



Test Report issued under the responsibility of:



TEST REPORT
IEC 60950-1
Information technology equipment – Safety –
Part 1: General requirements

Report Number..... : SHES160300161901

Date of issue..... : 2016-08-03

Total number of pages 64 pages

Applicant's name : GlobTek, Inc.

Address..... : 186 Veterans Dr. Northvale, NJ 07647, USA

Test specification:

Standard : IEC 60950-1: 2005 (Second Edition) + Am 1: 2009 + Am 2: 2013

Test procedure : CB Scheme

Non-standard test method : N/A

Test Report Form No. : IEC60950_1F

Test Report Form(s) Originator : SGS Fimko Ltd

Master TRF : Dated 2014-02

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General disclaimer:

The test results presented in this report relate only to the object tested.

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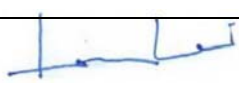
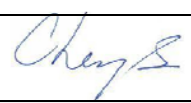
Test item description..... : ITE Power Supply

Trade Mark..... :  **GlobTek® ,Inc.**

Manufacturer : Same as applicant

Model/Type reference..... : GT-86120-WWVV-W2Z, GT-86120-WWVVHW2Z (see page 8 for model designation)

Ratings..... : Input: 100 - 240 Vac; 50 / 60 Hz; 0,5 A
DC-Output: 5 V, max 2 A or 12 V, max 1 A
Class II

Testing procedure and testing location:		
<input checked="" type="checkbox"/>	SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.	SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
Testing location/ address.....:		588 West Jindu Road, Xinqiao Town, Songjiang, 201612 Shanghai, China
<input type="checkbox"/>	Associated CB Testing Laboratory:	
Testing location/ address.....:		
Tested by (name + signature)		Lancer Lei 
Approved by (name + signature).....:		Cherry Sun 
<input type="checkbox"/>	Testing procedure: TMP/CTF Stage 1:	
Testing location/ address.....:		
Tested by (name + signature)		
Approved by (name + signature).....:		
<input type="checkbox"/>	Testing procedure: WMT/CTF Stage 2:	
Testing location/ address.....:		
Tested by (name + signature)		
Witnessed by (name + signature).....:		
Approved by (name + signature).....:		
<input type="checkbox"/>	Testing procedure: SMT/CTF Stage 3 or 4:	
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 – 12 pages of Photo documents;
Attachment 2 – 3 pages of Circuit diagram and PCB layout;
Attachment 3 – 1 page of User manual;
Attachment 4 – 19 pages of European group differences and national differences;
Attachment 5– 7 pages deviations of Australia and/or New Zealand;
Attachment 6 – 1 page deviation of Korea;
Attachment 7– 12 pages deviation of JAPAN;
Attachment 8 – 4 pages of REGULATORY REQUIREMENTS FOR SINGAPORE;
Attachment 9 – 6 pages of deviation of China.

Summary of testing:

The sample(s) tested complies with the requirements of IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013 and EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013.

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

The EMC for Korean deviations is not evaluated.

Models GT-86120-1005-W2E, GT-86120-1212-W2E, GT-86120-1005 and GT-86120-1212 are selected for tests. Unless otherwise specified, models GT-86120-1005-W2E and GT-86120-1212-W2E are tested.

Heating test (4.5):

Ta = 50 °C (declared by manufacturer)

Tamb = 50-51 °C

Tests were carried out at 90 Va.c. and 264 Va.c..

K-type thermocouple used for temperature measurement.

Tests performed (name of test and test clause):

- ☒ 1. GENERAL
- ☒ 2. PROTECTION FROM HAZARDS
- ☒ 3. WIRING, CONNECTIONS AND SUPPLY
- ☒ 4. PHYSICAL REQUIREMENTS
- ☒ 5. ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS
- ☐ 6. CONNECTION TO TELECOMMUNICATION NETWORKS
- ☐ 7. CONNECTION TO CABLE DISTRIBUTION SYSTEMS

Testing location:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
588 West Jindu Road, Xinqiao Town, Songjiang,
201612 Shanghai, China

Summary of compliance with National Differences:**List of countries addressed**

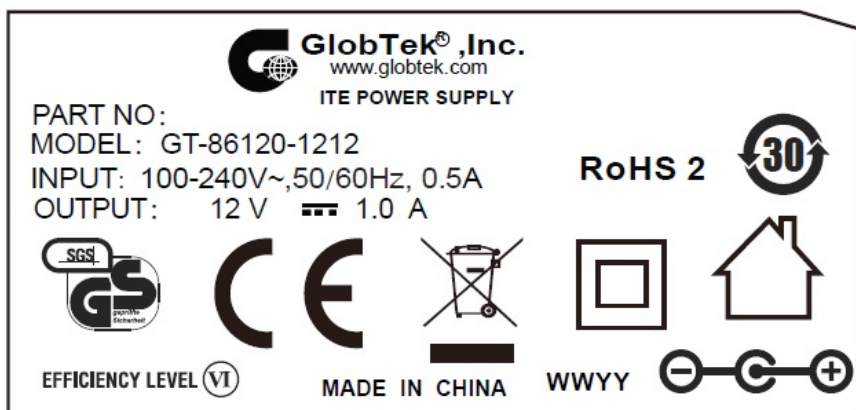
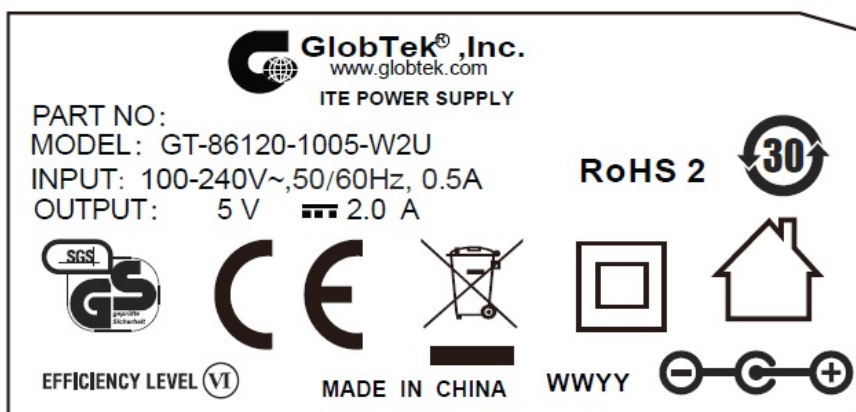
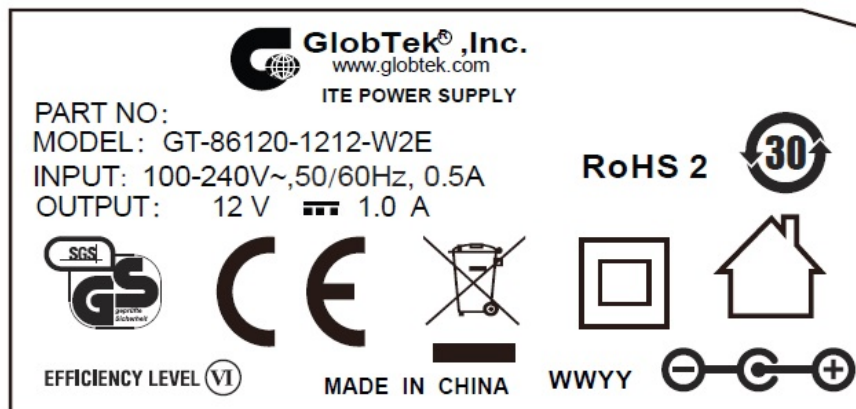
1. EU Group Differences (EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011+ A2: 2013)
2. EU Special National Conditions: none
3. Compliance with the National requirements of JP (J60950-1(H22)), KR (K60950-1) and AS/NZS (AS/NZS 60950.1:2011 +A1:2012) as given in CB Bulletin was also confirmed.
4. CN have not informed its national differences to IEC 60950-1: 2005 (Second Edition) + A1: 2009, the national differences to IEC 60950-1: 2005 have been used.
5. BR had not informed its national differences to IEC 60950-1: 2005 (Second Edition) + A1: 2009 + A2: 2013 in CB Bulletin.

The product fulfils the above requirements.

Copy of marking plate:

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

(Additional requirements for markings. See 1.7 NOTE)



Remark: The marking is representative of all models

Marking for other models are same as above except model name and output parameters.

Test item particulars.....:	
Equipment mobility.....:	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input checked="" type="checkbox"/> direct plug-in
Connection to the mains.....:	<input checked="" type="checkbox"/> pluggable equipment <input checked="" type="checkbox"/> type A <input type="checkbox"/> type B <input type="checkbox"/> permanent connection <input type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input type="checkbox"/> not directly connected to the mains
Operating condition.....:	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Access location	<input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other:
Mains supply tolerance (%) or absolute mains supply values	$\pm 10\%$
Tested for IT power systems	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
IT testing, phase-phase voltage (V)	230V
Class of equipment	<input type="checkbox"/> Class I <input checked="" type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified
Considered current rating of protective device as part of the building installation (A)	16 A
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class	IP20
Altitude during operation (m)	Up to 3000m or up to 5000m (see page 8)
Altitude of test laboratory (m)	≤ 100 m
Mass of equipment (kg)	Max 0,071 kg
Possible test case verdicts:	
- test case does not apply to the test object.....: N/A	
- test object does meet the requirement.....: P (Pass)	
- test object does not meet the requirement.....: F (Fail)	
Testing.....:	
Date of receipt of test item	2016-03-18
Date (s) of performance of tests	2016-03-18 to 2016-04-08
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 is used as the decimal separator.

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Manufacturer's Declaration per sub-clause 4.2.5 of IECCE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided

☒ **Yes**
☐ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) : 1, GlobTek (Suzhou) Co.,Ltd.
 Building 4, 76 Jinling East Road, Suzhou Industrial Park, Suzhou, 215021 Jiangsu, China
 2, GlobTek, Inc.
 186 Veterans Dr. Northvale, NJ 07647 USA

General product information:

Product name	ITE Power Supply
Model	GT-86120-WWVV-W2Z, GT-86120-WWVVHW2Z
Explanation of model designation	WW is the standard output wattage, with a maximum value of "12"; VV is the standard rated output voltage designation, can be "05" or "12"; Z designates type of plug and can be E for European plug, U for British plug, blank for North American / Japan plug/Taiwan plug, C for Chinese plug, I for India plug, A for Australia plug, K for Korea plug, AR for Argentina plug, BR for Brazilian plug, SA for South African plug -W2Z can be optional, when it is blank, denote to be with replaceable plug
Power rating	Input: 100 - 240 Vac; 50 / 60 Hz; 0,5 A DC-Output: 5 V, max 2 A or 12 V, max 1 A
Functions	The EUT are Class II switching power adaptors for ITE and designed for continuous operation. They are indoor use only. The power adapter's top enclosure is secured to bottom enclosure by ultrasonic welding
Model difference	Model GT-86120-WWVV-W2Z is technical identical to GT-86120-WWVVHW2Z, except the PCB layout. All models of GT-86120-WWVV-W2Z / GT-86120-WWVVHW2Z are identical to each other except differences in plug type, and components T1, R19, R15, R16, R18, R10, R17, C5, R9, JP1, R5, C4, R22, R12, R13, R11, R11A and D8 when with different output current and output voltage.

Model list:

Model	Output voltage	Output current	Output power
GT-86120-WW05-W2Z, GT-86120-WW05HW2Z	5 Vdc	Max 2 A	Max 10 W
GT-86120-WW12-W2Z, GT-86120-WW12HW2Z	12 Vdc	Max 1 A	Max 12 W

Examples of model name and relevant output ratings:

Model	Output voltage	Output current
GT-86120-1005-W2E	5 V	2 A
GT-86120-1212-W2E	12 V	1 A

The power pin parts of European plug and Korean plug are fixed into the enclosure of plug portion by a screw. The pin parts of Australian plug and British plug are moulded into the enclosure of plug portion. EU plug and UK plug are evaluated in this test report; other plugs should be evaluated during national approval.

PCB layout:

There are two types of PCB layout, The PCB REV:1 is identical to REV:3, only except for the PCB trace under CY1.

The equipment was evaluated for a maximum operating altitude of 3000 m for PCB REV:1.

The equipment was evaluated for a maximum operating altitude of 5000 m for PCB REV:3.

Model	PCB Layout	Altitude
GT-86120-WWVV-W2Z	PCB REV:1	3000m
GT-86120-WWVVHW2Z	PCB REV:3	5000m

Fuse & varistor configuration:

There are two current fuses (F1 & F2) and one varistor (MOV1) within equipment. The configuration for them are below:

Configuration	F1	F2	MOV1
1	T6,3A	T2A	Optional
2	T6,3A	3,3ohm	Optional
3	T2A	Jumper	Optional
4	3,3ohm	Jumper	Optional
5	none	T1A	none
6	none	3,3ohm	none

Abbreviations used in the report:

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


IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1	GENERAL		—
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1.5	Components		—
1.5.1	General		P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
1.5.2	Evaluation and testing of components	Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this standard. Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950-1 and the relevant component standard. Components, for which no relevant IEC-standard exists, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1.	P
1.5.3	Thermal controls		N/A
1.5.4	Transformers	Transformers used are suitable for their intended applications and comply with relevant parts of this standard and particularly Annex C, see Annex C – Transformers.	P
1.5.5	Interconnecting cables		P
1.5.6	Capacitors bridging insulation	Y1 capacitor according to IEC 60384-14.	P
1.5.7	Resistors bridging insulation	No such resistor.	N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors	The VDR is in compliance with Annex Q	P
1.5.9.1	General		P
1.5.9.2	Protection of VDRs	Fuses used in series with VDR.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9.3	Bridging of functional insulation by a VDR	Certified VDR connected between line and neutral, located after fuse.	P
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A

1.6	Power interface		—
1.6.1	AC power distribution systems	TN, and IT for Norway.	P
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	Not hand-held equipment.	N/A
1.6.4	Neutral conductor		P

1.7	Marking and instructions		—
1.7.1	Power rating and identification markings		P
1.7.1.1	Power rating marking		P
	Multiple mains supply connections.....:		N/A
	Rated voltage(s) or voltage range(s) (V)	100 - 240 V	P
	Symbol for nature of supply, for d.c. only		N/A
	Rated frequency or rated frequency range (Hz)	50 / 60 Hz	P
	Rated current (mA or A)	0,5 A	P
1.7.1.2	Identification markings		P
	Manufacturer's name or trade-mark or identification mark	Trade mark :  GlobTek® ,Inc.	P
	Model identification or type reference	GT-86120-WWVV-W2Z, GT-86120-WWVVHW2Z	P
	Symbol for Class II equipment only	Class II symbol used on label.	P
	Other markings and symbols		P
1.7.1.3	Use of graphical symbols		P
1.7.2	Safety instructions and marking	See below.	P
1.7.2.1	General		P
1.7.2.2	Disconnect devices	The plug is considered as the disconnect device.	P
1.7.2.3	Overcurrent protective device	Not pluggable equipment type B or permanently connected equipment.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.4	IT power distribution systems	The following or similar information should be given in the installation instruction: "This product is also designed for IT power distribution system with phase-to-phase voltage 230V".	N/A
1.7.2.5	Operator access with a tool	No tool used for access to operator access area.	N/A
1.7.2.6	Ozone	Not produce ozone.	N/A
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	N/A
1.7.4	Supply voltage adjustment	No voltage adjustment.	N/A
	Methods and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment	No power outlet.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)	F1: T6.3AL or T2.0AL or 3.3ohm 2W MAX; F2: T1AL or T2.0AL or 3.3ohm 2W MAX	P
1.7.7	Wiring terminals	Direct plug-in.	N/A
1.7.7.1	Protective earthing and bonding terminals		N/A
1.7.7.2	Terminals for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators	No such part.	N/A
1.7.8.1	Identification, location and marking		N/A
1.7.8.2	Colours		N/A
1.7.8.3	Symbols according to IEC 60417.....		N/A
1.7.8.4	Markings using figures	No control uses figures.	N/A
1.7.9	Isolation of multiple power sources	No multiple power source.	N/A
1.7.10	Thermostats and other regulating devices	No such device.	N/A
1.7.11	Durability	The marking withstands required tests.	P
1.7.12	Removable parts	No marking placed on removable parts	P
1.7.13	Replaceable batteries	No battery.	N/A
	Language(s)		—
1.7.14	Equipment for restricted access locations.....		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2	PROTECTION FROM HAZARDS		—
2.1	Protection from electric shock and energy hazards		—
2.1.1	Protection in operator access areas		P
2.1.1.1	Access to energized parts		P
	Test by inspection	See below.	P
	Test with test finger (Figure 2A)	No access.	P
	Test with test pin (Figure 2B)	No access.	P
	Test with test probe (Figure 2C)	No TNV circuit.	N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring	No internal wiring at ELV.	N/A
	Working voltage (V_{peak} or V_{rms}); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	All accessible parts are separated from internal wiring at hazardous voltage by double or reinforced insulation.	P
2.1.1.5	Energy hazards	No energy hazard in operator access area. Checked by means of the test finger. (see appended table 2.1.1.5)	P
2.1.1.6	Manual controls	No such part.	N/A
2.1.1.7	Discharge of capacitors in equipment	The capacitance of the input circuit is $< 0.1\mu F$.	P
	Measured voltage (V); time-constant (s)	No test necessary.	—
2.1.1.8	Energy hazards – d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply ...		N/A
	b) Internal battery connected to the d.c. mains supply ...		N/A
2.1.1.9	Audio amplifiers	No such part.	N/A
2.1.2	Protection in service access areas		P
2.1.3	Protection in restricted access locations	Not intended to be used in RAL.	N/A

2.2	SELV circuits		—
2.2.1	General requirements		P
2.2.2	Voltages under normal conditions (V)	(see appended table 2.2)	P
2.2.3	Voltages under fault conditions (V)	(see appended table 2.2)	P
2.2.4	Connection of SELV circuits to other circuits	SELV circuits are only connected to other SELV circuits.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.3	TNV circuits		—
2.3.1	Limits	No TNV circuit.	N/A
	Type of TNV circuits		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed.....		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed.....		—
2.3.5	Test for operating voltages generated externally		N/A

2.4	Limited current circuits		—
2.4.1	General requirements		P
2.4.2	Limit values	35,12mA / 0,7mA	P
	Frequency (Hz)	50,18kHz / 60Hz	—
	Measured current (mA).....	3,2mA / 0,46mA	—
	Measured voltage (V)	6,4V / 227mV	—
	Measured circuit capacitance (nF or μ F).....	CY1 2200pF	—
2.4.3	Connection of limited current circuits to other circuits		P

2.5	Limited power sources		—
	a) Inherently limited output		P
	b) Impedance limited output		N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition	(see appended table 2.5)	P
	Use of integrated circuit (IC) current limiters		N/A
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA).....		—
	Current rating of overcurrent protective device (A) ..		—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.6	Provisions for earthing and bonding		—
2.6.1	Protective earthing	Class II.	N/A
2.6.2	Functional earthing		N/A
	Use of symbol for functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG		—
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG		—
	Protective current rating (A), cross-sectional area (mm ²), AWG		N/A
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min)		N/A
2.6.3.5	Colour of insulation		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm)		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.7	Overcurrent and earth fault protection in primary circuits		—
2.7.1	Basic requirements	Protective devices are integrated in equipment.	P
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7		P
2.7.3	Short-circuit backup protection	The building installation is considered as providing short circuit backup protection.	P
2.7.4	Number and location of protective devices		P
2.7.5	Protection by several devices	Two fuses located together.	P
2.7.6	Warning to service personnel	After operation of the protective device, the equipment is still under voltage if it is connected to an IT-power distribution system. A warning is required for service persons. Norway does not require this warning. See also Sub-clause 2.7.4.	N/A

2.8	Safety interlocks		—
2.8.1	General principles	No safety interlock used.	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm)		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

2.9	Electrical insulation		—
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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.9.1	Properties of insulating materials	Neither natural rubber, materials containing asbestos nor hygroscopic materials are used as insulation. No driving belts or couplings used.	P
2.9.2	Humidity conditioning	Tested for 120 hrs.	P
	Relative humidity (%), temperature (°C) :	95%, 40 °C	—
2.9.3	Grade of insulation	Insulation is considered to be functional, basic, supplementary, reinforced or double insulation.	P
2.9.4	Separation from hazardous voltages		P
	Method(s) used :	Method 1	—

2.10	Clearances, creepage distances and distances through insulation		—
2.10.1	General		P
2.10.1.1	Frequency :	Considered.	P
2.10.1.2	Pollution degrees :	2	P
2.10.1.3	Reduced values for functional insulation		P
2.10.1.4	Intervening unconnected conductive parts	Considered.	P
2.10.1.5	Insulation with varying dimensions	No such insulation.	N/A
2.10.1.6	Special separation requirements	Not used.	N/A
2.10.1.7	Insulation in circuits generating starting pulses	The circuit will not generate starting pulse.	N/A
2.10.2	Determination of working voltage	(see appended table 2.10.2)	P
2.10.2.1	General		P
2.10.2.2	RMS working voltage	(See appended table 2.10.2)	P
2.10.2.3	Peak working voltage	(See appended table 2.10.2)	P
2.10.3	Clearances	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.1	General		P
2.10.3.2	Mains transient voltages		P
	a) AC mains supply :	2500V	P
	b) Earthed d.c. mains supplies :		N/A
	c) Unearthed d.c. mains supplies :		N/A
	d) Battery operation :		N/A
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.4	Clearances in secondary circuits	Only the functional insulation in secondary circuits complied with clause 5.3.4.	N/A
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply	Considered.	P
2.10.3.7	Transients from d.c. mains supply		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems	Not connected to telecommunication networks and cable distribution systems.	N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network :		N/A
2.10.4	Creepage distances	(see appended table 2.10.3 and 2.10.4)	P
2.10.4.1	General		P
2.10.4.2	Material group and comparative tracking index		P
	CTI tests	Material group IIIb is assumed to be used.	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	P
2.10.5	Solid insulation		P
2.10.5.1	General		P
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		N/A
2.10.5.5	Cemented joints		N/A
2.10.5.6	Thin sheet material – General	Not considered.	N/A
2.10.5.7	Separable thin sheet material		N/A
	Number of layers (pcs)		—
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material – standard test procedure		N/A
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure		N/A
	Electric strength test	(see appended table 2.10.5)	—
2.10.5.11	Insulation in wound components		P
2.10.5.12	Wire in wound components	Certified TIW used in transformer.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Working voltage		P
	a) Basic insulation not under stress		N/A
	b) Basic, supplementary, reinforced insulation		N/A
	c) Compliance with Annex U	Triple insulation wire used as secondary winding of transformer.	P
	Two wires in contact inside wound component; angle between 45° and 90°	Insulation tape and tube.	P
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage		N/A
	- Basic insulation not under stress		N/A
	- Supplementary, reinforced insulation		N/A
2.10.6	Construction of printed boards		P
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	P
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs)		N/A
2.10.7	Component external terminations	Coatings not used over terminations to increase effective clearance and creepage distances.	N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A
3	WIRING, CONNECTIONS AND SUPPLY		—
3.1	General		—
3.1.1	Current rating and overcurrent protection	Adequate cross sectional areas on internal wiring.	P
3.1.2	Protection against mechanical damage	The wires are routed away from sharp edges and parts which could damage insulation.	P
3.1.3	Securing of internal wiring	Internal wiring is secured against excessive strain, loosening of terminals and damage to the conductor insulation.	P
3.1.4	Insulation of conductors		P
3.1.5	Beads and ceramic insulators	No such component.	N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections	No contact pressure through insulating material.	N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors	Terminations cannot become displaced so that clearances and creepage distances can be reduced.	P
	10 N pull test		P
3.1.10	Sleeving on wiring		N/A
3.2	Connection to a mains supply		—
3.2.1	Means of connection		P
3.2.1.1	Connection to an a.c. mains supply	Direct plug-in equipment.	P
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment	Not permanently connected equipment.	N/A
	Number of conductors, diameter of cable and conduits (mm)		—
3.2.4	Appliance inlets	Direct plug-in equipment.	N/A
3.2.5	Power supply cords	Direct plug-in equipment.	N/A
3.2.5.1	AC power supply cords		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Type		—
	Rated current (A), cross-sectional area (mm ²), AWG		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N)		—
	Longitudinal displacement (mm)		—
3.2.7	Protection against mechanical damage	Direct plug-in equipment	N/A
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g)		—
	Radius of curvature of cord (mm)		—
3.2.9	Supply wiring space		N/A
3.3	Wiring terminals for connection of external conductors		—
3.3.1	Wiring terminals	The equipment is not permanently connected or provided with a non-detachable power supply cord.	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm ²)		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm)		—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A
3.4	Disconnection from the mains supply		—
3.4.1	General requirement		P
3.4.2	Disconnect devices	The plug of direct plug-in is considered to be the disconnect device.	P
3.4.3	Permanently connected equipment	Not permanently connected equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.4.4	Parts which remain energized	No part remain energized after the disconnect device is pull out.	P
3.4.5	Switches in flexible cords	No switch in flexible cord.	N/A
3.4.6	Number of poles - single-phase and d.c. equipment	Disconnect device disconnects both poles simultaneously.	P
3.4.7	Number of poles - three-phase equipment	Single phase equipment.	N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices	The plug of direct plug-in is considered to be the disconnect device.	P
3.4.10	Interconnected equipment	No interconnections using hazardous voltages.	N/A
3.4.11	Multiple power sources		N/A

