



Test Report issued under the responsibility of:



## TEST REPORT

### IEC 60950-1

### Information technology equipment – Safety – Part 1: General requirements

Report Number.....: BTL-CB-1-S1706C112

Date of issue.....: 2017-07-15

Total number of pages..... 61

Applicant's name.....: HONGFUJIN PRECISION ELECTRONICS (CHONGQING) CO., LTD

Address.....: NO.1 EAST DISTRICT 1ST RD., SHAPINGBA DISTRICT, CHONGQING, 401332, China

#### 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

**Copyright © 2014 IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE System). All rights reserved.**

This publication may be reproduced in whole or in part for non-commercial purposes as long as the IECEE is acknowledged as copyright owner and source of the material. IECEE takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.


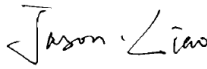
If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

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

#### General disclaimer:

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

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

<b>Test item description .....</b>	LCD Monitor	
<b>Trade Mark .....</b>	Lenovo	
<b>Manufacturer .....</b>	<b>Lenovo (BeiJing) Limited</b> NO.6 Chuang Ye Road, Shangdi Information Industry Base, Haidian District, Beijing, China	
<b>Model/Type reference .....</b>	D17215FT*, T22v-10, D17238FT*, T24v-10 (the "*" in the model name can be 0 to 9, A to Z or blank for marketing use only)	
<b>Ratings .....</b>	Input: 100-240V~, 50/60Hz, 1.5A	
<b>Testing procedure and testing location:</b>		
<input checked="" type="checkbox"/>	<b>CB Testing Laboratory:</b>	BTL Inc. (Dongguan)
<b>Testing location/ address.....</b>		BTL Inc. (Dongguan). / Building C, No.3, Jinshagang 1st Road, Shixia, Dalang, Dongguan, Guangdong, China
<input type="checkbox"/>	<b>Associated CB Testing Laboratory:</b>	
<b>Testing location/ address.....</b>		
<b>Tested by (name + signature) .....</b>		Ben Liu / Project Handler 
<b>Approved by (name + signature) .....</b>		Jason Liao / Reviewer 
<input type="checkbox"/>	<b>Testing procedure: TMP/CTF Stage 1:</b>	
<b>Testing location/ address.....</b>		
<b>Tested by (name + signature) .....</b>		
<b>Approved by (name + signature) .....</b>		
<input type="checkbox"/>	<b>Testing procedure: WMT/CTF Stage 2:</b>	
<b>Testing location/ address.....</b>		
<b>Tested by (name + signature) .....</b>		
<b>Witnessed by (name + signature).....</b>		
<b>Approved by (name + signature) .....</b>		
<input type="checkbox"/>	<b>Testing procedure: SMT/CTF Stage 3 or 4:</b>	
<b>Testing location/ address.....</b>		
<b>Tested by (name + signature) .....</b>		
<b>Witnessed by (name + signature).....</b>		
<b>Approved by (name + signature) .....</b>		
<b>Supervised by (name + signature) .....</b>		

<b>List of Attachments (including a total number of pages in each attachment):</b> <ul style="list-style-type: none"> <li>- European Group difference and national differences (19 pages)</li> <li>- US differences (6 pages)</li> <li>- Canada differences (6 pages)</li> <li>- Australia / New Zealand differences (8 pages)</li> </ul> <p>Additional National differences according to IEC 60950-1 2ed.:</p> <ul style="list-style-type: none"> <li>- China differences (6 pages)</li> </ul> <p>Additional National differences according to IEC 60950-1 2ed + Am1:2009:</p> <ul style="list-style-type: none"> <li>- Israel differences (2 pages)</li> <li>- Korea differences (1 page)</li> <li>- Japan differences (14 pages)</li> </ul> <p>Miscellaneous documentation (4 pages)</p> <p>Photos documentation (11 pages)</p>	
<b>Summary of testing:</b>	
<b>Tests performed (name of test and test clause):</b> <ul style="list-style-type: none"> <li>- 1.6.2 Input test</li> <li>- 1.7.11 Durability of marking test</li> <li>- 2.1.1.1 Access to energized parts</li> <li>- 2.1.1.5 Energy Hazard in Operator Access Area</li> <li>- 2.1.1.7 Discharge test</li> <li>- 2.2.2 SELV limits for normal and fault conditions</li> <li>- 2.4 Limited current circuit test</li> <li>- 2.5 Limited Power Sources</li> <li>- 2.6.3.4 Protective Bonding / Earthing Test</li> <li>- 2.9.2 Humidity Conditioning</li> <li>- 2.10.2 Working Voltage over Insulation</li> <li>- 2.10.3 Clearances measurement</li> <li>- 2.10.4 Creepage distances measurement</li> <li>- 4.2.4 Steady Force Test</li> <li>- 4.2.5 Impact test</li> <li>- 4.2.7 Stress relief</li> <li>- 4.2.10 Wall mounted Test</li> <li>- 4.5.2 Maximum Temperature Test</li> <li>- 5.1.6 Touch Current Test</li> <li>- 5.2 Electric Strength Test</li> <li>- 5.3 Fault Condition Test</li> <li>- 5.3.7 Connector overload Test</li> </ul>	<b>Testing location:</b> <p>Unless otherwise indicated, all tests were conducted at BTL Inc. (Dongguan) / Building C, No.3, Jinshagang 1 st Road, Shixia, Dalang, Dongguan, Guangdong, China</p>

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

EU Group Differences (AT, BE, BG, HR, CY, CZ, DK, EE, FI, MK, FR, DE, GR, HU, IS, IE, IT, LV, LT, LU, MT, NL, NO, PL, PT, RO, SK, SI, ES, SE, CH, TR, GB), CA, US, AU/NZ.

Explanation of used codes: AT=Austria, BE=Belgium, BG= Bulgaria, HR= Croatia, CY= Cyprus, CZ= The Czech Republic, DK=Denmark, EE=Estonia, FI=Finland, MK= Former Yugoslav Republic of Macedonia, FR=France, DE=Germany, GR=Greece, HU=Hungary, IS= Iceland, IE=Ireland, IT=Italy, LV= Latvia, LT= Lithuania, LU= Luxembourg, MT= Malta, NL=The Netherlands, NO=Norway, PL=Poland, PT= Portugal, RO= Romania, SK=Slovakia, SI=Slovenia, ES= Spain, SE=Sweden, CH= Switzerland, TR=Turkey, GB= United Kingdom, CA=Canada, US=United States of America, AU=Australia, NZ= NewZealand.

☒ **The product fulfils the requirements of EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013.**

**Summary of compliance with National Differences according to IEC 60950-1: 2005+A1:****List of countries addressed**

IL, KP, JP.

Explanation of used codes: IL=Israel, KP=Republic of Korea

**Summary of compliance with National Differences according to IEC 60950-1: 2005:****List of countries addressed**

CN.

Explanation of used codes: CN=China, JP= Japan

For National Differences see corresponding Attachment.



<b>Test item particulars .....</b>	
<b>Equipment mobility .....</b>	<input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
<b>Connection to the mains .....</b>	<input checked="" type="checkbox"/> pluggable equipment <input checked="" type="checkbox"/> type A <input type="checkbox"/> type B <input type="checkbox"/> permanent connection <input checked="" type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input type="checkbox"/> not directly connected to the mains
<b>Operating condition .....</b>	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
<b>Access location .....</b>	<input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
<b>Over voltage category (OVC) .....</b>	<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:
<b>Mains supply tolerance (%) or absolute mains supply values .....</b>	±10 %
<b>Tested for IT power systems .....</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>IT testing, phase-phase voltage (V) .....</b>	N/A
<b>Class of equipment .....</b>	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified
<b>Considered current rating of protective device as part of the building installation (A) .....</b>	16(Euro)/ 20(USA)
<b>Pollution degree (PD) .....</b>	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
<b>IP protection class .....</b>	IPX0
<b>Altitude during operation (m) .....</b>	Up to 5000 m
<b>Altitude of test laboratory (m) .....</b>	Not over 2000 m
<b>Mass of equipment (kg) .....</b>	D17215FT*, T22v-10: approx 3.3 kg (without base), base: approx 1.8kg; D17238FT*, T24v-10: approx 3.5 kg (without base), base: approx 1.8kg
<b>Possible test case verdicts:</b>	
- 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)
<b>Testing .....</b>	
<b>Date of receipt of test item .....</b>	2017-06-14
<b>Date(s) of performance of tests .....</b>	2017-06-14 to 2017-07-10
<b>General remarks:</b>	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.  <b>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</b>	

**Manufacturer's Declaration per sub-clause 4.2.5 of IEC60950-1:**

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).....:** **HONGFUJIN PRECISION ELECTRONICS (CHONGQING) CO., LTD**  
NO.1 EAST DISTRICT 1ST RD., SHAPINGBA DISTRICT, CHONGQING, 401332, China

**General product information:****Report Summary**

- All applicable tests according to the referenced standard(s) have been carried out.

**Product Description**

- The equipment is a LCD Monitor intended for information technology equipment.
- The unit has the following features:
  1. One internal metal chassis covering building-in switching power supply and main board, which is considered as fire enclosure;
  2. External plastic enclosure is considered as mechanical enclosure and electrical enclosure.
  3. Configured with LCD panel (with LED backlight);
  4. Configured with key control board
  5. Configured with two optional speaker.
- Wall mount function only evaluated VESA adaptor kit at back of equipment. Basically, the equipment considered to be movable. However, the equipment has four screw holes for VESA adaptor kit assembly, which is compliant with VESA standard. VESA compatible wall mounting kit, 100 × 100 mm distance, four M4 size with 10 mm length screws to secure.

**Model Differences**

- All models are identical except for model name, size of panel and external plastic enclosure, see below table and attached photos for detail.

Model Name	Size of panel
D17215FT*, T22v-10	22 inch
D17238FT*, T24v-10	24 inch

- Unless otherwise specified, all tests were performed on model T24v-10 and T22v-10.

**Technical Considerations**

- The product was submitted and tested for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40 °C
- Max. normal load condition means screen full display with maximum brightness and contrast; two speakers loaded to maximum volume with 1kHz sine wave; one USB 3.0 port is dummy load 5W (5V/1A), and another USB 3.0 port is dummy load 7.5W (5V/1.5A).
- **1.1.2 - Additional requirements:**
  - A. Exposure to extreme temperatures, excessive dust, moisture or vibration; to flammable gases; to corrosive or explosive atmospheres:  
This equipment is intended to operate in a "normal" environment (Offices and homes).
  - B. Electromedical equipment connected to the patient:  
This equipment is not an electromedical equipment intended to be physically connected to a patient.
  - C. Equipment used in in tropical countries, or at elevations ≤ 5000m:

This equipment is intended to operate in a "normal" environment (Offices and homes) and is intended to be operated under altitude up to 5000m, so the clearance is multiplied by the altitude correction factor (1.48 linear interpolation used), specified in table A.2 of IEC 60664-1.

**Abbreviations used in the report:**

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

Indicate used abbreviations (if any)



IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>1</b>	<b>GENERAL</b>		<b>P</b>
<b>1.5</b>	<b>Components</b>		<b>P</b>
1.5.1	General	See below.	P
	Comply with IEC 60950-1 or relevant component standard	(see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	<p>Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this Standard.</p> <p>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.</p> <p>Components, for which no relevant IEC Standard exist, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1.</p>	P
1.5.3	Thermal controls		N/A
1.5.4	Transformers	Transformer used is 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	Interconnecting cables comply with the relevant requirements of this standard.	P
1.5.6	Capacitors bridging insulation	Minimum X2, Y2 and Y1 capacitors according to IEC 60384-14. (see appended table 1.5.1)	P
1.5.7	Resistors bridging insulation	See below.	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	R847, R848, R849, R850. R851, R853 bridged between L and N after fuse as functional insulation.	P
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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9	Surge suppressors	No such component	N/A
1.5.9.1	General		N/A
1.5.9.2	Protection of VDRs		N/A
1.5.9.3	Bridging of functional insulation by a VDR		N/A
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

<b>1.6</b>	<b>Power interface</b>		<b>P</b>
1.6.1	AC power distribution systems	TN power system.	P
1.6.2	Input current	The steady state input current of the equipment did not exceed the RATED CURRENT by more than 10% under NORMAL LOAD. (See appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	This appliance is not hand-held equipment.	N/A
1.6.4	Neutral conductor	The neutral conductor insulated from earth and from the body throughout the equipment as if it were a line conductor	P

<b>1.7</b>	<b>Marking and instructions</b>		<b>P</b>
1.7.1	Power rating and identification markings	See below.	P
1.7.1.1	Power rating marking	See below.	P
	Multiple mains supply connections.....:	Single power source	P
	Rated voltage(s) or voltage range(s) (V) .....	100-240V~	P
	Symbol for nature of supply, for d.c. only.....:		N/A
	Rated frequency or rated frequency range (Hz) .....	50/60Hz.	P
	Rated current (mA or A) .....	1.5A	P
1.7.1.2	Identification markings	See below.	P
	Manufacturer's name or trade-mark or identification mark .....	Lenovo	P
	Model identification or type reference .....	D17215FT*, T22v-10, D17238FT*, T24v-10	P
	Symbol for Class II equipment only .....	Class I equipment.	N/A
	Other markings and symbols .....	Other markings and symbols do not give rise to misunderstanding.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1.3	Use of graphical symbols		N/A
1.7.2	Safety instructions and marking	See below.	P
1.7.2.1	General	Instructions are available, English version provided. (Version in other language will be provided when submitted for national approval)	P
1.7.2.2	Disconnect devices	Appliance inlet serves as disconnect device.	P
1.7.2.3	Overcurrent protective device	Pluggable equipment Type A	N/A
1.7.2.4	IT power distribution systems	For Norway compliance has to be evaluated during the nation approval.	N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	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 selector.	N/A
	Methods and means of adjustment; reference to installation instructions .....		N/A
1.7.5	Power outlets on the equipment .....		N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) .....	Fuse location and markings: F850 T3.15A / 250V	P
1.7.7	Wiring terminals	See below.	P
1.7.7.1	Protective earthing and bonding terminals .....	Appliance inlet approved according to IEC 60320-1 is used.	P
1.7.7.2	Terminals for a.c. mains supply conductors	The equipment with appliance inlet is intended to be use the detachable type power supply cord.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators	See below.	P
1.7.8.1	Identification, location and marking .....	No indicators affecting safety are used.	N/A
1.7.8.2	Colours .....	Only functional indicators use color.	P
1.7.8.3	Symbols according to IEC 60417 .....	The standby switch is marked with the symbol "⏻" (IEC 60417-1 No. 5009)	P
1.7.8.4	Markings using figures .....	No controls.	N/A
1.7.9	Isolation of multiple power sources .....	Only one connection supplying hazardous voltages and energy levels to the equipment.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.10	Thermostats and other regulating devices .....	No thermostats or other regulating devices.	N/A
1.7.11	Durability	The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. and then again for 15 sec. with the cloth soaked with petroleum spirit.  After this test there was no damage to the label. The marking on the label did not fade. There was no curling nor lifting of the label edge.	P
1.7.12	Removable parts	No marking on Base.	P
1.7.13	Replaceable batteries .....	No such battery	N/A
	Language(s) .....		—
1.7.14	Equipment for restricted access locations .....	No restricted access location.	N/A

<b>2</b>	<b>PROTECTION FROM HAZARDS</b>		<b>P</b>
<b>2.1</b>	<b>Protection from electric shock and energy hazards</b>		<b>P</b>
2.1.1	Protection in operator access areas		P
2.1.1.1	Access to energized parts	There is adequate protection against operator contact with bare parts at ELV or hazardous voltage or parts separated from these with basic or functional insulation only (except protective earth), also after operator detachable parts are removed and doors and covers are opened. No Hazardous voltages exceeding 1000V a.c. or 1500V d.c. ref. Sub-clause 2.10. Checked by test finger and test pin.	P
	Test by inspection .....	No access with test finger and test pin to any energized parts or hazardous voltage.	P
	Test with test finger (Figure 2A) .....	No access to any energized parts or hazardous voltage with test finger.	P
	Test with test pin (Figure 2B) .....	No access to any energized parts or hazardous voltage with test pin.	P
	Test with test probe (Figure 2C) .....	No TNV circuits.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V <sub>peak</sub> or V <sub>rms</sub> ); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards .....	No energy hazard in operator access area. Checked by means of the test finger. (Test data for reference).	P
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment	The X-capacitors and bleeder resistor used.at maximum rated value.	P
	Measured voltage (V); time-constant (s) .....	(See appended table 2.1.1.7)	—
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 .....	Considered.	P
2.1.2	Protection in service access areas	Checked by inspection unintentional contact with such parts is unlikely during service operations involving other parts for the equipment.	P
2.1.3	Protection in restricted access locations	Equipment not intended for installation in RAL.	N/A

<b>2.2</b>	<b>SELV circuits</b>		<b>P</b>
2.2.1	General requirements	See below.	P
2.2.2	Voltages under normal conditions (V) .....	Between any conductors of the SELV circuits 42.4V <sub>peak</sub> or 60Vd.c. are not exceeded. See appended table 2.2.	P
2.2.3	Voltages under fault conditions (V) .....	Single fault did not cause excessive voltage in accessible SELV circuits. Limits of 71V <sub>peak</sub> and 120V <sub>peak</sub> were not exceeded within 0.2 seconds and limits 42.4V <sub>peak</sub> and 60Vd.c. were not exceeded for longer than 0.2 seconds.	P
2.2.4	Connection of SELV circuits to other circuits .....	Connected to SELV circuits.	P

<b>2.3</b>	<b>TNV circuits</b>		<b>N/A</b>
------------	---------------------	--	------------

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.3.1	Limits		N/A
	Type of TNV circuits .....	No TNV circuit provided.	—
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

<b>2.4</b>	<b>Limited current circuits</b>		<b>P</b>
2.4.1	General requirements	The limits specified in 2.4.2 are not exceeded under normal operating conditions	P
2.4.2	Limit values	(See appended table)	P
	Frequency (Hz) .....	(See appended table)	—
	Measured current (mA) .....	(See appended table)	—
	Measured voltage (V) .....	(See appended table)	—
	Measured circuit capacitance (nF or $\mu$ F) .....	C860=3.3nF	—
2.4.3	Connection of limited current circuits to other circuits	See 2.2.2 and 2.2.3. No direct connection between SELV and any primary circuits.	P

<b>2.5</b>	<b>Limited power sources</b>		<b>P</b>
	a) Inherently limited output	The output of data ports (HDMI, DP, VGA and Audio, etc) are limited to the values of table 2B.	P
	b) Impedance limited output		N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition	A regulating network limits the output in complied with table 2B both under normal and single fault for output of the secondary rectifier (D855 / D856) of power board.	P
	Use of integrated circuit (IC) current limiters	Power switch IC used for USB port, its output are limited to the values of table 2B.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :	(see appended table 2.5)	—
	Current rating of overcurrent protective device (A) .:		—

<b>2.6</b>	<b>Provisions for earthing and bonding</b>		<b>P</b>
2.6.1	Protective earthing	All accessible conductive parts(Chassis) are reliable connected to PE, Refer to 2.6.3.4	P
2.6.2	Functional earthing	No functional earthing.	N/A
	Use of symbol for functional earthing .....		N/A
2.6.3	Protective earthing and protective bonding conductors	See below.	P
2.6.3.1	General		P
2.6.3.2	Size of protective earthing conductors	Appliance inlet used.	N/A
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG .....	Power supply cord is not provided.	N/A
2.6.3.3	Size of protective bonding conductors	Evaluation by test. See subclause 2.6.3.4.	P
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG .....	Protective bonding conductors complied with the requirements of 2.6.3.4 and the protective current rating of the circuit is not more than 20 A	—
	Protective current rating (A), cross-sectional area (mm <sup>2</sup> ), AWG .....	See above.	N/A
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min) .....	(see appended table 2.6.3.4)	P
2.6.3.5	Colour of insulation .....	Protective earth terminal and bonding conductors are in appliance inlet. No green/yellow insulated protective earth conductors are provided.	N/A
2.6.4	Terminals	See below.	P
2.6.4.1	General	See below.	P
2.6.4.2	Protective earthing and bonding terminals	Protective earthing terminal as below: the earth pin of appliance inlet.	P
	Rated current (A), type, nominal thread diameter (mm) .....	Evaluation by test of sub-clause 2.6.3.4 was performed for protective bonding conductor and their terminals.	—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	The protective bonding conductor is connected to protective earthing.	P
2.6.5	Integrity of protective earthing		P
2.6.5.1	Interconnection of equipment	No interconnection of protective earthing to other equipment.	P
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switches or fuses in earthing conductors.	P
2.6.5.3	Disconnection of protective earth	Appliance inlet used	P
2.6.5.4	Parts that can be removed by an operator	See above.	P
2.6.5.5	Parts removed during servicing	Protective earthed parts cannot be removed in a way which impairs safety.	P
2.6.5.6	Corrosion resistance	All safety earthing connections in compliance with Annex J.	P
2.6.5.7	Screws for protective bonding	Only ISO thread screw used in metal chassis for protective bonding. Metal thickness at least twice the pitch of the screw. No self-tapping or spaced thread screws.	P
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

<b>2.7</b>	<b>Overcurrent and earth fault protection in primary circuits</b>		<b>P</b>
2.7.1	Basic requirements	Protection against overcurrents, short-circuits and earth faults is provided as an integral part of the equipment.	P
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7	The protection devices are well dimensioned and mounted.	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 ..... :	The protective device is located adequately therefore able to interrupt the overcurrent flowing in any possible fault current path.	P
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel ..... :	No service work necessary.	N/A



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

<b>2.8</b>	<b>Safety interlocks</b>		<b>N/A</b>
2.8.1	General principles	No safety interlock provided.	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

<b>2.9</b>	<b>Electrical insulation</b>		<b>P</b>
2.9.1	Properties of insulating materials	Test was performed after the Humidity Treatment of 2.9.2.	P
2.9.2	Humidity conditioning	Humidity treatment performed for 120 hrs for equipment, after humidity test, Hi-pot test has been performed, see table 5.2	P
	Relative humidity (%), temperature (°C) .....	93 % R.H, 40 °C.	—
2.9.3	Grade of insulation		P
2.9.4	Separation from hazardous voltages	The adequate levels of safety insulation provided and maintained to comply with the requirements of this standard.	P
	Method(s) used .....	Method 1	—

