IEC IECEE CB SCHEME

Ref. Certif. No.

JPTUV-061993

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 Display
Name and address of the applicant Nom et adresse du demandeur	TPV Electronics (Fujian) Co., Ltd. Shangzheng, Yuan Hong Road Fuqing City, Fujian Province, P.R. China
Name and address of the manufacturer Nom et adresse du fabricant	MMD Monitors & Displays Nederland B.V. Prins Bernhardplein 200 1097 JB Amsterdam, -The, Netherlands
Name and address of the factory Nom et adresse de l'usine	See additional page(s)
Ratings and principal characteristics Valeurs nominales et charactéristiques principales	AC 100-240V; 50-60Hz; 1.5A; Class II
Trademark (if any) Marque de fabrique (si elle existe)	PHILIPS
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	N/A
Model / Type Ref. Ref. de type	BDL3230QL, BDL323****** (* = 0-9, A-Z, a-z, /, \, +, - or blank)
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page)	For model differences, refer to the test report.
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60065.2001+A1+A2 National differences see test report
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	17043312 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

TÜVRheinland®

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Global Technology Assessment Center
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Date: 19.03.2015

Signature: Ing. M. Eichenseder

1. TPV Electronics (Fujian) Co., Ltd.
   Shangzheng, Yuan Hong Road
   Fuqing City, Fujian Province
   P.R. China

2. Envision Industry of Electronic
   Products Ltd.
   895, Joao Marcos Pozzetti Street,
   Industrial District II,
   69.075-215 Manaus, Am, Brazil

3. Novatech Technology GmbH
   Siemensring 66-68
   47877 Willich
   Germany

4. TPV Displays Polska Sp. z o.o.
   ul. Zlotego Smoka 9
   66-400 Gorzów Wlkp.
   Poland

5. F.A.P.E.S.A. (Fábrica Austral de
   Productos Eléctricos Sociedad
   Anónima)
   Islas Malvinas 1180
   9420 Rio Grande Tierra del Fuego, ARGENTINA

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

7. TPV Display Technology (Xiamen)
   Co., Ltd
   No. 1 Xianghai Road, Xiamen Torch
   Hi-Tech Industrial Development
   Zone (Xiang'An), Xiamen City, Fujian Province 361101, P.R. China

8. 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

9. 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

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

Report Ref. No.: 17043312 001

Date: 19.03.2015

Signature: Ing. M. Eichenseder

10. Envision Industry of Electronic Products Ltd.
Av Torquato Tapajós 7503,
Galpão : II Bloco: B-Condomínio
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11. TPV Technology (Qingdao) Co., Ltd.
No.99 Huoju Road, High-tech
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Qingdao City, Shandong Province, P.R. China

12. TPV CIS Ltd.
177A Moskovskoe Shosse,
Shushary settlement,
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13. TP VISION INDUSTRIA ELETRONICA LTDA
Avenue Torquato Tapajós - no. 2236-
Flores, 69.058-830 Manaus - AM Brazil
Brazil

14. TPV Display Technology (China) Co., Ltd.
No. 106 Jinghai 3 Rd., BDA
Beijing City 100176
P.R. China

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

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

Report Ref. No.: 17043312 001

Date: 19.03.2015

Signature: Ing. M. Eichenseder

Test Report issued under the responsibility of:

TÜVRheinland®

TEST REPORT
IEC 60065
Audio, video and similar electronic apparatus - Safety requirements

Report Number. .....:	17043312 001
Date of issue .....:	Mar. 16. 2015
Total number of pages.....:	46
Applicant's name.....:	**TPV Electronics (Fujian) Co., Ltd.**
Address .....:	Shangzheng, Yuan Hong Road, Fuqing City, Fujian Province, P.R. China
Test specification:	
Standard.....:	IEC 60065: 2001 (7th Edition) +A1: 2005 +A2: 2010
Test procedure .....:	CB Scheme
Non-standard test method .....:	N/A
Test Report Form No.....:	IEC60065K
Test Report Form(s) Originator ....:	Intertek Semko AB
Master TRF.....:	Dated 2010-10

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.

Test item description..... :	LCD Display
Trade Mark..... :	PHILIPS
Manufacturer..... :	**MMD Monitors & Displays Nederland B.V.** Prins Bernhardplein 200, 1097 JB Amsterdam - The Netherlands
Model/Type reference..... :	BDL3230QL, BDL323****** (* can be 0-9, A-Z, a-z, /, \, +, - or blank, represent different enclosure color and sales regions for marketing purpose only, no technical difference.)
Ratings..... :	100-240V~, 50-60Hz, 1.5A

Testing procedure and testing location:		
☒	**CB Testing Laboratory:**	TÜV Rheinland (Shenzhen) Co., Ltd.
Testing location/ address .....:		3 & 4 F, Cybio Technology Building No. 1, Langshan No. 2 Road South, 5th Industrial Area, High-Tech Industry Park North, Nanshan District, 518057, Shenzhen, P.R. China
☐	**Associated CB Laboratory:**	
Testing location/ address .....:		
Tested by (name + signature).....:	Anderson Wang	
Approved by (name + signature)..:	Steven Lin	
☐	**Testing procedure: TMP**	
Testing location/ address .....:		
Tested by (name + signature).....:		
Approved by (name + signature)..:		
☐	**Testing procedure: WMT**	
Testing location/ address .....:		
Tested by (name + signature).....:		
Witnessed by (name + signature).:		
Approved by (name + signature)..:		
☐	**Testing procedure: SMT**	
Testing location/ address .....:		
Tested by (name + signature).....:		
Approved by (name + signature)..:		
Supervised by (name + signature):		
☐	**Testing procedure: RMT**	
Testing location/ address .....:		
Tested by (name + signature).....:		
Approved by (name + signature)..:		
Supervised by (name + signature):		

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

- Photo Documentation
- National Differences

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

Summary of testing:

Tests performed (name of test and test clause):

Clauses	Tests
5	Durability of Marking Test
5.1	Input Current Test
7.1	Heating under Normal Operations
9.1.1.1	Touch Current under Normal Conditions
9.1.6	Withdrawal of mains plug
9.1.7	Resistance to External Forces (50 N)
10.2	Humidity Test
10.3	Insulation Resistance and Electric Strength
11.1	Touch Current under Fault Conditions
11.2	Heating under Fault Conditions
12.1.2	Vibration test
12.1.3	Impact Test
12.1.5	Stress Relieve Test
13.2	Working Voltages
13.3 & 13.4	Clearance and Creepage Measurement
17.1	Torque Test for Screw Connections
19.6	Wall Mounting Test

Note: The EUT passed the test.