3.5	Interconnection of equipment		—
3.5.1	General requirements		P
3.5.2	Types of interconnection circuits	SELV	P
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection.	N/A
3.5.4	Data ports for additional equipment	No data port.	N/A

4	PHYSICAL REQUIREMENTS		—
4.1	Stability		—
	Angle of 10°	Direct plug-in equipment.	N/A
	Test force (N)	Not floor-standing equipment.	N/A

4.2	Mechanical strength		—
4.2.1	General		P
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N	No hazard.	P
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N	No hazard.	P
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm)	1000 mm	P
4.2.7	Stress relief test	85°C; 7 h	P
4.2.8	Cathode ray tubes	No cathode ray tube.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Picture tube separately certified		N/A
4.2.9	High pressure lamps	No high pressure lamp.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N)	Not intended to be mounted on a wall or ceiling.	N/A

4.3	Design and construction		—
4.3.1	Edges and corners	All edges and corners are rounded and smoothed.	P
4.3.2	Handles and manual controls; force (N)..... :		N/A
4.3.3	Adjustable controls	No adjustable control.	N/A
4.3.4	Securing of parts		P
4.3.5	Connection by plugs and sockets	SELV connectors do not comply with IEC 60320 or IEC 60083.	P
4.3.6	Direct plug-in equipment		P
	Torque	Max 0,03Nm	—
	Compliance with the relevant mains plug standard	EU plug (Fixed plug): the plug has been evaluated according to EN 50075 by TUV, report No. 16066710 001; EU plug (Replaceable plug): the plug has been evaluated according to EN 50075 by TUV, report No. 16066710 001; British plug (Fixed plug): the plug has been evaluated according to BS 1363-1+A1+A2+A3 by TUV, report No. 16066710 001; British plug (Replaceable plug): the plug has been evaluated according to BS 1363-1+A1+A2+A3 by TUV, report No. 16066710 001; Other plugs should be evaluated during national approval.	P
4.3.7	Heating elements in earthed equipment	No such part.	N/A
4.3.8	Batteries		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

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.9	Oil and grease	No oil and grease.	N/A
4.3.10	Dust, powders, liquids and gases	Not intend to product dust, or using powders, liquids and gases.	N/A
4.3.11	Containers for liquids or gases	No such containers used.	N/A
4.3.12	Flammable liquids	No flammable liquids.	N/A
	Quantity of liquid (l)		N/A
	Flash point (°C)		N/A
4.3.13	Radiation		N/A
4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation	No ionizing radiation.	N/A
	Measured radiation (pA/kg)		—
	Measured high-voltage (kV)		—
	Measured focus voltage (kV)		—
	CRT markings		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	No UV lamp used.	N/A
	Part, property, retention after test, flammability classification		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation	No UV radiation.	N/A
4.3.13.5	Lasers (including laser diodes) and LEDs		N/A
4.3.13.5.1	Lasers (including laser diodes)		N/A
	Laser class		—
4.3.13.5.2	Light emitting diodes (LEDs)		N/A
4.3.13.6	Other types		N/A

4.4	Protection against hazardous moving parts		—
4.4.1	General	No moving parts.	N/A
4.4.2	Protection in operator access areas		N/A
	Household and home/office document/media shredders		N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades		N/A
4.4.5.1	General		N/A
	Not considered to cause pain or injury. a).....		N/A
	Is considered to cause pain, not injury. b)		N/A
	Considered to cause injury. c)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.4.5.2	Protection for users		N/A
	Use of symbol or warning		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning		N/A
4.5	Thermal requirements		—
4.5.1	General		P
4.5.2	Temperature tests		P
	Normal load condition per Annex L	Rated load with continuous operation.	—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat	(see appended table 4.5.5)	P
4.6	Openings in enclosures		—
4.6.1	Top and side openings	No opening in the equipment.	P
	Dimensions (mm)		—
4.6.2	Bottoms of fire enclosures	No opening in the equipment.	P
	Construction of the bottommm, dimensions (mm) ..		—
4.6.3	Doors or covers in fire enclosures	No cover can be removed by hand.	N/A
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm)		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks)		—
4.7	Resistance to fire		—
4.7.1	Reducing the risk of ignition and spread of flame		P
	Method 1, selection and application of components wiring and materials	(See appended table 4.7)	P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure		P
4.7.2.1	Parts requiring a fire enclosure	The fire enclosure covers all parts.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General	Components and materials have adequate flammability classification. See appended table 1.5.1.	P
4.7.3.2	Materials for fire enclosures	The fire enclosure is of min V-1 material.	P
4.7.3.3	Materials for components and other parts outside fire enclosures	No parts outside the fire enclosure.	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures		P
4.7.3.5	Materials for air filter assemblies	No air filter.	N/A
4.7.3.6	Materials used in high-voltage components	No high-voltage component.	N/A
5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		—
5.1	Touch current and protective conductor current		—
5.1.1	General	(see appended Table 5.1)	P
5.1.2	Configuration of equipment under test (EUT)	See below.	P
5.1.2.1	Single connection to an a.c. mains supply	No interconnection of equipment.	P
5.1.2.2	Redundant multiple connections to an a.c. mains supply	No multiple power sources.	N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit	Tested for connection to IT power distribution system (also relevant for TN or TT power distribution system).	P
5.1.4	Application of measuring instrument	Measuring instrument D1 is used.	P
5.1.5	Test procedure		P
5.1.6	Test measurements		P
	Supply voltage (V)	(see appended table 5.1)	—
	Measured touch current (mA)	(see appended table 5.1)	—
	Max. allowed touch current (mA)	(see appended table 5.1)	—
	Measured protective conductor current (mA)		—
	Max. allowed protective conductor current (mA)....		—
5.1.7	Equipment with touch current exceeding 3,5 mA	The touch current does not exceed 3.5mA.	N/A
5.1.7.1	General		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	Not connected to a telecommunication network or a cable distribution system.	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V)		—
	Measured touch current (mA)		—
	Max. allowed touch current (mA)		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

5.2	Electric strength		—
5.2.1	General	(see appended table 5.2)	P
5.2.2	Test procedure	(see appended table 5.2)	P

5.3	Abnormal operating and fault conditions		—
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors	No motors.	N/A
5.3.3	Transformers	See Annex C and appended table C.2.	P
5.3.4	Functional insulation.....	Complies with a), b) and c).	P
5.3.5	Electromechanical components	No such components.	N/A
5.3.6	Audio amplifiers in ITE	No audio amplifier.	N/A
5.3.7	Simulation of faults	(see appended table 5.3)	P
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	No fire or molten metal occurred and no deformation of enclosure during the tests.	P
5.3.9.1	During the tests	No fire or molten metal occurred and no deformation of enclosure during the tests.	P
5.3.9.2	After the tests	No reduction of clearance and creepage distances. Electric strength test made.	P

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Clause	Requirement + Test	Result - Remark	Verdict
6	CONNECTION TO TELECOMMUNICATION NETWORKS		—
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		—
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A
	Supply voltage (V)		—
	Current in the test circuit (mA)		—
6.1.2.2	Exclusions		N/A
6.2	Protection of equipment users from overvoltages on telecommunication networks		—
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A
6.3	Protection of the telecommunication wiring system from overheating		—
	Max. output current (A)		—
	Current limiting method		—
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		—
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A
7.4.3	Impulse test		N/A
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		—

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Clause	Requirement + Test	Result - Remark	Verdict
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples.....:		—
	Wall thickness (mm)		—
A.1.2	Conditioning of samples; temperature (°C)		N/A
A.1.3	Mounting of samples		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material.....:		—
	Wall thickness (mm)		—
A.2.2	Conditioning of samples; temperature (°C)		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C		—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		—
B.1	General requirements		N/A
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days)		—
	Electric strength test: test voltage (V)		—
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V)		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V)		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V)		—

C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		—
	Position	T1: Primary to secondary.	—
	Manufacturer	(See appended table 1.5.1)	—
	Type	(See appended table 1.5.1)	—
	Rated values	(See appended table 1.5.1)	—
	Method of protection	Inherent protection	—

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Clause	Requirement + Test	Result - Remark	Verdict
C.1	Overload test	(See appended table 5.3)	P
C.2	Insulation	(see appended tables 5.2 and C2)	P
	Protection from displacement of windings..... :	(see appended table C.2)	P
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		—
D.1	Measuring instrument	Figure D.1 used.	P
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		—
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		—
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		—
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	Earthed d.c. mains supplies		N/A
G.2.3	Unearthed d.c. mains supplies		N/A
G.2.4	Battery operation		N/A
G.3	Determination of telecommunication network transient voltage (V)		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks		N/A
G.4.2	Transients from telecommunication networks		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.6	Determination of minimum clearances		N/A
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		—
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		—
	Metal(s) used		—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		—
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V)		N/A
K.3	Thermostat endurance test; operating voltage (V)		N/A
K.4	Temperature limiter endurance; operating voltage (V)		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		—
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment		P
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		—
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringling signal		N/A
M.3.1.1	Frequency (Hz)		—
M.3.1.2	Voltage (V)		—
M.3.1.3	Cadence; time (s), voltage (V)		—
M.3.1.4	Single fault current (mA)		—
M.3.2	Tripping device and monitoring voltage		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V)		N/A
N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)		—
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	ANNEX P, NORMATIVE REFERENCES		—
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		—
	- Preferred climatic categories	Certified VDR used. (see appended table 1.5.1)	P
	- Maximum continuous voltage	Certified VDR used. (see appended table 1.5.1)	P
	- Combination pulse current	Certified VDR used. (see appended table 1.5.1)	P
	Body of the VDR Test according to IEC60695-11-5.....		P
	Body of the VDR. Flammability class of material (min V-1).....		P
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		—
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		—
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		—
			—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		—
		The TIW of T1 was certified by UL.	—

V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		—
V.1	Introduction	IT and TN	P
V.2	TN power distribution systems		P

W	ANNEX W, SUMMATION OF TOUCH CURRENTS		—
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A

X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		—
X.1	Determination of maximum input current		P
X.2	Overload test procedure		P

Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		—
Y.1	Test apparatus		N/A
Y.2	Mounting of test samples		N/A
Y.3	Carbon-arc light-exposure apparatus		N/A
Y.4	Xenon-arc light exposure apparatus		N/A

Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		—
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AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		—
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BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—
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CC	ANNEX CC, Evaluation of integrated circuit (IC) current limiters		—
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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
CC.1	General		N/A
CC.2	Test program 1.....:		N/A
CC.3	Test program 2.....:		N/A
CC.4	Test program 3.....:		N/A
CC.5	Compliance.....:		N/A
DD	ANNEX DD, Requirements for the mounting means of rack-mounted equipment		—
DD.1	General		N/A
DD.2	Mechanical strength test, variable N.....:		N/A
DD.3	Mechanical strength test, 250N, including end stops.....:		N/A
DD.4	Compliance.....:		N/A
EE	ANNEX EE, Household and home/office document/media shredders		—
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols.....:		N/A
	Information of user instructions, maintenance and/or servicing instructions.....:		N/A
EE.3	Inadvertent reactivation test.....:		N/A
EE.4	Disconnection of power to hazardous moving parts:		N/A
	Use of markings or symbols.....:		N/A
EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A)		N/A
	Test with wedge probe (Figure EE1 and EE2)		N/A

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾	
Transformer (T1) For models with 5V output 3)	/ GlobTek / HAOPUWEI / BOAM / HEJIA 2)	90E12PT05-xxx ("xxx" to denote the part number, can be any alphanumeric character for marketing purposes only.)	Pri. Winding: (pin 2-1) Φ0,32mmx1px 100Ts (pin 5-4) Φ0,32mmx1px 19Ts (pin 4-NC) Φ0,25mmx1px 16Ts Sec. Winding: (pin 6-7) Φ0,50mmx2px 8Ts Class B	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance	
Transformer (T1) For models with 12V output 3)	/ GlobTek / HAOPUWEI / BOAM / HEJIA 2)	90E12PT12-xxx ("xxx" to denote the part number, can be any alphanumeric character for marketing purposes only.)	Pri. Winding: (pin 2-1) Φ0,32mmx1px 100Ts (pin 5-4) Φ0,32mmx1px 18Ts (pin 4-NC) Φ0,32mmx1p x7Ts Sec. Winding: (pin 6-7) Φ0,55mmx1px 15Ts Class B	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance	
-Bobbin	Hitachi Chemical Co Ltd	CP-J-8800	Phenolic, V-0, 150 °C , Min. thickness 0,71mm	UL 94, UL 746C	UL E42956	
(Alternate)	Chang Chun Plastics Co Ltd	T375J,T373J T375HF	Phenolic, V-0, 150 °C, min. 0,71 mm thickness	UL 94, UL 746C	UL E59481	
(Alternate)	Sumitomo Bakelite Co Ltd	PM-9820, PM-9630	Phenolic, V-0, 150 °C, min. 0,51 mm thickness	UL 94, UL 746C	UL E41429	
-Magnet wire	TAI-I Electric Wire & Cable	UEW	130 °C	UL 1446	UL E85640	

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾
(Alternative)	Pacific Electric Wire & Cable Co Ltd	DD-NYU	130 °C	UL 1446	UL E84081
(Alternative)	Heshan Jiangci Wire & Cable Co Ltd	XUEW-ULx	130 °C	UL 1446	UL E192838
(Alternative)	Shen Zhen City Chengwei Industry Co Ltd	2UEW	130 °C	UL 1446	UL E227475
(Alternative)	Interchangeable	Interchangeable	130 °C	UL 1446	UL
-Triple insulated wire for secondary winding	Furukawa Electric Co Ltd	TEX-E	Class B	IEC 60950:2005 +A1 EN 60950:2006+ A11+A1+A12	VDE 6735
(Alternate)	Cosmolink Co Ltd	TIW-M	Class B	IEC 60950:2005 +A1+A2 EN 60950:2006+ A11+A1+A12+A2: 2013	VDE 138053
(Alternate)	Young Chang Silicone Co Ltd	STW-B	Class B	IEC 60950:2005 +A1 EN 60950:2006+ A11+A1+A12	VDE 40013359
(Alternate)	Great Leoflon Industrial Co Ltd	TRW (B)	Class B	IEC 60950:2005 +A1+A2 EN 60950:2006+ A11+A1+A12+A2: 2013	VDE 136581
(Alternate)	E&B Technology Co Ltd	E&B-B-X.XX	Class B	IEC 60950:2005 +A1+A2 EN 60950:2006+ A11+A1+A12+A2: 2013	VDE 40023473
(Alternate)	Dah Jin Technology Co Ltd	TLW-B	Class B	IEC 60950:2005 +A1+A2 EN 60950:2006+ A11+A1+A12+A2: 2013	VDE 40019324

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾
(Alternate)	Yusheng Electric Co., Ltd.	TIW-B, TWE-3	Class B	IEC 60950:2005 +A1+A2 EN 60950:2006+ A11+A1+A12+A2: 2013	VDE 40033527
-Insulation tape	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	CT, PZ	130 °C	UL 510	UL E165111
(Alternate)	Symbio Inc	35660, 35661, 35660Y	130 °C	UL 510	UL E50292
(Alternate)	3M Company Electrical Markets Div (Emd)	1350-F1,1350-F2	130 °C	UL 510	UL E17385
Enclosure	SABIC Innovative Plastics Us L L C	SE1X	PPE+PS, V-1, 105°C, minimum 1,5 mm thickness.	UL 94	UL E121562
(Alternative)	SABIC Japan L L C	SE1X	PPE+PS, V-1, 105°C, minimum 1,5 mm thickness.	UL 94	UL E207780
(Alternative)	Asahi Kasei Chemicals Corp Xyron Polymer	540V	PPE, V-1, 105°C, minimum 1,5 mm thickness.	UL 94	UL E82268
(Alternative)	Bayer Materialscienc e Ag	6485	PC, V-0, 115°C, minimum 1,5 mm thickness.	UL 94	UL E41613
(Alternative)	SABIC Japan L L C	925U	PC, V-0, 115°C, minimum 1,5 mm thickness.	UL 94	UL E207780
(Alternative)	Idemitsu Kosan Co Ltd	AZ2201	PC, V-0, 125°C, minimum 1,5 mm thickness.	UL 94	UL E48268
(Alternative)	SABIC Japan L L C	CH6410	PC, V-0, 100°C, minimum 1,5 mm thickness.	UL 94	UL E207780
PCB	Shenzhen Wuzhu Tech Co Ltd	WZ-4	V-0, 130°C	UL 94	UL E170968

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾
(Alternative)	Huizhou Shunjia Electronics Co Ltd	SJ-B	V-0, 130°C	UL 94	UL E320884
(Alternative)	Interchangeable	Interchangeable	V-1 or better, 130°C	UL 94	UL
Primary lead wire	Dong Ju	1007	80°C, Min. 24AWG, VW-1, min. 300V	UL 758	UL E189674
(alternative)	Interchangeable	Interchangeable	Min.80°C, min. 24AWG, VW-1, min. 300V	UL 758	UL
Output wire	LiCheng Electronics	1185	80°C, min. 22AWG min. VW-1, min. 300V	UL 758	UL E205058
(Alternative)	Interchangeable	Interchangeable	Min. 80°C, min. 22AWG min. VW-1, min. 300V	UL 758	UL
Fuse (F1) (optional)	Littelfuse Wickmann Werke	392	T2,0A, T6,3A, 250Vac, Sub-miniature type	EN 60127-1:2006+A1:2011 EN 60127-3:1996+A2:2003	VED 126983
(Alternative)	Conquer Electronics Co Ltd	MST	T2,0A, T6,3A, 250Vac, Sub-miniature type	EN 60127-1:2006+A1:2011 EN 60127-3:1996+A2:2003	VDE 40017118
(Alternative)	Cooper Bussmann LLC	SS-5	T2,0A, T6,3A, 250Vac, Sub-miniature type	EN 60127-1:2006+A1:2011 EN 60127-3:1996+A2:2003	VDE 40015513
(Alternative)	Bel Fuse Inc	RST	T2,0A, T6,3A, 250Vac, Sub-miniature type	EN 60127-1:2006+A1:2011 EN 60127-3:1996+A2:2003	VDE 40011144
(Alternative)	Chi Lick Schurter Limited	SPT	T2,0A, T6,3A, 250Vac, Sub-miniature type	EN 60127-1:2006+A1:2011 EN 60127-3:1996+A2:2003	VDE 40014285

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾
(Alternative)	Conquer Electronics Co Ltd	PTU	T2,0A, T6,3A, 250Vac, Sub-miniature type	EN 60127-1:2006+A1:2011 EN 60127-3:1996+A2:2003	VDE 40001462
(Alternative)	Littelfuse Inc	877	T2,0A, T6,3A, 250Vac, Sub-miniature type	EN 60127-1:2006+A1:2011 EN 60127-3:1996+A2:2003	VDE 40023242
(Alternative)	Walter Electronic Co. Ltd	2010	T2,0A, T6,3A, 250Vac, Sub-miniature type	EN 60127-1:2006+A1:2011 EN 60127-3:1996+A2:2003	VDE 40018781
(Alternative)	Nippon Seisen Cable Ltd	SLT series	T2,0A, T6,3A, 250Vac, Sub-miniature type	EN 60127-1:2006+A1:2011 EN 60127-3:1996+A2:2003	VDE 40013103
(Alternative)	Walter Electronic Co Ltd	ICP	T2,0A, T6,3A, 250Vac, Sub-miniature type	EN 60127-1:2006+A1:2011 EN 60127-3:1996+A2:2003	VDE 40012824
Fusible resistor (F1) (optional)	Chang Sheng	FRT	3,3 Ω , 2W; 3,3 Ω , 1W	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance
(Alternative)	TZAI YUAN	KNF	3,3 Ω , 2W; 3,3 Ω , 1W	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance
(Alternative)	Hua Sheng Electronics	FKN	3,3 Ω , 2W; 3,3 Ω , 1W	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance
(Alternative)	Shenzhen Great	RXF series	3,3 Ω , 2W; 3,3 Ω , 1W	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾
Fuse (F2) (optional)	Littelfuse Wickmann Werke	392	T1,0A, T2,0A, 250Vac, Sub-miniature type	EN 60127- 1:2006+A1:2011 EN 60127- 3:1996+A2:2003	VED 126983
(Alternative)	Conquer Electronics Co Ltd	MST	T1,0A, T2,0A, 250Vac, Sub-miniature type	EN 60127- 1:2006+A1:2011 EN 60127- 3:1996+A2:2003	VDE 40017118
(Alternative)	Cooper Bussmann LLC	SS-5	T1,0A, T2,0A, 250Vac, Sub-miniature type	EN 60127- 1:2006+A1:2011 EN 60127- 3:1996+A2:2003	VDE 40015513
(Alternative)	Bel Fuse Inc	RST	T1,0A, T2,0A, 250Vac, Sub-miniature type	EN 60127- 1:2006+A1:2011 EN 60127- 3:1996+A2:2003	VDE 40011144
(Alternative)	Chi Lick Schurter Limited	SPT	T1,0A, T2,0A, 250Vac, Sub-miniature type	EN 60127- 1:2006+A1:2011 EN 60127- 3:1996+A2:2003	VDE 40014285
(Alternative)	Conquer Electronics Co Ltd	PTU	T1,0A, T2,0A, 250Vac, Sub-miniature type	EN 60127- 1:2006+A1:2011 EN 60127- 3:1996+A2:2003	VDE 40001462
(Alternative)	Littelfuse Inc	877	T1,0A, T2,0A, 250Vac, Sub-miniature type	EN 60127- 1:2006+A1:2011 EN 60127- 3:1996+A2:2003	VDE 40023242
(Alternative)	Walter Electronic Co. Ltd	2010	T1,0A, T2,0A, 250Vac, Sub-miniature type	EN 60127- 1:2006+A1:2011 EN 60127- 3:1996+A2:2003	VDE 40018781
(Alternative)	Nippon Seisen Cable Ltd	SLT series	T1,0A, T2,0A, 250Vac, Sub-miniature type	EN 60127- 1:2006+A1:2011 EN 60127- 3:1996+A2:2003	VDE 40013103
(Alternative)	Walter Electronic Co Ltd	ICP	T1,0A, T2,0A, 250Vac, Sub-miniature type	EN 60127- 1:2006+A1:2011 EN 60127- 3:1996+A2:2003	VDE 40012824
Fusible resister (F2) (optional)	Chang Sheng	FRT	3,3 Ω ,2W; 3,3 Ω ,1W	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾
(Alternative)	TZAI YUAN	KNF	3,3 Ω,2W; 3,3Ω,1W	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance
(Alternative)	Hua Sheng Electronics	FKN	3,3 Ω,2W; 3,3Ω,1W	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance
(Alternative)	Shenzhen Great	RXF series	3,3 Ω,2W; 3,3Ω,1W	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance
Varistor (MOV1) (optional)	Centra Science Corp	CNR10D471K, CNR14D471K	Min. 300Vac, min. 385Vdc, fulfilled 6kV/3kA pulse test.	IEC/EN 61051- 1:2007-04 IEC/EN 61051- 2:1991-01 IEC 60950-1:2005 Annex Q	VDE 127092
(Alternative)	Uppermost Electronic Industries Co Ltd	V10K300, V10K320, V10K350, V10K385, V14K300, V14K320, V14K350, V14K385	Min. 300Vac, min. 385Vdc, fulfilled 6kV/3kA pulse test.	IEC/EN 61051- 1:2007-04 IEC/EN 61051- 2:1991-01 IEC 60950-1:2005 Annex Q	VDE 010108
(Alternative)	Jya-Nay Co Ltd	10D471K, 14D471K	Min. 300Vac, min. 385Vdc, fulfilled 6kV/3kA pulse test.	IEC/EN 61051- 1:2007-04 IEC/EN 61051- 2:1991-01 IEC 60950-1:2005 Annex Q	VDE 40023949
(Alternative)	Joyin Co Ltd	JVR10N471K, JVR14N471K	Min. 300Vac, min. 385Vdc, fulfilled 6kV/3kA pulse test.	IEC/EN 61051- 1:2007-04 IEC/EN 61051- 2:1991-01 IEC 60950-1:2005 Annex Q	VDE 005937

