



Ref. Certif. No.

JPTUV-095822

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

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

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product
Produit

LCD Monitor

Name and address of the applicant
Nom et adresse du demandeur

Top Victory Electronics (Taiwan) Co., Ltd.
10F., No. 230, Liancheng Rd.
Zhonghe Dist., New Taipei City, 23553 Taiwan

Name and address of the manufacturer
Nom et adresse du fabricant

NEC Display Solutions, Ltd.
4-28, Mita 1-chome, Minato-ku
Tokyo, 108-0073 Japan

Name and address of the factory
Nom et adresse de l'usine

See additional page(s)

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

AC 100-240V; 50/60Hz; 2.40-1.00A (2.4A for Mexico); Class I

Trademark (if any)
Marque de fabrique (si elle existe)

NEC

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeur

N/A

Model / Type Ref.
Ref. de type

PA311D-BK

Additional information (if necessary may also be
reported on page 2)
Les informations complémentaires (si nécessaire,
peuvent être indiqués sur la 2^{ème} page)

A sample of the product was tested and found
to be in conformity with
Un échantillon de ce produit a été essayé et a été
considéré conforme à la

IEC 60950-1:2005+A1+A2
See Test Report for National Differences

As shown in the Test Report Ref. No. which forms part
of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce Certificat

50229923 001

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



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Global Technology Assessment Center
4-25-2 Kita-Yamata, Tsuzuki-ku
Yokohama 224-0021 Japan
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Mail: info@jpn.tuv.com
Web: www.tuv.com

Signature:

Dipl.-Ing. F. Stoelzel

Date: 08.04.2019

1. TPV Display Technology (Wuhan)
Co., Ltd.
Unique No. 11, Zhuankou Development
District of Economic Technological
Development Zone, Wuhan City 430056, P. R. China
2. TPV Electronics (Fujian) Co., Ltd.
Shangzheng, Yuan Hong Road
Fuqing City, Fujian Province
P. R. China
3. Envision Industry of Electronic
Products Ltd.
Rodovia Anhanguera S/N-KM 49
Tijuco Preto-Jundiá-SP-
13.205-700, Brazil
4. L&T Display Technology (Fujian) Ltd.
Optoelectronic Park, Rongqiao
Economic and Technological
Development Zone
Fuqing, Fujian 350301, P. R. China
5. TPV Electronics (Fujian) Co., Ltd.
Rongqiao Economic and
Technological Development Zone
Fuqing City, Fujian Province
P. R. China
6. Trend Smart CE Mexico S de RL de CV
Avenida Sor Juana Ines de la Cruz
de 19602 Nueva Tijuana,
22435 Tijuana Baja California
MEXICO
7. TPV Display Technology (Beihai)
Co., Ltd.
China Electronic Beihai Industry
Park, Northeast of the Crossing
Between Taiwan Road and Jilin Road, Beihai City, Guangxi, P. R. China
8. TPV Technology (Qingdao)
Co., Ltd.
No.99 Huoju Road, High-tech
Industrial Development Zone
Qingdao City, Shandong Province, P. R. China
9. TPV Display Technology (China)
Co., Ltd.
No. 106 Jinghai 3 Rd., BDA
Beijing City 100176
P. R. China

Additional information (if necessary)
Information complémentaire (si nécessaire)

Report Ref. No.: 50229923 001

Date: 08.04.2019

Signature:


Dipl.-Ing. F. Stoelzel

10. Hefei Huntkey Display Technology
Co., Ltd.
South Jinxiu Road,
East Qingtan Road, Economic And
Technological Development Zone, Hefei, Anhui 230601, P. R. China

11. TPV Electronics (Fujian) Co., Ltd.
Optoelectronic Park,
Rongqiao Economic and
Technological Development Zone,
Fuqing City, Fujian Province 350301, P. R. China

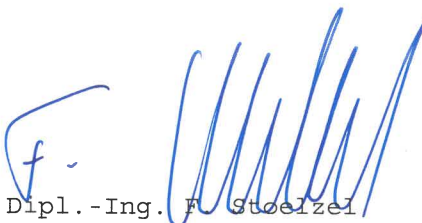
12. Envision Indústria de Produtos
Eletrônicos Ltda.
Av. Torquato Tapajós, 2236,
Flores - CEP 69058-830 - Manaus/AM
Brazil

Additional information (if necessary)
Information complémentaire (si nécessaire)

Report Ref. No.: 50229923 001

Date: 08.04.2019

Signature:


Dipl.-Ing. F. Stoezel



Test Report issued under the responsibility of:



TEST REPORT

IEC 60950-1

Information technology equipment – Safety – Part 1: General requirements

Report Number.: 50229923 001

Date of issue: March 29, 2019

Total number of pages.....: 78

Applicant's name.....: Top Victory Electronics (Taiwan) Co., Ltd.

Address: 10F., No. 230, Liancheng Rd., Zhonghe Dist., New Taipei City,
23553 Taiwan

Test specification:

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

Test procedure.....: CB Scheme

Non-standard test method.....: N/A

Test Report Form No.....: IEC60950_1F

Test Report Form(s) Originator.....: SGS Fimko Ltd

Master TRF.....: Dated 2014-02

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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.

Test item description..... : LCD Monitor		
Trade Mark..... : NEC		
Manufacturer..... : NEC Display Solutions, Ltd. 4-28, Mita 1-chome, Minato-ku, Tokyo, 108-0073 Japan		
Model/Type reference..... : PA311D-BK		
Ratings..... : 100-240V~, 50/60Hz, 2.40-1.0A (2.4A for Mexico)		
Testing procedure and testing location:		
☒	CB Testing Laboratory:	Audix Technology Corporation
Testing location/ address		No. 53-11, Dingfu, Linkou Dist., New Taipei City, Taiwan, Chinese Taipei
☐	Associated CB Testing Laboratory:	
Testing location/ address		
Tested by (name + signature)..... :		Thomas Lin (Project handle) 
Approved by (name + signature)..... :		Ben Lu (Reviewer) 
☐	Testing procedure: TMP/CTF Stage 1:	
Testing location/ address		
Tested by (name + signature)..... :		
Approved by (name + signature)..... :		
☐	Testing procedure: WMT/CTF Stage 2:	
Testing location/ address		
Tested by (name + signature)..... :		
Witnessed by (name + signature)..... :		
Approved by (name + signature)..... :		
☐	Testing procedure: SMT/CTF Stage 3 or 4:	
Testing location/ address		
Tested by (name + signature)..... :		
Witnessed by (name + signature)..... :		
Approved by (name + signature)..... :		
Supervised by (name + signature)		

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

- Photo documentation
- National Differences
- Measurement Section

Total number of pages in each attachment is indicated in each individual attachment.

Summary of testing:**Tests performed (name of test and test clause):**

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

- The maximum normal load condition used as below during testing:
- The equipment operated under maximum brightness, maximum contrast of LED backlight circuit and the volume with 1kHz sinusoidal waveform of unit adjusted to maximum attainable output and dummy load of 5V/0.5A for SENS/MEM port, 5V/0.9A for each USB downstream port (Type-A) (total three provided) and 3.3V/0.5A for Display port (total two provided) and 20V / 3.25A for USB Type C, RJ45 port connected to computer, refer to appended table 1.6.2.
- The equipment operated under maximum brightness, maximum contrast of LED backlight circuit and the volume with 1kHz sinusoidal waveform of unit adjusted to maximum attainable output and dummy load of 5V/0.5A for SENS/MEM port, 5V/0.9A for each USB downstream port (Type-A) (total three provided) and 3.3V/0.5A for Display port (total two provided) refer to appended table 1.6.2 for USB type C mode.
- The test samples are pre-production without serial numbers.
- The equipment provided wall mounting function and complied with loading test mentioned at sub-clause 4.2.10.
- The equipment has been evaluated according to the specified by the manufacturer maximum operating altitude of 5000m (correction factor for clearances according to IEC 60664:1992+A1:2000+A2:2002 of 1.48 is considered).
- The manufacturer specified the maximum ambient temperature as +40°C.
- The LCD Monitor can be operated in landscape (0°) to portrait mode (90°) when main board downside (Wall mounted).

Testing location:

All tests as described in Test Case and Measurement Sections were performed at the laboratory described on page 2.

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

EU Group Differences, EU Special National Conditions, US, CA, AU, NZ, JP

Explanation of used codes: US = United States of America, CA = Canada, AU = Australia, NZ = New Zealand, JP = Japan.

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

For IEC 60950-1:2005+A1 / EN 60950-1:2006+A11:2009+A1:2010+A12:2011 (per client request):

DE, FI, IL, KR

Explanation of used codes: DE = Germany, FI = Finland, IL = Israel, KR = Republic of Korea.

☒ The product fulfils the requirements of EN 60950-1:2006/A11:2009/A1:2010/A12:2011

For IEC 60950-1:2005 / EN 60950-1:2006+A11:2009 (per client request):

AU

Explanation of used codes: AU = Australia.

For IEC 60950-1:2001 / EN 60950-1:2001+A11:2004 (per client request):

(All CB members countries listed in CB Bulletin No. 112A, dated December 2006)

AR, AT, BE, CN, CZ, FR, GR, HU, IN, IT, JP, KE, MY, NL, PL, SG, SI, SK.

Explanation of used codes: AR = Argentina, AT = Austria, BE = Belgium, CN = China, CZ = Czech Republic, FR = France, GR = Greece, HU = Hungary, IN = India, IT = Italy, JP = Japan, KE = Kenya, MY = Malaysia, NL = The Netherlands, PL = Poland, SG = Singapore, SI = Slovenia, SK = Slovakia.

For IEC 60950:1999 (3rd Edition) + Corr. Jan. 2000 (per client request):

BR, IE, PT, RU, TR, UA, ZA.

Explanation of used codes: BR = Brazil, IE = Ireland, PT = Portugal, RU = Russian Federation, TR = Turkey, UA = Ukraine, ZA = South Africa.

For National Differences see corresponding Attachment.

Copy of marking plate

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



Notes:

The above labels are draft of an artwork for marking plate pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.

Only this label representative.

Test item particulars.....:	
Equipment mobility.....:	☒ movable ☐ hand-held ☐ transportable ☒ stationary (when with mounting function) ☐ for building-in ☐ direct plug-in
Connection to the mains.....:	☒ pluggable equipment ☒ type A ☐ type B ☐ permanent connection ☒ detachable power supply cord ☐ non-detachable power supply cord ☐ not directly connected to the mains
Operating condition.....:	☒ continuous ☐ rated operating / resting time:
Access location	☒ operator accessible ☐ restricted access location
Over voltage category (OVC)	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other: not directly connected to the mains
Mains supply tolerance (%) or absolute mains supply values	±10
Tested for IT power systems	☒ Yes ☐ No
IT testing, phase-phase voltage (V)	230 for Norway
Class of equipment	☒ Class I ☐ Class II ☐ Class III ☐ Not classified
Considered current rating of protective device as part of the building installation (A)	16 (20 for North America)
Pollution degree (PD)	☐ PD 1 ☒ PD 2 ☐ PD 3
IP protection class	IPX0
Altitude during operation (m)	Up to 5000
Altitude of test laboratory (m)	Less than 2000
Mass of equipment (kg)	Approx. 14.6kg (unit with base stand); Base stand 6.26kg
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement.....	P (Pass)
- test object does not meet the requirement	F (Fail)
Testing.....:	
Date of receipt of test item.....:	2018-01-07
Date(s) of performance of tests	2018-01-14 to 2018-02-11
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Throughout this report a ☐ comma / ☒ point is used as the decimal separator.	

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

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

☒ **Yes**☐ **Not applicable**

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

Name and address of factory (ies) :

- 1) TPV Electronics (Fujian) Co., Ltd.
Shangzheng, Yuan Hong Road, Fuqing City, Fujian Province, P. R. China.
- 2) TPV Display Technology (Wuhan) Co., Ltd.
Unique No. 11, Zhuankou Development, District of Economic Technological Development Zone, Wuhan City 430056, P. R. China.
- 3) Envision Industry of Electronic Products Ltd.
Rodovia Anhanguera S/N-KM 49, Tijuco Preto-Jundiaí-SP- 13.205-700, Brazil.
- 4) TPV Electronics (Fujian) Co., Ltd.
Optoelectronic Park, Rongqiao Economic and Technological, Development Zone, Fuqing City, Fujian Province 350301, P. R. China.
- 5) L&T Display Technology (Fujian) Ltd.
Optoelectronic Park, Rongqiao Economic and Technological, Development Zone Fuqing, Fujian 350301, P. R. China.
- 6) TPV Display Technology (Beihai) Co., Ltd.
China Electronic Beihai Industry Park, Northeast of the Crossing, Between Taiwan Road and Jilin Road, Beihai City, Guangxi, P. R. China.
- 7) TPV Technology (Qingdao) Co., Ltd.
No.99 Huoju Road, High-tech Industrial Development Zone Qingdao City, Shandong Province, P. R. China.
- 8) TPV Display Technology (China) Co., Ltd.
No. 106 Jinghai 3 Rd., BDA, Beijing City 100176 P. R. China.
- 9) Hefei Huntkey Display Technology Co., Ltd.
South Jinxiu Road, East Qingtan Road, Economic And Technological Development Zone, Hefei, Anhui 230601, P. R. China.
- 10) Trend Smart CE Mexico S de RL de CV
Avenida Sor Juana Ines de la Cruz, de 19602 Nueva Tijuana, 22435 Tijuana Baja California, MEXICO.
- 11) TPV Electronics (Fujian) Co., Ltd.
Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P. R. China.
- 12) Envision Indústria de Produtos Eletrônicos Ltda.
Av. Torquato Tapajós, 2236, Flores - CEP 69058-830 - Manaus/AM, Brazil.

General product information:

The equipment models which shown as page 2 are LCD Monitor intended for information technology equipment scope of this standard use.

The equipment consists of the following critical components:

- LCD panel (LED backlight type);
- Building-in type non-approved switching power supply board;
- Main board type 715GA088 (with HDMI port IN x2, Display port IN x2, LAN port IN, Headphone Jack, USB downstream port (Type-A) x3, USB Upstream port (Type-B) x2, SENS/MEM Port (not USB hub connection), USB-C port(5V, 9V, 12V, 15V, 20V));
- T-Con board
- Internal speak;
- Key control board;
- Base;
- Internal metal enclosure;
- External plastic enclosure

The suitable power supply cord will be provided and evaluated during national approval.

This equipment is intended to be installed by qualified service personnel.

All sources of L9901 are similar to each other except for type designation and manufacturer.

All sources of L9903 are similar to each other except for type designation and manufacturer.

All sources of L9801 are similar to each other except for type designation and manufacturer.

All sources of T9101 are similar to each other except for type designation and manufacturer.

All sources of T9301 are similar to each other except for type designation and manufacturer.

Model Differences

N/A

Additional Information

- The power supply unit used in the product is not a certified product. Hence, compliance has been evaluated in this report.
- The equipment contains with multimedia function ports, therefore the IEC Guide 112 for multimedia equipment has been considered.
- Special national conditions for J60950-1(H29)
Per client's request, supplement the special national conditions for J60950-1(H29) and J3000 (H25) to present test report. Described as following items:
a) Power cord set for Japanese market is added and AC plug adaptor is optional used and the equipment is consider as Class 0I or Class I equipment.
b) Considered further Japanese technical requirements J60950-1 (H29)
- PA311D-BK with main board type 715GA088
The Audio out Jack has also been tested and found in compliance with the requirements of EN 50332-2. Measured maximum output power of the speaker jack: Right side: 125mV; Left side: 128mV.
- The manufacturer declared that the product also fulfilled of the requirements of SANS 60950-1: 2014 (Edition 2.2 / IEC 60950-1: 2013 (Edition 2.2).
- Special national conditions for AS/NZS 60950.1:2015
Per client's request, supplement the special national conditions for AS/NZS 60950.1:2015 to present.
- Power cord set is replaced and AC plug adaptor is optional used for Japanese market. The equipment is regarded to be Class 0I or Class I equipment. Unit also complies with touch current requirements for

Class 0I equipment: < 1.0mA.

MARKINGS AND INSTRUCTIONS

- Fuse Identification (See subclause 1.7.6): Fuse marking is marked on PCB near fuse
- F9901 T5AL/250VAC.
- $\perp$ (IEC 60417-5017 for the wiring terminal of protective bonding conductor. (See subclause 1.7.7.1)
- The product also marked with
 or  (IEC 60417-5009) for the stand-by condition. (See subclause 1.7.8.3)
- I (IEC 60417-5007) for "ON" of the switch. (See subclause 1.7.8.3)
- $\bigcirc$ (IEC 60417-5008) for "OFF" of the switch. (See subclause 1.7.8.3)

Abbreviations used in the report:

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

Indicate used abbreviations (if any)

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	GENERAL		P
1.5	Components		P
1.5.1	General	See below.	P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
1.5.2	Evaluation and testing of components	Components certified to IEC standards and/or their harmonized standards, are used within their ratings and are checked for correct application. Non-certified components are checked for correct application, used within their ratings, tested as part of the equipment and subjected to applicable tests of the component standard. Components, which no relevant IEC-Standard exists, are used within their ratings and are tested under the conditions occurring in the equipment.	P
1.5.3	Thermal controls		N/A
1.5.4	Transformers	Transformers complied with the relevant requirements.	P
1.5.5	Interconnecting cables	Interconnection cable provided with the equipment is carrying signals on energy level below 240 VA. Besides for the insulation materials, there are no other requirements for the interconnection cables.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.6	Capacitors bridging insulation	Between lines: sub class X1 or X2 capacitors according to IEC 60384-14 with 21 days damp heat test. Between Line/Neutral and earth: subclass Y1 or Y2 capacitors according to IEC 60384-14. Between Primary and secondary: subclass Y1 capacitors according to IEC 60384-14.	P
1.5.7	Resistors bridging insulation	See below.	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	Resistors bridging functional insulation only.	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	(see appended table 1.5.1.)	P
1.5.9	Surge suppressors	See below.	P
1.5.9.1	General	See below.	P
1.5.9.2	Protection of VDRs	See Annex Q.	P
1.5.9.3	Bridging of functional insulation by a VDR	Power Supply board type 715GA191: A fuse is connected in series with the VDR (RV9902).	P
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A

1.6	Power interface		P
1.6.1	AC power distribution systems	Considered.	P
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment		N/A
1.6.4	Neutral conductor	Neutral is insulated from earth and body throughout the equipment and components rated accordingly.	P

1.7	Marking and instructions		P
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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	Power rating and identification markings	The power rating marking is provided and is readily visible in operator access area.	P
1.7.1.1	Power rating marking	See copy of marking plate.	P
	Multiple mains supply connections.....:		N/A
	Rated voltage(s) or voltage range(s) (V)	See copy of marking plate.	P
	Symbol for nature of supply, for d.c. only		N/A
	Rated frequency or rated frequency range (Hz):	See copy of marking plate.	P
	Rated current (mA or A)	See copy of marking plate.	P
1.7.1.2	Identification markings		P
	Manufacturer's name or trade-mark or identification mark	See copy of marking plate.	P
	Model identification or type reference	See copy of marking plate.	P
	Symbol for Class II equipment only	The equipment is Class I equipment.	N/A
	Other markings and symbols	Other markings and symbols do not give rise to misunderstanding.	P
1.7.1.3	Use of graphical symbols	Graphical symbols are in accordance with IEC 60417 or ISO 3864-2 or ISO 7000.	P
1.7.2	Safety instructions and marking	See below:	P
1.7.2.1	General	Instructions are available.	P
1.7.2.2	Disconnect devices	Appliance inlet provided as disconnect device.	N/A
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT power distribution systems	For Norway compliance has to be evaluated during the national 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		N/A
1.7.4	Supply voltage adjustment	Full range voltage design, no necessary adjustment.	N/A
	Methods and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment	No such device.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)	See General product information - Markings and Instructions.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.7	Wiring terminals	See below.	P
1.7.7.1	Protective earthing and bonding terminals	See General product information - Markings and Instructions.	P
1.7.7.2	Terminals for a.c. mains supply conductors	The equipment is provided with appliance inlet, which is for connection of a 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	The marking and indication of the power switch is located that indication of function is clearly.	P
1.7.8.2	Colours	No safety involved used.	N/A
1.7.8.3	Symbols according to IEC 60417	See General product information - Markings and Instructions.	P
1.7.8.4	Markings using figures		N/A
1.7.9	Isolation of multiple power sources		N/A
1.7.10	Thermostats and other regulating devices		N/A
1.7.11	Durability	The marking plate has no curling and is not able to be removed easily.	P
1.7.12	Removable parts	No marking place in removable parts.	P
1.7.13	Replaceable batteries	Only Two AA or two AAA consumer type batteries provided for remote controller.	P
	Language(s)		—
1.7.14	Equipment for restricted access locations	The equipment is not intended to be use in restricted access locations.	N/A

2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas	See below.	P
2.1.1.1	Access to energized parts		P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Test by inspection	No access with test finger to any parts with only basic insulation to hazardous voltage. The test pin cannot touch hazardous voltage through any seams within the appliance.	P
	Test with test finger (Figure 2A)	See above.	P
	Test with test pin (Figure 2B)	See above.	P
	Test with test probe (Figure 2C)	No TNV circuit.	N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V_{peak} or V_{rms}); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage circuit in operator access area.	N/A
2.1.1.5	Energy hazards	See appended table 2.1.1.5. The output +24V are exceed 240VA, however, both of the output were for internal use only, no parts at hazardous energy level in operator access area.	P
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment	Voltage decay measurement was conducted with an oscilloscope having an input impedance of 100M Ω in parallel with an input capacitance of 25pF or less.	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	Complied with 2.1.1.1.	P
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A
2.2	SELV circuits		P
2.2.1	General requirements	See below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.2.2	Voltages under normal conditions (V)	(see appended table 2.2)	P
2.2.3	Voltages under fault conditions (V)	(see appended table 2.2)	P
2.2.4	Connection of SELV circuits to other circuits	Complied with sub-clauses, 1.5.6, 2.2.2, 2.2.3, 2.4.	P

2.3	TNV circuits		N/A
2.3.1	Limits		N/A
	Type of TNV circuits		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed		—
2.3.5	Test for operating voltages generated externally		N/A

2.4	Limited current circuits		P
2.4.1	General requirements	The limits of 2.4.2 were not exceeded.	P
2.4.2	Limit values	See below.	P
	Frequency (Hz)	See appended table 2.4.2.	—
	Measured current (mA).....	See appended table 2.4.2.	—
	Measured voltage (V)	See appended table 2.4.2.	—
	Measured circuit capacitance (nF or µF)	See table 1.5.1 and 2.4.2.	—
2.4.3	Connection of limited current circuits to other circuits	The limits of 2.4.2 were not exceeded.	P

2.5	Limited power sources		P
	a) Inherently limited output	(see appended table 2.5)	P
	b) Impedance limited output		N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition	(see appended table 2.5)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Use of integrated circuit (IC) current limiters	Protective IC (U5504) for SENS/MEM port.	P
	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):.		—

2.6	Provisions for earthing and bonding		P
2.6.1	Protective earthing	The relevant parts connected to the main protective earthing terminal reliably. Complied with 2.6.3. See General product information - Markings and Instructions.	P
2.6.2	Functional earthing	Secondary functional earthing is separated to primary by double or reinforced insulation or by basic insulation and protective earthing. Green-and-yellow color combination was not used for functional earthing conductors.	P
	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	See below.	P
2.6.3.2	Size of protective earthing conductors	No power cord provided.	N/A
	Rated current (A), cross-sectional area (mm ²), AWG		—
2.6.3.3	Size of protective bonding conductors	Evaluation by test. See sub-clause 2.6.3.4.	P
	Rated current (A), cross-sectional area (mm ²), AWG	See above.	—
	Protective current rating (A), cross-sectional area (mm ²), AWG	See above.	—
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	The colour combination green-and-yellow is used.	P
2.6.4	Terminals	See below.	P
2.6.4.1	General	See below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.4.2	Protective earthing and bonding terminals	The earthing terminal in the appliance inlet is regarded as the main protective earthing terminal.	P
	Rated current (A), type, nominal thread diameter (mm)	Evaluation by test.	—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	Only protective bonding conductor used in this equipment.	P
2.6.5	Integrity of protective earthing	See below.	P
2.6.5.1	Interconnection of equipment	This unit has its own earthing connection. Any other units connected via the output shall be provided SELV only.	P
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switch or overcurrent protective device in bonding conductor.	P
2.6.5.3	Disconnection of protective earth	Appliance inlet provided as disconnection device.	P
2.6.5.4	Parts that can be removed by an operator	Appliance inlet provided, the earth connection is made before and broken after the hazardous voltage. No other operator removable parts.	P
2.6.5.5	Parts removed during servicing	It is not necessary to disconnect the earth connection except for the removing of the earthed part itself.	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	Self-tapping and spaced thread screws are not used to provide protective bonding. The protective bonding screw is threaded into the metal part at least twice the pitch of the screw thread.	P
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A
2.7	Overcurrent and earth fault protection in primary circuits		P

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Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	Basic requirements	Protection against overcurrents and short-circuits is provided as an integral part of the equipment. Protection against earth faults is provided as part of the building installation.	P
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7	Considered.	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	Only one fuse provided.	N/A
2.7.6	Warning to service personnel :		N/A

2.8	Safety interlocks		N/A
2.8.1	General principles		N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm) :		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

2.9	Electrical insulation		P
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Clause	Requirement + Test	Result - Remark	Verdict
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic materials are not used. After the humidity treatment of 2.9.2, the insulation is then subjected to the relevant electric strength test of 5.2.2.	P
2.9.2	Humidity conditioning	Tested for 120hrs.	P
	Relative humidity (%), temperature (°C) :	95% R.H., 40°C.	—
2.9.3	Grade of insulation	Basic, supplementary, double insulation, reinforced or functional insulation.	P
2.9.4	Separation from hazardous voltages	See below.	P
	Method(s) used :	Method 1.	—

2.10	Clearances, creepage distances and distances through insulation		P
2.10.1	General		P
2.10.1.1	Frequency :	Not exceed 30kHz.	P
2.10.1.2	Pollution degrees :	2	P
2.10.1.3	Reduced values for functional insulation	See 5.3.4.	P
2.10.1.4	Intervening unconnected conductive parts	Complied.	P
2.10.1.5	Insulation with varying dimensions		N/A
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 table 2.10.2.	P
2.10.2.3	Peak working voltage	See appended table 2.10.2.	P
2.10.3	Clearances	See below.	P
2.10.3.1	General	Annex F is considered.	P
2.10.3.2	Mains transient voltages	See below.	P
	a) AC mains supply :	2500 Vpk considered.	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

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.6	Transients from a.c. mains supply		N/A
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	Considered.	P
2.10.4.2	Material group and comparative tracking index	Material group IIIb assumed.	P
	CTI tests	See above.	—
2.10.4.3	Minimum creepage distances	(see appened 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
2.10.5.3	Insulating compound as solid insulation	Approved sources of optocoupler provide min. 0.4mm distance through insulation for reinforced insulation. See appended table 1.5.1 for internal distance.	P
2.10.5.4	Semiconductor devices	See 2.10.5.3.	P
2.10.5.5.	Cemented joints	See appended table 1.5.1 for optocoupler distances.	P
2.10.5.6	Thin sheet material – General	Considered.	P
2.10.5.7	Separable thin sheet material	Reinforced insulation.	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		—
2.10.5.10	Thin sheet material – alternative test procedure	See below.	P
	Electric strength test	(see appended table 5.2)	—
2.10.5.11	Insulation in wound components	See 2.10.5.14.	P
2.10.5.12	Wire in wound components	Reinforced insulation.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Working voltage	See appended table 2.10.2	P
	a) Basic insulation not under stress		N/A
	b) Basic, supplementary, reinforced insulation		N/A
	c) Compliance with Annex U	Complied with annex U, three layers.	P
	Two wires in contact inside wound component; angle between 45° and 90°	Insulating tape provided.	P
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		P
	Working voltage	See appended table 2.10.2.	P
	- Basic insulation not under stress		N/A
	- Supplementary, reinforced insulation	Complied 2.10.5.6.	P
2.10.6	Construction of printed boards		P
2.10.6.1	Uncoated printed boards		P
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs)		N/A
2.10.7	Component external terminations		N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	The cross-sectional area and the temperature of the internal wires are adequate. No internal wire for primary power distribution.	P
3.1.2	Protection against mechanical damage	The wireways including holes are smooth and free from sharp edges.	P
3.1.3	Securing of internal wiring	Internal wires are secured by soldering and quick connector or other mechanical fixing means 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. For the insulation material see 3.1.1.	P
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections	All current carrying connections made by metal to metal.	P
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors	All conductors are reliably secured by solder-pin or glued or other mechanical fixing means.	P
	10 N pull test	Complied.	P
3.1.10	Sleeving on wiring		N/A
3.2	Connection to a mains supply		P
3.2.1	Means of connection	See below.	P
3.2.1.1	Connection to an a.c. mains supply	Appliance inlet provided.	P
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm) :		—