- Pre-production samples without serial numbers and the mass of equipment without stand base is 5.2kg.
- Following proper noun may be used throughout this test report: 1) Primary: The circuit conductively connected to the mains. 2) Secondary: The circuit isn't conductively connected to the mains. It's insulated from primary circuit by specified insulation.
- Specified maximum ambient temperature for operation is +45 °C.
- Load conditions:
  The equipment operated under maximum brightness, maximum contrast of LED backlight circuit with three vertical bar signal, audio with maximum volume with 1kHz recorder adjusted to maximum one-eight non-clipped output power, USB loaded 5V/0.5A.
- The equipment can be used with the position mounted on the wall only, and the user's manual specified the relevant information for installation instruction.

Testing location:

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

• The equipment contains with D-sub connector, therefore the IEC Guide 112 for multimedia equipment has been considered. • 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).	

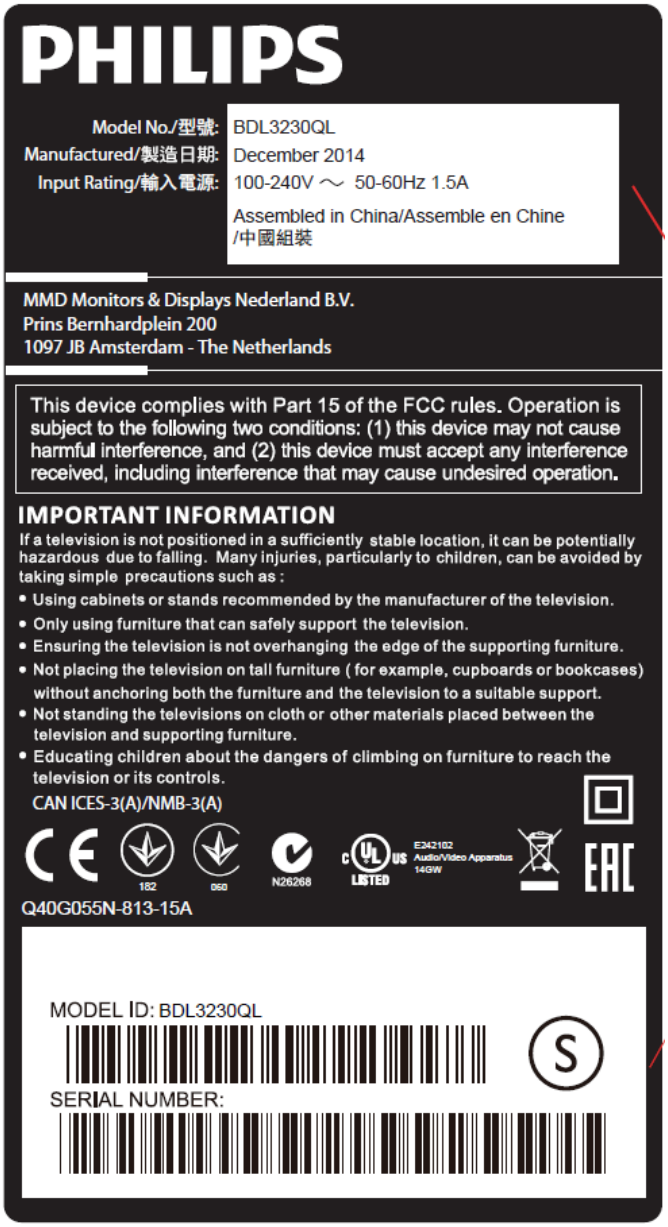
Summary of compliance with National Differences

List of countries addressed:

JP, KR, US, NZ.

Copy of marking plate

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



Test item particulars ..... :	
Classification of installation and use ..... :	Class II
Supply Connection ..... :	Appliance Inlet
..... :	
Possible test case verdicts:	
- test case does not apply to the test object ..... :	N/A (Not Applicable)
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)
Testing:	
Date of receipt of test item ..... :	04.Jan. 2015
Date (s) of performance of tests ..... :	Feb.20.2015-Mar.06. 2015
General remarks:	
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 testing laboratory.** **"(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 6.2.5 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 Envision Industry of Electronic Products Ltd. 895, Joao Marcos Pozzetti Street, Industrial District II, 69.075-215 Manaus, Am, Brazil 3 Novatech Techology GmbH Siemensring 66-68,47877 Willich, Germany 4 TPV Displays Polska Sp. z o.o. ul. Zlotego Smoka 9 66-400 Gorzów Wlkp. Poland 5 F.A.P.E.S.A. (Fábrica Austral de Productos Eléctricos Sociedad Anónima) Islas Malvinas 1180, 9420 Rio Grande Tierra del Fuego, ARGENTINA. 6 TPV Display Technology (Xiamen) Co., Ltd No.1 Xianghai Road, Xiamen Torch Hi-Tech Industrial Development Zone(Xiang'An), Xiamen City, Fujian Province 361101, P. R. China 7 Trend Smart CE Mexico S de RL de CV Avenida Sor Juana Ines de la Cruz de 19602 Nueva Tijuana, 22435 Tijuans Baja California， MEXICO 8 TPV Display Technology (Beihai）Co., Ltd. China El ctronic Beiha Industry Park, Northeast of the Crossing between Taiwan Road and Jilin Road, Beihai City, Guangxi, P.R. China 9 Envision Industry of Electronic Products Ltd Av Torquato Tapajós 7503, Galpão : II Bloco: B–Condmínio de Galpões–Tarumã-Manaus, AM, Brazil 10 TPV Technology (Qingdao) Co., Ltd. No.99 Huoju Road, High-tech Industrial Development Zone, Qingdao City, Shandong Province, P.R. China 11 TPV CIS Ltd. 177A Moskovskoe Shosse, Shushary Settlement 196626 St. Petersburg Russian Fed. 12 TP VISION INDUSTRIA ELETRONICA LTDA Avenue Torquato Tapajós - no. 2236 – Flores, 69.058-830 Manaus – AM Brazil 13 TPV Display Technology (China) Co., Ltd. No.106 Jinghai 3 Rd., BDA, Beijing City 100176, P.R. China. 14 Hefei Kaidi Weier Electronics Co., Ltd. Haier Color Television Workshop, No. 200 Fanhua Road,Econ. &Techno. Dev. Zone, Hefei, Anhui 230601, P.R. China 15 TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China