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾
(Alternative)	Panasonic Corporation	10DK471U, 14DK471U	Min. 300Vac, min. 385Vdc, fulfilled 6kV/3kA pulse test.	IEC/EN 61051- 1:2007-04 IEC/EN 61051- 2:1991-01 IEC 60950-1:2005 Annex Q	VDE 005912
(Alternative)	Thinking Electronic Industrial Co Ltd	TVR10471, TVR14471	Min. 300Vac, min. 385Vdc, fulfilled 6kV/3kA pulse test.	IEC/EN 61051- 1:2007-04 IEC/EN 61051- 2:1991-01 IEC 60950-1:2005 Annex Q	VDE 005944
(Alternative)	Guangdong Fenghua Advanced Technology Holding Co Ltd. Xianhua New Sensitive Components Branch	FNR-10K471, FNR-14K471	Min. 300Vac, min. 385Vdc, fulfilled 6kV/3kA pulse test.	IEC/EN 61051- 1:2007-04 IEC/EN 61051- 2:1991-01 IEC 60950-1:2005 Annex Q	VDE 40008242
(Alternative)	Brightking (Shenzhen)Co Ltd	10D471K, 14D471K,	Min. 300Vac, min. 385Vdc, fulfilled 6kV/3kA pulse test.	IEC/EN 61051- 1:2007-04 IEC/EN 61051- 2:1991-01 IEC 60950-1:2005 Annex Q	VDE 40027827
(Alternative)	Littelfuse Inc	V300- V385LA10P, V300- V385LA20AP, V10E300P- 385P, V14E300P- 385P	Min. 300Vac, min. 385Vdc, fulfilled 6kV/3kA pulse test.	IEC/EN 61051- 1:2007-04 IEC/EN 61051- 2:1991-01 IEC 60950-1:2005 Annex Q	VDE 116895
(Alternative)	Guangxi New Future Information Industry Co Ltd	10D471K, 14D471K,	Min. 300Vac, min. 385Vdc, fulfilled 6kV/3kA pulse test.	IEC/EN 61051- 1:2007-04 IEC/EN 61051- 2:1991-01 IEC 60950-1:2005 Annex Q	VDE 40030322

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾
Common choke (LF1)	GlobTek/ HAOPUWEI/ BOAM/ HEJIA	30C040120-xxx ("xxx" to denote the part number, can be any alphanumeric character for marketing purposes only.)	L1: Pin 1-2: Φ0,12*120Ts L2: Pin 4-3: Φ0,12*120Ts Min.30mH 130 °C	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance
-Bobbin	Chang Chun Plastics Co Ltd	T375J,T373J , T375HF	Phenolic, V-0, 150 °C, min. 0,71 mm thickness	UL 94	UL E59481
(Alternative)	Sumitomo Bakelite Co Ltd	PM-9820, PM- 9630	Phenolic, V-0, 150 °C, min. 0,51 mm thickness	UL 94	UL E41429
Bridge diode (BD1)	Interchangeable	Interchangeable	Min.1A, min. 1000V	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance
Electrolytic Cap. (C1, C2)	Interchangeable	Interchangeable	6,8-22μF, Min. 400Vdc (for100- 240VAC or 200- 240VAC), Min.200Vdc (for100- 120AC) 105°C	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance
IC (U1)	Interchangeable	Interchangeable	Min.2A, min.600V	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance
Y-Capacitor (CY1) (Optional)	Success Electronics Co Ltd	SE, SB	Max. 2200pF, min. 250Vac, 25/125/21/C, Y1 type	IEC/EN 60384- 14: 2005	VDE40020002
(Alternative)	Tdk-Epc Corp	CD	Max. 2200pF, min. 250Vac, 25/125/21/C, Y1 type	IEC/EN 60384- 14: 2005	VDE 124321

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾
(Alternative)	Murata Mfg Co Ltd	KX	Max. 2200pF, min. 250Vac, 25/125/21/C, Y1 type	IEC/EN 60384-14: 2005	VDE 40002831
(Alternative)	Jya-Nay Co Ltd	JN	Max. 2200pF, min. 250Vac, 25/125/21/C, Y1 type	IEC/EN 60384-14: 2005	VDE 40001831
(Alternative)	Welson Industrial Co Ltd	WD	Max. 2200pF, min. 250Vac, 25/125/21/C, Y1 type	IEC/EN 60384-14: 2005	VDE 115455
(Alternative)	Samwha Capacitor	SD	Max. 2200pF, min. 250Vac, 25/125/21/C, Y1 type Max. 2200pF, min.	IEC/EN 60384-14: 2005	VDE 40015804
(Alternative)	Nanjing Yuyue Electronics Co., Ltd.	CT7	Max. 2200pF, min. 250Vac, 25/125/21/C, Y1 type	IEC/EN 60384-14: 2005	VDE 40008010
(Alternative)	Yinan Don's Electronic Component Co	CT81	Max. 2200pF, min. 250Vac, 25/125/21/C, Y1 type	IEC/EN 60384-14: 2005	VDE 135256
(Alternative)	Jyh Hsu (Jec) Electronics Ltd	JD, JY	Max. 2200pF, min. 250Vac, 25/125/21/C, Y1 type	IEC/EN 60384-14: 2005	VDE 40038642 VDE 40038643
Photo Coupler (U3)	Sharp Corp Electronic Components And Devices Div	PC817, PC123	Cr.&Cl.=min.5, 1 mm Dti.=min>0,4m m Minimum110° C	IEC 60950:2005 +A1+A2 EN 60950:2006+ A11+A1+A12+A2	VDE 40008087
(Alternative)	Lite-On Technology Corp	LTV-817	Cr.&Cl.=min.7, 0 mm Dti.=min>0,4m m Minimum110° C	IEC 60950:2005 +A1+A2 EN 60950:2006+ A11+A1+A12+A2	VDE40015248

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾
(Alternative)	Everlight Electronics Co Ltd	EL 817	Cr.&Cl.=min.5, 2 mm Dti.=min>0,4mm Minimum110° C	IEC 60950:2005 +A1+A2 EN 60950:2006+ A11+A1+A12+A2	VDE132249
(Alternative)	Cosmo Electronics Corp	K1010, KP1010	Cr.&Cl.=min.5, 3 mm Dti.=min>0,4mm Minimum110° C	IEC 60950:2005 +A1+A2 EN 60950:2006+ A11+A1+A12+A2	VDE101347
(Alternative)	Fairchild Semiconductor Corp	H11A817B	Cr.&Cl.=min.5, 3 mm Dti.=min>0,4mm Minimum100° C	IEC 60950:2005 +A1+A2 EN 60950:2006+ A11+A1+A12+A2	VDE 40026857
(Alternative)	Bright Led Electronics Corp	BPC817B, BPC817C	Cr.&Cl.=min.5, 2 mm Dti.=min>0,4mm Minimum110° C	IEC 60950:2005 +A1+A2 EN 60950:2006+ A11+A1+A12+A2	VDE 40007240
(Alternative)	Renesas Electronics Corporation	PS2561	Cr.&Cl.=min.7, 0mm Dti.=min>0,4mm Minimum110° C	IEC 60950:2005 +A1+A2 EN 60950:2006+ A11+A1+A12+A2	VDE 40008862
Heat-shrinkable tube wrapped F1 and F2	Shenzhen Woer	RSFR RSFR-H	125°C, VW-1, 600V	UL 224	UL E203950
(Alternative)	Interchangeable	Interchangeable	125°C, VW-1, 600V	UL 224	UL
Mylar sheet between primary and secondary components	SUMITOMO BAKELITE CO LTD	AV-Lite DP 901	Diallyl Phthalate (DAP), V-0, thickness min.: 0,4mm. min.105°C,	UL 94	UL E41429
(alternative)	SABIC INNOVATIVE PLASTICS US L L C	FR700	PC, V-0, thickness: min. 0,4mm; min.105°C	UL 94	UL E61257

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾
(alternative)	DUPONT HONGJI FILMS FOSHAN CO LTD	EM, MO31	PET, VTM-2, thickness: min. 0,4mm; min.105°C	UL 94	UL E241830
(alternative)	Kanglongxin	PC-811A, PC-813A	PC, VTM-2, thickness: min. 0,4mm; min.80°C	UL 94	UL E315185
(alternative)	MIANYANG LONGHUA FILM CO LTD	PC-770, PC-770A, PC-870A, PC-1870A, PP-BK18	PC, VTM-0, thickness: min. 0,4mm; min.80°C	UL 94	UL E254551
(alternative)	JiangSu YuXing	CY28	PET, VTM-2, thickness: min. 0,4mm; min.105°C	UL 94	UL E212271

Supplementary information:

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

2): The transformers with the same model from different manufacturers have the same construction.

3): Transformer type 90E12PT05-xxx is the same construction as 90E12PT12-xxx except winding turns.

1.5.1	TABLE: Opto Electronic Devices	P
Manufacturer	See appended table 1.5.1 List of critical components	
Type.....	See appended table 1.5.1 List of critical components	
Separately tested	Tested with appliance	
Bridging insulation	RI	
External creepage distance.....	See appended table 1.5.1 List of critical components	
Internal creepage distance	See appended table 1.5.1 List of critical components	
Distance through insulation	See appended table 1.5.1 List of critical components	
Tested under the following conditions.....	Tested with appliance	
Input.....	--	
Output.....	--	
supplementary information		
--		

1.6.2	TABLE: Electrical data (in normal conditions)						P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status	
GT-86120-1005-W2E							
90/50Hz	0,24	--	12,71	F1, F2	0,24	Rated load	
100/50Hz	0,22	0,5	12,55	F1, F2	0,22	Rated load	
240/50Hz	0,12	0,5	12,39	F1, F2	0,12	Rated load	
264/50Hz	0,11	--	12,42	F1, F2	0,11	Rated load	
90/60Hz	0,24	--	12,63	F1, F2	0,24	Rated load	
100/60Hz	0,21	0,5	12,50	F1, F2	0,21	Rated load	
240/60Hz	0,11	0,5	12,30	F1, F2	0,11	Rated load	
264/60Hz	0,11	--	12,43	F1, F2	0,11	Rated load	
GT-86120-1212-W2E							
90/50Hz	0,27	--	14,87	F1, F2	0,27	Rated load	
100/50Hz	0,24	0,5	14,66	F1, F2	0,24	Rated load	
240/50Hz	0,13	0,5	14,35	F1, F2	0,13	Rated load	
264/50Hz	0,12	--	14,24	F1, F2	0,12	Rated load	
90/60Hz	0,27	--	14,84	F1, F2	0,27	Rated load	
100/60Hz	0,24	0,5	14,63	F1, F2	0,24	Rated load	
240/60Hz	0,12	0,5	14,31	F1, F2	0,12	Rated load	
264/60Hz	0,12	--	14,32	F1, F2	0,12	Rated load	

Supplementary information:

2.1.1.5 c) 1)	TABLE: max. V, A, VA test				P
Voltage (rated) (Vd.c.)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
GT-86120-1005-W2E					
5,0	2,0	5,14	3,1	14,6	
GT-86120-1212-W2E					
12,0	1,0	12,22	1,4	16,4	
supplementary information:					
The above measurements are the maximum values (max. V and max. A not obtained at the same time).					

2.1.1.5 c) 2)	TABLE: stored energy		N/A
Capacitance C (μF)	Voltage U (V)	Energy E (J)	
--	--	--	
supplementary information:			

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
GT-86120-1212-W2E				
Transformer secondary pin 7-6		61,0	--	--
E-capacitor C8		--	12,6	D8
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
GT-86120-1212-W2E				
D8 short circuited		0 (unit shut down immediately)		
supplementary information:				
--				

2.5	TABLE: Limited power sources					P
Circuit output tested:						
Note: Measured Uoc (V) with all load circuits disconnected:						
Components	Test condition (Single fault)	Uoc (Vd.c.)	I _{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
GT-86120-1005-W2E						

Output	Normal condition	5,14	3,1	8	14,6	100
Output	U3 pin 1-2, s-c	*	*	*	*	*
Output	U3 pin 3-4, s-c	*	*	*	*	*
Output	U3 pin 1, o-c	*	*	*	*	*
Output	U3 pin 3, o-c	*	*	*	*	*
Output	R11, s-c	*	*	*	*	*
GT-86120-1212-W2E						
Output	Normal condition	12,22	1,4	8	16,4	100
Output	U3 pin 1-2, s-c	*	*	*	*	*
Output	U3 pin 3-4, s-c	*	*	*	*	*
Output	U3 pin 1, o-c	*	*	*	*	*
Output	U3 pin 3, o-c	*	*	*	*	*
Output	R11, s-c	*	*	*	*	*
supplementary information:						
o-c= open circuit, s-c = short circuit.						
* Unit shut down.						

2.10.2	Table: working voltage measurement			P
Location	RMS voltage (V)	Peak voltage (V)	Comments	
T1 pin1-6	188	352	--	
T1 pin2-6	232	452	--	
T1 pin4-6	190	352	--	
T1 pin5-6	194	412	--	
T1 pin1-7	191	396	--	
T1 pin2-7	222	448	--	
T1 pin4-7	193	368	--	
T1 pin5-7	193	364	--	
U3 pin1-3	198	364	--	
U3 pin1-4	197	363	--	
U3 pin2-3	189	364	--	
U3 pin2-4	187	364	--	
CY1	195	356	--	

supplementary information:
--

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
	Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
GT-86120-WWVW-W2Z (with PCB REV:1)							
Functional:							
	Line trace to Neutral trace after fuse F1	420	250	1,8	3,0	2,5	3,0
	Line trace to Neutral trace after fuse F2	420	250	1,8	2,6	2,5	2,6
	PCB trace under fuse F1	420	250	1,8	2,6	2,5	2,6
	PCB trace under fuse F2	420	250	1,8	2,8	2,5	2,8
Basic/supplementary:							
	--	--	--	--	--	--	--
Reinforced:							
	Primary components to accessible enclosure	420	250	4,6	6,1	5,0	6,1
	Unit: Primary components (with 10N) to secondary components (with 10N) transformer core to D8	452	250	4,8	6,8	5,0	6,8
	Unit: Primary components (with 10N) to secondary components (with 10N) transformer core to C8	452	250	4,8	5,1	5,0	5,1
	Unit: Primary components (with 10N) to secondary components (with 10N) T1 core to U4	452	250	4,8	7,3	5,0	7,3
	PCB: primary to secondary traces under transformer (T1)	452	250	4,8	9,3	5,0	9,3
	PCB: primary to secondary traces under CY1	420	250	4,6	5,1	5,0	5,1
	PCB: primary to secondary traces under U3	420	250	4,6	6,0	5,0	6,0
	Transformer (T1): primary winding to secondary winding	452	250	4,8	6,4	5,0	6,4
	Transformer (T1): core to secondary winding	452	250	4,8	7,4	5,0	7,4

Supplementary information:

1. Internal wire and insulation sheet between transformer and secondary components were double fixed by soldering and glue.
2. The transformer core considered as primary circuit.
3. There is one mylar sheet between transformer and secondary components used as reinforced insulation (min. thickness: 0.4mm)
4. Concentric windings on EF20 size bobbin. At least 2 layers of insulation tape between primary (enamelled copper wire) and secondary windings (triple insulation wire), 2 layers on outer winding. There are no contact point of primary winding and secondary winding. At least 2 layers insulation tape wrapped on transformer core. 2 layer insulation tape cover secondary side of transformer core.
5. Unless otherwise specified, the worst conditions of Cl. & Cr. in above mentioned locations have been considered and listed.
6. The equipment was evaluated for a maximum operating altitude of 3000 m. Therefore the requirements of IEC 606641 for clearances were considered and the required clearance was multiplied with an altitude correction factor of 1.14

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
GT-86120-WWVHW2Z (with PCB REV:3)							
Functional:							
Line trace to Neutral trace after fuse F1	420	250	2,3	3,0	2,5	3,0	
Line trace to Neutral trace after fuse F2	420	250	2,3	2,6	2,5	2,6	
PCB trace under fuse F1	420	250	2,3	2,6	2,5	2,6	
PCB trace under fuse F2	420	250	2,3	2,8	2,5	2,8	
Basic/supplementary:							
--	--	--	--	--	--	--	
Reinforced:							
Primary components to accessible enclosure	420	250	6,0	6,1	6,0	6,1	
Unit: Primary components (with 10N) to secondary components (with 10N) transformer core to D8	452	250	6,3	6,8	6,3	6,8	
Unit: Primary components (with 10N) to secondary components (with 10N) transformer core to C8	452	250	6,3	7,1	6,3	7,1	
Unit: Primary components (with 10N) to secondary components (with 10N) T1 core to U4	452	250	6,3	7,3	6,3	7,3	

PCB: primary to secondary traces under transformer (T1)	452	250	6,3	7,6	6,3	7,6
PCB: primary to secondary traces under CY1	420	250	6,0	6,1	6,0	6,1
PCB: primary to secondary traces under U3	420	250	6,0	6,1	6,0	6,1
Transformer (T1): primary winding to secondary winding	452	250	6,3	6,4	6,3	6,4
Transformer (T1): core to secondary winding	452	250	6,3	7,4	6,3	7,4
Live part to accessible surface (for dischargeable plug)	420	250	6,0	6,1	6,0	6,1

Supplementary information:

1. Internal wire and insulation sheet between transformer and secondary components were double fixed by soldering and glue.
2. The transformer core considered as primary circuit.
3. There is one mylar sheet between transformer and secondary components used as reinforced insulation (min. thickness: 0.4mm)
4. Concentric windings on EF20 size bobbin. At least 2 layers of insulation tape between primary (enamelled copper wire) and secondary windings (triple insulation wire), 2 layers on outer winding. There are no contact point of primary winding and secondary winding. At least 2 layers insulation tape wrapped on transformer core. 2 layer insulation tape cover secondary side of transformer core. For more details see photo document.
5. Unless otherwise specified, the worst conditions of Cl. & Cr. in above mentioned locations have been considered and listed.
6. The equipment was evaluated for a maximum operating altitude of 5000 m. Therefore the requirements of IEC 606641 for clearances were considered and the required clearance was multiplied with an altitude correction factor of 1.48

2.10.5	TABLE: Distance through insulation measurements					P
Distance through insulation (DTI) at/of:		U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Enclosure		420	250	3000V _a c	0,4	1)
Photo Coupler (U3)		420	250	3000V _a c	0,4	1)
Supplementary information: 1) See appended table 1.5.1.						

4.3.8	TABLE: Batteries								N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available					--				N/A
Is it possible to install the battery in a reverse polarity position?					--				N/A
	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:									

4.3.8	TABLE: Batteries	N/A
Battery category : -- Manufacturer : -- Type / model..... : -- Voltage : -- Capacity..... : -- Tested and Certified by (incl. Ref. No.)..... : -- Circuit protection diagram: -- --		

MARKINGS AND INSTRUCTIONS (1.7.13)	
Location of replaceable battery	--
Language(s):	--
Close to the battery:	--
In the servicing instructions:	--
In the operating instructions:	--

4.5	TABLE: Thermal requirements						P
	Supply voltage (V)	90V/ 50Hz	90V/ 50Hz	264V/ 60Hz	264V/ 60Hz	--	—
	Ambient T_{min} (°C)	--	--	--	--	--	—
	Ambient T_{max} (°C)	--	--	--	--	--	—
Maximum measured temperature T of part/at.....:		T (°C)					Allowed T (°C) $T_{ma}=40^{\circ}\text{C}$
GT-86120-1005-W2E		Horizo ntal	Vertic al	Horiz ontal	Vertic al	--	--
Plug holder		62,9	60,9	60,2	58,8	--	--
Input wire		71,5	68,8	63,7	61,8	--	80
Varistor MOV1 body		68,4	51,1	62,6	68,0	--	85
PCB under BD1		80,9	76,8	67,7	64,8	--	130
E-capacitor C1		84,0	81,2	70,3	68,2	--	105
LF1 winding		90,5	88,4	70,7	69,1	--	130
E-capacitor C2		87,2	86,1	78,7	78,1	--	105
PCB under U1		100,2	97,8	95,0	93,8	--	130
T1 winding		88,7	88,4	90,1	89,2	--	110
T1 core		87,6	87,0	87,2	78,9	--	110
Photo coupler U3		72,1	72,6	72,3	70,0	--	100
Y-capacitor CY1		80,8	81,6	81,2	82,4	--	125
PCB under D8		100,2	100,8	102,8	104,6	--	130
E-capacitor C8		82,9	83,4	83,7	84,7	--	105
LF2 winding		78,1	78,8	78,5	79,5	--	130
Output wire		66,4	67,3	66,4	67,7	--	80
Enclosure inside near T1		74,4	74,1	74,1	74,3	--	100
Enclosure outside near T1		66,4	67,0	66,4	67,3	--	95
Ambient		50,4	50,6	50,4	50,8	--	--
GT-86120-1212-W2E		Horizo ntal	Vertic al	Horiz ontal	Vertic al	--	--
Plug holder		56,5	56,3	55,1	55,3	--	--
Input wire		76,2	75,9	63,2	63,7	--	80
Varistor MOV1 body		81,8	81,7	68,0	71,5	--	85
PCB under BD1		99,5	97,7	72,4	67,6	--	130
E-capacitor C1		100,9	101,0	76,2	76,2	--	105
LF1 winding		105,0	99,9	74,4	75,1	--	130
E-capacitor C2		97,1	98,6	79,4	80,6	--	105
PCB under U1		115,4	114,2	98,1	97,1	--	130

T1 winding	92,5	92,0	89,1	88,7	--	110
T1 core	91,2	90,9	88,5	88,4	--	110
Photo coupler U3	75,4	72,6	72,3	70,1	--	100
Y-capacitor CY1	81,9	81,6	79,3	79,2	--	125
PCB under D8	98,1	97,8	98,0	97,5	--	130
E-capacitor C8	76,0	75,0	75,0	74,2	--	105
LF2 winding	75,8	74,7	74,7	73,7	--	130
Output wire	59,5	58,9	59,0	58,7	--	80
Enclosure inside near T1	74,1	73,1	72,1	71,2	--	100
Enclosure outside near T1	67,6	66,1	67,6	64,8	--	95
Ambient	50,7	50,7	50,7	50,6	--	--
Supplementary information: For component with temperature marking, allowed $T = T_{max} + T_{amb} - T_{ma}$						
Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)
--	--	--	--	--	--	--
Supplementary information: Rated maximum ambient temperature of 50°C.						