<b>2.10</b>	<b>Clearances, creepage distances and distances through insulation</b>		<b>P</b>
2.10.1	General	See below.	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	The functional insulations complies with 5.3.4 a) and c)	P
2.10.1.4	Intervening unconnected conductive parts	Considered.	P
2.10.1.5	Insulation with varying dimensions		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage	See below.	P
2.10.2.1	General	Considered.	P
2.10.2.2	RMS working voltage	See appended tabl 2.10.2	P
2.10.2.3	Peak working voltage	See appended tabl 2.10.2	P
2.10.3	Clearances	See below.	P
2.10.3.1	General		P
2.10.3.2	Mains transient voltages	AC mains supply.	P
	a) AC mains supply .....	Overvoltage category II for primary circuit and transient voltage 2500V <sub>peak</sub> .	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
2.10.3.4	Clearances in secondary circuits	Refer to sub-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 .....	See 2.10.3.2.	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 .....		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 below	P
2.10.4.1	General	(see appended table 2.10.3 and 2.10.4)	P
2.10.4.2	Material group and comparative tracking index		P
	CTI tests .....	Material group IIIb; 100 ≤ CTI < 175	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	P
2.10.5	Solid insulation	Complied with 2.10.5.2 to 2.10.5.14 and 5.2.	P
2.10.5.1	General	See below.	P
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.3	Insulating compound as solid insulation	Certified sources of opto couplers used. See subclause 2.10.5.2 and 2.10.10.	P
2.10.5.4	Semiconductor devices	For opto couplers see subclause 2.10.5.3.	P
2.10.5.5.	Cemented joints		N/A
2.10.5.6	Thin sheet material – General	Considered.	P
2.10.5.7	Separable thin sheet material	See appended tables C.2 and appended table 2.10.3 and 2.10.4 for detail applicable.	P
	Number of layers (pcs) .....	(see appended table 5.2)	—
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	(see appended table 5.2)	—
2.10.5.10	Thin sheet material – alternative test procedure	See below.	P
	Electric strength test	(see appended table 2.10.5 and 5.2)	—
2.10.5.11	Insulation in wound components	Approved source of triple insulated wire used in T850 secondary winding for reinforced insulation.	N/A
2.10.5.12	Wire in wound components	See above	P
	Working voltage .....	See appended table 2.10.2	P
	a) Basic insulation not under stress .....		N/A
	b) Basic, supplementary, reinforced insulation .....	Reinforced insulation	P
	c) Compliance with Annex U .....	Approved triple insulated wire TIW used in T850, comply with Annex U	P
	Two wires in contact inside wound component; angle between 45° and 90° .....	By tubing or insulation tape.	P
2.10.5.13	Wire with solvent-based enamel in wound components	No such construction.	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	See below.	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	No coated printed boards.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	No multi-layer PCBs provided.	N/A
2.10.6.4	Insulation between conductors on different layers of a printed board	No multi-layer PCBs provided.	N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs) .....:	Single layer PCB	N/A
2.10.7	Component external terminations		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	See above.	N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts	No hermetically sealed component.	N/A

<b>3</b>	<b>WIRING, CONNECTIONS AND SUPPLY</b>		<b>P</b>
<b>3.1</b>	<b>General</b>		<b>P</b>
3.1.1	Current rating and overcurrent protection	Internal wires are UL recognized wiring which is PVC insulated, rated VW-1 or FT-1, and having gauge suitable for current intended to be carried.	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	The wires are secured by quick connection or soldering with solder pin so that a loosening of the terminal connection is unlikely.	P
3.1.4	Insulation of conductors	The insulation of the individual conductors is suitable for the application and the working voltage.	P
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure	No such screws provided.	N/A
3.1.7	Insulating materials in electrical connections		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors	All conductors are reliable secured.	P
	10 N pull test	Force of 10N applied to the termination points of the conductors.	P
3.1.10	Sleeving on wiring	No sleeving used to provide supplementary insulation.	N/A

<b>3.2</b>	<b>Connection to a mains supply</b>		<b>P</b>
3.2.1	Means of connection	See below.	P
3.2.1.1	Connection to an a.c. mains supply	The unit is provided with an appliance inlet.	P
3.2.1.2	Connection to a d.c. mains supply	Only a.c. mains supply.	N/A
3.2.2	Multiple supply connections	Only for one mains connection.	N/A
3.2.3	Permanently connected equipment	Unit is not permanently connected equipment.	N/A
	Number of conductors, diameter of cable and conduits (mm) .....		—
3.2.4	Appliance inlets	The appliance inlet complies with IEC 60320. The power cord can be inserted without difficulties and does not support the unit.	P
3.2.5	Power supply cords	No power supply cord provided.	N/A
3.2.5.1	AC power supply cords		N/A
	Type .....		—
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), 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		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

<b>3.3</b>	<b>Wiring terminals for connection of external conductors</b>	<b>N/A</b>
------------	---	------------

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.1	Wiring terminals	Equipment provided with an appliance inlet.	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 <sup>2</sup> )..... :		—
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

<b>3.4</b>	<b>Disconnection from the mains supply</b>		<b>P</b>
3.4.1	General requirement	See below.	P
3.4.2	Disconnect devices	The appliance inlet is considered to be the disconnect device.	P
3.4.3	Permanently connected equipment	Not permanently connected equipment.	N/A
3.4.4	Parts which remain energized	When power cord is removed from inlet (or wall socket) there are not any remaining parts at hazardous voltage in the equipment.	N/A
3.4.5	Switches in flexible cords		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		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A
<b>3.5</b>	<b>Interconnection of equipment</b>		<b>P</b>
3.5.1	General requirements	See below.	P
3.5.2	Types of interconnection circuits ..... :	Interconnection circuits of SELV through secondary output connector.	P
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection.	N/A
3.5.4	Data ports for additional equipment	See clause 2.5 for details.	P

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

<b>4</b>	<b>PHYSICAL REQUIREMENTS</b>		<b>P</b>
<b>4.1</b>	<b>Stability</b>		N/A
	Angle of 10°	<7.0kg	N/A
	Test force (N) .....		N/A

<b>4.2</b>	<b>Mechanical strength</b>		<b>P</b>
4.2.1	General	During steady force tests, the conductive enclosures do not bridge parts with hazardous energy level, and do not contact the bare part at hazardous voltage.	P
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N	10N applied to all internal components.	P
4.2.3	Steady force test, 30 N	30N applied on the internal metal enclosure. After tests, unit complies with 2.1.1, 2.6.1, 2.10.	P
4.2.4	Steady force test, 250 N	No hazard. The test is performed at all sides of enclosure and all source of enclosure.	P
4.2.5	Impact test	No hazards.	P
	Fall test	500g steel ball falls freely from 1.3m on top, back and side of plastic enclosure, all source are tested, no access to hazardous parts.	P
	Swing test	No hazard as result from the steel sphere swing test.	P
4.2.6	Drop test; height (mm) .....		N/A
4.2.7	Stress relief test	Test is carried out at 70°C / 7hrs. No risk of shrinkage or distortion on enclosures due to release of internal stresses.	P
4.2.8	Cathode ray tubes	CRT(s) not used in the equipment.	N/A
	Picture tube separately certified .....		N/A
4.2.9	High pressure lamps		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.2.10	Wall or ceiling mounted equipment; force (N) .....	For models D17215FT*, T22v-10: unit an additional force of 97.1N (3 times the mass of the unit and the mass is 3.3kg) was applied to the unit. For models D17238FT*, T24v-10: unit an additional force of 102.9N (3 times the mass of the unit and the mass is 3.5kg) was applied to the unit.  The unit withstood the load test without damages or breaks. The wall mounting kit, four M4 size with 10 mm length screws to secure.	P

<b>4.3</b>	<b>Design and construction</b>		<b>P</b>
4.3.1	Edges and corners	All edges and corners are judged to be sufficiently well rounded so as not to constitute a hazard.	P
4.3.2	Handles and manual controls; force (N) .....	No handles or controls provided.	N/A
4.3.3	Adjustable controls	No such controls provided.	N/A
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress.	P
4.3.5	Connection by plugs and sockets	No mismatch of connectors, plugs or socket possible.	N/A
4.3.6	Direct plug-in equipment	Not such equipment.	N/A
	Torque .....		—
	Compliance with the relevant mains plug standard .....		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries	No battery used	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
4.3.9	Oil and grease		N/A
4.3.10	Dust, powders, liquids and gases		N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids .....		N/A



IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Quantity of liquid (l) .....		N/A
	Flash point (°C) .....		N/A
4.3.13	Radiation	See below.	P
4.3.13.1	General		P
4.3.13.2	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		N/A
	Part, property, retention after test, flammability classification .....		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....		N/A
4.3.13.5	Lasers (including laser diodes) and LEDs	See below.	P
4.3.13.5.1	Lasers (including laser diodes)		N/A
	Laser class .....		—
4.3.13.5.2	Light emitting diodes (LEDs)	The following parts are considered complied without tests: - Photo coupler - Indicating lights. - LED backlight of LCD panel, the luminance is far less than 10000 cd/m <sup>2</sup> . With reference to subclause 4.1 of IEC 62471: 2006 no further test is necessary.	P
4.3.13.6	Other types .....		N/A

<b>4.4</b>	<b>Protection against hazardous moving parts</b>		<b>N/A</b>
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
4.4.5.2	Protection for users		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Use of symbol or warning .....		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning .....		N/A

<b>4.5</b>	<b>Thermal requirements</b>		<b>P</b>
4.5.1	General	Considered.	P
4.5.2	Temperature tests	(see appended table 4.5)	P
	Normal load condition per Annex L .....	(see Annex L)	—
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 .....	The bobbins of switching transformer and line choke were phenolic material that is accepted without further test.	N/A

<b>4.6</b>	<b>Openings in enclosures</b>		<b>P</b>
4.6.1	Top and side openings	Foreign objects entering the enclosure will not contact bare parts at hazardous voltage or energy (No hazardous parts within 5° projection).	P
	Dimensions (mm) .....	(see appended table 4.6.1, 4.6.2)	—
4.6.2	Bottoms of fire enclosures		P
	Construction of the bottom, dimensions (mm) ...	(see appended table 4.6.1, 4.6.2)	—
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment	Not 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) .....		—

<b>4.7</b>	<b>Resistance to fire</b>		<b>P</b>
4.7.1	Reducing the risk of ignition and spread of flame	See below.	P
	Method 1, selection and application of components wiring and materials	Method 1: Selection and application of components and materials which minimize the possibility of ignition and spread of flame.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	See below.	P
4.7.2.1	Parts requiring a fire enclosure	With having the following parts: - components in primary, - components in secondary (not supplied by LPS) - insulated wiring The fire enclosure is required.	P
4.7.2.2	Parts not requiring a fire enclosure	Following parts do not require a fire enclosure: Other components in secondary circuits are components in circuits supplied by LPS and mounted on PCB of class min. V-1 material.	P
4.7.3	Materials	See below.	P
4.7.3.1	General	The propagation of fire is minimized through the fire enclosure construction.	P
4.7.3.2	Materials for fire enclosures	The fire enclosure is constructed metal.	P
4.7.3.3	Materials for components and other parts outside fire enclosures	Decorative parts and parts outside of the fire enclosure are made of minimum HB material.	P
4.7.3.4	Materials for components and other parts inside fire enclosures	All internal materials are rated V-2 or better or are mounted on a PWB rated V-1 or better.	P
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

<b>5</b>	<b>ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS</b>		<b>P</b>
<b>5.1</b>	<b>Touch current and protective conductor current</b>		<b>P</b>
5.1.1	General	See sub-clauses 5.1.2 to 5.1.6.	P
5.1.2	Configuration of equipment under test (EUT)	EUT has only one mains connection.	P
5.1.2.1	Single connection to an a.c. mains supply		P
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit	Using figure 5 A.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.4	Application of measuring instrument	Using measuring instrument in annex D.	P
5.1.5	Test procedure	The touch current was measured from mains to SELV connector and to metal case.	P
5.1.6	Test measurements	(see appended table 5.1)	P
	Supply voltage (V) .....	264 Vac, 60 Hz	—
	Measured touch current (mA) .....	(See appended table 5.1)	—
	Max. allowed touch current (mA) .....	(See appended table 5.1)	—
	Measured protective conductor current (mA) .....	(See appended table 5.1)	—
	Max. allowed protective conductor current (mA) .....	(See appended table 5.1)	—
5.1.7	Equipment with touch current exceeding 3,5 mA	Touch current not exceeding 3.5 mA	N/A
5.1.7.1	General .....		N/A
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		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system	Not connected to telecommunication networks.	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

<b>5.2</b>	<b>Electric strength</b>		<b>P</b>
5.2.1	General	(see appended table 5.2)	P
5.2.2	Test procedure	Table 5B used.	P

<b>5.3</b>	<b>Abnormal operating and fault conditions</b>		<b>P</b>
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors	No Fan provided.	N/A
5.3.3	Transformers	See appended Annex C.	P
5.3.4	Functional insulation .....	Functional insulation complies with the requirements (a), (c).	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE .....	Considered.	P
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 occurred. No molten metal was emitted.	P
5.3.9.1	During the tests	No fire propagated beyond the equipment. No molten metal was emitted.	P
5.3.9.2	After the tests	Electric strength test made.	P

<b>6</b>	<b>CONNECTION TO TELECOMMUNICATION NETWORKS</b>		<b>N/A</b>
<b>6.1</b>	<b>Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment</b>		<b>N/A</b>
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

<b>6.2</b>	<b>Protection of equipment users from overvoltages on telecommunication networks</b>		<b>N/A</b>
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
<b>6.3</b>	<b>Protection of the telecommunication wiring system from overheating</b>		<b>N/A</b>
	Max. output current (A) .....		N/A
	Current limiting method .....		N/A

<b>7</b>	<b>CONNECTION TO CABLE DISTRIBUTION SYSTEMS</b>		<b>N/A</b>
<b>7.1</b>	<b>General</b>		<b>N/A</b>
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

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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>A</b>	<b>ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE</b>		<b>N/A</b>
<b>A.1</b>	<b>Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)</b>		<b>N/A</b>
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).....:		—
<b>A.2</b>	<b>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)</b>		<b>N/A</b>
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).....:		—
<b>A.3</b>	<b>Hot flaming oil test (see 4.6.2)</b>		<b>N/A</b>
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>B</b>	<b>ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)</b>		<b>N/A</b>
<b>B.1</b>	<b>General requirements</b>	No fan are provided.	<b>N/A</b>
	Position .....		—
	Manufacturer .....		—
	Type .....		—
	Rated values .....		—
<b>B.2</b>	<b>Test conditions</b>		N/A
<b>B.3</b>	<b>Maximum temperatures</b>		N/A
<b>B.4</b>	<b>Running overload test</b>		N/A
<b>B.5</b>	<b>Locked-rotor overload test</b>		N/A
	Test duration (days) .....		—
	Electric strength test: test voltage (V) .....		—
<b>B.6</b>	<b>Running overload test for d.c. motors in secondary circuits</b>		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>B.7</b>	<b>Locked-rotor overload test for d.c. motors in secondary circuits</b>		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>B.8</b>	<b>Test for motors with capacitors</b>		N/A
<b>B.9</b>	<b>Test for three-phase motors</b>		N/A
<b>B.10</b>	<b>Test for series motors</b>		N/A
	Operating voltage (V) .....		—

<b>C</b>	<b>ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)</b>		<b>P</b>
	Position .....	Located between primary and secondary (T850)	—
	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.	—
<b>C.1</b>	<b>Overload test</b>	See appended table 5.3.	P



IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>C.2</b>	<b>Insulation</b>	The reinforced insulation fulfill the requirement in Sub-clause 2.10 and relevant tests of Sub-clause 5.2.2	P
	Protection from displacement of windings .....	(see appended table C.2)	P
<b>D</b>	<b>ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)</b>		<b>P</b>
<b>D.1</b>	<b>Measuring instrument</b>	Figure D.1 used.	P
<b>D.2</b>	<b>Alternative measuring instrument</b>		N/A
<b>E</b>	<b>ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)</b>		<b>N/A</b>
<b>F</b>	<b>ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)</b>		<b>P</b>
<b>G</b>	<b>ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES</b>		<b>N/A</b>
<b>G.1</b>	<b>Clearances</b>		<b>N/A</b>
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
<b>G.2</b>	<b>Determination of mains transient voltage (V)</b>		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
<b>G.3</b>	<b>Determination of telecommunication network transient voltage (V) .....</b>		N/A
<b>G.4</b>	<b>Determination of required withstand voltage (V)</b>		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
<b>G.5</b>	<b>Measurement of transient voltages (V)</b>		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
<b>G.6</b>	<b>Determination of minimum clearances .....</b>		N/A

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

<b>H</b>	<b>ANNEX H, IONIZING RADIATION (see 4.3.13)</b>		<b>N/A</b>
----------	---	--	------------

<b>J</b>	<b>ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)</b>		<b>P</b>
	Metal(s) used .....	Complied.	—

<b>K</b>	<b>ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)</b>		<b>N/A</b>
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

<b>L</b>	<b>ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)</b>		<b>P</b>
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

<b>M</b>	<b>ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)</b>		<b>N/A</b>
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
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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>N</b>	<b>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)</b>		<b>N/A</b>
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
<b>P</b>	<b>ANNEX P, NORMATIVE REFERENCES</b>		<b>P</b>
<b>Q</b>	<b>ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)</b>		<b>N/A</b>
	- Preferred climatic categories .....		N/A
	- Maximum continuous voltage .....		N/A
	- Combination pulse current .....		N/A
	Body of the VDR Test according to IEC60695-11-5.....		N/A
	Body of the VDR. Flammability class of material ( min V-1).....		N/A
<b>R</b>	<b>ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES</b>		<b>N/A</b>
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
<b>S</b>	<b>ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)</b>		<b>N/A</b>
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
<b>T</b>	<b>ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)</b>		<b>N/A</b>
			—
<b>U</b>	<b>ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)</b>		<b>P</b>
		Triple insulated wire is used for transformer (T850), see appended table 1.5.1 for details.	—
<b>V</b>	<b>ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)</b>		<b>P</b>
V.1	Introduction	Considered.	P
V.2	TN power distribution systems	Considered.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>W</b>	<b>ANNEX W, SUMMATION OF TOUCH CURRENTS</b>		<b>N/A</b>
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
<b>X</b>	<b>ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)</b>		<b>P</b>
X.1	Determination of maximum input current	Considered.	P
X.2	Overload test procedure		P
<b>Y</b>	<b>ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)</b>		<b>N/A</b>
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
<b>Z</b>	<b>ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)</b>		<b>P</b>
<b>AA</b>	<b>ANNEX AA, MANDREL TEST (see 2.10.5.8)</b>		<b>N/A</b>
<b>BB</b>	<b>ANNEX BB, CHANGES IN THE SECOND EDITION</b>		—
<b>CC</b>	<b>ANNEX CC, Evaluation of integrated circuit (IC) current limiters</b>		<b>N/A</b>
CC.1	General	Certified component used.	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
<b>DD</b>	<b>ANNEX DD, Requirements for the mounting means of rack-mounted equipment</b>		<b>N/A</b>
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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
DD.4	Compliance.....:		N/A

EE	ANNEX EE, Household and home/office document/media shredders		N/A
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

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
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 <sup>1</sup>
Plastic material of rear and side enclosure	Kingfa Sci & Tech Co Ltd	CK-100, GAR-011	HB, min. 2.0mm thickness	UL 94	UL
(Alternate)	Lotte Advanced Materials Co Ltd	GC-0700(+++) (RR28) , SD-0150(+)	HB, min. 2.0mm thickness.	UL 94	UL
(Alternate)	Wistron Advanced Materials (Kunshan) Co Ltd	GA(M)(b)(c)	HB, min. 2.0mm thickness.	UL 94	UL
(Alternate)	Ineos Styrolution	495F series	HB, min. 2.0mm thickness.	UL 94	UL
(Alternate)	LG Chemical Ltd	SE750(#)	HB, min. 2.0mm thickness	UL 94	UL
(Alternate)	Total Petrochemicals Foshan Ltd	260-XX, 3441	HB, min. 2.0mm thickness.	UL 94	UL
(Alternate)	Colour Image Plastic Compound Sdn Bhd	HIPS 600, HIPS 1800	HB, min. 2.0mm thickness.	UL 94	UL
(Alternate)	Plastic World (China) Ltd	RPS-3014Y XNN (a)	HB, min. 2.0mm thickness	UL 94	UL
(Alternate)	Ineos Styrolution	P2H-AT	HB or better, 2.0 mm thick,	UL 94	UL
(Alternate)	Guo Heng (Dongguan) Plastic Technology Co Ltd	YOUHO(####)( Y)	HB, min. 2.0mm thickness.	UL 94	UL
Plastic latching device of base	Interchangeable	Interchangeable	V-1 or better	UL 94	UL
Metal Chassis	Interchangeable	Interchangeable	Metal, min. 0.81mm thick	IEC 60950-1	Tested in the equipment
Mylar sheet (Two provide) (one between power board and panel, another between power board and metal chassis)	Kanglongxin Plastics Co Ltd.	KLX FRPC-1860, KLX FRPC-1860B, KLX FRPC-1860-83B, KLX FRPC-1860B-HY, KLX PP WT-10, KLX PP BK-10	VTM-0 or V-0, thinkness 0.4mm min.	UL 94	UL

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
(Alternate)	POTENTIAL ENTERPRISE CO LTD	FRPP (NONHALOGE R)	V-0, thickness 0.4mm min.	UL 94	UL
(Alternate)	SABIC	FR65 (GG1), FR700	VTM-0 or V-0, thickness 0.4mm min.	UL 94	UL
(Alternate)	KunShan Dobesty Optoelectronic Materials Co Ltd	PC98, PC9821B/W, PC9841B/W, PC9832B/W, PC9842B/W, PC9852B/W, PC9843B/W, PC98HD, PC98CU, PC98HR, PC98KJ, PC98MN, PC98MG	V-0 or better, thickness 0.4mm min.	UL 94	UL
(Alternate)	Sichuan Dongfang Insulating Material Co Ltd	DFR117EOA, DFR117ECOB, DFR-BK(b), DFR-BK(b)-A5, DFR-BK(b)-A6, DFR-BK(b)-13, DFR-BK(b)-32, DFR-BK(b)-35, DFR-(b)	VTM-0 or V-0, thickness 0.4mm min.	UL 94	UL
Speaker (two provided) (Optional)	--	--	4Ω, min.1W	IEC/UL 60950-1	Tested with appliance
Power Switch IC for USB port (U702, U704)	RICHTEK TECHNOLOGY CORP	RT9742DGJ5	2.7-6.0Vdc, 1.5A	IEC 60950-1 UL 2367	Nemko UL
LCD Panel (for model D17215FT*, T22v-10)	BOE	MV215FHM-N40	21.5" TFT, glass is min. 0.4 mm thick	IEC 60950-1	Tested in the equipment
(Alternate)	LG DISPLAY	LM215WF9	21.5" TFT, glass is min. 0.4 mm thick	IEC 60950-1	Tested in the equip.
LCD Panel (for model D17238FT*, T24v-10)	BOE	MV238FHM-N20	23.8" TFT, glass is min. 0.4 mm thick	IEC 60950-1	Tested in the equipment
(Alternate)	LG DISPLAY	LM238WF2	23.8" TFT, glass is min. 0.4 mm thick	IEC 60950-1	Tested in the equipment
Printed circuit board	Interchangeable	Interchangeable	V-1 or better, min.105°C	UL94, UL 796	UL

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
AC inlet (CN850)	Tecx-unions Technology Corp.	TU-301-A, TU-301-AP, TU-301-AL, TU-301-S, TU-301-SP	AC 250V, 10A, 70°C	IEC 60320-1, UL498	ENEC, UL
(Alternate)	Shenzhen Delikang Electronics Technology Co., Ltd.	CDJ-3 series	AC 250V, 10A, 75°C	IEC 60320-1, UL498	VDE, UL
(Alternate)	Zhe Jiang Bei Er Jia Electronic Co Ltd	ST-A01-002LTA, ST-A01-002LTC, ST-A01-003JTA	AC 250V, 10A, 70°C	IEC 60320-1, UL498	VDE, UL
Fuse (F850)	Ever Island Electric Co., Ltd and Walter Electric	2010 Series	AC 250V, T3.15A	IEC 60127-1 IEC 60127-3 UL 248	VDE, UL
(Alternate)	Conquer	MST Series	AC 250V, T3.15A	IEC 60127-1 IEC 60127-3 UL 248	VDE, UL
(Alternate)	Littelfuse	392 Series	AC 250V, T3.15A	IEC 60127-1 IEC 60127-3 UL 248	VDE, UL
Thermistor (RT850)	--	--	Min. 5A, 8Ω at 25°C	--	--
Y- Capacitor (C850, C851) (Optional)	Success	SF, SE, SB	Max. 2200pF, Min. 250V, Min. 85°C (Y1 or Y2 type)	IEC 60384-14 UL 60384-14	VDE, UL
(Alternate)	Walsin	AC, AH	Max. 2200pF, Min. 250V, Min. 85°C (Y1 or Y2 type)	IEC 60384-14 UL 60384-14	VDE, UL
(Alternate)	Wansheng	CT7	Max. 2200pF, Min. 250V, Min. 85°C (Y1 or Y2 type)	IEC 60384-14 UL 60384-14	VDE, UL
(Alternate)	TDK	CS, CD	Max. 2200pF, Min. 250V, Min. 85°C (Y1 or Y2 type)	IEC 60384-14 UL 60384-14	VDE, UL
(Alternate)	JYA-NAY Co., Ltd.	JY, JN	Max. 2200pF, Min. 250V, Min. 85°C (Y1 or Y2 type)	IEC 60384-14 UL 60384-14	VDE, UL



IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
(Alternate)	Vishay	VY1, VY2	Max. 2200pF, Min. 250V, Min. 85°C (Y1 or Y2 type)	IEC 60384-14 UL 60384-14	VDE, UL
(Alternate)	Murata	KX	Max. 2200pF, Min. 250V, Min. 85°C (Y1 or Y2 type)	IEC 60384-14 UL 60384-14	VDE, UL
X- Capacitor (C852) (Optional)	EUROPTRONIC	MPX	Max. 0.33μF, Min. 275V, min. 85°C (X2 type)	IEC 60384-14 UL 60384-14	VDE, UL
(Alternate)	Strong Components Co. Ltd	MPX	Max. 0.33μF, Min. 275V, min. 85°C (X2 type)	IEC 60384-14 UL 60384-14	VDE, UL
(Alternate)	Hua Jung Components Co., Ltd.	MKP	Max. 0.33μF, Min. 275V, min. 85°C (X2 type)	IEC 60384-14 UL 60384-14	VDE, UL
Bleeder Resistor (R847, R848, R849, R850. R851, R853)	--	--	1.5MΩ, min. 1/8W, SMD.	--	--
Bridge Diode (D850)	--	--	Min. 4A, min. 600V	--	--
Ripple Capacitor (C854)	--	--	Max. 150μF, min. 450V, 105°C	--	--
Transistor (Q850)	--	--	Min.10A, min. 650V.	--	--
Current Resistor (R869)	--	--	Min. 0.39Ω, 2W	--	--
Bridge-Capacitors (C860) (Optional)	Success Electronics Co., Ltd.	SE, SB	Max. 3300pF, min. 250V, min.85°C (Y1 type )	IEC 60384-14 UL 60384-14	VDE, UL
(Alternate)	Walsin Technology Corp.	AH	Max. 3300pF, min. 250V, min. 85°C (Y1 type )	IEC 60384-14 UL 60384-14	VDE, UL
(Alternate)	Kunshan Wansheng Electronics Co., Ltd.	CT7	Max. 3300pF, min. 250V, min. 85°C (Y1 type )	IEC 60384-14 UL 60384-14	VDE, UL

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
(Alternate)	TDK-EPC Corporation	CD	Max. 3300pF, min. 250V, min. 85°C (Y1 type )	IEC 60384-14 UL 60384-14	VDE, UL
(Alternate)	JYA-NAY Co., Ltd.	JN	Max. 3300pF, min. 250V, min.85°C (Y1 type )	IEC 60384-14 UL 60384-14	VDE, UL
(Alternate)	VISHAY Electronic GmbH	VY1	Max. 3300pF, min. 250V, min.85°C (Y1 type )	IEC 60384-14 UL 60384-14	VDE, UL
(Alternate)	Murata Manufacturing Co., Ltd.	KX	Max. 3300pF, min. 250V, min.85°C (Y1 type )	IEC 60384-14 UL 60384-14	VDE, UL
Optocoupler (I850)	Lite-On Technology Corporation	LTV-817	dti $\geq$ 0.8mm, ext. cr.=7.8mm, int. cr.=Thermal cycling test, 100°C	IEC 60747-5-5, IEC 60950-1, IEC/EN 60950 Thermal cycling, UL 1577	VDE, UL
(Alternate)	Renesas Electronics Corporation	PS2561DL1, PS2561DL1-1, PS2561A-1, PS2561AL-1, PS2561AL1-1, PS2561AL2-1	dti. >0.4mm, ext. cr. > 7.0mm, int. cr.= Thermal cycling test, 100°C	IEC 60747-5-5, IEC 60950-1, IEC/EN 60950 Thermal cycling, UL 1577	VDE, UL
(Alternate)	Everlight Electronics Co Ltd	EL817	dti.=0.5mm, ext. cr.=7.7mm, int. cr.=6mm and Thermal cycling test, 100°C	IEC 60747-5-5, IEC 60950-1, IEC/EN 60950 Thermal cycling, UL 1577	VDE, UL
Line choke (L850)	FRONTIER	CHK-308	Min. 105°C	--	--
(Alternate)	DARFON	CHK-308	Min. 105°C	--	--
(Alternate)	TAICHANG	CHK-308	Min. 105°C	--	--
(Alternate)	DUNSHENG	CHK-308	Min. 105°C	--	--
(Alternate)	JINLAI	CHK-308	Min. 105°C	--	
(Alternate)	NANTAI	CHK-308	Min. 105°C	--	
Transformer (T850)	JINLAI	SPW-285	Class A	--	--
- Bobbin	Chang Chun Plastics Co., Ltd.	T375HF	Phenolic, V-0, 150°C	UL 94	UL
- Triple insulation wire	Young Chang Silicone Co Ltd	STW-B	130°C	EN 60950-1, UL 2352,	VDE, UL

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
- Insulation tape	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	CT-280	130°C	UL 510	UL
Transformer (T850) (Alternate)	NANTAI	SPW-285	Class A	--	--
- Triple insulation wire	Furukawa Magnet wire Co., Ltd.	TEX-E	130°C	EN 60950-1, UL 2352,	VDE, UL
- Bobbin	Sumitomo Bakelite Co Ltd	PM-9823	150°C	UL 94	UL
- Insulation tape	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	CT-280	130°C	UL 510	UL
<b>Supplementary information:</b>					
<sup>1)</sup> <b>Provided evidence ensures the agreed level of compliance. See OD-CB2039.</b>					

<b>1.5.1</b>	<b>TABLE: Opto Electronic Devices</b>	<b>P</b>
Manufacturer .....: See TABLE: List of critical components Type .....: See TABLE: List of critical components Separately tested .....: See TABLE: List of critical components Bridging insulation .....: Reinforced. External creepage distance.....: See TABLE: List of critical components Internal creepage distance .....: See TABLE: List of critical components Distance through insulation.....: See TABLE: List of critical components Tested under the following conditions.....: RI		
Input .....: N/A		
Output .....: N/A		
supplementary information		

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	
1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	I <sub>rated</sub> (A)	P (W)	Fuse #	I <sub>fuse</sub> (A)	Condition/status
<b>T24v-10</b> (with panel LG / LM238WF2)						
HDMI mode						
90V, 50Hz	0.600	--	33.7	F850	0.600	Maximum normal load
90V, 60Hz	0.597	--	33.6	F850	0.597	Maximum normal load
100V, 50Hz	0.551	1.5	33.8	F850	0.551	Maximum normal load
100V, 60Hz	0.547	1.5	33.6	F850	0.547	Maximum normal load
240V, 50Hz	0.293	1.5	34.1	F850	0.293	Maximum normal load
240V, 60Hz	0.291	1.5	34.2	F850	0.291	Maximum normal load
264V, 50Hz	0.276	--	34.2	F850	0.276	Maximum normal load
264V, 60Hz	0.274	--	34.1	F850	0.274	Maximum normal load
DP mode						
90V, 50Hz	0.623	--	33.8	F850	0.623	Maximum normal load
90V, 60Hz	0.618	--	33.9	F850	0.618	Maximum normal load
100V, 50Hz	0.564	1.5	34.0	F850	0.564	Maximum normal load
100V, 60Hz	0.558	1.5	34.0	F850	0.558	Maximum normal load
240V, 50Hz	0.294	1.5	34.0	F850	0.294	Maximum normal load
240V, 60Hz	0.291	1.5	34.0	F850	0.291	Maximum normal load
264V, 50Hz	0.277	--	33.4	F850	0.277	Maximum normal load
264V, 60Hz	0.275	--	33.2	F850	0.275	Maximum normal load
VGA mode						
90V, 50Hz	0.586	--	31.6	F850	0.586	Maximum normal load
90V, 60Hz	0.579	--	31.6	F850	0.579	Maximum normal load
100V, 50Hz	0.532	1.5	31.8	F850	0.532	Maximum normal load
100V, 60Hz	0.526	1.5	31.8	F850	0.526	Maximum normal load
240V, 50Hz	0.279	1.5	32.2	F850	0.279	Maximum normal load
240V, 60Hz	0.276	1.5	32.3	F850	0.276	Maximum normal load
264V, 50Hz	0.263	--	32.4	F850	0.263	Maximum normal load
264V, 60Hz	0.260	--	32.4	F850	0.260	Maximum normal load
<b>T24v-10</b> (with panel BOE / MV238FHM-N20)						
HDMI mode						
90V, 50Hz	0.587	--	33.0	F850	0.587	Maximum normal load
90V, 60Hz	0.584	--	33.0	F850	0.584	Maximum normal load
100V, 50Hz	0.537	1.5	33.0	F850	0.537	Maximum normal load
100V, 60Hz	0.533	1.5	33.0	F850	0.533	Maximum normal load

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
240V, 50Hz	0.288	1.5	33.4	F850	0.288	Maximum normal load
240V, 60Hz	0.283	1.5	33.4	F850	0.283	Maximum normal load
264V, 50Hz	0.270	--	33.9	F850	0.270	Maximum normal load
264V, 60Hz	0.266	--	33.9	F850	0.266	Maximum normal load
DP mode						
90V, 50Hz	0.617	--	33.0	F850	0.617	Maximum normal load
90V, 60Hz	0.612	--	33.1	F850	0.612	Maximum normal load
100V, 50Hz	0.563	1.5	33.1	F850	0.563	Maximum normal load
100V, 60Hz	0.557	1.5	33.1	F850	0.557	Maximum normal load
240V, 50Hz	0.287	1.5	33.2	F850	0.287	Maximum normal load
240V, 60Hz	0.283	1.5	33.2	F850	0.283	Maximum normal load
264V, 50Hz	0.268	--	33.3	F850	0.268	Maximum normal load
264V, 60Hz	0.265	--	33.3	F850	0.265	Maximum normal load
VGA mode						
90V, 50Hz	0.580	--	30.8	F850	0.580	Maximum normal load
90V, 60Hz	0.575	--	30.8	F850	0.575	Maximum normal load
100V, 50Hz	0.531	1.5	30.9	F850	0.531	Maximum normal load
100V, 60Hz	0.526	1.5	30.9	F850	0.526	Maximum normal load
240V, 50Hz	0.272	1.5	31.4	F850	0.272	Maximum normal load
240V, 60Hz	0.268	1.5	31.4	F850	0.268	Maximum normal load
264V, 50Hz	0.254	--	31.5	F850	0.254	Maximum normal load
264V, 60Hz	0.251	--	31.5	F850	0.251	Maximum normal load
<b>T22v-10 (BOE / MV215FHM-N40)</b>						
HDMI mode						
90V, 50Hz	0.536	--	30.1	F850	0.536	Maximum normal load
90V, 60Hz	0.530	--	30.2	F850	0.530	Maximum normal load
100V, 50Hz	0.490	1.5	30.3	F850	0.490	Maximum normal load
100V, 60Hz	0.484	1.5	30.3	F850	0.484	Maximum normal load
240V, 50Hz	0.266	1.5	30.4	F850	0.266	Maximum normal load
240V, 60Hz	0.261	1.5	30.4	F850	0.261	Maximum normal load
264V, 50Hz	0.249	--	30.7	F850	0.249	Maximum normal load
264V, 60Hz	0.247	--	30.8	F850	0.247	Maximum normal load
DP mode						
90V, 50Hz	0.527	--	29.8	F850	0.527	Maximum normal load
90V, 60Hz	0.520	--	29.8	F850	0.520	Maximum normal load
100V, 50Hz	0.483	1.5	29.7	F850	0.483	Maximum normal load

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
100V, 60Hz	0.478	1.5	29.8	F850	0.478	Maximum normal load
240V, 50Hz	0.261	1.5	30.0	F850	0.261	Maximum normal load
240V, 60Hz	0.258	1.5	30.0	F850	0.258	Maximum normal load
264V, 50Hz	0.247	--	30.1	F850	0.247	Maximum normal load
264V, 60Hz	0.244	--	30.1	F850	0.244	Maximum normal load
VGA mode						
90V, 50Hz	0.485	--	27.1	F850	0.485	Maximum normal load
90V, 60Hz	0.478	--	27.1	F850	0.478	Maximum normal load
100V, 50Hz	0.446	1.5	27.3	F850	0.446	Maximum normal load
100V, 60Hz	0.439	1.5	27.3	F850	0.439	Maximum normal load
240V, 50Hz	0.245	1.5	28.0	F850	0.245	Maximum normal load
240V, 60Hz	0.242	1.5	27.9	F850	0.242	Maximum normal load
264V, 50Hz	0.231	--	28.0	F850	0.231	Maximum normal load
264V, 60Hz	0.229	--	28.1	F850	0.229	Maximum normal load
<b>T22v-10</b> (LG / LM215WF9)						
HDMI mode						
90V, 50Hz	0.523	--	29.4	F850	0.523	Maximum normal load
90V, 60Hz	0.514	--	29.5	F850	0.514	Maximum normal load
100V, 50Hz	0.476	1.5	29.6	F850	0.476	Maximum normal load
100V, 60Hz	0.470	1.5	29.6	F850	0.470	Maximum normal load
240V, 50Hz	0.261	1.5	29.8	F850	0.261	Maximum normal load
240V, 60Hz	0.253	1.5	29.7	F850	0.253	Maximum normal load
264V, 50Hz	0.243	--	29.9	F850	0.243	Maximum normal load
264V, 60Hz	0.239	--	29.9	F850	0.239	Maximum normal load
DP mode						
90V, 50Hz	0.513	--	29.0	F850	0.513	Maximum normal load
90V, 60Hz	0.507	--	29.0	F850	0.507	Maximum normal load
100V, 50Hz	0.474	1.5	29.0	F850	0.474	Maximum normal load
100V, 60Hz	0.469	1.5	29.0	F850	0.469	Maximum normal load
240V, 50Hz	0.254	1.5	29.1	F850	0.254	Maximum normal load
240V, 60Hz	0.250	1.5	29.1	F850	0.250	Maximum normal load
264V, 50Hz	0.238	--	29.2	F850	0.238	Maximum normal load
264V, 60Hz	0.234	--	29.2	F850	0.234	Maximum normal load
VGA mode						
90V, 50Hz	0.479	--	26.3	F850	0.479	Maximum normal load
90V, 60Hz	0.471	--	26.3	F850	0.471	Maximum normal load

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
100V, 50Hz	0.445	1.5	26.6	F850	0.445	Maximum normal load
100V, 60Hz	0.440	1.5	26.6	F850	0.440	Maximum normal load
240V, 50Hz	0.238	1.5	27.0	F850	0.238	Maximum normal load
240V, 60Hz	0.234	1.5	27.0	F850	0.234	Maximum normal load
264V, 50Hz	0.222	--	27.1	F850	0.222	Maximum normal load
264V, 60Hz	0.220	--	27.1	F850	0.220	Maximum normal load
Supplementary information:						
Maximum normal load condition is described in the General product information.						

2.1.1.5 c) 1)	TABLE: max. V, A, VA test				P
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
+19V output of Power supply board	--	19.12	4.91	93.31 (19.00V * 4.91A)	
supplementary information:					

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.	
T850 Pin11, 12, 13 to Pin 8, 9, 10		80	--	--
After R884		80	--	--
After R880		80		
After R885, R881		78	--	--
After C877, D856, D855		--	19.2	C877, D856, D855
LED driver of panel:				
Before D50		53.2	--	--
After D50		--	47.2	D50
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
C877 s-c		0	
D856 s-c		0	
D855 s-c		0	
D50 s-c		0	
supplementary information:			
s-c = short circuit.			

2.5	TABLE: Limited power sources					P
Circuit output tested: see below						
Note: Measured Uoc (V) with all load circuits disconnected: see below						
Components	Test condition (Single fault)	Uoc (V)	I <sub>sc</sub> (A)		VA	
			Meas.	Limit	Meas.	Limit
HDMI port pin 15	(normal)	4.326	0	8	0	100
HDMI port Pin 16	(normal)	4.611	0	8	0	100
HDMI port other PIN	(normal)	0	0	8	0	100
DP port Pin 16	(normal)	3.00	0	8	0	100
DP port Pin 18	(normal)	3.230	0	8	0	100
DP port Pin 20	(normal)	3.224	0	8	0	100
DP port other pin	(normal)	0	0	8	0	100
USB3.0 port (P702) Pin 1	(normal)	5.20	2.572	8	11.31	100
USB3.0 port (P702) other Pin	(normal)	0	0	8	0	100
USB3.0 port (P703) Pin 1	(normal)	5.20	2.576	8	11.42	100
USB3.0 port (P703) other Pin	(normal)	0	0	8	0	100
After (D855 / D856) of power board	(normal)	19.077	3.528	8	66.318	100
After (D855 / D856) of power board	D855 S-C	0	0	8	0	100
After (D855 / D856) of power board	R864 S-C	0	0	8	0	100
After (D855 / D856) of power board	R869 S-C	19.083	3.732	8	69.919	100
After (D855 / D856) of power board	I850 pin1-3 S-C	0	0	8	0	100
After (D855 / D856) of power board	I850 pin1 O-C	0	0	8	0	100



IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
After (D855 / D856) of power board	R860 S-C	0	0	8	0	100
After (D855 / D856) of power board	C862 S-C	0	0	8	0	100
supplementary information:						
S-C = short circuit, O-C = Open circuit						

2.10.2	Table: working voltage measurement			P
Location		RMS voltage (V)	Peak voltage (V)	Comments
T850 pin 1 to pin 8/9/10		214	365	
T850 pin 1 to pin11/12/13		217	390	
T850 pin 2 to pin 8/9/10		216	422	
T850 pin 2 to pin 11/12/13		215	370	
T850 pin 5 to pin 8/9/10		<b>260</b>	<b>495</b>	Max. V <sub>PEAK</sub> & V <sub>RMS</sub> of T850
T850 pin 5 to pin 11/12/13		243	460	
T850 pin 7 to pin 8/9/10		215	371	
T850 pin 7 to pin 11/12/13		219	440	
I850 pin 1 to pin 3		225	383	
I850 pin 1 to pin 4		228	385	
I850 pin 2 to pin 3		225	380	
I850 pin 2 to pin 4		225	386	
C860 primary to secondary		215	360	
I850 pin 3 to sec. trace of R8		214	388	
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)	
Functional:							
L to N (before fuse)	420	250	2.3	4.5	2.5	4.5	
Under F850 on PCB	420	250	2.3	2.6	2.5	2.6	
Basic/Supplementary:							
Line to earth	420	250	3.0	3.7	3.0	3.7	
Neutral to earth	420	250	3.0	3.9	3.0	3.9	
C850 primary to earth	420	250	3.0	4.3	3.0	4.3	

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
C851 primary to earth	420	250	3.0	4.5	3.0	4.5
Primary components (C852) to earth	420	250	3.0	3.5	3.0	3.5
Primary components (T850) to metal chassis	495	260	3.3	8.0	3.3	8.0
Reinforced:						
C860 primary to secondary	420	250	6.0	6.6	6.0	6.6
I850 primary to secondary	420	250	6.0	6.4	6.0	6.4
Primary trace to secondary trace under T850	495	260	6.6	7.2	6.6	7.2
T850 core to C860 secondary	495	260	6.6	7.8	6.6	7.8
T850 core to heat-sink (H801)	495	260	6.6	8.3	6.6	8.3
Primary heat-sink (H802) to secondary connector (CN851)	420	250	6.0	6.8	6.0	6.8
Primary component (C854) to secondary component (R2)	420	250	6.0	10.3	6.0	10.3
Supplementary information:						
RT850, C854 are additional fixed by glue.						
There is one mylar sheet used between power board and metal chassis.						
There is one mylar sheet used between power board and LCD panel.						
Specified the equipment to be operated up to 5000m above sea level. So the required clearance is multiplied by the altitude correction factor (1.48), specified in table A.2 of IEC 60664-1.						