General product information:

- The equipment, models shown on cover page is a LCD Display for audio/video use in the scope of this standard.
- The equipment is incorporated with following critical parts:
  - TFT LCD module with LED backlight type
  - Building-in type switching power supply board 715G7339 (evaluated within the equipment, refer to appended table 14 for the source details).
  - Plastic enclosure (refer to appended table 14 for source details).
  - Main board 715G7249 (all secondary circuits).
  - LED drive board 715G7262 (all secondary circuits).
  - Signal control board (all secondary circuits).
  - Key control board (all secondary circuits).

This model contains VGA & DVI & HDMI interfaces, therefore the IEC Guide 112 for multimedia equipment has been considered. And AV and YPbPr interfaces of main board 715G7249 are optional.

The enclosures secured together by screws and mechanical fixing.

The product can be only mounted to wall at horizontal by using VESA compatible wall mounting kit, 200 mm x 200 mm or 400 mm x 400 mm, four M6 x 10mm size screws to secure.
The power supply cord was not evaluated together with the apparatus. The suitable certified power supply cord set has to be provided in the country where the apparatus is sold.

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
3	**General requirements**		**P**
	Safety class of the apparatus .....:	Class II	P
4	**General test conditions**		**P**
4.1.4	Ventilation instructions require the use of the test box	Yes.	P
5	**Marking and instructions**		P
	Comprehensible and easily discernible	Compliance checked.	P
	Permanent durability against water and petroleum spirit	After rubbing test by water and petroleum spirit, the label still easily discernible, indelible and legible.	P
5.1	a) Identification, maker .....:	See copy of marking plate.	P
	b) Model number or type reference.....:	See copy of marking plate.	P
	c) Class II symbol if applicable .....:	See copy of marking plate.	P
	d) Nature of supply.....:	See copy of marking plate.	P
	e) Rated supply voltage .....:	100-240V~	P
	f) Mains frequency if safety dependant .....:	50-60HZ	P
	g) Rated current or power consumption for apparatus supplied by supply apparatus for general use .....:	Supplied by a.c. mains.	N/A
	Measured current or power consumption .....:		N/A
	Deviation % (max 10%) .....:		N/A
	h) Rated current or power consumption for apparat-us intended for connection to an a.c. mains supply.:	1.5A	P
	Measured current or power consumption .....:		N/A
	Measured current or power consumption for Television set .....:	0.95A	P
	Deviation % (max 10%) .....:	-36.7%	P
5.2	a) Earth terminal	Class II equipment	N/A
	b) Hazardous live terminals	No such terminals	N/A
	c) Markings on supply output terminals	No such terminals	N/A
5.3	a) Use of triangle with exclamation mark	The symbol according to ISO 7000-0434 shown on the circuit diagram	P
	b) marking on loudspeaker grille, IEC 60417-5036		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
5.4	Instructions for use	Label markings and Manual are in English. Versions of other languages will be provided when submitted for national approval.	P
5.4.1	a) Mains powered equipment not exposed to dripping or splashing. Warning concerning objects filled with liquid, etc.	Indoor use only and mentioned in user manual.	P
	b) Hazardous live terminals, instructions for wiring	No such terminals	N/A
	c) Instructions for replacing lithium battery	No lithium batteries used	N/A
	d) Class I earth connection warning	Class II equipment	N/A
	e) Instructions for multimedia system connection	Mentioned in user manual	P
	f) Special stability warning for attachment of the apparatus to the floor/wall		N/A
	g) Warning: battery exposure to heat		N/A
	h) Warning: protective film on CRT face	No CRT within the apparatus.	N/A
5.4.2	a-b) Disconnect device: plug/coupler or all-pole mains switch location, accessibility and markings	The Appliance Inlet is used as disconnect device, the statement was provided in the user's manual.	P
	c) Instructions for permanently connected equipment	The apparatus is not permanently connected apparatus.	N/A
	Marking, signal lamps or similar for completely disconnection from the mains	Not such equipment.	N/A
6	**Hazardous radiation**		**N/A**
6.1	Ionizing radiation < 36 pA/kg (0,5 mR/h)	The apparatus does not generate ionizing radiation.	N/A
	Ionizing radiation under fault condition	The apparatus does not generate ionizing radiation.	N/A
6.2	Laser radiation, emission limits to IEC 60825-1:2007 .....:	The apparatus does not generate Laser radiation.	N/A
	Emission limits under fault conditions .....:	See above.	N/A
7	**Heating under normal operating conditions**		**P**
7.1	Temperature rises not exceeding specified values; fuse links and other protective devices defeated	(see appended table)	P
7.1.1	Temperature rise of accessible parts	(see appended table)	P
7.1.2	Temperature rise of parts providing electrical insulation	(see appended table)	P
7.1.3	Temperature rise of parts acting as a support or as a mechanical barrier		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
7.1.4	Temperature rise of windings	(see appended table)	P
7.1.5	Parts not subject to a limit under 7.1.1 to 7.1.4	(see appended table)	P
7.2	Softening temperature of insulating material supporting parts conductively connected to the mains carrying a current > 0,2 A at least 150 °C	Phenolic materials are used where parts at hazardous voltage are directly mounted. The phenolic material is accepted without further test.	P
8	**Constructional requirements with regard to the protection against electric shock**		**P**
8.1	Conductive parts covered by lacquer, paper, untreated textile oxide films and beads etc. considered to be bare	None used.	N/A
8.2	No shock hazard when changing voltage setting device, fuse-links or handling drawers etc.		N/A
8.3	Insulation of hazardous live parts not provided by hygroscopic material	The apparatus was subjected of humidity treatment for 168 hrs at R.H. of 95% and 40°C. For the test voltages after the test refer to appended table 10.3.	P
8.4	No risk of electric shock from accessible parts or from parts rendered accessible following the removal of a cover which can be removed by hand	The cover of remote controller can be removed by hand for batteries replace, but no any hazardous voltage inside of remote controller could cause electric shock.	P
8.5	Class I equipment	Class II equipment	N/A
	Basic insulation between hazardous live parts and earthed accessible parts		N/A
	Resistors bridging basic insulation complying with 14.1 a)		N/A
	Capacitors bridging basic insulation complying with 14.2.1 a)		N/A
	Protective earthing terminal		N/A
8.6	Class II equipment and Class II constructions within Class I equipment	Class II equipment	P
	Double or reinforced insulation between hazardous live parts and accessible parts	Reinforced or double insulation used between hazardous live parts and accessible parts	P
	Components bridging double or reinforced insulation complying with 14.1 a) or 14.3	Switching isolating transformer complied with clause 14.3	P
	Basic insulation bridged by components complying with 14.3.4.3.	No such components	N/A
	Basic and supplementary insulation each being bridged by a capacitor complying with 14.1 a)	No such capacitors	N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Double or reinforced insulation being bridged with 2 capacitors in series complying with 14.2.1 a)	No such capacitors	N/A
	Double or reinforced insulation being bridged with a single capacitor complying with 14.2.1 b)	Approved Y1 capacitors (C9905, C9906, C9908, C9909 and C9910) bridged between primary and secondary circuits (see appended table 14)	P
8.7	This clause is void	Void.	—
8.8	Basic or supplementary insulation > 0,4 mm (mm) :	Not incorporated.	N/A
	Reinforced insulation > 0,4 mm (mm) .....:	PVC wire, optocouplers, bobbin of transformer, insulation sheet which were provided distance through insulation of 0.4 mm minimum. Details see appended table 14 and appended table 13.1 for transformer construction.	P
	Thin sheet insulation (excluding non-separable thin sheet insulation. See 8.22)	Provided in transformer T9101.	P
	Basic or supplementary insulation, at least two layers, each meeting 10.3		N/A
	Basic or supplementary insulation, three layers any two of which meet 10.3		N/A
	Reinforced insulation, two layers each of which meet 10.3	See appended table 10.3	P
	Reinforced insulation, three layers any two which meet 10.3		N/A
8.9	Adequate insulation between internal hazardous live conductors and accessible parts	All internal wires with only basic isolation are routed so that they are not close to any live bare components and kept double or reinforced insulation distance. PVC insulated wires provided on internal wire. The apparatus complied with dielectric strength test in 10.3.	P
	Adequate insulation between internal hazardous live parts and conductors connected to accessible parts	All internal hazardous live parts are separated by double or reinforced insulation from these conductors.	P
8.10	Double insulation between conductors connected to the mains and accessible parts.	Double/reinforced insulation provided.	P
	Double insulation between internal hazardous live parts and conductors connected to accessible parts.	Double/reinforced insulation provided.	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
8.11	Detaching of wires	Conductors with mechanical securing. No wire could be became detached after the test below.	P
	No undue reduction of creepages or clearance distances if wires become detached	No undue reduction of creepage and clearance distances below the values specified in clause 13.	P
	Vibration test carried out .....:	Yes.	P
8.12	This clause is void	Void.	—
8.13	Adequate fastening of windows, lenses, lamp covers etc. (pull test 20 N for 10 s)	No such devices.	N/A
8.14	Adequate fastening of covers (push/pull test 50 N for 10 s)	No such cover.	N/A
8.15	No risk of damage to the insulation of internal wiring due to hot parts or sharp edges	The internal wiring does not touch hot parts or sharp edges, which may damage its insulation and cause hazard.	P
8.16	Only special supply equipment can be used	The apparatus is supplied from AC mains.	N/A
8.17	Insulated winding wire without additional interleaved insulation	Certificate triple insulated wire used.	P
8.18	Endurance test as required by 8.17		N/A
8.19	Disconnection from the mains	See below.	P
8.19.1	Disconnect device	Appliance Inlet used. See also 5.4.2.	P
	All-pole switch or circuit breaker with >3mm contact separation	No such component used.	N/A
8.19.2	Mains switch ON indication		N/A
8.20	Switch not fitted in the mains cord		N/A
8.21	Bridging components comply with clause 14		N/A
8.22	Non-separable thin sheet material	Not used.	N/A