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Clause	Requirement + Test	Result - Remark	Verdict
3.2.4	Appliance inlets	The appliance inlet complied with IEC 60320-1; the connector inserted without difficulty and not supporting the equipment on a flat surface.	P
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type		—
	Rated current (A), cross-sectional area (mm ²), AWG		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N)		—
	Longitudinal displacement (mm)		—
3.2.7	Protection against mechanical damage	No parts under this unit likely to damage the power supply cords. Enclosure without sharp edges.	P
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g)		—
	Radius of curvature of cord (mm)		—
3.2.9	Supply wiring space		N/A
3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm ²)		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm)		—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.4	Disconnection from the mains supply		P
3.4.1	General requirement	See below.	P
3.4.2	Disconnect devices	Appliance inlet is considered as disconnect device.	P
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized	When the power cord is removed from the inlet no remaining parts with hazardous voltage in the equipment.	P
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment	The 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	Interconnection to other equipment via secondary output connectors at SELV.	N/A
3.4.11	Multiple power sources	Single mains supply provided.	N/A
3.5	Interconnection of equipment		P
3.5.1	General requirements	See below.	P
3.5.2	Types of interconnection circuits	SELV and limited current circuits.	P
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment	See appended table 2.5.	P
4	PHYSICAL REQUIREMENTS		P
4.1	Stability		P
	Angle of 10°	The equipment does not fall over.	P
	Test force (N)		N/A
4.2	Mechanical strength		P
4.2.1	General	See below. After the tests, the equipment complies with the requirements of sub-clauses 2.1.1, 2.6.1 and 2.10.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N	10N applied to all components other than the parts serving as an enclosure.	P
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N	After subjected 250N, no damage to the plastic enclosure, metal enclosure and panel.	P
4.2.5	Impact test	No damage to the plastic enclosure, metal enclosure and panel from the steel ball impact test.	P
	Fall test	See above.	P
	Swing test	See above.	P
4.2.6	Drop test; height (mm) :		N/A
4.2.7	Stress relief test	At 70°C for 7 hours.	P
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified :		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N) :	Add an additional force of 25.02kg (3 times the mass of the unit and the mass is 8.34kg without base) was applied to the unit with the VESA adaptor kit. The unit withstood the load test without damages or breaks from the VESA adaptor kit.	P

4.3	Design and construction		P
4.3.1	Edges and corners	The edges and corners are rounded and smoothed.	P
4.3.2	Handles and manual controls; force (N) :	One handle provided, provide additional force 572.32N. (4 times the mass of the unit including stand base). No loosen and no hazard results.	P
4.3.3	Adjustable controls		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress. No loosening of clearance or creepage impairing distances likely to occur.	P
4.3.5	Connection by plugs and sockets	No mismatch of connectors, plugs or socket possible.	P
4.3.6	Direct plug-in 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		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	Insulation in intended use not considered to be exposed to oil or grease.	N/A
4.3.10	Dust, powders, liquids and gases	Equipment in intended use not considered to be exposed to these.	N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids :	No flammable liquids provided.	N/A
	Quantity of liquid (l) :		N/A
	Flash point (°C) :		N/A
4.3.13	Radiation	See below.	P
4.3.13.1	General	See below.	P
4.3.13.2	Ionizing radiation	No ionizing radiation.	N/A
	Measured radiation (pA/kg) :		—
	Measured high-voltage (kV) :		—
	Measured focus voltage (kV) :		—
	CRT markings :		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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: Indicating lights. Optocouplers. For LED backlight, the luminance is far less than 10000cd/m ² . With reference to sub clause 4.1 of IEC 62471:2006 no further test is necessary.	P
4.3.13.6	Other types		N/A

4.4	Protection against hazardous moving parts		N/A
4.4.1	General		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
	Use of symbol or warning		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning		N/A

4.5	Thermal requirements		P
4.5.1	General	No exceeding temperature.	P
4.5.2	Temperature tests	See appended table 4.5.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	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	Phenolic material used without further test. Others refer to table 4.5.5. upon client's request.	P

4.6	Openings in enclosures		P
4.6.1	Top and side openings	See below.	P
	Dimensions (mm)	(see appended table 4.6.1 and 4.6.2)	—
4.6.2	Bottoms of fire enclosures	See below.	P
	Construction of the bottommm, dimensions (mm) ..	(see appended table 4.6.1 and 4.6.2)	—
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm)		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks)		—

4.7	Resistance to fire		P
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	Materials with the required flammability classes are used.	P
	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	Following parts require a fire enclosure: ▪ Components in primary circuits. ▪ Components in secondary circuits not supplied by limited power source. ▪ Insulating wiring.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General	The PCBs have material of flammability class V-1 or better.	P
4.7.3.2	Materials for fire enclosures	See appended table 1.5.1.	P
4.7.3.3	Materials for components and other parts outside fire enclosures	HB min.	P
4.7.3.4	Materials for components and other parts inside fire enclosures	V-2, HF2 min.	P
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current		P
5.1.1	General	See appended table 5.1. See sub-clauses 5.1.2 to 5.1.6.	P
5.1.2	Configuration of equipment under test (EUT)	See below.	P
5.1.2.1	Single connection to an a.c. mains supply	The EUT has only one mains connection.	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	Test circuit in Figure 5A used.	P
5.1.4	Application of measuring instrument	Measuring instruments as in annex D used.	P
5.1.5	Test procedure	The touch current was measured from mains to metal enclosure, plastic enclosure with metal foil, and output connectors.	P
5.1.6	Test measurements	See appended table 5.1.	P
	Supply voltage (V)	See appended table 5.1.	—
	Measured touch current (mA)	See appended table 5.1.	—
	Max. allowed touch current (mA)	See appended table 5.1.	—
	Measured protective conductor current (mA)		—
	Max. allowed protective conductor current (mA) ...		—
5.1.7	Equipment with touch current exceeding 3,5 mA	The touch current not exceeded 3.5mA.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	Supply voltage (V)		—
	Measured touch current (mA)		—
	Max. allowed touch current (mA)		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

5.2	Electric strength		P
5.2.1	General	See appended table 5.2.	P
5.2.2	Test procedure	Table 5B used.	P

5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	See appended table 5.3.	P
5.3.2	Motors		N/A
5.3.3	Transformers	With short-circuited and overloaded of the output of transformer, no high temperature of the transformer was recorded. The test results of short-circuited and overload. (see appended table 5.3 and Annex C)	P
5.3.4	Functional insulation	Functional insulation complied with the requirements c).	P
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE	No hazards considered to be generated with this kind of speaker.	P
5.3.7	Simulation of faults	Complied.	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	See appended table.	P
5.3.9.1	During the tests	Neither fire burns the equipment nor molten metal.	P
5.3.9.2	After the tests	Electric strength test made.	P
6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A
	Supply voltage (V)		—
	Current in the test circuit (mA)		—
6.1.2.2	Exclusions		N/A
6.2	Protection of equipment users from overvoltages on telecommunication networks		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A
6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. output current (A)		—
	Current limiting method		—
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N/A
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A

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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
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples.....:		—
	Wall thickness (mm).....:		—
A.1.2	Conditioning of samples; temperature (°C)		N/A
A.1.3	Mounting of samples		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material.....:		—
	Wall thickness (mm).....:		—
A.2.2	Conditioning of samples; temperature (°C)		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C		—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s)		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

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

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Clause	Requirement + Test	Result - Remark	Verdict
C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		P
	Position	Refer to appended table 1.5.1	—
	Manufacturer	See above.	—
	Type	See above.	—
	Rated values	See above.	—
	Method of protection	Overcurrent protection by circuit design.	—
C.1	Overload test	(see appended table 5.3)	P
C.2	Insulation	(see appended table 5.2)	P
	Protection from displacement of windings	See appended table C.2.	P
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		P
D.1	Measuring instrument	Figure D.1 used.	P
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		P
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	Earthed d.c. mains supplies		N/A
G.2.3	Unearthed d.c. mains supplies		N/A
G.2.4	Battery operation		N/A
G.3	Determination of telecommunication network transient voltage (V)		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks		N/A
G.4.2	Transients from telecommunication networks		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	Determination of minimum clearances :		N/A
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		P
	Metal(s) used:	Complied.	—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V):		N/A
K.3	Thermostat endurance test; operating voltage (V):		N/A
K.4	Temperature limiter endurance; operating voltage (V):		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		P
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	See summary of testing.	P
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N/A
M.1	Introduction		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing 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
N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	ANNEX P, NORMATIVE REFERENCES		—
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		P
	- Preferred climatic categories	See appended table 1.5.1.	P
	- Maximum continuous voltage	See appended table 1.5.1.	P
	- Combination pulse current	See appended table 1.5.1.	P
	Body of the VDR Test according to IEC60695-11-5		N/A
	Body of the VDR. Flammability class of material (min V-1)	See appended table 1.5.1.	P
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
			—
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		P
			—
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		P
V.1	Introduction	Considered.	P
V.2	TN power distribution systems	Considered.	P
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus		N/A
Y.2	Mounting of test samples		N/A
Y.3	Carbon-arc light-exposure apparatus		N/A
Y.4	Xenon-arc light exposure apparatus		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		P

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Clause	Requirement + Test	Result - Remark	Verdict
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—
CC	ANNEX CC, Evaluation of integrated circuit (IC) current limiters		P
CC.1	General	This power distribution switch is used in SELV circuit.	P
CC.2	Test program 1	Integrated circuit (IC) current limiter complies with Annex CC.2, program 1.	P
CC.3	Test program 2	Integrated circuit (IC) current limiter complies with Annex CC.3, program 2.	P
CC.4	Test program 3		N/A
CC.5	Compliance	Complied.	N/A
DD	ANNEX DD, Requirements for the mounting means of rack-mounted equipment		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N.....		N/A
DD.3	Mechanical strength test, 250 N, including end stops.....		N/A
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

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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 ¹	
External Plastic Enclosure (Rear enclosure)	LG CHEM Ltd	LUPOY GN 5001RF(T), LUPOY GN-5001RF(T)	5VB or better, thickness 1.5mm min.	UL 94	UL	
External Plastic Enclosure (Front Bezel)	LG CHEM Ltd	LUPOY GN 5001RF(T), LUPOY GN-5001RF(T)	V-0 or better, thickness 1.5mm min.	UL 94	UL	
LCD Panel	Panasonic Liquid Crystal Display Co Ltd	VVX31P149H00	31.0" TFT type, with LED backlight.	--	--	
AC inlet	Interchangeable	Interchangeable	15A max., 250Vac.	IEC/EN 60320-1, ANSI/UL498	UL, VDE, TUV, ENEC	
-Alt.	Solteam	ST-01	10A, 250Vac; 15A, 250Vac.	IEC/EN 60320-1, ANSI/UL498	UL, VDE	
-Alt.	Zhang Jia Gang-Hua Jie	SA-4S	10A, 250Vac; 15A, 250Vac.	IEC/EN 60320-1, ANSI/UL498	UL, VDE	
-Alt.	Rong Feng	SS-120, SS-7B	10A, 250Vac; 15A, 250Vac.	IEC/EN 60320-1, ANSI/UL498	UL, VDE	
-Alt.	Shenzhen Delikang / Douling	CDJ-3, CDJ-3-1	10A, 250Vac.	IEC/EN 60320-1, ANSI/UL498	UL, VDE	
-Alt.	Inalways	0707-1, 0711-2	10A, 250Vac; 15A, 250Vac.	IEC/EN 60320-1, ANSI/UL498	UL, N	
-Alt.	Inalways	0714	10A, 250Vac.	IEC/EN 60320-1, ANSI/UL498	UL, VDE	
-Alt.	TECX	TU-301 series	10A, 250Vac; 15A, 250Vac.	IEC/EN 60320-1, ANSI/UL498	UL, VDE	
-Alt.	Yueqing Hongchang	DB-14	10A/250Vac; 15A, 250Vac.	IEC/EN 60320-1, ANSI/UL498	UL, VDE	
-Alt.	Solteam	SC04	10A/250Vac; UL: 10A / 250Vac; 12A / 250Vac.	IEC/EN 60320-1, ANSI/UL498	UL, VDE	
-Alt.	Zhang Jia Gang-Hua Jie	SA-4D	10A, 250Vac; 15A, 250Vac.	IEC/EN 60320-1, ANSI/UL498	UL, TUV	
Power Switch	CHILY	3024 series	16(4)A, 250Vac; 15A, 125/250Vac; 8A, 277Vac.	IEC/EN 61058-1, ANSI/UL 1054	ENEC, UL	
-Alt.	Zhangjiagang	PS8-338	8A, 250Vac; 12(4), 250Vac.	IEC/EN 61058-1, ANSI/UL 1054	TUV, UL	

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Clause	Requirement + Test			Result - Remark	Verdict
	Huajie				
-Alt.	Hongchang	RS and RT series	10A,125Vac; 6A, 250Vac.	IEC/EN 61058-1, ANSI/UL 1054	ENEC, UL
-Alt.	Solteam Electronics Co Ltd	MR-22 series	ENEC: 12(4)A,250V UL: 12A,125/250Vac ;8A,125/250Vac.	IEC/EN 61058-1, ANSI/UL 1054	ENEC, UL
Mylar sheet (Between power trace side and secondary LED board)	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX FRPC-1860B, KLX FRPC-1870B	V-0 or VTM-0, dimension 333mm by 156mm.	UL 94	UL
-Alt.	SUZHOU OMAI OPTICAL MATERIAL CO LTD	SE42B, SE42B-F	V-0 or VTM-0, dimension 333mm by 156mm.	UL 94	UL
-Alt.	SICHUAN DONGFANG INSULATING MATERIAL CO LTD	DFR117, DFR117ECO, DFR117ECOB, DFR117ECOC	V-0 or VTM-0, dimension 333mm by 156mm.	UL 94	UL
-Alt.	Sichuan Dongfang Insulating Material Co., Ltd.	DFPET 6023, DFR700, DFR700F	V-0 or VTM-0, dimension 333mm by 156mm.	UL 94	UL
Mylar sheet (Metal inside near speaker)	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX FRPC-1860B, KLX FRPC-1870B	V-0 or VTM-0, dimension 50mm by 47.2mm by 25mm.	UL 94	UL
-Alt.	SUZHOU OMAI OPTICAL MATERIAL CO LTD	SE42B, SE42B-F	V-0 or VTM-0, dimension 50mm by 47.2mm by 25mm.	UL 94	UL
-Alt.	SICHUAN DONGFANG INSULATING MATERIAL CO LTD	DFR117, DFR117ECO, DFR117ECOB, DFR117ECOC	V-0 or VTM-0, dimension 50mm by 47.2mm by 25mm.	UL 94	UL
-Alt.	Sichuan Dongfang Insulating Material Co., Ltd.	DFPET 6023, DFR700, DFR700F	V-0 or VTM-0, dimension 50mm by 47.2mm by 25mm.	UL 94	UL
Tape for	JIANGSU	YJC-810H(B)-2	For securing	UL 510	UL

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Clause	Requirement + Test		Result - Remark		Verdict
internal wire	YONGJIA ELECTRONIC MATERIAL CO LTD		secondary internal wirings. Overall measured minimum 50mm by 18mm.		
-Alt.	TAE HWA INDUSTRIAL CO LTD	6701	For securing secondary internal wirings. Overall measured minimum 50mm by 18mm.	UL 510	UL
-Alt.	DUCK SUNG HITECH CO LTD	231	105 degree C min. For securing secondary internal wirings. Overall measured minimum 50mm by 18mm.	UL 510	UL
-Alt.	JIANGMEN NEW ERA ADHESIVES TECHNOLOGY CO LTD	FGB-0011-200PP1	80 degree C min. For securing secondary internal wirings. Overall measured minimum 50mm by 18mm.	UL 510	UL
-Alt.	TAEYOUNG CHEMICAL IND CO LTD	TY301A	105 degree C min. For securing secondary internal wirings. Overall measured minimum 50mm by 18mm.	UL 510	UL
Skid proof pad on base stand	JIANGSU PEARL SILICONE RUBBER MATERIAL CO LTD	HD-87	V-0 or better, Min. 150°C.	UL 94	UL
-Adhesive (for base stand non-slip mat)	3M	9448A	80°C.	UL 510A	UL
Switching Power Supply Board type 715GA191					

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Primary connector (CN901)	Interchangeable	Interchangeable	7A max., 250Vac.	IEC/EN 61984, UL1977	TÜV, UL
-Alt.	Pontronics	3962 –Y2-X2 series (Y2=WR, WS, X2=2-14)	7 A, 250Vac.	IEC/EN 61984, UL1977	TÜV , UL
-Alt.	Jowle	A3963 series	7 A, 250Vac.	IEC/EN 61984 , UL1977	TÜV ,UL
-Alt.	J.S.T	VH series	7 A, 250Vac.	IEC/EN 61984, UL1977	TÜV ,UL
-Alt.	J.S.T	VT series	7 A, 250Vac.	IEC/EN 61984, UL1977	TÜV ,UL
-Alt.	Xinya	TÜV: M3962 series UL: 3962 series	TÜV: 6 A, 250Vac; UL: 7 A, 250Vac.	IEC/EN 61984 UL 1977	TÜV NORD UL
-Alt.	Xinya	W7913 series	7 A, 250Vac.	IEC/EN 61984 UL 1977	TÜV NORD UL
Fuse (F9901)	Littelfuse / Wickmann	392, 382 series	T5A, 250Vac.	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/ UL 248-14	VDE, UL
-Alt.	Conquer	MET, MST	T5A, 250Vac.	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/ UL 248-14	VDE, UL
-Alt.	Cooper Bussmann	SR-5, SS-5	T5A, 250Vac.	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/ UL 248-14	VDE, UL
-Alt.	Ever Island Electric Co., Ltd & Walter Electric	2010 series	T5A, 250Vac.	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/ UL 248-14	VDE, UL
Y- Capacitors (C9904, C9905, C9906, C9907, C9908) (Y1 or Y2 type) (Optional)	Walsin	AC, AH	Max. 4700pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI, UL
-Alt.	TDK	CS, CD	Max. 4700pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI, UL
-Alt.	Murata	KH, KX	Max. 4700pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI, UL
-Alt.	JYA-NAY	JN	Max. 4700pF, min. 250Vac,	IEC / EN 60384-14: 2013	VDE, UL

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
			min. 85°C.	UL 60384-14	
-Alt.	YINAN DON'S ELECTRONIC COMPONENT CO.,LTD	CT81	Max. 4700pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
-Alt.	Kunshan Wansheng	CT7	Max. 4700pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
-Alt.	SUCCESS	SE	Max. 4700pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
-Alt.	Interchangeable	Interchangeable	Max. 4700pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
Bridging - Capacitor (C9903, C9909) (Y1 type) (Optional)	Walsin	AH	Max. 2200pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI, UL
-Alt.	TDK	CD	Max. 2200pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI, UL
-Alt.	Murata	KX	Max. 2200pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
-Alt.	JYA-NAY	JN	Max. 2200pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
-Alt.	YINAN DON'S ELECTRONIC COMPONENT CO.,LTD	CT81	Max. 2200pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
-Alt.	Kunshan Wansheng	CT7	Max. 2200pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
-Alt.	SUCCESS	SE, SB	Max. 2200pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
-Alt.	Interchangeable	Interchangeable	Max. 2200pF, min. 250Vac, min. 85°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
X- Capacitor (C9901, C9902) (X1 or X2 type) (Optional)	Ultra Tech Xiphi Enterprise Co., Ltd.	HQX	Max. 0.47μF, min. 250Vac, min. 100°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI, UL
-Alt.	Hua Jung Components	MKP	Max. 0.47μF, min. 250Vac,	IEC / EN 60384-14: 2013	ENEC, FI, UL

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
	Co., Ltd.		min. 100°C.	UL 60384-14	
-Alt.	Europtronic (Taiwan) Industrial Corp.	MPX, MPX2	Max. 0.47μF, min. 250Vac, min. 100°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI, UL
-Alt.	Liow Gu Electronics Industry Co., Ltd.	GS-L	Max. 0.47μF, min. 250Vac, min. 100°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI
-Alt.	Kemet	R.46	Max. 0.47μF, min. 250Vac, min. 100°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
-Alt.	Epcos Electronic Components S A	B3292#	Max. 0.47μF, min. 250Vac, min. 100°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
-Alt.	NANJING TENGGEN RONG GUANG DA ELECTRONICS SALES CO LTD	MKP	Max. 0.47μF, min. 250Vac, min. 100°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
-Alt.	FARAD	PXK	Max. 0.47μF, min. 250Vac, min. 100°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE,UL
-Alt.	Interchangeable	Interchangeable	Max. 0.47μF, min. 250Vac, min. 100°C.	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
Varistor (RV9902) (Optional)	Thinking Electronic Industrial Co., Ltd.	TVR14681	Rated 420Vac, 560Vdc, 40/85/56, 6KV/3KA, pluse test passed. V-0 coating.	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd	VDE, UL
-Alt.	Centra Science corp.	CNR-14D681K	Rated 420Vac, 560Vdc, 40/85/56, 6KV/3KA, pluse test passed. V-0 coating.	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd	VDE, UL
-Alt.	EPCOS	SIOV-S14KV681, SIOV-SNF14K420	Rated 420Vac, 560Vdc, 40/85/56, 6KV/3KA, pluse test passed. V-0 coating.	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd	VDE, UL
Line Choke (L9901) (Optional)	ASET	373G0174048X	130°C.	--	--
-Alt.	GUANGDONG, SHENZHEN, CHINA / LZ	373G0174048Z	130°C.	--	--

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
-Alt.	CHANNELON / HA / DADON	373G0174048H	130°C.	--	--
Line Choke (L9903) (Optional)	ASET	373G0174049X	130°C.	--	--
-Alt.	CHANNELON / HA / DADON	373G0174049H	130°C.	--	--
Line Choke (L9801) (Optional)	YUVA	373G0174520N	130°C.	--	--
-Alt.	LITAI	373G0174520L	130°C.	--	--
Transformer (T9101)	YUVA	80GL52P-502-N	Class B.	Applicable parts of IEC 60950-1 and according to IEC 60085	Accepted by TUV Rheinland
-Bobbin	SUMITOMO BAKELITE CO LTD	PM-9820	V-0, phenolic, 150°C.	UL 94	UL
-Case	E I DUPONT DE NEMOURS & CO INC	FR530(I)(+)(f1), FR530L(I)(+)(f1)	V-0, 155°C.	UL 94	UL
-Insulation Tape	SYMBIO INC	35660Y (e)	130°C.	UL 510	UL
Transformer (T9101) (Alternate)	LITAI	80GL52P-502-L	Class B.	Applicable parts of IEC 60950-1 and according to IEC 60085	Accepted by TUV Rheinland
-Bobbin	CHANG CHUN PLASTICS CO LTD	T200HF	V-0, phenolic, 150°C.	UL 94	UL
-Case	CHANG CHUN PLASTICS CO LTD	T200HF	V-0, 150°C.	UL 94	UL
-Insulation Tape	SYMBIO INC	35660Y (e)	130°C.	UL 510	UL
-Alt.	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT* (c)(g)	130°C.	UL 510	UL
Transformer (T9301)	PHOENIX	380GL32P621P	Class B.	Applicable parts of IEC 60950-1 and according to IEC 60085	Accepted by TUV Rheinland
-Bobbin	SUMITOMO BAKELITE CO LTD	PM-9750	V-0, phenolic, 150°C.	UL 94	UL

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
-Insulation Tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT* (c)(g)	130°C.	UL 510	UL
-Triple insulation wire	COSMOLINK CO., LTD	TIW-B	130°C.	IEC/EN 60950-1, UL 2353	VDE, UL
Transformer (T9301) (Alternate)	TAICHANG / TC	380GL32P621S	Class B.	Applicable parts of IEC 60950-1 and according to IEC 60085	Accepted by TUV Rheinland
-Bobbin	SUMITOMO BAKELITE CO LTD	PM-9630	V-0, phenolic, 150°C.	UL 94	UL
-Insulation Tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT* (c)(g)	130°C.	UL 510	UL
-Triple insulation wire	Great Leoflon Industrial Co., Ltd	TRW(B) serie(s)	130°C.	IEC/EN 60950-1, UL 2353	VDE, UL
Transformer (T9301) (Alternate)	ASET	380GL32P621X	Class B.	Applicable parts of IEC 60950-1 and according to IEC 60085	Accepted by TUV Rheinland
-Bobbin	SUMITOMO BAKELITE CO LTD	PM-9750	V-0, phenolic, 150°C.	UL 94	UL
-Insulation Tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT* (c)(g)	130°C.	UL 510	UL
-Triple insulation wire	COSMOLINK CO., LTD	TIW-B	130°C.	IEC/EN 60950-1, UL 2353	VDE, UL
Optocouplers (U9302, U9303, U9102)	Sharp	PC123	Di more than 0.4mm, int = thermal cycling test, ext. more than 8.0mm, 5000 Vac, 100°C.	DIN EN 60747-5-2:2003 IEC/EN 60950-1 UL 1577	VDE, UL, Semko, Fimko, Nemko
-Alt.	Vishay Semiconductor	TCET1103	Di more than 0.5mm, int. cr more than 6.0mm, ext. cr more than 7.7mm,	DIN EN 60747-5-2:2003, IEC/EN 60950-1, UL 1577	VDE, UL, Semko, Fimko, Nemko

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
			3000Vac, 100 °C.		
-Alt.	Everlight Electronics Co., Ltd.	EL817, EL817M	Di more than 0.5mm, int. cr = thermal cycling test, ext. cr more than 7.7mm, 3000Vac, 100°C.	DIN EN 60747-5-2:2003 IEC/EN 60950-1 UL 1577	VDE,UL, Semko, Fimko, Nemko
-Alt.	TOSHIBA	TLP781F, TLP781	Di more than 0.5mm, int. cr =thermal cycling test, ext. cr more than 8.0mm, 4800Vac, 100°C.	DIN EN 60747-5-2:2003, IEC/EN 60950-1, UL 1577	VDE,UL, Semko, Fimko
-Alt.	TOSHIBA	TLP421F	Di more than 0.4mm, int.cr=thermal cycling test, ext. cr more than 8.0mm, 5000Vac, 100°C.	DIN EN 60747-5-2:2003 IEC/EN 60950-1 UL 1577	VDE,UL, Semko, Fimko
-Alt.	RENESAS ELECTRONICS CORPORATION	PS2561-1, PS2561L-1, PS2561L1-1, PS2561L2-1. PS2561DL1-1	Di more than 0.4mm, int.cr=thermal cycling test, ext. cr more than 8.0mm, 5000Vac, 100°C.	DIN EN 60747-5-2:2003 IEC/EN 60950-1 UL 1577	VDE,UL, Nemko, Fimko
-Alt.	Everlight Electronics Co., Ltd.	EL1013	Di more than 0.4mm, int.cr=thermal cycling test, ext. cr more than 8.1mm, 3000Vac, 100°C.	DIN EN 60747-5-2:2003 IEC/EN 60950-1 UL 1577	VDE,UL, Semko, Fimko, Nemko
-Alt.	Lite-On	LTV-817	Di more than 0.6mm, int.cr=thermal cycling test, ext. cr more than 8.0mm, 4800Vac, 100°C.	DIN EN 60747-5-2:2003, IEC/EN 60950-1, UL 1577	VDE,UL, Semko, Fimko, Nemko
Main board type 715GA088					
Protective IC	DIODES	AP2161D	2.7-5.5Vdc,	IEC 60950-1,	Nemko (CB by

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
(U5504) (for SENS/MEM port (CN7504) use)	Incorporated		Current limit (typical) 1.5A, Recommended maximum continuous load current 1.0A.	UL 2367	Nemko Certificate NO83682), UL
Functional Component					
Inter Metal enclosure	--	--	Metallic, min. 0.6mm thickness.	--	--
Internal metal sheet (provided for bottom enclosure and side enclosure near main board which will be bottom after rotate to vertical)	--	--	Metallic, min. 0.25mm thickness.	--	--
Stand base (Optional)	Interchangeable	Interchangeable	HB or batter, weight approx. 6.26 kg.	UL 94	UL
Internal speaker	Interchangeable	Interchangeable	Each rated 4 ohm max., Max. 3.6W.	--	--
Rubber stand for speaker	Interchangeable	Interchangeable	V-1 or better, Min. 105°C.	UL 94	UL
P.C.B	Interchangeable	Interchangeable	V-1 or better, Min. 105°C.	UL 796	UL
Switching Power Supply board type 715GA191					
Bleeder Resistors (R301,R302,R306,R307)	Interchangeable	SMD type	10KΩ, min. 1/4W (four provided, located after fuse).	--	--
Discharge IC (U9301)	Leadtrend Technology Corp.	LD5760	650V, Range of discharge resistor 1KΩ to 124KΩ.	IEC 60950-1:2005+A1	CB by Nemko (NO77082)
Bridging Diode (BD9901)	Interchangeable	Interchangeable	Min. 15A, min. 800Vac.	--	--
Ripple Capacitor (C9803)	Interchangeable	Interchangeable	150 μF, min. 450 V, min. 105°C.	--	--
Transistors	Interchangeable	Interchangeable	Min. 600V, min.	--	--

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
(Q9101, Q9102)			20.2A.		
Transistors (Q9801)	Interchangeable	Interchangeable	Min. 600V, min. 10A.	--	--
Transistors (Q9310)	Interchangeable	Interchangeable	Min. 650V, min. 5.5A.	--	--
Transistors (Q9301, Q9804)	Interchangeable	Interchangeable	Min. 60V, min. 5A.	--	--
Thermistor (TH9901, TH9902) (Optional)	Interchangeable	Interchangeable	Min. 1.5Ω, min. 2.4A at 25°C.	--	--
PCB	Interchangeable	Interchangeable	V-1 or better Min. 105°C.	UL 94, UL 796	UL
Supplementary information:					

1.5.1	TABLE: Opto Electronic Devices	P
Manufacturer : Sharp / Vishay / Everlight / TOSHIBA / TOSHIBA / RENESAS / Everlight / Lite-On Type..... : PC123 / TCET1103 / EL817, EL817M / TLP781F, TLP781 / TLP421F / PS2561-1, PS2561L-1, PS2561L1-1, PS2561L2-1, PS2561DL1-1 / EL1013 / LTV817 Separately tested..... : Tested by FIMKO Bridging insulation : Reinforced insulation. External creepage distance : >8.0 / >7.7 / >7.7 / >8.0 / >8.0 / >8.0 / >8.1 / >8.0 Internal creepage distance : ¹⁾ / >6.0 / ¹⁾ / ¹⁾ / ¹⁾ / ¹⁾		
Distance through insulation : >0.4 / >0.5 / >0.5 / >0.5 / >0.4 / >0.4 / >0.4 / >0.6 Tested under the following conditions : --		
Input..... : -- Output..... : --		
Supplementary information: 1) There is not any internal creepage distance. Test according to IEC 60950-1: 2001, cl. 2.10.8 (same as requirement in IEC 60950-1: 2005, cl. 2.10.9) has been carried out ten times for components at 100°C / 25°C / 0°C / 25°C. Humidity treatment of 48 hours as well as electric strength tests at 3000V / 1 minute and 5000V / 1 minute were carried out to the component after thermal cycling test.		