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)
Optocoupler (I850)	420	250	3000 Vac	0.4	≥ 0.4
Mylar sheet	420	250	3000Vac	0.4	≥ 0.4
Supplementary:					

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	

IEC 60950-1									
Clause	Requirement + Test				Result - Remark			Verdict	
	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	--	--	--	--	--	--	--	--	--
Supplementary information:									
Test results:						--		Verdict	
- Chemical leaks						--		N/A	
- Explosion of the battery						--		N/A	
- Emission of flame or expulsion of molten metal						--		N/A	
- Electric strength tests of equipment after completion of tests						--		N/A	
Supplementary information:									

<b>4.3.8</b>	<b>TABLE: Batteries</b>	<b>N/A</b>
Battery category .....: -- Manufacturer .....: -- Type / model .....: -- Voltage .....: -- Capacity .....: -- Tested and Certified by (incl. Ref. No.) .....: -- Circuit protection diagram: --		
<b>MARKINGS AND INSTRUCTIONS (1.7.13)</b>		
Location of replaceable battery		N/A
Language(s) .....:		N/A
Close to the battery .....:		N/A
In the servicing instructions .....:		N/A
In the operating instructions .....:		N/A

<b>4.5</b>	<b>TABLE: Thermal requirements</b>	<b>P</b>
	Supply voltage (V) .....: See below	--
	Ambient T <sub>min</sub> (°C) .....: See below    Shift to 40° C    See below    Shift to 40° C	--
	Ambient T <sub>max</sub> (°C) .....: --    --    --    --	--

IEC 60950-1								
Clause	Requirement + Test			Result - Remark		Verdict		
Maximum measured temperature T of part/at::			T (°C)			Allowed T <sub>max</sub> (°C)		
Test voltage (model: T24v-10) <b>(Horizontal)</b>			<b>90V, 50Hz</b>		<b>264V, 50Hz</b>	--		
01. T850 core (Power board)			56.4	72.7	60.4	76.8	--	90
02. T850 coil (Power board)			56.7	73.0	61.7	78.1	--	90
03. I850 body (Power board)			45.8	62.1	44.6	61.0	--	100
04. C860 body (Power board)			50.0	66.3	55.4	71.8	--	85
05. C850 body (Power board)			38.6	54.9	35.6	52.0	--	85
06. C851 body (Power board)			38.2	54.5	34.3	50.7	--	85
07. AC Inlet (Power board)			37.0	53.3	33.6	50	--	65
08. PWB near RT850 (Power board)			54.9	71.2	41.7	58.1	--	105
09. L850 coil (Power board)			46.6	62.9	39.7	56.1	--	105
10. C852 body (Power board)			45.5	61.8	39.3	55.7	--	85
11. PWB near D850 (Power board)			52.7	69.0	45.7	62.1	--	105
12. PWB near Q850 (Power board)			52.6	68.9	56.5	72.9	--	105
13. C854 body (Power board)			41.3	57.6	38.1	54.5	--	105
14. PWB near D855 (Power board)			57.1	73.4	62.1	78.5	--	105
15. C865 body (Power board)			50.9	67.2	51.9	68.3	--	85
16. L851 coil (Power board)			49.4	65.7	49.3	65.7	--	105
17. Output wire of power supply board			39.0	55.3	39.2	55.6	--	80
18. PWB near U502 (Main board)			43.7	60.0	43.2	59.6	--	105
19. L102 coil (Main board)			45.0	61.3	44.6	61.0	--	105
20. PWB near U805 (Main board)			50.4	66.7	50.9	67.3	--	105
21. Inside plastic enclosure near T850			33.2	49.5	32.2	48.6	--	50
22. Outside plastic enclosure near T850			31.0	47.3	29.8	46.2	--	95
23. Panel			31.0	47.3	29.9	46.3	--	80
24. Button			29.2	45.5	28.7	45.1	--	75
25. Ambient			23.7	40.0	23.6	40.0	--	--
<b>Test voltage (Rotate clockwise 90°)</b> (power board on top)			<b>90V, 50Hz</b>		<b>264V, 50Hz</b>		--	--
01. T850 core (Power board)			52.3	65.5	54.4	68.4	--	90
02. T850 coil (Power board)			52.5	65.7	55.3	69.3	--	90
03. I850 body (Power board)			43.8	57.0	41.9	55.9	--	100
04. C860 body (Power board)			48.4	61.6	50.4	64.4	--	85
05. C850 body (Power board)			39.4	52.6	36.2	50.2	--	85

IEC 60950-1						
Clause	Requirement + Test		Result - Remark			Verdict
06. C851 body (Power board)	40.4	53.6	35.7	49.7	--	85
07. AC Inlet (Power board)	38.8	52.0	35.1	49.1	--	65
08. PWB near RT850 (Power board)	53.0	66.2	41.4	55.4	--	105
09. L850 coil (Power board)	47.7	60.9	41.2	55.2	--	105
10. C852 body (Power board)	45.7	58.9	40.1	54.1	--	85
11. PWB near D850 (Power board)	51.2	64.4	45.3	59.3	--	105
12. PWB near Q850 (Power board)	51.5	64.7	55.9	69.9	--	105
13. C854 body (Power board)	41.0	54.2	37.5	51.5	--	105
14. PWB near D855 (Power board)	50.9	64.1	53.4	67.4	--	105
15. C865 body (Power board)	46.4	59.6	45.7	59.7	--	85
16. L851 coil (Power board)	44.4	57.6	43.0	57.0	--	105
17. Output wire of power supply board	39.6	52.8	39.6	53.6	--	80
18. PWB near U502 (Main board)	45.7	58.9	43.3	57.3	--	105
19. L102 coil (Main board)	45.1	58.3	43.2	57.2	--	105
20. PWB near U805 (Main board)	44.5	57.7	38.5	52.5	--	105
21. Inside plastic enclosure near T850	35.5	48.7	33.2	47.2	--	50
22. Outside plastic enclosure near T850	33.2	46.4	30.9	44.9	--	95
23. Panel	32.0	45.2	29.5	43.5	--	80
24. Button	32.6	45.8	30.0	44.0	--	75
25. Ambient	26.8	40.0	26.0	40.0	--	--
<b>Test voltage (Rotate anticlockwise 90°) (main board on top)</b>	<b>90V, 50Hz</b>		<b>264V, 50Hz</b>		--	--
01. T850 core (Power board)	53.8	66.2	57.6	71.4	--	90
02. T850 coil (Power board)	54.2	66.6	58.2	72.0	--	90
03. I850 body (Power board)	49.6	62.0	48.2	62.0	--	100
04. C860 body (Power board)	46.4	58.8	49.0	62.8	--	85
05. C850 body (Power board)	43.6	56.0	39.4	53.2	--	85
06. C851 body (Power board)	41.0	53.4	37.0	50.8	--	85
07. AC Inlet (Power board)	40.5	52.9	36.8	50.6	--	65
08. PWB near RT850 (Power board)	52.8	65.2	42.1	55.9	--	105
09. L850 coil (Power board)	44.9	57.3	40.2	54.0	--	105
10. C852 body (Power board)	47.6	60.0	41.5	55.3	--	85
11. PWB near D850 (Power board)	51.1	63.5	46.2	60.0	--	105
12. PWB near Q850 (Power board)	51.2	63.6	55.7	69.5	--	105
13. C854 body (Power board)	45.6	58.0	41.9	55.7	--	105
14. PWB near D855 (Power board)	55.3	67.7	59.0	72.8	--	105

IEC 60950-1							
Clause	Requirement + Test				Result - Remark		Verdict
15. C865 body (Power board)	51.5	63.9	52.7	66.5	--		85
16. L851 coil (Power board)	52.8	65.2	53.4	67.2	--		105
17. Output wire of power supply board	39.7	52.1	38.4	52.2	--		80
18. PWB near U502 (Main board)	42.3	54.7	40.5	54.3	--		105
19. L102 coil (Main board)	43.0	55.4	41.3	55.1	--		105
20. PWB near U805 (Main board)	39.9	52.3	38.0	51.8	--		105
21. Inside plastic enclosure near T850	35.9	48.3	34.4	48.2	--		50
22. Outside plastic enclosure near T850	33.3	45.7	31.5	45.3	--		95
23. Panel	34.4	46.8	32.3	46.1	--		80
24. Button	32.3	44.7	31.4	45.2	--		75
25. Ambient	27.6	40.0	26.2	40.0	--		--
Supplementary information:							
1. The temperatures were measured under the worst case of normal mode defined in sub-clause 1.2.2.1 and as described in sub-clause 1.6.2 at voltages as described above. 2. With a specified ambient temperature of + 40°C. Therefore the maximum temperatures measured are recalculated as follows: $T + (40 - T_{amb})$ , where T is the maximum temperature measured during test and $T_{amb}$ is the ambient temperature during the test.							
Temperature T of winding:	$t_1$ (°C)	$R_1$ (Ω)	$t_2$ (°C)	$R_2$ (Ω)	T (°C)	Allowed $T_{max}$ (°C)	Insulation class

4.5.5	TABLE: Ball pressure test of thermoplastic parts			N/A
	Allowed impression diameter (mm) .....: ≤ 2 mm			—
Part		Test temperature (°C)	Impression diameter (mm)	
Supplementary information:				

4.7	TABLE: Resistance to fire					P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence	
PWB	--	--	--	V-1 min	--	
Supplementary information:						

<b>5.1</b>	<b>TABLE: touch current measurement</b>				<b>P</b>
Measured between:		Measured (mA)	Limit (mA)	Comments/conditions	

IEC 60950-1			
Clause	Requirement + Test		Result - Remark
Primary and Secondary terminals (Normal/Reverse)	0.053 / 0.053	0.25	Terminal A to output connector with switch "e" closed
Primary and plastic enclosure (Normal/Reverse)	0.054 / 0.056	0.25	Terminal A to plastic enclosure switch "e" closed
Primary and Metal chassis (Normal/Reverse)	0.53 / 0.52	3.5	Terminal A to earth with switch "e" opened
supplementary information:			
Input voltage: 264Vac			
Input frequency: 60 Hz			
Overall capacity: See table 1.5.1			

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
Unit: Primary to metal chassis (Basic)		AC	1740	No
Unit: Primary to accessible plastic enclosure with metal foil (Reinforced)		DC	4242	No
Unit: primary to secondary (Reinforced)		DC	4242	No
T850 <sup>1)</sup> : primary to secondary (Reinforced)		AC	3000	No
T850 <sup>1)</sup> : secondary to core (Reinforced)		AC	3000	No
One layer of insulation tape <sup>1)</sup> of T850 (Reinforced)		AC	3000	No
Mylar sheet <sup>1)</sup> (Reinforced)		AC	3000	No
Supplementary information:				
1). All source of the material see table 1.5.1 for details.				

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C) .....		See below			—
	Power source for EUT: Manufacturer, model/type, output rating .....		See appended table 1.5.1 for details			—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
--	--	--	--	--	--	5.3.1 - 5.3.9 - ABNORMAL OPERATION TESTS
T850 pin11/12/13 to pin8/9/10	S-C	240	10min	F850	0.03	NB, NC, NT, Unit shutdown instantly. No hazards no damaged.
T850 pin1 to pin2	S-C	240	10min	F850	0.03	NB, NC, NT, Unit shutdown instantly. No damaged, no hazard.

IEC 60950-1						
Clause	Requirement + Test					Verdict
T850 pin5 to pin7	S-C	240	10min	F850	0.03	NB, NC, NT, Unit shutdown instantly. No damaged, no hazard.
C877	S-C	240	10min	F850	0.03	NB, NC, NT, Unit shutdown instantly. No damaged, no hazard.
C864	S-C	240	10min	F850	0.03	NB, NC, NT, Unit shutdown instantly. No damaged, no hazard.
D856	S-C	240	10min	F850	0.03	NB, NC, NT, Unit shutdown instantly. No damaged, no hazard.
R884	S-C	240	10min	F850	0.290	NB, NC, NT, Unit operated normal, no damaged, no hazards.
I850 pin 1 to pin 2	S-C	240	10min	F850	0.03	NB, NC, NT, Unit shutdown instantly. No damaged, no hazard.
I850 pin 1	O-C	240	10min	F850	0.03	NB, NC, NT, Unit shutdown instantly. No damaged, no hazard.
I850 pin 3	O-C	240	10min	F850	0.03	NB, NC, NT, Unit shutdown instantly. No damaged, no hazard.
I850 pin3 to pin4	S-C	240	10min	F850	0.03	NB, NC, NT, Unit shutdown instantly. No damaged, no hazard.
R869	S-C	240	10min	F850	0.289	NB, NC, NT Unit operated normal, No damaged, no hazard.
Q850 D to G	S-C	240	1s	F850	0	NB, NC, NT, Fuse open instantly, R852 and R869 and Q850 damage, no hazard
Q850 G to S	S-C	240	10mins	F850	0.03	NB, NC, NT, Unit shutdown instantly. No damaged, no hazard.
Q850 D to S	S-C	240	1s	F850	0	NB, NC, NT, Fuse open instantly, R852 and R869 and Q850 damage, no hazard
U830 pin2 to pin3	S-C	240	10mins	F850	0.03	NB, NC, NT, Unit shutdown instantly. No damaged, no hazard.
U830 pin8 to pin2	S-C	240	10mins	F850	0.05	NB, NC, NT, Unit shutdown instantly. No damaged, no hazard.



IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
U830 pin4 to pin6	S-C	240	10mins	F850	0.03	NB, NC, NT, Unit shutdown instantly. No damaged, no hazard.
D850 pin1,3 to pin2	S-C	240	1s	F850	0	NB, NC, NT, Fuse open, No damaged, no hazard.
C854	S-C	240	1s	F850	0	NB, NC, NT, Fuse open instantly, No damaged, no hazard.
USB 3.0	S-C	240	10min	F850	0.246	NB, NC, NT, Unit operated normal except for USB output shutdown, no damaged, no hazards.
Speaker	S-C	240	1hrs 40min	F850	0.31	NB, NC, NT Unit operated normal except for speaker output shutdown, no damaged, no hazard. T850 core =64.7°C T850 coil =65.7°C I850 body =49.0°C Ambient=26.4°C
Openings	Blocked	240	2.0hrs	F850	0.294	NB, NC, NT Unit operated normal. No damaged, no hazard. T850 core=61.2°C T850 coil=62.0°C I850 body=47.0°C Ambient=24.0°C
T850 pin 8/9/10 to pin 11/12/13 (after D855/ D856)	O-L	240	8.0hrs	F850	0.500 to 0.680 to 0.900 to 0.03	NB, NC, NT Unit shutdown when over load to 3.6A, no damaged, no hazard. T850 core=100.4°C T850 coil=102.6°C I850 body=63.0°C Ambient=24.7°C
--	--	--	--	--	--	5.3.7 - Overload of operator accessible connector test
USB port (P702) Pin1 to return	O-L	240	1 hour	--	--	NB, NC, NT, measured open voltage is 5.20V, 2.5A.
USB port (P703) Pin1 to return	O-L	240	1 hour	--	--	NB, NC, NT, measured open voltage is 5.20V, 2.5A.

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
<p>Supplementary information:</p> <ol style="list-style-type: none"><li>1. The following Electric Strength (ES) potentials were applied after fault condition were indicated for one minute, the test voltage see table 5.2 for detail</li><li>2. Fuse current is more than fuse rating times 2.1, repeated the test with each source of fuse and same result come out.</li><li>3. Results Key: CD = Component damage NB = No indication of dielectric breakdown NC = Cheesecloth remained intact NT = Tissue paper remained intact</li></ol>			

IEC 60950-1							
Clause	Requirement + Test			Result - Remark			Verdict
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)
T850	Reinforced: Primary windings / Core to secondary windings	495	260	3000 Vac	6.6	6.6	*
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measure d distance thr. insul. / mm; number of layers
T850	Reinforced: Primary windings / Core to secondary windings			3000 Vac	7.0	7.0	Min. 2 layers and TIW
supplementary information:							
* 2 or 3 layers / 0.4mm / Annex U; 1). Secondary windings used triple insulation wire, core consider as primary.							

<b>C.2</b>	<b>TABLE: transformers</b>	<b>P</b>
<p>Technical drawing of a transformer showing dimensions and winding details.</p> <p>Dimensions:</p> <ul style="list-style-type: none"> <li>A: 28.5MAX</li> <li>D: 3.5±0.5</li> <li>C: 21.5MAX</li> <li>G: 0.8±0.1</li> <li>F: 3.75±0.5</li> <li>E: 30.0±0.5</li> <li>B: 35.0 MAX</li> <li>G: 7.5±0.5</li> <li>F: 3.75±0.5</li> </ul> <p>Marking: SPW-285 JLI-130 E360641 YYWW</p> <p>Winding Diagrams:</p> <ul style="list-style-type: none"> <li><b>PRI (Primary):</b> N5, N1, N2, N3. Taps: 7, 6, 5, 2, 1.</li> <li><b>SEC (Secondary):</b> 11,12,13, N4, 8,9,10. Start point: 起绕点.</li> <li><b>PRI (Primary):</b> N5, N4, N3, N2, N1. Tape: 反折胶带15mm*2L.</li> <li><b>SEC (Secondary):</b> 2TS, 2TS, 2TS, 1TS, 1TS. Tape: TAPE:CT280.</li> </ul> <p>Core: PQ2620</p>		

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
绕组 WDG	端子 进-出 Pin S--F	材质和规格 Material & SPEC	圈数 Turns	胶带规格和圈数 TAPE SPEC & Turns	绝缘套管 TUPE	繞線方法 WINDING METHOD
N1	5--6	UEW/U $\Phi 0.5$	16 TS	W9.5mm*1Ts	/	密绕
N2	2--1	UEW/U $\Phi 0.18$	6 TS	W9.5mm*1Ts	/	居中密绕
N3	1--NC	copper 0.05*7	1.1 TS	W9.5mm*2Ts	/	居中
N4	11, 12, 13--8, 9, 10	STW-B $\Phi 0.50*3P$	7 TS	W9.5mm*2Ts	初级贴反折胶带	密绕
N5	6--7	UEW/U $\Phi 0.5$	16 TS	W9.5mm*2Ts	次级贴反折胶带	密绕

**List of test equipment used:**

A completed list of used test equipment shall be provided in the Test Reports when a Manufacturer Testing Laboratory according to TMP/CTF stage 1 or WMT/CTF stage 2 procedure has been used.

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<p align="center"><b>ATTACHMENT TO TEST REPORT IEC 60950-1</b>  <b>EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES</b>  Information technology equipment – Safety –  PART 1: GENERAL REQUIREMENTS</p>			
<b>Differences according to</b> ..... : EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013			
<b>Attachment Form No.</b> ..... : EU_GD_IEC60950_1F			
<b>Attachment Originator</b> ..... : SGS Fimko Ltd			
<b>Master Attachment</b> ..... : Date 2014-02			
<b>Copyright © 2014 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.</b>			

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

<b>IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)</b>			
	Clauses, subclauses, notes, tables and figures which are additional to those in IEC60950-1 and it's amendmets are prefixed "Z"		P
Contents	Add the following annexes:		P
	Annex ZA (normative)	Normative references to international publications with their corresponding European publications	
(A2:2013)	Annex ZB (normative)	Special national conditions	
	Annex ZD (informative)	IEC and CENELEC code designations for flexible cords	
General	Delete all the "country" notes in the reference document (IEC 60950-1:2005) according to the following list:		P
	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	
General (A1:2010)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list:		P
	1.5.7.1 Note	6.1.2.1 Note 2	
	6.2.2.1 Note 2	EE.3 Note	
General (A2:2013)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A2:2013) according to the following list:		P
	2.7.1 Note *	2.10.3.1 Note 2	
	6.2.2. Note		
	* Note of secretary: Text of Common Modification remains unchanged.		


IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)</b>			
1.1.1 (A1:2010)	<b>Replace</b> 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.	Not portable sound system.	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	Delete.	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 *	Added.	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.	Not portable sound system.	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.	Delete.	N/A
	<b>Zx Protection against excessive sound pressure from personal music players</b>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)</b>			
	<p><b>Zx.1 General</b></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"> <li>is designed to allow the user to listen to recorded or broadcast sound or video; and</li> <li>primarily uses headphones or earphones that can be worn in or on or around the ears; and</li> <li>allows the user to walk around while in use.</li> </ul> <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"> <li>while the personal music player is connected to an external amplifier; or</li> <li>while the headphones or earphones are not used.</li> </ul> <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"> <li>hearing aid equipment and professional equipment;</li> </ul> <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
	<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



IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)</b>			
	<p><b>Zx.2 Equipment requirements</b></p> <p>No safety provision is required for equipment that complies with the following:</p> <ul style="list-style-type: none"> <li>equipment provided as a package (personal music player with its listening device), where the acoustic output <math>L_{Aeq,T}</math> is <math>\leq 85</math> dBA measured while playing the fixed "programme simulation noise" as described in EN 50332-1; and</li> <li>a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is <math>\leq 27</math> mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" as described in EN 50332-1.</li> </ul> <p>NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level <math>L_{Aeq,T}</math> is meant. See also Zx.5 and Annex Zx.</p> <p>All other equipment shall:</p> <ul style="list-style-type: none"> <li>a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and</li> <li>b) 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</li> </ul>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)</b>			
	<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> <ol style="list-style-type: none"> <li>1) equipment provided as a package (player with its listening device), the acoustic output shall be <math>\leq 100</math> dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and</li> <li>2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be <math>\leq 150</math> mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1.</li> </ol> <p>For music where the average sound pressure (long term <math>L_{Aeq,T}</math>) 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 <math>L_{Aeq,T}</math>) 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>		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)</b>			
	<p><b>Zx.3 Warning</b>  The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following:  the symbol of Figure 1 with a minimum height of 5 mm; and  the following wording, or similar:  “To prevent possible hearing damage, do not listen at high volume levels for long periods.”</p>  <p><b>Figure 1 – Warning label (IEC 60417-6044)</b></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
	<b>Zx.4 Requirements for listening devices (headphones and earphones)</b>		N/A
	<p><b>Zx.4.1 Wired listening devices with analogue input</b>  With 94 dBA sound pressure output <math>L_{Aeq,T}</math>, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be <math>\geq 75</math> mV.  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).  NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.</p>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)</b>			
	<p><b>Zx.4.2 Wired listening devices with digital input</b>            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 <math>L_{Aeq,T}</math> of the listening device shall be <math>\leq 100</math> 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><b>Zx.4.3 Wireless listening devices</b>            In wireless mode:                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 <math>L_{Aeq,T}</math> of the listening device shall be <math>\leq 100</math> dBA.</p> <p>NOTE An example of a wireless listening device is a Bluetooth headphone.</p>		N/A
	<p><b>Zx.5 Measurement methods</b>            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_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
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;	Replaced.	N/A
	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'.	Declared.	N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Delete.	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 <sup>a)</sup>   Over 6 up to and including 10  (0,75) <sup>b)</sup> 1,0   Over 10 up to and including 16  (1,0) <sup>c)</sup> 1,5    In the conditions applicable to Table 3B delete the words "in some countries" in condition <sup>a)</sup> .  In NOTE 1, applicable to Table 3B, delete the second sentence.	Replaced.	N/A
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)</b>			
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	Delete.	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).	Replaced.	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.	Replaced.	N/A
Bibliography	Additional EN standards.	Added.	—

<b>ZA</b>	<b>NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS</b>	—
-----------	--	---

<b>ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In <b>Denmark</b> , 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.	No power supply cord provided.	N/A
1.2.13.14 (A11:2009)	In <b>Norway</b> and <b>Sweden</b> , for requirements see 1.7.2.1 and 7.3 of this annex.	The equipment is not connected to the cable distribution systems.	N/A
1.5.7.1 (A11:2009)	In <b>Finland</b> , <b>Norway</b> and <b>Sweden</b> , 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.	No such resistors.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.8	In <b>Norway</b> , 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).	Considered.	P
1.5.9.4	In <b>Finland, Norway</b> and <b>Sweden</b> , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.	No TNV circuit within the equipment.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	<p>In <b>Finland, Norway</b> and <b>Sweden</b>, 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 <b>Finland</b>: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"</p> <p>In <b>Norway</b>: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In <b>Sweden</b>: "Apparaten skall anslutas till jordat uttag"</p>	Shall be evaluated during the national approval.	N/A
1.7.2.1 (A11:2009)	<p>In <b>Norway</b> and <b>Sweden</b>, 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_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<p align="center"><b>ZB ANNEX (normative)</b>  <b>SPECIAL NATIONAL CONDITIONS (EN)</b></p>			
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):          "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:          "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>		
1.7.2.1 (A2:2013)	<p>In <b>Denmark</b>, 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 <b>Denmark</b> shall be as follows:          In <b>Denmark</b>: "Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord."</p>	Shall be evaluated during the national approval.	N/A
1.7.5  1.7.5 (A11:2009)	<p>In <b>Denmark</b>, 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 <b>CLASS II EQUIPMENT</b> the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.</p>	No such socket-outlets provided.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5 (A2:2013)	<p>In <b>Denmark</b>, 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 <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuits within the equipment.	N/A
2.3.2	In <b>Finland, Norway and Sweden</b> there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuits within the equipment.	N/A
2.3.4	In <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuits within the equipment.	N/A
2.6.3.3	In the <b>United Kingdom</b> , the current rating of the circuit shall be taken as 13 A, not 16 A.	Considered. However, test was performed with 16 A for representative.	P
2.7.1	In the <b>United Kingdom</b> , 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.	The equipment is not direct plug-in equipment.	N/A
2.10.5.13	In <b>Finland, Norway and Sweden</b> , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuits within the equipment.	N/A
3.2.1.1	<p>In <b>Switzerland</b>, 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>	No power supply cord provided.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
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: 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 <b>Denmark</b>, 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>	No power supply cord provided.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1 (A2:2013)	<p>In <b>Denmark</b>, 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>		N/A
3.2.1.1	<p>In <b>Spain</b>, 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>	No power supply cord provided.	N/A
3.2.1.1	<p>In the <b>United Kingdom</b>, 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>	No power supply cord provided.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In <b>Ireland</b> , 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.	No power supply cord provided.	N/A
3.2.4	In <b>Switzerland</b> , for requirements see 3.2.1.1 of this annex.	Shall be evaluated during the national approval.	N/A
3.2.5.1	In the <b>United Kingdom</b> , a power supply cord with conductor of 1,25 mm <sup>2</sup> is allowed for equipment with a rated current over 10 A and up to and including 13 A.	No power supply cord provided.	N/A
3.3.4	In the <b>United Kingdom</b> , 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 <sup>2</sup> to 1,5 mm <sup>2</sup> nominal cross-sectional area.	No power supply cord provided.	N/A
4.3.6	In the <b>United Kingdom</b> , 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.	The equipment is not direct plug-in equipment.	N/A
4.3.6	In <b>Ireland</b> , 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.	The equipment is not direct plug-in equipment.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	<p>In <b>Finland, Norway</b> and <b>Sweden</b> 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"> <li>• STATIONARY PLUGGABLE EQUIPMENT TYPE A that <ul style="list-style-type: none"> <li>is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and</li> <li>has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and</li> <li>is provided with instructions for the installation of that conductor by a SERVICE PERSON;</li> </ul> </li> <li>• STATIONARY PLUGGABLE EQUIPMENT TYPE B;</li> <li>• STATIONARY PERMANENTLY CONNECTED EQUIPMENT.</li> </ul>	The equipment is not such equipment.	N/A
6.1.2.1 (A1:2010)	<p>In <b>Finland, Norway</b> and <b>Sweden</b>, 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"> <li>- two layers of thin sheet material, each of which shall pass the electric strength test below, or</li> <li>- one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.</li> </ul> <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"> <li>- 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</li> </ul>	No TNV circuits within the equipment.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>- is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.</p> <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"> <li>- 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;</li> <li>- the additional testing shall be performed on all the test specimens as described in EN 60384-14:</li> <li>- 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.</li> </ul>		
6.1.2.2	<p>In <b>Finland, Norway</b> and <b>Sweden</b>, 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 circuits within the equipment.	N/A
7.2	<p>In <b>Finland, Norway</b> and <b>Sweden</b>, 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>	The equipment is not connected to the distribution systems.	N/A
7.3 (A11:2009)	<p>In <b>Norway</b> and <b>Sweden</b>, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.</p>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