4.5.5	TABLE: Ball pressure test of thermoplastic parts			P
	Allowed impression diameter (mm):	≤ 2 mm		—
Part		Test temperature (°C)	Impression diameter (mm)	
Enclosure		125	Max 1,4	
Supplementary information: Tested for all enclosure materials, see appended table 1.5.1.				

4.7	TABLE: Resistance to fire					P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence	
--	--	--	--	--	--	
Supplementary information: Refer to appended table 1.5.1.						

5.1	TABLE: touch current measurement			P
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions	
L - output connector	0,13	0,25	--	
N - output connector	0,13	0,25	--	
L - enclosure with metal foil	0,01	0,25	--	

N - enclosure with metal foil	0,01	0,25	--
supplementary information:			
Test voltage: 264V/60Hz; Capacity: CY1=2200pF			

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Functional:				
Different polarity of power supply (Fuse or Fusible resistor disconnection)		AC	1500	No
Basic				
--		--	--	--
Reinforced:				
Unit: Primary circuit to secondary circuit		AC	3000	No
Unit: Primary circuit to enclosure with metal foil		AC	3000	No
Transformer: Primary winding to secondary winding		AC	3000	No
Transformer: Core to secondary winding		AC	3000	No
One layer insulation tape		AC	3000	No
Mylar sheet		AC	3000	No
Supplementary information: All testing Including after Humidity required of clause 2.9, there are including unit, transformer and all material of transformer, see appended tables 1.5.1. Core of transformer T1 is considered as primary circuit.				

5.3	TABLE: Fault condition tests					P
Ambient temperature (°C)		25 °C (if not specified)			—	
Power source for EUT: Manufacturer, model/type, output rating		--			—	
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
GT-86120-1005-W2E Tested with Fuse F1(6.3A), F2(2.0A or 3.3ohm) and MOV1 for combination 1 and combination 2						
MOV1	s-c	264	1 s	F1,F2	--	*Current Fuse (F1) opened immediately, no hazard.
BD1	s-c	264	1 s	F1,F2	--	*Current Fuse (F2) opened immediately, no hazard.
C1	s-c	264	1 s	F1,F2	--	*Current Fuse (F2) opened immediately, no hazard.
C2	s-c	264	1 s	F1,F2	--	*Current Fuse (F2) opened immediately, no hazard.

U1 pin 6-8	s-c	264	1 s	F1,F2	--	*Current Fuse (F2) opened immediately, U1 damaged, no hazard.
U1 pin 6-1	s-c	264	1 s	F1,F2	--	*Current Fuse (F2) opened immediately, Z2 damaged, no hazard.
U3 pin 1-2	s-c	264	30 min	F1,F2	0,02	Unit shutdown immediately, recoverable, no hazard.
U3 pin 3-4	s-c	264	30 min	F1,F2	0,02	Unit shutdown immediately, recoverable, no hazard.
U3 pin 1	o-c	264	30 min	F1,F2	0,02	Unit shutdown immediately, recoverable, no hazard.
U3 pin 3	o-c	264	30 min	F1,F2	0,02	Unit shutdown immediately, recoverable, no hazard.
R11	s-c	264	30 min	F1,F2	0,12	Normal operation, no damage, no hazard.
T1 pin 1-2	s-c	264	30 min	F1,F2	0,02	Unit shutdown immediately, recoverable, no hazard.
T1 pin 4-5	s-c	264	30 min	F1,F2	0,06	Unit shutdown immediately, recoverable, no hazard.
T1 pin 6-7	s-c	264	30 min	F1,F2	0,02	Unit shutdown immediately, recoverable, no hazard.
D8	s-c	264	30 min	F1,F2	0,03	Unit shutdown immediately, recoverable, no hazard.
C8	s-c	264	30 min	F1,F2	0,02	Unit shutdown immediately, recoverable, no hazard.
Output	s-c	264	30 min	F1,F2	0,02	Unit shutdown immediately, recoverable, no hazard.
Output	o-l	264	6h 24min	F1,F2	Max 0,15	Output current overload to 1,3A, unit shutdown immediately at 1,31A, no hazard. Max temperature of: T1 coil: 99,5°C, T1 core: 98,7°C, Ambient: 50,0°C.

Transformer	o-l	264	4h 36min	F1,F2	Max 0,15	Output load to 1,0A, transformer current overload to 0,3A; unit shutdown immediately at 0,31A, no hazard. Max temperature of: T1 coil: 105,2°C, T1 core: 104,5°C, Ambient: 50,0°C.
GT-86120-1005-W2E Tested with Fuse F1(2.0A or 3.3ohm), F2 Jumper and MOV1 for combination 3 and combination 4						
MOV1	s-c	264	1 s	F1	--	* Fuse (F1) opened immediately, no hazard.
BD1	s-c	264	1 s	F1	--	* Fuse (F1) opened immediately, no hazard.
C1	s-c	264	1 s	F1	--	* Fuse (F1) opened immediately, no hazard.
C2	s-c	264	1 s	F1	--	* Fuse (F1) opened immediately, no hazard.
U1 pin 6-8	s-c	264	1 s	F1	--	* Fuse (F1) opened immediately, U1 damaged, no hazard.
U1 pin 6-1	s-c	264	1 s	F1	--	* Fuse (F1) opened immediately, Z2 damaged, no hazard.
GT-86120-1005-W2E Tested with Fuse F1 Jumper and F2(1.0A or 3.3ohm) for combination 5 and combination 6						
BD1	s-c	264	1 s	F2	--	* Fuse (F2) opened immediately, no hazard.
C1	s-c	264	1 s	F2	--	* Fuse (F2) opened immediately, no hazard.
C2	s-c	264	1 s	F2	--	* Fuse (F2) opened immediately, no hazard.
U1 pin 6-8	s-c	264	1 s	F2	--	* Fuse (F2) opened immediately, U1 damaged, no hazard.
U1 pin 6-1	s-c	264	1 s	F2	--	* Fuse (F2) opened immediately, Z2 damaged, no hazard.
GT-86120-1212-W2E						
Output	s-c	264	30 min	F1,F2	0,02	Unit shutdown immediately, recoverable, no hazard.

Output	o-l	264	2h 36min	F1,F2	Max 0,13	Output current overload to 2,6A, unit shutdown immediately at 2,7A, no hazard. Max temperature of: T1 coil: 109,7°C, T1 core: 108,1°C, Ambient: 50,3°C.
Transformer	o-l	264	4h 18min	F1,F2	Max 0,14	Output load to 2,0A, transformer current overload to 0,6A; unit shutdown immediately at 0,7A, no hazard. Max temperature of: T1 coil: 112,0°C, T1 core: 110,7°C, Ambient: 50,6°C.

Supplementary information:

- 1) s-c: short circuit, o-c: open circuit, o-l: overload.
 - 2) YC: Cheesecloth charred or flamed
- NT: Tissue paper remained intact
RF: Repeat all fuse result were the same.
YT: Tissue paper charred or flamed
IP: Internal protection operated (list component)
I/P: Input current
RF: Repeat all fuse result were same
IP: Internal protection operated (list component)
*: All types of current fuse in table 1.5.1 are considered.

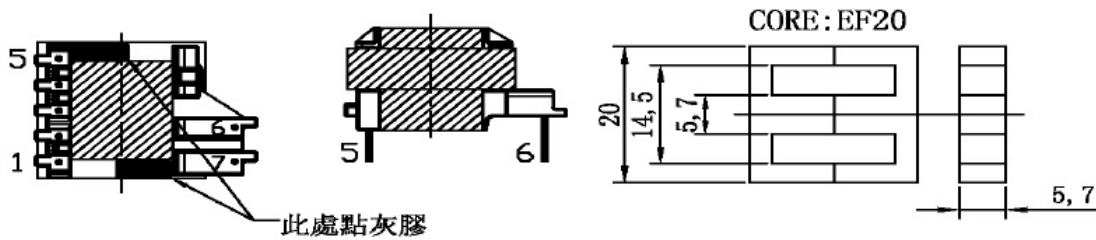
C.2		TABLE: transformers						P
Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)	
T1	Reinforced: Primary to secondary	452	250	3000 Va.c.	6,3	6,3	0,4	
T1	Reinforced: Secondary winding to core	452	250	3000 Va.c.	6,3	6,3	0,4	
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers	
T1	Reinforced: Primary to secondary			3000 Va.c.	6,4	6,4	TIW	
T1	Reinforced: Secondary winding to core			3000 Va.c.	7,4	7,4	TIW	
supplementary information:								
All testing Including after Humidity required of clause 2.9, there are including unit, transformer from all manufacturers and all material of transformer, see appended tables 1.5.1. 5000 altitude applied for transformer.								

C.2

TABLE: transformers

P

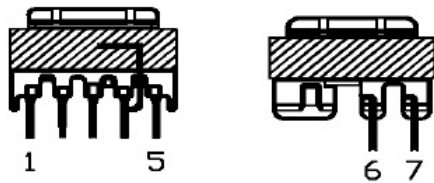
T1, type 90E12PT05-xxx



5. 感值

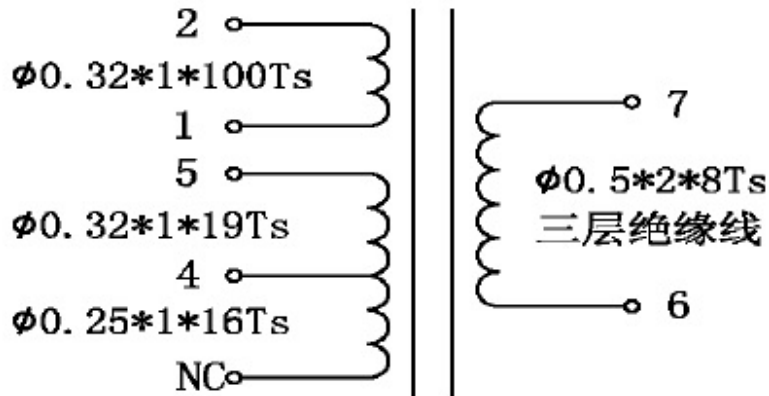
INDUCTANCE: AT 50KHz 1V

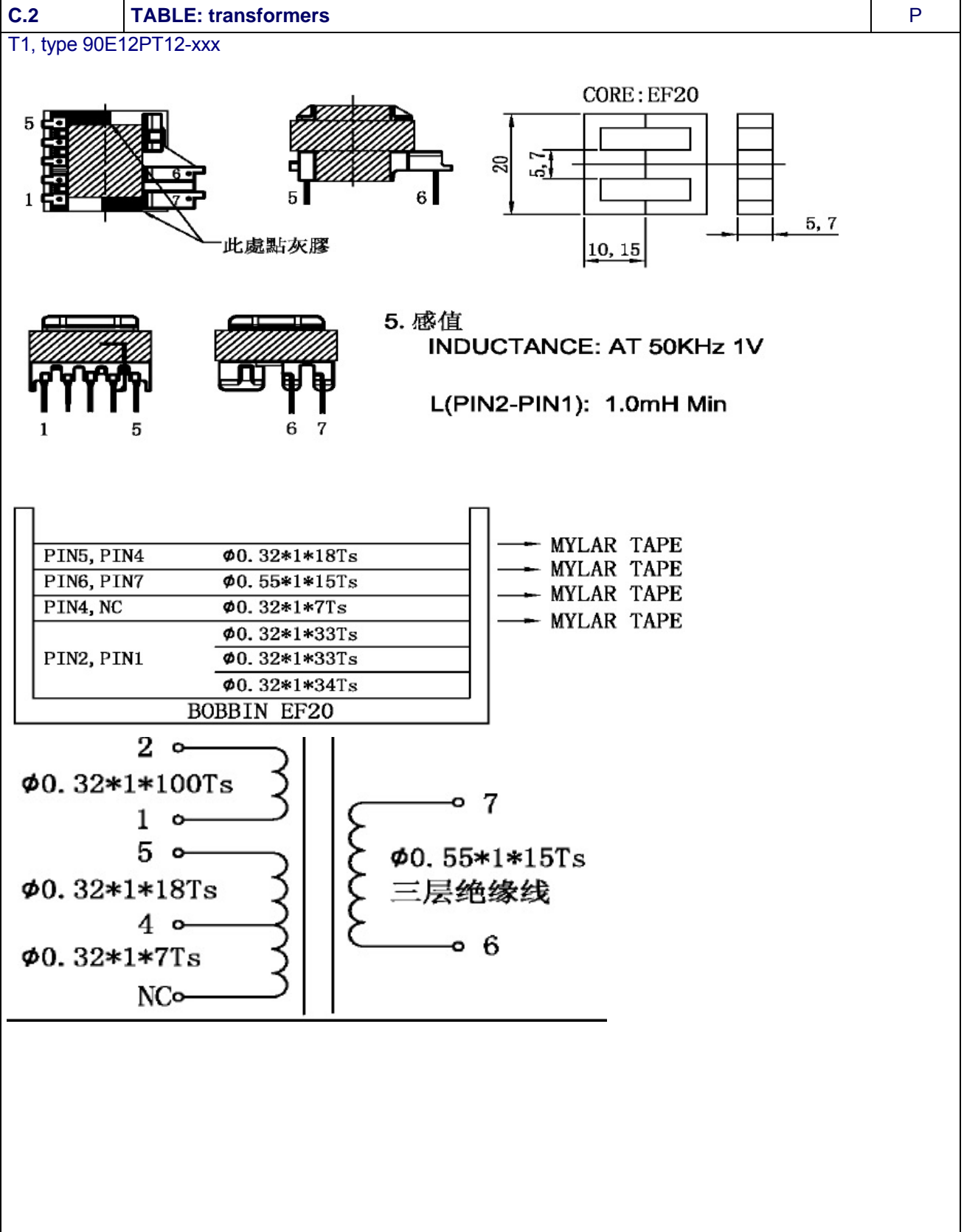
L(PIN2-PIN1): 1.5mH Min



PIN5, PIN4	$\phi 0.32 \times 1 \times 19Ts$	MYLAR TAPE
PIN6, PIN7	$\phi 0.5 \times 2 \times 8Ts$	MYLAR TAPE
PIN4, NC	$\phi 0.25 \times 1 \times 16Ts$	MYLAR TAPE
	$\phi 0.32 \times 1 \times 33Ts$	MYLAR TAPE
PIN2, PIN1	$\phi 0.32 \times 1 \times 33Ts$	
	$\phi 0.32 \times 1 \times 34Ts$	

BOBBIN EF20





*****End of Test report*****

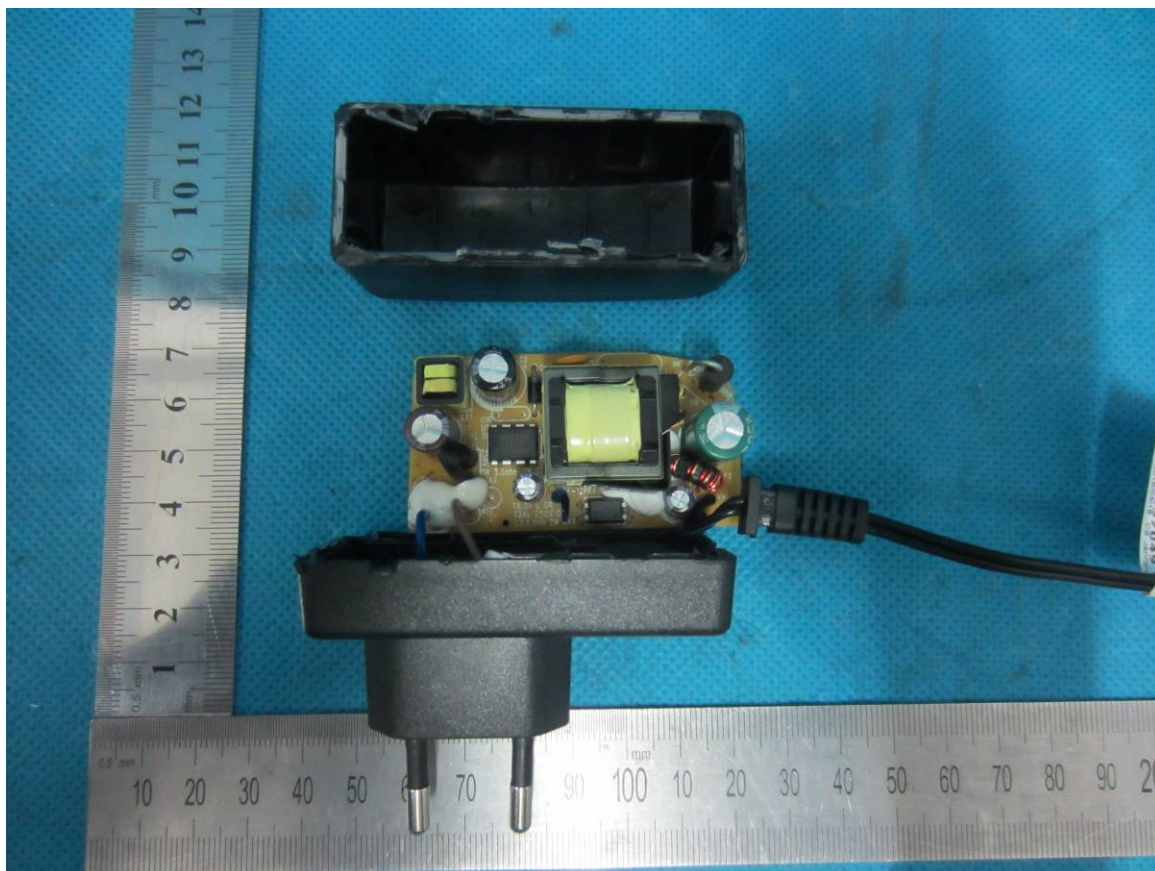
Attachment 1 Photo documentation

General view (Model GT-86120-1212HW2E)



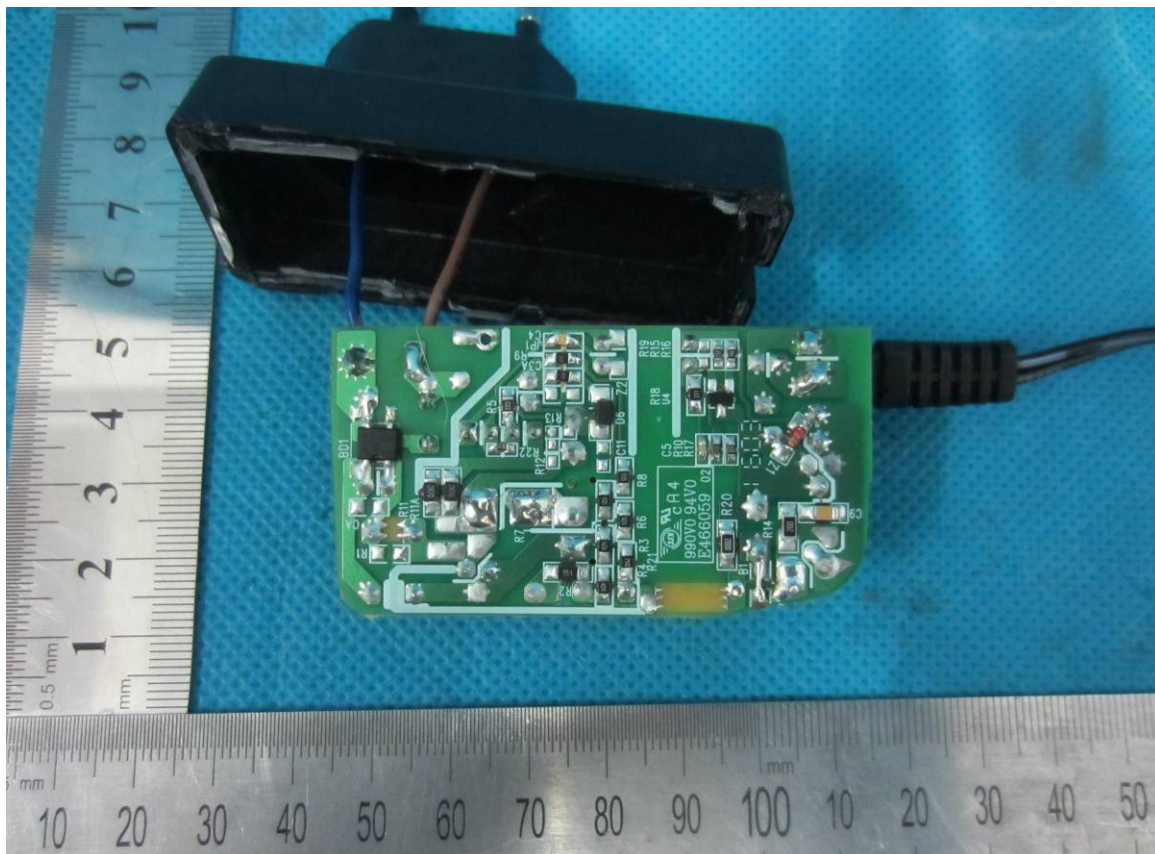
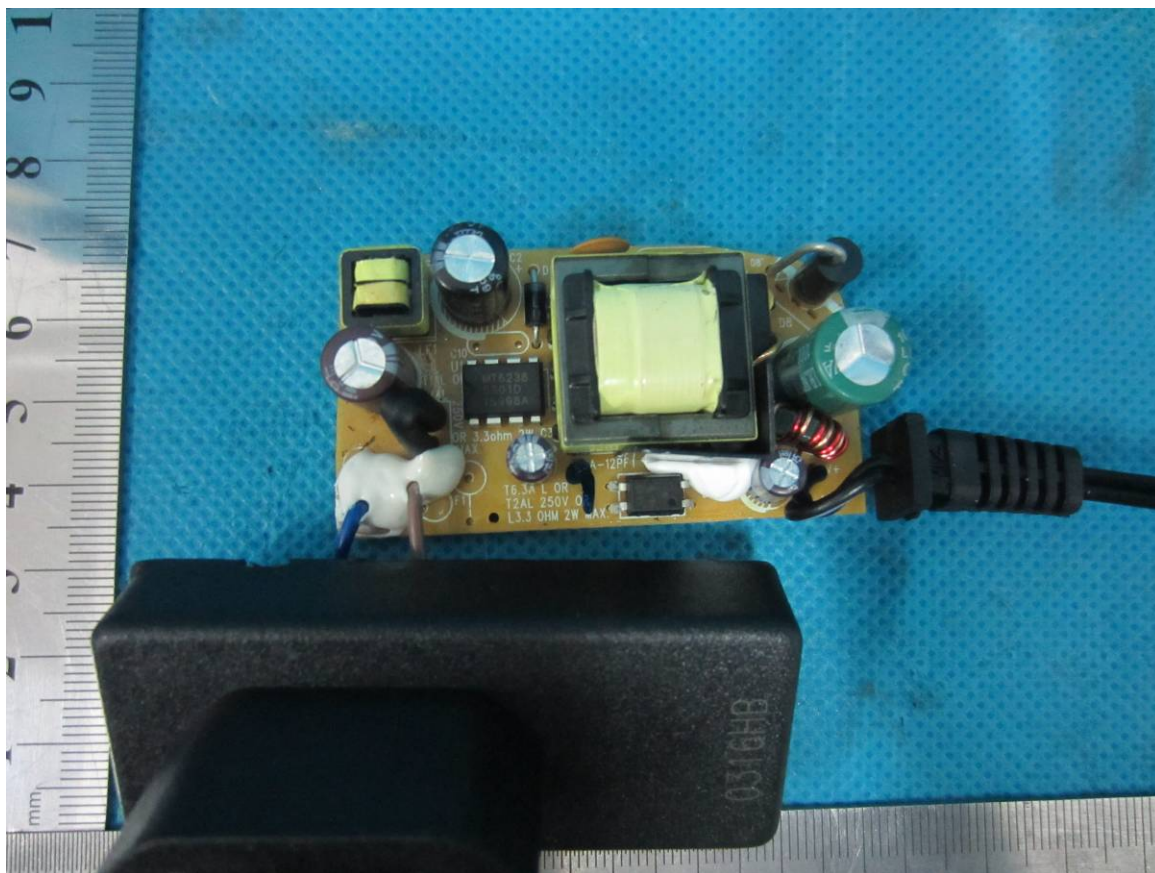
Attachment 1 Photo documentation