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V/Hz)	I (A)	I _{rated} (A)	P (W)	Fuse #	I _{fuse} (A)	Condition/status
HDMI mode						
90/50	2.05	--	183.1	F9901	2.05	Maximum normal load
90/60	2.05	--	183.2	F9901	2.05	Maximum normal load
100/50	1.83	2.4	181.7	F9901	1.83	Maximum normal load
100/60	1.84	2.4	181.9	F9901	1.84	Maximum normal load
240/50	0.76	1.0	175.4	F9901	0.76	Maximum normal load
240/60	0.76	1.0	175.5	F9901	0.76	Maximum normal load
264/50	0.70	--	175.3	F9901	0.70	Maximum normal load
264/60	0.70	--	175.3	F9901	0.70	Maximum normal load
Display mode						
90/50	2.03	--	181.6	F9901	2.03	Maximum normal load
90/60	2.03	--	181.6	F9901	2.03	Maximum normal load
100/50	1.83	2.4	180.0	F9901	1.83	Maximum normal load
100/60	1.83	2.4	180.0	F9901	1.83	Maximum normal load
240/50	0.76	1.0	174.2	F9901	0.76	Maximum normal load
240/60	0.76	1.0	174.3	F9901	0.76	Maximum normal load
264/50	0.70	--	174.2	F9901	0.70	Maximum normal load
264/60	0.70	--	174.2	F9901	0.70	Maximum normal load
USB Type C mode						
90/50	1.13	--	101.5	F9901	1.13	Maximum normal load
90/60	1.15	--	102.0	F9901	1.15	Maximum normal load
100/50	1.01	2.4	100.4	F9901	1.01	Maximum normal load
100/60	1.02	2.4	100.4	F9901	1.02	Maximum normal load
240/50	0.46	1.0	99.5	F9901	0.46	Maximum normal load
240/60	0.46	1.0	99.5	F9901	0.46	Maximum normal load
264/50	0.45	--	99.5	F9901	0.45	Maximum normal load
264/60	0.45	--	99.5	F9901	0.45	Maximum normal load
Note(s):						
1. The measured input current at rated voltage shall be $\leq 110\%$ of rated current.						
2. See summary of testing in the test report for the detail max. normally condition.						

IEC 60950-1				
Clause	Requirement + Test			Verdict
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)
+24V output	--	24.3	10.62	250.11
+12V output	--	12.12	15.5	150.82
+5V output	--	5.22	9.65	40.34
Supplementary information: +24V output not user accessible part.				

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.		
T9301 Pin 8,9 to Earth	41.6	--	--	
T9101 Pin 8 to Earth	31.2	--	--	
T9101 Pin 9 to Earth	34.0	--	--	
T9101 Pin 10,11 to Earth	17.6	--	--	
T9101 Pin 12,13 to Earth	17.6	--	--	
For LED driver circuit				
After L802	71.2	--	--	
After D803, D804	--	63.9	--	
Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)			
supplementary information:				
Input Voltage is 240Vac, 60Hz.				
1. The output of LED circuit was considered to be hazardous (not user accessible).				

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
2.5	TABLE: Limited power sources					P
Circuit output tested:						
Note: Measured Uoc (V) with all load circuits disconnected:						
Components	Test condition (Single fault)	Uoc (V)	I _{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
According to table 2B, for USB upstream Type B (CN1404)						
All pins to earth	Normal	0	--	8	--	100
According to table 2B, for USB upstream Type B (CN1403)						
All pins to earth	Normal	0	--	8	--	100
According to table 2B, for USB Type C (CN1409) (+5V)						
Pin 4, 9, 16, 21 to earth	Normal	5.33	4.5	8	16.34	100
Pin 4, 9, 16, 21 to earth	U1426 pin 13, 14 to 11, 12 SC	0	--	8	--	100
Other pins to earth	Normal	0	--	8	--	100
According to table 2B, for USB Type C (CN1409) (+9V)						
Pin 4, 9, 16, 21 to earth	Normal	9.28	4.8	8	34.28	100
Pin 4, 9, 16, 21 to earth	U1426 pin 13, 14 to 11, 12 SC	0	--	8	--	100
Other pins to earth	Normal	0	--	8	--	100
According to table 2B, for USB Type C (CN1409) (+12V)						
Pin 4, 9, 16, 21 to earth	Normal	12.3	4.6	8	46.08	100
Pin 4, 9, 16, 21 to earth	U1426 pin 13, 14 to 11, 12 SC	0	--	8	--	100
Other pins to earth	Normal	0	--	8	--	100
According to table 2B, for USB Type C (CN1409) (+15V)						
Pin 4, 9, 16, 21 to earth	Normal	15.09	4.4	8	55.2	100
Pin 4, 9, 16, 21 to earth	U1426 pin 13, 14 to 11, 12 SC	0	--	8	--	100

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
Other pins to earth	Normal	0	--	8	--	100
According to table 2B, for USB Type C (CN1409) (+20V)						
Pin 4, 9, 16, 21 to earth	Normal	20.48	3.9	8	73.79	100
Pin 4, 9, 16, 21 to earth	U1426 pin 13, 14 to 11, 12 SC	0	--	8	--	100
Other pins to earth	Normal	0	--	8	--	100
According to table 2B, for Display port IN (CN5202)						
Pin18 to earth	Normal	3.27	Can't loading	8	Can't loading	100
Pin 20 to earth	Normal	3.3	1.0	8	2.79	100
Pin 20 to earth	U5204 Pin 1-5 SC	3.3	1.2	8	3.17	100
Other Pins	Normal	0	--	8	--	100
According to table 2B, for Display port IN (CN5201)						
Pin18 to earth	Normal	3.27	Can't loading	8	Can't loading	100
Pin 20 to earth	Normal	3.3	1.0	8	2.8	100
Pin 20 to earth	U5208 Pin 1-5 SC	3.3	1.2	8	3.15	100
Other Pins	Normal	0	--	8	--	100
According to table 2B, for HDMI IN (CN5102)						
Pin1, 3, 4, 6, 7, 9, 10, 12 to earth	Normal	3.28	Can't loading	8	Can't loading	100
Pin 13 to earth	Normal	3.1	Can't loading	8	Can't loading	100
Pin 14 to earth	Normal	2.78	Can't loading	8	Can't loading	100
Other Pins	Normal	0	--	8	--	100
According to table 2B, for HDMI IN (CN5101)						
Pin1, 3, 4, 6, 7, 9, 10, 12 to earth	Normal	3.28	Can't loading	8	Can't loading	100
Pin 15, 16 to earth	Normal	4.53	Can't loading	8	Can't loading	100

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
Other pins to earth	Normal	0	--	8	--	100
According to table 2B, for USB Downstream Port Type A (CN1402)						
Pin 1 to earth	Normal	5.14	1.5	8	7.11	100
Pin 1 to earth	U1408 pin 1-5 SC	5.14	7.0	8	18.18	100
Other pins to earth	Normal	0	--	8	--	100
According to table 2B, for USB Downstream Port Type A (CN1407)						
Pin 1 to earth	Normal	5.14	1.7	8	7.96	100
Pin 1 to earth	U1407 pin 1-5 SC	5.14	7.4	8	18.60	100
Other pins to earth	Normal	0	--	8	--	100
According to table 2B, for USB Downstream Port Type A (CN1406)						
Pin 1 to earth	Normal	5.14	1.6	8	7.54	100
Pin 1 to earth	U1406 pin 1-5 SC	5.14	7.5	8	19.02	100
Other pins to earth	Normal	0	--	8	--	100
According to table 2B, for RJ45 Port (CN7503)						
Pin 9, 11 to earth	Normal	3.24	Can't loading	8	Can't loading	100
Other pins to earth	Normal	0	--	8	--	100
According to table 2B, for Audio Port (CN603)						
All pins to earth	Normal	0	--	8	--	100
According to table 2C, for SENS/MEM port (CN7504)						
Pin 1	Normal	5.17	1.4	8	6.57	100
Other pins to earth	Normal	0	--	8	--	100
Supplementary information: 1. Tested on 240Vac, 60Hz. 2. SC= short circuit, OC= opened circuit. Protective IC (U5504) (for SENS/MEM port (CN7504) use)						
2.10.2	Table: working voltage measurement					P
Location		RMS voltage (V)	Peak voltage (V)	Comments		

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

Tested on 240Vac, 60Hz			
T9301 Pin 1 to Pin 8,9	301	560	
T9301 Pin 1 to Pin 10,11	300	492	
T9301 Pin 3 to Pin 8,9	322	580	Highest Vp and Vrms of T9301
T9301 Pin 3 to Pin 10,11	317	570	
T9301 Pin 4 to Pin 8,9	173	480	
T9301 Pin 4 to Pin 10,11	172	452	
T9301 Pin 5 to Pin 8,9	172	412	
T9301 Pin 5 to Pin 10,11	171	408	
T9101 Pin 2 to Pin 8	165	324	
T9101 Pin 2 to Pin 9	157	296	
T9101 Pin 2 to Pin 10, 11	161	308	
T9101 Pin 2 to Pin 12, 13	157	288	
T9101 Pin 2 to Pin 14, 15	159	296	
T9101 Pin 6 to Pin 8	226	424	
T9101 Pin 6 to Pin 9	264	470	Highest Vp and Vrms of T9101
T9101 Pin 6 to Pin 10, 11	233	430	
T9101 Pin 6 to Pin 12, 13	255	460	
T9101 Pin 6 to Pin 14, 15	245	450	
U9303 Pin 1 to Pin 3	160	376	
U9303 Pin 1 to Pin 4	160	376	
U9303 Pin 2 to Pin 3	162	374	
U9303 Pin 2 to Pin 3	162	376	
U9302 Pin 1 to Pin 3	173	396	
U9302 Pin 1 to Pin 4	172	396	
U9302 Pin 2 to Pin 3	172	396	
U9302 Pin 2 to Pin 3	173	396	
U9102 Pin 1 to Pin 3	180	404	
U9102 Pin 1 to Pin 4	180	404	
U9102 Pin 2 to Pin 3	178	404	
U9102 Pin 2 to Pin 3	179	404	
C9909 Primary to Secondary	167	392	
C9907 Primary to Secondary	168	384	
C9905 Primary to Secondary	167	384	

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Clause	Requirement + Test	Result - Remark	Verdict
Tested on 100Vac, 60Hz			
T9301 Pin 1 to Pin 8,9	345	436	
T9301 Pin 1 to Pin 10,11	348	428	
T9301 Pin 3 to Pin 8,9	358	580	Highest Vp and Vrms of T9301
T9301 Pin 3 to Pin 10,11	354	580	
T9301 Pin 4 to Pin 8,9	77.5	282	
T9301 Pin 4 to Pin 10,11	75.3	250	
T9301 Pin 5 to Pin 8,9	74.0	192	
T9301 Pin 5 to Pin 10,11	73.7	190	
T9101 Pin 2 to Pin 8	168	292	
T9101 Pin 2 to Pin 9	165	264	
T9101 Pin 2 to Pin 10, 11	166	284	
T9101 Pin 2 to Pin 12, 13	166	256	
T9101 Pin 2 to Pin 14, 15	164	272	
T9101 Pin 6 to Pin 8	229	408	
T9101 Pin 6 to Pin 9	266	460	Highest Vp and Vrms of T9101
T9101 Pin 6 to Pin 10, 11	238	420	
T9101 Pin 6 to Pin 12, 13	258	444	
T9101 Pin 6 to Pin 14, 15	249	432	
U9303 Pin 1 to Pin 3	64.3	172	
U9303 Pin 1 to Pin 4	64.0	172	
U9303 Pin 2 to Pin 3	64.2	172	
U9303 Pin 2 to Pin 3	64.2	172	
U9302 Pin 1 to Pin 3	73.0	188	
U9302 Pin 1 to Pin 4	73.2	188	
U9302 Pin 2 to Pin 3	73.1	186	
U9302 Pin 2 to Pin 3	73.0	190	
U9102 Pin 1 to Pin 3	89.3	200	
U9102 Pin 1 to Pin 4	89.1	200	
U9102 Pin 2 to Pin 3	89.1	199	
U9102 Pin 2 to Pin 3	89.0	200	
C9909 Primary to Secondary	72.0	168	
C9907 Primary to Secondary	70.0	156	
C9905 Primary to Secondary	101	156	

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Clause	Requirement + Test	Result - Remark	Verdict

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:							
Line trace to Neutral trace before fuse	420	250	2.3 (1.5 * 1.48)	2.8	2.5	2.8	
Under Fuse				2.6		2.6	
Basic/supplementary:							
Primary component (with 10N) or trace to earthed component (with 10N) or trace	420	250	3.0 (2.0 * 1.48)	See below	3.0	See below	
L/N to earth trace				7.0		7.0	
Under C9904/C9905/C9906				7.5		7.5	
Under C9907				7.2		7.2	
Under C9908				7.2		7.2	
Primary / secondary component to metal chassis	420	250	3.0 (2.0 * 1.48)	6.2	3.0	6.2	
Primary component to user accessible metal part	420	250	3.0 (2.0x1.48)	More than 10	3.0	More than 10	
Reinforced:							
Primary part / component (with 10N) or trace to secondary part / component (with 10N) or trace	420	250	6.0 (4.0 * 1.48)	See below	6.0	See below	
Under C9909				7.5		7.5	
Under C9903				7.4		7.4	
Under U9302				7.5		7.5	
Under U9303				7.5		7.5	
Under U9102				7.8		7.8	
Under T9101	470	266	6.3 (4.2 * 1.48)	9.1	6.3	9.1	
Under T9301	580	358	6.9 (4.6 * 1.48)	7.8	7.2	7.8	

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

1. Functional insulation shorted, see 5.3.4 c).
2. The required clearances multiplied by 1.48 considering that EUT operates up to 5000m.
3. For clearance and creepage did not describe above are far larger than limit above.
4. The measurement were conducted on both component side and trace layout side, only smaller value being recorded above.
5. One mylar sheet provided between primary trace and LED board to keep enough reinforce insulation distances.

2.10.5	TABLE: Distance through insulation measurements					P
Distance through insulation (DTI) at/of:		U peak (V)	U rms (V)	Test voltage (Vac)	Required DTI (mm)	DTI (mm)
Optical Isolator		420	250	3000	0.4	1.
Mylar		420	250	3000 ^{2.}	--	1.
T9101 Bobbin		420	250	3000	0.4	0.4 min
T9301 Tape		420	250	3000	0.4	Two layers
Supplementary information:						
1. See appended table 1.5.1 for the source details. 2. Worst case to test. 3. One mylar sheet provided between primary trace and LED board to keep enough reinforce insulation distances.						

4.3.8		TABLE: Batteries								N/A	
The tests of 4.3.8 are applicable only when appropriate battery data is not available											
Is it possible to install the battery in a reverse polarity position?											
	Non-rechargeable batteries			Rechargeable batteries							
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging			
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.		
Max. current during normal condition											
Max. current during fault condition											
Test results:											Verdict

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

4.3.8	TABLE: Batteries	N/A
Battery category..... : (Lithium, NiMh, NiCad, Lithium Ion ...)		
Manufacturer		
Type / model.....		
Voltage		
Capacity..... : mAh		
Tested and Certified by (incl. Ref. No.)		
Circuit protection diagram:		

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

4.5	TABLE: Thermal requirements				P
	Supply voltage (V/Hz):	See below	See below	See below	—
	Ambient T _{min} (°C):	--	--	--	—
	Ambient T _{max} (°C):	--	--	--	—
Maximum measured temperature T of part/at::		T (°C)			Allowed T _{max} (°C)
Test Voltage (Under HDMI Mode)		90V/60Hz Horizontal	90V/60Hz Vertical (Main board at downside)	264V/60Hz Horizontal	--
CN901 near L pin		68.7	74.3	58.4	85

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Clause	Requirement + Test	Result - Remark		Verdict
RV9902 body	69.7	75.0	59.9	85
C9902 body	73.4	74.3	61.8	100
L9901 coil	85.2	80.9	63.8	130
PCB near TH9901	100.0	92.2	71.4	105
C9906 body	84.1	64.9	66.9	85
L9903 coil	80.4	80.7	61.9	130
PCB near BD9901	79.7	84.2	63.8	105
L9801 coil	77.0	82.4	65.0	130
PCB near D9801	60.5	70.8	58.1	105
C9803 body	64.2	72.3	60.8	105
PCB near Q9310	72.7	75.4	69.9	105
PCB near Q9102	66.4	72.9	66.2	105
U9102 body	56.4	59.6	56.7	100
C9909 body	60.8	78.5	60.2	85
T9101 core	89.9	89.3	89.7	110
T9101 coil	91.3	91.2	91.3	110
T9301 coil	76.5	76.2	75.7	110
T9301 core	74.9	74.3	73.9	110
U9303 body	72.9	63.6	71.1	100
PCB near D9207,Q9205	83.8	74.3	83.2	105
PCB near D9206	76.3	74.0	76.5	105
L9203 coil	71.5	60.7	70.4	105
L9202 coil	76.6	64.4	76.0	105
L9201 coil	76.0	62.0	75.0	105
L801 coil(Main board)	64.0	65.1	64.2	105
L802 coil(Main board)	69.8	67.6	70.1	105
PCB near D803(Main board)	69.6	67.9	69.6	105
PCB near HS401(Main board)	71.4	59.3	71.5	105
PCB near HS501(Main board)	69.6	64.9	69.3	105
Mylar surface	50.2	56.5	49.7	80
AC inlet near L pin	43.9	53.0	43.4	65
Plastic enclosure inside	48.7	49.2	47.1	--

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Clause	Requirement + Test			Result - Remark			Verdict
Plastic enclosure outside	46.2	48.2	44.3	95			
Switch body	45.1	57.2	43.9	95			
Button body	47.8	48.3	48.6	85			
Panel body	50.3	48.1	51.2	95			
Tamb.	23.6	23.8	23.8	--			
Tma.	40.0	40.0	40.0	--			
Supplementary information:							
Temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
Supplementary information:							
1. The temperatures were measured under worst case normal mode defined in 1.2.2.1 and as described in 1.6.2 at voltages as described in above.							
2. The instruction installation manual defines the Tma at of 40°C.							
<u>Winding components (providing safety isolation):</u>							
- Class 130 material (B) T _{max} = 120°C – 10°C = 110°C							
4. All values for T (°C) are re-calculated from actual ambient.							

4.5.5	TABLE: Ball pressure test of thermoplastic parts			P
	Allowed impression diameter (mm)	≤ 2 mm		—
Part		Test temperature (°C)	Impression diameter (mm)	
Below tests for client required only				
Plastic enclosure, Kingfa : HIPS-5197, 2.5mm		90	1.59	
Plastic enclosure, Kingfa : GAR-011(L85), 2.5mm		85	1.31	
Plastic enclosure, Kingfa : GAR-011(L65), 2.5mm		85	1.29	
Plastic enclosure, Kingfa : HIPS-510(H), 2.5mm		80	1.29	
Plastic enclosure, Kingfa : FRHIPS-960, 2.5mm		85	1.88	
Plastic enclosure, Cheil : GC-0750(+), 2.5mm		80	1.61	
Plastic enclosure, Cheil : GC-0700(+), 2.5mm		80	1.94	
Plastic enclosure, Cheil : HG-0760(+), 2.5mm		85	1.73	
Plastic enclosure, Cheil : LX-0951(+), 2.5mm		85	1.83	
Plastic enclosure, Cheil : SD-0150, 2.5mm		85	1.48	
Plastic enclosure, Cheil : HR-1360, 2.5mm		85	1.71	
Plastic enclosure, Cheil : BF-0670F, 2.5mm		80	1.59	
Plastic enclosure, LG : HF380, 2.5mm		85	1.48	

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Clause	Requirement + Test	Result - Remark	Verdict
	Plastic enclosure, LG : LUPOY GP-1000(#), 2.5mm	95	1.21
	Plastic enclosure, LG : XG568, 2.5mm	80	1.81
	Plastic enclosure, LG : XG569C, 2.5mm	80	1.85
	Plastic enclosure, LG : HF388H, 2.5mm	85	1.39
	Plastic enclosure, LG : SE885, 2.5mm	80	1.42
	Plastic enclosure, LG : SE750, 2.5mm	80	1.50
	Plastic material, Kingfa : GAR-011C, 2.5mm	90	1.91
	Plastic material, Kingfa : GAR-011C, 3.0mm	90	1.59
	Plastic material, Kingfa : CK-61006, 3.0mm	85	1.67
	Plastic material, Kingfa : CK-61506, 3.0mm	85	1.43
	Plastic material, YOUHO-1302B, 3.3mm	85	1.04
	Plastic material, YOUHO-1303B, 3.3mm	85	1.42
Supplementary information: Phenolic materials are accepted without test.			

4.7	TABLE: Resistance to fire					P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence	
Inter Metal enclosure	--	--	1.	--	--	
External plastic enclosure	--	--	1.	--	--	
Rubber	--	--	--	1.	1.	
PCB	--	--	--	1.	1.	
Supplementary information: 1. See table 1.5.1 for details.						

5.1	TABLE: touch current measurement			P
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions	
Input voltage: 264V, 60Hz				
Line / Neutral to Accessible conductive parts (metal chassis)	1.6 / 1.6	3.5	System ON and switch “e” open	
Line / Neutral to Secondary part	0.01 /0.01	0.25	System ON and switch “e” close	
Line / Neutral to plastic enclosure with foil	0.01 /0.01	0.25	System ON and switch “e” close	
Input voltage: 110V, 60Hz (For Japan)				

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Clause	Requirement + Test	Result - Remark	Verdict
Line / Neutral to Accessible conductive parts (metal chassis)	0.79 / 0.79	1.0	System ON and switch "e" open
Line / Neutral to Secondary part	0.01 / 0.01	0.25	System ON and switch "e" close
Line / Neutral to plastic enclosure with foil	0.01 / 0.01	0.25	System ON and switch "e" close
supplementary information:			
Overall capacitance: 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
Basic / supplementary:				
Unit: primary and earth		DC	2636	No
T9101: Primary / secondary and core		AC	1691	No
Reinforced:				
Unit: primary and secondary		DC	4242	No
Unit: primary and plastic enclosure with foil		DC	4242	No
T9101: primary and secondary		AC	3000	No
T9301: primary and secondary		AC	3000	No
T9301: secondary and core		AC	3000	No
T9101: Bobbin		AC	3000	No
T9301: insulation tape		AC	3000	No
Mylar sheet		AC	3000 ¹	No
Supplementary information:				
1. Worst case to test.				
2. Test was performed on all sources of transformer , tape , bobbin and mylar.				
3. The tests mentioned above were performed after humidity test.				
One mylar sheet provided between primary trace and LED board to keep enough reinforce insulation distances.				

5.3	TABLE: Fault condition tests		P
	Ambient temperature (°C)	40°C, if not otherwise specified	—
	Power source for EUT: Manufacturer, model/type, output rating	See appended table 1.5.1	—

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Clause	Requirement + Test				Result - Remark	Verdict
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Openings	Blocked	240	1hr 49min	F9901	0.76	Unit normal operation, No hazards. No damage. T9101 coil =98.8°C, T9301 coil=84.1°C, Ambient=40.0°C.
BD9901 Pin 1-4	SC	240	1sec	F9901	--	F9901 open, No hazards.
C9803	SC	240	1sec	F9901	--	F9901 open, No hazards.
U9801 Pin 2-7	SC	240	10min	F9901	0.72	Unit Normally operated, No hazards.
Q9801 G-S	SC	240	10min	F9901	0.72	Unit Normally operated, No hazards.
Q9801 G-D	SC	240	1sec	F9901	--	F9901 open, No hazards.
Q9801 S-D	SC	240	1sec	F9901	--	F9901 open, No hazards.
Q9803 G-S	SC	240	10min	F9901	0.72	Unit Normally operated, No hazards.
Q9803 G-D	SC	240	10min	F9901	0.72	Unit Normally operated, No hazards.
Q9803 D-S	SC	240	10min	F9901	0.72	Unit Normally operated, No hazards.
U9301 Pin 2-5	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
U9301 Pin 2-8	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
Q9310 G-S	SC	240	10min	F9901	0.10	Unit shutdown, no hazards, no damage.
Q9310 D-S	SC	240	1sec	F9901	--	F9901 open, No hazards.
Q9310 D-G	SC	240	1sec	F9901	--	F9901 open, No hazards.
T9301 Pin 1-3	SC	240	10min	F9901	0.16	Unit shutdown, no hazards, no damage.
T9301 Pin 4-5	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
T9301 Pin 8,9-10,11	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
U9101 Pin 3-16	SC	240	10min	F9901	0.17	Unit shutdown, no hazards, no damage.
U9101 Pin 3-11	SC	240	10min	F9901	0.17	Unit shutdown, no hazards, no damage.

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Clause	Requirement + Test				Result - Remark	Verdict
Q9101 G-S	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
Q9101 G-D	SC	240	1sec	F9901	--	F9901 open, No hazards.
Q9101 D-S	SC	240	1sec	F9901	--	F9901 open, No hazards.
Q9102 G-S	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
Q9102 G-D	SC	240	1sec	F9901	--	F9901 open, No hazards.
Q9102 D-S	SC	240	1sec	F9901	--	F9901 open, No hazards.
T9101 Pin 2-6	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
T9101 Pin 8-10,11	SC	240	10min	F9901	0.17	Unit shutdown, no hazards, no damage.
T9101 Pin 9-12,13	SC	240	10min	F9901	0.17	Unit shutdown, no hazards, no damage.
T9101 Pin 14-10,11	SC	240	10min	F9901	0.17	Unit shutdown, no hazards, no damage.
T9101 Pin 15-12,13	SC	240	10min	F9901	0.17	Unit shutdown, no hazards, no damage.
D9205	SC	240	10min	F9901	0.17	Unit shutdown, no hazards, no damage.
D9206	SC	240	10min	F9901	0.17	Unit shutdown, no hazards, no damage.
D9207	SC	240	10min	F9901	0.17	Unit shutdown, no hazards, no damage.
+24V to Earth	SC	240	10min	F9901	0.17	Unit shutdown, no hazards, no damage.
+VLED to Metal part	SC	240	10min	F9901	0.17	Unit shutdown, no hazards, no damage.
+VLED to secondary connector	SC	240	10min	F9901	0.17	Unit shutdown, no hazards, no damage.
+12V to Earth	SC	240	10min	F9901	0.17	Unit shutdown, no hazards, no damage.
+5V to Earth	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
U9102 Pin 1-2	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
U9102 Pin 3-4	SC	240	10min	F9901	0.16	Unit shutdown, no hazards, no damage.
U9102 Pin 1	OC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.