9	**Electric shock hazard under normal operating conditions**		**P**
9.1	Testing on the outside		P
9.1.1	For voltages >1000 V ac or >1500 V dc complies with clause 13.3.1 for basic insulation	See below.	N/A
9.1.1.1	a) Open circuit voltages		N/A
	b) Touch current measured from terminal devices using the network in annex D .....:	(see appended table 9.1.1)	P
	c) Discharge not exceeding 45 µC	Complied.	P
	d) Energy of discharge not exceeding 350 mJ		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
9.1.1.2	Test with test finger and test probe	No access with test finger or test probe to any parts bearing hazardous voltage.	P
9.1.2	No hazardous live shafts of knobs, handles or levers	No hazardous live shafts of operating knobs, handles, levers or the likes are used.	N/A
9.1.3	Ventilation holes and other holes tested by means of 4 mm x 100 mm test pin	No hazardous live can be touched by test pin.	P
9.1.4	Terminal devices tested with 1 mm x 20 mm test pin (10 N); test probe D of IEC 61032	The test probe connect to AV terminals did not became hazardous live after test.	P
	Terminal devices tested with 1 mm x 100 mm straight wire (1 N); test probe D of IEC 61032	The test probe connect to AV terminals did not became hazardous live after test.	P
9.1.5	Pre-set controls tested with 2.5 mm x 100 mm test pin (10 N); test probe C of IEC 61032		N/A
9.1.6	No shock hazard due to stored charge on withdrawal of the mains plug; voltage (V) after 2 s .....:	The pins or contacts for the mains plug are not hazardous live after 2 s (16 Vac).	P
	If C is not greater than 0,1 µF no test needed		N/A
9.1.7	Resistance to external forces	See below.	P
	a) Test probe 11 of IEC 61032 for 10 s (50 N)	The hazardous live part is not accessible.	P
	b) Test hook of fig. 4 for 10 s (20 N)	The hazardous live part is not accessible.	P
	c) 30 mm diameter test tool for 5 s (100 or 250 N)	100 N applied, no damage by client request.	P
9.2	No hazard after removing a cover by hand	The cover of remote controller can be removed by hand for two AA size batteries replace, no any hazardous inside of remote controller could cause electric shock.	P

10	**Insulation requirements**		**P**
10.1	Insulation resistance (MΩ) at least 2 MΩ min. after surge test for basic and 4 MΩ min. for reinforced insulation .....:	No such component.	N/A
10.2	Humidity treatment 48 h or 120 h .....:	At 120 hrs, 40°C, R.H. 95%.	P
10.3	Insulation resistance and dielectric strength between mains terminals	(see appended table 10.3)	P
	Insulation Resistance and dielectric strength across BASIC or SUPPLEMENTARY insulation (Class I)	Class II apparatus.	N/A
	Insulation resistance and dielectric strength across REINFORCED insulation (Class II)	(see appended table 10.3)	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
11	**Fault conditions**		**P**
11.1	No shock hazard under fault condition	Accessible voltages remain non-hazardous live.	P
11.2	Heating under fault condition	No fire hazard, no excessive temp.	P
	Flames extinguish within 10 seconds	No flames.	P
	No hazard from softening solder	No solder became softening during the tests.	P
	Soldered terminations not used as protective mechanism	No soldered terminations used as protective mechanism.	P
11.2.1	Measurement of temperature rises	(see appended table 11.2)	P
11.2.2	Temperature rise of accessible parts	(see appended table 11.2)	P
11.2.3	Temperature rise of parts, other than windings and printed boards, providing electrical insulation	(see appended table 11.2)	P
11.2.4	Temperature rise of parts acting as a support or mechanical barrier		N/A
11.2.5	Temperature rise of windings	(see appended table 11.2)	P
11.2.6	Temperature rise of printed boards shall not exceed the limits of table 3 by max. 100 K for max. 5 min		N/A
	Printed circuit boards (PCB) classified as V-0 according to 60695-11-10 or Clause G.1 may exceed the limit in table 3 in case a) and b):		N/A
	a) Temperature rise of printed circuit boards exceeding the limits of table 3 by not more than 100 K for an area not greater than 2 cm² .....:		N/A
	b) Temperature rise of printed circuit boards exceeding the limits of table 3 up to 300 K for an area not greater than 2 cm² for a maximum of 5 min		N/A
	Meets all the special conditions if conductors on printed circuit boards are interrupted		N/A
	Class I protective earthing maintained		N/A
11.2.7	Temperature rise of parts not subject to the limits of 11.2.1 to 11.2.6 shall not exceed the limits in table 3, item e), "Fault conditions".	(see appended table 11.2)	P

12	**Mechanical strength**		**P**
12.1.1	Bump test where mass >7 kg	No damage to the apparatus after the bump test.	P
12.1.2	Vibration test	No damage to the apparatus after the vibration test.	P
12.1.3	Impact hammer test	No damage, the apparatus passed the dielectric strength test with all enclosure sources.	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Steel ball test	No hazard to the apparatus after steel ball fall test with all enclosure sources.	P
12.1.4	Drop test for portable apparatus where mass ≤ 7 kg	The unit is not portable apparatus.	N/A
12.1.5	Thermoplastic enclosures stress relief test	Test performed for all sources of enclosure. After 7 hours at 70 °C and cooling down to room temperature, no shrinkage, distortion or loosening any enclosure part was noticeable on the enclosure.	P
12.2	Fixing of knobs, push buttons, keys and levers	Controls in non-hazardous live circuits, no hazards.	P
12.3	Remote controls with hazardous live parts	No hazardous live parts were contained in the remote controller.	N/A
12.4	Drawers (pull test 50 N, 10 s)		N/A
12.5	Antenna coaxial sockets providing isolation		N/A
12.6	Telescoping or rod antennas construction		N/A
12.6.1	Telescoping or rod antennas securement		N/A