General view (Model GT-86120-1212HW2E)



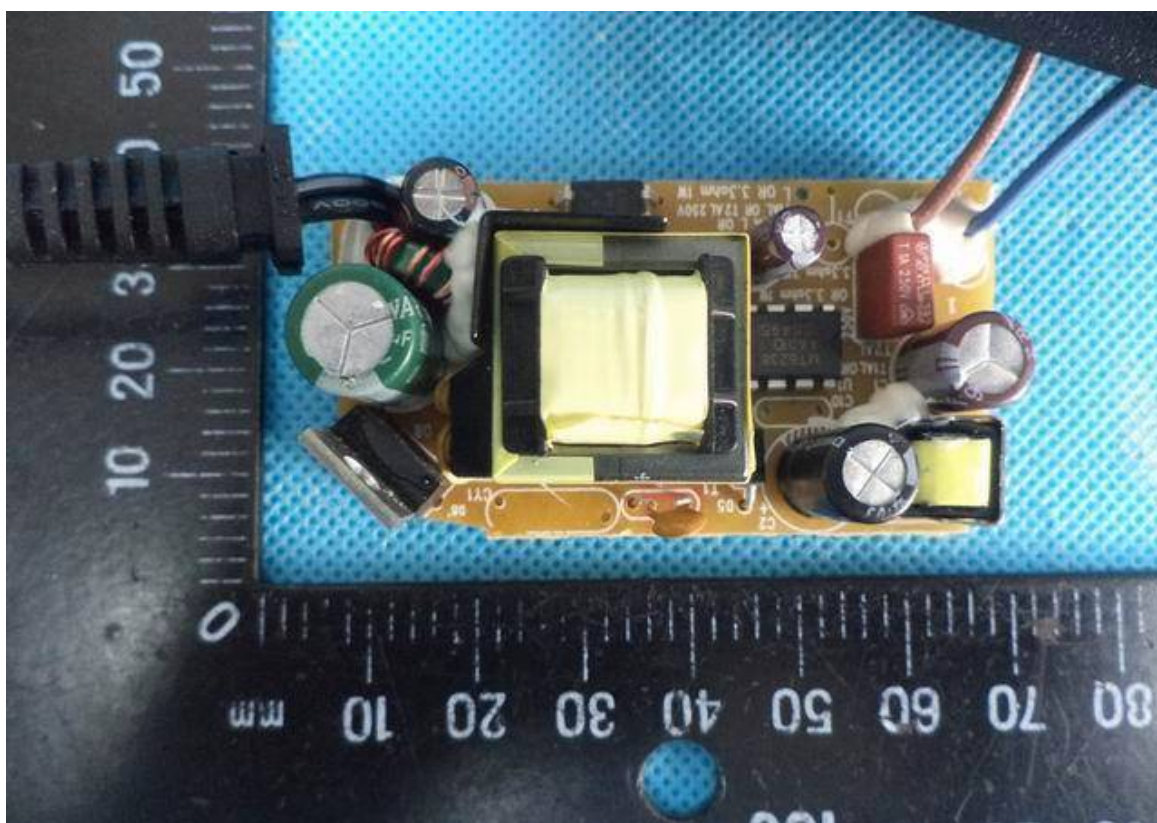
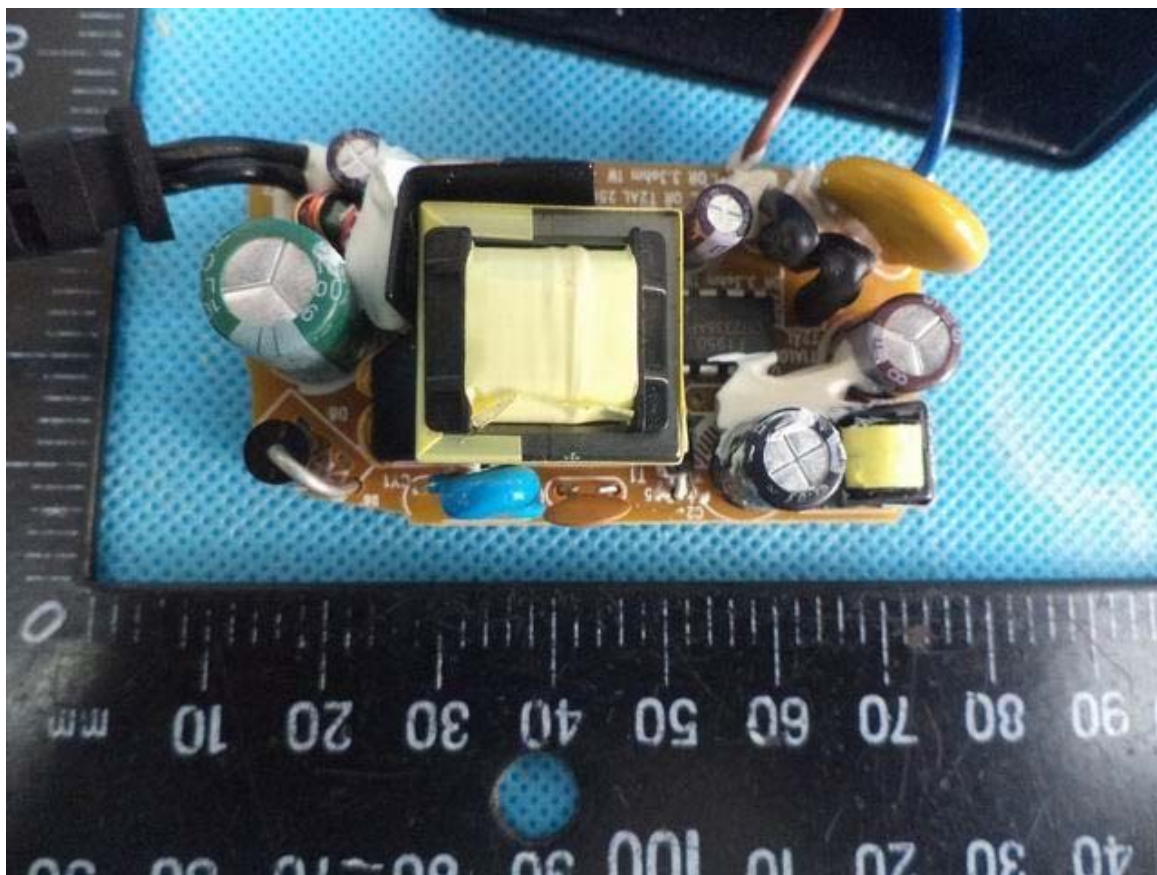
Attachment 1 Photo documentation

PCB (Model GT-86120-1212HW2E, PCB REV:3)



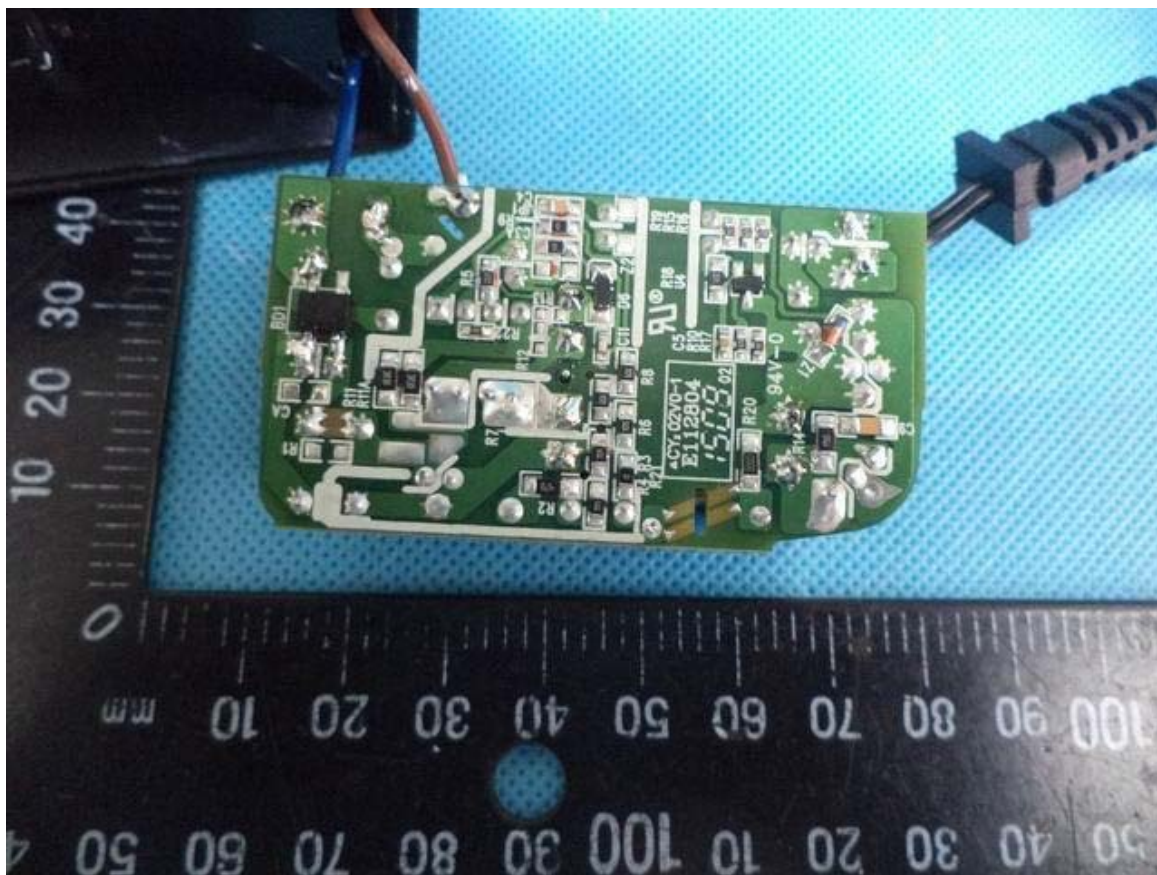
Attachment 1 Photo documentation

PCB (Model GT-86120-1212HW2E, Different Configurations of fuse / varistor)

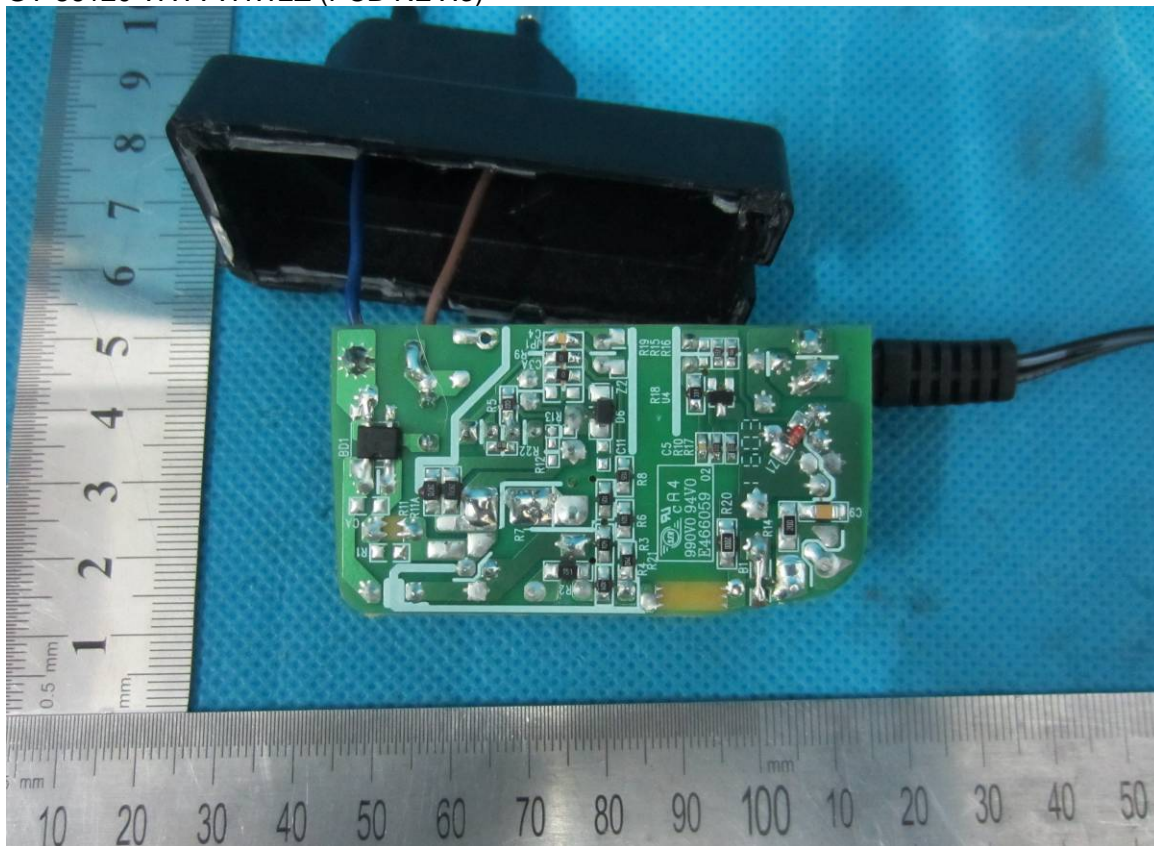


Attachment 1 Photo documentation

GT-86120-WWVV-W2Z (PCB REV:1)



GT-86120-WWVVHW2Z (PCB REV:3)



Attachment 1 Photo documentation

General view (Model GT-86120-WWVV-W2U)



Attachment 1 Photo documentation

General view (Model GT-86120-WWVV)



Attachment 1 Photo documentation

General view (Model GT-86120-WWVV)



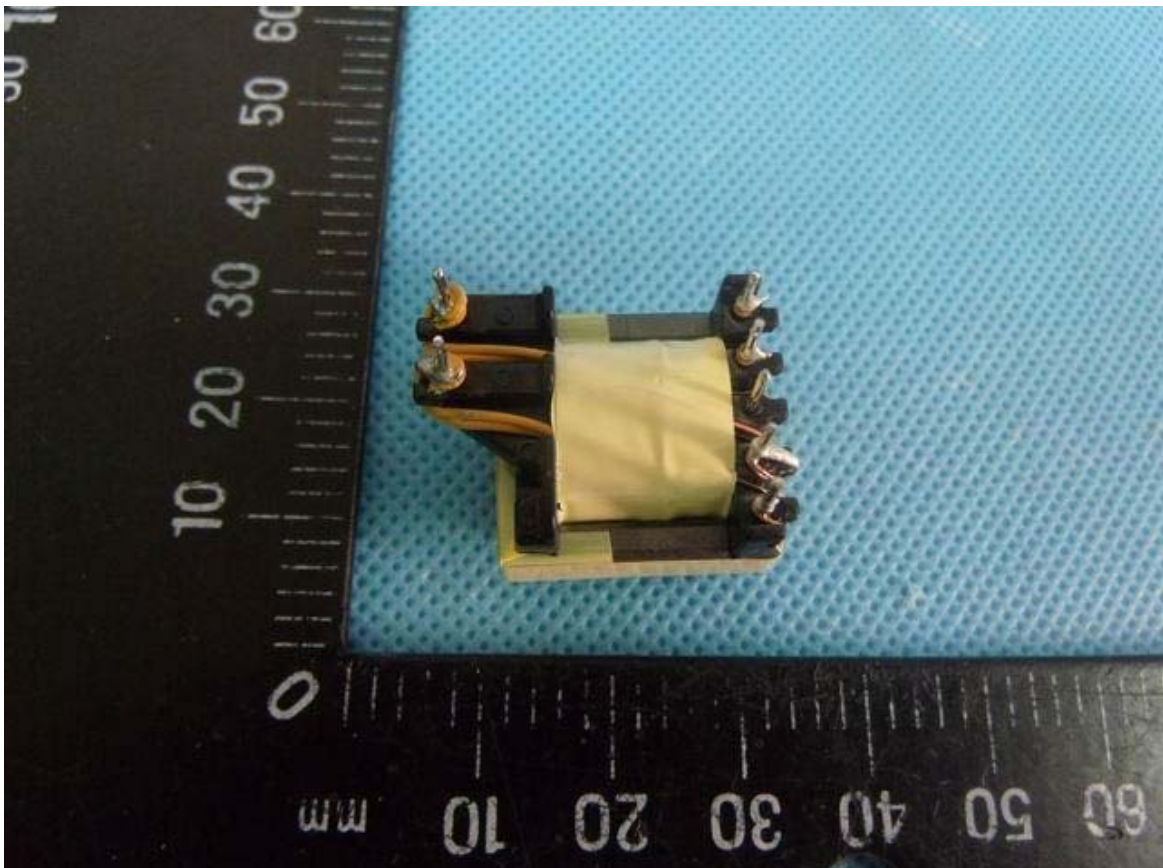
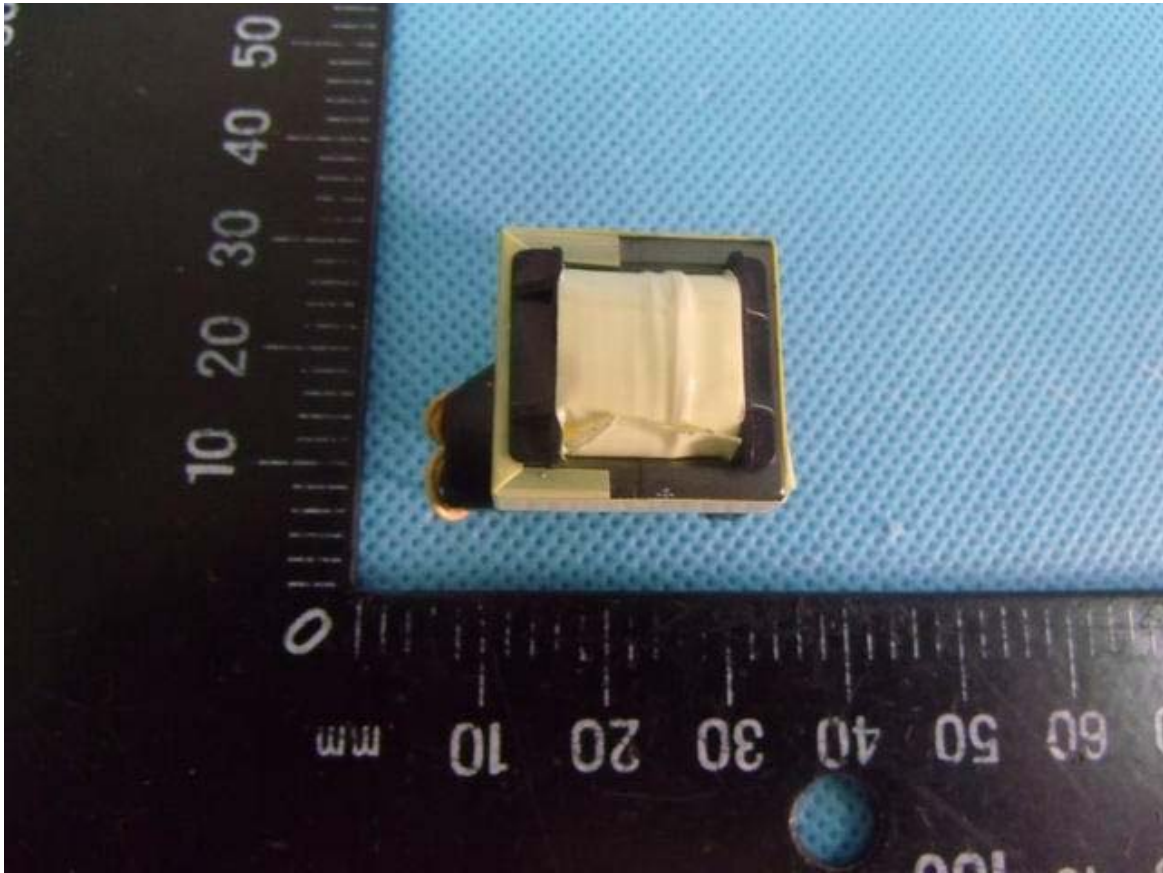
Attachment 1 Photo documentation

General view (Model GT-86120-WVVV)