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Clause	Requirement + Test				Result - Remark	Verdict
U9302 Pin 1-2	SC	240	10min	F9901	0.13	Unit shutdown, no hazards, no damage.
U9302 Pin 3-4	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
U9302 Pin 1	OC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
U9303 Pin 1-2	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
U9303 Pin 3-4	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
U9303 Pin 1	OC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
Q9205 G-S	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
Q9205 D-S	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
Q9205 D-G	SC	240	10min	F9901	0.11	Unit shutdown, no hazards, no damage.
T9301 (after Q9205) (+5V)	Overload	240	3hr 57mins	F9901	0.81	Max. temp. stabled at load to 7.5A, unit shutdown when increased to 8.0A, No hazards. T9101 coil =100.7°C, T9101 core = 100.2°C, T9301 coil =92.5°C, T9301 core =92.0°C Ambient=40.0°C.
T9101 (after D9207) (+12V)	Overload	240	2hr 10mins	F9901	0.82	Max. temp. stabled at load to 3.5A, unit shutdown when increased to 4.0A, No hazards. T9101 coil =97.1°C, T9101 core = 86.0°C, T9301 coil = 74.9°C, T9301 core = 73.4°C Ambient=40.0°C.
T9101 (after D9205, D9206) (+24V)	Overload	240	2hr 26mins	F9901	1.20	Max. temp. stabled at load to 5.5A, unit shutdown when increased to 5.8A, No hazards. T9101 coil =80.5°C, T9101 core = 78.6°C, T9301 coil = 121.5°C, T9301 core = 106.9°C Ambient=40.0°C.
Overload of operator accessible connector test						

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Clause	Requirement + Test				Result - Remark	Verdict
USB Type C (CN1409) pin 4, 9, 16, 21	Overload	240	1hr	F9901	--	Max. available current: 4.3A, Uoc = 5.33V, No hazards, no damage.
USB Type C (CN1409) pin 4, 9, 16, 21	Overload	240	1hr	F9901	--	Max. available current: 4.0A, Uoc = 9.28V, No hazards, no damage.
USB Type C (CN1409) pin 4, 9, 16, 21	Overload	240	1hr	F9901	--	Max. available current: 3.9A, Uoc = 12.3V, No hazards, no damage.
USB Type C (CN1409) pin 4, 9, 16, 21	Overload	240	1hr	F9901	--	Max. available current: 3.7A, Uoc = 15.09V, No hazards, no damage.
USB Type C (CN1409) pin 4, 9, 16, 21	Overload	240	1hr	F9901	--	Max. available current: 3.6A, Uoc = 20.48V, No hazards, no damage.
Display IN (CN5202) pin 20	Overload	240	1hr	F9901	--	Max. available current: 1.0A, Uoc = 3.3V, No hazards, no damage.
Display IN (CN5201) pin 20	Overload	240	1hr	F9901	--	Max. available current: 1.0A, Uoc = 3.3V, No hazards, no damage.
SENS/MEM (CN7504) pin 1	Overload	240	1hr	F9901	--	Max. available current: 1.2A, Uoc = 5.17V, No hazards, no damage.
USB downstream type A (CN1402) pin 20	Overload	240	1hr	F9901	--	Max. available current: 1.3A, Uoc = 5.14V, No hazards, no damage.
USB downstream type A (CN1407) pin 20	Overload	240	1hr	F9901	--	Max. available current: 1.4A, Uoc = 5.14V, No hazards, no damage.
USB downstream type A (CN1408) pin 20	Overload	240	1hr	F9901	--	Max. available current: 1.4A, Uoc = 5.14V, No hazards, no damage.

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

1. In fault column, where SC= short-circuited, OC = open-circuited.
2. For fuse opened condition, carried out for all sources of fuse.
3. Maximum temperatures limitation of safety isolation transformers based on a test temperature of 40°C:
Class B $T_{max} = 175^{\circ}\text{C}$.
4. Test items where components were damaged were repeated twice with same outcome.
5. All other output connector overload condition which not mentioned above were all under "output could not be loaded condition".

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)
T9101	Primary / input winding and secondary / output winding (internal) (DI)	470	266	AC 3000	6.3	6.3	Bobbin with 0.4mm thick
T9101	Primary / input winding and core (internal) (BI/SI)	470	266	AC 1691	3.2	3.2	--
T9101	Secondary / output winding and core (internal) (BI/SI)	470	266	AC 1691	3.2	3.2	--
T9101	Primary / input part and secondary / output part (external) (DI)	470	266	AC 3000	6.3	6.3	Bobbin with 0.4mm thick
T9101	Primary / input part and secondary / output winding (external) (DI)	470	266	AC 3000	6.3	6.3	Bobbin with 0.4mm thick
T9101	Primary / input part and core (external) (BI/SI)	470	266	AC 1691	3.2	3.2	--
T9101	Secondary / output part and core (external) (BI/SI)	470	266	AC 1691	3.2	3.2	--
T9101	Secondary / output part and primary / input winding (external) (DI)	470	266	AC 3000	6.3	6.3	Bobbin with 0.4mm thick

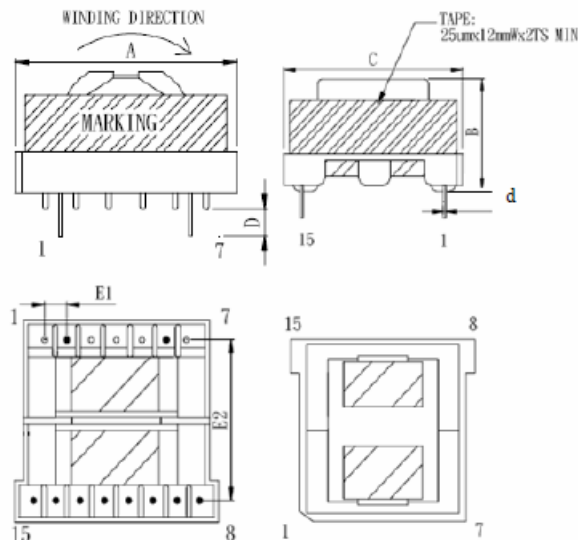
IEC 60950-1					
Clause	Requirement + Test	Result - Remark			Verdict
Loc.	Tested insulation	Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
T9101	Primary / input winding and secondary / output winding (internal) (DI)	AC 3000	6.5	6.5	Bobbin with 0.45mm thick
T9101	Primary / input winding and core (internal) (BI/SI)	AC 1691	4.0	4.0	--
T9101	Secondary / output winding and core (internal) (BI/SI)	AC 1691	4.0	4.0	--
T9101	Primary / input part and secondary / output part (external) (DI)	AC 3000	38.5	38.5	Bobbin with 0.45mm thick
T9101	Primary / input part and secondary / output winding (external) (DI)	AC 3000	6.5	6.5	Bobbin with 0.45mm thick
T9101	Primary / input part and core (external) (BI/SI)	AC 1691	4.0	4.0	--
T9101	Secondary / output part and core (external) (BI/SI)	AC 1691	4.0	4.0	--
T9101	Secondary / output part and primary / input winding (external) (DI)	AC 3000	6.5	6.5	Bobbin with 0.45mm thick
supplementary information:					
1. The constructions of all sources of T901 are identical, only model designation, manufacturer, and the material different. 2. The required clearances multiplied by 1.48 considering that EUT operates up to 5000m. 3. Same construction for all sources.					
C.2	TABLE: transformers				P

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

Two separated windings (primary and secondary) on bobbin design (horizontal type core). Bobbin partition that thickness 6.5mm separated primary and secondary winding. Two layers of insulation tape around the core. The core is considered as floating part.

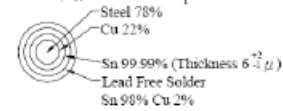
1. Mechanical Characteristics

1.1 Dimensions



A = 48.0mm MAX
B = 27.0mm MAX
C = 48.0mm MAX
D = 3.5 ± 0.3mm
E1 = 5.8 ± 0.5mm
E2 = 39.3 ± 0.5mm
Φ d = 0.8 ± 0.1mm

NOTE: 1. Lead Wire Composition



2. GAP CORE ON PIN1-7 SIDE.

3. PIN 1,3,4,5,7 CUT OFF

4. 引脚挂 PIN 圈数

配线 ALL PIN 1.0T MIN

5. NO GAP CORE 两腿内侧点软胶

6. Weight: 106±2g (1PC)

1.2 Marking Contents:

(1)TPV P/N : 80GL52P-502-N

(2)Vendor Name or Trade Mark : YUVA

(3)Date Code: XX(YEAR) & XX (WEEK)

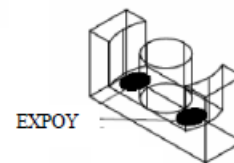
(4)"HI-POT OK" Model of Written Characters.

(5) Insulation System Designation: CIS.04 TABLE III CLASS B (I)

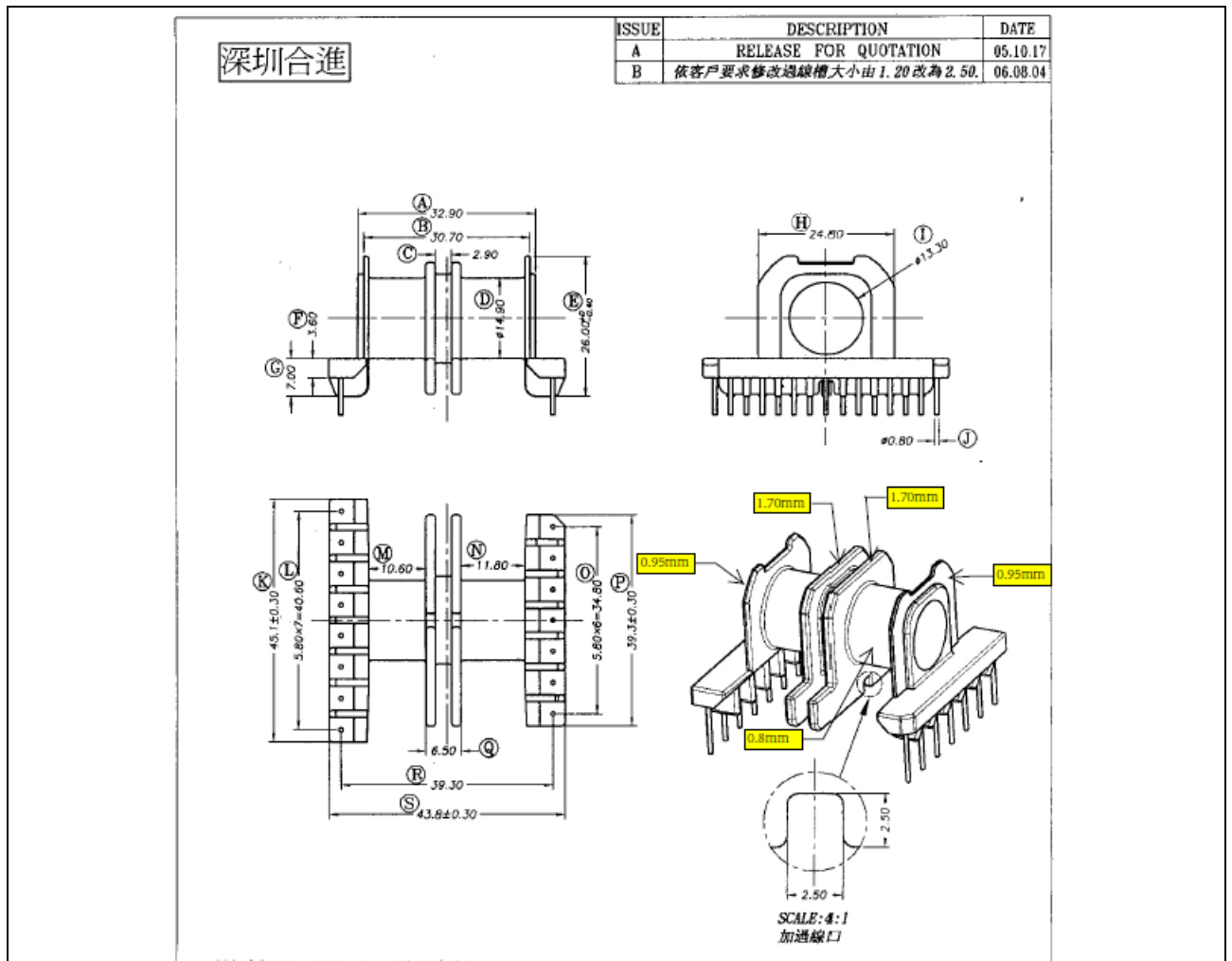
(6)Marking Standards:

80GL52P-502-N HI-POT OK

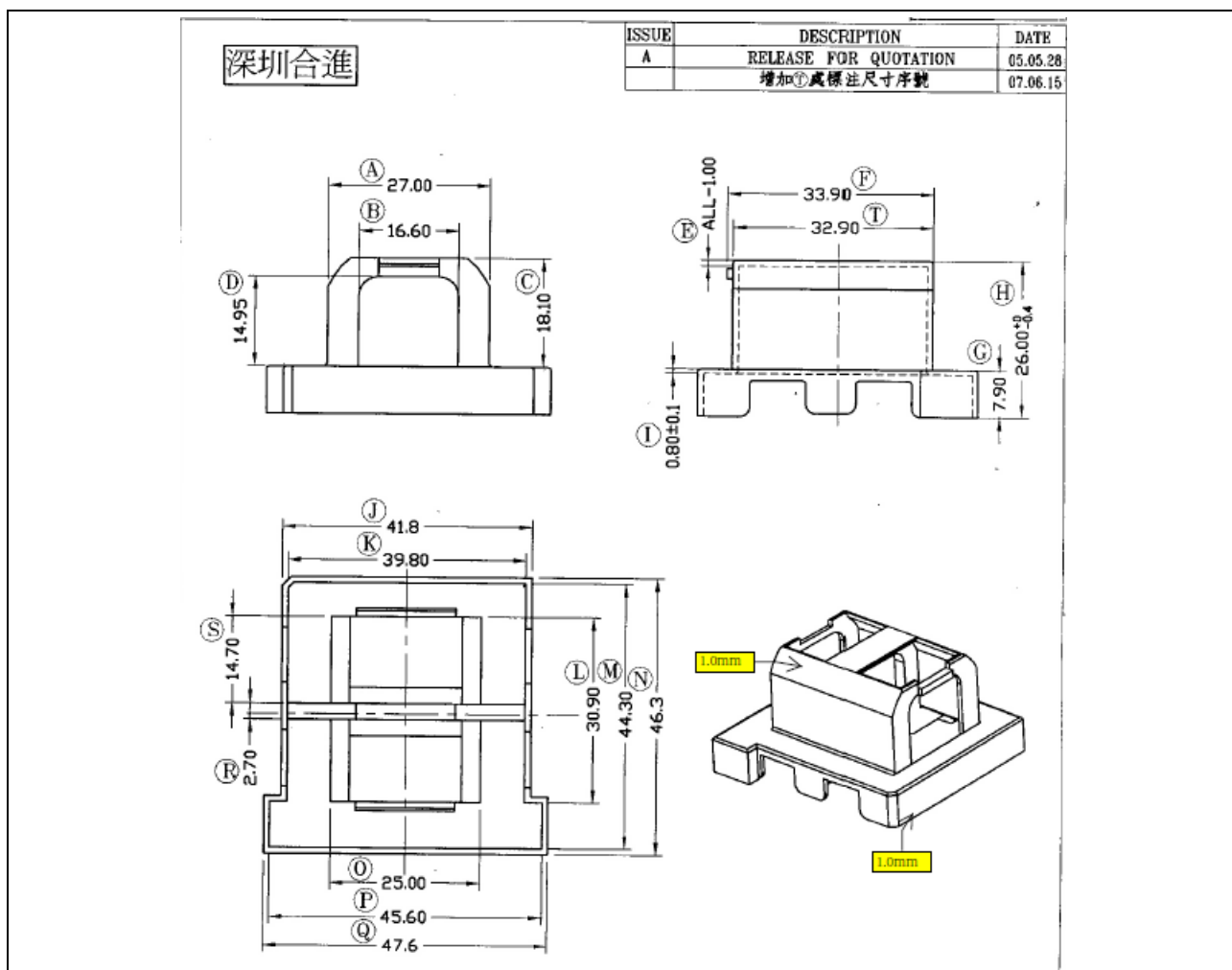
YUVA CIS.04 xxxx



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

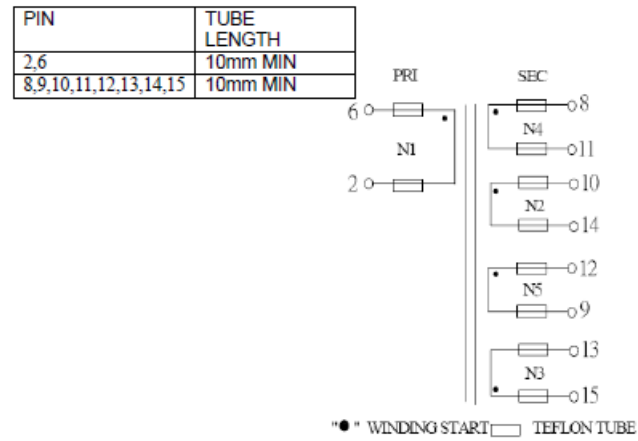


IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

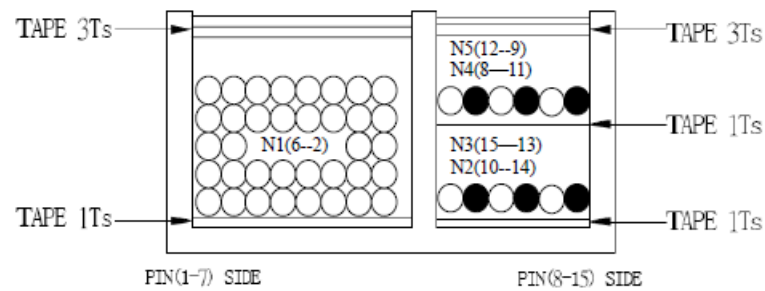


IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.4 Schematic



1.5 Winding construction



NOTE: 1. ALL PINS ADD TUBE,

1.6 Winding mode:

NO.	Winding	Terminal	Wire	Turns	Remark	MARGIN mm	TAPE 1T
1	N1	6—2	LITZ UEW $\phi 0.1 \times 80$	33	CLOSED	/	3Ts
2	N2	10—14	LITZ UEW $\phi 0.1 \times 150$	2	CLOSED	/	1Ts
3	N3	15—13	LITZ UEW $\phi 0.1 \times 150$	2	并绕	/	
4	N4	8—11	LITZ UEW $\phi 0.1 \times 150$	2	CLOSED	/	3Ts
5	N5	12—9	LITZ UEW $\phi 0.1 \times 150$	2	并绕	/	

1.7 Winding direction: IT IS CLOCKWISE FROM PIN 1-7 SIDE

Description of design:

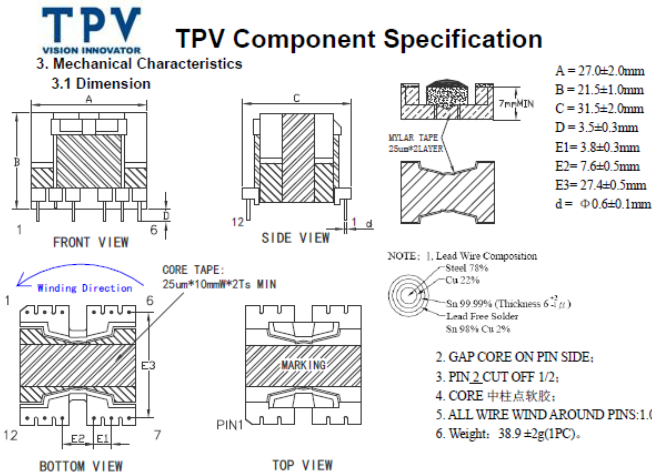
(a) Bobbin

Primary/input pins.....:	6-2
Secondary/output pins.....:	8-11; 10-14; 12-9; 15-13
Material (manufacturer, type, ratings)	See table1.5.1
Thickness (mm)	Min. 0.45mm

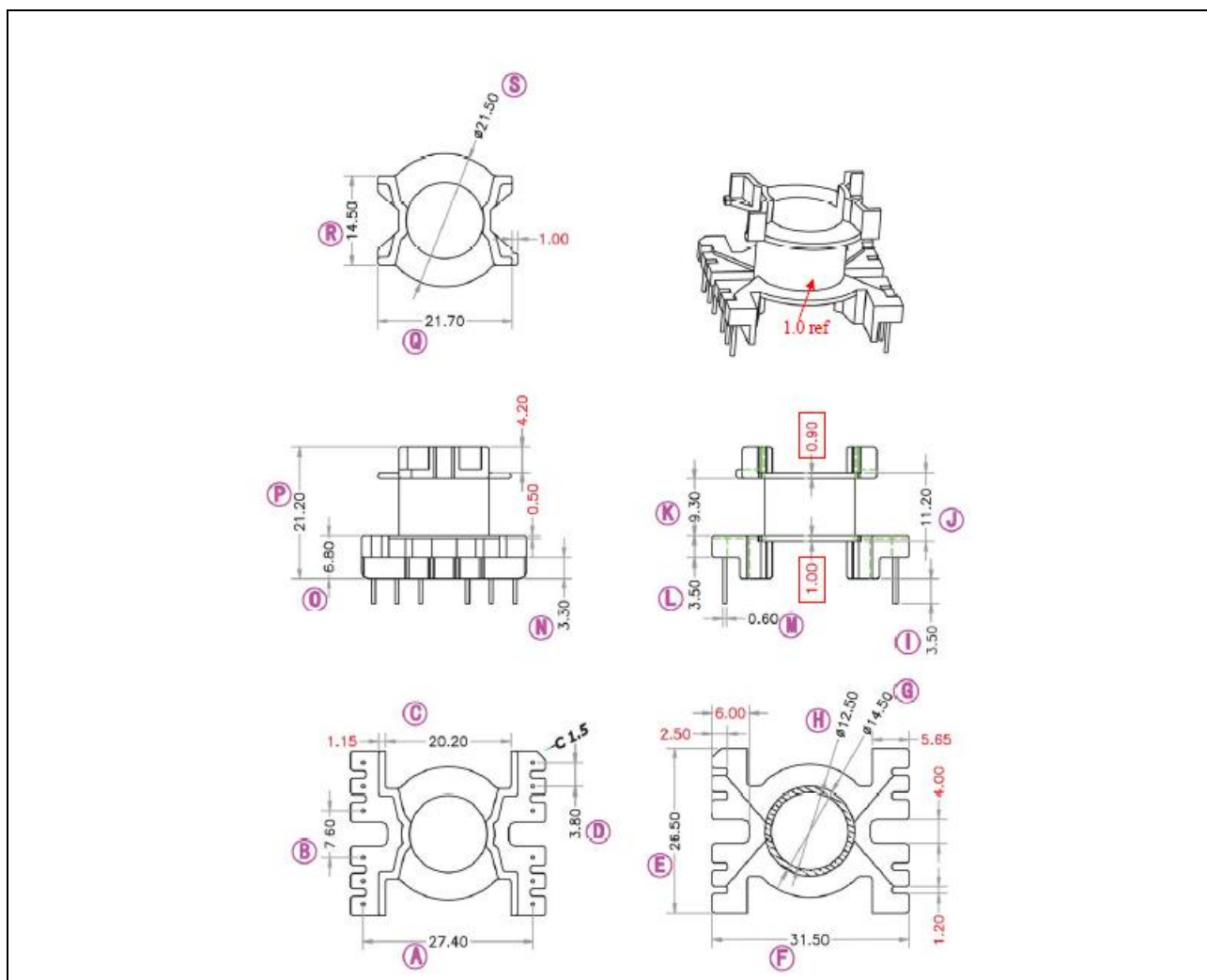
IEC 60950-1							
Clause	Requirement + Test			Result - Remark			Verdict

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)
T9301	Primary / input winding and secondary / output winding (internal) (DI)	580	358	AC 3000	6.9	7.2	Triple insulation wire
T9301	Primary / input winding and core (internal) (FI)	--	--	--	--	--	--
T9301	Secondary / output winding and core (internal) (DI)	580	358	AC 3000	6.9	7.2	Triple insulation wire
T9301	Primary / input part and secondary / output part (external) (DI)	580	358	AC 3000	6.9	7.2	Triple insulation wire
T9301	Primary / input part and secondary / output winding (external) (DI)	580	358	AC 3000	6.9	7.2	Triple insulation wire
T9301	Primary / input part and core (external) (FI)	--	--	--	--	--	--
T9301	Secondary / output part and core (external) (DI)	580	358	AC 3000	6.9	7.2	Triple insulation wire
T9301	Secondary / output part and primary / input winding (external) (DI)	580	358	AC 3000	6.9	7.2	Triple insulation wire
Loc.	Tested insulation			Test voltage / V	Measured clearance / mm	Measured creepage dist. / mm	Measured distance thr. insul. / mm; number of layers
T9301	Primary / input winding and secondary / output winding (internal) (DI)			AC 3000	9.0	9.0	Triple insulation wire
T9301	Primary / input winding and core (internal) (FI)			--	--	--	--
T9301	Secondary / output winding and core (internal) (DI)			AC 3000	9.0	9.0	Triple insulation wire
T9301	Primary / input part and secondary / output part (external) (DI)			AC 3000	27.1	27.1	Triple insulation wire

IEC 60950-1					
Clause	Requirement + Test	Result - Remark			Verdict
T9301	Primary / input part and secondary / output winding (external) (DI)	AC 3000	9.0	9.0	Triple insulation wire
T9301	Primary / input part and core (external)	--	--	--	--
T9301	Secondary / output part and core (external)	AC 3000	9.0	9.0	Triple insulation wire
T9301	Secondary / output part and primary / input winding (external) (DI)	AC 3000	9.0	9.0	Triple insulation wire
supplementary information:					
1. The constructions of all sources of T9301 are identical, only model designation, manufacturer, and the material different. 2. The required clearances multiplied by 1.48 considering that EUT operates up to 5000m. 3. Same construction for all source.					

C.2	TABLE: transformers	P									
Concentric windings on bobbin (vertical type core), outer winding is primary windings. Certificate triple insulated wire used in secondary windings, therefore core is considered as primary circuit. The bobbin which near secondary pin side to keep least min. 10 mm length. The angle of triple insulated wire between 45° and 90° provided with tape to against winding contact each other. There are two layer of insulation tapes provided on complete core of transformer to keep sufficient insulation for double insulation request. There are three layer of insulation tape provided on outer winding. the details information see below.											
TPV VISION INNOVATOR 3. Mechanical Characteristics TPV Component Specification 3.1 Dimension  $A = 27.0 \pm 2.0 \text{ mm}$ $B = 21.5 \pm 1.0 \text{ mm}$ $C = 31.5 \pm 2.0 \text{ mm}$ $D = 3.5 \pm 0.3 \text{ mm}$ $E1 = 3.8 \pm 0.3 \text{ mm}$ $E2 = 7.6 \pm 0.5 \text{ mm}$ $E3 = 27.4 \pm 0.5 \text{ mm}$ $d = \Phi 0.6 \pm 0.1 \text{ mm}$ NOTE: 1. Lead Wire Composition Steel 78% Cu 22% Sn 99.99% (Thickness $6.2 \mu\text{m}$) Lead Free Solder Sn 98% Cu 2% 2. GAP CORE ON PIN SIDE; 3. PIN CUT OFF 1/2; 4. CORE 中柱点软胶; 5. ALL WIRE WIND AROUND PINS: 1.0T MIN; 6. Weight: 38.9 ± 2g (1PC). 3.2 Marking Contents 3.2.1 TPV P/N : 380GL32P621P_00 3.2.2 Vendor Name or Trade Mark : PHOENIX 3.2.3 Date Code: XXXX X—XX(YEAR) & XX(WEEK) & X(PRODUCT LINE) 3.2.4 "HI-POT OK" Model of Written Characters. 3.2.5 Insulation System Designation: E480767 PH-130 CLASS B(130°C) TABLE I 3.2.6 Marking Standards: 380GL32P621P_00 HI-POT OK E480767 PH-130 XXXX X ** 3.2.7 Manufacture site: PHOENIX: HEFEI ANHUI CHINA <table border="1"> <thead> <tr> <th>NO.</th><th>Supplier of core</th><th>Color dot</th></tr> </thead> <tbody> <tr> <td>02</td><td>DMEGC</td><td>红点一点</td></tr> <tr> <td>09</td><td>LFG</td><td>绿色两点</td></tr> </tbody> </table>			NO.	Supplier of core	Color dot	02	DMEGC	红点一点	09	LFG	绿色两点
NO.	Supplier of core	Color dot									
02	DMEGC	红点一点									
09	LFG	绿色两点									

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

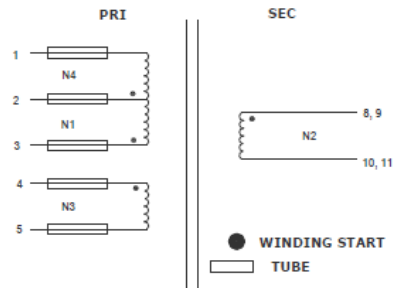


IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict



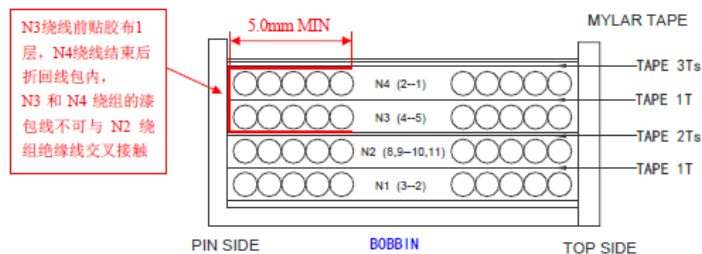
TPV Component Specification

3.4 Schematic



PIN	TUBE LENGTH
1,2,3,4,5	10mm MIN

3.5 Winding Specification



NOTE: 1) Mylar tape: 25um*9.5mmW REF;
2) PIN 1,2,3,4,5 ADDED TUBE.