13	**Clearances and creepage distances**		**P**
13.1	Clearances in accordance with 13.3	See subclause 13.3.	P
	Creepage distances in accordance with 13.4	See subclause 13.4.	P
13.2	Determination of working voltage	The rms and the peak voltage of the appliance is mains voltage range 100-240 V max. The unit was connected to a 240V TN power system. The max. working voltage: Vpk Vrms T9101 494 241	P
13.3	Clearances	(see appended table 13)	P
13.3.1	General		P
13.3.2	Circuits conductively connected to the mains comply with table 8 and, where applicable, table 9.....:	See appended table.	P
13.3.3	Circuits not conductively connected to the mains comply with table 10		N/A
13.3.4	Measurement of transient voltages		N/A
13.4	Creepage distances	(see appended table 13)	P
	Creepage distances greater than table 11 minimum values	Considered.	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
13.5	Printed boards	No such printed boards.	N/A
13.5.1	Clearances and creepage distances between conductors on printed circuit boards, one of which may be conductively connected to the mains, as in fig. 10		N/A
13.5.2	Type B coated printed circuit boards complying with IEC 60664-3 (basic insulation only)		N/A
13.6	Conductive parts along uncemented joints clearances and creepage distances comply with 13.3 and 13.4		N/A
	Conductive parts along reliably cemented joints comply with 8.8		N/A
	Temperature cycle test and dielectric strength test		N/A
	500V test for transformers, magnetic coupler and similar devices, if insulation is relied upon for safety		N/A
13.7	Enclosed, enveloped or hermetically sealed parts not conductively connected to the mains, clearances and creepage distances as in table 12	Not such construction.	N/A
13.8	Parts filled with insulating compound, meeting the requirements of 8.8	Optocouplers are approved component. See appended table 14 for the sources details.	P

