.4.8.1	Fire enclosure and fire barrier material properties	The V-0 material is used for the fire enclosure (overall enclosure).	P
6.4.8.2.1	Requirements for a fire barrier	No fire barrier used.	N/A
6.4.8.2.2	Requirements for a fire enclosure	The V-0 fire enclosure is used. See above.	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.3.1	Fire enclosure and fire barrier openings	No openings in fire enclosure.	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 except for the opening filled by VW-1 output cord bushing.	N/A
	Flammability tests for the bottom of a fire enclosure .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c) .....:		N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating.....:	Fire enclosure is made of V-0 material.	P
6.5	Internal and external wiring		P
6.5.1	Requirements	Output lead wire comply with UL 758, which has the equivalent requirement with IEC/TS 60695-11-21.	P
6.5.2	Cross-sectional area (mm^2) .....:	Min. 0.2 mm^2	—
6.5.3	Requirements for interconnection to building wiring .....:		N/A
6.6	Safeguards against fire due to connection to additional equipment		P
	External port limited to PS2 or complies with Clause Q.1	Output complies with Clause Q.1.	P
7	**INJURY CAUSED BY HAZARDOUS SUBSTANCES**		N/A
7.2	Reduction of exposure to hazardous substances	No hazardous chemicals within the equipment.	N/A
7.3	Ozone exposure	No ozone production within the equipment.	N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions ..... :		—
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010) .....:		—
7.6	Batteries.....:	No battery used.	N/A
8	**MECHANICALLY-CAUSED INJURY**		P
8.1	General	Mass<7Kg, No moving parts in the equipment – see below regarding edges and corners.	P
8.2	Mechanical energy source classifications	MS1	P
8.3	Safeguards against mechanical energy sources		N/A
8.4	Safeguards against parts with sharp edges and corners	Edges and corners of the enclosure are rounded.	N/A
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts	No moving parts.	N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks .....:		N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard .....:		—
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N) .....:		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test.....:		N/A
8.6	Stability	Classification MS1 according to table 35, line 5 and no stability requirements.	N/A
8.6.1	Product classification		N/A
	Instructional Safeguard .....:		—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force .....:		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10? tilt .....:		—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force).....:		N/A
	Position of feet or movable parts.....:		—
8.7	Equipment mounted to wall or ceiling		N/A
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) .....:		N/A
8.7.2	Direction and applied force .....:		N/A
8.8	Handles strength		N/A
8.8.1	Classification		N/A
8.8.2	Applied Force .....:		N/A
8.9	Wheels or casters attachment requirements		N/A
8.9.1	Classification		N/A
8.9.2	Applied force .....:		—
8.10	Carts, stands and similar carriers		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard.....:		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force .....:		—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N).....:		—
8.10.6	Thermoplastic temperature stability (?C).....:		N/A
8.11	Mounting means for rack mounted equipment		N/A
8.11.1	General		N/A
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable *N* .....:		N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas.....	No such parts.	N/A
	Button/Ball diameter (mm).....:		—
9	**THERMAL BURN INJURY**		P
9.2	Thermal energy source classifications	No part considered to be accessible other than enclosure. The equipment evaluated by temperature test (see table 5.4.1.4).	P
9.3	Safeguard against thermal energy sources	Temperature of enclosure classed as TS1.	P
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard	Enclosure provided to limit the transfer of thermal energy of internal parts under normal operating conditions and abnormal operating conditions.	P
9.4.2	Instructional safeguard .....:	Instructional safeguard is not required.	N/A
10	**RADIATION**		P
10.2	Radiation energy source classification	RS1: The LED only used for indicating, which is considered as low power & inherently exempt group according to IEC 62471	P
10.2.1	General classification	See above	P
10.3	Protection against laser radiation	No such radiation generated from the equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Laser radiation that exists equipment:		—
	Normal, abnormal, single-fault..... :		N/A
	Instructional safeguard ..... :		—
	Tool..... :		—
10.4	Protection against visible, infrared, and UV radiation	No such radiation generated from the equipment.	N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons .....:		N/A
10.4.1.b)	RS3 accessible to a skilled person.....:		N/A
	Personal safeguard (PPE) instructional safeguard.....:		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1 . :		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions ..... :		N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque.....:		N/A
10.4.1.f)	UV attenuation.....:		N/A
10.4.1.g)	Materials resistant to degradation UV .....:		N/A
10.4.1.h)	Enclosure containment of optical radiation.....:		N/A
10.4.1.i)	Exempt Group under normal operating conditions.....:		N/A
10.4.2	Instructional safeguard .....:		N/A
10.5	Protection against x-radiation	No such x-radiation generated from the equipment	N/A
10.5.1	X- radiation energy source that exists equipment:		N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards.....:		N/A
	Instructional safeguard for skilled person..... :		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation .....:		—
	Abnormal and single-fault condition ..... :		N/A
	Maximum radiation (pA/kg)..... :		N/A
10.6	Protection against acoustic energy sources	Not such equipment.	N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output, dB(A)..... :		N/A
	Output voltage, unweighted r.m.s..... :		N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards ..... :		N/A
	Equipment safeguard prevent ordinary person to RS2..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Means to actively inform user of increase sound pressure..... :		—
	Equipment safeguard prevent ordinary person to RS2..... :		—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output..... :		—
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A)..... :		—
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A)..... :		—
B	**NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS**		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements..... :	(See summary of testing for tested models, each loaded according to its output ratings. See also appended table B.2.5.)	P
	Audio Amplifiers and equipment with audio amplifiers ..... :	Not such equipment.	N/A
B.2.3	Supply voltage and tolerances	+10 % and −10 % considered.	P
B.2.5	Input test..... :	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements..... :	(See appended table B.3 & B.4)	P
B.3.2	Covering of ventilation openings		N/A
B.3.3	D.C. mains polarity test	The EUT is not connected to a D.C. mains	N/A
B.3.4	Setting of voltage selector ..... :	No voltage selector was used.	N/A
B.3.5	Maximum load at output terminals ..... :	(See appended table B.3 & B.4)	P
B.3.6	Reverse battery polarity	No battery within the EUT	N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.	Not such equipment.	N/A
B.3.8	Safeguards functional during and after abnormal operating conditions	All safeguards remained effective.	P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited ..... :	No such device used.	N/A
B.4.3	Motor tests	No motors used.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature ..... :		--
B.4.4	Short circuit of functional insulation	See below.	P
B.4.4.1	Short circuit of clearances for functional insulation	(See appended table B.4)	P
B.4.4.2	Short circuit of creepage distances for functional insulation	(See appended table B.4)	P
B.4.4.3	Short circuit of functional insulation on coated printed boards	No coated printed boards used.	N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors	(See appended table B.3 &B.4 for faults on electronic components)	P
B.4.6	Short circuit or disconnect of passive components	(See appended table B.3 &B.4)	P
B.4.7	Continuous operation of components	The EUT is continuous operating type and no such components intended for short time operation or intermittent operation	N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions	No change to circuits classified in 5.3.	P
B.4.9	Battery charging under single fault conditions ... :	No battery involved in the EUT	N/A
C	**UV RADIATION**		N/A
C.1	Protection of materials in equipment from UV radiation	No UV generated from the equipment.	N/A
C.1.2	Requirements	See above.	N/A
C.1.3	Test method	See above.	N/A
C.2	UV light conditioning test	See above.	N/A
C.2.1	Test apparatus	See above.	N/A
C.2.2	Mounting of test samples	See above.	N/A
C.2.3	Carbon-arc light-exposure apparatus	See above.	N/A
C.2.4	Xenon-arc light exposure apparatus	See above.	N/A
D	**TEST GENERATORS**		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A
E	**TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS**		N/A
E.1	Audio amplifier normal operating conditions	Not such equipment.	N/A
	Audio signal voltage (V) .....:		--
	Rated load impedance (Ω) .....:		--
E.2	Audio amplifier abnormal operating conditions		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
F	**EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS**		P
F.1	General requirements	See below.	P
	Instructions – Language .....:	English & German.	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1	Letter symbols for quantities and units are complied with IEC 60027-1.	P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific	Graphical symbols are complied with IEC 60417, ISO 3864-2, ISO 7000 or ISO 7010.	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	The required marking is located on the enclosure of the equipment and is easily visible.	P
F.3.2	Equipment identification markings	See copy of marking plate.	P
F.3.2.1	Manufacturer identification .....:	See copy of marking plate.	—
F.3.2.2	Model identification .....:	See model list.	—
F.3.3	Equipment rating markings	See the following details.	P
F.3.3.1	Equipment with direct connection to mains	The equipment is direct connected to AC mains, see F.3.3.3 to F.3.3.6.	P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage.....:	~	—
F.3.3.4	Rated voltage .....:	See copy of marking plate.	—
F.3.3.4	Rated frequency.....:	See copy of marking plate.	—
F.3.3.6	Rated current or rated power .....:	See copy of marking plate.	—
F.3.3.7	Equipment with multiple supply connections	Only one mains supply connection provided.	N/A
F.3.4	Voltage setting device	No voltage setting device.	N/A
F.3.5	Terminals and operating devices	See below.	P
F.3.5.1	Mains appliance outlet and socket-outlet markings..... :	No outlet used.	N/A
F.3.5.2	Switch position identification marking ..... :	No switch used.	N/A
F.3.5.3	Replacement fuse identification and rating markings..... :	The current fuse is located within the equipment and not replaceable by an ordinary person or an instructed person. The current fuse is anyway marked with F1 T3.15AL/250Vac.	P
F.3.5.4	Replacement battery identification marking ..... :	No such battery on the equipment.	N/A
F.3.5.5	Terminal marking location		N/A
F.3.6	Equipment markings related to equipment classification	See below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.6.1	Class I Equipment		P
F.3.6.1.1	Protective earthing conductor terminal	Class I equipment, protective earthing symbol marked on the appliance inlet.	P
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		N/A
F.3.6.2	Class II equipment (IEC60417-5172)	Class I equipment	N/A
F.3.6.2.1	Class II equipment with or without functional earth	Class I equipment	N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking	Class I equipment	N/A
F.3.7	Equipment IP rating marking .....:		—
F.3.8	External power supply output marking	See copy of marking plate.	P
F.3.9	Durability, legibility and permanence of marking	Marking is considered to be legible and easily discernible. See also the following details.	P
F.3.10	Test for permanence of markings	The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. And then again for 15 sec,with the cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was no curling and lifting of the label edge. After each test, the marking remained legible.	P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking		N/A
	b) Instructions given for installation or initial use		P
	c) Equipment intended to be fastened in place		N/A
	d) Equipment intended for use only in restricted access area		N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1	No such terminals provided.	N/A
	f) Protective earthing employed as safeguard		P
	g) Protective earthing conductor current exceeding ES2 limits		N/A
	h) Symbols used on equipment	No such symbols used as a safeguard considered.	N/A
	i) Permanently connected equipment not provided with all-pole mains switch	Not permanently connected equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	j) Replaceable components or modules providing safeguard function	No such markings.	N/A
F.5	Instructional safeguards	No instructional safeguard is considered as necessary.	N/A
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction	No instructional safeguard required in the equipment.	N/A
G	**COMPONENTS**		P
G.1	**Switches**		N/A
G.1.1	General requirements	No switch used.	N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	**Relays**		N/A
G.2.1	General requirements	No relay used.	N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
G.3	**Protection Devices**		P
G.3.1	Thermal cut-offs	No thermal cut-off used.	N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691	No thermal link used.	N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H) ..... :		—
	Single Fault Condition ..... :		—
	Test Voltage (V) and Insulation Resistance (Ω). :		—
G.3.3	PTC Thermistors	No PTC thermistor used.	N/A
G.3.4	Overcurrent protection devices	Current fuse complying with IEC 60127 as overcurrent protection device and protected within 1 s.	P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.4		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions.....:		N/A
G.4	**Connectors**		P
G.4.1	Spacings	See below	P

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Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	Mains connector configuration .....:	Approved according to IEC/EN 60320-1 appliance inlet used.	P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely	Output connector with a shape that insert into a mains connector is unlikely to occur.	P
G.5	**Wound Components**		P
G.5.1	Wire insulation in wound components.....	Approved triple insulated wire used as Reinforced insulation for secondary winding of T2.	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°	Physical separation is used tube to wrap the winding leads.	P
G.5.1.2 b)	Construction subject to routine testing		N/A
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s) .....:		—
	Temperature (°C) .....:		—
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	**Transformers**		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1).....:	The transformer meets the requirements given in G.5.3.2 and G.5.3.3.	P
	Position.....:	T2	—
	Method of protection .....:	By protection circuit design.	—
G.5.3.2	Insulation	Primary windings and secondary windings are separated by Reinforced insulation (The core is considered as primary part as it is not isolated from Primary)	P
	Protection from displacement of windings.....:	The end-turn of each winding is fixed by insulating tape	—
G.5.3.3	Overload test ..... :	(See appended table B.3&B.4)	P
G.5.3.3.1	Test conditions	Tested in the complete equipment.	P
G.5.3.3.2	Winding Temperatures testing in the unit	(See appended table B.3&B.4)	P
G.5.3.3.3	Winding Temperatures - Alternative test method	Alternative test method was not considered.	N/A
G.5.4	**Motors**		N/A
G.5.4.1	General requirements	No motor used.	N/A
	Position .....:		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days) .....:		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V).....:		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h) .....:		N/A
	Electric strength test (V).....:		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature .....:		N/A
	Electric strength test (V) .....:		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h) .....:		N/A
	Electric strength test (V).....:		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage .....:		—
G.6	**Wire Insulation**		P
G.6.1	General	Triple insulated winding in T2 secondary windings used as reinforced safeguard in the isolating transformer that has separately complied with Annex J.	P
G.6.2	Solvent-based enamel wiring insulation	Insulation does not rely on solvent-based enamel.	N/A
G.7	**Mains supply cords**		N/A
G.7.1	General requirements	No such 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

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.3.2.3	Cord sheath or jacket position, distance (mm)....:		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry ..... :		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g) ..... :		—
	Diameter (m) ..... :		—
	Temperature (?C)..... :		—
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire	No such wire.	N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	**Varistors**		P
G.8.1	General requirements	VDE approved varisor used, coating V-0, see table 4.1.2 for details	P
G.8.2	Safeguard against shock	(See appended table 4.1.2)	P
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test ..... :	The method of control fire spread used, fire enclosure is provided.	N/A
G.8.3.3	Temporary overvoltage ..... :		N/A
G.9	**Integrated Circuit (IC) Current Limiters**		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.	No IC current limiter provided within the equipment.	N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA ..... :		--
G.9.1 d)	IC limiter output current (max. 5A) ..... :		--
G.9.1 e)	Manufacturers' defined drift ..... :		--
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	**Resistors**		N/A
G.10.1	General requirements	Resistor bridging functional insulation	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

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Clause	Requirement + Test	Result - Remark	Verdict
G.10.3.3	Impulse test		N/A
G.11	**Capacitor and RC units**		P
G.11.1	General requirements	Capacitors used in accordance with their rating and complied with subclasses of IEC 60384-14. (see appended table 4.1.2)	P
G.11.2	Conditioning of capacitors and RC units		P
G.11.3	Rules for selecting capacitors		P
G.12	**Optocouplers**		P
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results).....:	The optocoupler complied with standard IEC/EN 60747-5-5. (see appended table 4.1.2)	P
	Type test voltage Vini .....:	Considered	—
	Routine test voltage, Vini,b .....:	Considered	—
G.13	**Printed boards**		P
G.13.1	General requirements	See the following details.	P
G.13.2	Uncoated printed boards	The insulation between conductors on the outer surfaces of an uncoated printed board complied with the minimum clearance and creepage requirements	P
G.13.3	Coated printed boards	No coated printed board or multilayer board applied for within the equipment.	N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction).....:		—
G.13.5	Insulation between conductors on different surfaces		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 ..... :	No coating on component terminals considered to affect creepage or clearances.	N/A
G.15	**Liquid filled components**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.15.1	General requirements	No such device provided within the equipment.	N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	**IC including capacitor discharge function (ICX)**		N/A
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N/A
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	No telephone ringing signal generated within the equipment.	N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringing signal		N/A
H.3.1.1	Frequency (Hz) .....:		—
H.3.1.2	Voltage (V) .....:		—
H.3.1.3	Cadence; time (s) and voltage (V) .....:		—
H.3.1.4	Single fault current (mA):.....:		—
H.3.2	Tripping device and monitoring voltage .....:		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V) .....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
J	**INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION**		P
	General requirements	Triple insulated winding wiring used as reinforced safeguard in the isolating transformer that has been evaluated to Annex J as follows: Requirements of Annex U of IEC 60950-1/A2 are identical to Annex J of this standard (for wires providing Reinforced insulation). See Table 4.1.2.	P
K	**SAFETY INTERLOCKS**		N/A
K.1	General requirements	No safety interlock provided.	N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance .....:		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method .....:		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) .....:		N/A
K.7.2	Overload test, Current (A) .....:		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test .....:		N/A
L	**DISCONNECT DEVICES**		P
L.1	General requirements	AC inlet used as disconnect device.	P
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized	When AC inlet is disconnected no hazardous voltage in the equipment.	P
L.4	Single phase equipment	The appliance coupler disconnects both poles simultaneously.	P
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices	-	N/A
L.8	Multiple power sources	Only one a.c. mains connection.	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	No battery used.	N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method) .. :		--
M.3	Protection circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Tests		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance .....:		--
M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature .....:		--
M.4.2.2 b)	Single faults in charging circuitry .....:		--
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		N/A
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A

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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) ..... :		--
M.6.2	Leakage current (mA) ..... :		--
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
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**		N/A
	Metal(s) used ..... :	No risk of corrosion.	--
O	**MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES**		P
	Figures O.1 to O.20 of this Annex applied ..... :	Considered.	—
P	**SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS**		P
P.1	General requirements	No opening	P
P.2.2	Safeguards against entry of foreign object		P
	Location and Dimensions (mm) ..... :	No openings of enclosure.	—
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	No such liquids.	N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts	No such construction.	N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C).....:		—
	Tr (°C) .....:		—
	Ta (°C).....:		—
P.4.2 b)	Abrasion testing .....:		N/A
P.4.2 c)	Mechanical strength testing .....:		N/A
Q	**CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING**		P
Q.1	Limited power sources	See appended table Annex Q.1	P
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		P
	- Regulating network limited output under normal operating and simulated single fault condition	A regulating network limits the output in compliance with table Q.1 both under normal operating conditions and after any single fault.	P
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method	See appended table Annex Q.1	P
Q.2	Test for external circuits – paired conductor cable	No such circuit for connection to the EUT	N/A
	Maximum output current (A) .....:		--
	Current limiting method.....:		--
R	**LIMITED SHORT CIRCUIT TEST**		N/A
R.1	General requirements	No such consideration.	N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)). .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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	Approved fire enclosure with V-0 material used.	N/A
	Samples, material .....:		—
	Wall thickness (mm).....:		—
	Conditioning (?C) .....:		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material .....:		—
	Wall thickness (mm).....:		—
	Conditioning (?C) .....:		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material .....:		—
	Wall thickness (mm).....:		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material .....:		—
	Wall thickness (mm).....:		—
	Conditioning (test condition), (°C).....:		—
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	After every test specimen was not consumed completely		N/A
	After fifth flame application, flame extinguished within 1 min		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
T	**MECHANICAL STRENGTH TESTS**		P
T.1	General requirements		P
T.2	Steady force test, 10 N .....:	(See appended table T.2)	P
T.3	Steady force test, 30 N .....:	No internal enclosure.	N/A
T.4	Steady force test, 100 N .....:	(See appended table T.4)	P
T.5	Steady force test, 250 N .....:	(See appended table T.5)	P
T.6	Enclosure impact test		P
	Fall test		P
	Swing test		N/A
T.7	Drop test .....:	(See appended table T.7)	P
T.8	Stress relief test .....:	(See appended table T.8)	P
T.9	Impact Test (glass)	No glass used.	N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J).....:		—
	Height (m) .....:		—
T.10	Glass fragmentation test .....:		N/A
T.11	Test for telescoping or rod antennas	No such antennas provided within the equipment.	N/A
	Torque value (Nm) .....:		—

U	**MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFECTS OF IMPLOSION**		N/A
U.1	General requirements	No CRT provided.	N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen.....:		N/A

V	**DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)**		P
V.1	Accessible parts of equipment	No access with test probes to any hazardous parts	P
V.2	Accessible part criterion		P