(informative)

**IEC and CENELEC code designations for flexible cords**

Type of flexible cord	Code designations	
	IEC	CENELEC
<b>PVC insulated cords</b>		
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
<b>Rubber insulated cords</b>		
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
<b>Cords having high flexibility</b>		
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



IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ATTACHMENT TO TEST REPORT IEC 60950-1 with A1: 2009 and A2:2013</b> <b>U.S.A. NATIONAL DIFFERENCES</b> Information technology equipment – Safety – Part 1: General requirements			
Differences according to .....	UL 60950-1-07(Second Edition) + A1: 2011 + A2: 2014		
Attachment Form No.....	US_ND_IEC60950_1F		
Attachment Originator .....	UL		
Master Attachment .....	Date 2014-07		
Copyright © 2014 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			

U.S.A. NATIONAL DIFFERENCES			
	<b><i>Special national conditions</i></b>		
1.1.1	All equipment is designed as to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and if applicable, the National Electrical Safety Code, IEEE C2	See below.	P
	Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75	In accordance with the National Electrical Code (NEC), ANSI/NFPA 70, and unless marked or otherwise identified, the Standard for Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	P
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A	Considered.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the /NEC	Considered.	P
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC are required to have special construction features and identification markings		P
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings	Single phase only.	N/A
	A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>U.S.A. NATIONAL DIFFERENCES</b>			
	- if it is part of a range that extends into the Table 2 "Normal Operating Conditions"		N/A
	Likewise, a voltage rating is not to be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions"		N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with NEC or CEC Part 1 or NEC are marked with the voltage rating and "Class 2" or equivalent		N/A
	- Marking is located adjacent to the terminals		N/A
	- Marking is visible during wiring		N/A
2.5	Fuse providing Class 2, Limited Power Source, or TNV current limiting is not operator-accessible unless it is not interchangeable		N/A
2.6	Equipment with isolated ground (earthing) receptacles is in compliance with NEC 250.146(D) and CEC 10-112 and 10-906(8)		N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is provided for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.		N/A
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, provided with special transformer overcurrent protection		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains is in accordance with the NEC/CEC		N/A
3.2.1	Attachment plugs of power supply cords are rated not less than 125 percent of the rated current of the equipment		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment comply with special earthing, wiring, marking and installation instruction requirements		N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs		N/A
3.2.5	Power supply cords are no longer than 4.5 m in length	No power supply cords provided	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>U.S.A. NATIONAL DIFFERENCES</b>			
	Minimum cord length is 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement		N/A
	Flexible power supply cords are compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC		N/A
3.2.9	Permanently connected equipment has a suitable wiring compartment and wire bending space		N/A
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0		N/A
3.3.3	Wire binding screws are not attached with conductors larger than 10 AWG (5.3 mm2)		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are suitable for Canadian/US wire gauge sizes, are		N/A
	- rated 125 per cent of the equipment rating, and		N/A
	- are specially marked when specified (1.7.7)		N/A
3.3.5	Revise first column of Table 3E to "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration"		N/A
3.4.2	Motor control devices are provided for cord-connected equipment with a motor if the equipment is rated more than 12 A,		N/A
	- or if the motor has a nominal voltage rating greater than 120 V		N/A
	- or is rated more than 1/3 hp (locked rotor current over 43 A)		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position		N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes have a battery disconnect means that may be connected to the computer room remote power-off circuit		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30		N/A
4.3.13.5.1	Equipment with lasers meets the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>U.S.A. NATIONAL DIFFERENCES</b>			
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m <sup>3</sup> (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge		N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9m <sup>2</sup> (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less		N/A
	For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less		N/A
4.7.3.1	Non-metallic enclosures of equipment for use in spaces used for environmental air (plenums) are required to comply with UL 2043		N/A
Annex H	Equipment that produces ionizing radiation complies with U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370)		N/A
	<b>Other National Differences</b>		
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include: attachment plugs, battery backup systems, battery packs, cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultracapacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cut-offs, thermostats, (multi-layer) transformer winding wire, surge protective devices, tubing, vehicle battery adapters, wire connectors, and wire and cables		P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>U.S.A. NATIONAL DIFFERENCES</b>			
	This maximum operating voltage includes consideration of the battery charging "float voltage" associated with the intended supply system, regardless of the marked power rating of the equipment		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 V <sub>peak</sub> or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions		N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts		N/A
2.6.2	Equipment with functional earthing marked with the functional earthing symbol (IEC 60417-6092)		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified	Shall be evaluated during the national approval.	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more reduce the risk of injury due to the implosion of the CRT		N/A
4.3.2	Equipment with handles complies with special loading tests		N/A
4.3.8	Battery packs for both portable and stationary applications comply with special component requirements	Not such battery	N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals comply with a special touch current measurement tests		N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are overloaded		P
	During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test is repeated twice (three tests total) using new components as necessary		N/A
6.4	Equipment intended for connection to telecommunication network outside plant cable is protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC		N/A
Annex EE	Articulated accessibility probe (Fig EE.3) is used for assessing accessibility to document/media shredders instead of the Figure 2A test finger		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
U.S.A. NATIONAL DIFFERENCES			
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions		N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear comply with special acoustic pressure requirements		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ATTACHMENT TO TEST REPORT IEC 60950-1 with A1:2009 and A2:2013</b> <b>CANADA NATIONAL DIFFERENCES</b> Information technology equipment – Safety – Part 1: General requirements			
<b>Differences according to</b> ..... : CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014			
<b>Attachment Form No.</b> ..... : CA_ND_IEC60950_1F			
<b>Attachment Originator</b> ..... : CSA			
<b>Master Attachment</b> ..... : Date (2015-05)			
<b>Copyright © 2015 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.</b>			

CANADA NATIONAL DIFFERENCES			
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	In accordance with the National Electrical Code (NEC), ANSI/NFPA 70, and unless marked or otherwise identified, the Standard for Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	P
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A:	Equipment acceptable for connection to 20 A	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the CEC/NEC.  For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC/NEC are required to have special construction features and identification markings.	Interconnecting cable meet the requirement.	P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>CANADA NATIONAL DIFFERENCES</b>			
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings.  A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."	Single-phase equipment.	N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with CEC Part 1 or NEC shall be marked with the voltage rating and "Class 2" or equivalent. Marking shall be located adjacent to the terminals and shall be visible during wiring.	Not applied for.	N/A
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.		N/A
2.6	Equipment with isolated ground (earthing) receptacles are required to comply with NEC 250.146(D) and CEC 10-112 and 10-906(8).		N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.  Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.		N/A
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.		N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		N/A



IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>CANADA NATIONAL DIFFERENCES</b>			
3.2.5	Power supply cords are required to be no longer than 4.5 m in length.  Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement.  Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.	No power supply cord provided.	N/A
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	The equipment is not permanently connected equipment.	N/A
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm <sup>2</sup> ).	No wire binding screws.	N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for US/Canadian wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).		N/A
3.3.5	First column of Table 3E revised to require "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		N/A
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).	No motor control devices.	N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.		N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.	No battery systems.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.		N/A
4.3.13.5.1	Equipment with lasers is required to meet the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>CANADA NATIONAL DIFFERENCES</b>			
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m <sup>3</sup> (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m <sup>2</sup> (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.		N/A
	Non-metallic enclosures of equipment for use in spaces used for environmental air (plenums) are required to comply with UL 2043.	No ionizing radiation.	N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		
<b>OTHER NATIONAL DIFFERENCES</b> The following key national differences are based on requirements other than national regulatory requirements.			
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include:  attachment plugs, battery packs (rechargeable type, used with transportable equipment), cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, transient voltage surge suppressors, tubing, wire connectors, and wire and cables.	Components are approved by UL, see appended table 1.5.1 of IEC 60950-1 test report for details.	P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>CANADA NATIONAL DIFFERENCES</b>			
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply. This maximum operating voltage shall include consideration of the battery charging "float voltage" associated with the intended supply system, regardless of the marked power rating of the equipment.		—
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.		N/A
2.6.2	Equipment with functional earthing is required to be marked with the functional earthing symbol (IEC 60417-6092).		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.	Shall be evaluated during the national approval.	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.		N/A
4.3.2	Equipment with handles is required to comply with special loading tests.		N/A
4.3.8	Battery packs for both portable and stationary applications are required to comply with special component requirements.	Not such battery.	N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.		N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are to be overloaded.  During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary.		P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
CANADA NATIONAL DIFFERENCES			
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.		N/A
Annex EE	UL articulated accessibility probe (Fig EE.3) required for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ATTACHMENT TO TEST REPORT IEC 60950-1 with A1:2009 and A2:2013</b> <b>Australia / New Zealand NATIONAL DIFFERENCES</b> <b>Information technology equipment – Safety – Part 1: General requirements</b>			
Differences according to .....: AS/NZS 60950.1:2015			
Clause	Requirement + Test	Result - Remark	Verdict
1.2	After definition 'PERSON, SERVICE', insert the following new definition:  POTENTIAL IGNITION SOURCE..... 1.2.12.201	Inserted.	P
1.2.12.201	<p><i>After Clause 1.2.12.15, insert the following new clause:</i></p> <p><b>1.2.12.201POTENTIAL IGNITION SOURCE</b></p> <p>Possible fault which can starts a fire if the open-circuit voltage measured across an interruption or faulty contact exceeds a value of 50 V (peak) a.c. or d.c. and the product of the peak value of this voltage and the measured r.m.s. current under normal operating conditions exceeds 15VA. Such a faulty contact or interruption in anelectrical connection includes those which may occur in CONDUCTIVE PATTERNS on PRINTED BOARDS.</p> <p>Note 1: An electronic protection circuit may be used to prevent such a fault from becoming a POTENTIAL IGNITIONSOURCE.</p> <p>Note 2: This definition is from AS/NZS 60065:2012, Clause 2.8.11.</p>	Inserted.	P
1.5.1	<p>1. First paragraph, insert the following text after the words 'IEC component standard':</p> <p>or the relevant Australian/New Zealand Standard</p> <p>2. In the Note, insert the following text after the word 'standard':</p> <p>or an Australian/New Zealand Standard</p> <p>3. Second paragraph, delete the words 'without further evaluation'.</p>	All critical components are IEC and UL certified.	P

IEC60950_1F - ATTACHMENT													
Clause	Requirement + Test	Result - Remark	Verdict										
1.5.2	1. First paragraph, insert the following text after the word 'standard':  or an Australian/New Zealand Standard  2. First paragraph, second dash item, second line, insert the following text after the word 'standard':  or an Australian/New Zealand Standard  3. First paragraph, second dash item, last line, insert the following text after the word 'standard':  or an Australian/New Zealand Standard		N/A										
1.7.1.3	Delete existing text and replace with the following:  Graphical symbols placed on the equipment as a requirement of this standard, shall be in accordance with IEC 60417 or ISO 3864-2 or ISO 7000, if available. In the absence of suitable symbols, the manufacturer may design specific graphical symbols.  Symbols as required by this standard placed on the equipment shall be explained in the user manual.		N/A										
2.9.2	Second paragraph, delete the word 'designated'.		N/A										
3.2.5.1	1. Replace the first four rows for Table 3B with the following:  ----- <table><tr><td>Rated Current of Equipment (A)</td><td>Nominal cross-sectional area (mm²)</td></tr><tr><td>0.2 ≤ 3</td><td>0.5<sup>a</sup></td></tr><tr><td>3 ≤ 7.5</td><td>0.75</td></tr><tr><td>7.5 ≤ 10</td><td>(0.75)<sup>b</sup></td></tr><tr><td>10 ≤ 16</td><td>(1,0)<sup>c</sup></td></tr></table> ----- 2. Delete NOTE 1 and renumber existing NOTE 2 as "NOTE".  3. Delete Footnote <sup>a</sup> and replace with the following:  <sup>a</sup> This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the entry to the plug does not exceed 2 m (0,5 mm² three-core supply flexible cords are not permitted: see AS/NZS 3191).	Rated Current of Equipment (A)	Nominal cross-sectional area (mm²)	0.2 ≤ 3	0.5 <sup>a</sup>	3 ≤ 7.5	0.75	7.5 ≤ 10	(0.75) <sup>b</sup>	10 ≤ 16	(1,0) <sup>c</sup>	Power supply cord has not been check.	N/A
Rated Current of Equipment (A)	Nominal cross-sectional area (mm²)												
0.2 ≤ 3	0.5 <sup>a</sup>												
3 ≤ 7.5	0.75												
7.5 ≤ 10	(0.75) <sup>b</sup>												
10 ≤ 16	(1,0) <sup>c</sup>												

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.1.201	<p><i>After Clause 4.1, insert new Clause 4.1.201 as follows:</i></p> <p><b>4.1.201 Display devices used for television purposes</b></p> <p>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.</p>	Inserted.	N/A
4.3.6	<p><i>Delete the third paragraph and replace with the following:</i></p> <p>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.</p>	Not direct plug-in equipment.	N/A
4.3.8	<p><i>Eighth paragraph, insert the following new note after the first dash item:</i></p> <p>NOTE 6.201 In cases where the voltage source is provided by power from an unassociated power source, consideration should be given to the effects of possible single fault conditions in the unassociated equipment. If the power source is unknown then it should be assumed that the maximum limit of SELV may be applied to the source input under assumed single fault conditions in the source when assessing the charging circuit in the equipment under test.</p>	Added.	N/A
4.3.8.201	<p><i>After Clause 4.3.8, add the following new clause as follows:</i></p> <p>Products containing coin/button cell batteries and batteries designated R1</p> <p>The requirements of AS/NZS 60065:2012 Amendment 1:2015, Clause 14.10.201 apply for this Clause.</p>	Added.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.13.5.1	<p>1. Delete the first paragraph and replace with the following:</p> <p>Except as permitted below, equipment shall be classified and labelled according to IEC 60825-1 or AS/NZS 60825.1, IEC 60825-2 or AS/NZS 60825.2 and IEC 60825-12, as applicable.</p> <p>2. Third paragraph, first sentence, after 'IEC 60825-1', insert the following text:</p> <p>or AS/NZS 60825.1</p> <p>3. Fourth paragraph, after 'IEC 60825-1', insert the following text:</p> <p>or AS/NZS 60825.1</p>	Added.	N/A
4.7	<p><i>At the end of Clause 4.7, insert the following text:</i></p> <p>For alternative resistance to fire tests, refer to Clause 4.7.201</p>	Added.	N/A
4.7.201	<p><i>After Clause 4.7.3.6, add new clauses as follows:</i></p> <p><b>4.7.201 Resistance to fire - Alternative tests</b></p> <p><b>4.7.201.1 General</b></p> <p>Parts of non-metallic material shall be resistant to ignition and spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames originating from inside the apparatus, or the following:</p> <p>(a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1 mm in width regardless of length.</p> <p>(b) The following parts which would contribute negligible fuel to a fire:</p> <ul style="list-style-type: none"> <li>- small mechanical parts, the mass of which does not exceed 4 g, such as mounting parts, gears, cams, belts and bearings;</li> <li>- small electrical components, such as capacitors with a volume not exceeding 1,750 mm<sup>3</sup>, 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.</li> </ul> <p>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.</p>	Material of fire enclosure is metal	N/A



IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>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.</p> <p>For the base material of printed boards, compliance shall be checked by the test of 4.7.201.5.</p> <p>The tests shall be carried out on parts of non-metallic material which have been removed from the apparatus. When the glow-wire test is carried out, the parts shall be placed in the same orientation as they would be in normal use.</p> <p>These tests are not carried out on internal wiring.</p>		
4.7.201.2	<p><b>4.7.201.2 Testing of non-metallic materials</b></p> <p>Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550°C. Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glow-wire test shall be not carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part.</p>		N/A
4.7.201.3	<p><b>4.7.201.3 Testing of insulating materials</b></p> <p>Parts of insulating material supporting POTENTIAL IGNITION SOURCES shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750°C.</p> <p>The test shall be also carried out on other parts of insulating material which are within a distance of 3mm of the connection.</p> <p>NOTE Contacts in components such as switch contacts are considered to be connections.</p> <p>For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test. However, parts shielded by a barrier which meets the needle-flame test shall not be tested.</p> <p>The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications:</p>		N/A

IEC60950_1F - ATTACHMENT													
Clause	Requirement + Test	Result - Remark	Verdict										
	<table><tr><th>Clause of AS/NZS 60695.11.5</th><th>Change</th></tr><tr><td colspan="2">9 Test procedure</td></tr><tr><td>9.2 Application of needle-flame</td><td>Delete the first and second paragraphs and replace with the following:  The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of Figure 1. If possible the flame shall be applied at least 10 mm from a corner.  The duration of application of the test flame shall be 30 s ± 1 s.</td></tr><tr><td>9.3 Number of test specimens</td><td>Delete existing text and replace with the following:  The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.</td></tr><tr><td>11 Evaluation of test results</td><td>Delete existing text and replace with the following:  The duration of burning (t<sub>b</sub>) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.</td></tr></table>	Clause of AS/NZS 60695.11.5	Change	9 Test procedure		9.2 Application of needle-flame	Delete the first and second paragraphs and replace with the following:  The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of Figure 1. If possible the flame shall be applied at least 10 mm from a corner.  The duration of application of the test flame shall be 30 s ± 1 s.	9.3 Number of test specimens	Delete existing text and replace with the following:  The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.	11 Evaluation of test results	Delete existing text and replace with the following:  The duration of burning (t <sub>b</sub> ) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.		
Clause of AS/NZS 60695.11.5	Change												
9 Test procedure													
9.2 Application of needle-flame	Delete the first and second paragraphs and replace with the following:  The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of Figure 1. If possible the flame shall be applied at least 10 mm from a corner.  The duration of application of the test flame shall be 30 s ± 1 s.												
9.3 Number of test specimens	Delete existing text and replace with the following:  The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.												
11 Evaluation of test results	Delete existing text and replace with the following:  The duration of burning (t <sub>b</sub> ) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.												
	The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10, provided that the sample tested was not thicker than the relevant part.												
4.7.201.4	<p><b>4.7.201.4 Testing in the event of non-extinguishing material</b></p> <p>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 need not be tested.</p> <p>NOTE 1 - If the enclosure does not withstand the glow-wire test the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing.</p> <p>NOTE 2 - If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the equipment, the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing.</p> <p>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.</p>		N/A										



IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.201.5	<p><b>4.7.201.5 Testing of printed boards</b></p> <p>The base material of printed boards shall be subjected to the needle-flame test of Clause 4.7.201.3. The flame shall be applied to the edge of the board where the heat sink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge, consisting of broken perforations, unless the edge is less than 3 mm from a POTENTIAL IGNITION SOURCE.</p> <p>The test is not carried out if the</p> <ul style="list-style-type: none"> <li>- Printed board does not carry any POTENTIAL IGNITION SOURCE;</li> <li>- Base material of printed boards, on which the available apparent power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category V-1 or better according to AS/NZS 60695.11.10, or the printed boards are protected by an enclosure meeting the flammability category V-0 according to AS/NZS 60695.11.10, or made of metal, having openings only for connecting wires which fill the openings completely; or</li> <li>- Base material of printed boards, on which the available apparatus power at a connection exceeds 15 VA operating at a voltage exceeding 400 V (peak) a.c. or d.c. under normal operating conditions, and base material of printed boards supporting spark gaps which provides protection against overvoltages, is of flammability category V-0 according to AS/NZS 60695.11.10 or the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely.</li> </ul> <p>Compliance shall be determined using the smallest thickness of the material.</p> <p>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.</p>		N/A
6.2.2	<p><i>For Australia only, delete the first paragraph and Note, and replace with the following:</i></p> <p>In Australia (not in New Zealand) only, compliance with 6.2.2 is checked by the tests of both 6.2.2.1 and 6.2.2.2.</p>	No TNV circuit.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
6.2.2.1	<p><i>For Australia only, delete the first paragraph including the note and replace with the following:</i></p> <p>In Australia only(not in New Zealand), the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator of Annex N for 10/700µs impulses. The interval between successive impulses is 60 s and the initial voltage, <math>U_c</math> is:</p> <p>(i) for 6.2.1a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and</p> <p>(ii) for 6.2.1b) and 6.2.1c): 1.5 kV.</p> <p>NOTE 201 The 7 kV impulse is to simulate lightning surges on typical rural and semi-rural network lines.</p> <p>NOTE 202 The value of 2.5 kV for 6.2.1a) was chosen to ensure adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.</p>		N/A
6.2.2.2	<p><i>For Australia only, delete the second paragraph including the Note and replace with the following:</i></p> <p>In Australia (not New Zealand), the a.c. test voltage is:</p> <p>(i) for 6.2.1a): 3 kV; and</p> <p>(ii) for 6.2.1b) and 6.2.1c): 1.5 kV</p> <p>NOTE 201 Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used.</p> <p>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.</p>		N/A
7.3	<p><i>Add the following before the first paragraph:</i> 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 telecommunication purposes.</p>	Added.	N/A
Annex P	<p><i>Add the following Normative References:</i></p> <p>AS/NZS 3191, Electric flexible cords</p> <p>AS/NZS 3112, Approval and test specification—Plugs and socket-outlets</p>		N/A

IEC60950_1A - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ATTACHMENT TO TEST REPORT IEC 60950-1</b> <b>CHINA NATIONAL DIFFERENCES</b> Information technology equipment – Safety – Part 1: General requirements			
<b>Differences according to</b> ..... : GB 4943.1--2011			
<b>Attachment Form No.</b> ..... : CN_ND_IEC60950_1A			
<b>Attachment Originator</b> ..... : CQC-TIRT			
<b>Master Attachment</b> ..... : Date 2012-11			
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.	Shall be submitted 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.	Complied.	P