14	**Components**		**P**
14.1	Resistors		N/A
	a) Resistors between hazardous live parts and accessible metal parts	No such resistor within the apparatus.	N/A
	b) Resistors, other than between hazardous live parts and accessible parts	No such resistor within the apparatus.	N/A
	Resistors separately approved .....:	No	N/A
14.2	Capacitors and RC units	Certified capacitors used.	P
	Capacitors separately approved :	Yes	P
14.2.1	Y capacitors tested to IEC 60384-14, 2nd edition ……:	See appended table 14.	P
14.2.2	X capacitors tested to IEC 60384-14, 2nd edition ……:	See appended table 14.	P
14.2.3	Capacitors operating at mains frequency but not connected to the mains: tests for X2 .....:		N/A
14.2.5	Capacitors with volume exceeding 1750 mm³, where short-circuit current exceeds 0,2 A: compliance with IEC 60384-1, 4.38 category B or better .....:	Capacitors, other than X2 type or metal-cased type, provided with volume less than 1750 mm³.	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Capacitors with volume exceeding 1750 mm³, mounted closer to a potential ignition source than table 5 permits: compliance with IEC 60384-1, 4.38 category B or better .....:		N/A
	Shielded by a barrier acc. to 20.1.4/ table 21 or metal .....:		N/A
14.3	Inductors and windings	See below.	P
	Comply with IEC 61558-1, IEC 61558-2 (as relevant) and clause 20.1.4		N/A
14.3.1	Transformers and inductors marked with manufacturer's name and type .....:	The transformer marked with the manufacturer name and type. See appended table 14 for the details.	P
	Transformers and inductors separately approved .:	No	N/A
14.3.2	General	See subclauses 14.3.3, 14.3.4.1 and 14.3.5.1.	P
	Insulation material complies with clause 20.1.4	Complied.	P
14.3.3	Constructional requirements	See below.	P
14.3.3.1	Clearances and creepage distances comply with clause 13	Transformer is complied with clause 13.	P
14.3.3.2	Transformers meet the constructional requirements	Complied.	P
14.3.4	Separation between windings	See appended table 14.	P
14.3.4.1	Class II transformers have adequate separation between hazardous live parts and accessible parts (double or reinforced insulation).....:	Double or reinforced insulation separated between primary windings and secondary windings.	P
	Coil formers and partition walls > 0,4 mm	See subclause 8.8.	P
14.3.4.2	Class I transformers, with basic insulation and protective screening only if all 7 conditions of 14.3.4.2 are met	Class II transformer used.	N/A
14.3.4.3	Separating transformers with at least basic insulation	No such transformers.	N/A
14.3.5	Insulation between HAZARDOUS LIVE parts and ACCESSIBLE parts		P
14.3.5.1	Class II transformers have adequate insulation between hazardous live parts and accessible parts (double or reinforced insulation)	Double or reinforced insulation separated between hazardous live windings and windings intended to be connected to output terminals. See also subclause 8.8.	P
	Coil formers and partition walls > 0,4 mm		P
14.3.5.2	Class I transformers have adequate insulation between hazardous live parts and accessible conductive parts or those conductive parts or protective screens connected to a protective earth terminal	Class II transformer used.	N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Winding wires connected to protective earth have adequate current-carrying capacity		N/A
14.4	High voltage components	No high voltage components used.	N/A
	High-voltage components and assemblies: U > 4 kV (peak) separately approved		N/A
	Component meets category V-1 of IEC 60707		N/A
14.4.1	High voltage transformers and multipliers tested as part of the submission		N/A
14.4.2	High voltage assemblies and other parts tested as part of the submission		N/A
14.5	Protective devices	See below.	P
	Protective devices used within their ratings	(see appended table 14)	P
	External clearances and creepage distances meet requirement of clause 13 for the voltage across the device when opened	See appended table.	P
14.5.1.1	a) Thermal cut-outs separately approved	No thermal cut-outs used.	N/A
	b) Thermal cut-outs tested as part of the submission		N/A
14.5.1.2	a) Thermal links separately approved	No thermal links used.	N/A
	b) Thermal links tested as part of the submission		N/A
14.5.1.3	Thermal devices re-settable by soldering		N/A
14.5.2.1	Fuse-links in the mains circuit according to IEC 60127	The fuse-link that connected to the mains is approved component according to IEC 60127. See appended table 14 for the details.	P
14.5.2.2	Correct marking of fuse-links adjacent to holder ...:	Not user replaceable, the marking provided next to fuse on PCB: In primary: F9901 T5AH/250V	P
14.5.2.3	Not possible to connect fuses in parallel .....:		N/A
14.5.2.4	Not possible to touch hazardous live parts when replacing fuse-links without the use of a tool .....:	Not possible replacing fuse-links without using tools.	N/A
14.5.3	PTC thermistors comply with IEC 60730-1:2007	No PTC-S thermistors used.	N/A
	PTC devices (15 W) category V-1 or better		N/A
14.5.4	Circuit protectors have adequate breaking capacity and their position is correctly marked		N/A
14.6	Switches	Approved power switch provided. See table 14.	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
14.6.1 a)	Separate testing to IEC 61058-1 including: - 10 000 operations - Normal pollution suitability - Make and break speed independent of speed of actuation V-0 compliance with annex G, G.1.1		P
14.6.1 b)	Tested in the apparatus:		N/A
	Switch controlling > 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.3, 14.6.4 and V-0 in annex G, G.1.1		N/A
	Switch controlling > 0.2A with open contact voltage < 35 V (peak)/24 V dc complying with 14.6.3 and V-0 in annex G, G.1.1		N/A
	Switch controlling < 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.4 and V-0 in annex G, G.1.1		N/A
14.6.2	Switch tested to 14.6.1 b) constructed to IEC 61058-1 subclause 13.1 and has making/breaking action independent of speed of actuation		N/A
14.6.3	Switch tested to 14.6.1 b) compliant with IEC 61058-1 subclause 16.2.2 d) and m) not attaining excessive temperatures in use		N/A
14.6.4	Switch tested to 14.6.1 b) has adequate dielectric strength		N/A
14.6.5	Mains switch controlling mains socket outlets additional tests to IEC 61058-1		N/A
	Socket outlet current marking correct		N/A
14.7	Safety interlocks	No safety interlocks used.	N/A
	Safety interlocks to 2.8 of IEC 60950-1		N/A
14.8	Voltage setting devices and the like	No such devices used.	N/A
	Voltage setting device not likely to be changed accidentally		N/A
14.9	Motors	No motors used.	N/A
14.9.1	Endurance test on motors		N/A
	Motor start test		N/A
	Dielectric strength test		N/A
14.9.2	Not adversely affected by oil or grease etc.		N/A
14.9.3	Protection against moving parts		N/A
14.9.4	Motors with phase-shifting capacitors, three-phase motors and series motors meet clause. B.8, B.9 and B.10 of IEC 60950-1, Annex B		N/A
14.10	Batteries		P
14.10.1	Batteries mounted with no risk of accumulation of flammable gases		P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
14.10.2	No possibility of recharging non-rechargeable batteries	Two “AAA” consumer type batteries used in the remote controller.	P