3.6 Winding mode:

NO.	Winding	Terminal	Wire	Turns	Remark	Margin Tape mm	Tape
1	N1	3-2	UEW ϕ 0.30	26	CLOSED	/	1T
2	N2	8,9-10,11	TIW-B ϕ 0.50*6	4	CLOSED	/	2Ts
3	N3	4-5	UEW ϕ 0.20*3	12	CLOSED	/	1T
4	N4	2-1	UEW ϕ 0.30	27	CLOSED	/	3Ts

3.7 Winding direction: IT IS ANTI-CLOCKWISE FROM BOTTOM SIDE

Note: 1) Bare wires and insulated wires should not intersect contacts each other.
(漆包线和绝缘线不能相互交叉和接触)

2) Reflexed tape of copper foil : N/A

Description of design:

(a) Bobbin

Primary/input pins.....:	3-2-1; 4-5
Secondary/output pins.....:	8, 9-10, 11
Material (manufacturer, type, ratings)	See table1.5.1
Thickness (mm)	Min. 0.45mm

List of test equipment used:

No listing of test equipment used necessary for chosen test procedure.

Clause	Requirement + Test			Result - Remark	Verdict
2.1.1.7	TABLE: Discharge test				P
Condition	τ calculated (s)	τ measured (ms)	t u→ 0V (s)	Comments	
Supply voltage: 264Vac, 60Hz					
Line to Neutral	¹⁾	193.8	--	V _O = 376V _{peak} , 37 % of V _O = 139.12V _{peak} .	
Line to Neutral	¹⁾	134.2	--	V _O = 141.4V _{peak} , 37 % of V _O = 52.32V _{peak} .	
Supplementary information: 1) Overall capacity: see appended table 1.5.1.					

2.4.2	TABLE: Limited current circuit measurement					P
Location		Voltage (V)	Current (mA)	Freq. (Hz)	Limit (mA)	Comments
C9909		1.3	0.65	60	0.7	C9909 = 2200pF.
C9903		1.3	0.65	60	0.7	C9903 = 2200pF.
Supplementary information: Supply voltage: 264Vac, 60Hz.						

2.6.3.4	TABLE: Resistance of earthing measurement			P
Location	Resistance measured (mΩ)		Comments	
AC inlet earth pin to Metal enclosure	10		Test current : 32A, duration: 2 min., Voltage drop: 0.32V.	
AC inlet earth pin to Metal enclosure	11		Test current : 40A, duration: 2 min., Voltage drop: 0.44V.	
AC inlet earth pin to C9904 trace	6		Test current : 32A, duration: 2 min., Voltage drop: 0.192V.	
AC inlet earth pin to C9904 trace	6		Test current : 40A, duration: 2 min., Voltage drop: 0.24V.	
AC inlet earth pin to C9906 trace	6		Test current : 32A, duration: 2 min., Voltage drop: 0.192V.	
AC inlet earth pin to C9906 trace	6		Test current : 40A, duration: 2 min., Voltage drop: 0.24V.	
AC inlet earth pin to C9907 trace	3		Test current : 32A, duration: 2 min., Voltage drop: 0.096V.	
AC inlet earth pin to C9907 trace	4		Test current : 40A, duration: 2 min., Voltage drop: 0.16V.	
AC inlet earth pin to C9908 trace	3		Test current : 32A, duration: 2 min., Voltage drop: 0.096V.	
AC inlet earth pin to C9908 trace	4		Test current : 40A, duration: 2 min., Voltage drop: 0.16V.	

Clause	Requirement + Test	Result - Remark	Verdict
AC inlet earth pin to C9905 trace	6	Test current : 32A, duration: 2 min., Voltage drop: 0.192V.	
AC inlet earth pin to C9905 trace	6	Test current : 40A, duration: 2 min., Voltage drop: 0.24V.	
Supplementary information:			

4.6.1, 4.6.2	Table: Enclosure opening measurements		P
Location		Size (mm)	Comments
Metal Chassis as fire enclosure (Horizontal)(Side near Main board can be bottom when rotating)			
Top (can be side when rotated)	1) Ø1.8mm max. 2) Ø3.4mm max. 3) 10.6mm x 5.9mm max. 4) 12.7mm x 3.4mm max.	1) Numerous circle openings provided. These openings comply with table 4D requirement. 2) Numerous circle openings provided. 3) Two openings provided, these openings cover by external plastic enclosure. 4) One opening provided, these opening cover by insulation sheet.	
Rear	1) Ø 4.8mm max. 2) Ø 6.4mm max. 3)12.0mm x 13.8mm max. 4)15.2mm x 24.2mm max. 5) 26.8mm x 4.1mm max.	1) Numerous circle openings provided. 2) Two circle openings provided. 3) One opening provided. 4) Two openings provided. 5) Four openings provided. These openings cover by external plastic enclosure.	
Side (near main board) (can be bottom when rotated)	1) Ø1.8mm max. (center to center min. 5.0mm), thickness: min. 1.0mm.	1) Numerous circle openings provided. These openings comply with table 4D requirement.	
Side (near Power board) (can be top when rotated)	1) Ø 3.4mm max.	1) Numerous circle openings provided.	
Bottom (can be side when rotated)	1) Ø1.8mm max. (center to center min. 5.0mm), thickness: min. 1.0mm. 2) Ø15.9mm max.	1) Numerous circle openings provided. These openings comply with table 4D requirement. 2) One circle opening provided, these opening cover by external plastic enclosure.	
Rear Plastic enclosure as fire enclosure (Horizontal)(Side near Main board can be bottom when rotating)			
Top (can be side when rotated)	2.5mm x 45.0mm max.	Numerous openings provided.	
Rear	--	No openings.	
Side (near main board) (can be bottom when rotated)	2.5mm x 45.0mm max.	Numerous openings provided.	
Side (near Power board) (can be top when rotated)	2.5mm x 45.0mm max.	Numerous openings provided.	

Clause	Requirement + Test	Result - Remark	Verdict
Bottom (can be side when rotated)	2.5mm x 40.0mm max.	Numerous openings provided.	
Supplementary information:			

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to: EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013			
Attachment Form No.: EU_GD_IEC60950_1F			
Attachment Originator: SGS Fimko Ltd			
Master Attachment: Date 2014-02			
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EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 – CENELEC COMMON MODIFICATIONS

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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
General (A1:2010)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1 Note 6.1.2.1 Note 2 6.2.2.1 Note 2 EE.3 Note		P
General (A2:2013)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A2:2013) according to the following list: 2.7.1 Note * 2.10.3.1 Note 2 6.2.2. Note * Note of secretary: Text of Common Modification remains unchanged.		P
1.1.1 (A1:2010)	Replace the text of NOTE 3 by the following. NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.		P
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.	Added.	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	Deleted.	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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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.	Added.	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.	Equipment is not a personal music player.	N/A
	Zx Protection against excessive sound pressure from personal music players		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.1 General 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. A personal music player is a portable equipment for personal use, that: - is designed to allow the user to listen to recorded or broadcast sound or video; and - primarily uses headphones or earphones that can be worn in or on or around the ears; and - allows the user to walk around while in use. 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. 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. The requirements in this sub-clause are valid for music or video mode only. The requirements do not apply: - while the personal music player is connected to an external amplifier; or - while the headphones or earphones are not used. 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. The requirements do not apply to: - hearing aid equipment and professional equipment; 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.	Not personal music players.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	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. 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. For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.		
	Zx.2 Equipment requirements No safety provision is required for equipment that complies with the following: equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed "programme simulation noise" as described in EN 50332-1; and a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" as described in EN 50332-1. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx. All other equipment shall: a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and 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	Not personal music players.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	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 NOTE 2 Examples of means include visual or audible signals. Action from the user is always required. 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. d) have a warning as specified in Zx.3; and e) not exceed the following: 1) equipment provided as a package (player with its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and 2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1. For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song. NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. 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.		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.3 Warning 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.”  Figure 1 – Warning label (IEC 60417-6044) 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.	Not personal music players.	N/A
	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be ≥ 75 mV. 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.	Not personal music players.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.4.2 Wired listening devices with digital input With any playing device playing the fixed “programme simulation noise” described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. 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.). NOTE An example of a wired listening device with digital input is a USB headphone.	Not personal music players.	N/A
	Zx.4.3 Wireless listening devices 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 $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.	Not personal music players.	N/A
	Zx.5 Measurement methods 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. NOTE Test method for wireless equipment provided without listening device should be defined.	Not personal music players.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;	Replaced.	P
	c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		N/A
2.7.2	This subclause has been declared 'void'.	Void.	N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Deleted.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.5.1	Replace “60245 IEC 53” by “H05 RR-F”; “60227 IEC 52” by “H03 VV-F or H03 VVH2-F”; “60227 IEC 53” by “H05 VV-F or H05 VVH2-F2”. In Table 3B, replace the first four lines by the following: Up to and including 6 0,75 ^{a)} Over 6 up to and including 10 (0,75) ^{b)} 1,0 Over 10 up to and including 16 (1,0) ^{c)} 1,5 In the conditions applicable to Table 3B delete the words “in some countries” in condition ^{a)}. In NOTE 1, applicable to Table 3B, delete the second sentence.		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		N/A
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 1,5 to 2,5 1,5 to 4 Delete the fifth line: conductor sizes for 13 to 16 A	Deleted.	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.		—

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	—	
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ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
1.2.4.1	In Denmark , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		N/A
1.2.13.14 (A11:2009)	In Norway and Sweden , for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1 (A11:2009)	In Finland , Norway and Sweden , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.8	In Norway , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).	Complied.	P
1.5.9.4	In Finland , Norway and Sweden , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	In Finland , Norway and Sweden , CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Finland : "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway : "Apparatet må tilkoples jordet stikkontakt" In Sweden : "Apparaten skall anslutas till jordat uttag"	See copy of marking plate.	P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1 (A11:2009)	In Norway and Sweden, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. 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. 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: “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).”		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkøp utstyr – og er tilkøp et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkøp av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel-TV nettet.” 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.”		
1.7.2.1 (A2:2013)	In Denmark, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in Denmark shall be as follows: In Denmark: “Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.”		P
1.7.5 1.7.5 (A11:2009)	In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5 (A2:2013)	In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011. 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. 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. Justification the Heavy Current Regulations, 6c	No socket-outlets.	N/A
2.2.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	No TNV.	N/A
2.3.2	In Finland, Norway and Sweden there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	No TNV.	N/A
2.3.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	No TNV.	N/A
2.6.3.3	In the United Kingdom , the current rating of the circuit shall be taken as 13 A, not 16 A.		P
2.7.1	In the United Kingdom , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.	Not direct plug-in equipment.	N/A
2.10.5.13	In Finland, Norway and Sweden , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In Switzerland, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A 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 SEV 5933-2.1998: Plug Type 21, L+N, 250 V, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A	No power supply cord provided.	N/A
3.2.1.1	In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If 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.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1 (A2:2013)	In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Justification the Heavy Current Regulations, 6c		N/A
3.2.1.1	In Spain, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. 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. 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. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.		N/A
3.2.1.1	In the United Kingdom, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In Ireland , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.		N/A
3.2.4	In Switzerland , for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the United Kingdom , a power supply cord with conductor of 1,25 mm ² is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the United Kingdom , the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm ² to 1,5 mm ² nominal cross-sectional area.		N/A
4.3.6	In the United Kingdom , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.	No socket outlet.	N/A
4.3.6	In Ireland , DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.	Not direct plug-in equipment.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	In Finland, Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that - is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and - has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and - is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.		N/A
6.1.2.1 (A1:2010)	In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. 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 - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.	No TNV.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14: - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		N/A
6.1.2.2	In Finland, Norway and Sweden , the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.	No TNV.	N/A
7.2	In Finland, Norway and Sweden , for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	No Cable distribution system.	N/A
7.3 (A11:2009)	In Norway and Sweden , for requirements see 1.2.13.14 and 1.7.2.1 of this annex.	No Cable distribution system.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

**Annex ZD
(informative)**

IEC and CENELEC code designations for flexible cords

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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 with A1: 2009 and A2:2013 U.S.A. NATIONAL DIFFERENCES 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
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	<i>Special national conditions</i>		
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	In accordance with the National Electrical Code (NEC) and the Canadian Electrical Code (CEC) part 1 CAN/CSA C22.1, ANSI/NFPA 70, and unless marked or otherwise identified, the Standard for Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	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	Considered.	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		N/A
	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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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 equipment.	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
	- 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	No such components provided.	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)		P
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.	No such components provided.	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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	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	No wire binding screws.	N/A
3.3.3	Wire binding screws are not attached with conductors larger than 10 AWG (5.3 mm ²)		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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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).	No Laser.	N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge		N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9m ² (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)	No ionizing radiation.	N/A
	Other National Differences		P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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	Approved components provided, see appended table 1.5.1 of IEC 60950-1 test report.	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
	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 $42.4 V_{peak}$ 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	No TNV.	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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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 CA and US 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		P
4.3.8	Battery packs for both portable and stationary applications comply with special component requirements		P
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	See IEC 60950-1 test report.	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
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

ATTACHMENT TO TEST REPORT IEC 60950-1 with A1:2009 and A2:2013 CANADA NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to: CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014			
Attachment Form No.: CA_ND_IEC60950_1F			
Attachment Originator: CSA			
Master Attachment: Date (2015-05)			
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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) and the Canadian Electrical Code (CEC) part 1 CAN/CSA C22.1, 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 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 20 A.	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 CEC/NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC 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. 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	Not for used in more than one phase power supply system.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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."		
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.		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.	No such components provided.	N/A
2.6	Equipment with isolated ground (earthing) receptacles is 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.	No such components provided.	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.	No for DC mains.	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 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.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	Not permanent connection equipment.	N/A
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0.	No wire binding screws.	N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm ²).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for Canadian/US 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).		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.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	No flammable liquid.	N/A
4.3.13.5.1	Equipment with lasers is required to meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.	No Laser.	N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	extended discharge.		
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m ² (10 sq ft) or a single dimension greater than 1.8 m (6 ft) 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
Annex H	Equipment that produces ionizing radiation is required to comply with the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations, 21 CFR 1020, as applicable.		N/A
OTHER DIFFERENCES			
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.	Approved components provided, see appended table 1.5.1 of IEC 60950-1 test report.	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. 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.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 V _{peak} or		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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.		
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 CA and US 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.		P
4.3.8	Battery packs for both portable and stationary applications are required to comply with special component requirements.		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.	See IEC 60950-1 test report.	P
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	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		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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.		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 (AUSTRALIA/NEW ZEALAND) NATIONAL DIFFERENCES (Information technology equipment-safety)			
Differences according to.....: AS/NZS 60950.1:2015			
Attachment Form No.....: AU_NZ_ND_IEC60950_1F			
Attachment Originator.....: JAS-ANZ			
Master Attachment.....: 2017-06			
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	National Differences		P
Appendix ZZ	Variations to IEC 60950-1, Ed 2.2 (2013) for Australia and New Zealand		P
1.2	DEFINITIONS		P
	After definition 'PERSON, SERVICE', insert the following new definition: POTENTIAL IGNITION SOURCE.....1.2.12.201	Added.	P
1.5	COMPONENTS		P
1.5.1	1..... First paragraph, insert the following text after the words 'IEC component standard' or the relevant Australian/New Zealand Standard 2..... In the Note, insert the following text after the word standard: or the relevant Australian/New Zealand Standard 3..... Second paragraph, delete the words 'without further evaluation'	Added.	P
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	Added.	P
1.7	MARKINGS AND INSTRUCTIONS		P

IEC60950_1F - ATTACHMENT																	
Clause	Requirement + Test			Result - Remark	Verdict												
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			Replaced.	P												
2.9	ELECTRICAL INSULATION				N/A												
2.9.2	Variation Second paragraph, delete the word ‘designated’			Deleted.	N/A												
3.2.5	POWER SUPPLY CORDS				N/A												
Table 3B	Variation 1..... <i>Delete</i> the first four rows and replace with the following: <table><tr><td>Over 0.2 up to and including 3</td><td>0.5^a</td><td>18 [0.8]</td></tr><tr><td>Over 3 up to and including 7.5</td><td>0.75</td><td>16 [1.3]</td></tr><tr><td>Over 7.5 up to including 10</td><td>(0.75)^b 1.00</td><td>16 [1.3]</td></tr><tr><td>Over 10 up to including 16</td><td>(1.0)^c 1.5</td><td>14 [2]</td></tr></table>			Over 0.2 up to and including 3	0.5 ^a	18 [0.8]	Over 3 up to and including 7.5	0.75	16 [1.3]	Over 7.5 up to including 10	(0.75) ^b 1.00	16 [1.3]	Over 10 up to including 16	(1.0) ^c 1.5	14 [2]	Deleted.	N/A
Over 0.2 up to and including 3	0.5 ^a	18 [0.8]															
Over 3 up to and including 7.5	0.75	16 [1.3]															
Over 7.5 up to including 10	(0.75) ^b 1.00	16 [1.3]															
Over 10 up to including 16	(1.0) ^c 1.5	14 [2]															
	2..... <i>Delete</i> NOTE 1 and renumber existing NOTE 2 as ‘NOTE’				N/A												
	3..... <i>Delete</i> Footnote ^a and replace with the following: ^a This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the to the plug does not exceed 2 m (0,5 mm2 three-core supply flexible cords are not permitted; see AS/NZS 3191)				N/A												
4.3	DESIGN AND CONSTRUCTION				P												
4.3.6	Variation <i>Delete</i> the third paragraph and <i>replace</i> with the following:				P												

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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	Deleted and replaced. Not direct plug-in type.	P
4.3.8	Addition Eighth paragraph, <i>insert</i> the following new note after the first dash item:	No Batteries.	N/A
	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.		
4.3.13.5.1	Variation <i>Delete</i> the first paragraph and <i>replace</i> with the following: 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	No Lasers.	N/A
	Third paragraph, first sentence, after 'IEC 60825-1', insert the following text: or AS/NZS 60825.1		N/A
	Fourth paragraph, after 'IEC 60825-1', <i>insert</i> the following text: or AS/NZS 60825.1		N/A
4.7	RESISTANCE TO FIRE		N/A
4.7	Addition At the end of Clause 4.7, <i>insert</i> the following text: For alternate tests refer to Clause 4.7.201	Added. The alternative method is not considered.	N/A
6	CONNECTION TO TELECOMMUNICATIONS NETWORKS		N/A
6.2.2	Variation For Australia only, <i>delete</i> the first paragraph and Note, and <i>replace</i> with the following: In Australia only, compliance with 6.2.2 shall be checked by the tests of both 6.2.2.1 and 6.2.2.2		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
6.2.2.1	Variation For Australia only, <i>delete</i> the first paragraph including the Notes, and <i>replace</i> with the following: In Australia only, the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator Reference 1 of Table N.1. The interval between successive impulses is 60 s and the initial voltage, U_c, is: (i)..... for 6.2.1 a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and (ii)..... For 6.2.1 b) and 6.2.1 c): 1.5kV	No TNV.	N/A
	NOTE 201 The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines		N/A
	NOTE 202 The value of 2.5 kV for 6.2.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages		N/A
6.2.2.2	Variation For Australia only, delete the second paragraph including the Note, and replace with the following: In Australia only, the a.c. test voltage is (i).....for 6.2.1 a): 3kV; and (ii)..... for 6.2.1b) and 6.2.1c): 1.5kV	No TNV.	N/A
	NOTE 201 Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used.		N/A
	NOTE 202 The 3 kV and 1.5 kV values have been determined considering the low frequency induced voltages from the power supply distribution system.		N/A
7	CONNECTION TO CABLE DISTRIBUTION NETWORK		N/A
7.3	Addition Add the following before the first paragraph: Equipment providing functions that fall only within the scope of AS/NZS 60065 and that incorporate a PSTN interface, are not required to comply with this Clause where the only ports provided on the equipment, in addition to a coaxial cable connection and a PSTN interface, are audio or video ports and analogue or data ports not intended to be used for telecommunications purposes		N/A
Annex P	Addition Add the following Normative References: AS/NZS 3191, Electric flexible cords AS/NZS 3112, Approval and test specification—Plugs and socket-outlets		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Special national conditions (if any)		N/A
1.2.12	FLAMMABILITY		N/A
1.2.12.15	Addition After Clause 1.2.12.15, <i>insert</i> the following new clause:		N/A
1.2.12.201	POTENTIAL IGNITION SOURCE Possible fault which can start 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 15 VA		N/A
	Such a faulty contact or interruption in an electrical connection includes those which may occur in CONDUCTIVE PATTERNS on PRINTED BOARDS		N/A
	NOTE 1 An electronic protection circuit may be used to prevent such a fault from becoming a POTENTIAL IGNITION SOURCE		N/A
	NOTE 2 This definition is from AS/NZS 60065:2012, Clause 2.8.11.		N/A
4	PHYSICAL REQUIREMENTS		N/A
4.1	Addition After Clause 4.1, <i>insert</i> new Clause 4.1.201 as follows:		N/A
4.1.201	Display devices used for television purposes Display devices which may be used for television purposes, with a mass of 7 kg or more, shall comply with the requirements for stability and mechanical hazards, including the additional stability requirements for television receivers, specified in AS/NZS 60065		N/A
4.3	DESIGN AND CONSTRUCTION		N/A
4.3.8	Addition After Clause 4.3.8, <i>add</i> the following new clause as follows	No Batteries.	N/A
4.3.8.201	Products containing coin/button cell batteries and batteries designated R1 The requirements of AS/NZS 60065:2012 Amendment 1:2015, Clause 14.10.201 apply for this Clause.	No such Batteries.	N/A
4.7	RESISTANCE TO FIRE		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.6	Addition After Clause 4.7.3.6, <i>add</i> new clauses as follows:	Added. The alternative method is not considered.	N/A
4.7.201	Resistance to fire—Alternative tests	Added. The alternative method is not considered.	N/A
4.7.201.1	General Parts of non-metallic material shall be resistant to ignition and spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames from inside the apparatus, or the following: a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1 mm in width regardless of length.	Added. The alternative method is not considered.	N/A
	b) The following parts which would contribute negligible fuel to a fire: — small mechanical parts, the mass of which does not exceed 4 g, such as mounting parts, gears, cams, belts and bearings; — small electrical components, such as capacitors with a volume not exceeding 1,750 mm ³ , integrated circuits, transistors and optocoupler packages, if these components are mounted on material of flammability category V-1, or better, according to AS/NZS 60695.11.10		
	NOTE In considering how to minimize propagation of fire and what 'small parts' are, account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating the fire from one part to another		N/A
	Compliance shall be checked by the tests of 4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5		N/A
	For the base material of printed boards, compliance shall be checked by the test of 4.7.201.5		N/A
	The tests shall be carried out on parts of non-metallic material which have been removed from the apparatus. When the glow-wire test is carried out, the parts shall be placed in the same orientation as they would be in normal use. These tests are not carried out on internal wiring		N/A

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4.7.201.2	Testing of non-metallic materials Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550°C Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The 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.	Added. The alternative method is not considered.	N/A
4.7.201.3	Testing of insulating materials Parts of insulating material supporting POTENTIAL IGNITION SOURCES shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750°C. The test shall be also carried out on other parts of insulating material which are within a distance of 3 mm of the connection. NOTE Contacts in components such as switch contacts are considered to be connections. 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. The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications:	Added. The alternative method is not considered.	N/A

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Clause	Requirement + Test		Result - Remark	Verdict
	Clause of AS/NZS 60695.11.5			
	9 Test procedure			
	9.2 Application of Needle-flame	<i>Delete</i> the first and second paragraphs and <i>replace</i> 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	<i>Delete</i> existing text and <i>replace</i> 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	<i>Delete</i> existing text and <i>replace</i> with the following: The duration of burning (tb) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15s		
	The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10, provided that the sample tested was not thicker than the relevant part			N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.201.4	Testing in the event of non-extinguishing material 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.	Added. The alternative method is not considered.	N/A
	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.		N/A
	NOTE 2 If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the equipment, the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing		N/A
	NOTE 3 Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting, in contact with, or in close proximity to, connections.		N/A
4.7.201.5	Testing of printed boards 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.	Added. The alternative method is not considered.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The test is not carried out if the – Printed board does not carry any POTENTIAL IGNITION SOURCE; – 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 – 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 <i>Compliance shall be determined using the smallest thickness of the material.</i>		N/A
	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 m when the circuit supplied is disconnected.		N/A

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ATTACHMENT TO TEST REPORT IEC 60950-1 with A1: 2009 and A2:2013 JAPAN NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to: J60950-1 (H29)			
Attachment Form No.: JP_ND_IEC60950_1F			
Attachment Originator: JQA			
Master Attachment: 2017-11			
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	National Differences		
1.2.4.1	Add the following new notes. Note: Even if the equipment is designed as Class I, the equipment is regarded as CLASS 0I EQUIPMENT (see 1.2.4.3A) when 2-pin adaptor with earthing lead wire or cord set having 2-pin plug with earthing lead wire is provided or recommended.	Added.	P
1.2.4.3A	Add the following new clause. 1.2.4.3A CLASS 0I EQUIPMENT Equipment having attachment plug without earthing blade, where protection against electric shock is achieved by: - using BASIC INSULATION, and - providing either of the following a) or b) 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 earthing terminal, 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.	Added.	P

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Clause	Requirement + Test	Result - Remark	Verdict

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Clause	Requirement + Test	Result - Remark	Verdict
1.3.2	Add the following notes after the first paragraph: 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.	Added. Not transportable equipment.	P
1.5.1	Replace the first paragraph with the follows: 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, or components shall have equivalent to or better properties than these. Replace Note 1 with the following: Note 1 Components complying with the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance. Note 2 JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope. Add the following after the last paragraph: For an appliance connector that is able to fit with appliance inlet compatible with the standard sheet of IEC 60320-1 or JIS C 8283-1, the size of the connector shall comply with relevant standard sheet of IEC 60320-1 or JIS C 8283-1. A power supply cord set complying with JIS C 8286 is regarded to comply with this requirement. Note 3 A power supply cord set provided with appliance connector that is able to fit with appliance inlet compatible with the standard sheet of IEC 60320-1 or JIS C 8283-1 should comply with JIS C 8286.	Replaced.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.5.2	Add the following Note 2 after the 4th dashed paragraph: 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.	Replaced.	P
1.5.5	Add the following Note after the last paragraph: NOTE An interconnection cord sets provided with interconnecting coupler for mains supply complying with JIS C 8283-2-2 should comply with JIS C 8286.		N/A
1.5.9.1	Add the following in the last of NOTE 1. Gas discharge tube connected in series with VDR may be used.	Replaced.	N/A
1.7	Replace EE.2 and EE.4 with the following: JA.1 Shredder warning JA.3 Shredder power disconnection	Replaced.	P
1.7.1.2	Replace first and second dashed paragraphs with the followings: - manufacturer's or responsible company's name or trade-mark or identification mark; - manufacturer's or responsible company's model identification or type reference;		N/A
1.7.2.1	Add the following after the second paragraph. Instruction or equipment marking regarding safety shall be written in Japanese unless otherwise permitted in this standard.	Added. Shall be evaluated during national approval	N/A
1.7.2.5	Replace the last sentence with the following: An acceptable marking for an electric shock hazard is (6.2.4 of JIS S 0101). 	Replaced.	N/A
1.7.5	Replace the second paragraph with the following. Socket-outlets conforming to JISC8282-1 are examples of standard power supply outlets.	Replaced.	N/A

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1.7.5A	Add the following new clause after 1.7.5. 1.7.5A Power supply cord set 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 operating 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。” 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 operating instruction 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 operating <i>instruction should provide the information that the cord set is exclusively used with the equipment and not allowed to use with other equipment.</i>	Added. Not Exceed 10A.	N/A

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1.7.14A	Add the following new clause after 1.7.14. 1.7.14A Marking for CLASS 0I EQUIPMENT 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。” - the following instruction 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。	Added. Shall be evaluated during national approval.	P
1.7.14B	Add the following new clause after 1.7.14A 1.7.14B Protective earthing conductor used for CLASS 0I EQUIPMENT For CLASS 0I EQUIPMENT provided with independent main protective earthing terminal, where the cord for the protective earthing connection is not provided within the package for the equipment, the suitable information for the protective earthing connection shall be provided in the operating instruction. (See 2.6.3.2)	Added.	P