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

4.1.2	TABLE: List of critical components				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
Enclosure	Sabic Innovative Plastics US L L C	940(f1)	PC, V-0, 120°C, min. thickness 1.5mm	UL 94	UL
(Alternative)	SILVER AGE ENGINEERING PLASTICS (DONGGUAN) CO LTD	PC2330, PC2370(a1)(f1)	PC, V-0, 115°C, min. thickness 1.5mm	UL 94	UL
AC Inlet (CN1)	Zhejiang LECI Electronics Co., Ltd	DB-14	10A, 250Vac, Standard sheet C14, 70℃	IEC/EN 60320-1 UL 60320-1	VDE UL
(Alternative)	Zhejiang LECI Electronics Co., Ltd	DB-6	2.5A, 250Vac, Standard sheet C6, 70℃	IEC/EN 60320-1 UL 60320-1	VDE UL
(Alternative)	DONGGUAN HUACONN ELECTRONICS CO LTD	HC-99	10A, 250Vac, Standard sheet C14, 70℃	IEC/EN 60320-1 UL 60320-1	VDE UL
(Alternative)	DONGGUAN HUACONN ELECTRONICS CO LTD	HC-66	2.5A, 250Vac, Standard sheet C6, 70℃	IEC/EN 60320-1 UL 60320-1	VDE UL
(Alternative)	Zhe Jiang Bei Er Jia Electronic Co.	ST-A01-003J	10A, 250Vac, Standard sheet C14, 70℃	IEC/EN 60320-1 UL 60320-1	VDE UL
(Alternative)	Zhe Jiang Bei Er Jia Electronic Co.	ST-A04-002	2.5A, 250Vac, Standard sheet C6, 70℃	IEC/EN 60320-1 UL 60320-1	VDE UL
(Alternative)	Rong Feng Industrial Co Ltd	SS-120	10A, 250Vac, Standard sheet C14, 70℃	IEC/EN 60320-1 UL 60320-1	VDE UL
(Alternative)	Rong Feng Industrial Co Ltd	RF-190	2.5A, 250Vac, Standard sheet C6, 70℃	IEC/EN 60320-1 UL 60320-1	VDE UL
(Alternative)	Sun Fair Electric Wire & Cable (HK) Co Ltd	S-03	10A, 250Vac, Standard sheet C14, 70℃	IEC/EN 60320-1 UL 60320-1	VDE UL
Protective bonding wire	SHENZHEN FUJIA APPLIANCE CO LTD	1672	VW-1, Min.18AWG, 105°C	UL 758	UL

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

(Alternative)	Interchangeable	Interchangeable	VW-1, Min.18AWG, 105°C	UL758	UL
Output cord	Interchangeable	Interchangeable	VW-1, 300V, Min. 24AWG, min. 80°C	UL 758	UL
Strain Relief	Interchangeable	Interchangeable	Min. V-1, Integral to cord	UL 94	UL
PCB	Interchangeable	Interchangeable	V-0, 130°C	UL 796	UL
Fuse(F1)	XC Electronics (Shen Zhen) Corp. Ltd.	3T	T3.15A, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3 UL 248	VDE UL
(Alternative)	Shenzhen Lanson Electronics Co., Ltd.	3K Series	T3.15A, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3 UL 248	VDE UL
(Alternative)	HONG HU BLUELIGHT ELECTRONIC CO LTD	L3T	T3.15A, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3 UL 248	VDE UL
Thermistor (RT1) (optional)	Interchangeable	Interchangeable	Min. 3.0 A, Min.1.0Ω, at 25°C	UL 1434	UL
Heat shrinkable tube used on F1, LF2	Interchangeable	Interchangeable	VW-1, 600V, 125°C	UL 224	UL
Line filter (LF1) (Optional)	Interchangeable	Interchangeable	Min.0.7mH, 130°C	--	--
- Triple insulated wire	Furukawa Electric Co.,Ltd.	TEX-E	130°C	IEC/EN/UL 60950-1	VDE UL
- Magnet wire	Interchangeable	Interchangeable	130°C	UL 1446	UL
Line filter (LF2) (Optional)	Interchangeable	Interchangeable	Min.12mH,130°C	--	--
- Bobbin	Sumitomo Bakelite Co. Ltd	PM-9820, PM-9630	Phenolic, V-0, 150°C, Min. thickness 0.9 mm	UL 94	UL
(Alternative)	Chang Chun Plastics	4130(100%Virgin) (a)(b)	PBT, V-0, 140 °C, Min. thickness 0.9 mm	UL94	UL
- Magnet wire	Interchangeable	Interchangeable	130°C	UL 1446	UL
- Insulation tape	3M Corp	1350F-1(b), 1350-1(c)	130°C	UL 510	UL

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

(Alternative)	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	CT*(c)(g), PZ*(b)	130°C	UL 510	UL
Bridge diode (BD1)	Interchangeable	Interchangeable	Min. 2.0A, min. 600V	--	--
Electrolytic capacitor (C6)	Interchangeable	Interchangeable	68-200µF, min. 400Vdc, min. 105°C	--	--
Transistor (Q3)	Interchangeable	Interchangeable	Min. 7A, min. 600V	--	--
Current sense resistor (R1)	Interchangeable	Interchangeable	Min. 0.47 ohm, Min. 1/2 W	--	--
Current sense resistor (R5) (output power< 36W not provided, ≥36W optional)	Interchangeable	Interchangeable	Min. 0.47 ohm, Min. 1/4 W	--	--
Current sense resistor (R29) (output power< 36W not provided, ≥36W optional)	Interchangeable	Interchangeable	Min. 0.47 ohm, Min. 1/4 W	--	--
Bleeder resistor (R2, R3, R37, R38)	Interchangeable	Interchangeable	Each max.1.8M ohm, min.1/4 W	--	--
X-Capacitor (CX1) (optional)	Shantou High-New Technology Development Zone Songtian Enterprise Co	MPX	Max. 0.47µF, ±10%, min. 250Vac, 110°C, X2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	XIAMEN WANMING ELECTRONICS CO LTD	MPX	Max. 0.47µF, ±10%, min. 250Vac, 110°C, X2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	DONGGUAN TOPCAP TECHNOLOGY CO LTD	MPX	Max. 0.47µF, ±10%, min. 250Vac, 110°C, X2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	DONGGUAN CITY DAFU ELECTRONICS CO LTD	MPX	Max. 0.47µF, ±10%, min. 250Vac, 110°C, X2 type	IEC/EN/UL 60384-14	VDE UL

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

(Alternative	Dongguan Easy- Gather Electronic Co Ltd	MKP-X2	Max. 0.47µF, ±10%, min. 250Vac, 105°C, X2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	Carli Electronics Co.,Ltd	MPX	Max. 0.47µF, ±10%,min. 250Vac, 100°C, X2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	XIANGTAI ELECTRONIC (SHENZHEN) CO LTD	MPX/MKP	Max. 0.47µF, ±10%,min. 250Vac, 110°C, X2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	Tenta Electric Industrial Co Ltd	MEX	Max. 0.47µF, ±10%,min. 250Vac, 110°C, X2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	Dain Electronics Co Ltd	MPX	Max. 0.47µF, ±10%, min. 250Vac, 110°C, X2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	SHENZHEN HAOTIAN ELECTRONIC CO LTD	MPX	Max. 0.47µF, ±10%,min. 250Vac, 105°C, X2 type	IEC/EN/UL 60384-14	VDE UL
Y capacitor (CY1, CY2) (when CY1&CY2 in series use) (Bridging Pri. And Sec. circuit) (optional)	Shantou High-New Technology Development Zone Songtian Enterprise Co Ltd	CD (for Y1 type), CE (for Y2 type)	Max. 3300pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	GUANGDONG SOUTH HONGMING ELECTRONIC SCIENCE & TECHNOLOGY CO LTD	F	Max. 3300pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	Dongguan Cigu Electronic	CD (Y1), CE (Y2)	Max. 3300pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	DONGGUAN CITY DAFU ELECTRONICS CO LTD	CT7 Y1, CT7 Y2	Max. 3300pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL

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

(Alternative)	XIAMEN WANMING ELECTRONICS CO LTD	CK (for Y1 type), CM (for Y2 type)	Max. 3300pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	Dongguan Easy- Gather Electronic Co Ltd	DCF	Max. 3300pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	Jya-Nay Co Ltd	JN	Max. 3300pF, min. 250Vac, 125℃ , Y1 type	IEC/EN/UL 60384-14	TUV UL
(Alternative)	XIANGTAI ELECTRONIC (SHENZHEN) CO LTD	YO-series (Y1), YT(Y2)	Max. 3300pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN 60384-14	VDE
(Alternative)	XIANGTAI ELECTRONIC (SHENZHEN) CO LTD	YOF (Y1), YT (Y2)	Max. 3300pF, min. 250Vac, 125℃ , Y1 or Y2 type	UL 60384-14	UL
(Alternative)	Murata Mfg Co Ltd	KX	Max. 3300pF, min. 250Vac, 125℃ , Y1 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	SHENZHEN HAOTIAN ELECTRONIC CO LTD	HT (Y1), HTC (Y2)	Max. 3300pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL
Y capacitor (CY1) (when CY2 not use) (Bridging Pri. And Sec. circuit) (optional)	Shantou High-New Technology Development Zone Songtian Enterprise Co Ltd	CD	Max. 2200pF, min. 250Vac, 125℃ , Y1 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	GUANGDONG SOUTH HONGMING ELECTRONIC SCIENCE & TECHNOLOGY CO LTD	F	Max. 2200pF, min. 250Vac, 125℃ , Y1 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	Dongguan Cigu Electronic	CD	Max. 2200pF, min. 250Vac, 125℃ , Y1 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	DONGGUAN CITY DAFU ELECTRONICS CO LTD	CT7 Y1	Max. 2200pF, min. 250Vac, 125℃ , Y1 type	IEC/EN/UL 60384-14	VDE UL

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

(Alternative)	XIAMEN WANMING ELECTRONICS CO LTD	CK	Max. 2200pF, min. 250Vac, 125℃ , Y1 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	Dongguan Easy- Gather Electronic Co Ltd	DCF	Max. 2200pF, min. 250Vac, 125℃ , Y1 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	Jya-Nay Co Ltd	JN	Max. 2200pF, min. 250Vac, 125℃ , Y1 type	IEC/EN/UL 60384-14	TUV UL
(Alternative)	XIANGTAI ELECTRONIC (SHENZHEN) CO LTD	YO-series	Max. 2200pF, min. 250Vac, 125℃ , Y1 type	IEC/EN 60384-14	VDE
(Alternative)	XIANGTAI ELECTRONIC (SHENZHEN) CO LTD	YOF	Max. 2200pF, min. 250Vac, 125℃ , Y1 type	UL 60384-14	UL
(Alternative)	Murata Mfg Co Ltd	KX	Max. 2200pF, min. 250Vac, 125℃ , Y1 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	SHENZHEN HAOTIAN ELECTRONIC CO LTD	HT	Max. 2200pF, min. 250Vac, 125℃ , Y1 type	IEC/EN/UL 60384-14	VDE UL
Y capacitor (CY3, CY4) (optional)	Shantou High-New Technology Development Zone Songtian Enterprise Co Ltd	CD (for Y1 type), CE (for Y2 type)	Max. 2200pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	GUANGDONG SOUTH HONGMING ELECTRONIC SCIENCE & TECHNOLOGY CO LTD	F	Max. 2200pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	Dongguan Cigu Electronic	CD (Y1), CE (Y2)	Max. 2200pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	DONGGUAN CITY DAFU ELECTRONICS CO LTD	CT7 Y1, CT7 Y2	Max. 2200pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL

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

(Alternative)	XIAMEN WANMING ELECTRONICS CO LTD	CK (for Y1 type), CM (for Y2 type)	Max. 2200pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	Dongguan Easy- Gather Electronic Co Ltd	DCF	Max. 2200pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	Jya-Nay Co Ltd	JN	Max. 2200pF, min. 250Vac, 125℃ , Y1 type	IEC/EN/UL 60384-14	TUV UL
(Alternative)	XIANGTAI ELECTRONIC (SHENZHEN) CO LTD	YO-series (Y1), YT(Y2)	Max. 2200pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN 60384-14	VDE
(Alternative)	XIANGTAI ELECTRONIC (SHENZHEN) CO LTD	YOF (Y1), YT (Y2)	Max. 2200pF, min. 250Vac, 125℃ , Y1 or Y2 type	UL 60384-14	UL
(Alternative)	Murata Mfg Co Ltd	KX	Max. 2200pF, min. 250Vac, 125℃ , Y1 type	IEC/EN/UL 60384-14	VDE UL
(Alternative)	SHENZHEN HAOTIAN ELECTRONIC CO LTD	HT (Y1), HTC (Y2)	Max. 2200pF, min. 250Vac, 125℃ , Y1 or Y2 type	IEC/EN/UL 60384-14	VDE UL
Varistor (RV1) (Optional)	Shantou High-New Technology Development Zone Songtian Enterprise Co Ltd	10D471K, 10D511K, 14D471K, 14D511K	Min. 300V ac, 105°C, (tested for 6KV/3KA combination pulse), coating V-0	IEC/EN 61051-1 UL 1449	VDE UL
(Alternative)	XIAMEN WANMING ELECTRONICS CO LTD	WMR10D471K-2, WMR10D471K-3, WMR10D511K-2, WMR10D511K-3, WMR14D471K-2, WMR14D471K-3, WMR14D511K-2, WMR14D511K-3	Min. 300V ac, Min.105°C, (tested by UL for 6KV/3KA combination pulse), coating V-0	IEC/EN 61051-1 UL 1449	VDE UL

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

(Alternative)	Thinking Electronic Industriall Co Ltd	TVR14471, TVR14511, TVR14561, TVR14621, TVR10471, TVR10511, TVR10561, TVR10621	Min. 300V ac, 105°C, (tested for 6KV/3KA combination pulse), coating V-0	IEC/EN 61051-1 UL 1449	VDE UL
(Alternative)	Lien Shun Technical Co Ltd	10D471K, 10D511K, 14D471K, 14D511K	Min. 300V ac, 105°C, (tested for 6KV/3KA combination pulse), coating V-0	IEC/EN 61051-1 UL 1449	VDE UL
(Alternative)	Success Electronics Co Ltd	SVR14D471K, SVR14D511K, SVR10D471K, SVR10D511K	Min. 300V ac, Min.105°C, (tested by UL for 6KV/3KA combination pulse), coating V-0	IEC/EN 61051-1 IEC/EN 61051-2 UL 1449	VDE UL
(Alternative)	Centra Science Corp	CNR-14D471K, CNR-10D471K, CNR-10V471K, CNR-10V511K, CNR-10V561K, CNR-14V471K, CNR-14V511K, CNR-14V561K	Min. 300V ac, Min.105°C, (tested by UL for 6KV/3KA combination pulse), coating V-0	IEC/EN 61051-1 IEC/EN 61051-2 UL 1449	VDE UL
Opto-coupler (OP1)	Everlight Electronics Co Ltd	EL1018, EL1019	Ext. Dcr. = 8.1mm 110°C	IEC/EN 60950-1, IEC/EN 60747-5-5, UL 1577	VDE UL
(Alternative)	CHINA RESOURCES SEMICONDUCTOR(SHENZHEN)LIMITED	1018, 1019, HK1018, HK1019	Ext. Dcr. = 8.0mm 110°C	IEC/EN 60950-1, IEC/EN 60747-5-5, UL 1577	VDE UL
(Alternative)	CT Micro International Corporation	CT1018, CT1019	Ext. Dcr. = 8.0mm 110°C	IEC/EN 60950-1, IEC/EN 60747-5-5, UL 1577	VDE UL
Opto-coupler (OP2) (optional)	Everlight Electronics Co Ltd	EL1018, EL1019	Ext. Dcr. = 8.1mm 110°C	IEC/EN 60950-1, IEC/EN 60747-5-5, UL 1577	VDE UL
(Alternative)	CHINA RESOURCES SEMICONDUCTOR(SHENZHEN)LIMITED	1018, 1019, HK1018, HK1019	Ext. Dcr. = 8.0mm 110°C	IEC/EN 60950-1, IEC/EN 60747-5-5, UL 1577	VDE UL

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

(Alternative)	CT Micro International Corporation	CT1018, CT1019	Ext. Dcr. = 8.0mm 110°C	IEC/EN 60950-1, IEC/EN 60747-5-5, UL 1577	VDE UL
Insulation cover on transformer	E I DUPONT DE NEMOURS & CO INC	FR530(I)(+)(f1), FR530L(I)(+)(f1)	V-0, 155 °C. min. thickness 0.4mm	UL 94	UL
Transformer (T2)	Shenzhen Fujia Appliance Co., Ltd.	2017-T1 (for output voltage 5.0-9.0V) 2017-T2 (for output voltage 9.5-19.5V) 2017-T3 (for output voltage 20.0-33.0V) 2017-T4 (for output voltage 36.0-54.0V)	Class B	Applicable part of IEC/EN 62368-1 and according to IEC 60085	Tested with appliance
- Bobbin	Sumitomo Bakelite Co. Ltd	PM-9820, PM-9630	Phenolic, V-0, 150°C, Min. thickness 0.9 mm	UL 94	UL
(Alternative)	Chang Chun Plastics	4130(100%Virgin) (a)(b)	PBT, V-0, 140 °C Min. thickness 0.9 mm	UL94	UL
- Secondary Triple insulated wire	Furukawa Electric Co.,Ltd.	TEX-E	130°C	IEC/EN 60950-1 UL 2353	VDE UL
- Magnet wire	Interchangeable	Interchangeable	130°C	UL 1446	UL
-Tube	Great Holding Industrial Co Ltd	TFL, TFS, TFT	200°C	UL 224	UL
(Alternative)	Zeus Industrial Products Inc	TFE-LW-150, TFE-TW-300, TFE-SW-600	200°C	UL 224	UL
- Insulation tape	3M Corp	1350F-1(b), 1350-1(c)	130°C	UL 510	UL
(Alternative)	Jinjiang Yahua Sticking Tape Co Ltd	CT*(c)(g), PZ*(b)	130°C	UL 510	UL
(Alternate)	P Leo & Co (B C) Ltd	1P801, 1P802	130°C	UL 510	UL
-Varnish	Hitachi Chemical Co	WP-2952F-2G	130°C	UL 1446	UL

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

(Alternative)	ELANTAS ELECTRICAL INSULATION ELANTAS PDG INC	468-2(d)	130°C	UL 1446	UL

Supplementary information:

1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.
2) Opto-coupler OP2 is optional only for output voltage ≤ 33Vdc models, The other models it is provided.