IEC60950_1A - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<b>China National Differences</b>		
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>	Shall be submitted 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>	Complied.	P

IEC60950_1A - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<b>China National Differences</b>		
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 <math>40\pm 2^{\circ}\text{C}</math> and a relative humidity of <math>(93\pm 3)\%</math>. 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 <math>(93\pm 3)\%</math>. The temperature of the air, at all places where samples can be located, is maintained within <math>2^{\circ}\text{C}</math> of any convenient value between <math>20^{\circ}\text{C}</math> and <math>30^{\circ}\text{C}</math> 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.		N/A

IEC60950_1A - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<b>China National Differences</b>		
2.10.3.4	<p>Add a new section above Table 2K and in Clause 2.10.3.4:</p> <p>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>		P
3.2.1.1	<p>Add a paragraph before the last paragraph:.</p> <p>Plugs connected to AC mains supply shall comply with GB 1002 or GB 1003 or GB/T 11918 as applicable.</p>	Added.	N/A
4.2.8	<p>Clause 4.2.8 cathode ray tubes quoted Clause 18 of GB8898-2011.</p> <p>Delete note of Clause 4.2.8.</p>		N/A
Annex E	<p>Amend last section:</p> <p>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.</p> <p>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.</p>		P
Annex G.6	<p>Change the second section of Clause G.6 to be:</p> <p>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.</p>		P



IEC60950_1A - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

China National Differences			
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, therefore 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, therefore 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>	Shall be submitted 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>	Shall be submitted during national approval.	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>	Considered.	P
1.4.5	<p>Amend the second paragraph by the following:</p> <p>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>	Considered.	P

IEC60950_1A - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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>	Considered.	P

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>Israel – Differences to IEC 60950-1:2005+A1:2009</b>			
(Test results according to last modification date 2014-01-02 in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
1.1.1	Replace the text of Note 3 as follows:  The requirements of Israel Standard SI 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment.		N/A
1.6	The clause is applicable with the following addition:		N/A
1.6.1	Add following note:  In Israel, the clause is subject to the Electricity Law, 1954, its regulations and updates.		N/A
1.7.1	The clause is applicable with the following additions:  Subclause 1.7.201 shall be added at the beginning of the clause as follows:		N/A
1.7.201	Marking in the Hebrew language  The marking in the Hebrew language shall be in accordance with the Consumer Protection Order (Marking of goods), 1983.  In addition to the marking required by clause 1.7.1, the following items shall be marked in the Hebrew language.  1. Name of the apparatus and its commercial designation;  2. Manufacturer's name and his address; if the equipment is imported, the importer's name and his address;  3. Manufacturer's registered trademark, if any;  4. Name of the model and serial number, if any;  5. Country of manufacture.  The items shall be marked on the apparatus or on its packaging, or a label well attached to the apparatus or its packaging, by bonding or sewing, such that the label cannot be easily removed.	Shall be evaluated during the national approval.	N/A
1.7.2.1	The following shall be added to the clause:  All the instructions and warnings related to safety shall also be written in the Hebrew language.		N/A
1.201	Power consumption in standby mode  The equipment shall comply with the requirements of the Energy Sources Regulations (Maximum electrical power in standby mode for domestic and office electrical appliances), 2011, with a permitted deviation of up to 10 %.		N/A


IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>Israel – Differences to IEC 60950-1:2005+A1:2009</b>			
(Test results according to last modification date 2014-01-02 in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
2	The clause is applicable with the following additions:		N/A
2.9.4	<p>The following shall be added at the beginning of the clause:</p> <p>According to the Electricity Law, 1954, and the Electricity Regulations (Earthing and means of protection against electricity of voltages up to 1,000V) 1991, in Israel, seven means of protection from electricity are permitted, as follows:</p> <ol style="list-style-type: none"> <li>1) Network system earthing– (TN-C-S, TN-S);</li> <li>2) Network system earthing– (TT);</li> <li>3) Network Insulation Terre– (IT);</li> <li>4) Isolated transformer;</li> <li>5) Safety extra low voltage;</li> <li>6) Residual current circuit breaker;</li> <li>7) Reinforced insulation; Double insulation</li> </ol>		N/A
2.201	<p>Prevention of electromagnetic interference</p> <p>The device shall meet the requirements of the relevant part of the Israeli Standard series, SI 961.</p> <p>If the device contains components for prevention of electromagnetic interference, the devices shall not lower the safety level of the device, as required by this standard.</p>		N/A
3	The clause is applicable with the following additions:		N/A
3.2.1.1	<p>Connection to an a.c. mains supply</p> <p>After the Note, the following note shall be added:</p> <p>Note:</p> <p>In Israel, the supply plug shall comply with the requirements in Israeli Standard SI 32 Part 1.1.</p>	Shall be evaluated during the national approval.	N/A
3.2.1.2	<p>Connection to a d.c. mains supply</p> <p>At the first paragraph, the following note shall be added:</p> <p>Note:</p> <p>As of the date of publication of this standard, there is no Israeli Standard for connection accessories to d.c.</p>		N/A
Annex P	<p>Normative references</p> <p>(List of relevant Israel Standards that have been inserted in place of some of the International Standards)</p>		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>Korea – National Differences to IEC 60950-1/A1:2009</b> (Test results according to last modification date 2012-05-31 in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.101	Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305).	No power supply cords provided.	N/A
8	EMC The apparatus shall comply with the relevant CISPR standards.		N/A

IEC 60950-1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>Japan– Differences to IEC 60950-1:2005+A1:2009</b> (Test results according to last modification date 2016-11-15in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
Japanese Deviations for J 60950-1 (H27)			
1.2.4.1	<b>Add the following new notes.</b>  Note: Even if the equipment is designed as Class I, the equipment is regarded as Class 0I equipment when 2-pin adaptor with earthing lead wire or cord set having 2-pin plug with earthing lead wire is provided or recommended.		P
1.2.4.3A	<b>Add the following new clause.</b> <b>1.2.4.3A CLASS 0I EQUIPMENT</b>  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. a) Provision of 2-pin plug with earthing lead including the condition of that 2-pin adaptor with earthing lead wire is provided or recommended. b) Provision of an independent earthingterminal, when 2-core mains cord (without earthing conductor) is used.  NOTE – Class 0I equipment may have a part constructed with Double Insulation or Reinforced Insulation.		N/A
1.3.2	<b>Add the following notes after first paragraph:</b>  Note 1 Transportable or similar equipment that are 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.  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.		N/A

IEC 60950-1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>Japan– Differences to IEC 60950-1:2005+A1:2009</b> (Test results according to last modification date 2016-11-15in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.1	<b>Replace the first paragraph with the follows:</b> Where safety is involved, components shall comply either with the requirements of this standard, 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, a component that falls within the scope of METI Ministerial ordinance No. 85 is properly used in accordance with its marked ratings, requirements of 1.5.4, 2.8.7 and 3.2.5 apply, and in addition, a cord connector of power supply cord set mating with appliance inlet complying with the standard sheet of IEC 60320-1 or JIS C 8283-1, shall comply with relevant standard sheet of IEC 60320-1 or JIS C 8283-1. <b>Replace Note 1 with the following:</b> Note 1 JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope.		P
1.5.2	<b>Replace the first sentence in the first dashed paragraph with the following:</b> - 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. <b>Replacethefirst sentence in the third dashed paragraph as follows:</b> - 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. <b>Addthe following Note 2after the thirddashed paragraph as follows:</b> Note 2 See 1.7.5A when Type C.14 appliance coupler rated 10 A per JIS C 8283-1 is used with an equipment rated not more than 125 V and rated more than 10 A.		N/A
1.5.9.1	<b>Add the followingin the last of NOTE 1.</b> Gas discharge tube connected in series with VDR may be used.		N/A

IEC 60950-1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>Japan– Differences to IEC 60950-1:2005+A1:2009</b> (Test results according to last modification date 2016-11-15in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9.4	<b>Add following paragraph after the NOTE:</b> Gas discharge tube that complies with the requirements of functional insulation may be connected in series with VDR for bridging basic insulation..		N/A
1.7.1.1	<b>Replace the last paragraph with the following:</b> Where symbols are used, they shall conform to JIS S 0101, ISO 7000 or IEC 60417 where appropriate symbols exist.		N/A
1.7.1.2	<b>Replace first and second dashed paragraphs with the followings:</b> <ul style="list-style-type: none"> <li>- manufacturer's or responsible company's name or trade-mark or identification mark;</li> <li>- manufacturer's or responsible company's model identification or type reference;</li> </ul>		P
1.7.2.1	<b>Add the following after 2nd paragraph.</b> Instruction or equipment marking regarding safety shall be written in Japanese unless otherwise permitted in this standard.		N/A
1.7.2.5	<b>Replace the last sentence with the following:</b> An acceptable marking for an electric shock hazard  (6.2.4 of JIS S 0101).		N/A
1.7.5	<b>Replace 2nd paragraph with the following.</b> Socket-outlets conforming to JISC8303 are examples of standard power supply outlets.		N/A



IEC 60950-1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>Japan– Differences to IEC 60950-1:2005+A1:2009</b> (Test results according to last modification date 2016-11-15in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5A	<p><b>Add the following new clause. after 1.7.5</b></p> <p>1.7.5A Appliance Coupler            If appliance coupler according to IEC60320-1, C.14(rated current: 10A)is used in equipment whose rated voltage is less than 125V and rated current is over 10A, the following instruction or equivalent shall be described in the user instruction.            “ Use only designated cord set attached in this equipment”  <i>Example in Japanese:</i>            “この機器に同こん(梱)した指定の電源コードセットだけを使用して下さい。”</p> <p>If appliance coupler is used for connection to the mains and if the cord set is not provided within the package for the equipment, suitable information regarding to the cord set shall be described in the user instruction  <i>Note Since the combination of appliance inlet with earthing pin and two-core cord set (without earthing conductor) is special, the cord set should be attached in the equipment and the use instruction should provide the information that the cord set is exclusively used with the equipment and not allowed to use with other equipments.</i></p>		N/A
1.7.14A	<p><b>Add the following new clause. after 1.7.14</b></p> <p><b>1.7.14A Marking for CLASS 0I EQUIPMENT</b>            For CLASS 0I EQUIPMENT, the following or equivalent instructions shall be marked.            - the following instruction shall be marked on the mains plug or on the visible place of the main body            “Provide an earthing connection”  <i>Example in Japanese:</i>            “必ず接地接続を行ってください。”</p> <p>- the following marking shall be marked on the visible place of the main body or written in the operating instructions:            “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.”  <i>Example in Japanese:</i>            接地接続は必ず、電源プラグを電源につなぐ前に行ってください。            また、接地接続を外す場合は、必ず電源プラグを電源から切り離してから行ってください。</p>		N/A

IEC 60950-1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>Japan– Differences to IEC 60950-1:2005+A1:2009</b> (Test results according to last modification date 2016-11-15in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.14B	<b>Add the following new clause. after 1.7.14A</b> 1.7.14BProtective earthingconductor used for CLASS 0I equipment For CLASS 0I equipmentprovided with independent main protective earthing terminal, where the cord for the protectiveearthing connection is not provided within the package for the equipment, the suitable information for the protective earthing connection shall be provided in the instruction manual. (See 2.6.3.2)		N/A
2.1.1.1	<b>Replace item b) of 2.1.1.1with the following.</b> b) A test with the test finger, Figure 2A, which shall not contact parts described above whenapplied to openings in the ENCLOSURES after removal of parts that can be detached by anOPERATOR, including fuseholders, and with OPERATOR access doors and covers open. It ispermitted to leave lamps in place for this test. Connectors that can be separated by anOPERATOR, other than those complying with JIS C 8303 or Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance or JIS C 8285 or IEC 60309 series or JIS C 8283 series or IEC 60320 series, shall also be tested during disconnection.		N/A
2.5	<b>Replacement:</b> "IEC 60730-1" replaced with "JIS C 9730-1".		N/A
2.6.3.2	<b>Add the following after 1st paragraph.</b> However where the single core conductor is used for protective earthing lead or earthingcordfor CLASS 0I equipment, either of the following condition shall be met. - Use of annealed copper wire with1 .6mm diameter or corrosion-inhibiting metal wire equivalent or higher in term of strength and thickness. - Single core cord or single core cabtire cable with 1.25mm <sup>2</sup> ormore cross-sectional area.		N/A
2.6.3.5	<b>Add the following after 1st paragraph.</b> However this requirement does not apply to internal conductor of the cord set that is covered by the sheath of mains cord and is the formed together with mains plug and appliance connector.		N/A

IEC 60950-1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>Japan– Differences to IEC 60950-1:2005+A1:2009</b> (Test results according to last modification date 2016-11-15in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.4.2	<b>Replace 1st paragraph with the following.</b> 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 applianceinlet is regarded as the main protective earthing terminal. However, for CLASS 0I EQUIPMENT provided with the separate main protective earthing terminal other than appliance inlet, the separate main protective earthing terminal may be treated as mains protective earthing terminal.		N/A
2.6.5.4	<b>Replace 1st sentence with the following.</b> Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:		N/A
2.6.5.8A	<b>Add the following new clause. after 2.6.5.8</b> 2.6.5.8A Earthing of CLASS 0I EQUIPMENT Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V. For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip. CLASS 0I EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external location where easily visible.		N/A
2.7.6	<b>Replace “ISO 3864, No. 5036” with “6.2.4 of JIS S 0101”.</b>		N/A
2.9.3 Table 2H	<b>Replace the following columns in Table 2H.</b> The right column for BASIC, TNV-2, -earthed TNV-1 circuit is replaced with “B13 <sup>d), f)</sup> ” The right column for SUPPLEMENTARY, TNV CIRCUIT, -basic-insulated conductive part earthed circuit is replaced with “S2”		N/A
2.10.3.1	<b>Replace 8thparagraph with the following</b> The above minimum CREEPAGE DISTANCES for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series, JIS C 8283 series, IEC60320 series, JIS C 8303,andAppendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance in which dimension is comply with JIS C 8283 series, JIS C 8303 or IEC 60309-2.		N/A

IEC 60950-1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>Japan– Differences to IEC 60950-1:2005+A1:2009</b> (Test results according to last modification date 2016-11-15in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.4.3	<b>Replace 6th paragraph with the following</b> The above minimum CREEPAGE DISTANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series, JIS C 8283 series, IEC60320 series, JIS C 8303, and Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance in which dimension is comply with JIS C 8283 series, JIS C 8303 or IEC 60309-2.		N/A
2.10.9	<b>Replace “1.4.5” in 3rd paragraph with “1.4.12”.</b>		N/A
3.2.3	<b>Add the following after 3rd paragraph.</b> Table 3A applies when cables complying JIS C 3662 or JIS C 3663 are used. In case of other cables, cable entries shall be so designed that a conduit suitable for the cable used can be fitted.		N/A
3.2.4	<b>Add the following as fourth dash.</b> - be so constructed that mechanical stress shall not transmit to the soldering part of inlet terminal during insertion or removal of the connector except that the body of the inlet is secured and is secured not only soldering.		N/A


IEC 60950-1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>Japan– Differences to IEC 60950-1:2005+A1:2009</b> (Test results according to last modification date 2016-11-15in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.5.1	<p><b>Add the following to the last of first dashed paragraph.</b></p> <p>Or mains cords shall be of the sheathed type complying with Appendix 1 of the interpretation of Ministerial Ordinance 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 the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance.</p> <p><b>Replace 3rd dashed paragraph with the following.</b></p> <p>– include, for equipment required to have protective earthing, a PROTECTIVE EARTHING CONDUCTOR having green-and-yellow insulation. However this requirement does not apply to internal conductor of the cord set that is covered by the sheath of mains cord and is the formed together with mains plug and appliance connector. For CLASS 0I EQUIPMENT provided with the separate main protective earthing terminal, the protective conductor may not need to provide in mains cord. ; and</p> <p><b>Replace 4th dashed paragraph with the following.</b></p> <p>– The cord complying with JIS C 3662-5 or JIS C 3663-4 has conductors with cross-sectional areas not less than those specified in Table 3B. Other cord shall comply with relevant wiring regulation.</p>		N/A
3.3.4 Table 3D	<p><b>Add the following note to Table 3D:</b></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><b>Add the following after the first sentence:</b></p> <p>This requirement is not applicable to the external earthing terminal of Class 0I equipment.</p>		N/A
4.3.4	<p><b>Add the following after the first sentence:</b></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

IEC 60950-1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>Japan– Differences to IEC 60950-1:2005+A1:2009</b> (Test results according to last modification date 2016-11-15in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.5	<b>Replace 1st dashed paragraph with the following.</b> Within a manufacturer's unit or system, plugs and sockets likely to be used by the OPERATOR or by a SERVICE PERSON shall not be employed in a manner likely to create a hazard due to misconnection. In particular, connectors complying with IEC 60320/JIS C 8283 series or JIS C 8303 or JIS C 8358 shall not be used for SELV CIRCUITS or TNV CIRCUITS. Keying, location or, in the case of connect orsaccessible only to a SERVICE PERSON, clear markings are permitted to meet the requirement.		N/A
4.4.2	<b>Replace the paragraph with the following:</b> HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall also comply with Annex JA.		N/A
4.5.3	<b>Add the following note to footnote b) of Table 4B:</b> 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. 3:2008/04/19) may apply.		N/A
5.1.3	<b>Add a note after the first paragraph as follows:</b> Note – Attention should be drawn to that majority of three-phase power system in Japan is of delta connection, and therefore, in that case, test is conducted using the test circuit from IEC 60990, figure 13.		N/A

IEC 60950-1C - ATTACHMENT																																							
Clause	Requirement + Test	Result - Remark	Verdict																																				
<b>Japan– Differences to IEC 60950-1:2005+A1:2009</b> (Test results according to last modification date 2016-11-15in CB Bulletin)																																							
Clause	Requirement + Test	Result - Remark	Verdict																																				
5.1.6	<b>Replace Table 5A. as follows</b> <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.<sup>a</sup></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<sup>b</sup></td><td>0,25</td><td>-</td></tr> <tr> <td rowspan="2">HAND-HELD</td><td>Main protective earthing terminal of CLASS I EQUIPMENT</td><td>0,75</td><td>-</td></tr> <tr> <td>Main protective earthing terminal of CLASS 0 I EQUIPMENT</td><td>0,5</td><td>-</td></tr> <tr> <td rowspan="2">MOVABLE (other than HAND_HELD, but including TRANSPORTABLE EQUIPMENT)</td><td>Main protective earthing terminal of CLASS I EQUIPMENT</td><td>3,5</td><td>-</td></tr> <tr> <td>Main protective earthing terminal of CLASS 0 I EQUIPMENT</td><td>1.0</td><td>-</td></tr> <tr> <td rowspan="2">STATIONARY, PLUGGABLE TYPE A</td><td>Main protective earthing terminal of CLASS I EQUIPMENT</td><td>3,5</td><td>-</td></tr> <tr> <td>Main protective earthing terminal of CLASS 0 I EQUIPMENT</td><td>1,0</td><td>-</td></tr> <tr> <td rowspan="2">ALL other STATIONARY EQUIPMENT - not subject to the conditions of 5.1.7 - subject to the conditions of 5.1.7</td><td>Main protective earthing terminal of CLASS I EQUIPMENT</td><td>3.5 -</td><td>- 5 % of input current</td></tr> <tr> <td>Main protective earthing terminal of CLASS 0 I EQUIPMENT</td><td>1.0 -</td><td>- -</td></tr> </tbody> </table> <p>a If peak values of TOUCH CURRENT are measured, the maximum values are obtained by multiplying the r.m.s.values in the table by 1,414.</p> <p>b Some unearthed accessible parts are covered in 1.5.6 and 1.5.7 and the requirements of 2.4 apply. These may be different from those in 5.1.6.</p>	Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. <sup>a</sup>	Maximum PROTECTIVE CONDUCTOR CURRENT	ALL equipment	Accessible parts and circuits not connected to protective earth <sup>b</sup>	0,25	-	HAND-HELD	Main protective earthing terminal of CLASS I EQUIPMENT	0,75	-	Main protective earthing terminal of CLASS 0 I EQUIPMENT	0,5	-	MOVABLE (other than HAND_HELD, but including TRANSPORTABLE EQUIPMENT)	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	-	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1.0	-	STATIONARY, PLUGGABLE TYPE A	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	-	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1,0	-	ALL other STATIONARY EQUIPMENT - not subject to the conditions of 5.1.7 - subject to the conditions of 5.1.7	Main protective earthing terminal of CLASS I EQUIPMENT	3.5 -	- 5 % of input current	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1.0 -	- -		P
Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. <sup>a</sup>	Maximum PROTECTIVE CONDUCTOR CURRENT																																				
ALL equipment	Accessible parts and circuits not connected to protective earth <sup>b</sup>	0,25	-																																				
HAND-HELD	Main protective earthing terminal of CLASS I EQUIPMENT	0,75	-																																				
	Main protective earthing terminal of CLASS 0 I EQUIPMENT	0,5	-																																				
MOVABLE (other than HAND_HELD, but including TRANSPORTABLE EQUIPMENT)	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	-																																				
	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1.0	-																																				
STATIONARY, PLUGGABLE TYPE A	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	-																																				
	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1,0	-																																				
ALL other STATIONARY EQUIPMENT - not subject to the conditions of 5.1.7 - subject to the conditions of 5.1.7	Main protective earthing terminal of CLASS I EQUIPMENT	3.5 -	- 5 % of input current																																				
	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1.0 -	- -																																				
Annex G	<b>Replace the paragraph before Table G.2 with the following</b> The above minimum CREEPAGE DISTANCES for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series, JIS C 8283 series, IEC60320 series, JIS C 8303, and Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance in which dimension is comply with JIS C 8283 series, JIS C 8303 or IEC 60309-2.		N/A																																				
Annex P	<b>Delete the issued date of IEC61051-2.</b>		N/A																																				
Annex Q	<b>Replace the terms in b) as follows:</b> From “Maximum continuous voltage” to “Maximum continuously applied voltage” From “The maximum continuous a.c. voltage” to “The maximum continuously applied a.c. voltage”		N/A																																				

IEC 60950-1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>Japan– Differences to IEC 60950-1:2005+A1:2009</b> (Test results according to last modification date 2016-11-15in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
Annex U U.2.4	<b>Add the following new note after NOTE:</b> NOTE 2 Considering environmental issue, "(for example 1,1,1 -trichloroethane)" was deleted from the above paragraph.	Should be evaluated during national approval.	N/A
Annex V V.1	<b>Replace “3.1.2” in the first line of V.1 with “312” in first line.</b>		N/A
AnnexW W.1	<b>Replace third sentence in the first paragraph with the following:</b> Floating circuits can exist in CLASS IEQUIPMENT, CLASS 0I EQUIPMENT and earthed circuits can exist in CLASS II EQUIPMENT.		N/A
Annex CC CC.2	<b>Replace second dashed paragraph with the following:</b> - 10 000 cycles of turning enable on and off with a ferrite-core inductor having (0.35 ± 0.1) mH inductance at 1 kHz and a d.c. resistance not exceeding 1 Ωconnected in the output circuit;  <b>Replace fifth dashed paragraph with the following:</b> –10 000 cycles of turning the input pin on and off with a ferrite-core inductor having (0.35 ± 0.1) mH inductance at 1 kHz and a d.c. resistance not exceeding 1Ωconnected to the input supply and return while keeping enable active and shorting the output;	Certified component used.	P
CC.3	<b>Add note at end of CC.3:</b> Note: The fast blow fuse should be the one complying with IEC 60127-2.		N/A



IEC 60950-1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>Japan– Differences to IEC 60950-1:2005+A1:2009</b> (Test results according to last modification date 2016-11-15in CB Bulletin)			
Clause	Requirement + Test	Result - Remark	Verdict
AnnexEE	<p><b>ReplaceAnnex EEwith the following Annex JA.</b></p> <p style="text-align: center;">Annex JA (normative) Document shredding machines</p> <p>HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall additionally comply with the requirements of this annex.</p> <p><b>JA.1 Markings and instructions</b></p> <p>The symbol  (JIS S 0101:2000, 6.2.1) 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"> <li>-that use by an infants/children may cause a hazard of injury etc.;</li> <li>-that a hand can be drawn into the mechanical section for shredding when touching the document-slot;</li> <li>-that clothing can be drawn into the mechanical section for shredding when touching the document-slot;</li> <li>-that hairs can be drawn into the mechanical section for shredding when touching the document-slot;</li> <li>-in case of equipment incorporating a commutator motor, that equipment may catch fire or explode by sprayingof flammable gas.</li> </ul> <p><b>JA.2 Inadvertent reactivation</b></p> <p>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. Compliance is checked by inspection and, where necessary, by a test with the test finger, Figure JA.1</p> <p><b>JA.3 Disconnection from the mains supply</b></p> <p>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> <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>		N/A

## IEC 60950-1C - ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

**Japan– Differences to IEC 60950-1:2005+A1:2009**

(Test results according to last modification date 2016-11-15in CB Bulletin)

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

**JA.4 Protection against hazardous moving parts**

Any warning shall not be used instead of the structure for preventing access to hazardous moving parts.