Attachment 1 Photo documentation

Transformer



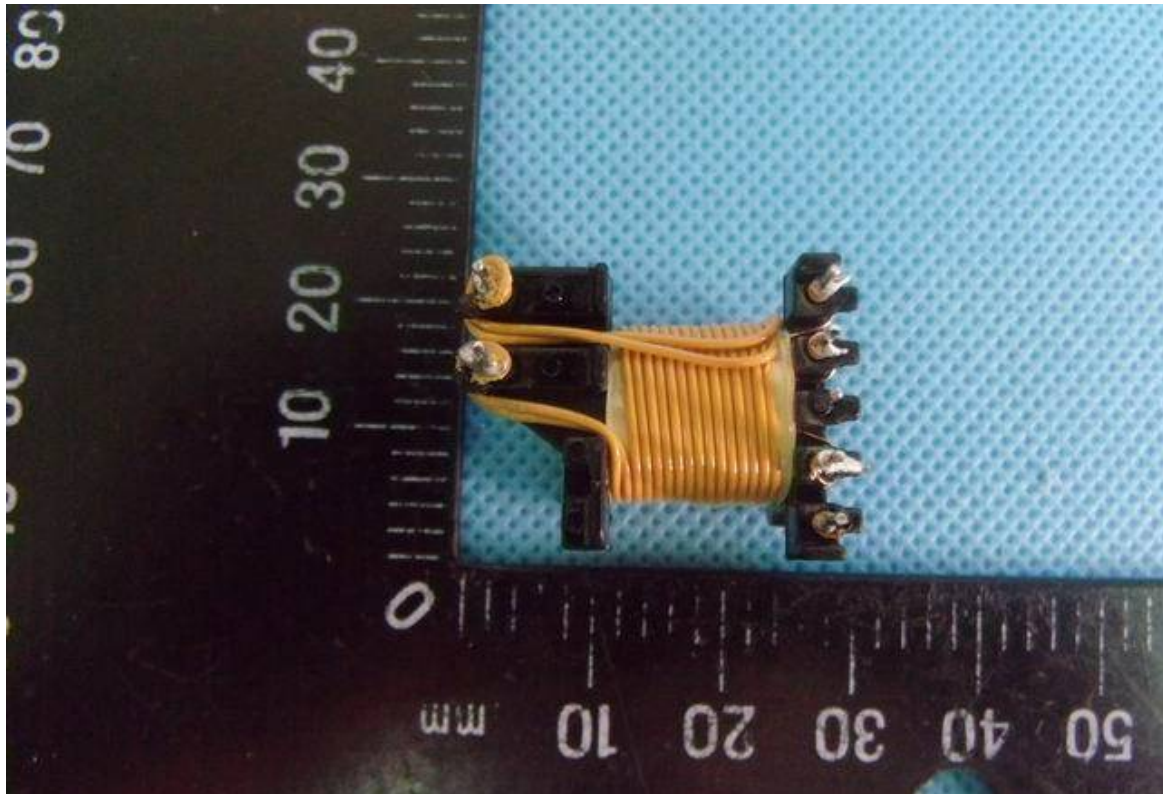
Attachment 1 Photo documentation

Transformer



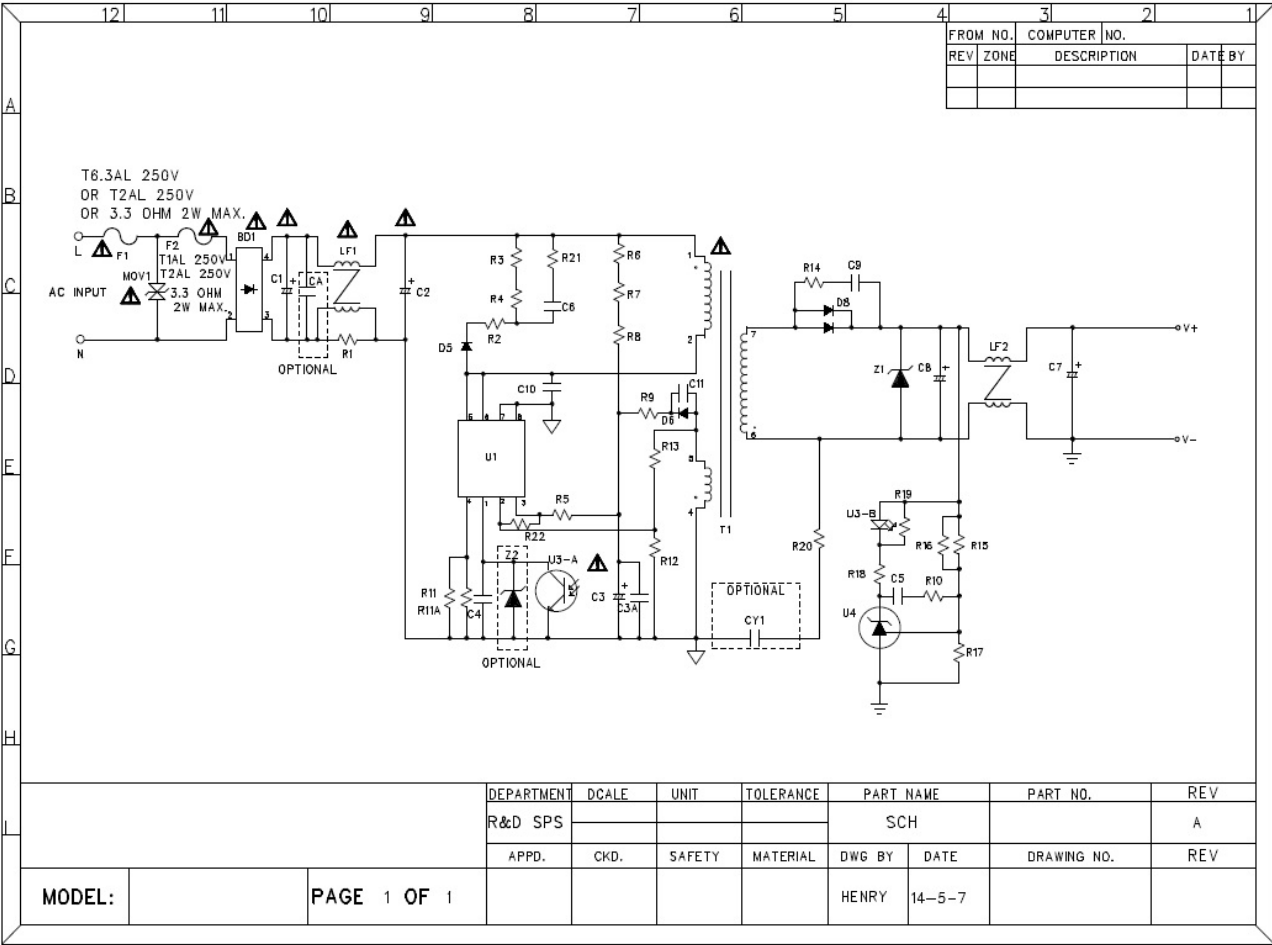
Attachment 1 Photo documentation

Transformer

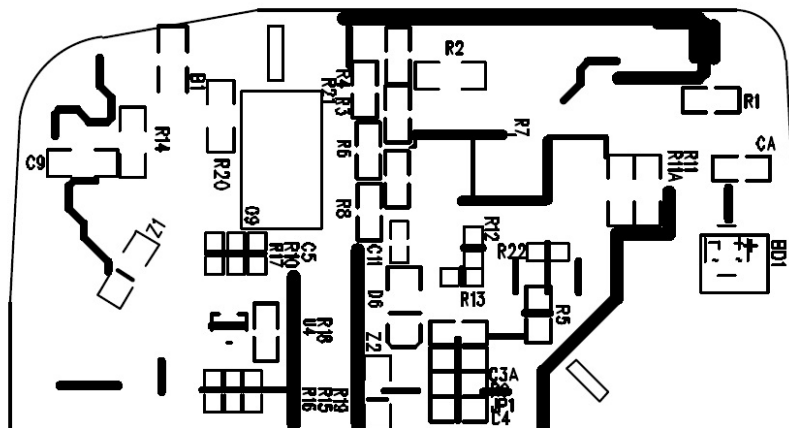
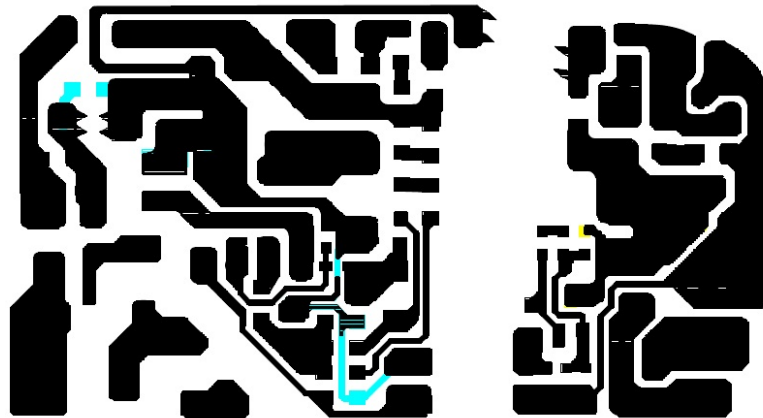
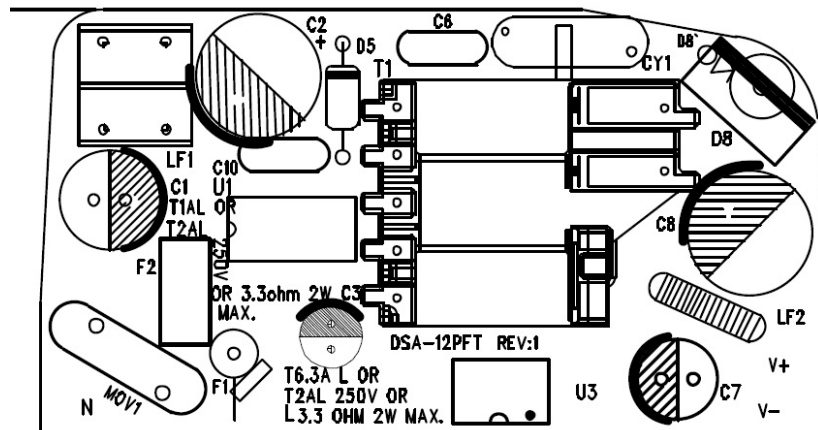


*****End of Attachment 1****

Circuit diagram



PCB Layout (REV:1)



*****End of attachment 2*****

Attachment 3 Safety Information in User Manual

Allgemeines (General)

To comply with the published safety standards, the following must be considered when using this switching power supply.

Um den zur Zeit gültigen Sicherheitsbestimmungen zu genügen, müssen die folgenden Hinweise beim Einsatz dieses Schaltnetzteils berücksichtigt werden:

1. The appliance is used for IT and similar electronic apparatus. It is certified according to the relevant safety standards IEC60950 and EN60950.

Dieses Netzgerät ist ein Tischgerät IT und Datenverarbeitungseräten. Es ist geprüft nach den einschlägigen Bestimmungen IEC60950, und EN60950.

2. The output power taken from the supply must not exceed the rating given on the switching power supply.

Die Ausgangsleistung darf die auf dem Netzgerät angegebenen Werte nicht übersteigen.

3. The appliance is not intended to be repaired by service personnel in case of failure or component defect (unit can be thrown away)

In einem Fehlerfall werden Teile des Gerätes, bzw. das Gerät selbst nicht durch den Kundendienst repariert. Das Gerät muss entsorgt werden.

4. The mains plug is used as the disconnect device, the disconnect device shall remain readily operable.

Die Steckdose muß in der Nähe der Einrichtung angebracht und leicht zugänglich sein.

5. The appliance shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the appliance.

Das Gerät darf nicht Spritzwasser oder tropfenden Flüssigkeiten ausgesetzt werden. Kein mit Wasser gefüllten Gefäße auf dem Gerät abstellen.

6. The switching power supply should be used in ventilated condition, should not cover the power supply with other things.

Das Batterieladegerät sollte unter belüfteter Bedingung benutzt werden. Der Netzanschluss darf nicht mit anderen Dingen bedecken werden.

*****End of Attachment 3*****

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ATTACHMENT TO TEST REPORT IEC 60950-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements	
Differences according to.....:	EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013
Attachment Form No.....:	EU_GD_IEC60950_1E
Attachment Originator	SGS Fimko Ltd
Master Attachment.....:	Date 2013-09
Copyright © 2013 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.	

EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 – CENELEC COMMON MODIFICATIONS

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Clauses, subclauses, notes, tables and figures which are additional to those in IEC60950-1 and it's amendmets are prefixed "Z"		P
Contents (A2:2013)	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZD (informative) IEC and CENELEC code designations for flexible cords		P
General	Delete all the "country" notes in the reference document (IEC 60950-1:2005) according to the following list: 1.4.8 Note 2 1.5.1 Note 2 & 3 1.5.7.1 Note 1.5.8 Note 2 1.5.9.4 Note 1.7.2.1 Note 4, 5 & 6 2.2.3 Note 2.2.4 Note 2.3.2 Note 2.3.2.1 Note 2 2.3.4 Note 2 2.6.3.3 Note 2 & 3 2.7.1 Note 2.10.3.2 Note 2 2.10.5.13 Note 3 3.2.1.1 Note 3.2.4 Note 3. 2.5.1 Note 2 4.3.6 Note 1 & 2 4.7 Note 4 4.7.2.2 Note 4.7.3.1 Note 2 5.1.7.1 Note 3 & 4 5.3.7 Note 1 6 Note 2 & 5 6.1.2.1 Note 2 6.1.2.2 Note 6.2.2 Note 6.2.2.1 Note 2 6.2.2.2 Note 7.1 Note 3 7.2 Note 7.3 Note 1 & 2 G.2.1 Note 2 Annex H Note 2		P
General (A1:2010)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1 Note 6.1.2.1 Note 2 6.2.2.1 Note 2 EE.3 Note		P

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
General (A2:2013)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A2:2013) according to the following list: 2.7.1 Note * 2.10.3.1 Note 2 6.2.2. Note * Note of secretary: Text of Common Modification remains unchanged.		P
1.1.1 (A1:2010)	Replace the text of NOTE 3 by the following. NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.		P
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.	No headphone and earphone.	N/A
(A12:2011)	In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010		N/A
1.5.1 (Added info*)	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC. New Directive 2011/65/11 *		P
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.	No headphone and earphone.	N/A
1.7.2.1 (A12:2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.		N/A

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx Protection against excessive sound pressure from personal music players		N/A
	<p>Zx.1 General</p> <p>This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players.</p> <p>A personal music player is a portable equipment for personal use, that:</p> <ul style="list-style-type: none"> – is designed to allow the user to listen to recorded or broadcast sound or video; and – primarily uses headphones or earphones that can be worn in or on or around the ears; and – allows the user to walk around while in use. <p>NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment.</p> <p>A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause.</p> <p>The requirements in this sub-clause are valid for music or video mode only.</p> <p>The requirements do not apply:</p> <ul style="list-style-type: none"> – while the personal music player is connected to an external amplifier; or – while the headphones or earphones are not used. <p>NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player.</p> <p>The requirements do not apply to:</p> <ul style="list-style-type: none"> – hearing aid equipment and professional equipment; <p>NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.</p>		N/A

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>– analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015.</p> <p>NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies.</p> <p>For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.</p>		N/A
	<p>Zx.2 Equipment requirements</p> <p>No safety provision is required for equipment that complies with the following:</p> <ul style="list-style-type: none"> – equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed “programme simulation noise” as described in EN 50332-1; and – a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” as described in EN 50332-1. <p>NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx.</p> <p>All other equipment shall:</p> <ol style="list-style-type: none"> protect the user from unintentional acoustic outputs exceeding those mentioned above; and have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and 		N/A


IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and</p> <p>NOTE 2 Examples of means include visual or audible signals. Action from the user is always required.</p> <p>NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off.</p> <p>d) have a warning as specified in Zx.3; and</p> <p>e) not exceed the following:</p> <p>1) equipment provided as a package (player with its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and</p> <p>2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1.</p> <p>For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song.</p> <p>NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA.</p> <p>For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.</p>		N/A

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>Zx.3 Warning</p> <p>The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following:</p> <ul style="list-style-type: none"> – the symbol of Figure 1 with a minimum height of 5 mm; and – the following wording, or similar: <p>“To prevent possible hearing damage, do not listen at high volume levels for long periods.”</p>  <p>Figure 1 – Warning label (IEC 60417-6044)</p> <p>Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.</p>		N/A
	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	<p>Zx.4.1 Wired listening devices with analogue input</p> <p>With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be ≥ 75 mV.</p> <p>This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control).</p> <p>NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.</p>		N/A

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>Zx.4.2 Wired listening devices with digital input</p> <p>With any playing device playing the fixed “programme simulation noise” described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA.</p> <p>This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.).</p> <p>NOTE An example of a wired listening device with digital input is a USB headphone.</p>		N/A
	<p>Zx.4.3 Wireless listening devices</p> <p>In wireless mode:</p> <ul style="list-style-type: none"> – with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and – respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and – with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. <p>NOTE An example of a wireless listening device is a Bluetooth headphone.</p>		N/A
	<p>Zx.5 Measurement methods</p> <p>Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s.</p> <p>NOTE Test method for wireless equipment provided without listening device should be defined.</p>		N/A

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; 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;	The equipment is provided with a fuse and complies with a).	P
	c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		N/A
2.7.2	This subclause has been declared 'void'.		—
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Not permanently connected equipment.	N/A
3.2.5.1	Replace “60245 IEC 53” by “H05 RR-F”; “60227 IEC 52” by “H03 VV-F or H03 VVH2-F”; “60227 IEC 53” by “H05 VV-F or H05 VVH2-F2”. In Table 3B, replace the first four lines by the following: Up to and including 6 0,75 ^{a)} Over 6 up to and including 10 (0,75) ^{b)} 1,0 Over 10 up to and including 16 (1,0) ^{c)} 1,5 In the conditions applicable to Table 3B delete the words “in some countries” in condition ^{a)} . In NOTE 1, applicable to Table 3B, delete the second sentence.	No power supply cord provided.	N/A

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		N/A
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 1,5 to 2,5 1,5 to 4 Delete the fifth line: conductor sizes for 13 to 16 A		N/A
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to: 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation).		N/A
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.	No ionizing radiation.	N/A
Bibliography	Additional EN standards.		—

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	—
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ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In Denmark , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	Class II	N/A
1.2.13.14 (A11:2009)	In Norway and Sweden , for requirements see 1.7.2.1 and 7.3 of this annex.	Not intended to be connected to cable distribution system.	N/A

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.7.1 (A11:2009)	In Finland, Norway and Sweden , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.	Class II	N/A
1.5.8	In Norway , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).	Class II	N/A
1.5.9.4	In Finland, Norway and Sweden , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.	No TNV circuit.	N/A

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	<p>In Finland, Norway and Sweden, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"</p> <p>In Norway: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In Sweden: "Apparaten skall anslutas till jordat uttag"</p>	Class II	N/A
1.7.2.1 (A11:2009)	<p>In Norway and Sweden, the screen of the cable 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 need to be isolated from the screen of a cable distribution system.</p> <p>It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer.</p> <p>The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in:</p> <p>"Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)."</p>		

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.</p> <p>Translation to Norwegian (the Swedish text will also be accepted in Norway):</p> <p>“Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.”</p> <p>Translation to Swedish:</p> <p>”Utrustning 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 utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”</p>		N/A
1.7.2.1 (A2:2013)	<p>In Denmark, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet.</p> <p>The marking text in Denmark shall be as follows: In Denmark: “Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.”</p>	Class II	N/A
1.7.5 1.7.5 (A11:2009)	<p>In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.</p> <p>For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.</p>		N/A

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5 (A2:2013)	<p>In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011.</p> <p>For class I equipment the following Standard Sheets are applicable: DK 1-3a, DK 1-1c, DK 1-1d, DK 1-5a or DK 1-7a, with the exception for STATIONARY EQUIPMENT where the socket-outlets shall be in accordance with Standard Sheet DK 1-1b, DK 1-1c, DK 1-1d or DK 1-5a.</p> <p>Socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance with DS 60884-2-D1 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with by DS 60884-2-D1 Standard Sheet DKA 1-3a or DKA 1-3b.</p> <p>Justification the Heavy Current Regulations, 6c</p>		N/A
2.2.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.2	In Finland, Norway and Sweden there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuit.	N/A
2.3.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuit.	N/A
2.6.3.3	In the United Kingdom , the current rating of the circuit shall be taken as 13 A, not 16 A.		P
2.7.1	In the United Kingdom , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.	Direct plug-in equipment.	P
2.10.5.13	In Finland, Norway and Sweden , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuit.	N/A
3.2.1.1	<p>In Switzerland, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets:</p> <p>SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A</p>	EN 50075 plug provided.	P

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A</p> <p>SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A</p> <p>In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998:</p> <p>SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A</p> <p>SEV 5933-2.1998: Plug Type 21, L+N, 250 V, 16A</p> <p>SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A</p>		
3.2.1.1	<p>In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</p> <p>If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.</p>	EN 50075 plug provided.	P

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1 (A2:2013)	<p>In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</p> <p>If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.</p> <p>Justification the Heavy Current Regulations, 6c</p>	EN 50075 plug provided.	P
3.2.1.1	<p>In Spain, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994.</p> <p>Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994.</p> <p>If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.</p>	EN 50075 plug provided.	P
3.2.1.1	<p>In the United Kingdom, apparatus 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 and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations.</p> <p>NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>	EN 50075 plug and BS1363 plug provided.	P

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In Ireland , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.	EN 50075 plug provided.	P
3.2.4	In Switzerland , for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the United Kingdom , a power supply cord with conductor of 1,25 mm ² is allowed for equipment with a rated current over 10 A and up to and including 13 A.	Direct plug-in equipment.	N/A
3.3.4	In the United Kingdom , the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm ² to 1,5 mm ² nominal cross-sectional area.		N/A
4.3.6	In the United Kingdom , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and 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.	Direct plug-in equipment.	P
4.3.6	In Ireland , DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.	Direct plug-in equipment.	P

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	<p>In Finland, Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment:</p> <ul style="list-style-type: none"> • STATIONARY PLUGGABLE EQUIPMENT TYPE A that <ul style="list-style-type: none"> is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT. 		N/A
6.1.2.1 (A1:2010)	<p>In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>Alternatively for components, there is no distance through insulation requirements for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. 	No TNV circuit.	N/A

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b).</p> <p>It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - 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 TNV circuit.	N/A
6.1.2.2	<p>In Finland, Norway and Sweden, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.</p>	No TNV circuit.	N/A
7.2	<p>In Finland, Norway and Sweden, for requirements see 6.1.2.1 and 6.1.2.2 of this annex.</p> <p>The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.</p>	Not intended to be connected to cable distribution system.	N/A
7.3 (A11:2009)	<p>In Norway and Sweden, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.</p>	Not intended to be connected to cable distribution system.	N/A

IEC60950_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
Annex ZD
(informative)

IEC and CENELEC code designations for flexible cords

Type of flexible cord	Code designations	
	IEC	CENELEC
PVC insulated cords		
Flat twin tinsel cord	60227 IEC 41	H03VH-Y
Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F H03VVH2-F
Ordinary polyvinyl chloride sheathed flexible cord	60277 IEC 53	H05VV-F H05VVH2-F
Rubber insulated cords		
Braided cord	60245 IEC 51	H03RT-F
Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F
Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F
Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F
Cords having high flexibility		
Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H
Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	H03RV4-H
Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H

*****End of Attachment 4*****

Attachment 5 Deviations of Australia and/or New Zealand

Sub-clause	Variations to IEC 60950-1:2005 +A1:2009 for application in Australia and/or New Zealand (AS/NZS 60950.1:2011 +A1:2012)	Verdict																	
ZZ1	This Appendix sets out variations and additional requirements to cover issues which have not been addressed by the International Standard. These variations indicate national variations for purposes of the IEC EE CB System and will be published in the IEC EE CB Bulletin.	-																	
ZZ2	The variations are as follows:	-																	
1.2.12.201	Add the definition of "POTENTIAL IGNITION SOURCE"	Noted																	
1.5.1	Add the following to the end of the first paragraph: 'or the relevant Australian/New Zealand Standard.' In Note 1, add the following after the word 'standard': 'or an Australian/New Zealand Standard.'	P																	
1.5.2	Add the following to the end of the first and third dash items: 'or the relevant Australian/New Zealand Standard'	P																	
3.2.5.1	Modify Table 3B as follows: Delete the first four rows and replace with <table border="1" data-bbox="343 1093 933 1326"> <thead> <tr> <th rowspan="2">RATED CURRENT of equipment A</th><th colspan="2">Minimum conductor sizes</th></tr> <tr> <th>Nominal cross-sectional area mm²</th><th>AWG or kcmil [cross-sectional area in mm²] see Note 2</th></tr> </thead> <tbody> <tr> <td>Over 0.2 up to and including 3</td><td>0.5 ^a</td><td>18 [0.8]</td></tr> <tr> <td>Over 3 up to and including 7.5</td><td>0.75</td><td>16 [1.3]</td></tr> <tr> <td>Over 7.5 up to and including 10</td><td>(0.75) ^b</td><td>16 [1.3]</td></tr> <tr> <td>Over 10 up to and including 16</td><td>(1.0) ^c</td><td>14 [2]</td></tr> </tbody> </table>	RATED CURRENT of equipment A	Minimum conductor sizes		Nominal cross-sectional area mm ²	AWG or kcmil [cross-sectional area in mm ²] see Note 2	Over 0.2 up to and including 3	0.5 ^a	18 [0.8]	Over 3 up to and including 7.5	0.75	16 [1.3]	Over 7.5 up to and including 10	(0.75) ^b	16 [1.3]	Over 10 up to and including 16	(1.0) ^c	14 [2]	N/A
RATED CURRENT of equipment A	Minimum conductor sizes																		
	Nominal cross-sectional area mm ²	AWG or kcmil [cross-sectional area in mm ²] see Note 2																	
Over 0.2 up to and including 3	0.5 ^a	18 [0.8]																	
Over 3 up to and including 7.5	0.75	16 [1.3]																	
Over 7.5 up to and including 10	(0.75) ^b	16 [1.3]																	
Over 10 up to and including 16	(1.0) ^c	14 [2]																	
	replace footnote a) and replace with the following: a) This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the entry to the plug does not exceed 2 m (0.5 mm ² three-core supply flexible cords are not permitted; see AS/NZS 3191).	N/A																	
	Delete Note 1.	N/A																	
4.1.201	Insert a new Clause 4.1.201 after Clause 4.1 as follows: 4.1.201 Display devices used for television purposes	N/A																	
	Display devices which may be used for television purposes, with a mass of 7 kg or more, shall comply with the requirements for stability and mechanical hazards, including the additional stability requirements for television receivers, specified in AS/NZS 60065.	N/A																	