IEC 62368-1			
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:

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

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

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

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 [1)]	Parameters			ES Class
				U (Vrms or Vpk)	I (Apk or Arms)	Hz	
Model: FJ-SW20170906000 (output load: 9.0V6.0A)							
1	264Va.c. 60Hz	Primary circuits supplied by a.c. mains supply	Normal	264Vrms	--	60	ES3
			Abnormal	--	--	--	
			Single fault	--	--	--	
2	264Va.c, 60Hz	T2 pin TA-TB	Normal	38.2Vpk	--	53.6K	ES1
3.	264Va.c, 60Hz	T2 secondary (after Q4)	Normal	9.15Vdc	--	DC	ES1
			Single fault: SC Q4 pin D-S	0 (output shut down)	--	--	
3	264Va.c, 60Hz	Output	Normal	9.0Vdc max.	--	DC	ES1
			Normal (CY1=2200pF)	--	0.304mApk	60	ES1
			Normal (CY1=CY2=3300 pF)	--	0.288mApk	60	ES1
			Single fault: SC CY2 (CY1=CY2=3300 pF)	--	0.336mApk	60	ES1
4	264Va.c. 60Hz	Plastic enclosure to earth	Normal	--	0.005mApk	60	ES1
Model: FJ-SW20171096000 (output load: 10.9V6.0A)							
1	264Va.c. 60Hz	Primary circuits supplied by a.c. mains supply	Normal	264Vrms	--	60	ES3
			Abnormal	--	--	--	
			Single fault	--	--	--	
2	264Va.c, 60Hz	T2 pin TA-TB	Normal	66.0Vpk	--	53.6K	ES2
3	264Va.c. 60Hz	T2 secondary (after Q4)	Normal	11.0Vdc	--	DC	ES1
			Single fault: SC Q4 pin D-S	0 (output shut down)	--	--	
4	264Va.c, 60Hz	Output	Normal	10.8Vdc max.	--	DC	ES1

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Clause	Requirement + Test			Result - Remark			Verdict
			Normal (CY1=2200pF)	--	0.304mApk	60	ES1
			Normal (CY1=CY2=3300 pF)	--	0.288mApk	60	ES1
			Single fault: SC CY2 (CY1=CY2=3300 pF)	--	0.336mApk	60	ES1
5	264Va.c. 60Hz	Plastic enclosure to earth	Normal	--	0.005mApk	60	ES1
Model: FJ-SW20172003250 (output load: 20.0V3.25A)							
1	264Va.c. 60Hz	Primary circuits supplied by a.c. mains supply	Normal	264Vrms	--	60	ES3
			Abnormal	--	--	--	
			Single fault	--	--	--	
2	264Va.c, 60Hz	T2 pin TA-TB	Normal	129.1Vpk	--	53.6K	ES3
3	264Va.c. 60Hz	T2 secondary (after Q4)	Normal	20.7Vdc	--	DC	ES1
			Single fault: SC Q4 pin D-S	0 (output shut down)	--	--	
4	264Va.c, 60Hz	Output	Normal	19.7Vdc max.	--	DC	ES1
			Normal (CY1=2200pF)	--	0.304mApk	60	ES1
			Normal (CY1=CY2=3300 pF)	--	0.288mApk	60	ES1
			Single fault: SC CY2 (CY1=CY2=3300 pF)	--	0.336mApk	60	ES1
5	264Va.c. 60Hz	Plastic enclosure to earth	Normal	--	0.005mApk	60	ES1

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Clause	Requirement + Test	Result - Remark	Verdict

Model: FJ-SW20175401200 (output load: 54.0V1.2A)							
1	264Va.c. 60Hz	Primary circuits supplied by a.c. mains supply	Normal	264Vrms	--	60	ES3
			Abnormal	--	--	--	
			Single fault	--	--	--	
2	264Va.c, 60Hz	T2 pin TA-TB	Normal	250.1Vpk	--	53.6K	ES3
3	264Va.c. 60Hz	T2 secondary (after Q4)	Normal	54.0Vdc	--	DC	ES1
			Single fault: SC Q4 pin D-S	0 (output shut down)	--	--	
4	264Va.c, 60Hz	Output	Normal	53.8Vdc max.	--	DC	ES1
			Normal (CY1=2200pF)	--	0.304mApk	60	ES1
			Normal (CY1=CY2=3300 pF)	--	0.288mApk	60	ES1
			Single fault: SC CY2 (CY1=CY2=3300 pF)	--	0.336mApk	60	ES1
			Single fault: SC OP1 pin 1-2	0 (output shut down)	--	--	ES1
			Single fault: OC OP1 pin 1	0 (output shut down)	--	--	ES1
			Single fault: SC OP1 pin 3-4	54.7Vdc Max. (Unit worked normally)	--	DC	ES1
			Single fault: OC OP1 pin 3	54.7Vdc Max. (Unit worked normally)	--	DC	ES1
			Single fault: SC OP2 pin 1-2	0 (output shut down)	--	--	ES1
			Single fault: OC OP2 pin 1	0 (output shut down)	--	--	ES1
			Single fault: SC OP2 pin 3-4	54.7Vdc Max. (Unit worked normally)	--	DC	ES1
			Single fault: OC OP2 pin 3	54.7Vdc Max. (Unit worked normally)	--	DC	ES1
5	264Va.c. 60Hz	Plastic enclosure to earth	Normal	--	0.005mApk	60	ES1

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

Model: FJ-SW20173301970 (33Vdc 1.97A) (with opto-coupler OP1 only)

1	264Va.c. 60Hz	T2 secondary (after Q4)	Normal	33.6Vdc	--	DC	ES1
			Single fault: SC Q4 pin D-S	0 (output shut down)	--	--	ES1
2	264Va.c, 60Hz	Output	Normal	32.8Vdc max.	--	DC	ES1
			Normal (CY1=2200pF)	--	0.304mApk	60	ES1
			Normal (CY1=CY2=3300 pF)	--	0.288mApk	60	ES1
			Single fault: SC CY2 (CY1=CY2=3300 pF)	--	0.336mApk	60	ES1
			Single fault: SC OP1 pin 1-2	0 (output shut down)	--	--	ES1
			Single fault: OC OP1 pin 1	0 (output shut down)	--	--	ES1

Note: Input voltage: 264Vac, 60Hz

5.2.2.3 - Capacitance Limits

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Capacitance, nF	Upk (V)	
1	264Va.c, 60Hz	Between L & N (CX1)	Normal (after RV1 disconnected)	470	373	ES3
			Abnormal	--	--	--
			Single fault: R2 OC	--	--	--

Overall capacity: CX1=0.47μF±10%;

Limit: ES1=60V; ES2=120V.

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)	
1	264Va.c, 60Hz	Output "+" to "-"	Normal	--	--	--	--
			Abnormal	--	--	--	
			Signal fault			--	

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)	

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Clause	Requirement + Test	Result - Remark	Verdict

Model: FJ-SW20173301970 (33Vdc 1.97A) (with opto-coupler OP1 only)							
1	264Va.c, 60Hz	Output	Signal fault OP1 pin 3-4 SC	600	40.3Vpk Max. (Unit output voltage oscillatory)	--	ES1
			Signal fault OP1 pin 3 OC	600	40.3Vpk Max. (Unit output voltage oscillatory)	--	
Test Conditions: Normal – Full load and no load. Abnormal – Overload output Supplementary information: SC=Short Circuit, OC=Open Circuit .							

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements				P
	Supply voltage (V) .....:	90V/50Hz	264V/50Hz		—
	Ambient T_{min} (°C) .....:	--	--		—
	Ambient T_{max} (°C) .....:	--	--		—
	Tma (°C) .....:	--	--		—
Maximum measured temperature T of part/at:		T (°C)			Allowed T_{max} (°C)
--		Label up	Label down	Label up	Label down	--
Model: FJ-SW20170906000					
AC Inlet		56.9	57.2	54.0	53.7	70
Y-capacitor CY3		85.5	85.4	77.7	77.0	125
Line chock of LF1		73.1	73.2	66.2	65.4	130
Varistor RV1		91.7	90.3	77.4	76.9	105
X-capacitor CX1		83.9	83.7	72.0	71.0	100
Line chock of LF2		92.8	91.9	76.8	76.1	130
PCB under BD1		101.1	99.6	87.8	88.0	130
E-capacitor C6		93.4	92.6	82.8	82.2	105
PCB under Q3		105.0	103.7	94.0	94.0	130
Y-capacitor CY1		84.4	85.7	81.9	80.4	125
T2 coil		101.8	102.8	101.4	99.6	110
T2 core		94.2	97.8	96.8	92.9	110
PCB under Q4		94.1	92.5	87.5	88.4	130
Opto coupler OP1		97.3	93.3	91.1	94.6	110
Opto coupler OP2		96.6	91.9	89.8	94.0	110
E-capacitor C7		97.3	96.8	98.4	96.5	105
Line chock of LF3		80.7	83.7	82.7	80.0	130
Output wire		73.6	77.4	76.5	73.2	80
PE wire (near heat-sink HS1)		84.0	85.6	82.7	81.0	105
Plastic enclosure inside near T2		94.1	97.7	97.0	93.0	115
Ambient		45.1	45.4	45.5	45.5	--
Plastic enclosure outside near T2		58.3	68.1	67.7	58.5	77*
Ambient		25.0	25.0	25.0	25.0	--
Model: FJ-SW20171096000					
AC Inlet		59.5	61.8	60.4	56.8	70
Y-capacitor CY3		84.3	84.2	75.9	71.8	125

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

Line chock of LF1	83.0	82.7	77.2	72.9	130
Varistor RV1	92.3	91.1	82.2	77.6	105
X-capacitor CX1	90.8	90.2	83.9	79.4	100
Line chock of LF2	100.3	98.5	84.4	79.9	130
PCB under BD1	110.1	104.2	96.3	88.7	130
E-capacitor C6	98.5	97.4	88.1	84.9	105
PCB under Q3	115.0	108.7	100.5	93.2	130
Y-capacitor CY1	81.2	83.9	80.0	77.0	125
T2 coil	105.5	105.1	102.0	96.7	110
T2 core	100.5	101.2	97.0	92.8	110
PCB under Q4	99.9	98.8	96.0	90.7	130
Opto coupler OP1	99.9	93.2	94.7	85.4	110
Opto coupler OP2	98.1	92.4	93.4	84.8	110
E-capacitor C7	90.3	90.1	86.7	81.8	105
Line chock of LF3	77.5	74.3	71.4	69.9	130
Output wire	72.7	70.9	67.1	66.7	80
PE wire (near heat-sink HS1)	81.3	85.4	75.5	73.8	105
PE wire (near LF2)	74.5	73.3	69.6	68.7	105
Plastic enclosure inside near T2	96.6	99.5	94.0	91.3	115
Ambient	45.2	45.5	45.5	45.5	--
Plastic enclosure outside near T2	70.2	69.1	61.1	62.3	77*
Ambient	25.0	25.0	25.0	25.0	--
Model: FJ-SW20172003250					
AC Inlet	67.8	68.8	61.3	62.2	70
Y-capacitor CY3	95.3	97.5	78.1	79.4	125
Line chock of LF1	87.3	89.5	76.3	77.7	130
Varistor RV1	102.3	100.0	89.1	90.4	105
X-capacitor CX1	95.4	97.7	87.2	88.3	100
Line chock of LF2	107.5	110.4	86.2	87.5	130
PCB under BD1	100.2	102.5	85.8	87.0	130
E-capacitor C6	101.6	102.1	90.1	91.5	105
PCB under Q3	113.6	116.1	101.3	102.3	130
Y-capacitor CY1	88.8	91.0	85.7	87.1	125
T2 coil	106.3	105.4	106.2	106.9	110
T2 core	103.2	101.6	101.9	103.2	110
PCB under Q4	103.7	109.5	112.2	114.5	130
Opto coupler OP1	97.7	100.5	97.3	98.6	110

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Clause	Requirement + Test	Result - Remark	Verdict

Opto coupler OP2	97.7	100.8	98.5	100.1	110
E-capacitor C7	88.5	92.9	93.4	95.3	105
Line chock of LF3	69.1	71.3	70.0	71.7	130
Output wire	64.5	66.6	65.5	67.2	80
PE wire (near heat-sink HS1)	83.9	85.8	74.2	75.3	105
Plastic enclosure inside near T2	97.7	100.4	96.6	98.3	115
Ambient	45.2	45.4	45.3	45.4	--
Plastic enclosure outside near T2	65.2	66.1	64.7	64.8	77*
Ambient	25.0	25.0	25.0	25.0	--
Model: FJ-SW20175401200					
AC Inlet	54.3	53.5	48.6	47.6	70
Y-capacitor CY3	82.2	78.4	60.2	61.6	125
Line chock of LF1	67.8	64.3	54.6	54.6	130
Varistor RV1	86.0	81.2	63.9	65.3	105
X-capacitor CX1	83.1	78.0	63.3	64.3	100
Line chock of LF2	95.6	90.3	66.9	68.9	130
PCB under BD1	93.8	90.3	66.7	67.8	130
E-capacitor C6	96.2	91.1	69.7	71.2	105
PCB under Q3	102.5	97.6	77.8	80.4	130
Y-capacitor CY1	83.3	83.3	72.3	75.8	125
T2 coil	102.2	99.4	90.7	91.9	110
T2 core	99.3	97.1	89.9	91.6	110
PCB under Q4	107.9	107.5	98.4	100.0	130
Opto coupler OP1	92.1	90.2	76.0	78.2	110
Opto coupler OP2	94.4	90.8	76.8	80.2	110
E-capacitor C7	70.1	70.3	67.3	66.4	105
Line chock of LF3	95.4	92.9	70.3	71.8	130
Output wire	71.5	71.7	68.6	67.7	80
PE wire (near heat-sink HS1)	80.3	78.7	75.9	76.1	105
Plastic enclosure inside near T2	80.4	77.1	87.2	87.9	115
Ambient	45.2	45.6	45.0	45.0	--
Plastic enclosure outside near T2	51.0	48.8	51.6	48.1	77*
Ambient	25.0	25.0	25.0	25.0	--

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Clause	Requirement + Test	Result - Remark	Verdict

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

Note 1: The apparatus was submitted and evaluated for maximum manufacturer's recommended ambient (Tma) of 45°C.

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

Note 3. Temperature limits are calculated as follows:

Winding components providing safety isolation:

Class B → Tmax = 120 - 10=110°C

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

5.4.1.8	Table: working voltage measurement		P
Location	RMS voltage (V)	Peak voltage (V)	Comments
Model: FJ-SW20170906000			
Transformer T2 pin TA – pin1	179	344	The highest voltage.
Transformer T2 pin TA – pin3	182	404	
Transformer T2 pin TA – pin4	228	340	
Transformer T2 pin TA – pin6	280	524	
Transformer T2 pin TB – pin1	180	364	
Transformer T2 pin TB – pin3	186	440	
Transformer T2 pin TB – pin4	228	344	
Transformer T2 pin TB – pin6	**288**	**530**	
OP1 pin 1-3	192	336	
OP1 pin 1-4	190	336	
OP1 pin 2-3	192	336	
OP1 pin 2-4	192	338	
OP2 pin 1-3	198	342	
OP2 pin 1-4	194	336	
OP2 pin 2-3	198	340	
OP2 pin 2-4	192	338	
CY1 primary to secondary	179	344	
CY4 primary to secondary	242	334	
Model: FJ-SW20171096000			
Transformer T2 pin TA – pin1	181	344	
Transformer T2 pin TA – pin3	183	404	
Transformer T2 pin TA – pin4	229	340	
Transformer T2 pin TA – pin6	167	432	
Transformer T2 pin TB – pin1	182	396	

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Clause	Requirement + Test	Result - Remark	Verdict

Transformer T2 pin TB – pin3	186	**460**	The highest voltage.
Transformer T2 pin TB – pin4	231	344	
Transformer T2 pin TB – pin6	**281**	432	The highest voltage.
OP1 pin 1-3	192	336	
OP1 pin 1-4	192	336	
OP1 pin 2-3	192	336	
OP1 pin 2-4	192	338	
OP2 pin 1-3	198	350	
OP2 pin 1-4	194	346	
OP2 pin 2-3	196	344	
OP2 pin 2-4	194	342	
CY1 primary to secondary	178	344	
CY4 primary to secondary	240	333	
Model: FJ-SW20172003250			
Transformer T2 pin TA – pin1	178	344	
Transformer T2 pin TA – pin3	188	404	
Transformer T2 pin TA – pin4	237	340	
Transformer T2 pin TA – pin6	266	420	
Transformer T2 pin TB – pin1	184	444	
Transformer T2 pin TB – pin3	192	**504**	The highest voltage.
Transformer T2 pin TB – pin4	235	356	
Transformer T2 pin TB – pin6	**295**	444	The highest voltage.
OP1 pin 1-3	190	336	
OP1 pin 1-4	190	338	
OP1 pin 2-3	190	336	
OP1 pin 2-4	190	338	
OP2 pin 1-3	192	344	
OP2 pin 1-4	188	340	
OP2 pin 2-3	192	342	
OP2 pin 2-4	192	342	
CY1 primary to secondary	176	346	
CY4 primary to secondary	242	333	
Model: FJ-SW20175401200			
Transformer T2 pin TA – pin1	181	340	
Transformer T2 pin TA – pin3	185	400	
Transformer T2 pin TA – pin4	224	340	
Transformer T2 pin TA – pin6	280	452	

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Clause	Requirement + Test	Result - Remark	Verdict

Transformer T2 pin TB – pin1	203	540	
Transformer T2 pin TB – pin3	221	**612**	The highest voltage.
Transformer T2 pin TB – pin4	241	392	
Transformer T2 pin TB – pin6	**344**	524	The highest voltage.
OP1 pin 1-3	192	336	
OP1 pin 1-4	192	334	
OP1 pin 2-3	190	336	
OP1 pin 2-4	192	338	
OP2 pin 1-3	190	356	
OP2 pin 1-4	186	356	
OP2 pin 2-3	190	354	
OP2 pin 2-4	192	352	
CY1 primary to secondary	182	346	
CY4 primary to secondary	242	334	
supplementary information:			
Test voltage: 240V Test frequency: 60Hz			

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

5.4.1.10.3	**TABLE: Ball pressure test of thermoplastics**		P
Allowed impression diameter (mm) ..... :		≤ 2 mm	—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)
Bobbin or Transformer (Model: 4130(100%Virgin) (a)(b))	Chang Chun Plastics	125	1.0
Supplementary information: Other materials of T2 and LF2 bobbin are no need to conduct this test., see appended table4.1.2, And no other parts are necessary to be tested.			

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)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Line trace to Neutral trace before fuse F1 (B)	420	250	<30	2.3*	5.5	2.5	5.5

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Clause	Requirement + Test			Result - Remark			Verdict
PCB trace under fuse or F1 L pin to case after fuse (B)	420	250	<30	2.3*	2.9	2.5	4.8
Line trace to primary trace for LF1 (B)	420	250	<30	2.3*	3.3	2.5	3.3
PE to L/N trace (B)	420	250	<30	2.3*	3.1	2.5	4.6
PCB: primary to secondary traces under CY1(CY1&CY2 in series used) (B)	420	250	<30	2.3*	7.0	2.5	7.0
PCB: primary to secondary traces under CY2(CY1&CY2 used series) (S)	420	250	<30	2.3*	5.0	2.5	5.0
CY3 primary trace to PE (B)	420	250	<30	2.3*	5.1	2.5	5.1
CY4 primary trace to PE (B)	420	250	<30	2.3*	4.4	2.5	4.4
Primary heat-sink to accessible enclosure (R)	420	250	<30	4.5*	7.8	5.0	7.8
Primary circuit (PCB trace under RT1) to enclosure screw (R)	420	250	<30	4.5*	7.4	5.0	7.4
Primary circuit (PCB trace under primary line filter LF1) to enclosure screw (R)	420	250	<30	4.5*	6.3	5.0	6.3
PCB: primary to secondary traces under CY1 (without CY2)(R)	420	250	<30	4.5*	7.0	5.0	7.0
PCB: primary to secondary traces under OP1 (R)	420	250	<30	4.5*	7.5	5.0	7.5
PCB: primary to secondary traces under OP2 (R)	420	250	<30	4.5*	7.2	5.0	7.2
PCB: primary to secondary traces under T2 (R)	612	344	53.6	4.5*	9.1	6.9	9.1
PCB: core of T2 to secondary heat-sink HS2 (bottom) through primary winding (R)	612	344	53.6	4.5*	7.3	6.9	7.3
Component: primary heat-sink to secondary heat-sink (R)	420	250	<30	4.5*	8.8	5.0	8.8
Transformer							
Transformer (T2): core to secondary heat-sink HS2 over top of the cover (R)	612	344	53.6	4.5*	11.1	6.9	11.1
Transformer (T2): primary EMC copper foil (bottom) to CY1 secondary pin (without CY2) (R)	612	344	53.6	4.5*	8.0	6.9	8.0
Transformer (T2): primary winding (top) to C22 over the tube on	612	344	53.6	4.5*	10.0	6.9	10.0

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Clause	Requirement + Test	Result - Remark	Verdict

secondary winding (TA) (R)							

Supplementary information:

F=Functional insulation, B= Basic insulation, R=Reinforced insulation.

1. Triple insulated wire used in secondary side. Core of transformer (T2) is considered as primary.
2. Components LF1, LF2, CX1, BD1, C6, T2, Q4, C7 and heat-sink are additional by glue.
3. Insulation cover and tape used on transformer as reinforced insulation.
4. A slot with 1.4mm in width between L/N trace and PE trace.
5. *The equipment is intended to be operated under altitude up to 5000m, so the clearance is multiplied by the altitude correction factor (1.48, linear interpolation used), specified in table A.2 of IEC 60664-1
6. Transformer secondary winding terminals, output wire and earthing wire terminals additional fixed by glue.