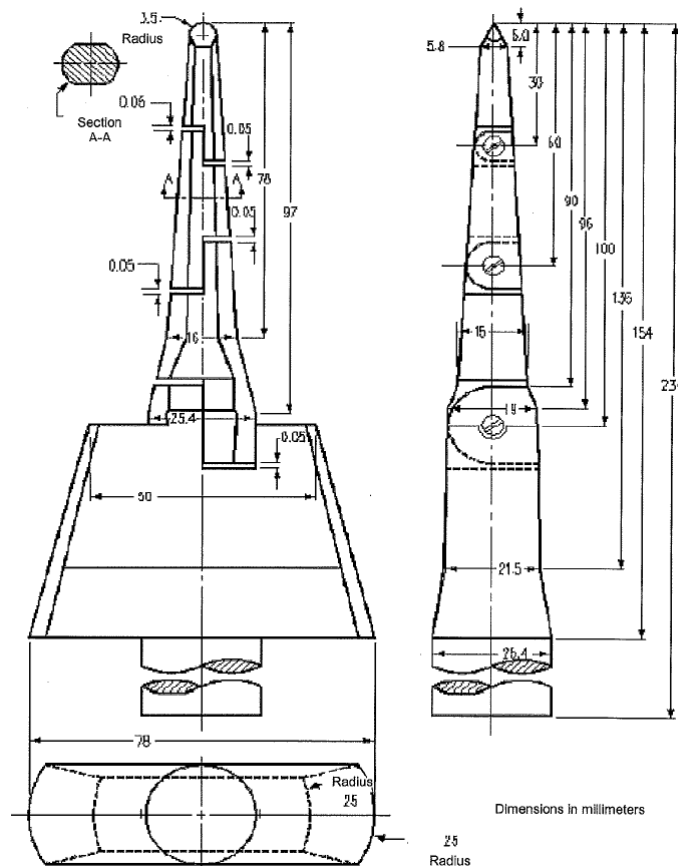
Document shredding machines shall comply with the following requirements.

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.

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.

**Figure JA.1 Test finger**

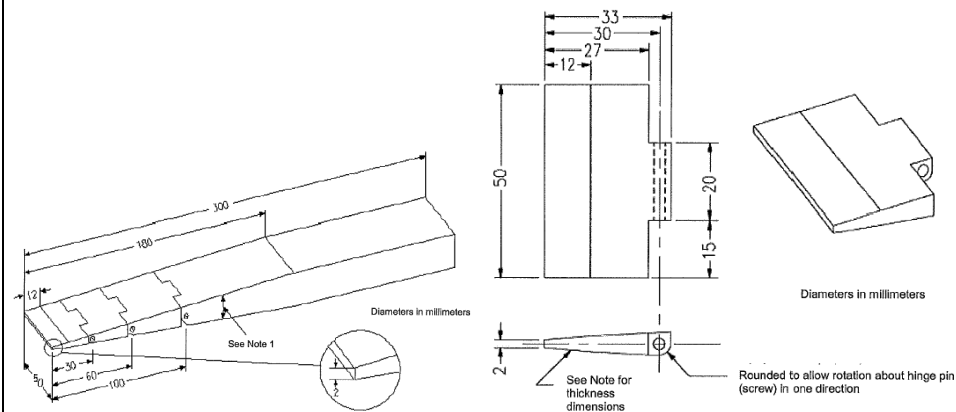
## IEC 60950-1C - ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

**Japan– Differences to IEC 60950-1:2005+A1:2009**

(Test results according to last modification date 2016-11-15in CB Bulletin)

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

**(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.

Note 2 –The allowable dimensional tolerance of the probe is +/- 0.127 mm.

**Figure JA.2 Wedge-probe**

MISCELLANEOUS
---------------

Appended Table
----------------

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

2.1.1.7	TABLE: Discharge test				P
Measurement Locations	Calculated (s)	Measured (s)	t → 0V (s)	Comments	
Between L and N	--	0.68	--	V <sub>O</sub> = 348V <sub>peak</sub> , 37 % of V <sub>O</sub> = 128.8 V <sub>peak</sub> , voltage drop to 78 V <sub>peak</sub> after 1 s	
Supplementary information:					

2.4.2	TABLE: limited current circuit measurement					P
Location		Voltage (V)	Current (mA)	Freq. (Hz)	Limit (mA)	Comments
C860 secondary pin to earth		1.3	0.65	60	0.7	C860=3300pF
Supplementary information:						

<b>2.6.3.4</b>	<b>TABLE: Resistance of earthing measurement</b>	<b>P</b>
Location	Resistance measured (mΩ)	Comments
The earth pin of appliance inlet to metal enclosure	16	Test current at 32 A, for 2 min. Limit: 0.1Ω
The earth pin of appliance inlet to metal enclosure	19	Test current at 40 A, for 2 min. voltage drop to 0.76 V. Limit: 2.5V
The earth pin of appliance inlet to C850 earthed trace	11	Test current at 32 A, for 2 min. Limit: 0.1Ω
The earth pin of appliance inlet to C850 earthed trace	13	Test current at 40 A, for 2 min. voltage drop to 0.36 V. Limit: 2.5V
The earth pin of appliance inlet to C851 earthed trace	12	Test current at 32 A, for 2 min. Limit: 0.1Ω
The earth pin of appliance inlet to C851 earthed trace	12	Test current at 40 A, for 2 min. voltage drop to 0.48 V. Limit: 2.5V
Supplementary information:		

<b>4.6.1, 4.6.2</b>	<b>TABLE: Enclosure opening measurements</b>	<b>P</b>
Location	Size (mm)	Comments
<b>Horizontal direction</b>		
External plastic enclosure		
Top	Max. 31.8 by 1.0 mm	Numerous rectangular openings provided, the internal metal enclosure is that part which complies with the requirements of openings
Bottom	Max. 23.4 by 2.6 mm	Numerous rectangular openings provided, the

MISCELLANEOUS		
		internal metal enclosure is that part which complies with the requirements of openings
Others	--	No any openings provided.
Internal metal enclosure as fire enclosure:		
Top	1) Max. $\varnothing$ 3.0 mm 2) Max. 71.5 by 4.1 mm 3) Max. 20.7 by 3.2 mm 4) Max. 17.0 by 3.2 mm	1) Numerous circular openings provided. 2) One rectangular opening provided. There's no any hazardous voltage or energy hazards present within 5° projections. 3) One rectangular opening provided. There's no any hazardous voltage or energy hazards present within 5° projections. 4)
Rear	1) Max. $\varnothing$ 3.0 mm 2) Max. 12.3 by 5.8 mm 3) Max. 20.7 by 3.2 mm 4) Max. 12.1 by 5.9 mm	1) Numerous circular openings provided. 2) Four rectangular openings provided. The latching device of base consider as barrier to cover the openings. 3) One rectangular opening provided. There's no any hazardous voltage or energy hazards present within 5° projections. 4) One rectangular opening provided. There's no any hazardous voltage or energy hazards present within 5° projections.
Right side	--	No any openings provided.
Left side	Max. $\varnothing$ 1.3 mm	Numerous circular openings provided.
Bottom	1) Max. $\varnothing$ 1.3mm, centre to centre min. 3.1 mm, thickness min. 0.81 mm; 2) Max. 7.1 by 1.5mm;	1) Numerous circular openings, there's openings which comply with table 4D. 2) Four rectangular opening provided. The component above these opening which supplied from LPS.
<b>Vertical direction for rotate clockwise 90° (power board on top)</b>		
External plastic enclosure		
Right side	Max. 31.8 by 1.0	Numerous rectangular openings provided, the internal metal enclosure is that part which complies with the requirements of openings
Left side	Max. 23.4 by 2.6	Numerous rectangular openings provided, the internal metal enclosure is that part which complies with the requirements of openings
Others	--	No any openings provided.
Internal metal enclosure as fire enclosure:		
Right side	1) Max. $\varnothing$ 3.0mm 2) Max. 71.5 by 4.1 3) Max. 20.7 by 3.2	1) Numerous circular openings provided. 2) One rectangular opening provided. There's no any hazardous voltage or energy hazards present within 5° projections. 3) One rectangular opening provided. There's no any hazardous voltage or energy hazards

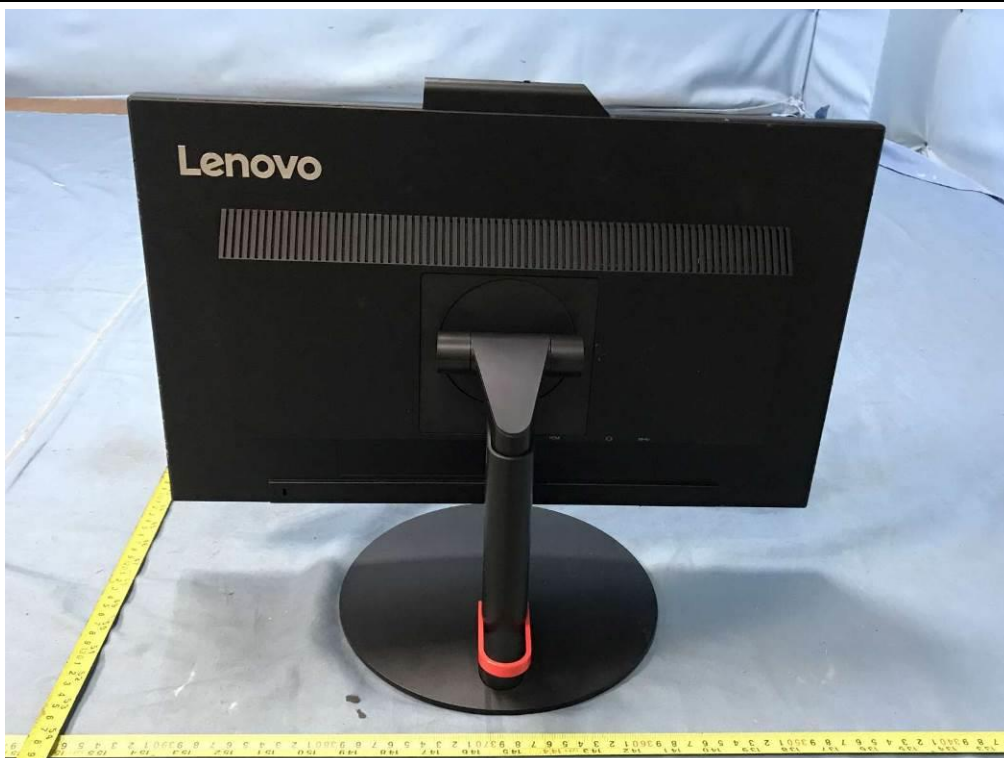
MISCELLANEOUS		
		present within 5° projections.
Rear	1) Max. $\varnothing$ 3.0mm 2) Max. 12.3 by 5.8  3) Max. 20.7 by 3.2  4) Max. 12.1 by 5.9	1) Numerous circular openings provided, there's a mylar sheet under power board consider as barrier to cover the openings.  2) Four rectangular openings provided. The latching device of base consider as barrier to cover the openings.  3) One rectangular opening provided. There's no any hazardous voltage or energy hazards present within 5° projections.  4) One rectangular opening provided. There's no any hazardous voltage or energy hazards present within 5° projections.
Bottom	--	No any openings provided.
Top	Max. $\varnothing$ 1.3 mm	Numerous circular openings provided.
Left side	1) Max. $\varnothing$ 1.3mm. 2) Max. 7.1 mm by 1.5mm;	1) Numerous circular openings. 2) Four rectangular openings provided. There's no any hazardous voltage or energy hazards present within 5° projections.
<b>Vertical direction for rotate clockwise 90° (main board on top)</b>		
External plastic enclosure		
Left side	Max. 31.8 by 1.0	Numerous rectangular openings provided, the internal metal enclosure is that part which complies with the requirements of openings
Right side	Max. 23.4 by 2.6	Numerous rectangular openings provided, the internal metal enclosure is that part which complies with the requirements of openings
Others	--	No any openings provided.
Internal metal enclosure as fire enclosure:		
Left side	1) Max. $\varnothing$ 3.0mm 2) Max. 71.5 by 4.1  3) Max. 20.7 by 3.2	1) Numerous circular openings provided. 2) One rectangular opening provided. There's no any hazardous voltage or energy hazards present within 5° projections.  3) One rectangular opening provided. There's no any hazardous voltage or energy hazards present within 5° projections.
Rear	1) Max. $\varnothing$ 3.0mm 2) Max. 12.3 by 5.8  3) Max. 20.7 by 3.2  4) Max. 12.1 by 5.9	1) Numerous circular openings provided, there's a mylar sheet under power board consider as barrier to cover the openings.  2) Four rectangular opening provided. There's no any hazardous voltage or energy hazards present within 5° projections.  3) One rectangular opening provided. Four rectangular openings provided. The latching device of base consider as barrier to cover the openings.

MISCELLANEOUS		
		4) One rectangular opening provided. There's no any hazardous voltage or energy hazards present within 5° projections.
Top	--	No any openings provided.
Bottom	Max. $\varnothing$ 1.3mm, centre to centre min. 3.1 mm, thickness min. 0.81 mm	Numerous circular openings, there's openings which comply with table 4D.
Right side	1) Max. $\varnothing$ 1.3mm, centre to centre min. 3.1 mm, thickness min. 0.81 mm; 2) Max. 7.1 mm by 1.5mm;	1) Numerous circular openings provided. 2) Four rectangular opening provided. There's no any hazardous voltage or energy hazards present within 5° projections.
Supplementary information:		

## PHOTOS



(D17215FT\*, T22v-10) Overall view – 1



(D17215FT\*, T22v-10) Overall view – 2



PHOTOS



(D17215FT\*, T22v-10) Overall view of Rotate clockwise



(D17215FT\*, T22v-10) Overall view of Rotate counterclockwise

PHOTOS



(D17238FT\*, T24v-10) Overall view – 1



(D17238FT\*, T24v-10) Overall view – 2

PHOTOS



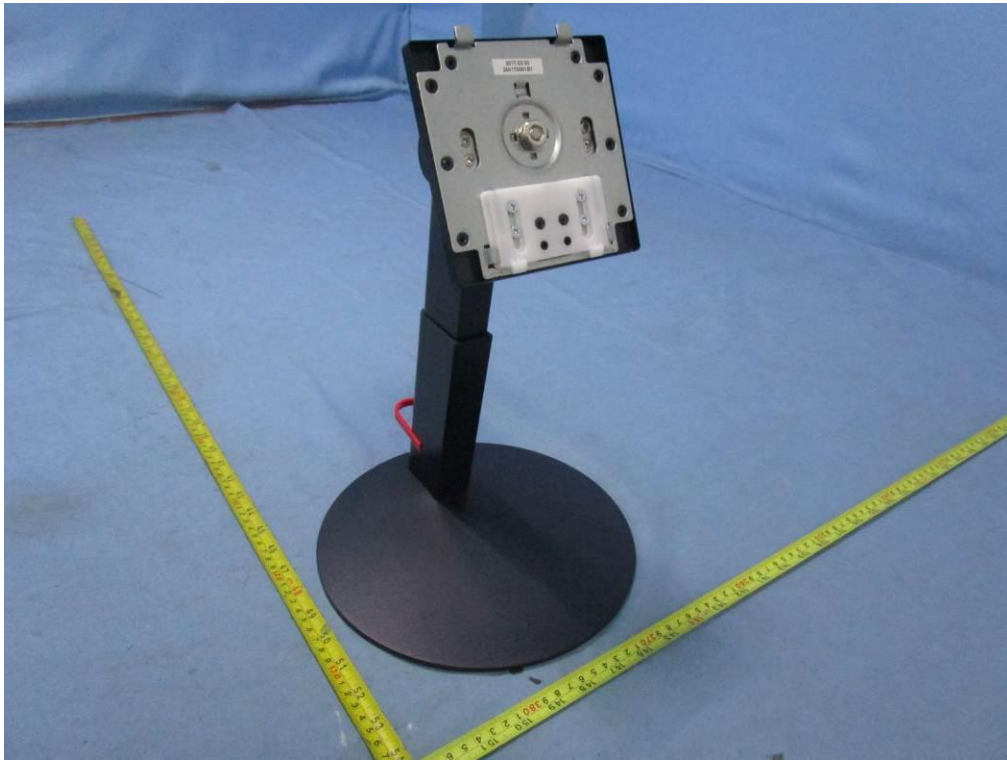
(D17238FT\*, T24v-10) Overall view of Rotate clockwise