14.10.3	Recharging currents and times within manufacturers limits	No recharging circuit designed in the remote controller.	N/A
	Lithium batteries discharge and reverse currents within the manufacturers limits		N/A
14.10.4	Battery mould stress relief		N/A
14.10.5	Battery drop test		N/A
14.11	Optocouplers	Approved optocouplers were used, see appended table 14 for the details.	P
	a) Comply with 13.6 (jointed insulation) and N.2.1		N/A
	b) Comply with IEC 60747-5-5:2007		P
	Alternative to a) and b) optocoupler comply with 13.8		N/A
14.12	Surge suppression varistors	See below.	P
	Comply with IEC 61051-2	Certificate component used. See appended table 14.	P
	Not connected between mains and accessible parts except for earthed parts of permanently connected apparatus	The varistor not connected between mains and accessible parts.	P
	Complies with the current pulse, fire hazard and thermal stress requirements of 14.12	Certificate component used. See appended table 14.	P
15	**Terminals**		**P**
15.1.1	Mains plug, appliance inlet, interconnection couplers and mains socket-outlet meet the appropriate standard	Appliance Inlet provided.	P
	Overloading of plugs or appliance inlets prevented if the apparatus has mains socket outlets		N/A
	Overloading of internal wiring prevented if the apparatus has mains socket outlets		N/A
15.1.2	Connectors for antenna, earth, audio, video or data	None of mismatch of connectors to AC mains occurred.	P
	No risk of insertion in mains socket-outlets		N/A
	No risk of insertion into audio- or video- outlets marked with the symbol of 5.2		N/A
15.1.3	Output terminals of a.c. adaptors or similar devices not compatible with household mains socket-outlets		N/A
15.2	Provision for protective earthing		P
	Accessible conductive parts of Class I equipment reliably connected to earth terminal, within equipment	Class II equipment	N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Protective earth conductors correctly coloured		N/A
	Equipment with non-detachable mains cord provided with separate protective earth terminal near mains input	No such equipment	N/A
	Protective earth terminal resistant to corrosion		N/A
	Earth resistance test: < 0,1 Ω at 25 A .....:		N/A
15.3	Terminals for external flexible cords and for permanent connection to the mains supply	No such equipment	N/A
15.3.1	Adequate terminals for connection of permanent wiring		N/A
15.3.2	Reliable connection of non-detachable cords		N/A
	Not soldered to conductors of a printed circuit board		N/A
	Adequate clearances and creepage distances between connections should a wire break away		N/A
	Wire secured by additional means to the conductor		P
15.3.3	Screws and nuts clamping conductors have adequate threads: ISO 261, ISO 262 or similar		N/A
15.3.4	Soldered conductors wrapped around terminal prior to soldering or held in place by additional means		N/A
	Clamping of conductor and insulation if not soldered or held by screws		N/A
15.3.5	Terminals allow connection of appropriate cross-sectional area of conductors, for the rated current of the equipment		N/A
15.3.6	Terminals to 15.3.3 have sizes required by table 16		N/A
15.3.7	Terminals clamp conductors between metal and have adequate pressure		N/A
	Terminals designed to avoid conductor slipping out when tightened or loosened		N/A
	Terminals adequately fixed to avoid loosening when the clamping is tightened or loosened and stress on internal wiring is avoided		N/A
15.3.8	Terminals carrying a current more than 0,2 A: contact pressure not transmitted by insulating material except ceramic		N/A
15.3.9	Termination of non-detachable cords: wires terminated near to each other		N/A
	Terminals located and shielded: test with 8 mm strand		N/A
15.4	Devices forming a part of the mains plug	The apparatus is not direct plug-in apparatus.	N/A
15.4.1	No undue strain on mains socket-outlets		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
15.4.2	Device complies with standard for dimensions of mains plugs		N/A
15.4.3	Device has adequate mechanical strength (tests a,b,c)		N/A
16	**External flexible cords**		**N/A**
16.1	Mains cords sheathed type, complying with IEC 60227 for PVC or IEC 60245 for synthetic rubber cords .....:		N/A
	Non-detachable cords for Class I have green/yellow core for protective earth		N/A
16.2	Mains cords conductors have adequate cross-sectional area for rated current consumption of the equipment		N/A
16.3	a) Flexible cords not complying with 16.1, used for interconnections between separate units of equipment used in combination and carrying hazardous live voltages, have adequate dielectric strength		N/A
	b) Flexible cords not complying with 16.1, withstand bending and mechanical stress (3.2 of IEC 60227-2)		N/A
16.4	Flexible cords used for connection between equipment have adequate cross-sectional areas to avoid temperature rise under normal and fault conditions		N/A
16.5	Adequate strain relief on external flexible cords		N/A
	Not possible to push cord back into equipment		N/A
	Strain relief device unlikely to damage flexible cord		N/A
	For mains cords of Class I equipment, hazardous live conductors become taut before earth conductor		N/A
16.6	Apertures for external flexible cord: no risk of damage to the cord during assembly or movement in use		N/A
16.7	Transportable musical instruments and amplifiers fitted with detachable cord set with appliance inlet to IEC 60320-1		N/A
	Transportable musical instruments and amplifiers fitted with detachable cord sets or with means of stowage to protect the cord		N/A
17	**Electrical connections and mechanical fixings**		**P**
17.1	Torque test to table 20		P
	- screws into metal: 5 times	0.5Nm for screw fixed plastic enclosure, power board, main board(screw Φ2.9mm)	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	- screws into non-metallic material: 10 times	No such screw used.	N/A
17.2	Correct introduction into female threads in non-metallic material	Screws into female threads in non-metallic to fix outer plastic enclosure.	P
17.3	Cover fixing screws: captive	No such screws used.	N/A
	Non-captive fixing screws: no hazard when replaced by a screw whose length is 10 times its diameter	No safety isolation provided which could be impaired during the removal.	P
17.4	No loosening of conductive parts carrying a current > 0,2 A	All termination of conductors are reliably fixed by soldering and mechanical fixing.	P
17.5	Contact pressure not transmitted through plastic other than ceramic for connections carrying a current > 0,2 A	All connections are metal to metal or, where contact pressure is transmitted through PCB material, a combination of screw, washer and spring-washer are provided.	P
17.6	Stranded conductors of flexible supply cords carrying a current > 0,2 A with screw terminals not consolidated by solder		N/A
17.7	Cover fixing devices other than screws have adequate strength and their positioning is unambiguous		N/A
17.8	Fixing devices for detachable legs or stands provided		N/A
17.9	Internal pluggable connections, affecting safety, unlikely to become disconnected	Adequate connectors withstand 2 N pull test and no loosening.	P