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 (Vpeak)	Required cl (mm)	Measured cl (mm)
Line trace to Neutral trace before fuse F1 (B)	2500	2.3*	5.5
PCB trace under fuse or F1 L pin to case after fuse (B)	2500	2.3*	2.9
Line trace to primary trace for LF1 (B)	2500	2.3*	3.3
PE to L/N trace (B)	2500	2.3*	3.1
PCB: primary to secondary traces under CY1(CY1&CY2 in series used) (B)	2500	2.3*	7.0
PCB: primary to secondary traces under CY2(CY1&CY2 used series) (S)	2500	2.3*	5.0
CY3 primary trace to PE (B)	2500	2.3*	5.1
CY4 primary trace to PE (B)	2500	2.3*	4.4
Primary heat-sink to accessible enclosure (R)	2500	4.5*	7.8
Primary circuit (PCB trace under RT1) to enclosure screw (R)	2500	4.5*	7.4
Primary circuit (PCB trace under primary line filter LF1) to enclosure screw (R)	2500	4.5*	6.3
PCB: primary to secondary traces under CY1 (without CY2)(R)	2500	4.5*	7.0
PCB: primary to secondary traces under OP1 (R)	2500	4.5*	7.5
PCB: primary to secondary traces under OP2 (R)	2500	4.5*	7.2
PCB: primary to secondary traces under T2 (R)	2500	4.5*	9.1
PCB: core of T2 to secondary heat-sink HS2 (bottom) through primary winding (R)	2500	4.5*	7.3

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Clause	Requirement + Test	Result - Remark	Verdict

Component: primary heat-sink to secondary heat-sink (R)	2500	4.5*	8.8
Transformer			
Transformer (T2): core to secondary heat-sink HS2 over top of the cover (R)	2500	4.5*	11.1
Transformer (T2): primary EMC copper foil (bottom) to CY1 secondary pin (without CY2) (R)	2500	4.5*	8.0
Transformer (T2): primary winding (top) to C22 over the tube on secondary winding (TA) (R)	2500	4.5*	10.0
Supplementary information: F=Functional insulation, B= Basic insulation, R=Reinforced insulation. *The equipment is intended to be operated under altitude up to 5000m, so the clearance is multiplied by the altitude correction factor (1.48, linear interpolation used), specified in table A.2 of IEC 60664-1			

5.4.2.4	TABLE: Clearances based on electric strength test		P
Test voltage applied between:	Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No
Line trace to Neutral trace before fuse F1 (B)	2.3*	3621*	No
PCB trace under fuse or F1 L pin to case after fuse (B)	2.3*	3621*	No
Line trace to primary trace for LF1 (B)	2.3*	3621*	No
PE to L/N trace (B)	2.3*	3621*	No
PCB: primary to secondary traces under CY1(CY1&CY2 in series used) (B)	2.3*	3621*	No
PCB: primary to secondary traces under CY2(CY1&CY2 used series) (S)	2.3*	3621*	No
CY3 primary trace to PE (B)	2.3*	3621*	No
CY4 primary trace to PE (B)	2.3*	3621*	No
Primary heat-sink to accessible enclosure (R)	4.5*	5794*	No
Primary circuit (PCB trace under RT1) to enclosure screw (R)	4.5*	5794*	No
Primary circuit (PCB trace under primary line filter LF1) to enclosure screw (R)	4.5*	5794*	No
PCB: primary to secondary traces under CY1 (without CY2)(R)	4.5*	5794*	No
PCB: primary to secondary traces under OP1 (R)	4.5*	5794*	No
PCB: primary to secondary traces under OP2 (R)	4.5*	5794*	No

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Clause	Requirement + Test	Result - Remark	Verdict

PCB: primary to secondary traces under T2 (R)	4.5*	5794*	No
PCB: core of T2 to secondary heat-sink HS2 (bottom) through primary winding (R)	4.5*	5794*	No
Component: primary heat-sink to secondary heat-sink (R)	4.5*	5794*	No
Transformer			
Transformer (T2): core to secondary heat-sink HS2 over top of the cover (R)	4.5*	5794*	No
Transformer (T2): primary EMC copper foil (bottom) to CY1 secondary pin (without CY2) (R)	4.5*	5794*	No
Transformer (T2): primary winding (top) to C22 over the tube on secondary winding (TA) (R)	4.5*	5794*	No
Supplementary information: F=Functional insulation, B= Basic insulation, R=Reinforced insulation. *The equipment is intended to be operated under altitude up to 5000m, so the clearance is multiplied by the altitude correction factor (1.48, linear interpolation used), specified in table A.2 of IEC 60664-1			

5.4.4.2, 5.4.4.5 c) 5.4.4.9	**TABLE: Distance through insulation measurements**				P
Distance through insulation di at/of:	Peak voltage (V)	Frequency (Hz)	Material	Required DTI (mm)	DTI (mm)
Enclosure	612	53.6K	1)	0.4	1)
Bobbin of transformer (T2)	612	53.6K	1)	0.4	1)
Insulation cover on transformer	612	53.6K	1)	0.4	1)
Insulation tape used for transformer (T2)	612	53.6K	Polyethylene	See only 5.4.4.9	See only 5.4.4.9
Supplementary information: 1). See appended table 4.1.2 for details.					

5.4.9	**TABLE: Electric strength tests**			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (Vpeak)	Breakdown Yes / No
Basic/supplementary:				
L and N of input (with fuse opened)		DC	2500	No
L/ N to earth		DC	2500	No
Reinforced:				
Unit primary to secondary		DC	4000	No
Unit primary to plastic enclosure(with metal foil)		DC	4000	No

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Primary to secondary of transformer T2	DC	4000	No
Secondary to core of transformer T2	DC	4000	No
Insulation tape used in and around transformer T2 and around Secondary heat-sink (single layer)	DC	4000	No
Insulation barrier on transformer	DC	4000	No
Supplementary information: Core of transformer T2 was considered as primary. Test after humidity treatment, heating test, and for unit primary to secondary, primary to plastic enclosure electric strength after each fault condition test. Test were performed on product with each source listed in table 4.1.2. The DC voltage source was performed on all testing once in forward and once in reverse.			

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
264Vac, 60Hz	Phase to Neutral	N	--	32V	ES1
264Vac, 60Hz	Phase to Neutral	S(R2 open)	--	56V	ES1
264Vac, 60Hz	Phase to Neutral	S(R2 shorted)	--	20V	ES1
Supplementary information: The end system may be pluggable equipment type A. Limit of ES1 applied for mains terminal as accessible part. X-capacitors installed for testing are: CX1=0.47ìF±10%. ☒ bleeding resistor rating: R=(1.8/2+1.8/2)MΩ=1.8MΩ; R2=R3=R37=R38=1.8MΩ. Notes: A. Test Location: Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth B. Operating condition abbreviations: N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition (Bleeder Resistor open circuit)					

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Clause	Requirement + Test	Result - Remark	Verdict

5.6.6.2	TABLE: Resistance of protective conductors and terminations				P
Accessible part		Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)
PE terminal to output cord terminal which connected to green/yellow wire terminal on secondary side of PWB		32	2	0.32	0.010
PE terminal to output cord terminal which connected to green/yellow wire terminal on secondary side of PWB		40	2	0.60	0.015
Supplementary Information: North American deviation was considered.					

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		P
Supply voltage .....:		264Vac, 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 (mApeak) Limited (0.707 mApeak)
Model: FJ-SW20175401200 (CY1=CY3=CY4=2200pF)			
Output terminal		1 (e opened, normal and reverse polarity p)	0.584 / 0.584
Output terminal		2* (netural open (switch n), earth intact and normal polarity, again in reverse polarity (switch p)	N/A
Output terminal		3 (for IT system, each phase conductor faulted to earth, one at a time (switch g)	N/A[a)]
Output terminal		4 (for three-phase, each phase conductor open, one at a time switches l)	N/A[b)]
Output terminal		5 (IT power system or three phase delta system)	N/A[c)]
Output terminal		6 (three-phase for use on centre-earthed dalta supply system)	N/A[d)]
Output terminal		8 (incidental electrically connected to other parts)	N/A[e)]
Model: FJ-SW20175401200 (CY1=CY2=3300pF, CY3=CY4=2200pF)			
Output terminal		1 (e opened, normal and reverse polarity p)	0.520 / 0.520
Output terminal		2* (netural open (switch n), earth intact and normal polarity, again in reverse polarity (switch p)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

Output terminal	3 (for IT system, each phase conductor faulted to earth, one at a time (switch g)	N/A[a)]
Output terminal	4 (for three-phase, each phase conductor open, one at a time switches I)	N/A[b)]
Output terminal	5 (IT power system or three phase delta system)	N/A[c)]
Output terminal	6 (three-phase for use on centre-earthed dalta supply system)	N/A[d)]
Output terminal	8 (incidental electrically connected to other parts)	N/A[e)]

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

6.2.2	**Table: Electrical power sources (PS) measurements for classification**				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s*)	PS Classification
Model: FJ-SW20170906000					
Output + to -	Normal operation	Power (W) :	65.1	65.1	PS2
		V_A (V) :	9.0	9.0	
		I_A (A) :	7.7	7.7	
Output + to -	OP1 pin1-2 short circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output + to -	OP1 pin3-4 short circuit	Power (W) :	65.1&	65.1&	PS2
		V_A (V) :	9.0&	9.0&	
		I_A (A) :	7.7&	7.7&	
Output + to -	OP1 pin1 open circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output +	OP1 pin3 open	Power (W) :	65.1&	65.1&	PS2

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Clause	Requirement + Test		Result - Remark		Verdict
to -	circuit	V_A (V) :	9.0&	9.0&	
		I_A (A) :	7.7&	7.7&	
Output + to -	OP2 pin1-2 short circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output + to -	OP2 pin3-4 short circuit	Power (W) :	65.1&	65.1&	PS2
		V_A (V) :	9.0&	9.0&	
		I_A (A) :	7.7&	7.7&	
Output + to -	OP2 pin1 open circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output + to -	OP2 pin3 open circuit	Power (W) :	65.1&	65.1&	PS2
		V_A (V) :	9.0&	9.0&	
		I_A (A) :	7.7&	7.7&	
Output + to -	R1 short circuit	Power (W) :	0#	0#	PS2
		V_A (V) :	0#	0#	
		I_A (A) :	0#	0#	
Model: FJ-SW20171096000					
Output + to -	Normal operation	Power (W) :	73.0	73.0	PS2
		V_A (V) :	10.8	10.8	
		I_A (A) :	7.0	7.0	
Output + to -	OP1 pin1-2 short circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output + to -	OP1 pin3-4 short circuit	Power (W) :	73.0&	73.0&	PS2
		V_A (V) :	10.8&	10.8&	
		I_A (A) :	7.0&	7.0&	
Output + to -	OP1 pin1 open circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output + to -	OP1 pin3 open circuit	Power (W) :	73.0&	73.0&	PS2
		V_A (V) :	10.8&	10.8&	
		I_A (A) :	7.0&	7.0&	
Output + to -	OP2 pin1-2 short circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output +	OP2 pin3-4	Power (W) :	73.0&	73.0&	PS2

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
to -	short circuit	V_A (V) :	10.8&	10.8&	
		I_A (A) :	7.0&	7.0&	
Output + to -	OP2 pin1 open circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output + to -	OP2 pin3 open circuit	Power (W) :	73.0&	73.0&	PS2
		V_A (V) :	10.8&	10.8&	
		I_A (A) :	7.0&	7.0&	
Output + to -	R1 short circuit	Power (W) :	0#	0#	PS2
		V_A (V) :	0#	0#	
		I_A (A) :	0#	0#	
Model: FJ-SW20172003250					
Output + to -	Normal operation	Power (W) :	68.2	68.2	PS2
		V_A (V) :	19.7	19.7	
		I_A (A) :	3.5	3.5	
Output + to -	OP1 pin1-2 short circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output + to -	OP1 pin3-4 short circuit	Power (W) :	68.2&	68.2&	PS2
		V_A (V) :	19.7&	19.7&	
		I_A (A) :	3.5&	3.5&	
Output + to -	OP1 pin1 open circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output + to -	OP1 pin3 open circuit	Power (W) :	68.2&	68.2&	PS2
		V_A (V) :	19.7&	19.7&	
		I_A (A) :	3.5&	3.5&	
Output + to -	OP2 pin1-2 short circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output + to -	OP2 pin3-4 short circuit	Power (W) :	68.2&	68.2&	PS2
		V_A (V) :	19.7&	19.7&	
		I_A (A) :	3.5&	3.5&	
Output + to -	OP2 pin1 open circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output +	OP2 pin3 open	Power (W) :	68.2&	68.2&	PS2

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Clause	Requirement + Test		Result - Remark		Verdict
to -	circuit	V_A (V) :	19.7&	19.7&	
		I_A (A) :	3.5&	3.5&	
Output + to -	R1 short circuit	Power (W) :	0#	0#	PS2
		V_A (V) :	0#	0#	
		I_A (A) :	0#	0#	
Model: FJ-SW20175401200					
Output + to -	Normal operation	Power (W) :	83.0	83.0	PS2
		V_A (V) :	53.8	53.8	
		I_A (A) :	1.54	1.54	
Output + to -	OP1 pin1-2 short circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output + to -	OP1 pin3-4 short circuit	Power (W) :	80.5&	80.5&	PS2
		V_A (V) :	54.7&	54.7&	
		I_A (A) :	1.50&	1.50&	
Output + to -	OP1 pin1 open circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output + to -	OP1 pin3 open circuit	Power (W) :	80.5&	80.5&	PS2
		V_A (V) :	54.7&	54.7&	
		I_A (A) :	1.50&	1.50&	
Output + to -	OP2 pin1-2 short circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output + to -	OP2 pin3-4 short circuit	Power (W) :	80.5&	80.5&	PS2
		V_A (V) :	54.7&	54.7&	
		I_A (A) :	1.50&	1.50&	
Output + to -	OP2 pin1 open circuit	Power (W) :	0*	0*	PS2
		V_A (V) :	0*	0*	
		I_A (A) :	0*	0*	
Output + to -	OP2 pin3 open circuit	Power (W) :	80.5&	80.5&	PS2
		V_A (V) :	54.7&	54.7&	
		I_A (A) :	1.50&	1.50&	
Output + to -	R1 short circuit	Power (W) :	0#	0#	PS2
		V_A (V) :	0#	0#	
		I_A (A) :	0#	0#	

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Supplementary information: See clause 6.2.2 for details.

Note: * Unit shutdown immediately recoverable, no hazard; & Unit worked normally, no hazard;

F1 opened immediately, Q3 damaged, no hazard.

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)				P
Location	Open circuit voltage After 3 s (Vp)	Measured r.m.s current (Irms)	Calculated value (V_p x I_{rms})	Arcing PIS? Yes / No	
Primary circuits and secondary circuit / parts except for output connector	--	--	--	Yes (Declaration)	
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 conductors and devices are considered as PIS.					

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

8.5.5	TABLE: High Pressure Lamp		N/A
Description		Values	Energy Source Classification
Lamp type ..... :			—
Manufacturer ..... :			—
Cat no. ..... :			—
Pressure (cold) (MPa) ..... :			MS_
Pressure (operating) (MPa) ..... :			MS_
Operating time (minutes) ..... :			—

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Explosion method .....:		—
Max particle length escaping enclosure (mm) .:		MS_
Max particle length beyond 1 m (mm).....:		MS_
Overall result .....:		
Supplementary information:		

B.2.5	TABLE: Input test					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Model: FJ-SW20170906000 (output load: 9.0V6.0A)						
90/50Hz	1.212	--	65.94	F1	1.212	Load with 9Vdc/6A
90/60Hz	1.148	--	65.72	F1	1.148	Same as above
100/50Hz	1.034	1.5	64.85	F1	1.034	Same as above
100/60Hz	1.005	1.5	65.00	F1	1.005	Same as above
240/50Hz	0.503	1.5	63.18	F1	0.503	Same as above
240/60Hz	0.445	1.5	63.28	F1	0.445	Same as above
264/50Hz	0467	--	63.24	F1	0467	Same as above
264/60Hz	0.434	--	63.43	F1	0.434	Same as above
Model: FJ-SW20171096000 (output load: 10.9V6.0A)						
90/50Hz	1.341	--	76.76	F1	1.341	Load with 10.9Vdc/6A
90/60Hz	1.287	--	76.72	F1	1.287	Same as above
100/50Hz	1.176	1.5	75.64	F1	1.176	Same as above
100/60Hz	1.119	1.5	75.88	F1	1.119	Same as above
240/50Hz	0.580	1.5	74.24	F1	0.580	Same as above
240/60Hz	0.527	1.5	74.31	F1	0.527	Same as above
264/50Hz	0.532	--	74.45	F1	0.532	Same as above
264/60Hz	0.490	--	74.62	F1	0.490	Same as above
Model: FJ-SW20172003250 (output load: 20.0V3.25A)						
90/50Hz	1.358	--	77.83	F1	1.358	Load with 20Vdc/3.25A
90/60Hz	1.313	--	77.49	F1	1.313	Same as above
100/50Hz	1.185	1.5	76.93	F1	1.185	Same as above
100/60Hz	1.160	1.5	76.38	F1	1.160	Same as above
240/50Hz	0.584	1.5	75.45	F1	0.584	Same as above
240/60Hz	0.524	1.5	74.94	F1	0.524	Same as above
264/50Hz	0.540	--	75.77	F1	0.540	Same as above
264/60Hz	0.502	--	75.12	F1	0.502	Same as above

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Model: FJ-SW20175401200 (output load: 54.0V1.2A)						
90/50Hz	1.294	--	73.20	F1	1.294	Load with 54Vdc/1.2A
90/60Hz	1.291	--	73.32	F1	1.291	Same as above
100/50Hz	1.164	1.5	72.58	F1	1.164	Same as above
100/60Hz	1.174	1.5	72.56	F1	1.174	Same as above
240/50Hz	0.546	1.5	70.94	F1	0.546	Same as above
240/60Hz	0.544	1.5	70.91	F1	0.544	Same as above
264/50Hz	0.515	--	70.94	F1	0.515	Same as above
264/60Hz	0.512	--	70.93	F1	0.512	Same as above
Supplementary information: The maximum measured current under rated voltage did not exceed 110% of the rated current.						

B.3 & B.4	**TABLE: Abnormal operating and fault condition tests**							**P**
Ambient temperature (°C) .....:							25°C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:							--	—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Model: FJ-SW20175401200								
RV1	s-c	264	1s	F1	0	Type K	--	F1 opened immediately, no hazard.
BD1 pin AC-V+	s-c	264	1s	F1	0	Type K	--	F1 opened immediately, no hazard.
C6	s-c	264	1s	F1	0	Type K	--	F1 opened immediately, no hazard.
Q3 pin G-D	s-c	264	1s	F1	0	Type K	--	F1 opened immediately, Q3 damaged, no hazard.
Q3 pin D-S	s-c	264	1s	F1	0	Type K	--	F1 opened immediately, Q3 damaged, no hazard.
Q3 pin G-S	s-c	264	30min	F1	0.019	Type K	--	Unit shutdown immediately recoverable, no hazard.
R1	s-c	264	1s	F1	0	Type K	--	F1 opened immediately, Q3 damaged, no hazard.

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
U1 pin 5-1	s-c	264	30min	F1	0.045	Type K	--	Unit shutdown immediately recoverable, no hazard.
U1 pin 5-2	s-c	264	30min	F1	0.05	Type K	--	Unit shutdown immediately recoverable, no hazard.
OP1 pin1-2	s-c	264	30min	F1	0.049	Type K	--	Unit shutdown immediately recoverable, no hazard.
OP1 pin3-4	s-c	264	30min	F1	0.515	Type K	--	Unit worked normally, recoverable, no hazard.
OP1 pin1	o-c	264	30min	F1	0.042	Type K	--	Unit shutdown immediately recoverable, no hazard.
OP1 pin3	o-c	264	30min	F1	0.515	Type K	--	Unit worked normally, recoverable, no hazard.
OP2 pin1-2	s-c	264	30min	F1	0.05	Type K	--	Unit shutdown immediately recoverable, no hazard.
OP2 pin3-4	s-c	264	30min	F1	0.515	Type K	--	Unit worked normally, recoverable, no hazard.
OP2 pin1	o-c	264	30min	F1	0.043	Type K	--	Unit shutdown immediately recoverable, no hazard.
OP2 pin3	o-c	264	30min	F1	0.515	Type K	--	Unit worked normally, recoverable, no hazard.
T2 pin 1-3	s-c	264	30min	F1	0.015	Type K	--	Unit shutdown immediately recoverable, no hazard.
T2 pin 4-6	s-c	264	30min	F1	0.015	Type K	--	Unit shutdown immediately recoverable, no hazard.
T2 pin TA-TB	s-c	264	30min	F1	0	Type K	--	F1 opened immediately, Q3 damaged, no hazard.

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
Q4 pin D-pin S	s-c	264	30min	F1	0.036	Type K	--	Unit shutdown immediately recoverable, no hazard.
C7	s-c	264	30min	F1	0.03	Type K	--	Unit shutdown immediately recoverable, no hazard.
Output	s-c	264	30min	F1	0.049	Type K	--	Unit shutdown immediately recoverable, no hazard.
Output	o-l	264	3h36min	F1	0.515 → 0.582 → 0.049	Type K	T2 winding: 106.4 °C; T2 core: 105.7 °C; Ambient: 45.0 °C. Plastic enclosure outside near T2: 54.9 °C; Ambient: 25.0 °C.	Output overload to 1.5A and unit shutdown at 1.6A. Recoverable when fault removed and no hazards observed, all safeguards remained effective during and after abnormal condition.
Transformer	o-l	264	6h06min	F1	0.515 → 0.597 → 0.044	Type K	T2 winding: 109.5 °C; T2 core: 104.0 °C; Ambient: 45.2 °C. Enclosure outside near T2: 57.1 °C; Ambient: 25.0 °C.	Transformer overload to 0.40A and unit shutdown at 0.50A, Output normal loading 1.2A, Recoverable when fault removed and no hazards observed, all safeguards remained effective during and after abnormal condition.
Model: FJ-SW2017090600								
Output	o-l	264	4h54min	F1	0.467 → 0.512 → 0.024	Type K	T2 winding: 104.8 °C; T2 core: 97.8 °C; ; Ambient: 45.5 °C. Enclosure outside near T2: 70.3 °C; Ambient: 25.0 °C.	Output overload to 7.5A and unit shutdown at 7.6A. Recoverable when fault removed and no hazards observed, all safeguards remained effective during and after abnormal condition.