(D17238FT\*, T24v-10) Overall view of Rotate counterclockwise



PHOTOS



Stand Base

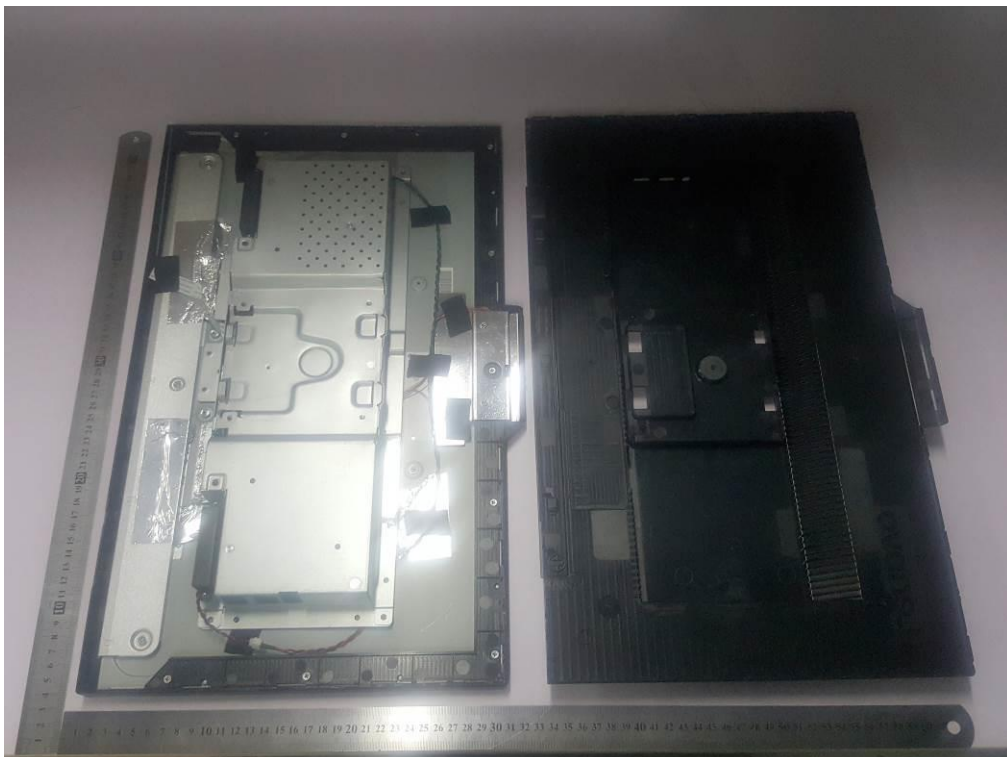


Terminal view of bottom

PHOTOS

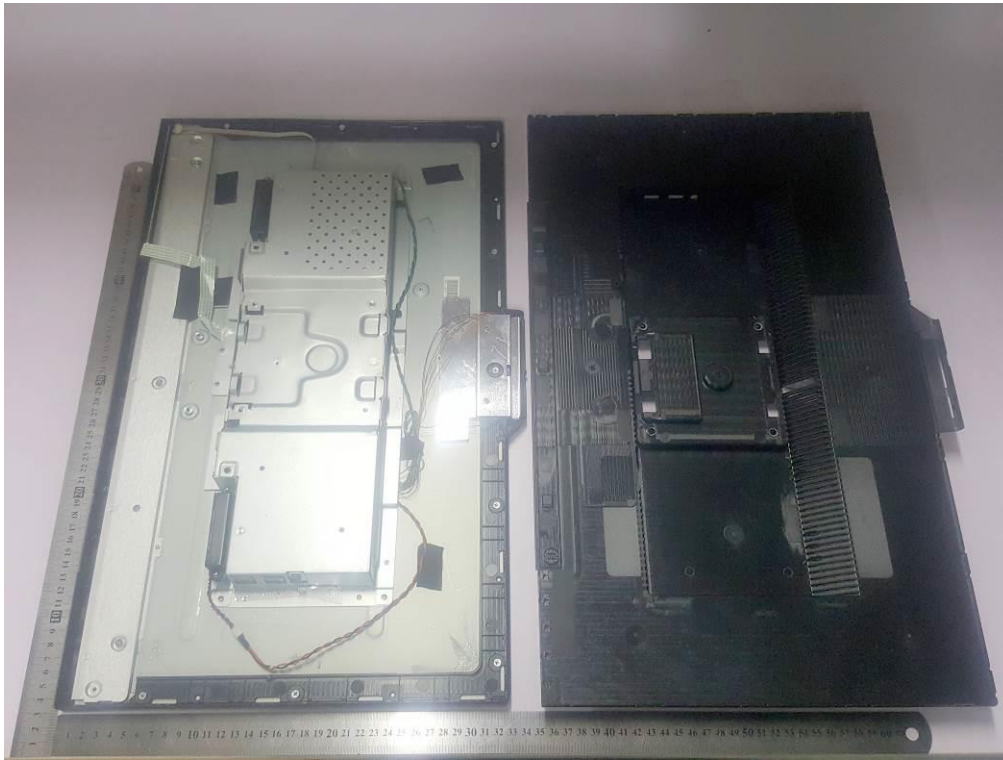


Terminal view of side

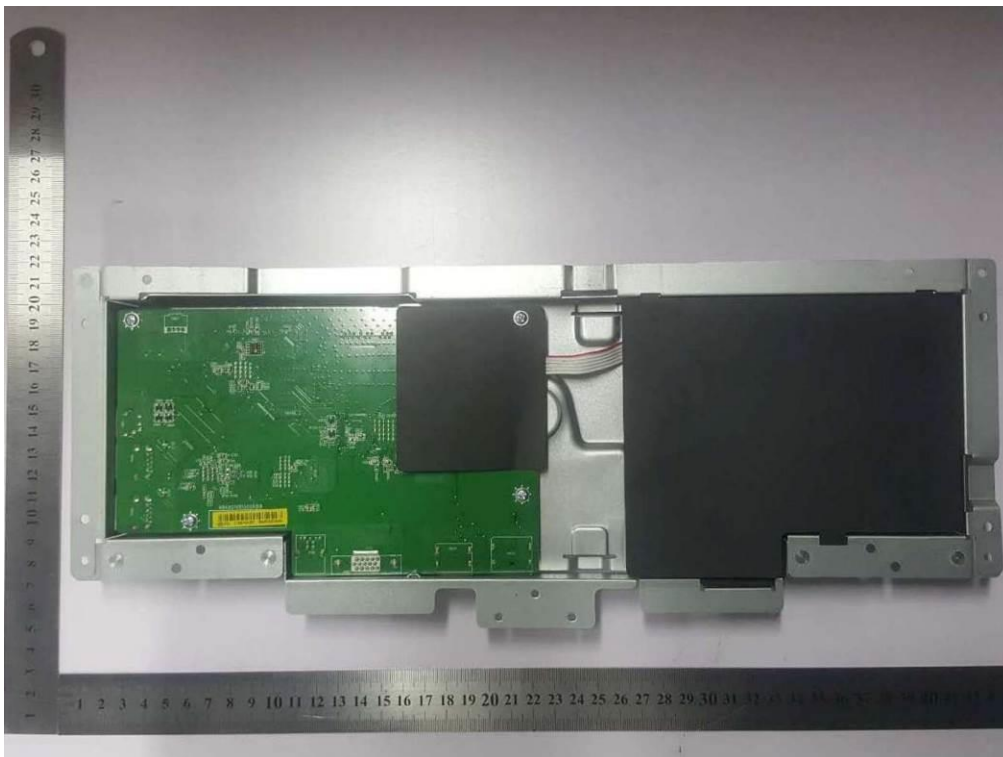


(D17215FT\*, T22v-10) Internal view

## PHOTOS



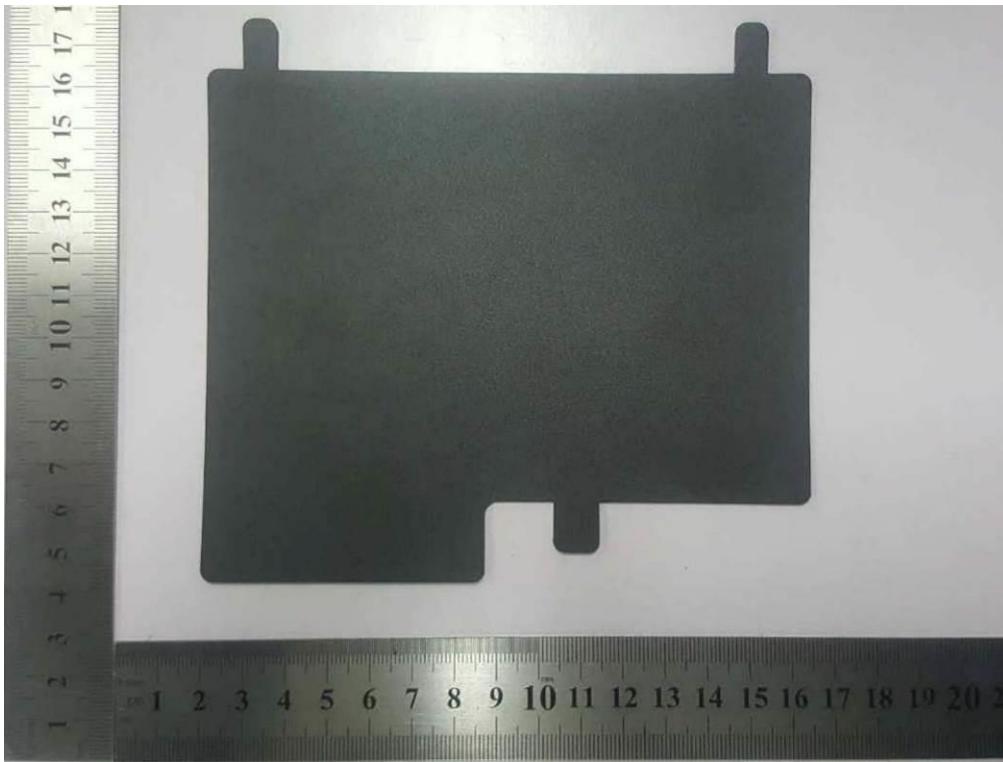
(D17238FT\*, T24v-10) Internal view



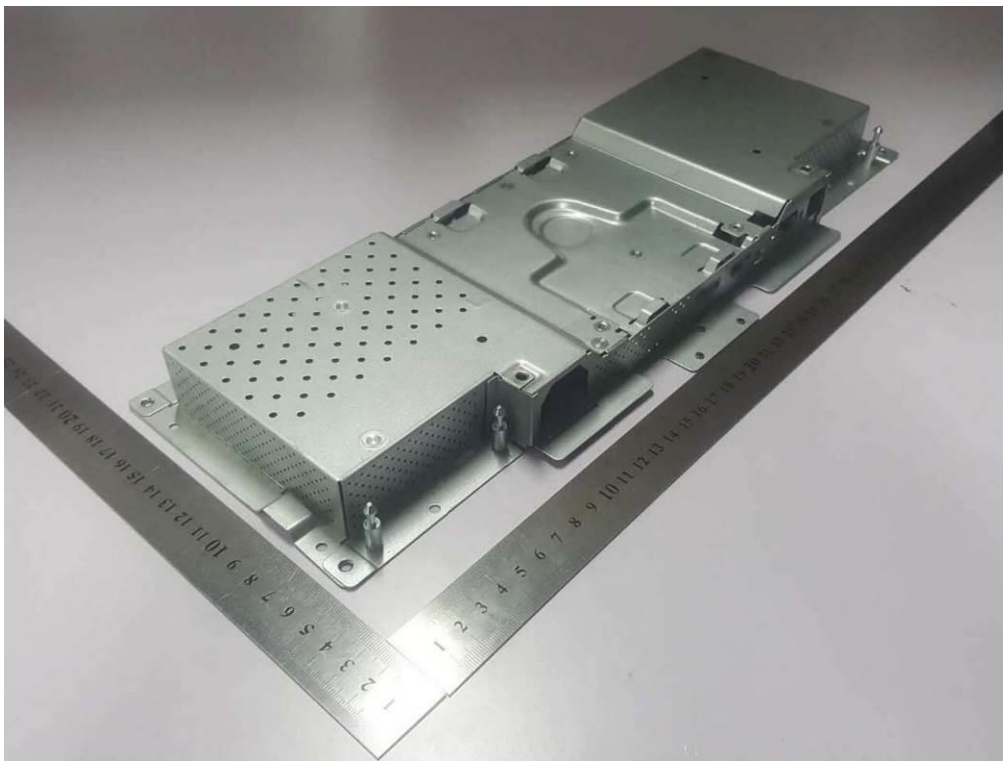
Internal view-2



## PHOTOS

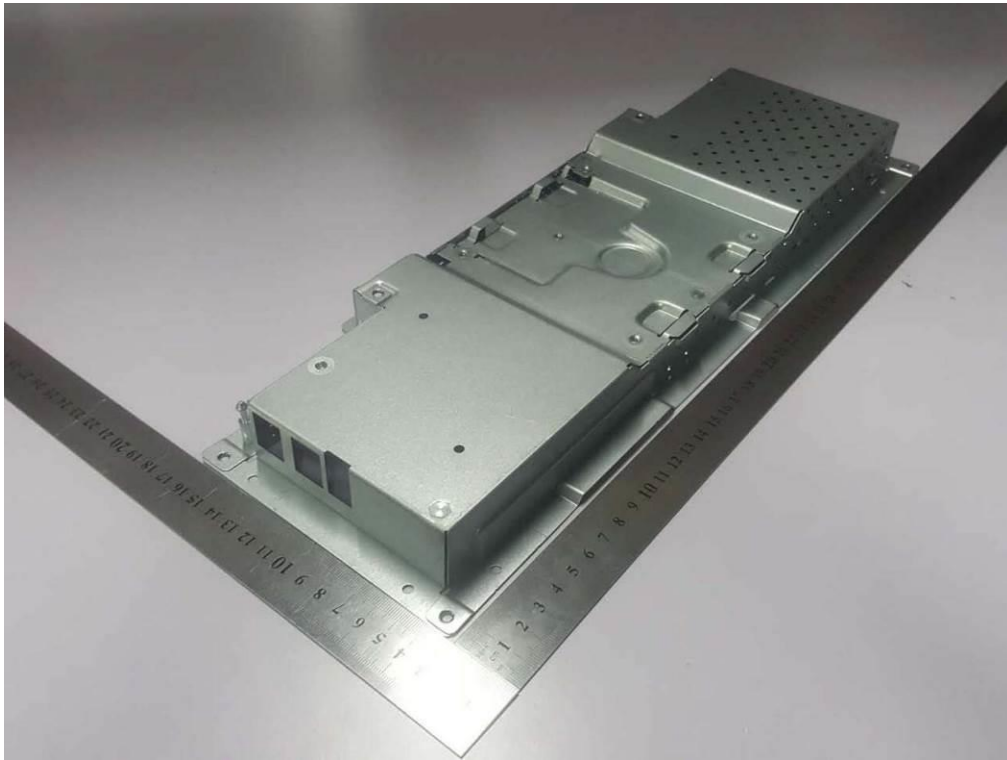


Mylar sheet (between power board and panel)

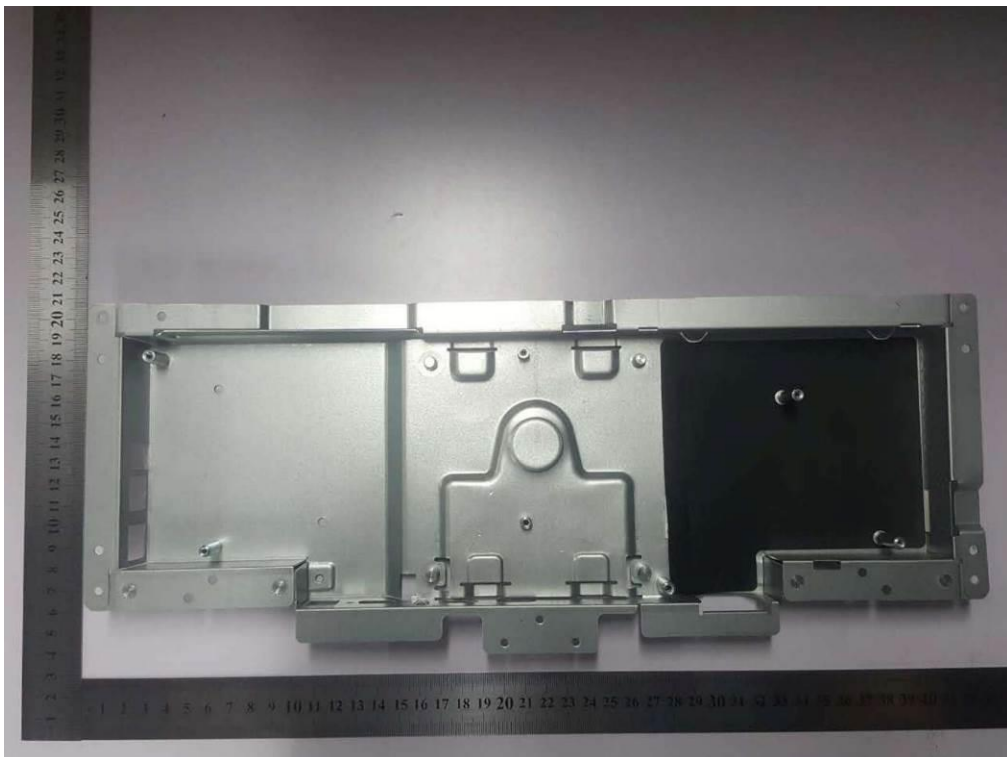


Internal metal enclosure view - 1

PHOTOS



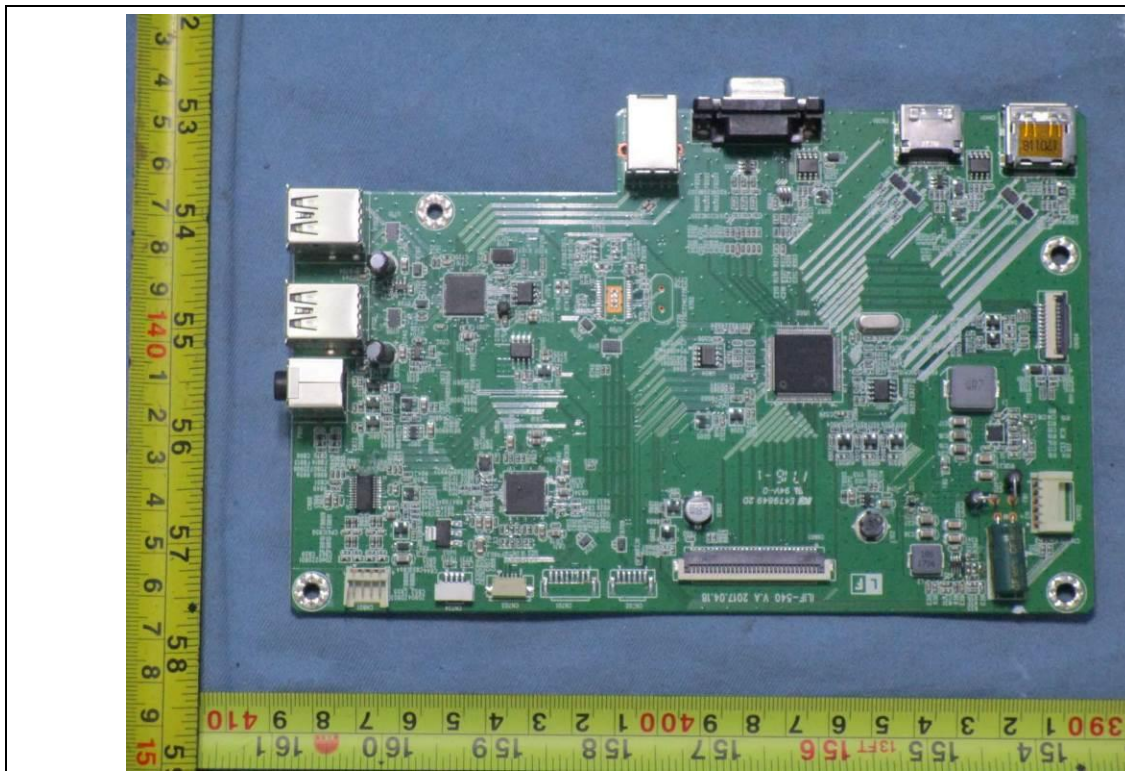
Internal metal enclosure view - 2



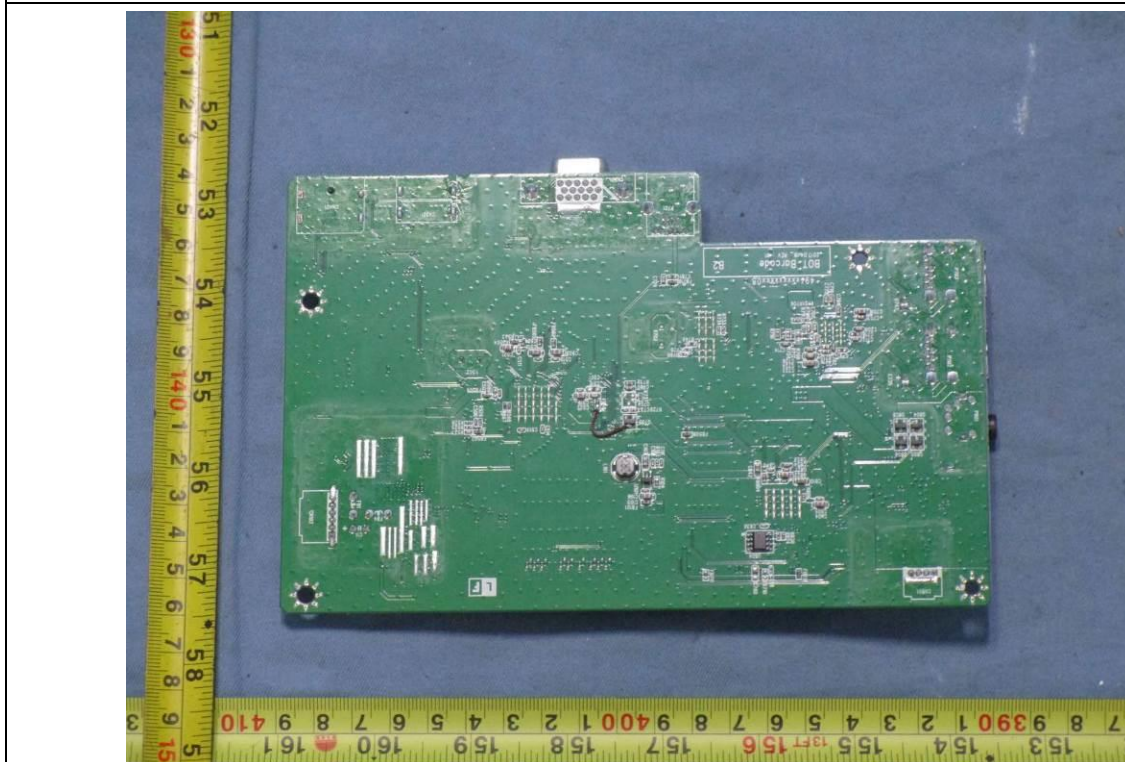
Internal metal enclosure view - 3



## PHOTOS

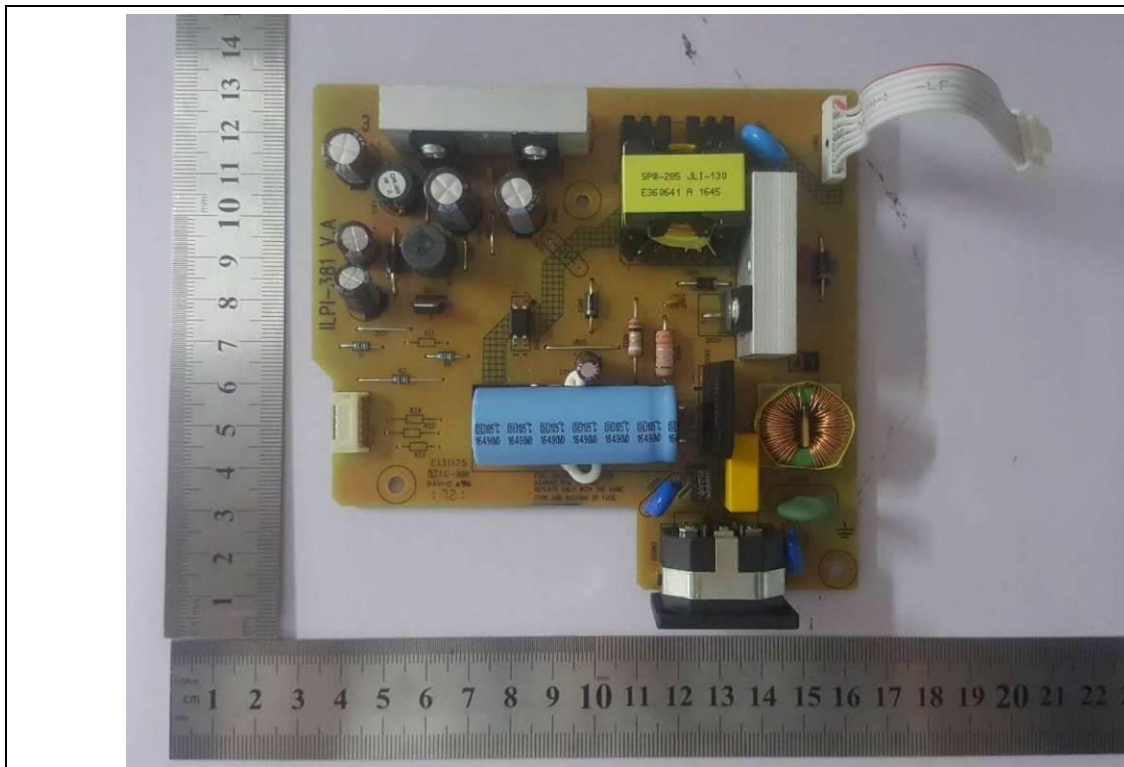


Component side of main board

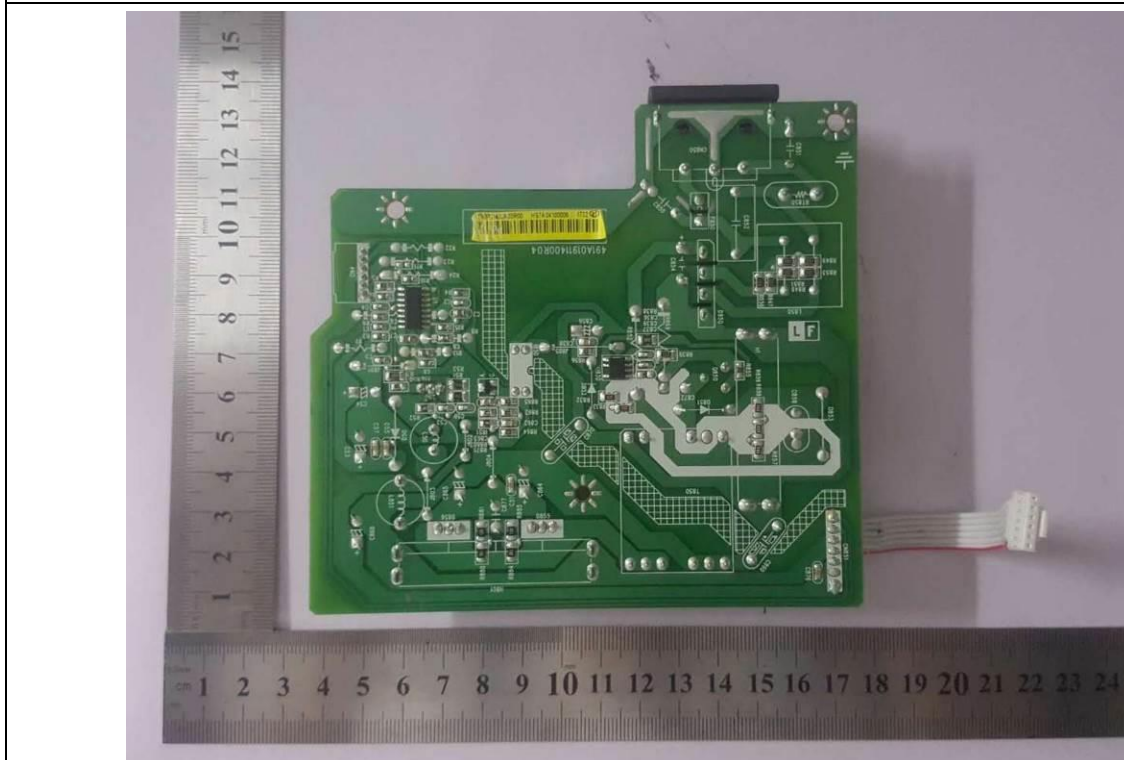


Soldering side of main board

## PHOTOS



Component side of power board



Soldering side of power board