Attachment 5 Deviations of Australia and/or New Zealand

Sub-clause	Variations to IEC 60950-1:2005 +A1:2009 for application in Australia and/or New Zealand (AS/NZS 60950.1:2011 +A1:2012)	Verdict
4.3.6	Delete the third paragraph and replace with the following: Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flat-pin socket-outlet complying with AS/NZS 3112 shall comply with the requirements in AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets.	Should be evaluated during national approval. N/A
4.3.13.5	Add the following after each reference to 'IEC 60825-1': ' , or AS/NZS 60825.1.'	N/A
	Add the following after 'IEC 60825-2' in line two of the first paragraph: 'or AS/NZS 60825.2'	N/A
4.7	Add the following paragraph: For alternative tests refer to Clause 4.7.201.	P
4.7.201	Add the following after clause 4.7.3.6 Resistance to fire — Alternative tests	Not used. N/A
4.7.201.1	Parts of non-metallic material shall be resistant to ignition and the spread of fire	N/A
	This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames originating from inside the apparatus, or the following:	N/A
	a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1mm in width regardless of length.	N/A
	b) The following parts which would contribute negligible fuel to a fire:	N/A
	- small mechanical parts, the mass of which does not exceed 4 g, such as mounting parts, gears, cams, belts and bearings;	N/A
	- small electrical components, such as capacitors with a volume not exceeding 1 750 mm ³ , integrated circuits, transistors and optocoupler packages, if these components are mounted on material of flammability category V-1 or better, according to AS/NZS 60695.11.10.	N/A
	NOTE – In considering how to minimize propagation of fire and what 'small parts' are, account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating fire from one part to another.	N/A

Attachment 5 Deviations of Australia and/or New Zealand

Sub-clause	Variations to IEC 60950-1:2005 +A1:2009 for application in Australia and/or New Zealand (AS/NZS 60950.1:2011 +A1:2012)	Verdict
	Compliance shall be checked by the tests of 4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5 For the base material of printed boards, compliance shall be checked by the test of 4.7.201.5.	N/A
	The tests shall be carried out on parts of non-metallic material which have been removed from the apparatus.	N/A
	When the glow-wire test is carried out, they are placed in the same orientation as they would be in normal use.	N/A
	These tests are not carried out on internal wiring.	N/A
4.7.201.2	Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550°C.	N/A
	Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glow-wire test shall not be carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part.	N/A
4.7.201.3	Part of insulating material supporting potential ignition sources shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750°C.	N/A
	The test shall be also carried out on other parts of insulating material which are within a distance of 3 mm of the connection	N/A
	NOTE – Contacts in components such as switch contacts are considered to be connections.	N/A
	For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test.	N/A
	However, parts shielded by a barrier which meets the needle-flame test need not be tested.	N/A

Attachment 5 Deviations of Australia and/or New Zealand

Sub-clause	Variations to IEC 60950-1:2005 +A1:2009 for application in Australia and/or New Zealand (AS/NZS 60950.1:2011 +A1:2012)	Verdict										
	<p>The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications:</p> <table><tr><th>Clause of AS/NZS 60695.11.5</th><th>Change</th></tr><tr><td>9 Test procedure</td><td></td></tr><tr><td>9.2 Application of needle-flame</td><td><p>Replace the first paragraph with:</p><p>The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. If possible the flame shall be applied at least 10 mm from a corner</p><p>Replace the second paragraph with:</p><p>The duration of application of the test flame shall be 30 s ±1 s.</p></td></tr><tr><td>9.3 Number of test specimens</td><td><p>Replace with:</p><p>The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.</p></td></tr><tr><td>11 Evaluation of test results</td><td><p>Replace with:</p><p>The duration of burning (t_b) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.</p></td></tr></table>	Clause of AS/NZS 60695.11.5	Change	9 Test procedure		9.2 Application of needle-flame	<p>Replace the first paragraph with:</p> <p>The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. If possible the flame shall be applied at least 10 mm from a corner</p> <p>Replace the second paragraph with:</p> <p>The duration of application of the test flame shall be 30 s ±1 s.</p>	9.3 Number of test specimens	<p>Replace with:</p> <p>The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.</p>	11 Evaluation of test results	<p>Replace with:</p> <p>The duration of burning (t_b) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.</p>	N/A
Clause of AS/NZS 60695.11.5	Change											
9 Test procedure												
9.2 Application of needle-flame	<p>Replace the first paragraph with:</p> <p>The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. If possible the flame shall be applied at least 10 mm from a corner</p> <p>Replace the second paragraph with:</p> <p>The duration of application of the test flame shall be 30 s ±1 s.</p>											
9.3 Number of test specimens	<p>Replace with:</p> <p>The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.</p>											
11 Evaluation of test results	<p>Replace with:</p> <p>The duration of burning (t_b) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.</p>											
	The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10, provided that the sample tested was not thicker than the relevant part.	N/A										
4.7.201.4	If parts, other than enclosures, do not withstand the glow wire tests of 4.7.201.3, by failure to extinguish within 30 s after the removal of the glow-wire tip, the needle-flame test detailed in 4.7.201.3 shall be made on all parts of non-metallic material which are within a distance of 50 mm or which are likely to be impinged upon by flame during the tests of 4.7.201.3. Parts shielded by a separate barrier which meets the needle-flame test shall not be tested.	N/A										
	NOTE 1 – If the enclosure does not withstand the glow-wire test the appliance is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing.	N/A										
	NOTE 2 – If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the apparatus, the apparatus is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing	N/A										

Attachment 5 Deviations of Australia and/or New Zealand

Sub-clause	Variations to IEC 60950-1:2005 +A1:2009 for application in Australia and/or New Zealand (AS/NZS 60950.1:2011 +A1:2012)	Verdict
	NOTE 3 – Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting, in contact with, or in close proximity to, connections.	N/A
4.7.201.5	The base material of printed boards shall be subject to the needle-flame test of Clause 4.7.201.3.	N/A
	The flame shall be applied to the edge of the board where the heat sink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge consisting of broken perforations, unless the edge is less than 3 mm from a potential ignition source.	N/A
	The test is not carried out if:	N/A
	- the printed board does not carry any potential ignition source	N/A
	- base material of printed boards, on which the available power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category V-1 or better according to AS/NZS 60695.11.10, or the printed boards are protected by an enclosure meeting the flammability category V-0 according to AS/NZS 60695.11.10, or made of metal, having openings only for connecting wires which fill the openings completely	N/A
	- base material of printed boards, on which the available power at a connection exceeds 15 VA operating at a voltage exceeding 400 V (peak) a.c. or d.c. under normal operating conditions, and base material of printed boards supporting spark gaps which provides protection against overvoltages, is of flammability category V-0 according to AS/NZS 60695.11.10	N/A
	- the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely	N/A
	Compliance shall be determined using the smallest thickness of the material. NOTE – Available apparent power is the maximum apparent power which can be drawn from the supplying circuit through a resistive load whose value is chosen to maximise the apparent power for more than 2 min when the circuit supplied is disconnected.	N/A
6.2.2	For Australia only, delete the first paragraph and Note, and replace with the following:	N/A

Attachment 5 Deviations of Australia and/or New Zealand

Sub-clause	Variations to IEC 60950-1:2005 +A1:2009 for application in Australia and/or New Zealand (AS/NZS 60950.1:2011 +A1:2012)	Verdict
	In Australia only, compliance with 6.2.2 shall be checked by the tests of both 6.2.2.1 and 6.2.2.2.	N/A
6.2.2.1	For Australia only, delete the first paragraph including the Notes, and replace with the following:	N/A
	In Australia only, the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator reference 1 of annex N. The interval between successive impulses is 60 s and the initial voltage, U_c , is: for 6.2.1 a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and for 6.2.1 b) and 6.2.1 c): 1.5 kV.	N/A
	NOTE 201 – The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines. NOTE 202 – The value of 2.5 kV for 6.2.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.	N/A
6.2.2.2	For Australia only, delete the second paragraph including the Note, and replace with the following:	N/A
	In Australia only, the a.c. test voltage is: for 6.2.1 a): 3 kV; and for 6.2.1 b) and 6.2.1 c): 1.5 kV.	N/A
	NOTE 201 – Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used. NOTE 202 – The 3 kV and 1.5 kV values have been determined considering the low frequency induced voltages from the power supply distribution system.	N/A
7.3	Add the following before the first paragraph: Equipment providing functions that fall only within the scope of AS/NZS 60065 and that incorporate a PSTN interface, are not required to comply with this Clause where the only ports provided on the equipment, in addition to a coaxial cable connection and a PSTN interface, are audio or video ports and analogue or data ports not intended to be used for telecommunications purposes.	N/A
Annex P	Add the following Normative References: AS/NZS 3191, Electric flexible cords AS/NZS 3112, Approval and test specification—Plugs and socket-outlets	P

Attachment 5 Deviations of Australia and/or New Zealand

Sub-clause	Variations to IEC 60950-1:2005 +A1:2009 for application in Australia and/or New Zealand (AS/NZS 60950.1:2011 +A1:2012)	Verdict
Index	<p>1. Insert the following between 'asbestos, not to be used as insulation' and 'attitude see orientation':</p> <p>AS/NZS 3112.....4.3.6 AS/NZS 3191.....3.2.5.1 (Table 3B) AS/NZS 60064.....4.1.201 AS/NZS 60695 2.11.....4.7.201.2, 4.7.201.3 AS/NZS 60695 11.10.....4.7.201.1, 4.7.201.5 AS/NZS 60695 11.5.....4.7.201.3 AS/NZS 60825 1.....4.3.13.5.1 AS/NZS 60825 2.....4.3.13.5.1'</p> <p>2. Insert the following between 'positive temperature coefficient (PTC) device' and 'powder':</p> <p>potential ignition source.....1.2.201, 4.7.201.3, 4.7.201.5</p>	P

*****End of Attachment 5*****

Attachment 6 Deviations of Korea

Sub-clause	Variations to IEC 60950-1:2005 for application in Korea (K60950-1)		Verdict
1.5.101	Addition Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305).	The plug portion shall be evaluated when submitted for national approval.	N/A
8 EMC	Addition The apparatus shall comply with the relevant CISPR standards	The EMC for Korean deviations is not evaluated.	N/A

*****End of Attachment 6*****

IEC 60950-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Attachment 7 Deviation of JAPAN			
ATTACHMENT TO TEST REPORT IEC 60950-1 JAPAN NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to.....: J60950-1(H22)			
Attachment Form No.....: JP_ND_IEC60950_1A			
Attachment Originator: --			
Master Attachment.....: 2010-11			
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National Differences - Japan			
1.2.4.1	Add the following new NOTE. NOTE Even if the equipment is designed as Class I, the equipment is regarded as Class 0I equipment when a 2-pin adaptor with an earthing lead wire or a cord set having a 2-pin plug with an earthing lead wire is provided or recommended.		N/A
1.2.4.3A	Add the following new clause. 1.2.4.3A CLASS 0I EQUIPMENT Equipment having attachment plug without earthing blade, where protection against electric shock is achieved by: - using BASIC INSULATION, and - providing externally an earth terminal or a lead wire for earthing in order to connect those conductive parts that might assume a HAZARDOUS VOLTAGES in the event of BASIC INSULATION fault to the PROTECTIVE EARTHING CONDUCTOR in the building wiring. NOTE Class 0I equipment may have a part constructed with Double Insulation or Reinforced Insulation. circuit.	Class II	N/A

IEC 60950-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<u>Attachment 7 Deviation of JAPAN</u>			
1.3.2	<p>Add the following notes after the first paragraph:</p> <p>NOTE 1 Transportable or similar equipment that is relocated frequently for intended usage should not be designed as Class I or Class 0I equipment unless it is intended to be installed by service personnel.</p> <p>NOTE 2 Considering wiring circumstance in Japan, equipment intended to be installed where the provision for earthing connection is unlikely should not be designed as Class I or Class 0I equipment unless it is intended to be installed by service personnel.</p>		N/A
1.5.1	<p>Replace the first paragraph with the following:</p> <p>Where safety is involved, components shall comply either with the requirements of this standard or with the safety aspects of the relevant JIS component standard or IEC component standards in case there is no applicable JIS component standard is available. However, in case a component that falls within the scope of the METI Ministerial ordinance (No. 85:1962) is properly used in accordance with its marked ratings, the requirements of 1.5.4, 2.8.7 and 3.2.5 apply, and in addition, a cord connector of power supply cord set matching with an appliance inlet specified in the standard sheets of IEC 60320-1, shall comply with relevant standard sheet of IEC 60320-1.</p> <p>Replace NOTE 1 with the following:</p> <p>NOTE 1 A JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope.</p>		P

IEC 60950-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Attachment 7 Deviation of JAPAN			
1.5.2	<p>Replace the first sentence in the first dashed paragraph with the following:</p> <ul style="list-style-type: none"> - a component that has been demonstrated to comply with a JIS component standard harmonized with the relevant IEC component standard, or where such JIS component standard is not available, a component that has been demonstrated to comply with the relevant IEC component standard shall be checked for correct application and use in accordance with its rating. <p>Add a NOTE after the first dashed paragraph as follows:</p> <p>NOTE 1 See 1.7.5A when Type C.14 appliance coupler rated 10 A per IEC 60320-1 is used with an equipment rated not more than 125 V and rated more than 10 A.</p> <p>Replace the first sentence in the third dashed paragraph as follows:</p> <ul style="list-style-type: none"> - where no relevant IEC component standard or JIS component standard harmonized with the relevant IEC component standard exists, or where components are used in circuits not in accordance with their specified rating, the components shall be tested under the conditions occurring in the equipment. 		P
1.5.6	In this sub-clause, add "JIS C 5101-14:1998 or" before the reference number, IEC 60384-14:1993.		P
1.5.7.2	In this sub-clause, add "JIS C 5101-14:1998 or" before the reference number, IEC 60384-14:1993.		N/A
1.5.8	In the first paragraph, add "JIS C 5101-14:1998 or" before the reference number, IEC 60384-14:1993.		N/A
1.7.1	<p>Replace the fifth dashed paragraph with the following:</p> <ul style="list-style-type: none"> - manufacturer's or responsible company's name or trade-mark or identification mark; 		P
1.7.5	In the second paragraph, add "or JIS C 8303:2007" after the reference number, IEC/TR 60083:1997".		N/A


IEC 60950-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Attachment 7 Deviation of JAPAN			
1.7.5A	<p>Add the following new clause after 1.7.5</p> <p>1.7.5A Appliance Couplers</p> <p>If an appliance coupler according to IEC 60320-1, C.14(rated current: 10 A) is used in equipment whose rated voltage is less than 125 V and the rated current is over 10 A, the following instruction or equivalent shall be described in the user instruction.</p> <p>“ Use only designated cord set attached in this equipment”</p>		N/A
1.7.12	<p>Replace first sentence with the following:</p> <p>Instructions and equipment marking related to safety shall be in Japanese.</p>		N/A
1.7.17A	<p>Add the following new clause after 1.7.17</p> <p>1.7.17A Marking for CLASS 0I EQUIPMENT</p> <p>For CLASS 0I EQUIPMENT, the following instruction shall be marked on the visible place of the mains plug or the main body:</p> <p>必ず接地接続を行って下さい “Provide an earthing connection”</p> <p>Moreover, for CLASS 0I EQUIPMENT, the following or equivalent instruction shall be indicated on the visible place of the main body or written in the operating instructions:</p> <p>接地接続は必ず、電源プラグを電源につなぐ前に行って下さい。又、接地接続を外す場合は、必ず電源プラグを電源から切り離してから行って下さい。</p> <p>“Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains.”</p>		N/A
2.1.1.1	<p>In item b) of this sub-clause, replace “IEC 60083” with “JIS C 8303:2007 or Article 1 of the Ministerial Ordinance (No. 85:1962)”</p>		N/A
2.6.3.2	<p>Add the following after the first paragraph.</p> <p>This also applies to the conductor of lead wire for protective earthing of CLASS 0I EQUIPMENT.</p>		N/A

IEC 60950-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Attachment 7 Deviation of JAPAN			
2.6.4.2	<p>Replace the first paragraph with the following.</p> <p>Equipment required to have protective earthing shall have a main protective earthing terminal. For equipment with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal except for CLASS 0I EQUIPMENT providing separate main protective earthing terminal other than appliance inlet.</p>		N/A
2.6.5.4	<p>Replace the first sentence with the following.</p> <p>Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:</p>		N/A
2.6.5.8A	<p>Add the following new clause after 2.6.5.8</p> <p>2.6.5.8A Earthing of CLASS 0I EQUIPMENT</p> <p>Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150 V.</p> <p>For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip.</p> <p>CLASS 0I EQUIPMENT shall be provided with an earthing terminal or a lead wire for earthing in the external location where easily visible.</p>		N/A
2.10.3.1	In this sub-clause, replace IEC 60664-1 with JIS C 0664:2003.		P
2.10.3.2	In the second paragraph, replace IEC 60664-1 with JIS C 0664:2003.		P
3.2.3	<p>Add the following after Table 3A:</p> <p>Table 3A applies when cables complying with JIS C 3662 or JIS C 3663 are used. In case of other cables, the cable entries shall be so designed that a conduit suitable for the cable used can be fitted.</p>		N/A

IEC 60950-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Attachment 7 Deviation of JAPAN			
3.2.5.1	<p>Add the following to the last of first dashed paragraph.</p> <p>Or mains cords shall be of the sheathed type complying with Appendix 1 of Article 1 of the Ministerial Ordinance (No. 85:1962) on stipulating technical requirements for the Electrical Appliance.</p> <p>Add the following to the last of second dashed paragraph.</p> <p>Or mains cords shall be of the sheathed type complying with Appendix 1 of Article 1 of the Ministerial Ordinance (No. 85:1962) on stipulating technical requirements for the Electrical Appliance.</p> <p>Delete 1) in Table 3B.</p>		N/A
3.3.4	<p>Add the following note to Table 3D:</p> <p>NOTE For cables other than those complying with JIS C 3662 or JIS C 3663, terminals shall be suitable for the size of the intended cables.</p>		N/A
3.3.7	<p>Add the following after the first sentence:</p> <p>This requirement is not applicable to the external earthing terminal of Class 0I equipment.</p>		N/A
4.3.4	<p>Add the following after the first sentence:</p> <p>This requirement also applies to those connections in Class 0I equipment, where CLEARANCE or CREEPAGE DISTANCES over BASIC INSULATION would be reduced to less than the values specified in 2.10.</p>		N/A
4.3.13.5	<p>Replace the first paragraph with the following:</p> <p>Except as permitted below, equipment shall be classified and labelled according to JIS C 6802:2005, and JIS C 6803:2006 or IEC 60825-2:2000, as applicable.</p> <p>Replace IEC 60825-1 in the second and the last paragraph with JIS C 6802:2005.</p>		N/A

IEC 60950-1 ATTACHMENT																															
Clause	Requirement + Test	Result - Remark	Verdict																												
Attachment 7 Deviation of JAPAN																															
4.5	<p>Add the following NOTE to Table 4B, 3):</p> <p>NOTE: In case no data for the material is available, Appendix 4, 4. (1). b. 3 of the Interpretation on the Ministerial Ordinance stipulating Technical Specifications for Electrical Appliances (Commerce and Distribution Policy Group No. 3:2008/06/19) may apply.</p>		P																												
5.1.3	<p>Add a note after the first paragraph as follows:</p> <p>NOTE Attention should be drawn to that majority of three-phase power system in Japan is of delta connection, and therefore, in that case, the test is conducted using the test circuit from IEC 60990, figure 13.</p>		N/A																												
5.1.6	<p>Replace Table 5A as follows:</p> <table border="1"> <thead> <tr> <th>Type of equipment</th><th>Terminal A of measuring instrument connected to:</th><th>Maximum TOUCH CURRENT mA r.m.s. ¹⁾</th><th>Maximum PROTECTIVE CONDUCTOR CURRENT</th></tr> </thead> <tbody> <tr> <td>All equipment</td><td>Accessible parts and circuits not connected to protective earth</td><td>0,25</td><td>-</td></tr> <tr> <td>HAND-HELD</td><td rowspan="4">Equipment main protective earthing terminal (if any) CLASS I EQUIPMENT</td><td>0,75</td><td>-</td></tr> <tr> <td>MOVABLE (other than HAND-HELD, but including TRANSPORTABLE EQUIPMENT</td><td>3,5</td><td>-</td></tr> <tr> <td>STATIONARY, PLUGGABLE TYPE A</td><td>3,5</td><td>-</td></tr> <tr> <td>All other STATIONARY EQUIPMENT - not subject to the conditions of 5.1.7 - subject to the conditions of 5.1.7</td><td>3,5 -</td><td>- 5 % of input current</td></tr> <tr> <td>HAND-HELD</td><td rowspan="2">Equipment main protective earthing terminal (if any) CLASS 0I EQUIPMENT</td><td>0,5</td><td>-</td></tr> <tr> <td>Others</td><td>1,0</td><td>-</td></tr> </tbody> </table> <p>¹⁾ If peak values of TOUCH-CURRENT are measured, the maximum values obtained by multiplying the r.m.s. values by 1,414.</p>	Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. ¹⁾	Maximum PROTECTIVE CONDUCTOR CURRENT	All equipment	Accessible parts and circuits not connected to protective earth	0,25	-	HAND-HELD	Equipment main protective earthing terminal (if any) CLASS I EQUIPMENT	0,75	-	MOVABLE (other than HAND-HELD, but including TRANSPORTABLE EQUIPMENT	3,5	-	STATIONARY, PLUGGABLE TYPE A	3,5	-	All other STATIONARY EQUIPMENT - not subject to the conditions of 5.1.7 - subject to the conditions of 5.1.7	3,5 -	- 5 % of input current	HAND-HELD	Equipment main protective earthing terminal (if any) CLASS 0I EQUIPMENT	0,5	-	Others	1,0	-		P
Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. ¹⁾	Maximum PROTECTIVE CONDUCTOR CURRENT																												
All equipment	Accessible parts and circuits not connected to protective earth	0,25	-																												
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STATIONARY, PLUGGABLE TYPE A		3,5	-																												
All other STATIONARY EQUIPMENT - not subject to the conditions of 5.1.7 - subject to the conditions of 5.1.7		3,5 -	- 5 % of input current																												
HAND-HELD	Equipment main protective earthing terminal (if any) CLASS 0I EQUIPMENT	0,5	-																												
Others		1,0	-																												
6	Replace IEC 60664-1 in NOTE 4 with JIS C 0664.		N/A																												
7	Replace IEC 60664-1 in NOTE 3 with JIS C 0664:2003.		N/A																												