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2.1.1.1	Replace item b) of 2.1.1.1 with the following. b) A test with the test finger, Figure 2A, which shall not contact parts described above when applied to openings in the ENCLOSURES after removal of parts that can be detached by an OPERATOR, including fuseholders, and with OPERATOR access doors and covers open. It is permitted to leave lamps in place for this test. Connectors that can be separated by an OPERATOR, other than those complying with JIS C 8303 or JIS C 8285 or IEC 60309 series or JIS C 8283 series or IEC 60320 series, shall also be tested during disconnection. But even if the connector does not comply with these standards, the one having equivalent to or better performance need not be tested during disconnection. Note 4 Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.	Replaced.	N/A
2.5	Replace "IEC 60730-1" with "JIS C 9730-1" (in item b)).	Replaced.	N/A
2.6.2	Delete the following line. • the symbol , IEC 60417-5018 (2011-07);		N/A
2.6.3.2	Add the following after the first paragraph. However where the single core conductor is used for protective earthing lead or earthing cord for CLASS 0I EQUIPMENT, either of the following condition shall be met. - Use of annealed copper wire with 1.6 mm diameter or corrosion-inhibiting metal wire having equivalent to or more strength and thickness. - Single core cord or single core cable with 1.25 mm² or more cross-sectional area	Added.	P
2.6.3.5	Add the following after the first paragraph. However this requirement does not apply to internal conductor of the cord set that is covered by the sheath of mains cord and is formed together with mains plug and appliance connector.	Added. No power cord provided.	N/A

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2.6.4.2	Replace the first paragraph with the following. Equipment required to have protective earthing shall have a main protective earthing terminal. For equipment with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal. 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.	Added.	P
2.6.5.4	Replace the first sentence with the following. Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following: Add the following after last paragraph: Note For CLASS 0I EQUIPMENT, 1.7.14A is applied instead of this requirement.	Added.	P
2.6.5.8A	Add the following new clause after 2.6.5.8 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.	Added.	P
2.7.6	Replace "ISO 3864, No. 5036" with "6.2.4 of JIS S 0101".	Replaced.	N/A

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2.10.3.1	Replace the 8th paragraph with the following The above minimum CLEARANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, or even if it does not comply with the above standards but the one having equivalent to or better performance and dimension which comply with JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2. Note Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.	Replaced.	P
2.10.3.2 Table 2J	In Japan, the value of the main power supply transient voltage for the nominal ac main power supply voltage of 100 V is determined by applying the row of AC main power supply voltage 150 V.	Added.	P
2.10.4.3	Replace the 6th paragraph with the following The above minimum CREEPAGE DISTANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, or even if it does not comply with the above standards but the one having equivalent to or better performance and dimension which comply with JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2. Note Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.	Replaced.	P
2.10.9	Replace "1.4.5" in the third paragraph with "1.4.12".	Replaced.	N/A
3.2.3	Add the following after the third paragraph. Table 3A applies when cables complying JIS C 3662 series of standards or JIS C 3663 series of standards are used. In case of other cables, cable entries shall be so designed that the cable could be fitted in a conduit.	Added.	N/A

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3.2.4	Add the following as 4th dashed paragraph. - 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.	Added. Inlet is cover by adequate mechanical construction, not rely on soldering.	P
3.2.5.1	Add the following after Note 3: Note 4 In Japan, mains cords having equivalent to or better electro-mechanical and fire safety performance as above and complying with Appendix 1 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance can be used. Replace the paragraph after Note 3 with the following. For equipment required to have protective earthing, a PROTECTIVE EARTHING CONDUCTOR shall be included in the MAINS SUPPLY cord except for CLASS 0I EQUIPMENT having separate protective earthing conductor from mains cord. Add the following after the second paragraph after Note 3: Note 5 For the cross-sectional area of mains cord described in Note 4, relevant Japanese wiring regulation can be applied.	Added.	N/A
3.2.5A	Add the following new clause after 3.2.5 3.2.5A AC mains plug Mains plug for PLUGGABLE EQUIPMENT TYPE A shall comply with JIS C 8282-1 or equivalent to or better performance. Power supply cord set complying with JIS C 8286 is regarded to meet the requirements. Mains plug with fuse link for PLUGGABLE EQUIPMENT TYPE A shall comply with JIS C 8282-2-1 or equivalent to or better performance. Note Mains plug complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.	Added.	N/A
3.3.4 Table 3D	Add the following note to Table 3D: Note For cables other than those complying with JIS C 3662 series of standards or JIS C 3663 series of standards, the terminals shall be suitable for the size of the intended cables.	Added.	N/A

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3.3.7	Add the following after the first sentence: This requirement is not applicable to the external earthing terminal of CLASS 0I EQUIPMENT.	Added.	N/A
4.2.8	Add the following after the first paragraph: Note Intrinsically protected picture tube is required to comply with JIS C 6965 in clause 18 of JIS C 6065. No intrinsically protected picture tube which is out of scope of JIS C 6965 is required to test according to sub-clause 18.2 of JIS C 6065.	Added.	N/A
4.3.4	Add the following after the first sentence: 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.	Added.	N/A
4.3.5	Replace the first dashed paragraph with the following. 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 of standards 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 connectors accessible only to a SERVICE PERSON, clear markings are permitted to meet the requirement.	Replaced.	N/A
4.3.6	Replace the 1st paragraph with the following DIRECT PLUG-IN EQUIPMENT shall not impose undue stress on the socket-outlet. The mains plug part shall comply with the standard for the relevant mains plug. (see 3.2.5A)		N/A
4.4.2	Replace the paragraph with the following: HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall also comply with Annex JA.		N/A

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4.5.3	Add the following note to footnote b) of Table 4B: NOTE In case no data for the material is available, Appendix 4, 1. (1). b. 3 of the Interpretation on the Ministerial Ordinance stipulating Technical Specifications for Electrical Appliances is regarded as maximum temperature limit of the material.	Replaced.	N/A
5.1.3	Add a note after the first paragraph as follows: 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.	Added. Single phase power distribution system used.	N/A

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5.1.6	Replace Table 5A. as follows				Replaced. See IEC 60950-1 report	P
	Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. ^a	Maximum PROTECTIVE CONDUCTOR CURRENT		
	ALL equipment	Accessible parts and circuits not connected to protective earth ^b	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 -	- -		
	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.					
	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.					

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Annex G	Replace the paragraph before Table G.2 with the following The above minimum CLEARANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, and 1.5.1 of this standard in which dimension is comply with JIS C 8283 series, JIS C 8303 or IEC 60309-2.	Replaced.	N/A
Annex V V.1	Replace "3.1.2" in the first line of V.1 with "312" in the first line.	Replaced.	P
Annex W W.1	Replace the third sentence in the first paragraph with the following: Floating circuits can exist in CLASS I EQUIPMENT, CLASS 0I EQUIPMENT and earthed circuits can exist in CLASS II EQUIPMENT.	Replaced.	N/A
Annex BB	This annex is not applicable.		N/A
Annex CC CC.2	Replace the third dashed paragraph with the following: <i>- 10 000 cycles of turning enable on and off with the input connected to a capacitor rated 425 uF ± 10 uF and shorting the output;</i>		N/A
CC.3	Add note at end of CC.3: Note: The fast blow fuse should be the one complying with JIS C 6575-2.		N/A
CC.4	Replace the 2nd dashed paragraph with the following: - 10 000 cycles of turning enable on and off with a 100 Ω ± 5 Ω resistor and a 425 uF ± 10 uF capacitor in parallel with the output; Replace the 4th dashed paragraph with the following: - 10 000 cycles of turning enable on and off with the input connected to a capacitor rated 425 uF ± 10 uF and shorting the output; Replace the 5th dashed paragraph with the following: -10 000 cycles of turning the input pin on and off with a capacitor rated 425 uF ± 10 uF connected to the input supply while keeping enable active and		N/A

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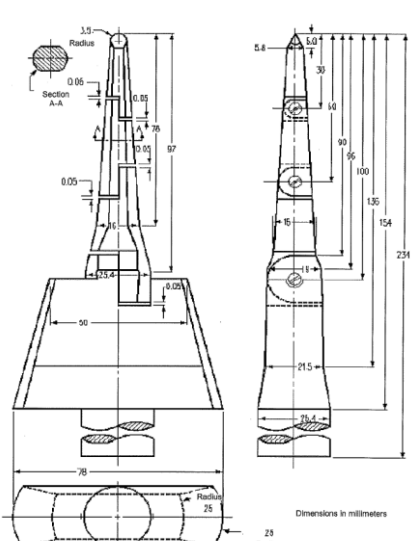
IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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	shorting the output; Replace the 6th dashed paragraph with the following: –10 000 cycles of turning the input pin on and off with an ferrite-core inductor having 350 mH ± 10 mH inductance at 1 kHz and less than 1 Ω d.c. resistance connected to the input supply and return while keeping enable active and shorting the output; Replace the 10th dashed paragraph with the following: –3 cycles of exposing the device (not energized) to 70 °C ± 2 °C for 24 h; followed by at least 1 h at room ambient; followed by at least 3 h at -30 °C ± 2 °C; followed by 3 h at room ambient; Replace the 11th dashed paragraph with the following: –10 cycles of exposing the device (while energized) to 50 °C ± 2 °C for 10 min; followed by 10 min at 0 °C ± 2 °C with a 5 min period of transition from one state to the other;		
Annex EE	Replace Annex EE with the following Annex JA. Annex JA (normative) Document shredding machines HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall additionally comply with the requirements of this annex. JA.1 Markings and instructions 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; 子供が使用することによって、傷害などの危害が発生するおそれがある。; (that use by infants/children may cause a hazard of injury etc.)	Not document shredding machine.	N/A

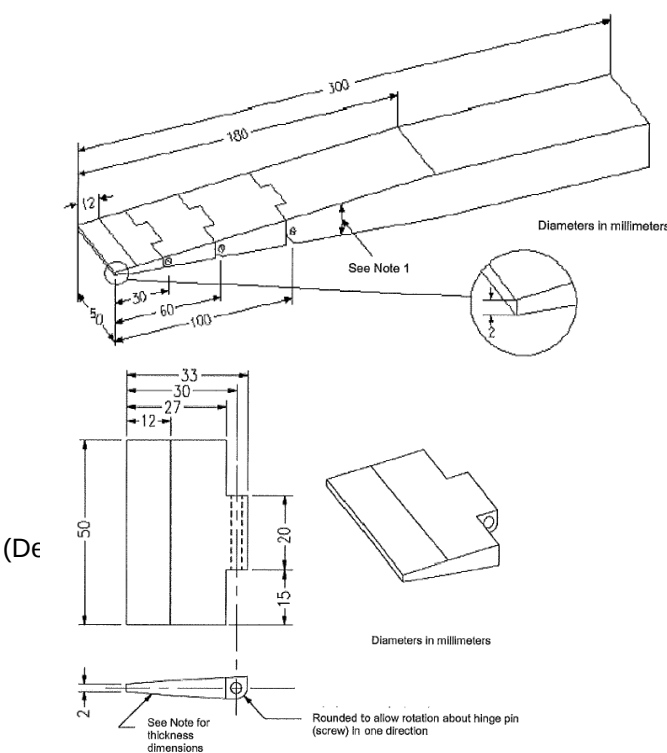
IEC60950_1F - ATTACHMENT			
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Clause	Requirement + Test	Result - Remark	Verdict
	文書投入口に手を触れることによって、細断機構に引き込まれるおそれがある。 ;(that a hand can be drawn into the mechanical section for shredding when touching the document-slot) 文書投入口に衣類が触れることによって、細断機構に引き込まれるおそれがある。 ; (that clothing can be drawn into the mechanical section for shredding when touching the document-slot) 文書投入口に髪の毛が触れることによって、細断機構に引き込まれるおそれがある。 ; (that hairs can be drawn into the mechanical section for shredding when touching the document-slot) - in case of equipment incorporating a commutator motor, 可燃性ガスを噴射することによって引火又は爆発するおそれがある。 (that equipment may catch fire or explode by spraying of flammable gas.) JA.2 Inadvertent reactivation Any safety interlock that can be operated by means of the test finger, Figure JA.1, is considered to be likely to cause inadvertent reactivation of the hazard. Compliance is checked by inspection and, where necessary, by a test with the test finger, Figure JA.1. JA.3 Disconnection from the mains supply Document shredding machines shall incorporate an isolating switch complying with sub-clause 3.4.2 as the device disconnecting the power of hazardous moving parts. For this switch, two-position (single-use) switch or multi-position (multifunction) switch (e.g., slide switch) may be used. 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. Compliance is checked by inspection.		

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Clause	Requirement + Test	Result - Remark	Verdict

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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.	See above.	N/A
	 Figure JA.1 Test finger		

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950_1F ATTACHMENT											
Clause	Requirement + Test	Result - Remark	Verdict								
	 <table data-bbox="373 1464 1115 1666"> <tr> <th>Distance from the tip (mm)</th> <th>Thickness of probe (mm)</th> </tr> <tr> <td>0</td> <td>2</td> </tr> <tr> <td>12</td> <td>4</td> </tr> <tr> <td>180</td> <td>24</td> </tr> </table> 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; for ≤ 25 mm: ± 0.13 mm for > 25 mm: ± 0.3 mm. Figure JA.2 Wedge-probe	Distance from the tip (mm)	Thickness of probe (mm)	0	2	12	4	180	24		
Distance from the tip (mm)	Thickness of probe (mm)										
0	2										
12	4										
180	24										

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Appendix	Appendix 12 J3000 (H25) Special National conditions, National deviation and other information according to MITI Ordinance No. 85.		—
1	General requirement When equipment provides with appliance inlet complying with JIS C 8283-1(2008), soldered parts of appliance inlet is not applied by force during insert or removal of connector. This is not applied when inlet body is fixed itself and not fixed by solder.	Inlet is cover by adequate mechanical construction, not rely on soldering.	P
2	Requirement for equipment		—
2.1	Heater Appliances When diode is used in parallel at the power sources for adjustment of power consumption, the equipment shall remain safe for operation under open condition of one diode.		N/A
	The current rating of one diode shall be more than main current. The diodes connected in parallel are same type.		N/A
	The heating test specified by clause 11 of JIS C 9335-1(2003) and a specified in applicable individual requirements under open condition of one diode of parallel shall comply with the requirements.		N/A
2.2	Electric heater with glowing heating elements	Not electric stove.	N/A
	Surface treatment by paint or adhesive on protective frame or protective mesh shall not be used.		N/A
	Caution marking like below shall be on - easily visible place of the equipment or - Instruction manual 「注意 当該機器から、使用初期段階で揮発性有機化合物及びカルボニル化合物が最も放散するおそれがあるため、その際には十分換気を行うこと。」		N/A
3	Components used in equipment	No relevant equipment or component.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.1	Motor capacitors used in ventilating fan, electric fan, air conditioner, electric washing machine, refrigerator or electric freezer shall be comply with - capacitors with protective elements or protective mechanism complying with JIS C 4908(2007) - P2 capacitor complying with IEC 60252-1(2001) Capacitor complying with below is acceptable		N/A
	Enclosed by metal or ceramic		N/A
	No non-metallic materials within 50 mm from capacitor surface		N/A
	Non-metallic material within 50mm from capacitor surface comply with needle frame test of JIS C 9335-1(2003), Annex E		N/A
	Non-metallic material within 50 mm from capacitor surface comply with V-1 test of JIS C 60965-11-10(2006).		N/A
3.2	Plug directly inserted to outlet used refrigerator or electric freezer. Shall comply with - Face contact with outlet shall have CTI with more than 400 according to JIS C 2134(2007) or - Supporting material of blades shall comply with glow wire test by temperature of 750°C according to JIS C 60695-2-11(2004) or JIS C 60695-2-12(2004). Materials having glow wire frame temperature of 775 °C are acceptable.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 FINLAND NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to: EN 60950-1:2006/A11:2009/A1:2010			
Attachment Form No.: FI_ND_IEC60950_1C			
Attachment Originator: SGS Fimko Ltd			
Master Attachment: Date (2010-04)			
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	National Differences		P
General	See also Group Differences (EN 60950-1:2006/A11/A1)		P
1.5.7.1	In Finland 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 resistor.	N/A
1.5.9.4	In Finland , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	In Finland , 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. The marking text in in Finland shall be as follows: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"		P
2.3.2	In Finland , there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.10.5.13	In Finland , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	In Finland, TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that - is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and - has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and - is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.		N/A
6.1.2.1 (A1:2010)	In Finland, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.	No TNV.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14:2005 which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14:2005; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14:2005, in the sequence of tests as described in EN 60384-14:2005.		N/A
6.1.2.2	In Finland, 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.		N/A
7.2	In Finland, for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	No cable distribution system.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 GERMANY NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to.....: VDE 0805-1:2011-01			

Annex ZC, 1.7.2.1	According to GPSG, section 2, clause 4: If certain rules on the use, supplementation or maintenance of an item of technical work equipment or ready-to-use commodity must be observed in order to guarantee safety and health, instructions for use in German must be supplied when it is brought into circulation.		P
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IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950 - 1, ed2, amd1 ISRAEL NATIONAL DIFFERENCES (INFORMATION TECHNOLOGY EQUIPMENT – SAFETY: GENERAL REQUIREMENTS)			
Differences according to.....: National standard SI 60950 - 1, ed2, amd1.			
Attachment Form No.....: IL_ND_IEC60950_1C			
Attachment Originator Standards Institution of Israel			
Master Attachment Date 2015-12			
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	National Differences		P
1.6	Power interface The clause is applicable with the following addition:		P
1.6.1	AC Power distribution systems		P
	- At the end of the clause, the following note shall be added: Note: In Israel, the clause is subject to the Electricity Law, 1954, its Regulations and updates.		P
1.7	Marking and instructions The clause is applicable with the following additions:		N/A
1.7.1	Power rating		P
	- Subclause 1.7.201 shall be added after the clause, as follows:		P
1.7.201	Marking in the Hebrew language	Shall be evaluated during national approval	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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 on a label well attached to the apparatus or its packaging, by bonding or sewing, such that the label cannot be easily removed.		
1.7.2	Safety instructions and marking	See below	N/A
1.7.2.1	General - The following shall be added at the end of the clause: All the instruction and all the warnings related to safety shall also be written in the Hebrew language.	Shall be evaluated during national approval	N/A
- At the end of clause 1, clause 1.201 shall be added as follows:			
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 %.	Shall be evaluated during national approval	N/A
2	Protection from hazards The clause is applicable with the following additions:		P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.9.4	Separation from hazardous voltages The following shall be added at the beginning of the clause: According to the Electricity Law, 1954, and the Electricity Regulations (Earthing and protection means from electricity at voltages up to 1,000 V), 1991, in Israel, seven means of protection from electricity are permitted, as follows: 1) Network system earthing - (TN-C-S, TN-S); 2) Network system earthing - (TT); 3) Network Insulation Terre - (IT); 4) Isolated transformer; 5) Safety extra low voltage; 6) Residual current circuit breaker; 7) Reinforced insulation; Double insulation		P
- Clause 2.201 shall be added at the end of clause 2, as follows:			
2.201	Prevention of electromagnetic interference The device shall meet the requirements of the relevant part of the Israeli Standard series, SI 961. 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.		N/A
3	Wiring, connections and supply The clause is applicable with the following additions:		N/A
3.2	Connection to a mains supply		N/A
3.2.1	Means of connection		N/A
3.2.1.1	Connection to an a.c. mains supply After the Note, the following note shall be added: Note: In Israel, the supply plug shall comply with the requirements in Israeli Standard, SI 32 Part 1.1.	No power cord provided	N/A
3.2.1.2	Connection to a d.c. mains supply After the first paragraph, the following note shall be added: Note: As of the date of publication of this Standard, there is no Israeli Standard for connection accessories to d.c.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

	Special national conditions (if any)		N/A
	ANNEX P Normative references		N/A
	The annex is applicable with the following modifications and additions: In place of some of the International Standards cited in the Standard and noted in this annex, the following Israeli Standards shall apply:		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 KOREA NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to.....: K 60950-1			

1.5.101	Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305)		N/A
8	EMC The apparatus shall comply with the relevant CISPR standards.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 CHINA NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to.....: GB4943.1-2011			

1.1.2	GB 4943.1-2011 applies to equipment for use at altitudes not exceeding 5000m above sea level, primarily in regions with moderate or tropical climates. Amend 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;		N/A
1.4.5	After the third paragraph, add a paragraph: If the equipment is intended for direct connection to an AC mains supply, the tolerances on RATED VOLTAGE shall be taken as +10%,-10% unless a wider tolerance is declared by the manufacturer. The first dash paragraph "-the RATED VOLTAGE is 230V single -phase or 400V three-phase, in which case the tolerance shall be taken as +10% and -10%" of IEC 60950-1:2005 is deleted in GB 4943.1-2011	Added.	N/A
1.4.12.1	Tma in clause 1.4.12.1 amended as: Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 35 °C, whichever is greater. 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. Add note 2: For equipment is to be operated at 2000m-5000m above sea leave, its temperature test conditions and temperature limits are under consideration.		P
1.5. 2	Add a note behind the first break off section in Clause 1.5.2: A component used shall comply with related requirements corresponding altitude of 5000m.	Added.	P
1.7	Add one paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.	Added.	N/A

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IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	Based on the AC mains supply of China, 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.		N/A
1.7.2.1	Add requirements of warning for equipment intended to be used at altitudes not exceeding 2000m or at non-tropical climate regions: 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. "Only used at altitude not exceeding 2000m."  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. "Only used in not-tropical climate regions."  If only the symbol used, the explanation of the symbol shall be contained in the instruction manual. The above statements shall be given in a language acceptable to the regions where the apparatus is intended to be used.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	Amended the first paragraph as: 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. Delete note of Clause 2.7.1.		N/A
2.9.2	First section of Clause 2.9.2 amended as two sections: Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 120 h in a cabinet or room containing air with ambient temperature $40\pm 2^{\circ}\text{C}$ and a relative humidity of $(93\pm 3)\%$. During this conditioning the component or subassembly is not energized. For equipment not to be operated at tropical climatic conditions, Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of $(93\pm 3)\%$. The temperature of the air, at all places where samples can be located, is maintained within 2°C of any convenient value between 20°C and 30°C such that condensation does not occur. Due to pretreatment of equipment operated at high altitude area is humidity conditioning withstand hot shock, specific requirements are to be considered. 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.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.1	Amend the third paragraph of Clause 2.10.3.1 to be: 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.		N/A
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
2.10.3.4	Add a new section above Table 2K and in Clause 2.10.3.4: Minimum CLEARANCES determined by above rules apply for equipment to be operated up to 2000m above sea level. For equipment 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 (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.		N/A
3.2.1.1	Add a paragraph before the last paragraph: Plugs connected to AC mains supply shall comply with GB 1002 or GB 1003 or GB/T 11918 as applicable.		N/A
4.2.8	Clause 4.2.8 cathode ray tubes quoted Clause 18 of GB8898-2011. Delete note of Clause 4.2.8.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex E	Last section of Annex E amended as: 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. And add note: for equipment not to be operated at tropical climatic conditions, 25 °C shall be added to the calculated temperature rise to compare with the temperature of Table 4B.		N/A
Annex G.6	Change the second section of Clause G.6 to be: For equipment to be operated at 2000 m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.		N/A
Annex BB (informative)	Amended as : The differences between Chinese national standards GB 4943.1-2011 and GB 4943-2001.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DD (normative)	Added annex DD: Instructions for the new safety warning labels. DD.1 Altitude warning label  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. DD.2 Climate warning label  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.		N/A
Annex EE (informative)	Added annex EE: Illustration relative to safety explanation in normative Chinese, Tibetan, Mongolian, Zhuang Language and Uighu.		N/A
Other amend-ments	In accordance with the relevant CTL decisions and the amendments of IEC 60950-1, the specific requirements or mistakes in IEC standard are corrected or editorially modified in this part, Including clause 1.7, 2.1.1.7, 2.9.2, Table 2H, Figure 2H, F.8, F.9, M.3 and Annex U.		N/A
Quoting standards and reference documents	The principles of quoting and referring to other standards in Annex P and reference documents of IEC 60950-1 are as follows: If the date of the reference document is given, only that edition applies, excluding any subsequent corrigenda and amendments. However, parties to agreements based on this part are encouraged to investigate the possibility of applying the most recent editions of the reference documents. For undated references, the latest edition of the referenced document applies, including any corrigenda and		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	amendments. For the usage of international standards in Chinese national standards and industry standards is various, in the aim of achieving easy operation and based on the requirements of GB/T 1.1 and GB/T 20000.2, when quoting an entire international standard in the normative quoting files and reference documents of Annex P of this part, the principles of quotation are as follows: - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted; - If the date of the national standard or industry standard is not given, the latest edition of the standard applies; - The national standard or industry standard number, corresponding international standard number and the consistency level code should be identified in parentheses behind the listed national standard or industry standard. When quoting several chapters or clauses of the international standard, the principles of quotation are as follows: - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted. Meanwhile, in order to retain the relevant information on international standards, informative annex CC is increased, which gives the table about the comparison of the normative quoting files and reference documents in IEC 60950-1: 2005 and GB 4943.1-2011.		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
APPENDIX	Ukrainian National Differences according to CB Bulletin No. 110A, June 2006 (IEC Publication 60950:1999)		P
EXPLANATION FOR ABBREVIATIONS P=Pass, F=Fail, N/A=Not applicable. Placed in the column to the right.			
1.4.5	In Ukraine the NOMINAL VOLTAGE is 220 V for monophase or 380 V for three-phase supply.		N/A
1.5.8	In Ukraine components connected between phase and earthing or between phase and neutral terminal shall be calculated for the voltage between phases.		N/A
1.7.2	In Ukraine for the APPARATUS of CLASS I the necessity of its obligatory earthing shall be indicated in the manuals.		N/A
2.3.3	In Ukraine method b) is not used.		N/A
6.2.2	In Ukraine the both tests in 6.2.2.1 and 6.2.2.2 are applied.		N/A
6.2.2.1	In Ukraine in 6.2.1 a) is used Uc=3.5 kV.		N/A
6.2.2.2	In Ukraine in 6.2.1 a) is used 3.0 kV for telephones and headsets and 2.5 kV for other equipment and in 6.2.1 b) and c) is used 1.5 kV.		N/A
Annex N	In Ukraine in 6.2.1 a) is used 3.0 kV for telephones and headsets and 2.5 kV for other equipment and in 6.2.1 b) and c) is used 1.5 kV.		N/A