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
Transformer	o-l	264	4h20min	F1	0.467 → 0.520 → 0.048	Type K	T2 winding: 107.3 °C; T2 core: 101.9 °C; Ambient: 45.0 °C. Enclosure outside near T2: 74.1 °C; Ambient: 25.0 °C.	Transformer overload to 1.6A and unit shutdown at 1.7A, Output normal loading 6.0A, Recoverable when fault removed and no hazards observed, all safeguards remained effective during and after abnormal condition.
Model: FJ-SW20171096000								
Output	o-l	264	5h24min	F1	0.532 → 0.570 → 0.020	Type K	T2 winding: 107.3 °C; T2 core: 102.3 °C; Ambient: 45.0 °C. Enclosure outside near T2: 65.3 °C; Ambient: 25.0 °C.	Output overload to 7.0A and unit shutdown at 7.1A. Recoverable when fault removed and no hazards observed, all safeguards remained effective during and after abnormal condition.
Transformer	o-l	264	4h48min	F1	0.532 → 0.585 → 0.060	Type K	T2 winding: 110.5 °C; T2 core: 104.7 °C; Ambient: 45.0 °C. Enclosure outside near T2: 69.1 °C; Ambient: 25.0 °C.	Transformer overload to 1.0A and unit shutdown at 1.1A, Output normal loading 6.0A, Recoverable when fault removed and no hazards observed, all safeguards remained effective during and after abnormal condition.
Model: FJ-SW20172003250								
Output	o-l	264	6h06min	F1	0.540 → 0.562 → 0.045	Type K	T2 winding: 115.5°C; T2 core: 110.1 °C; Ambient: 45.0 °C. Enclosure outside near T2: 70.1°C; Ambient: 25.0 °C.	Output overload to 3.5A and unit shutdown at 3.6A. Recoverable when fault removed and no hazards observed, all safeguards remained effective during and after abnormal condition.

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
Transformer	o-l	264	5h48min	F1	0.540 → 0.577 → 0.046	Type K	T2 winding: 118.4°C; T2 core: 112.4 °C; Ambient: 45.2 °C. Enclosure outside near T2: 73.3°C; Ambient: 25.0 °C.	Transformer overload to 0.3A and unit shutdown at 0.4A, Output normal loading 3.25A, Recoverable when fault removed and no hazards observed, all safeguards remained effective during and after abnormal condition.

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.

1) s-c: Short-circuited; o-c: Open-circuited; o-l: Overloaded.
2) The test result shown all safeguards remained effective and didn’t lead to a single fault condition during abnormal operating condition; In addition all safeguards complied with applicable requirements in this standard after restoration of normal operating conditions.
3) The test result showed no Class 1 or 2 energy source become Class 3 level during and after single fault condition.
4) The overloaded condition is applied according to annex G.5.3.3.
Winding Limit for T2: 175-10=165°C. Enclosure outside: TS2=87°C.

5) The same as result test conducted on all fuse sources, all fuse sources see table 4.1.2 for details.

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

G.5.3	TABLE: transformers						P
Loc.	Tested insulation	Working voltage peak / V (5.4.1.8)	Working voltage rms / V (5.4.1.8)	Required electric strength (5.4.9)	Required clearance / mm (5.4.2.2)	Required creepage distance / mm (5.4.3)	Required distance thr. insul. (5.4.4.6)
Primary winding to secondary winding	RI	612	344	4000 Vpeak	6.9*	6.9	Insulated winding wire used
Core to secondary winding	RI	612	344	4000 Vpeak	6.9*	6.9	Insulated winding wire used
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
Primary winding to secondary winding terminal	RI			4000 Vpeak	10.0	10.0	TIW / Transformer cover
Core to secondary winding terminal	RI			4000 Vpeak	10.0	10.0	TIW / Transformer cover

Supplementary information:

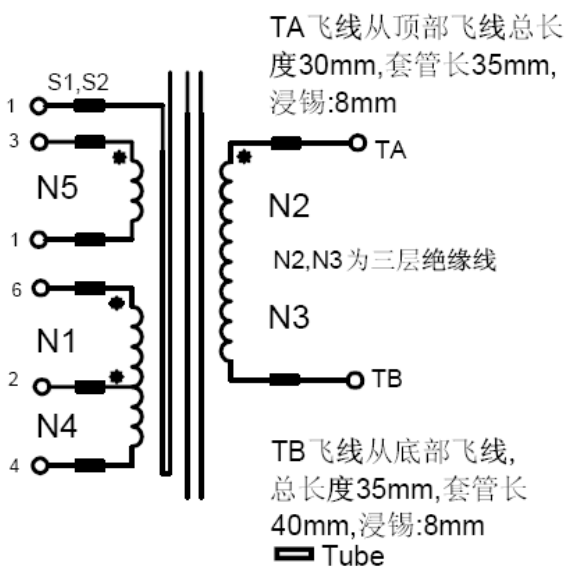
Concentric windings on single bobbin. Triple insulated wire used as secondary winding. Core is considered as primary. Two layers of insulation tape wrapped around the transformer. The insulation tube used to separate primary winding and secondary winding where they are crossing. The lead pins soldered to primary windings and secondary windings are directly moulded in bobbin. The secondary winding were soldered to PCB and additional fixed by glue. There is a Insulation barrier with min. thickness 0.4mm on the whole transformer.

*The equipment is intended to be operated under altitude up to 5000m, so the clearance is multiplied by the altitude correction factor (1.48, linear interpolation used), specified in table A.2 of IEC 60664-1

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

Construction:

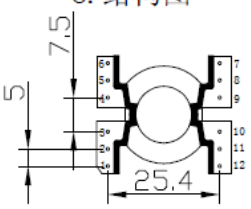
Transformer : (2017-T1)



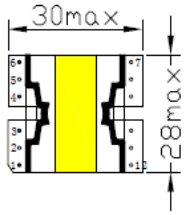


PQ2620(6+6)脚距25.4mm

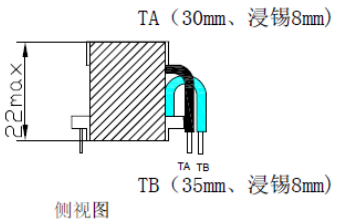
8. 结构图



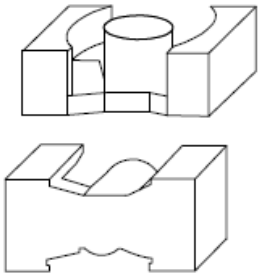
脚位尺寸图

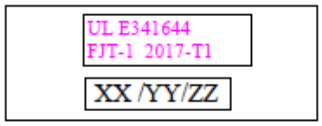


底视图



侧视图





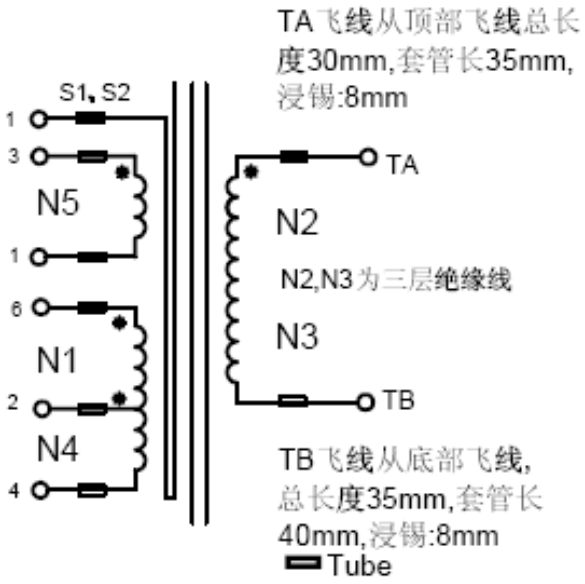
生产厂代号/年份/周期:

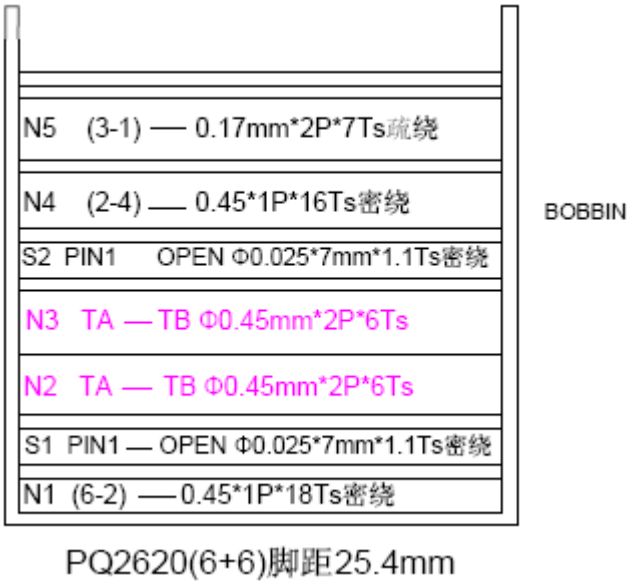
1. 使用PQ2620: CORE: 44材料
2. 使用PQ2620: 6+6PIN立式骨架排距25.4mm
3. 线层与层之间用9.5mm宽亚华胶布2Ts
4. 装好磁芯用6mm宽胶带2.5Ts固定磁芯,再沿线包方向包0.025*7.0mm宽背胶铜箔,铜箔短接后用Φ0.2mm线接至Pin1.
5. 沿磁芯用20mm宽胶带包2Ts.
6. 用13mm宽胶带沿线包,包2Ts.
7. 剪掉5,7-12脚,绕制完成去掉2脚。
8. 浸好漆后,套好变压器护套并整型!

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

Construction:

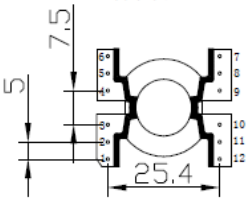
Transformer : (2017-T2)



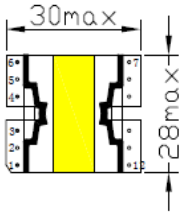


PQ2620(6+6)脚距25.4mm

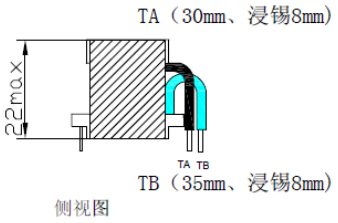
8. 结构图



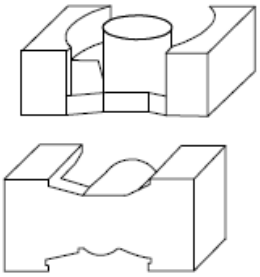
脚位尺寸图

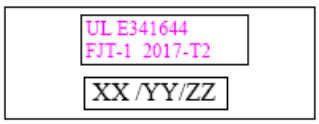


底视图



侧视图





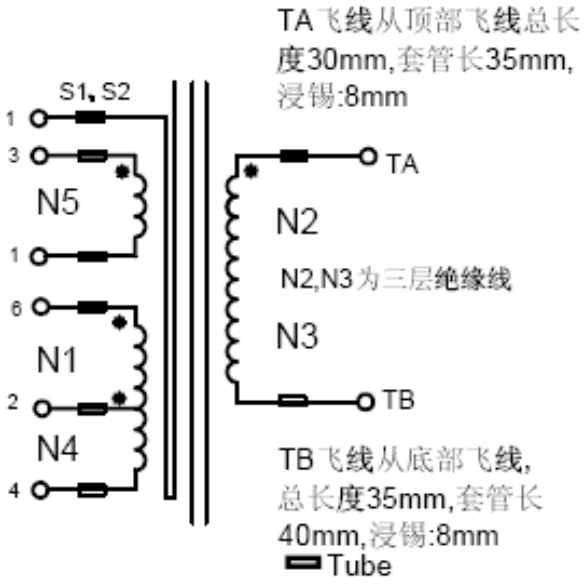
生产厂代号/年份/周期:

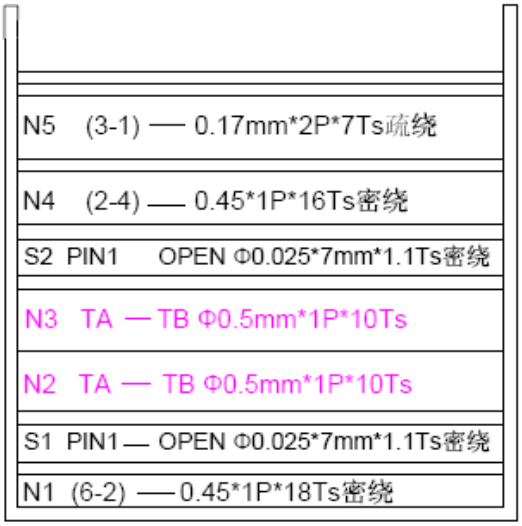
1. 使用PQ2620: CORE: 44材料
2. 使用PQ2620: 6+6PIN立式骨架排距25.4mm
3. 线层与层之间用9.5mm宽亚华胶布2Ts
4. 装好磁芯用6mm宽胶带2.5Ts固定磁芯,再沿线包方向包0.025*7.0mm宽背胶铜箔,铜箔短接后用Φ0.2mm线接至Pin1.
5. 沿磁芯用20mm宽胶带包2Ts.
6. 用13mm宽胶带沿线包,包2Ts.
7. 剪掉5,7-12脚,绕制完成去掉2脚。
8. 浸好漆后,套好变压器护套并整型!

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

Construction:

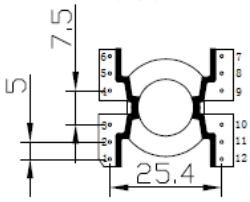
Transformer : (2017-T3)



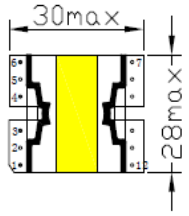


PQ2620(6+6)脚距25.4mm

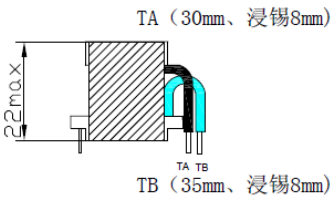
8. 结构图



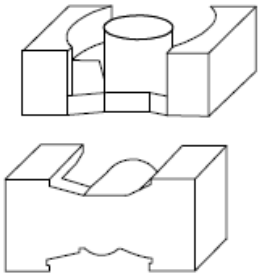
脚位尺寸图

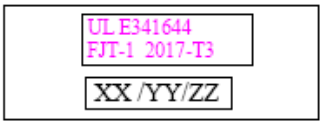


底视图



侧视图





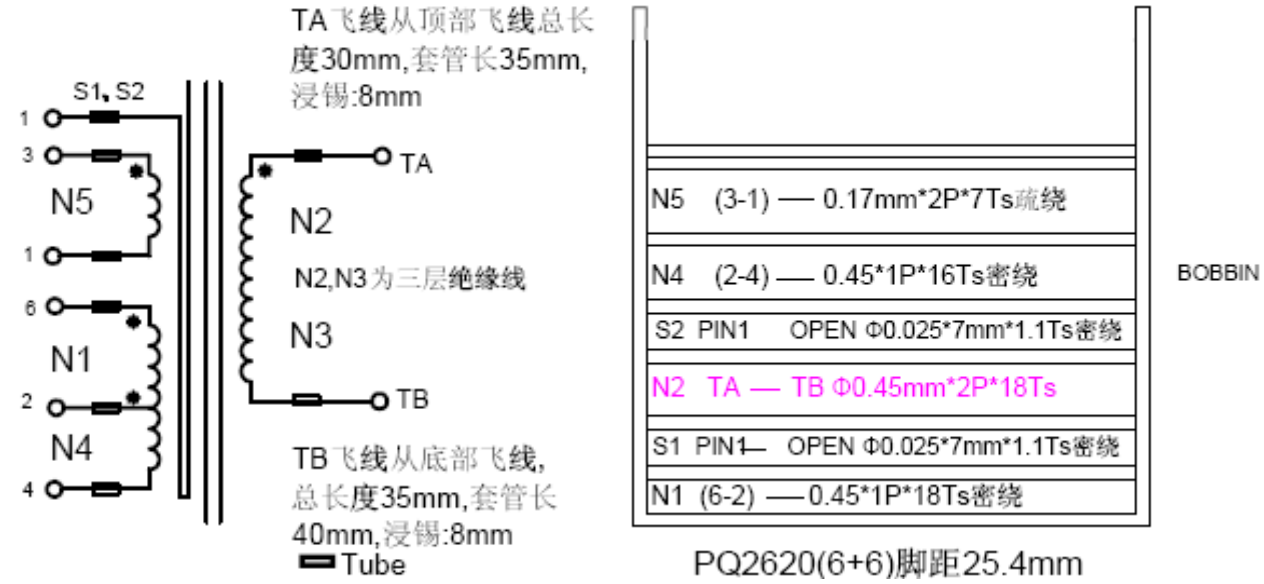
生产厂代号/年份/周期：

1. 使用PQ2620： CORE： 44材料
2. 使用PQ2620： 6+6PIN立式骨架排距25.4mm
3. 线层与层之间用9.5mm宽亚华胶布2Ts
4. 装好磁芯用6mm宽胶带2.5Ts固定磁芯，再沿线包方向包0.025*7.0mm宽背胶铜箔，铜箔短接后用Φ0.2mm线接至Pin1.
5. 沿磁芯用20mm宽胶带包2Ts.
6. 用13mm宽胶带沿线包，包2Ts.
7. 剪掉5, 7-12脚, 绕制完成去掉2脚。
8. 浸好漆后, 套好变压器护套并整型!

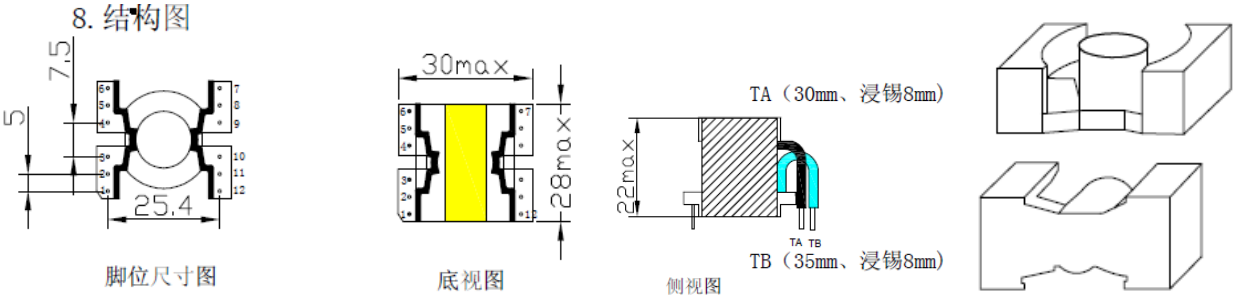
IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

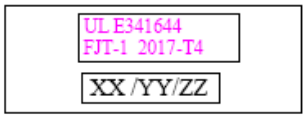
Construction:

Transformer : (2017-T4)



8. 结构图





生产厂代号/年份/周期:

1. 使用PQ2620: CORE: 44材料
2. 使用PQ2620: 6+6PIN立式骨架排距25.4mm
3. 线层与层之间用9.5mm宽亚华胶布2Ts
4. 装好磁芯用6mm宽胶带2.5Ts固定磁芯,再沿线包方向包0.025*7.0mm宽背胶铜箔,铜箔短接后用Φ0.2mm线接至Pin1.
5. 沿磁芯用20mm宽胶带包2Ts.
6. 用13mm宽胶带沿线包,包2Ts.
7. 剪掉5,7-12脚,绕制完成去掉2脚。
8. 浸好漆后,套好变压器护套并整型!