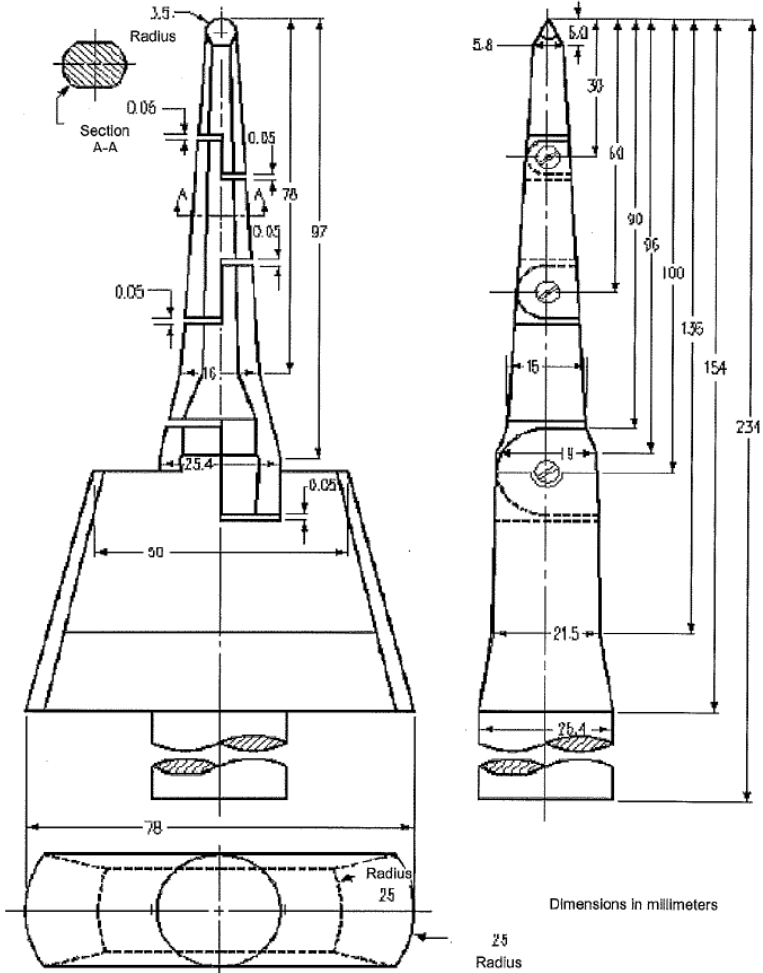
IEC 60950-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Attachment 7 Deviation of JAPAN			
7.2	<p>Add the following after the paragraph:</p> <p>However, the separation requirements and tests of 6.2.1 a), b) and c) do not apply to a CABLE DISTRIBUTION SYSTEM if all of the following apply:</p> <ul style="list-style-type: none"> - the circuit under consideration is a TNV-1 CIRCUIT; and - the common or earthed side of the circuit is connected to the screen of the coaxial cable and to all accessible parts and circuits (SELV, accessible metal parts and LIMITED CURRENT CIRCUITS, if any); and - the screen of the coaxial cable is intended to be connected to earth in the building installation. 		N/A
W.1	<p>Replace the second and the third sentence in the first paragraph with the following:</p> <p>This distinction between earthed and unearthed (floating) circuit is not the same as between CLASS I EQUIPMENT, CLASS 0I EQUIPMENT and CLASS II EQUIPMENT. Floating circuits can exist in CLASS I EQUIPMENT or CLASS 0I EQUIPMENT and earthed circuits in CLASS II EQUIPMENT.</p>		N/A

IEC 60950-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Attachment 7 Deviation of JAPAN			
Annex JA	<p>Add a new annex JA with the following contents.</p> <p style="text-align: center;">Annex JA (normative) Document shredding machines</p> <p>Document shredding machines shall also comply with the requirements of this annex except those of STATIONARY EQUIPMENT used by connecting directly to an AC MAINS SUPPLY of three-phase 200V or more.</p> <p>JA.1 Markings and instructions The symbol  (JIS S 0101:2000, 6.2.4) and the following precautions for use shall be marked on readily visible part adjacent to document feed opening. The marking shall be clearly legible, permanent, and easily discernible;</p> <ul style="list-style-type: none"> - that use by an infants/children may cause a hazard of injury etc.; - that a hand can be drawn into the mechanical section for shredding when touching the document-slot; - that clothing can be drawn into the mechanical section for shredding when touching the document-slot; - that hairs can be drawn into the mechanical section for shredding when touching the document-slot; - in case of equipment incorporating a commutator motor, that equipment may catch fire or explode by spraying of flammable gas. <p>JA.2 Inadvertent reactivation Any safety interlock that can be operated by means of the test finger, Figure JA.1, is considered to be likely to cause inadvertent reactivation of the hazard.</p> <p>Compliance is checked by inspection and, where necessary, by a test with the test finger, Figure JA.1</p> <p>JA.3 Disconnection from the mains supply Document shredding machines shall incorporate an isolating switch complying with sub-clause 3.4.2 as the device disconnecting the power of hazardous moving parts. For this switch, two-position (single-use) switch or multi-position (multifunction) switch (e.g., slide switch) may be used.</p>		N/A

IEC 60950-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Attachment 7 Deviation of JAPAN			
Annex JA	<p>If two-position switch, the positions for “ON” and “OFF” shall be indicated in accordance with sub-clause 1.7.8. If multi-position switch, the position for “OFF” shall be indicated in accordance with sub-clause 1.7.8 and other positions shall be indicated with proper terms or symbols.</p> <p>Compliance is checked by inspection</p> <p>JA.4 Protection against hazardous moving parts Any warning shall not be used instead of the structure for preventing access to hazardous moving parts. Document shredding machines shall comply with the following requirements.</p> <p>Insert the test finger, Figure JA.1, into all openings in MECHANICAL ENCLOSURES without applying appreciable force. It shall not be possible to touch hazardous moving parts with the test finger. This consideration applies to all sides of MECHANICAL ENCLOSURES when the equipment is mounted as intended. Before testing with the test finger, remove the parts detachable without a tool.</p> <p>Insert the wedge-probe, Figure JA.2, into the document-slot. And, against all directions of openings, if straight-cutting type, a force of 45 N shall apply to the probe, and 90 N if cross-cutting type. In this case, the weight of the probe is to be factored into the overall applied force. Before testing with the wedge-probe, remove the parts detachable without a tool. It shall not be possible to touch any hazardous moving parts, including the shredding roller or the mechanical section for shedding, with the probe.</p>		N/A

IEC 60950-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 7 Deviation of JAPAN

Annex JA	 <p>Figure JA.1 Test finger</p>	P
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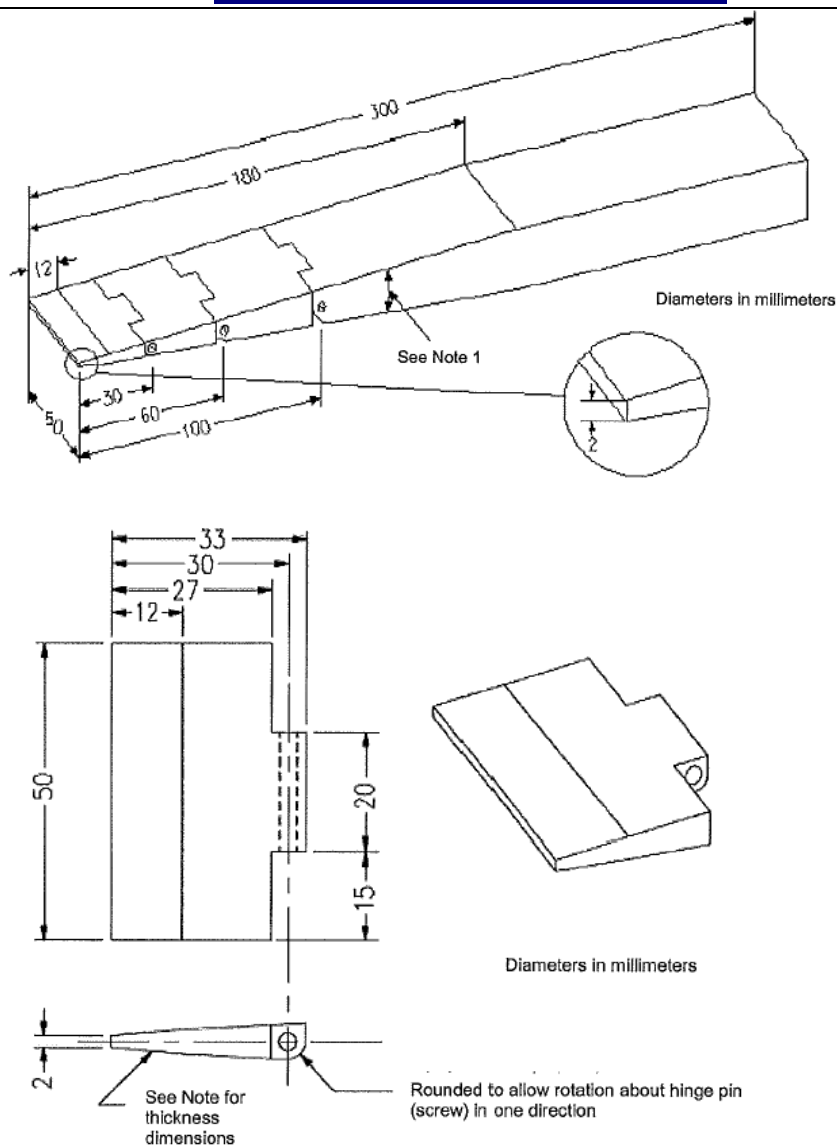
IEC 60950-1 ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
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Attachment 7 Deviation of JAPAN

Annex JA

P



Details of the tip of wedge

Distance from the tip (mm)	Thickness of probe (mm)
0	2
12	4
180	24

NOTE 1 The thickness of the probe varies linearly, with slope changes at the respective points shown in the table.

NOTE2 The allowable dimensional tolerance of the probe is +/- 0.127 mm.

Figure JA.2 Wedge-probe

Attachment 8 REGULATORY REQUIREMENTS FOR SINGAPORE

No	Items	Requirements	Result - Remark	Verdict
<p>The following is the national differences in accordance with safety authority website www.spring.gov.sg/safety, ref. Singapore Consumer Protection (Safety Requirements) – Information Booklet – Chapter 7.</p>				
7 SAFETY AUTHORITY'S REQUIREMENTS				
<p>The Safety Authority monitors the safety of the controlled goods sold in Singapore by investigating all complaints, incidents and accidents reported to the authority. Experiences gained are translated into the Safety Authority's Requirements. These requirements are to be fulfilled in addition to the applicable safety standards.</p>				
No	Items	Requirements	Result - Remark	Verdict
Applicable to all products				
1	Test certificate / Test report	Test certificate / Test report more than three (3) years old shall be rejected.		P
Applicable to all electrical products				
2	All appliances	All appliances must be tested to 230 VAC.	100-240Vac	P
3	Voltage selector (voltage mismatch test)	Appliance fitted with voltage selector shall be tested as follows: Connect appliance to 230 VAC mains with voltage selector switch to settings not suitable for operation at 230 VAC.	No such part.	N/A
4	Tropical condition test	All appliances (with tropical test requirements in applicable Standards) shall comply with the tropical condition test as stated in the relevant IEC Standards.		P
5	Class I appliances (3-pin mains plug)	All Class I appliances must be fitted with 3-pin mains plugs complied with SS 145/SS 472 that are registered with the Safety Authority.	Class II.	N/A
6	Class II appliances (mains plug)	a) All Class II appliances must be fitted with 2-pin mains plug (Appendix T) complied with EN 50075. b) Class II appliances that are fitted with 3-pin mains plugs must use plugs that are complied with SS 145 and registered with the Safety Authority.	EN 50075 plug provided.	P
7	Appliances rated ≥ 3 kW or connected to fixed wiring	Electric appliance ≥ 3 kW must be connected to fixed wiring. All connection to fixed wiring must be in accordance with Code of Practice CP5.		N/A

Attachment 8 REGULATORY REQUIREMENTS FOR SINGAPORE

No	Items	Requirements	Result - Remark	Verdict
8	Detachable power cord set (consists of mains plug, mains cord and appliance connector)	Detachable power cord set must be listed in the test report critical component list.		N/A
9	Circuit diagrams	Circuit diagrams must be indicated with component's values for products tested to IEC 60065 and IEC 60950.		P
10	Circuit diagrams of electronic modules in electrical appliances	Circuit diagrams of the electronic modules in the electrical appliances must be provided.		P
11	Controlled goods likely to be treated as toy by children	Controlled goods, having an enclosure, which is shaped and decorated so that it is likely to be treated as a toy by children, shall not be accepted for certification and registration.		N/A
Applicable to electric airport				
12	Reboil Switch	No part of the reboil switch is allowed to protrude into the water pot, even if it is located above the maximum water level mark.		N/A
Applicable to AC adaptor				
13	3-pin AC adaptor (Appendix V)	Test report showing that the 3-pin complied with sub-clauses 12.1 & 12.3 of SS 246 must be submitted.		N/A
14	2-pin AC adaptor (Appendix V)	The 2-pin (Appendix T) shall comply with EN 50075.	En 50075 plug provided.	P
15	Detachable power supply cord set not supplied by Registered Supplier	Registered Supplier who is not supplying the detachable power supply cord set together with the AC Adaptor must provide written instruction to its customer on the type of approved detachable power cord set to use.		N/A
Applicable to computer products				
16	CD/DVD ROM (used in personal computer)	Test certificate showing that CD/DVD ROM has complied with IEC 825 must be provided.		N/A
17	Modem Card (used in personal computer)	Modem card incorporated in the personal computer must be tested at set level (sub-clauses 5.1 & 6 of IEC 60950) or at component level.		N/A

Attachment 8 REGULATORY REQUIREMENTS FOR SINGAPORE

No	Items	Requirements	Result - Remark	Verdict
Applicable to ceiling fan and cycle fan				
18	Ceiling fan and cycle fan	<p>a) These appliances must be tested to sub-clauses 5.7 and 5.8 of SS 360: 1992.</p> <p>b) Installation instruction must mention the 3 expansion bolts for fastening the main suspension, safety cord, expansion bolt with hook for fastening safety cord and mounting plate. (Appendix Q)</p> <p>c) Drawing (Appendix P) to show that the wires within the motor shaft are not stressed must be provided.</p>		N/A
Applicable to portable/wall socket-outlet and portable cable reel				
19	Portable/wall socket-outlet and portable cable reel	<p>a) If residual current device (RCD) is incorporated, its tripping current must be less than 30mA and operating time must be less than 0.1 second and testing to sub-clauses 9.9.2.1, 9.9.2.2, 9.9.2.3 and 9.16 of SS 97: Part 1: 2000 are required.</p> <p>b) The shutters screening the current-carrying socket contacts shall not be opened by the insertion of any corresponding SINGLE pin of the plug into any current-carrying socket aperture.</p>		N/A
Applicable to roaster				
20	Roaster	A metal ring (Appendix U) must be provided to prevent the roaster from falling off in case the glass bowl shattered.		N/A
Applicable to Residual Current Circuit Breaker (RCCB)				
21	RCCB	Registration of RCCB is limited to 30 mA sensitivity and the operating time must be less than 0.1 second. Electronic RCCB will not be accepted for registration.		N/A
Applicable to electric instantaneous and storage water heater				
22	Instantaneous electric water heater and mains pressure electric storage water heater	Heating elements used must not be of the "bare-element" type.		N/A
23	Water heater incorporated with residual current device(RCD)	Testing to sub-clauses 9.9.2.1, 9.9.2.2, 9.9.2.3 and 9.16 of SS 97: Part 1: 2000 are required.		N/A

Attachment 8 REGULATORY REQUIREMENTS FOR SINGAPORE

No	Items	Requirements	Result - Remark	Verdict
Applicable to multiway adaptor				
24	Multiway adaptor with 3-pin socket-outlets or combination of 3-pin and 2-pin socket-outlets	<p>a) The socket contacts of the adaptor shall only accept 13A 3-pin mains plug complying with SS 145 and/or 2.5A 2-pin mains plug complying with EN 50075.</p> <p>b) The shutters screening the current-carrying socket contacts shall not be opened by the insertion of any corresponding SINGLE pin of the plug into any current-carrying socket aperture.</p> <p>c) A barrier or other acceptable means shall be provided on the engagement surface of the 2.5A 2-pin socket-outlet of the adaptor to PREVENT entry of any types of 2-pin mains plugs except those complying with EN 50075. (note: shutters cannot be regarded as barriers)</p> <p>d) Adaptor incorporates with switch would require additional test to sub-clauses 13.11, 17.1.3 and 18.1.3 of SS 145: Part 2: 1997.</p>		N/A
Applicable to plasma/LCD display monitor				
25	Plasma/LCD display monitor with TV tuner	Plasma/LCD display monitor tested to IEC 60950 would require additional test to clauses 9 (related to antenna only), 10.1, 10.2, 10.3 and 12.5 of IEC 60065.		N/A

*****End of Attachment 8*****

IEC 60950_1A ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict



Attachment 9 Deviation of China

ATTACHMENT TO TEST REPORT IEC 60950-1 CHINA NATIONAL DIFFERENCES Information technology equipment Safety – Part 1: General requirements	
Differences according to.....:	GB 4943.1--2011
Attachment Form No.....:	CN_ND_IEC60950_1A
Attachment Originator	CQC
Master Attachment	Date 2012-10
Copyright © 2012 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.	

	China National Differences		
1.5. 2	Add a note behind the first dashed paragraph. Note: A component used shall comply with related requirements corresponding altitude of 5000m.		P
1.7	Add a paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.	Should be considered during national approval.	N/A
1.7.1	Amend dashed paragraph at the fifth paragraph : The RATED VOLTAGE should be 220V (single phase) or 380V (three-phases) for single rated voltage, for RATED VOLTAGE RANGE, it should cover 220V or 380V (three-phases), for multiple RATED VOLTAGES, one of them should be 220V or 380V (three-phases) and set on 220V or 380V (three-phases) when manufactured. And the RATED FREQUENCY or RATED FREQUENCY RANGE should be 50Hz or include 50Hz.	100-240V	P

IEC 60950_1A ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 9 Deviation of China

1.7.2.1	<p>Add requirements of warning for equipment intended to be used at altitude not exceeding 2000m or at non-tropical climate regions:</p> <p>For equipment intended to be used at altitude not exceeding 2000m, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place.</p> <p>"Only used at altitude not exceeding 2000m."</p>  <p>For equipment intended to be used in not-tropical climate regions, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place.</p> <p>"Only used in not-tropical climate regions."</p>  <p>If only the symbol used, the explanation of the symbol shall be contained in the instruction manual.</p> <p>The above statements shall be given in a language acceptable to the regions where the apparatus is intended to be used.</p>	Should be considered during national approval.	N/A
2.7.1	<p>Amended the first paragraph as:</p> <p>Protection in PRIMARY CIRCUITS against overcurrent short-circuits and earth faults shall be provided as an integral part of the equipment except special provisions. And the protective device shall meet the requirement of Clause 5.3.</p> <p>Delete note of Clause 2.7.1.</p>		P

IEC 60950_1A ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 9 Deviation of China

2.9.2	<p>First section of Clause 2.9.2 amended as two sections:</p> <p>Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 120 h in a cabinet or room containing air with ambient temperature $40\pm 2^{\circ}\text{C}$ and a relative humidity of $(93\pm 3)\%$. During this conditioning the component or subassembly is not energized.</p> <p>For equipment not to be operated at tropical climatic conditions, Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of $(93\pm 3)\%$. The temperature of the air, at all places where samples can be located, is maintained within 2°C of any convenient value between 20°C and 30°C such that condensation does not occur.</p> <p>Due to pretreatment of equipment operated at high altitude area is humidity conditioning withstand hot shock, specific requirements are to be considered.</p> <p>Add note: For equipment to be operated at 2000 m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered.</p>		P
2.10.3.1	<p>Amend the third paragraph of Clause 2.10.3.1 to be:</p> <p>These requirements apply for equipment to be operated up to 2000 m above sea level. For equipment to be operated at more than 2000 m above sea level and up to 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.</p>		P
2.10.3.3&2.10.3.4	Add "(applicable for altitude up to 2000m)" in header of Table 2K、2L and 2M.		P



IEC 60950_1A ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 9 Deviation of China

2.10.3.4	Add a new section above Table 2K and in Clause 2.10.3.4: Minimum CLEARANCES determined by above rules apply for equipment to be operated up to 2000m above sea level. For equipment operated at 2000 m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1 (IEC 60664-1) . For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of GB/T16935.1.		P
3.2.1.1	Add a paragraph before the last paragraph: Plugs connected to AC mains supply shall comply with GB 1002 or GB 1003 or GB/T 11918 as applicable.	The plug portion shall be evaluated when submitted for national approval.	N/A
4.2.8	Clause 4.2.8 cathode ray tubes quoted Clause 18 of GB8898-2011. Delete note of Clause 4.2.8.		N/A
Annex E	Amend last section: For comparison of winding temperatures determined by the resistance method of this annex with the temperature limits of Table 4B, 35 °C shall be added to the calculated temperature rise. Add note: for equipment not to be operated at tropical climatic conditions, 25 °C shall be added to the calculated temperature rise to compare with the temperature of Table 4B.		N/A
Annex G.6	Change the second section of Clause G.6 to be: For equipment to be operated at 2000 m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.		N/A

IEC 60950_1A ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 9 Deviation of China

Annex DD (normative)	<p>Added annex DD: Instructions for the new safety warning labels.</p> <p>DD.1 Altitude warning label </p> <p>Meaning of the label: Evaluation for apparatus only based on altitude not exceeding 2000m, therefor it's the only operating condition applied for the equipment .There may be some potential safety hazard if the equipment is used at altitude above 2000m.</p> <p>DD.2 Climate warning label </p> <p>Meaning of the label: Evaluation for apparatus only based on temperate climate condition, therefor it's the only operating condition applied for the equipment .There may be some potential safety hazard if the equipment is used in tropical climate region.</p>	Should be considered during national approval.	N/A
Annex EE (informative)	<p>Added annex EE:</p> <p>Illustration relative to safety explanation in normative Chinese、Tibetan、Mongolian、Zhuang Language and Uighur.</p>		N/A

	Special national conditions	--
1.1.2	<p>GB4943.1-2011 applies to equipment used at altitudes not exceeding 5000m above sea level, primarily in regions with moderate or tropical climates.</p> <p>Revise the third dashed paragraph of 1.1.2 as: ——equipment intended to be used in vehicles, on board ships or aircraft, at altitudes greater than 5000m;</p>	P
1.4.5	<p>Amend the second paragraph by the following: If the equipment is intended for direct connection to an AC mains supply, the tolerances on RATED VOLTAGE shall be taken as +10% and -10%.</p>	P

IEC 60950_1A ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 9 Deviation of China

1.4.12.1	<p>Tma: The maximum ambient temperature permitted by the manufacturer's specification, or 35 °C, whichever is greater.</p> <p>Add note 1: For equipment not to be operated at tropical climatic conditions, Tma is the maximum ambient temperature permitted by the manufacturer's specification, or 25 °C, whichever is greater.</p> <p>Add note 2: For equipment to be operated at 2000m-5000m above sea level, its temperature test conditions and temperature limits are under consideration.</p>		P
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*****End of Attachment 9*****