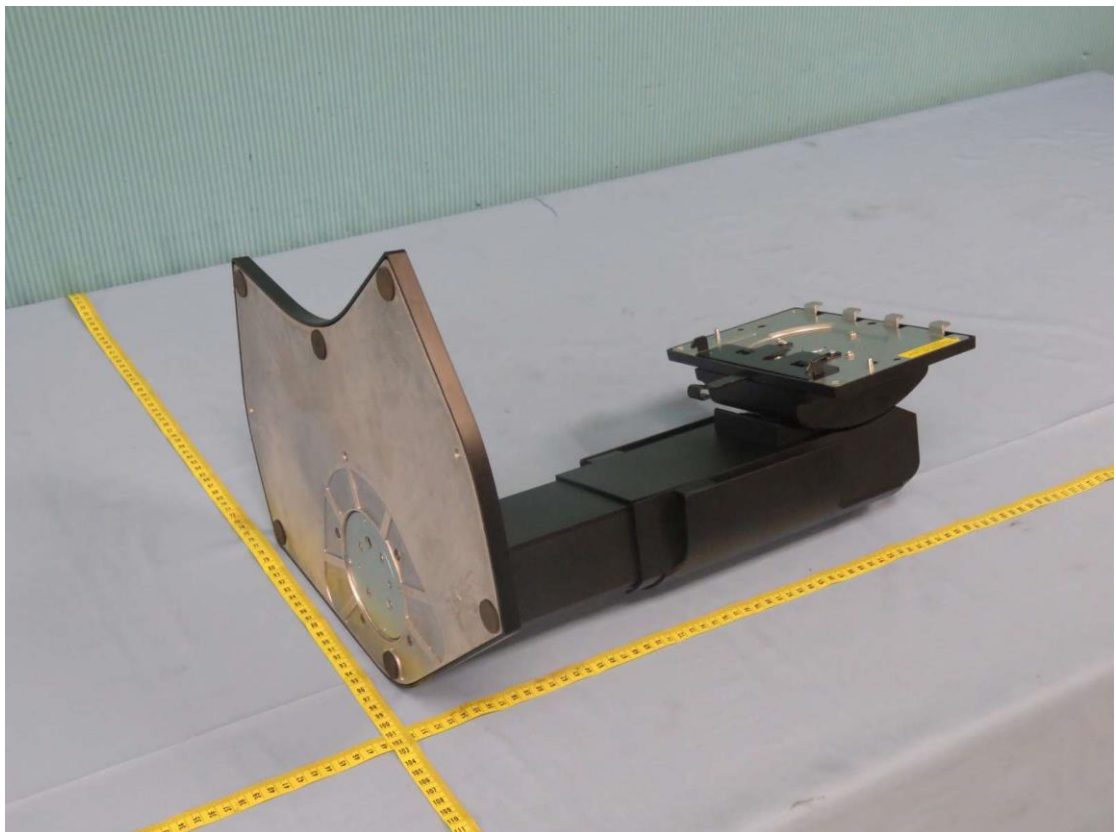
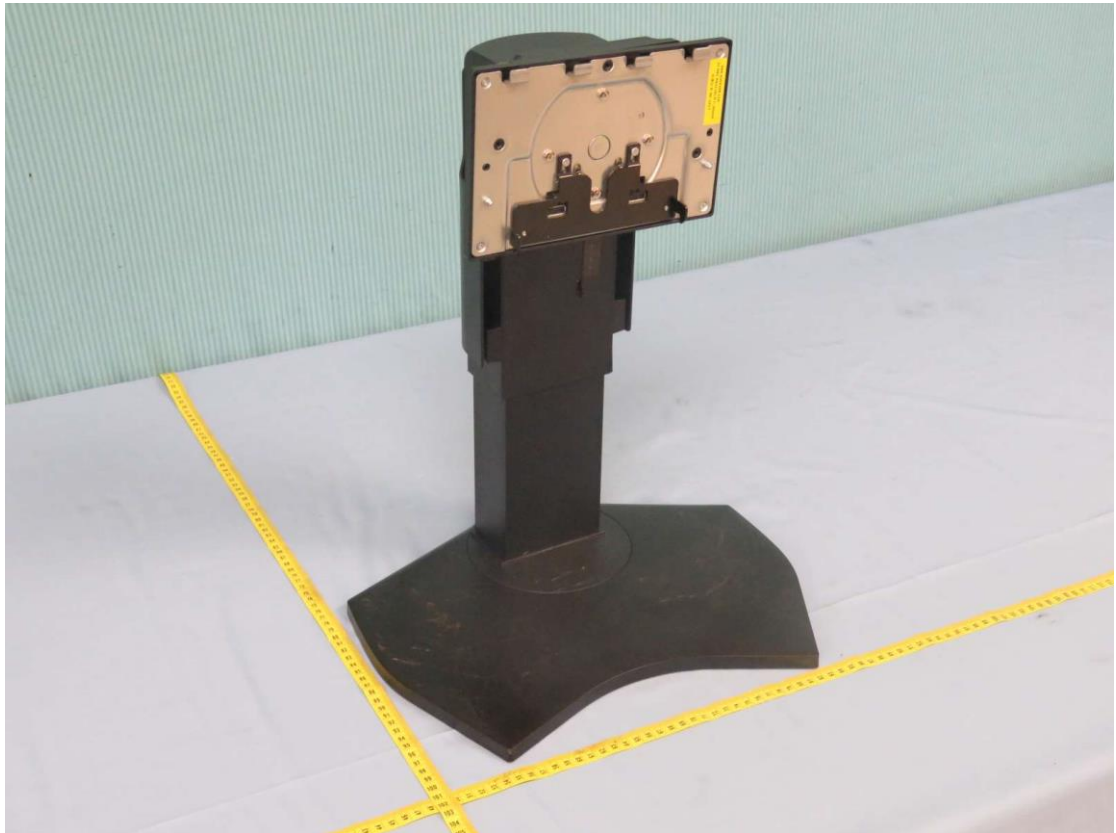
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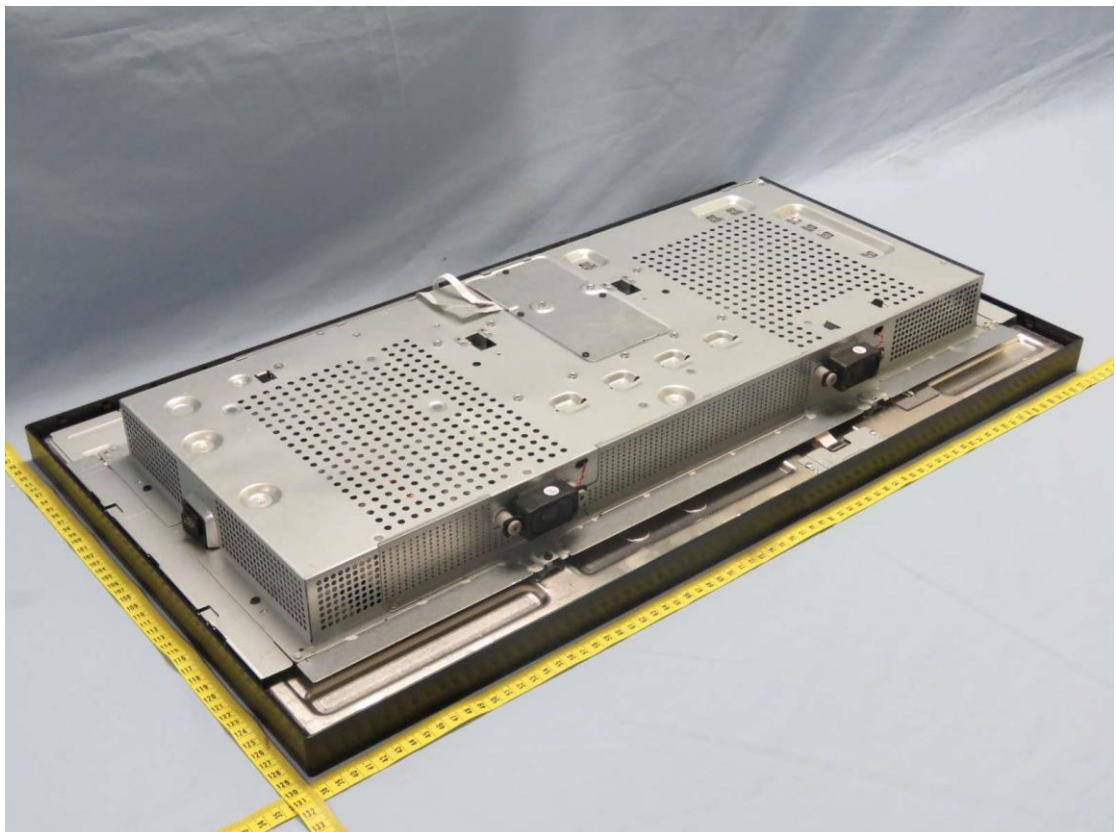
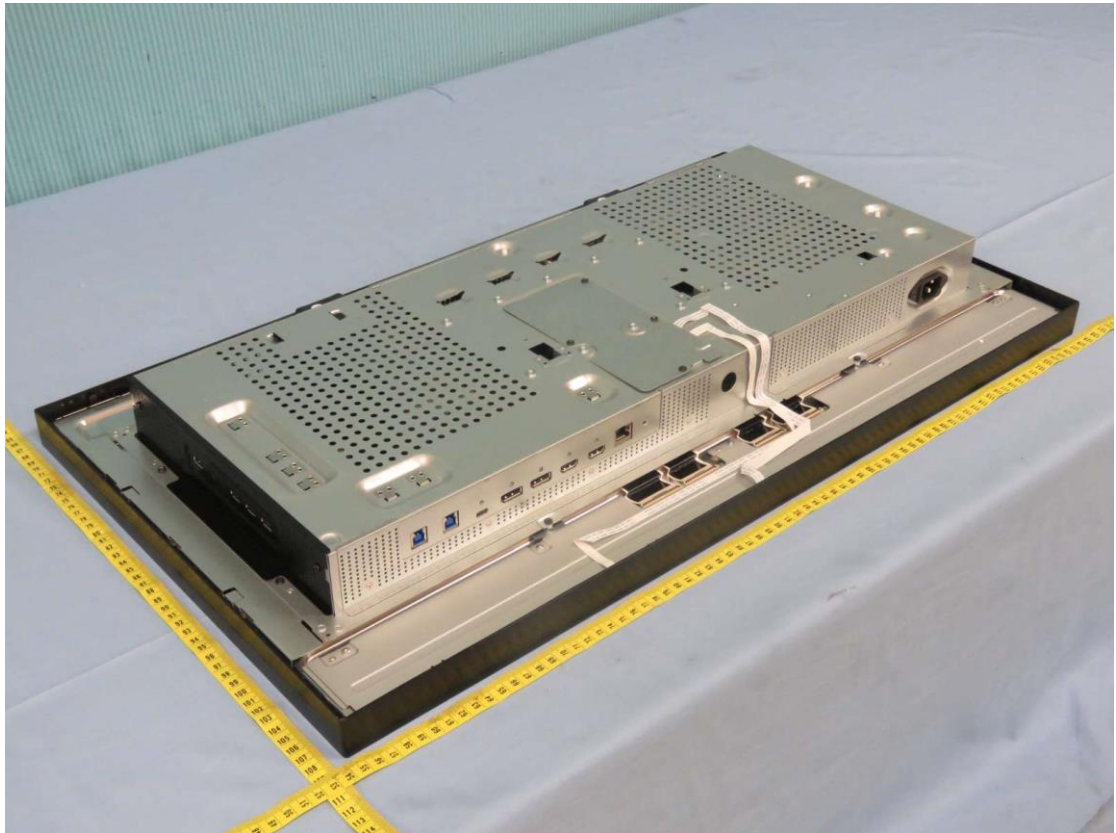
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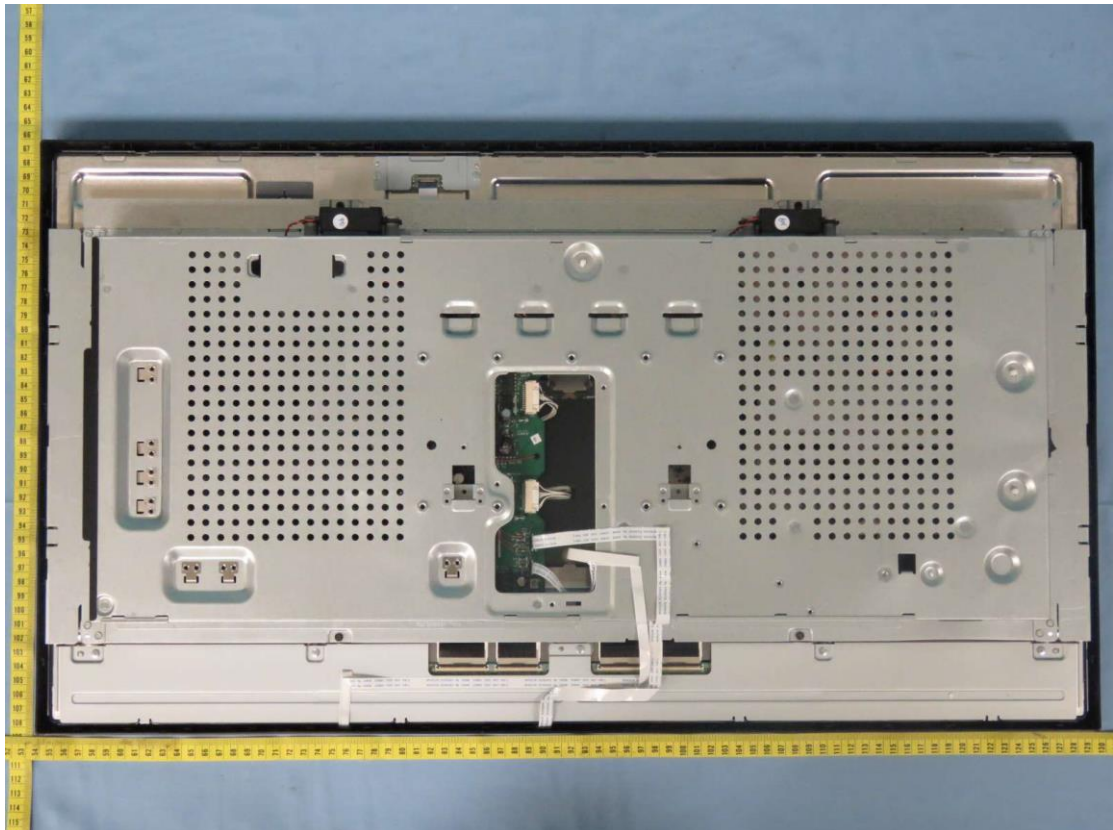
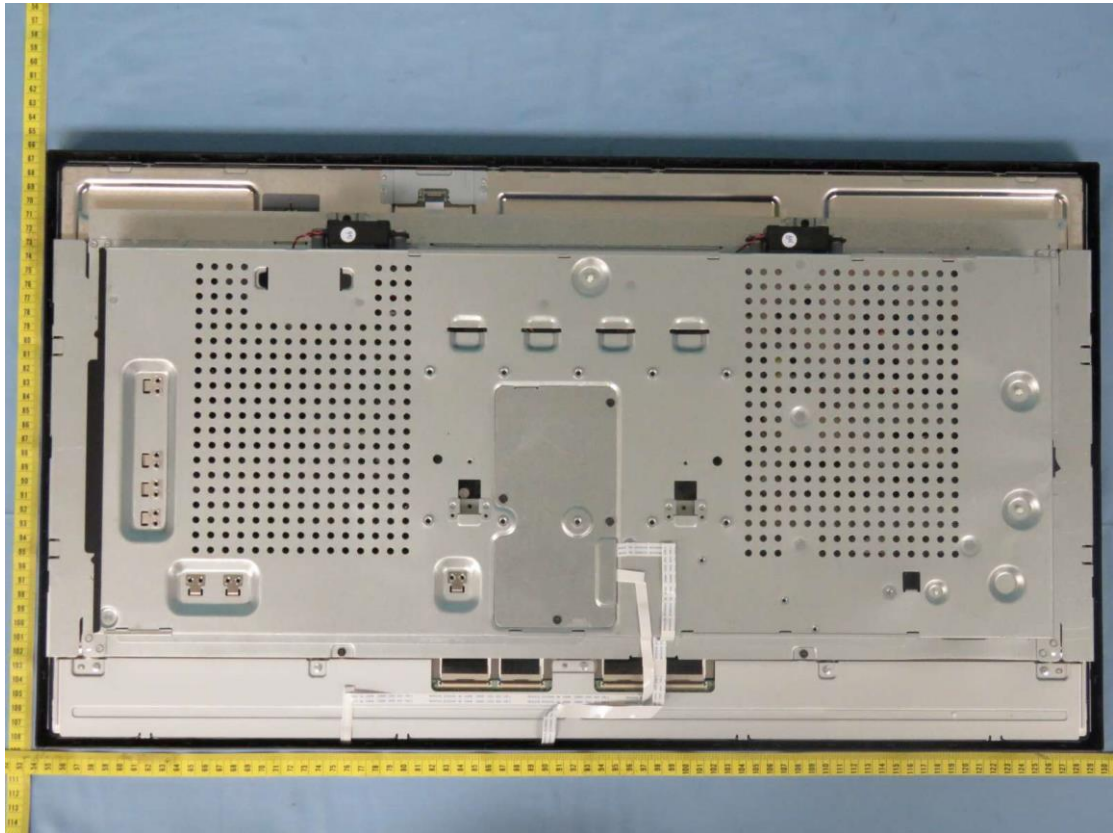
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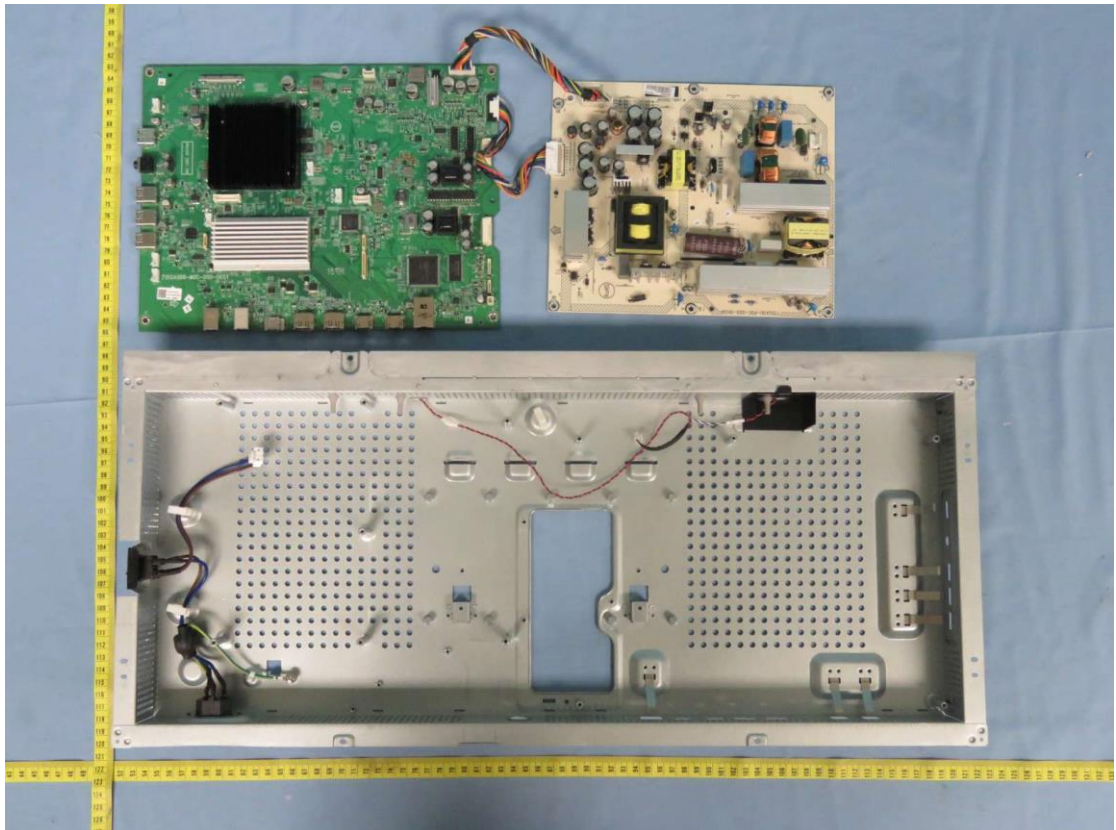
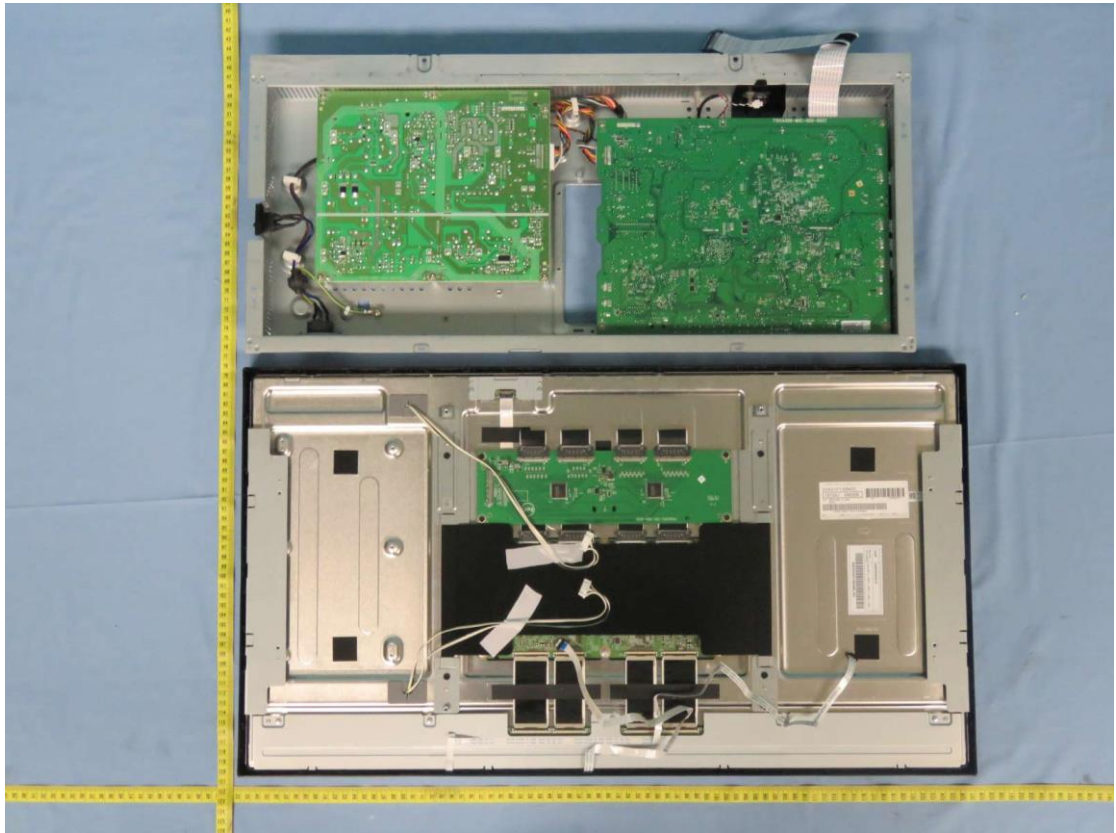
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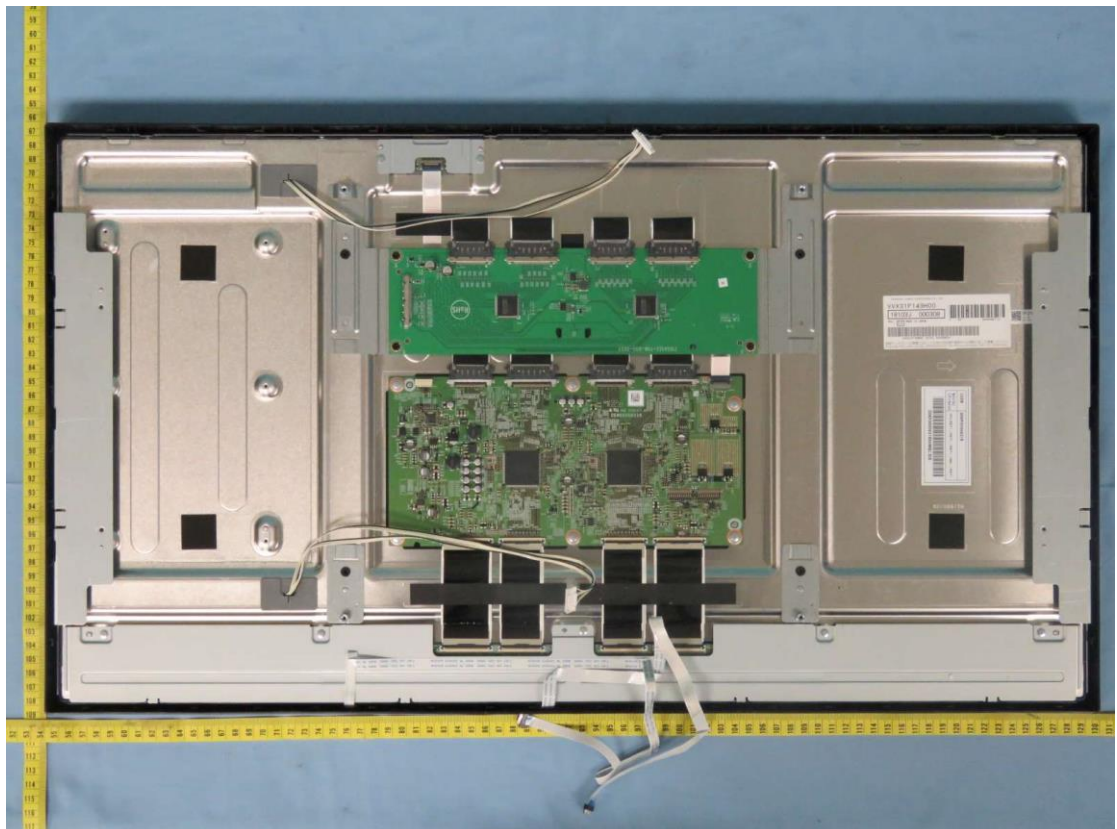
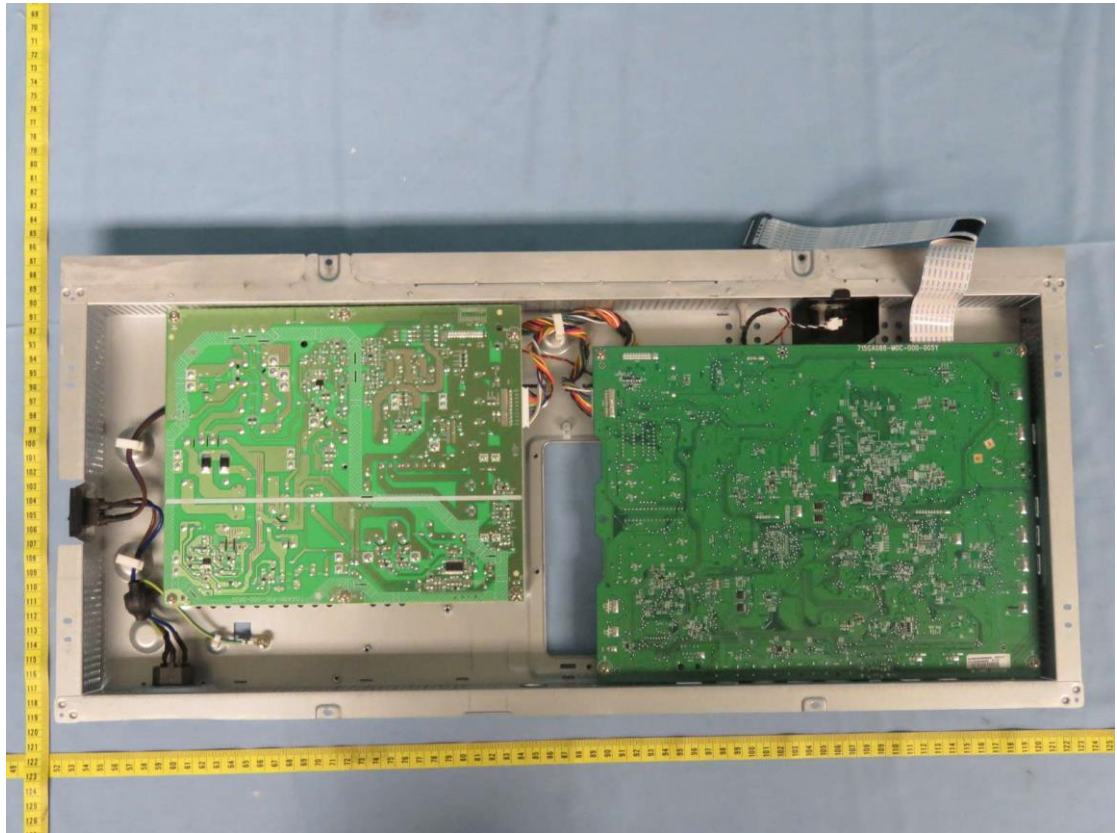
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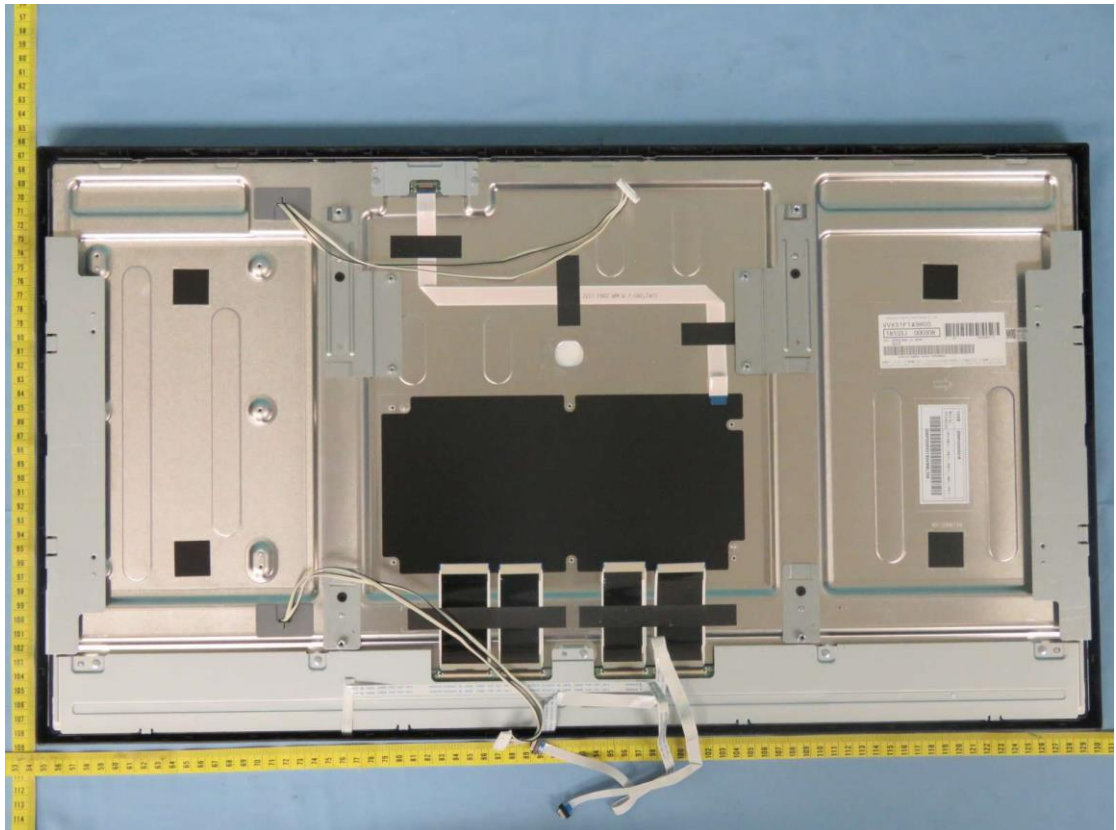