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

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:										

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 Tlowest (°C)	Observation	Charging at Thighest (°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)**					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: FJ-SW20170506000						
Output	Normal conditions	5.20	7.0	8	33.1	100
OP1 pin 1-2	SC	0	0*	8	0*	100
OP1 pin 3-4	SC	5.20	7.0	8	33.1	100
OP1 pin 1	OC	0	0*	8	0*	100
OP1 pin 3	OC	5.20	7.0	8	33.1	100
OP2 pin 1-2	SC	0	0*	8	0*	100
OP2 pin 3-4	SC	5.20	7.0	8	33.1	100
OP2 pin 1	OC	0	0*	8	0*	100
OP2 pin 3	OC	5.20	7.0	8	33.1	100
R1	SC	0	0**	8	0**	100
Model: FJ-SW20170906000						
Output	Normal conditions	9.0	7.7	8	65.1	100
OP1 pin 1-2	SC	0	0*	8	0*	100
OP1 pin 3-4	SC	9.0	7.7	8	65.1	100
OP1 pin 1	OC	0	0*	8	0*	100
OP1 pin 3	OC	9.0	7.7	8	65.1	100
OP2 pin 1-2	SC	0	0*	8	0*	100
OP2 pin 3-4	SC	9.0	7.7	8	65.1	100
OP2 pin 1	OC	0	0*	8	0*	100
OP2 pin 3	OC	9.0	7.7	8	65.1	100
R1	SC	0	0**	8	0**	100
Model: FJ-SW20171096000						
Output	Normal conditions	10.8	7.0	8	73.0	100
OP1 pin 1-2	SC	0	0*	8	0*	100
OP1 pin 3-4	SC	10.8	7.0	8	73.0	100
OP1 pin 1	OC	0	0*	8	0*	100
OP1 pin 3	OC	10.8	7.0	8	73.0	100
OP2 pin 1-2	SC	0	0*	8	0*	100
OP2 pin 3-4	SC	10.8	7.0	8	73.0	100
OP2 pin 1	OC	0	0*	8	0*	100

IEC 62368-1						
Clause	Requirement + Test			Result - Remark		Verdict
OP2 pin 3	OC	10.8	7.0	8	73.0	100
R1	SC	0	0**	8	0**	100
Model: FJ-SW20172003250						
Output	Normal conditions	19.7	3.5	8	68.2	100
OP1 pin 1-2	SC	0	0*	8	0*	100
OP1 pin 3-4	SC	19.7	3.5	8	68.2	100
OP1 pin 1	OC	0	0*	8	0*	100
OP1 pin 3	OC	19.7	3.5	8	68.2	100
OP2 pin 1-2	SC	0	0*	8	0*	100
OP2 pin 3-4	SC	19.7	3.5	8	68.2	100
OP2 pin 1	OC	0	0*	8	0*	100
OP2 pin 3	OC	19.7	3.5	8	68.2	100
R1	SC	0	0**	8	0**	100
Model: FJ-SW20175401200						
Output	Normal conditions	53.8	1.54	2.78	83.0	100
OP1 pin 1-2	SC	0	0*	8	0*	100
OP1 pin 3-4	SC	54.7	1.50	2.74	80.5	100
OP1 pin 1	OC	0	0*	8	0*	100
OP1 pin 3	OC	54.7	1.50	2.74	80.5	100
OP2 pin 1-2	SC	0	0*	8	0*	100
OP2 pin 3-4	SC	54.7	1.50	2.74	80.5	100
OP2 pin 1	OC	0	0*	8	0*	100
OP2 pin 3	OC	54.7	1.50	2.74	80.5	100
R1	SC	0	0**	8	0**	100
Supplementary Information: SC = short circuit; OC = open circuit * Unit shutdown, ** F1 opened, Q3 damaged.						

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, closed to transformer (T.4, T.5)	Plastics	1)	100, 250	5	Enclosure remained intact, no crack/ opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Enclosure front (T.4, T.5)	Plastics	1)	100, 250	5	Enclosure remained intact, no crack/ opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Enclosure side, closed to transformer (T.4, T.5)	Plastics	1)	100, 250	5	Enclosure remained intact, no crack/ opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Internal components (CY2, C22) (T.2)	--	--	10	5	No insulation breakdown. No reduction the clearances and creepage distances	
Supplementary information: 1). See appended table 4.1.2. Each source of enclosure in table 4.1.2 was applied and passed the relevant tests.						

T.6, T.9	TABLE: Impact tests				P
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation	
Enclosure Top	500g Steel sphere	Diameter 50mm	1.3m	Enclosure remained intact, no crack/ opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Enclosure Front	500g Steel sphere	Diameter 50mm	1.3m	Enclosure remained intact, no crack/ opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Enclosure Side	500g Steel sphere	Diameter 50mm	1.3m	Enclosure remained intact, no crack/ opening developed. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Supplementary information: Each source of enclosure in table 4.1.2 was applied and passed the relevant tests.					

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

T.7	TABLE: Drop tests				P
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation	
Three sides of enclosure	Sabic Innovative Plastics US L L C Type: 940(f1)	1.5mm	1000mm	After the drop test, enclosure remained intact, no cracking/opening developed in the enclosure joint. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Three sides of enclosure	SILVER AGE ENGINEERING PLASTICS (DONGGUAN) CO LTD Type: PC2330, PC2370(a1)(f1)	1.5mm	1000mm	After the drop test, enclosure remained intact, no cracking/opening developed in the enclosure joint. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Supplementary information:					

T.8	TABLE: Stress relief test					P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
Enclosure	Plastics	1)	111	7	Enclosure remained intact, no cracking/opening developed in the enclosure joint. Internal ES3, TS3 were not accessible after test. No insulation breakdown.	
Insulation barrier on transformer	Plastic	1)	127	7	Barrier remained intact, no cracking/opening developed in the barrier joint after test. No insulation breakdown.	
Supplementary information: 1). See appended table 4.1.2. Each source of enclosure in table 4.1.2 was applied and passed the relevant tests.						

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 62368-1
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

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

Differences according to.....:	EN 62368-1:2014+A11:2017
Attachment Form No.....:	EU_GD_IEC62368_1B_II
Attachment Originator .....:	Nemko AS
Master Attachment.....:	Date 2017-09-22

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

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

	For special national conditions, see Annex ZB.		P
1	**Add** the following note: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.		P

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.Z1	**Add** the following new subclause after 4.9: To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. **mains**, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for **pluggable equipment type B** or **permanently connected equipment**, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for **pluggable equipment type A** the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.	Considered.	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.	No connection to external circuit.	N/A
10.2.1	Add the following to [c] and [d] in table 39: For additional requirements, see 10.5.1.	No radiation.	N/A

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	**Add** the following after the first paragraph: *For RS 1 compliance is checked by measurement under the following conditions:* *In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or presets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.* NOTE Z1 Soldered joints and paint lockings are examples of adequate locking. *The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus.* *Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.* *For RS1, the dose-rate shall not exceed 1 µSv/h taking account of the background level.* NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.	Added.	N/A
10.6.1	**Add** the following paragraph to the end of the subclause: EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.	Added.	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	Added. The equipment is a low power SWITCHING ADAPTER, it does incorporate only non-intentional radiators, but does not contain radio transmitters; the typical usage, installation and physical characteristics make the equipment inherently compliant with all applicable EMF exposure levels (EN 62479:2010 clause 4.1 Route A).	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.	Added.	N/A

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Bibliography	**Add** the following standards: **Add** the following notes for the standards indicated: IEC 60130-9 NOTE Harmonized as EN 60130-9. IEC 60269-2 NOTE Harmonized as HD 60269-2. IEC 60309-1 NOTE Harmonized as EN 60309-1. IEC 60364 NOTE some parts harmonized in HD 384/HD 60364 series. IEC 60601-2-4 NOTE Harmonized as EN 60601-2-4. IEC 60664-5 NOTE Harmonized as EN 60664-5. IEC 61032:1997 NOTE Harmonized as EN 61032:1998 (not modified). IEC 61508-1 NOTE Harmonized as EN 61508-1. IEC 61558-2-1 NOTE Harmonized as EN 61558-2-1. IEC 61558-2-4 NOTE Harmonized as EN 61558-2-4. IEC 61558-2-6 NOTE Harmonized as EN 61558-2-6. IEC 61643-1 NOTE Harmonized as EN 61643-1. IEC 61643-21 NOTE Harmonized as EN 61643-21. IEC 61643-311 NOTE Harmonized as EN 61643-311. IEC 61643-321 NOTE Harmonized as EN 61643-321. IEC 61643-331 NOTE Harmonized as EN 61643-331.		P
ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		--
4.1.15	**Denmark, Finland, Norway** and **Sweden** To the end of the subclause the following is added: **Class I pluggable equipment type A** intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and **accessible** parts, have a marking stating that the equipment shall be connected to an earthed **mains** socket-outlet. The marking text in the applicable countries shall be as follows: In **Denmark**: “Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord.” In **Finland**: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In **Norway**: “Apparatet må tilkoples jordet stikkontakt” In **Sweden**: “Apparaten skall anslutas till jordat uttag”	Added.	P
4.7.3	**United Kingdom** To the end of the subclause the following is added: The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex		N/A

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

5.5.6	**Finland, Norway** and **Sweden** To the end of the subclause the following is added: Resistors used as **basic safeguard** or bridging **basic insulation** in **class I pluggable equipment type A** shall comply with G.10.1 and the test of G.10.2.	No such resistor used.	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.	Added.	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.	Added.	N/A
5.6.5.1	To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm^2 to 1,5 mm^2 in cross-sectional area.	Added.	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

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.1	**Norway and Sweden** To the end of the subclause the following is added: The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation needs to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)” NOTE In Norway, due to regulation for CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet.” Translation to Swedish: ”Apparater som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet.”.		N/A
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 .	See for 5.2.2.2 above.	N/A

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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	Not direct plug-in equipment.	N/A
G.4.2	**Denmark** To the end of the subclause the following is added: Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a *Justification:* Heavy Current Regulations, Section 6c		N/A
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

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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 mm^2 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)		--
10.5.2	**Germany** The following requirement applies: For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking. *Justification:* German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM. **NOTE** Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int +49-531-592-6320, Internet: http://www.ptb.de		N/A

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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

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

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

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IEC 62368-1 - US and Canadian National Differences Special National Conditions based on Regulations and Other National Differences			
1.1	All equipment is to be designed to allow installation according to the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, for such equipment marked or otherwise identified, installation is allowed per the Standard for the Protection of Information Technology Equipment, ANSI/NFPA 75.		P
1.4	Additional requirements apply to some forms of power distribution equipment, including sub-assemblies.		P
4.1.17	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the NEC.		N/A
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC generally are required to have special construction features and identification markings.		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	See only 5.6.3 in main report.	N/A
5.7.7	Equipment intended to receive telecommunication ringing signals complies with a special touch current measurement tests.	Not such equipment	N/A

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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.		P
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 V_{peak} or 60 V d.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A
Annex M	Battery packs for stationary applications comply with special component requirements.	No battery.	N/A
Annex DVA (1)	Equipment intended for use in spaces used for environmental air are subjected to special flammability requirements for heat and visible smoke release.	Not such equipment or application.	N/A
	For ITE room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A
	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

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Baby monitors additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
Annex DVA (5.6.3)	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.		P
Annex DVA (6.3)	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30.		N/A
Annex DVA (6.4.8)	For ITE room applications, enclosures with combustible material measuring greater than 0.9 m^2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less. For equipment with the same dimensions for other applications, an external surface that is not a fire enclosure requires a min. flammability classification of V-1.		P
Annex DVA (10.3.1)	Equipment with lasers meets the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
Annex DVA (10.5.1)	Equipment that produces ionizing radiation complies with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
Annex DVA (F.3.3.3)	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. Additional considerations apply for voltage ratings that exceed the attachment cap rating or are lower than the “Normal Operating Condition” in Table 2 of CAN/CSA C22.2 No. 235.”		N/A
Annex DVA (F.3.3.5)	Equipment identified for ITE (computer) room installation is marked with the rated current		N/A
Annex DVA (G.1)	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position		N/A
Annex DVA (G.3.4)	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.		N/A
Annex DVA (G.4.2)	Equipment with isolated ground (earthing) receptacles complies with NEC 250.146(D) and CEC 10-112 and 10-906(8).		N/A
Annex DVA (G.4.3)	Where a fuse is used to provide Class 2 or Class 3 current limiting, it is not operator-accessible unless it is non- interchangeable.	No such fuse provided.	N/A

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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, electrochemical capacitor modules (energy storage modules with ultra-capacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), ground-fault current interrupters, interconnecting cables, data storage equipment, printed wiring, protectors for communications circuits, receptacles, surge protective devices, vehicle battery adapters, wire connectors, and wire and cables.	See Table 4.1.2.	P
Annex DVH	Equipment for permanent connection to the mains supply is subjected to additional requirements.		N/A
Annex DVH (DVH.1)	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains are in accordance with the NEC/CEC.	Inlet for detachable power cord.	P

IEC62368_1B ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVH (DVH.3.2)	Terminals for permanent wiring, including protective earthing terminals, are suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and are specially marked when specified.		N/A
Annex DVH (DVH.3.2)	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).		N/A
Annex DVH (DVH.4)	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.		N/A
Annex DVH (DVH 5.5)	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, complies with special earthing, wiring, marking and installation instruction requirements.		N/A
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

Product: SWITCHING ADAPTER

Type Designation: FJ-SW2017xxxyyyy (xxx and yyyy are variables)



Figure 1. Overall view of unit



Figure 2. Overall view of unit (AC inlet: C14)

Product: SWITCHING ADAPTER

Type Designation: FJ-SW2017xxxyyyy (xxx and yyyy are variables)



Figure 3. Overall view of unit (AC inlet: C6)

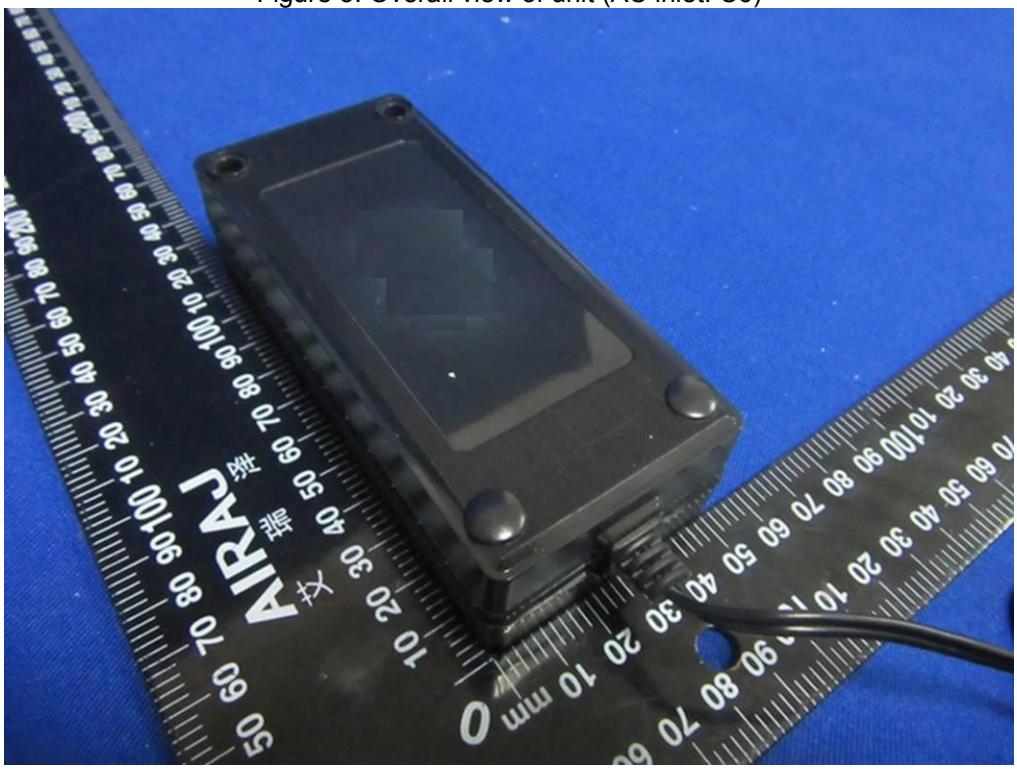


Figure 4. Overall view of unit

Product: SWITCHING ADAPTER

Type Designation: FJ-SW2017xxxyyyy (xxx and yyyy are variables)

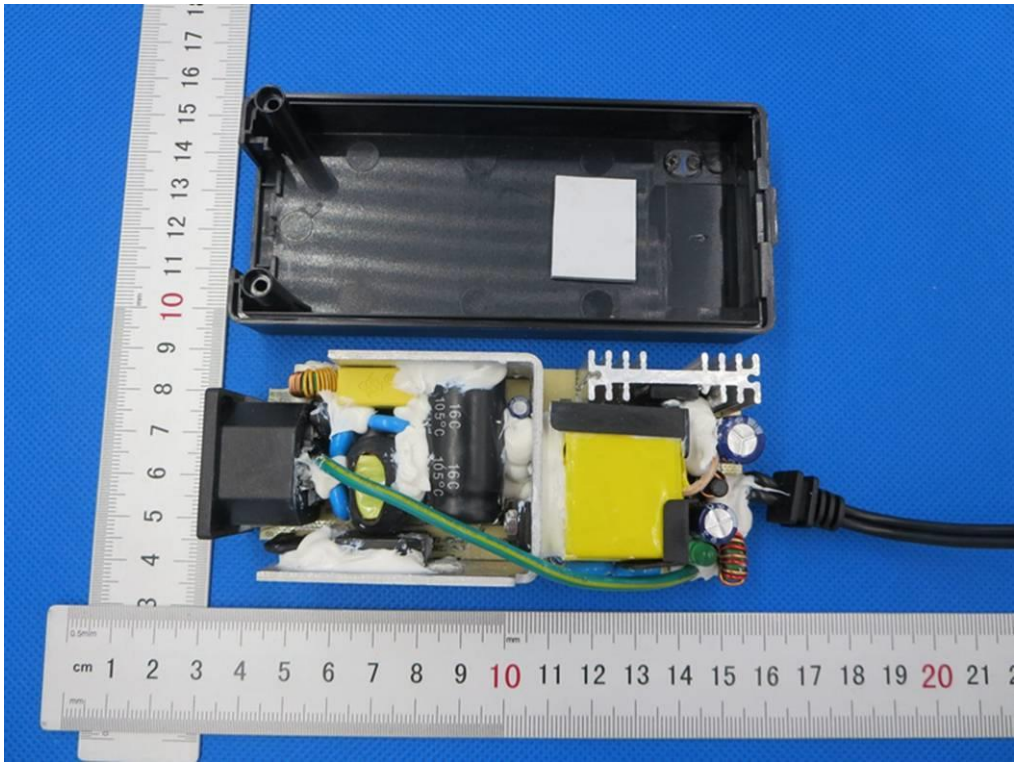


Figure 5. Internal view of unit

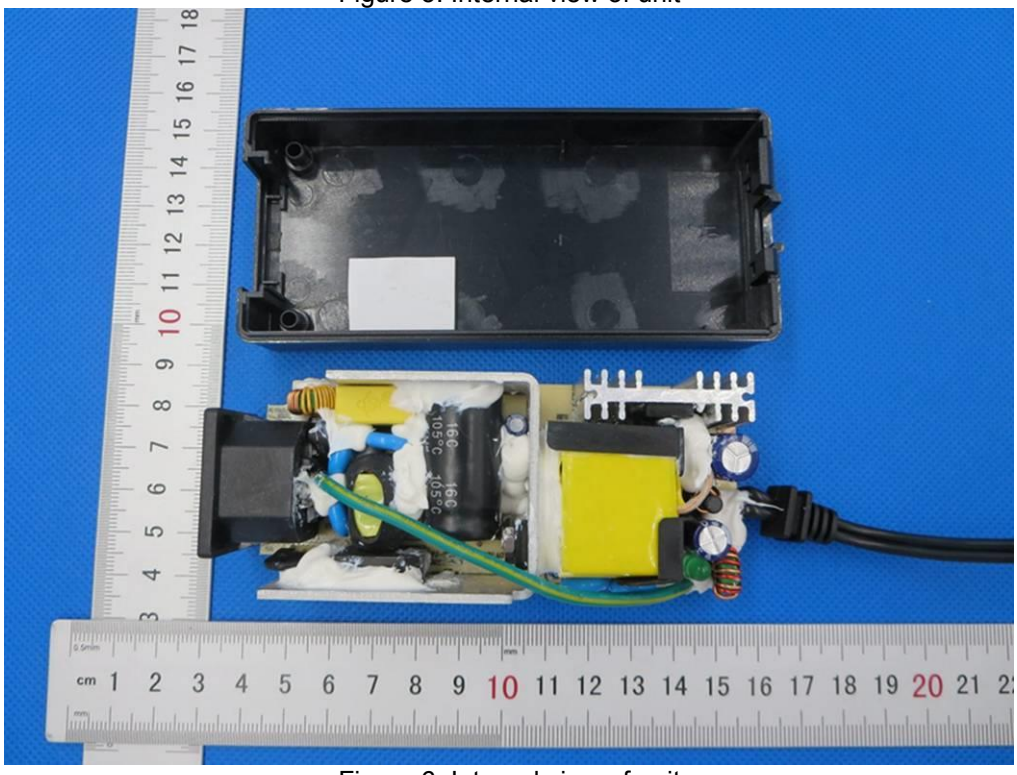


Figure 6. Internal view of unit

Product: SWITCHING ADAPTER

Type Designation: FJ-SW2017xxxyyyy (xxx and yyyy are variables)