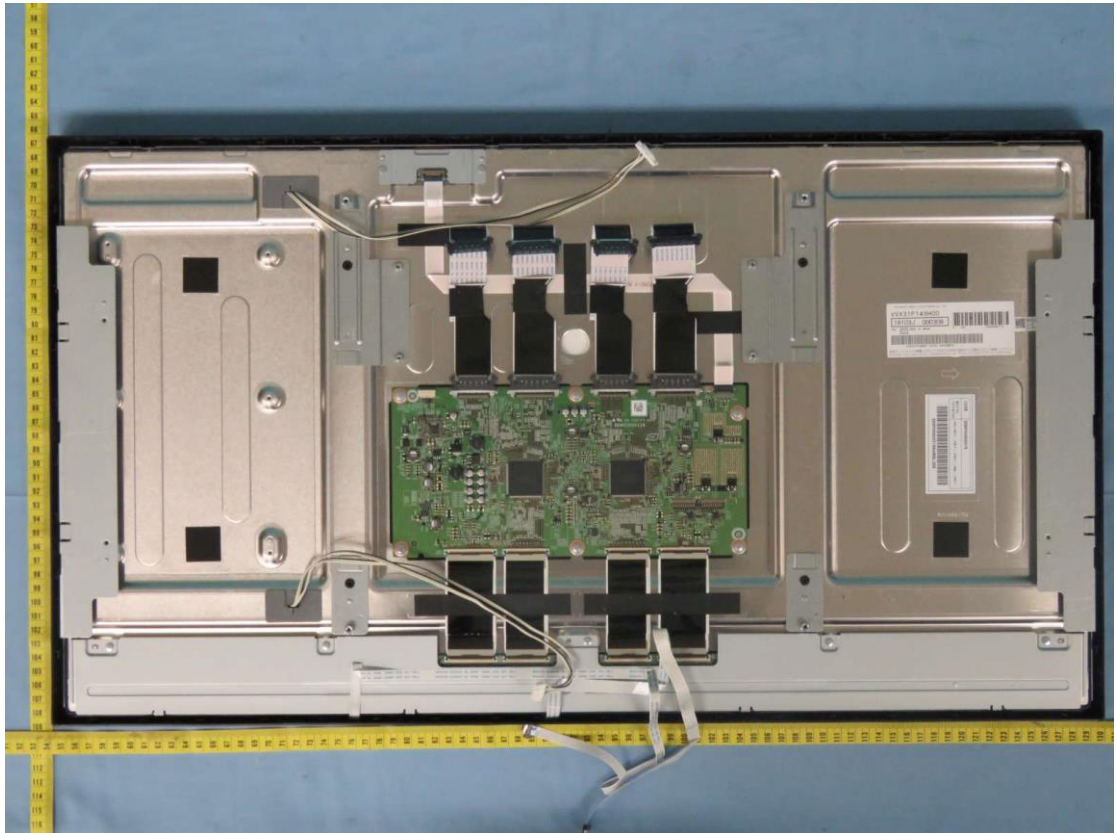
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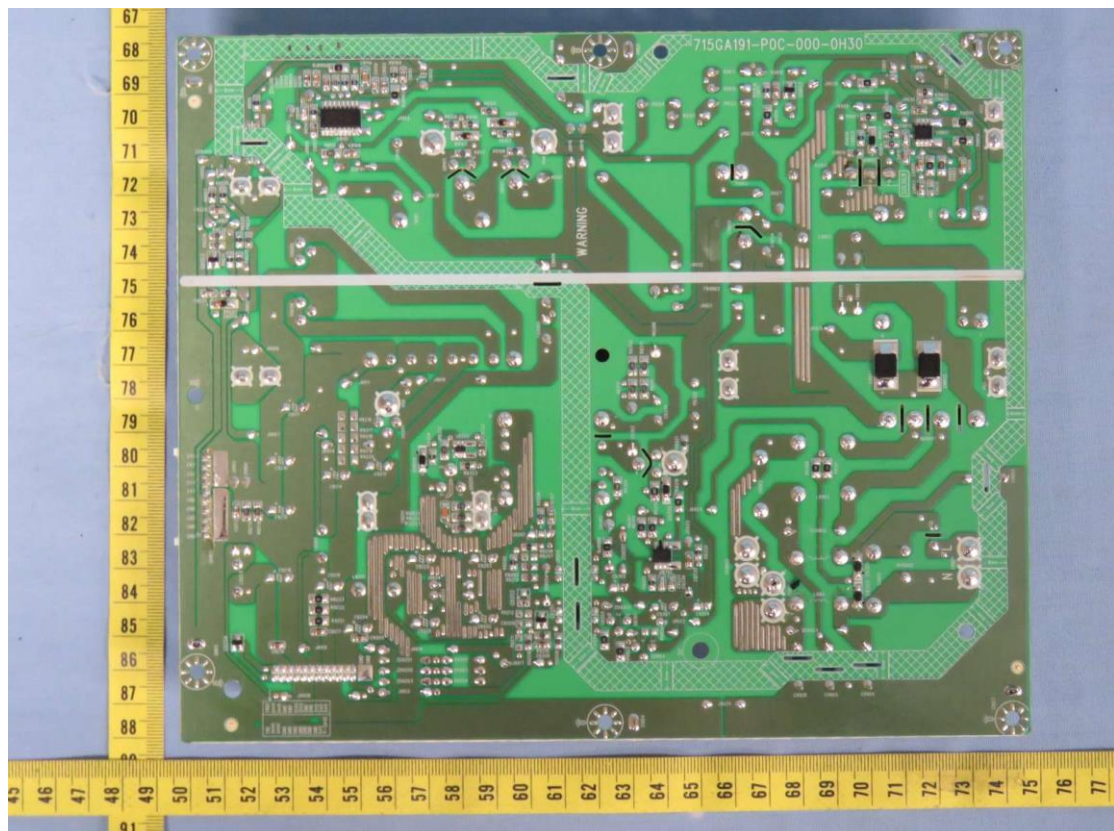
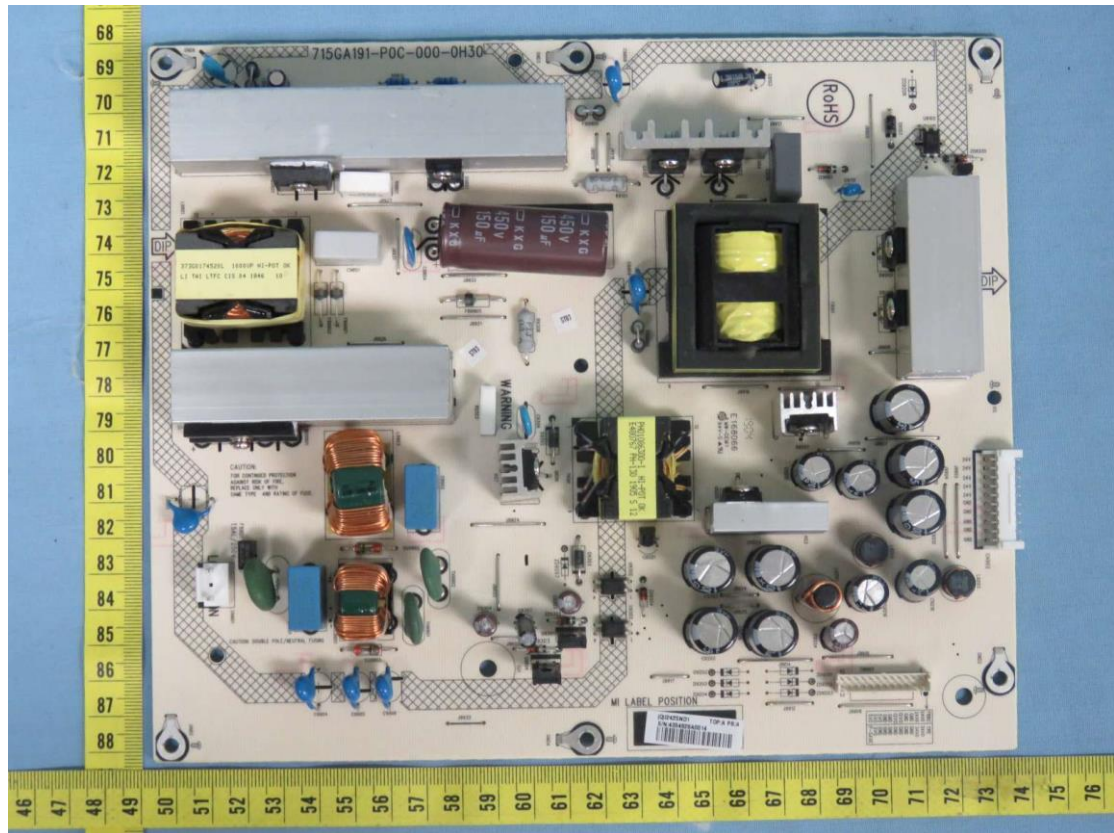
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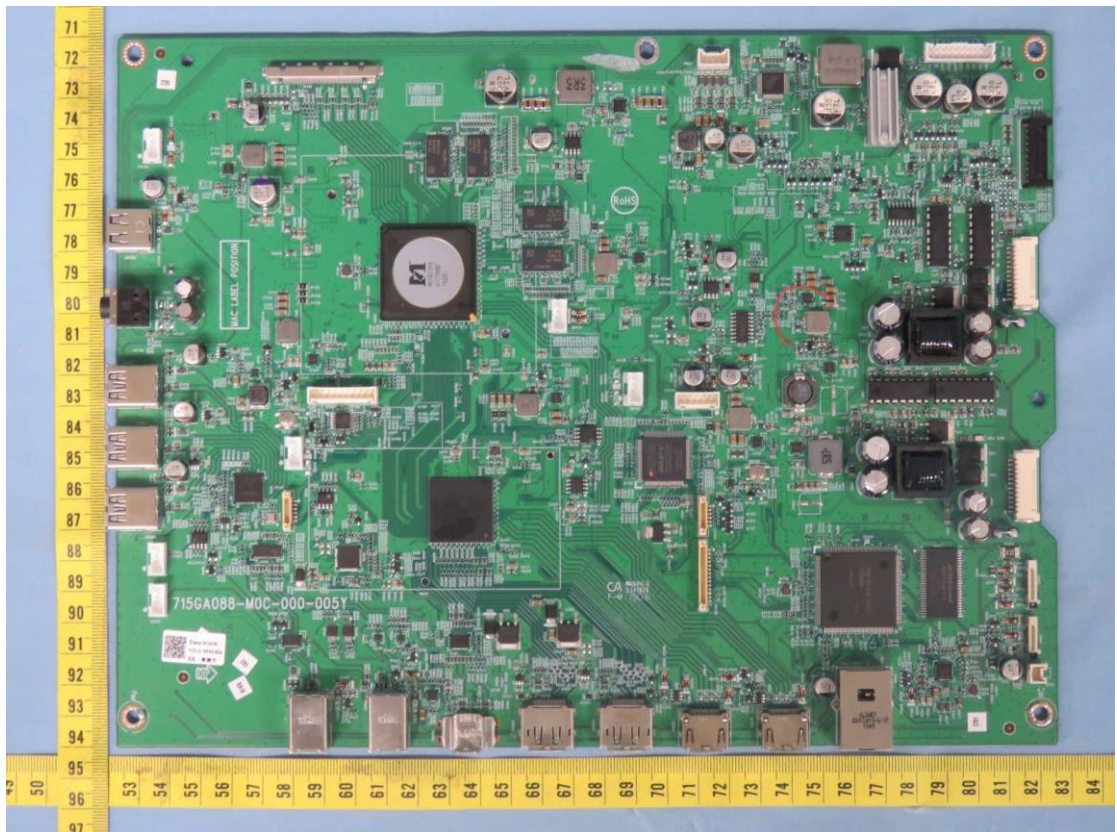
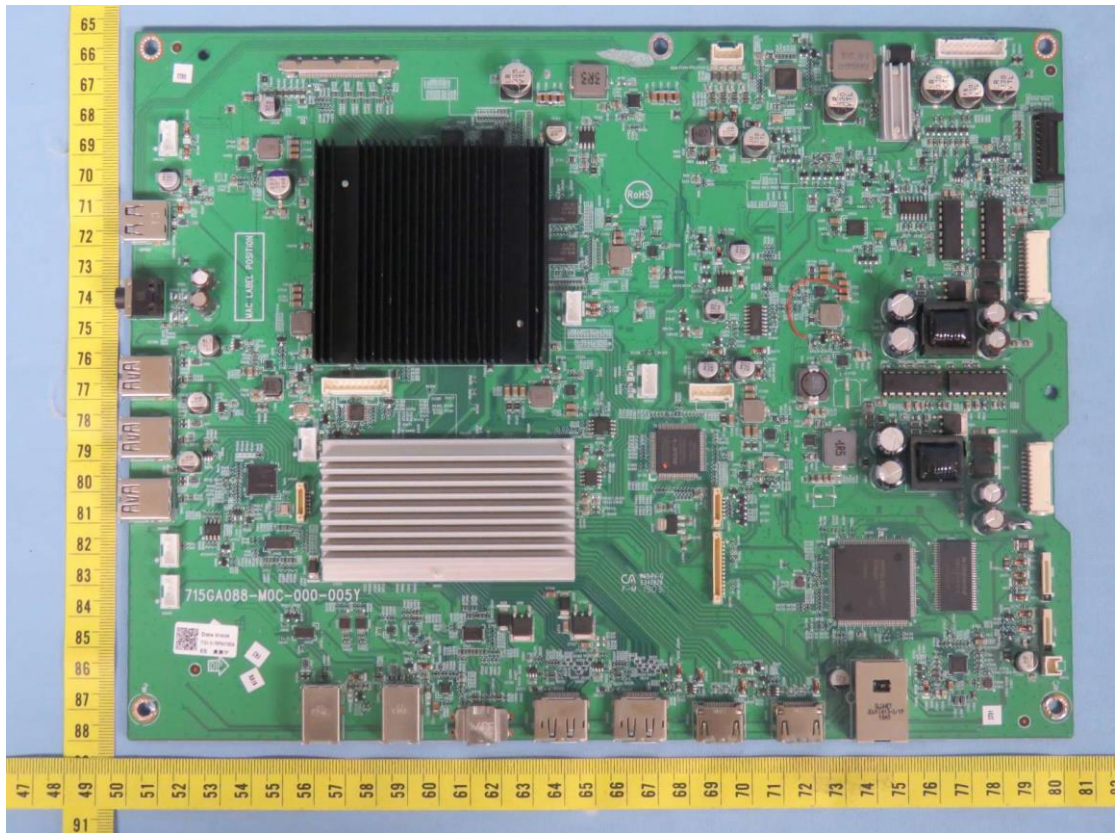
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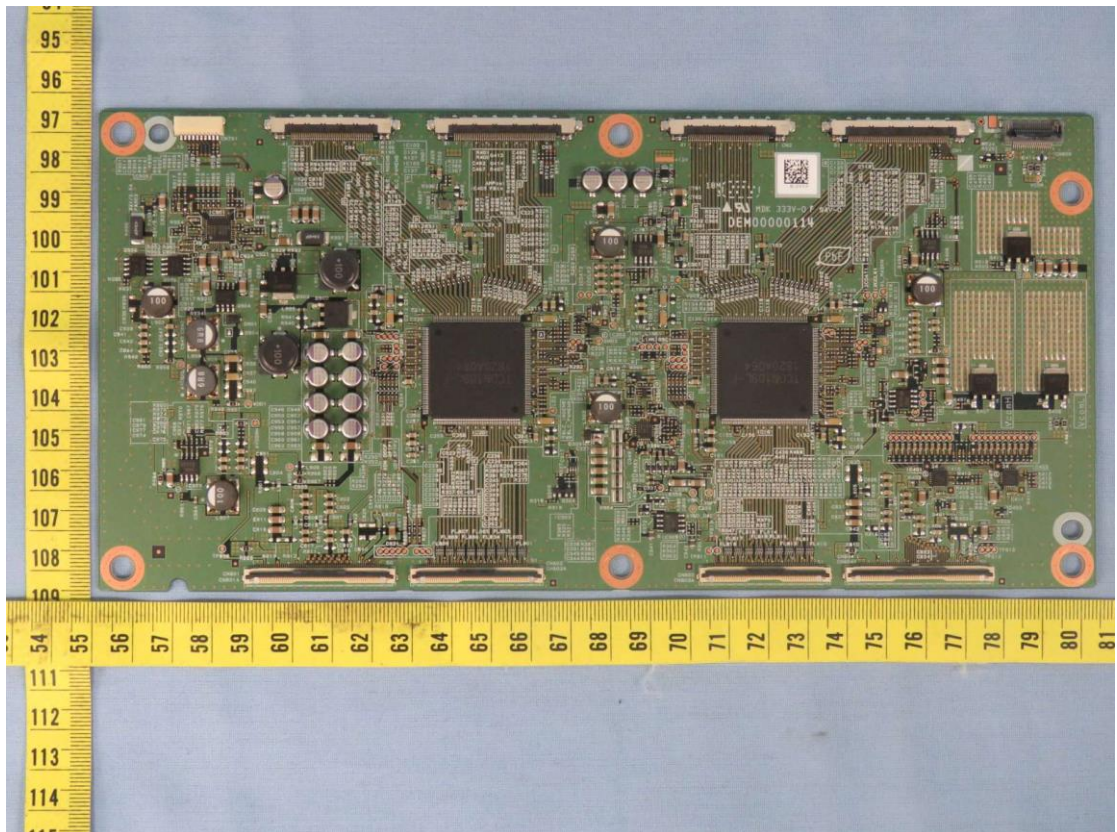
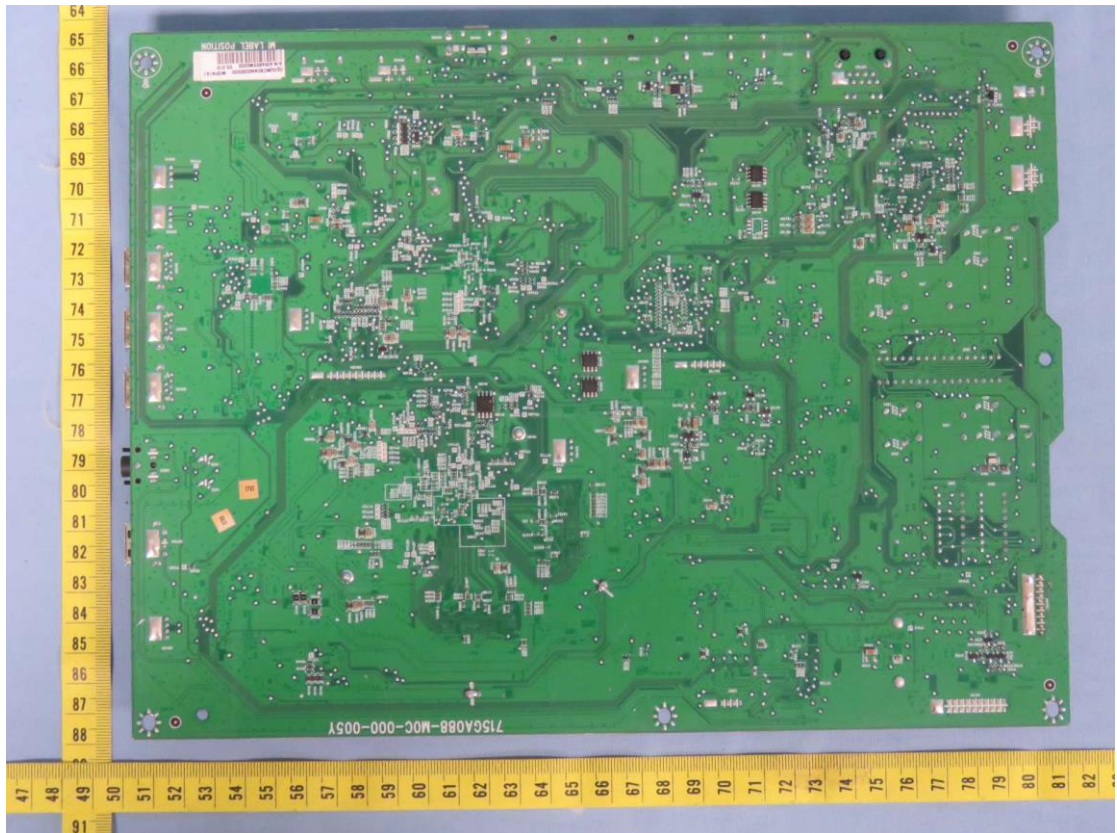
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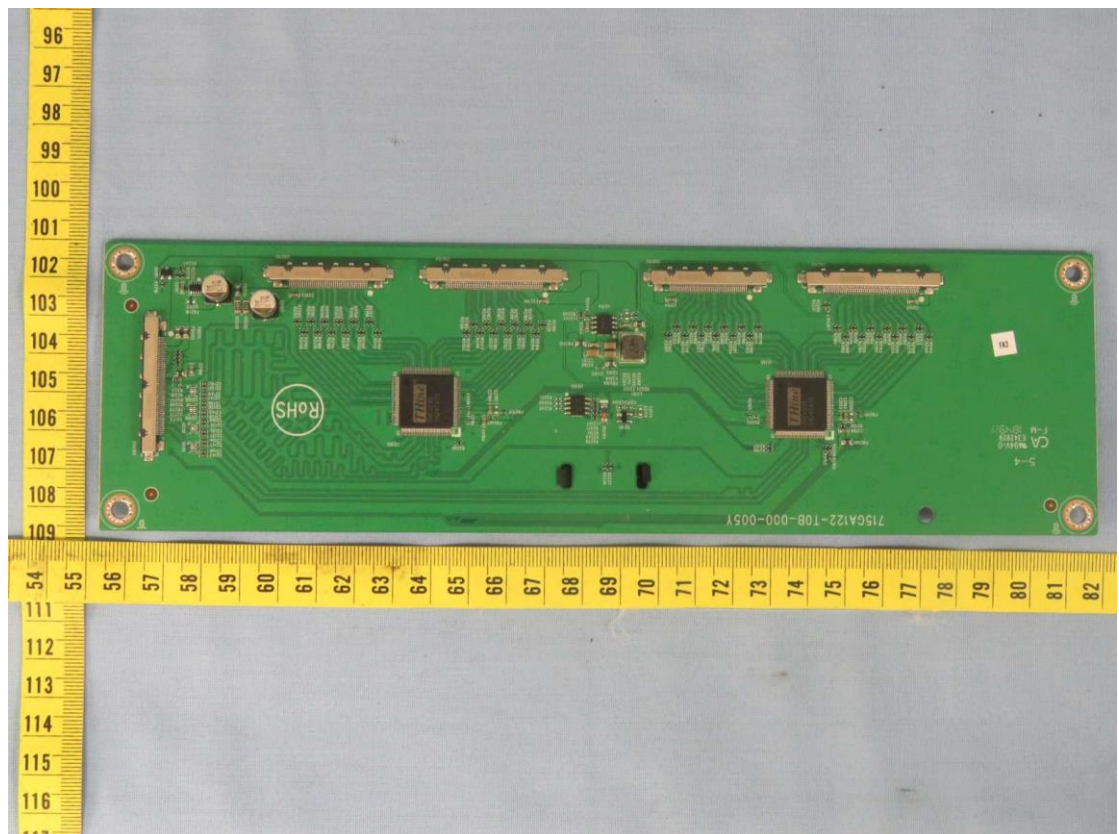
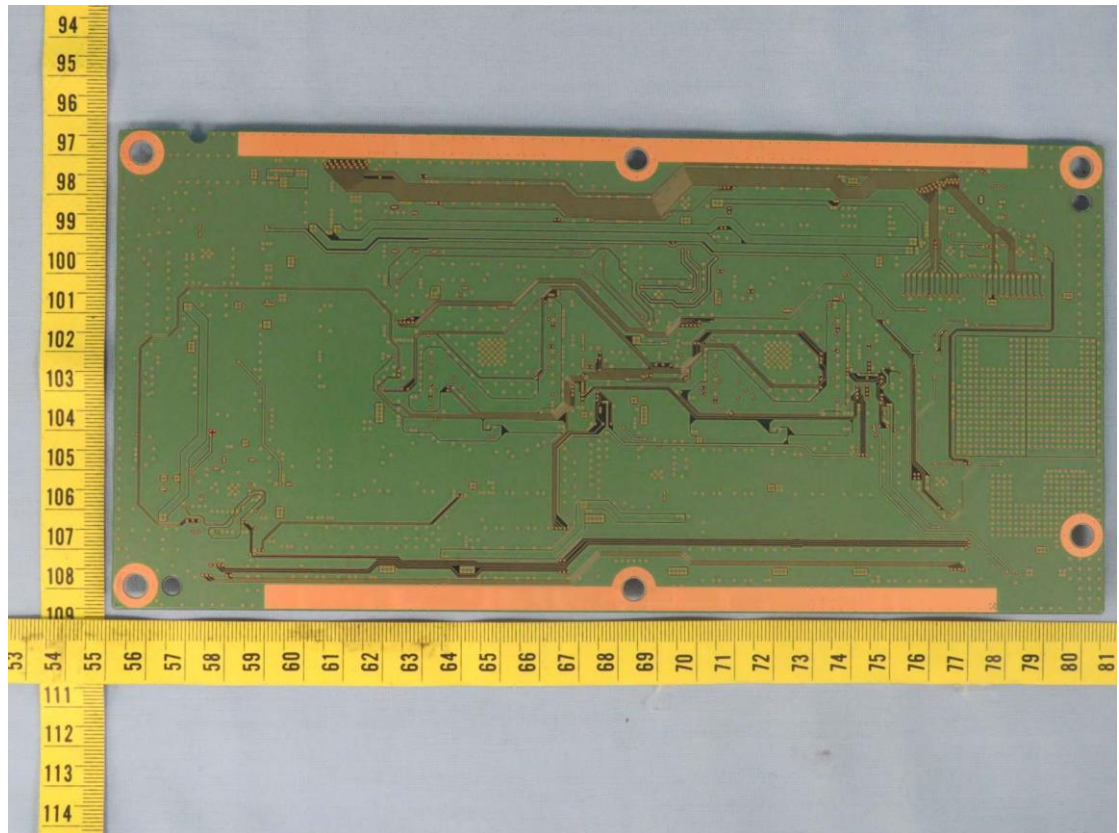
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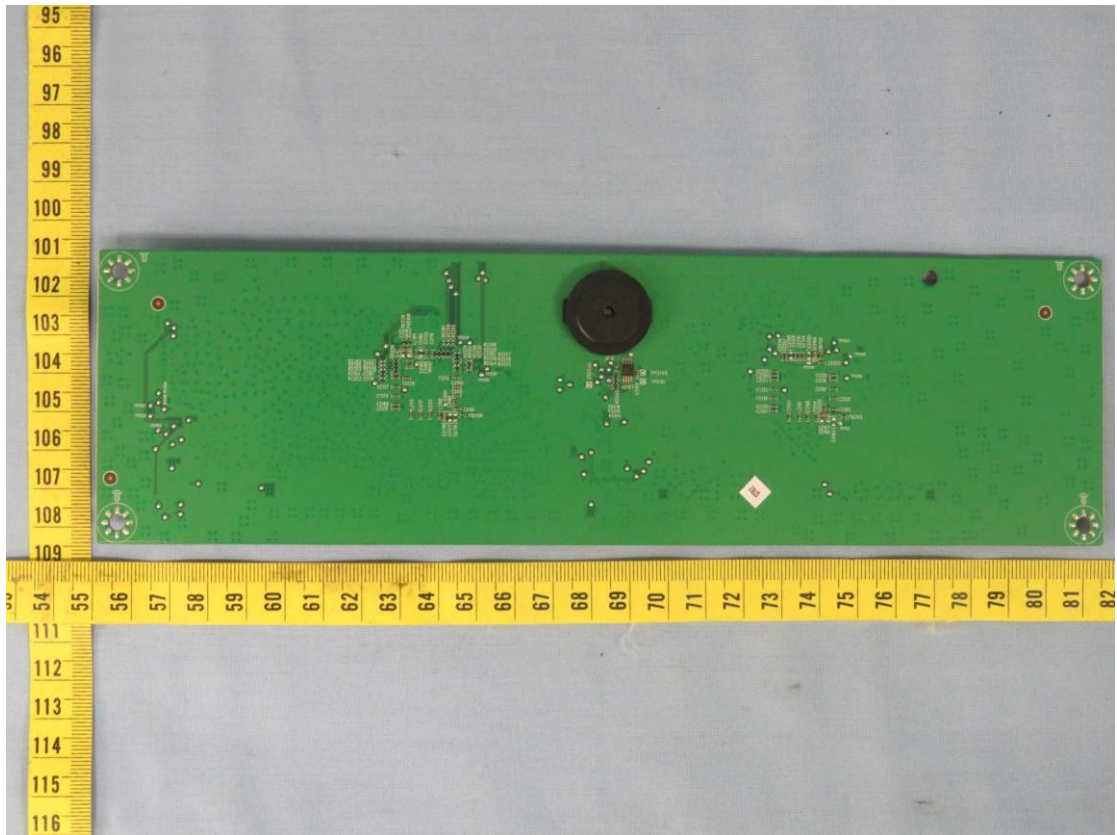
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