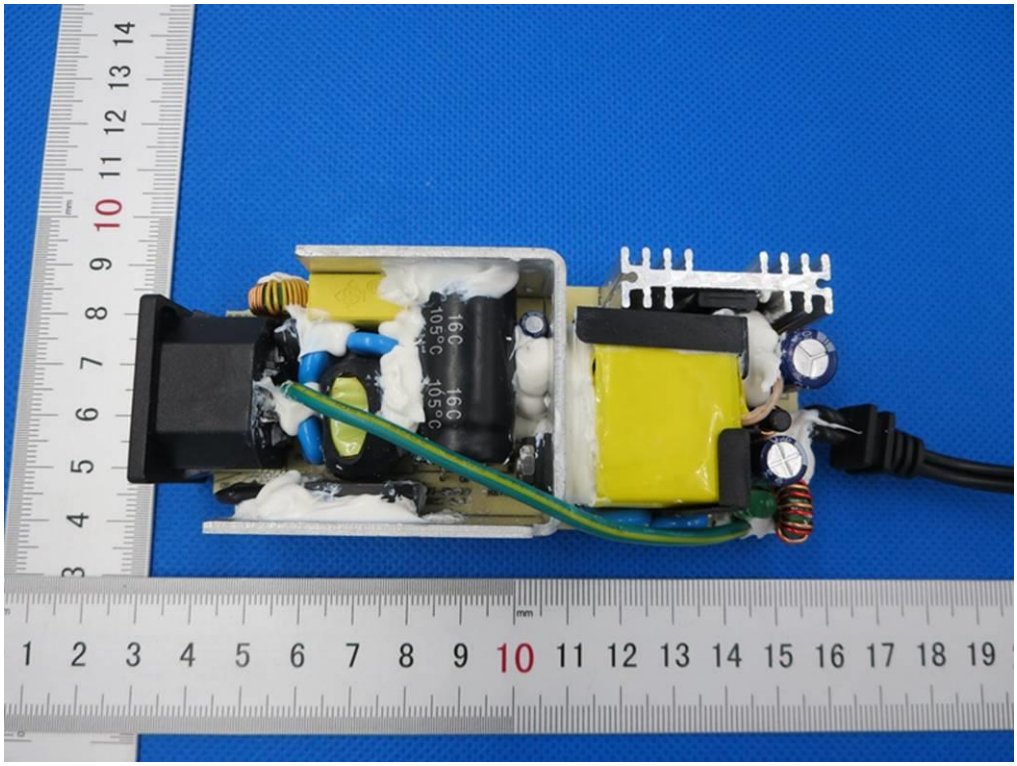


Figure 7. Component side view of PCB

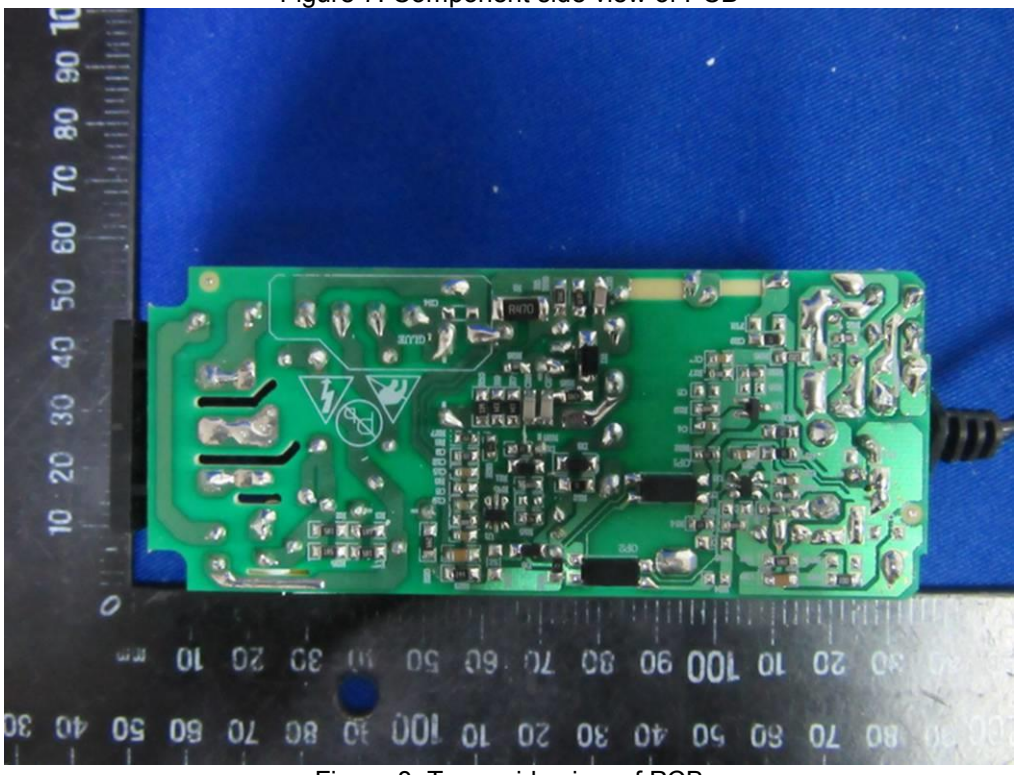


Figure 8. Trace side view of PCB

Product: SWITCHING ADAPTER

Type Designation: FJ-SW2017xxxyyyy (xxx and yyyy are variables)

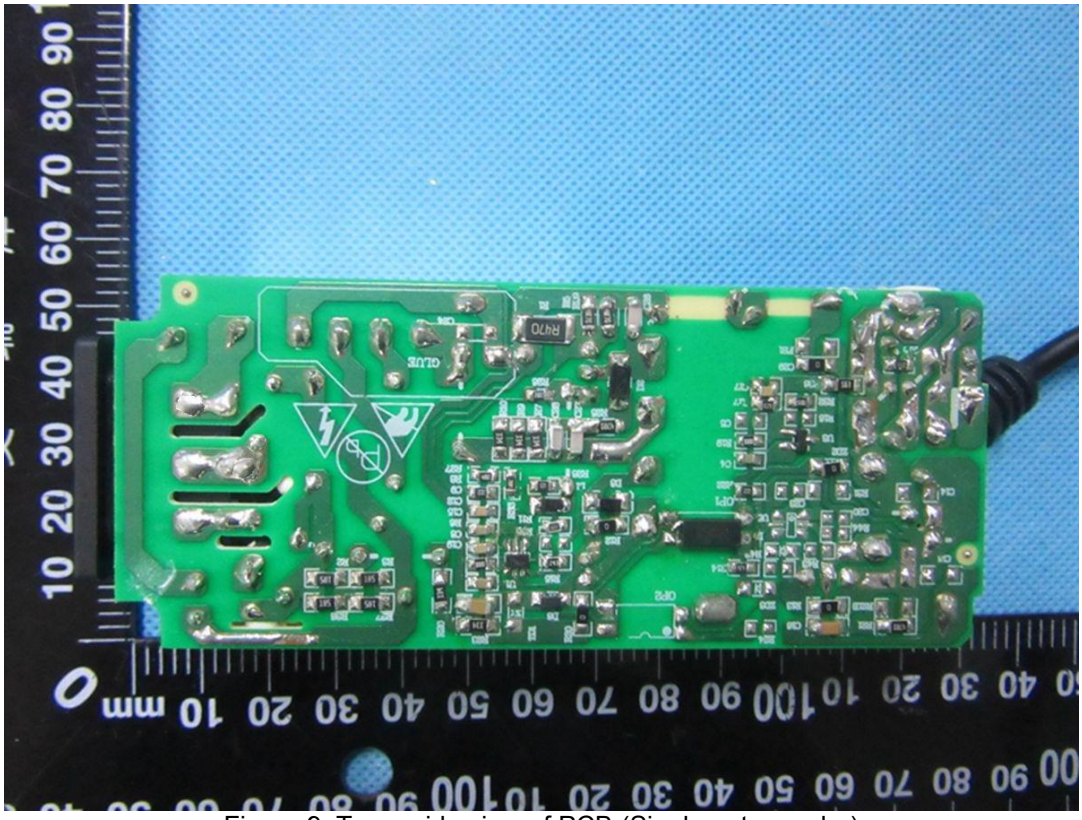


Figure 9. Trace side view of PCB (Single optocoupler)

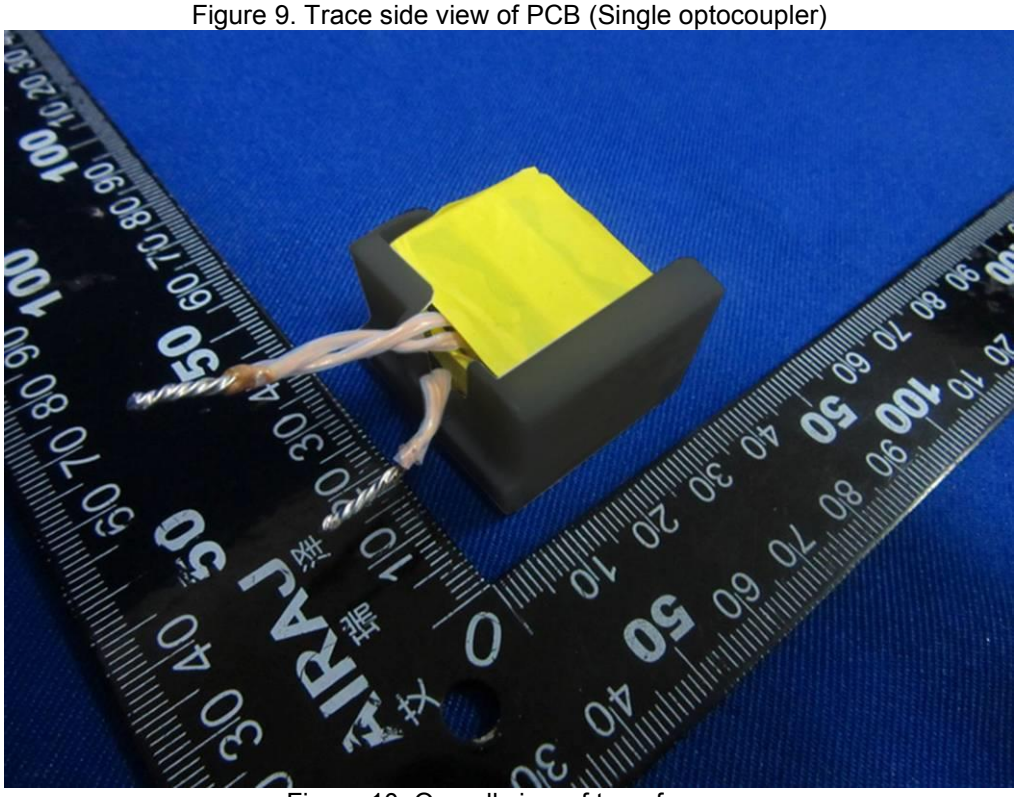


Figure 10. Overall view of transformer

Product: SWITCHING ADAPTER

Type Designation: FJ-SW2017xxxyyyy (xxx and yyyy are variables)

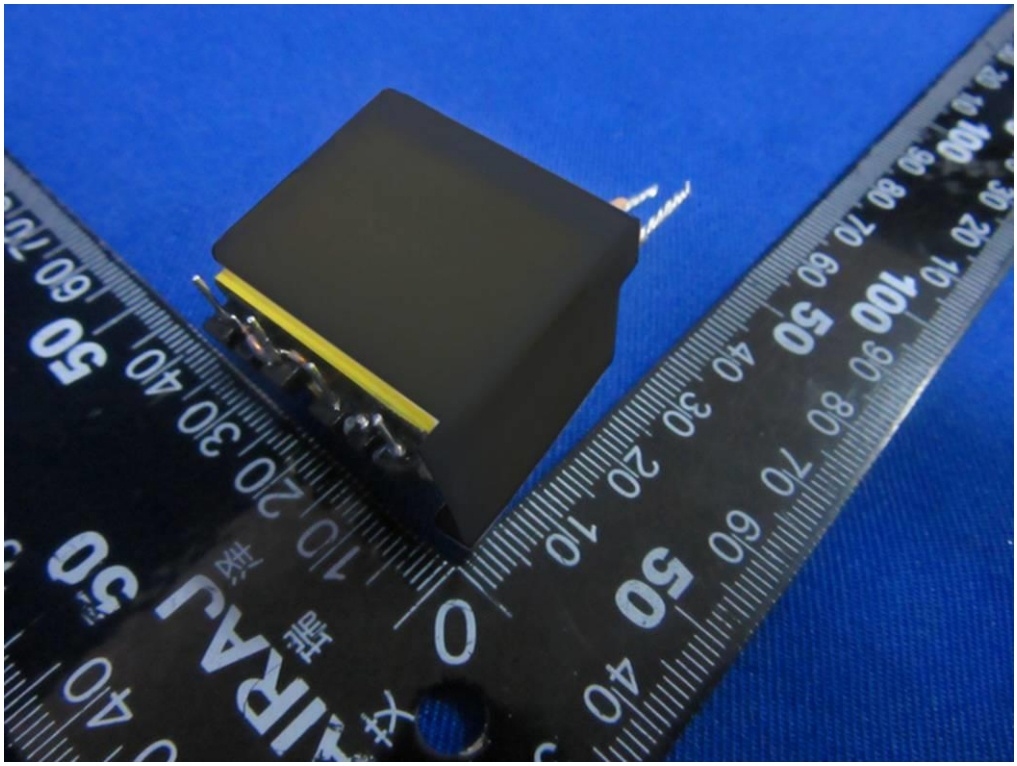


Figure 11. Overall view of transformer

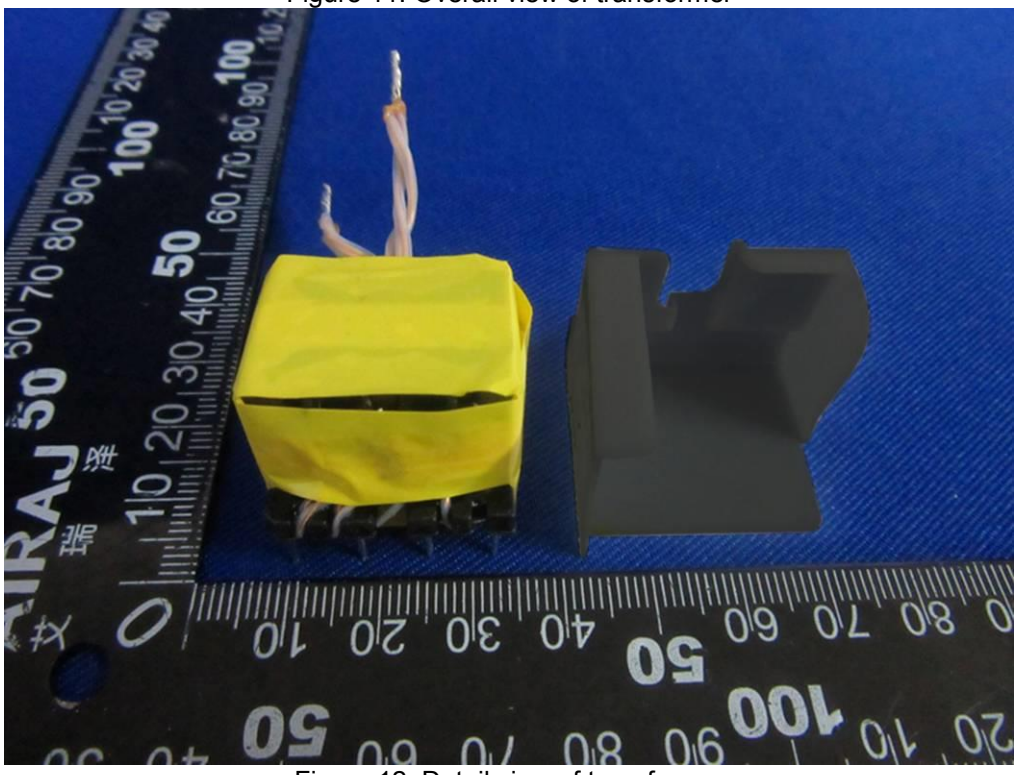


Figure 12. Detail view of transformer

Product: SWITCHING ADAPTER

Type Designation: FJ-SW2017xxxyyyy (xxx and yyyy are variables)

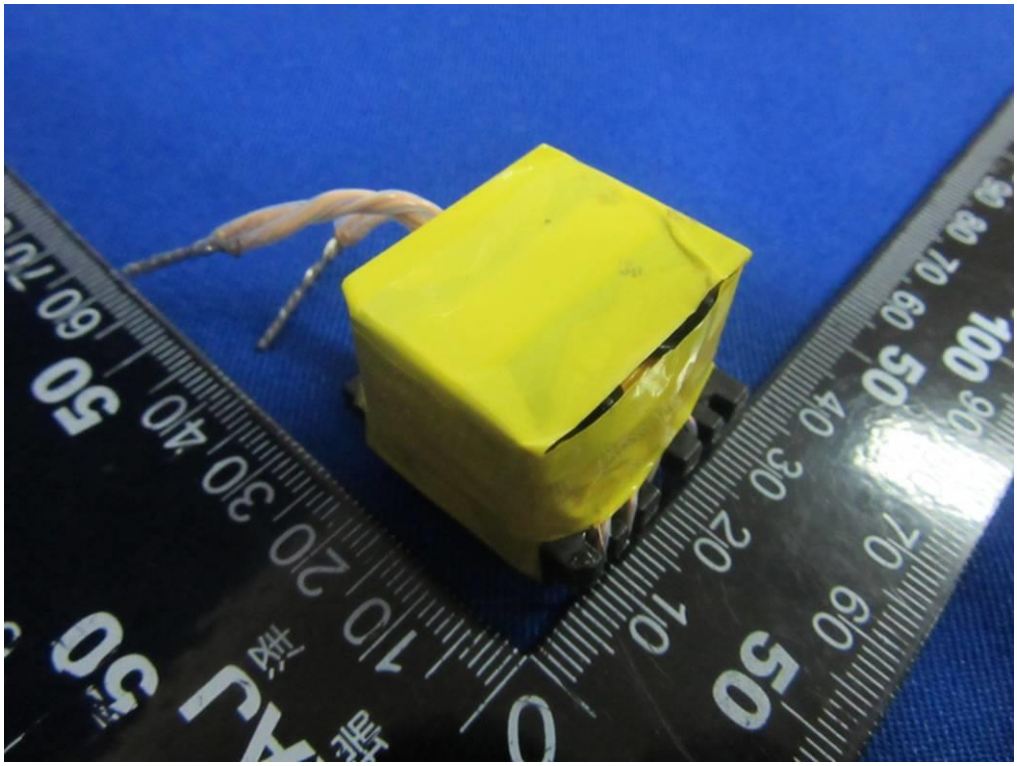


Figure 13. Detail view of transformer

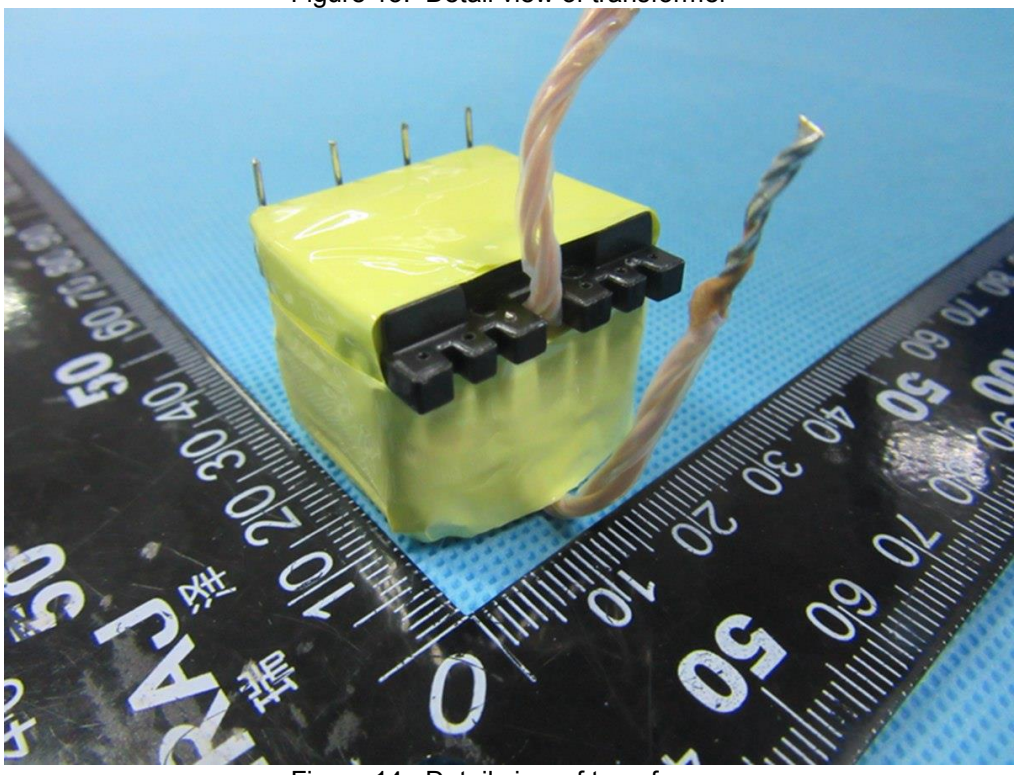


Figure 14. Detail view of transformer

Product: SWITCHING ADAPTER

Type Designation: FJ-SW2017xxxyyyy (xxx and yyyy are variables)

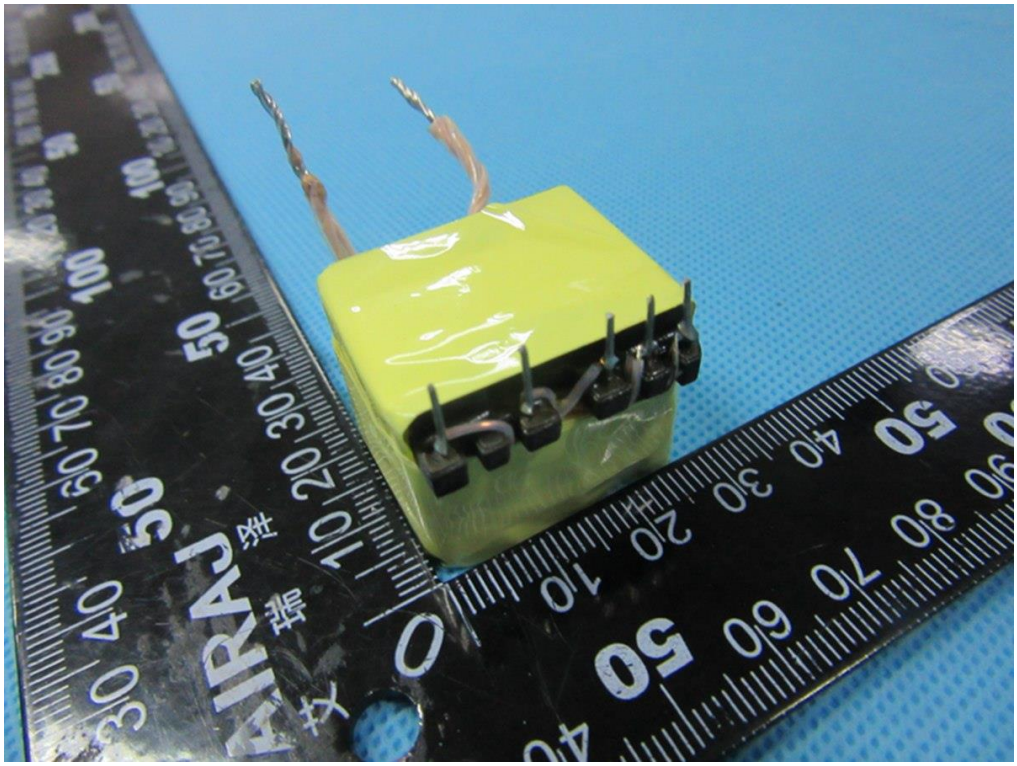


Figure 15. Detail view of transformer

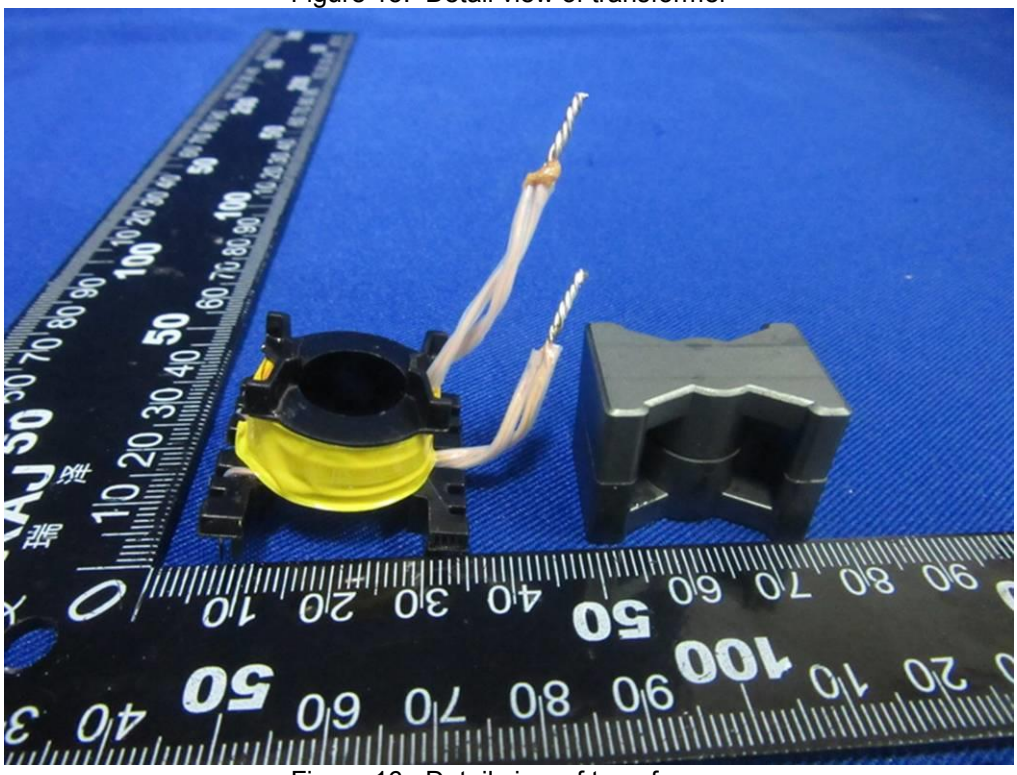


Figure 16. Detail view of transformer

Product: SWITCHING ADAPTER

Type Designation: FJ-SW2017xxxyyyy (xxx and yyyy are variables)

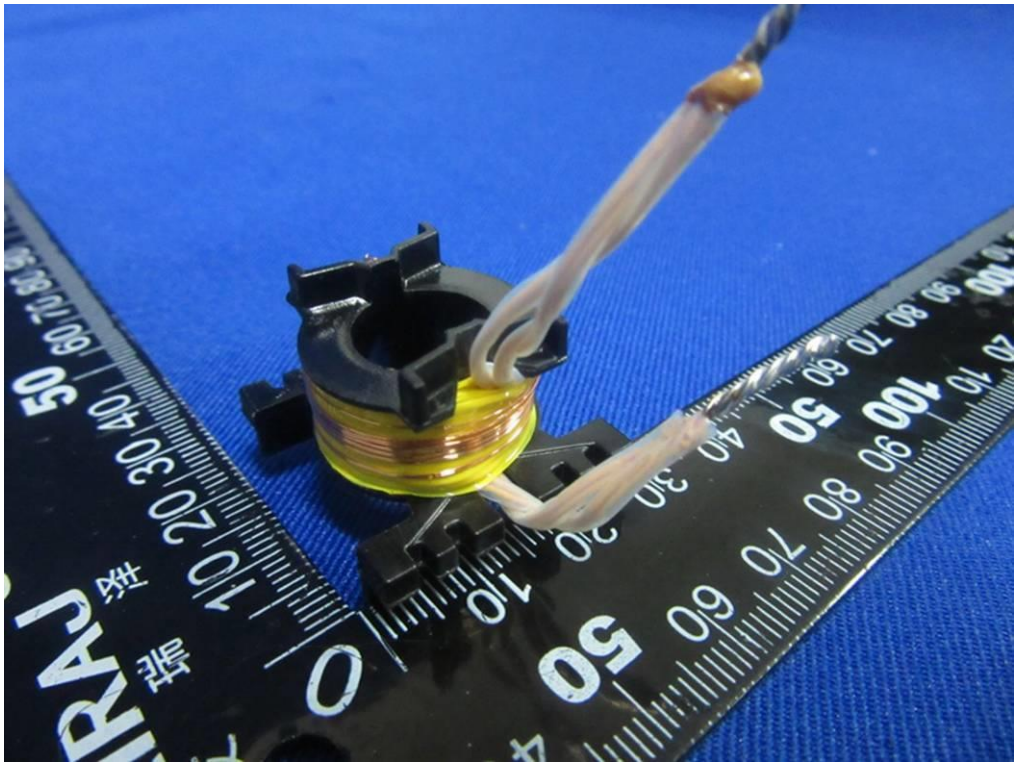


Figure 17. Detail view of transformer

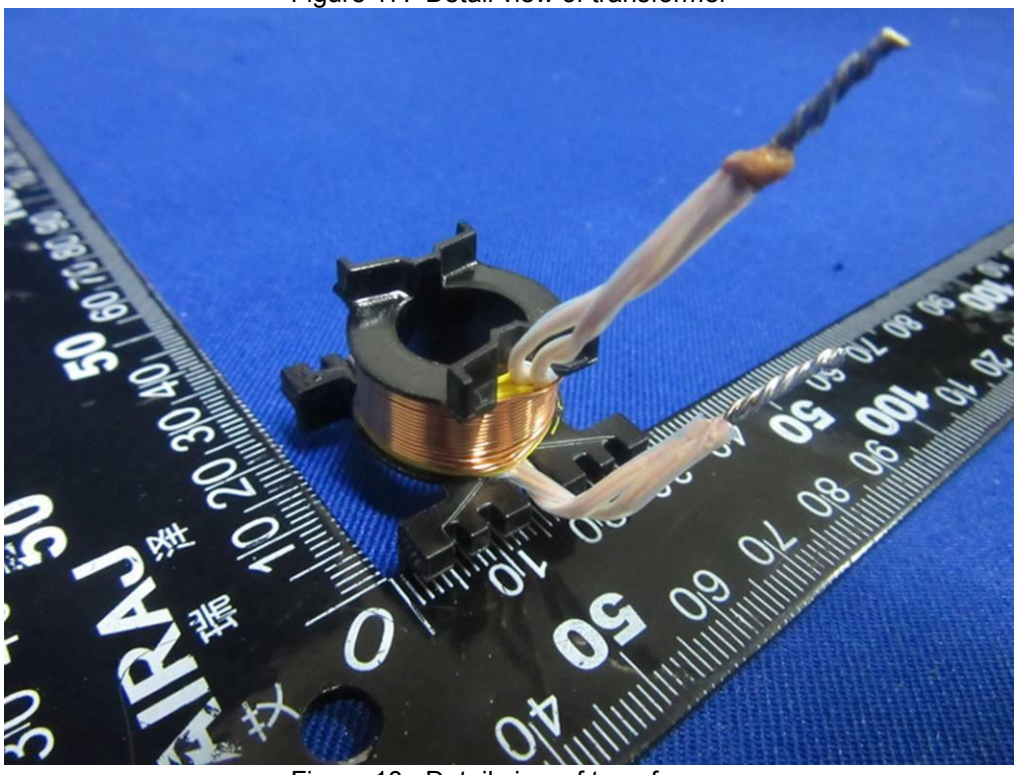


Figure 18. Detail view of transformer

Product: SWITCHING ADAPTER

Type Designation: FJ-SW2017xxxyyyy (xxx and yyyy are variables)

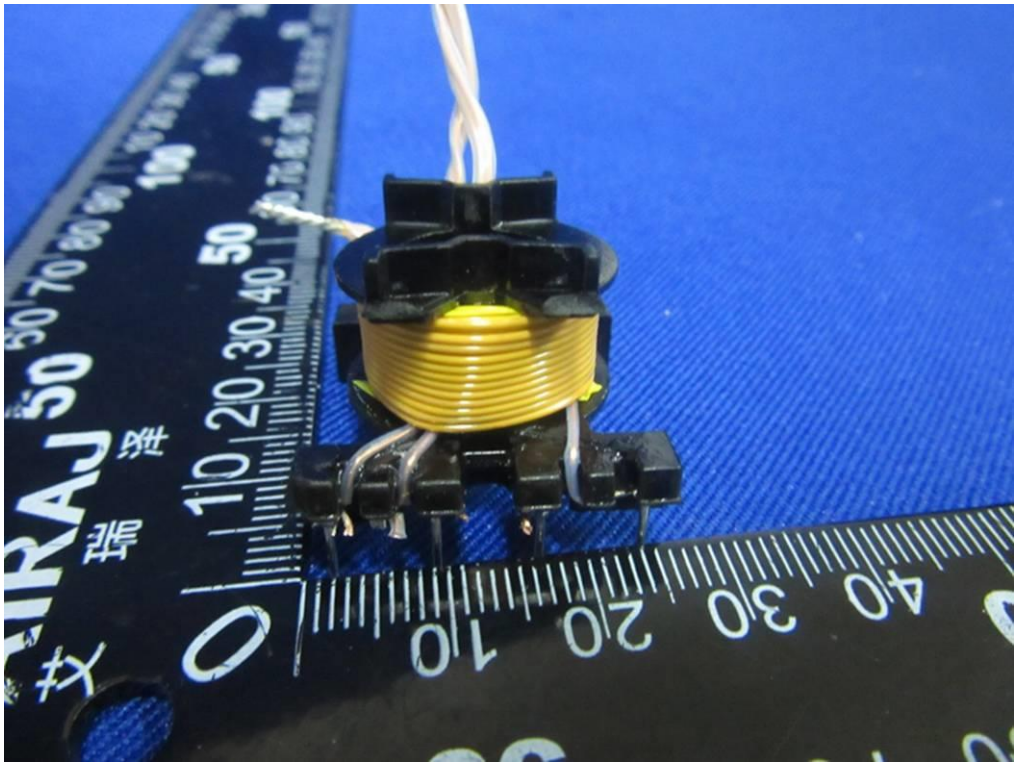


Figure 19. Detail view of transformer

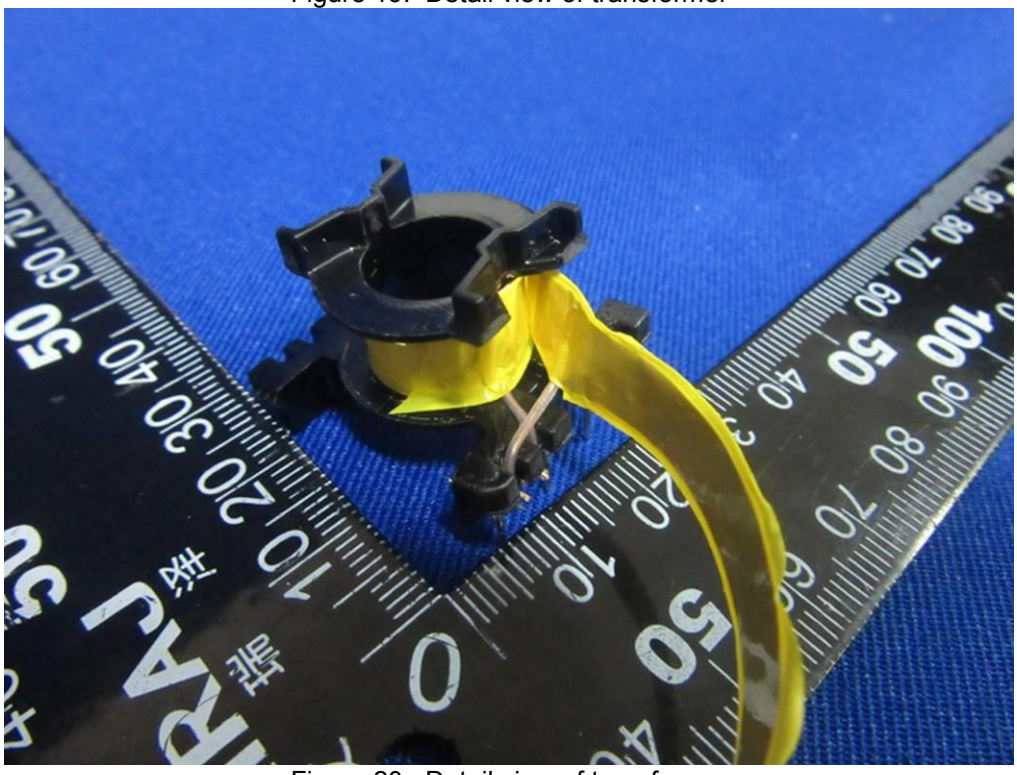


Figure 20. Detail view of transformer

Product: SWITCHING ADAPTER

Type Designation: FJ-SW2017xxxyyyy (xxx and yyyy are variables)

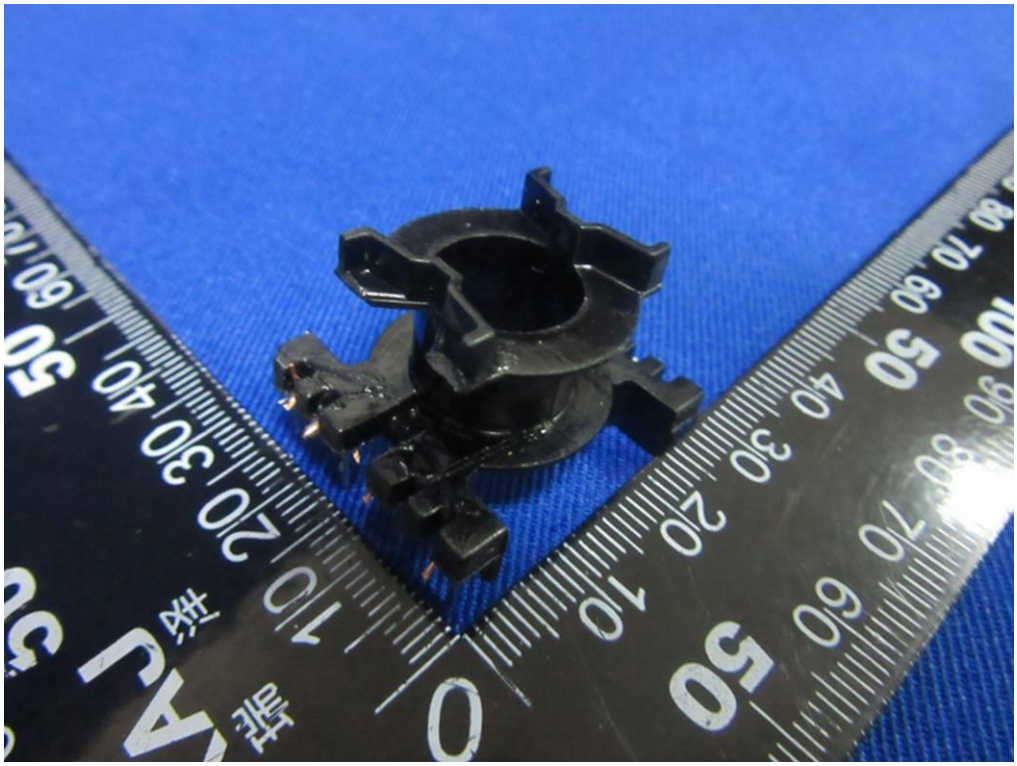


Figure 21. Detail view of transformer

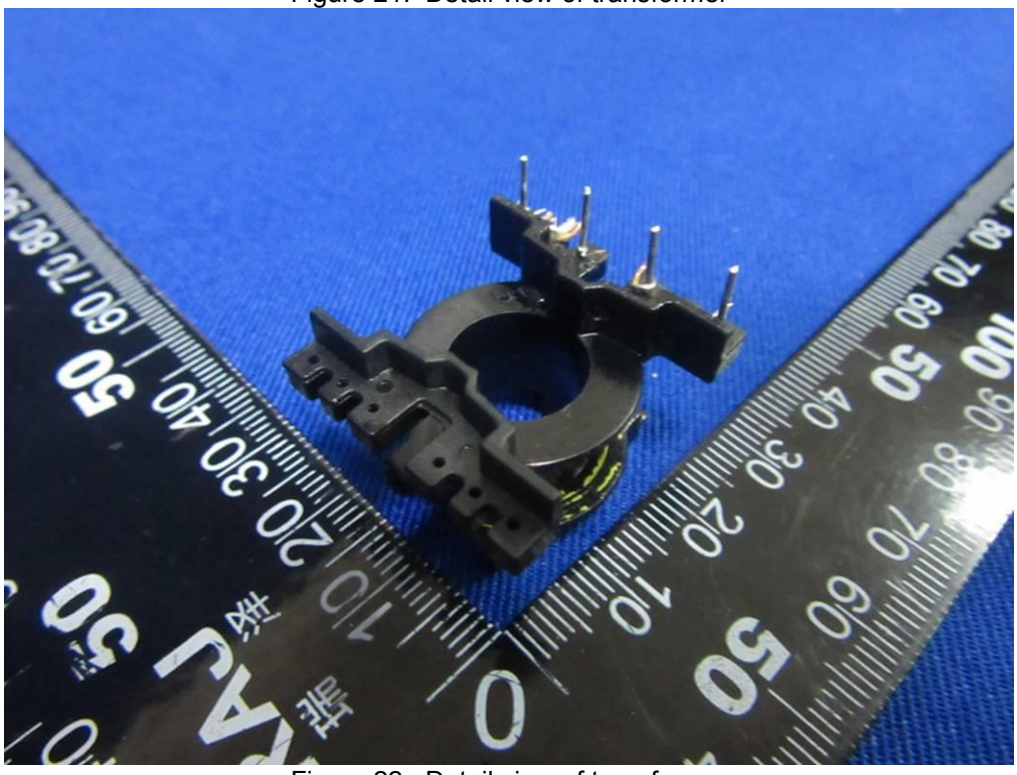


Figure 22. Detail view of transformer