18	**Mechanical strength of picture tubes and protection against the effects of implosion**		**N/A**
18.1	Picture tube separately approved to IEC 61965 ....:		N/A
	Picture tube separately approved to 18.2 .....:		N/A
18.2	Non-intrinsically protected tubes tested to 18.2		N/A

19	**Stability and mechanical hazards**		**P**
	Mass of the equipment exceeding 7 kg .....:	Measured mass for unit: 5.2kg.	N/A
	Apparatus intended to be fastened in place – suitable instructions .....:	No	N/A
19.1	Test on a plane, inclined at 10^{o} to the horizontal		P
19.2	100 N force applied vertically downwards		P
19.3	100 N force, or 13% of weight, applied horizontally to point of least stability	The model is not applicable as weight under 25kg.	N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
19.4	Edges or corners not hazardous	The edges and corners are rounded and smoothed.	P
19.5	Glass surfaces (exc.laminated) with an area exceeding 0,1 m² or maximum dimension > 450 mm, pass the test of 19.5.1		N/A
19.6	Wall or ceiling mountings adequate	Wall mounted: An additional force of 152.9N (3 times the mass of the unit and the mass is 5.2kg without base) was applied to the unit with the VESA adaptor kit. The unit withstood the load test without damage or breakage from the VESA adaptor kit. VESA compatible wall mounting kit, 200 mm x 200 mm or 400 mm x 400 mm, four M6 x 10mm size with screws to secure.	P
20	**Resistance to fire**		**P**
20.1	Electrical components and mechanical parts		P
	a) Exemption for components contained in an enclosure of material V-0 to IEC 60695-11-10 with openings not exceeding 1 mm in width	See below.	N/A
	b) Exemption for small components as defined in 20.1	All small electrical components are mounted on a PCB of flammability category V-0 or better.	P
20.1.1	Electrical components meet the requirements of Clause 14 or 20.1.4	The electrical components complied with the relevant flammability requirements in clause 14. See also subclause 20.1.4.	P
20.1.2	Insulation of internal wiring working at voltages > 4 kV or leaving an internal fire enclosure, or located within the areas mentioned in Table 21, not contributing to the spread of fire		N/A
20.1.3	Material of printed circuit boards on which the available power exceeds 15 W at a voltage between 50 V and 400 V (peak) a.c. or d.c. meets V-1 or better to IEC 60707, unless used in a fire enclosure	PCB rated V-1	P
	Material of printed circuit boards on which the available power exceeds 15 W at a voltage >400 V (peak) a.c. or d.c. meets V-0 to IEC 60707	PCB rated V-0	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
20.1.4	Components and parts not covered by 20.1.1, 20.1.2 and 20.1.3 (other than fire enclosures) mounted nearer to a potential ignition source than the distances in Table 21 comply with the relevant flammability category in Table 21	All potential ignition sources are shielded by metal chassis (panel rear side), plastic enclosure and min. V-1 mylar sheet as barrier. min. 13 mm in downwards min. 5 mm in sideways (V-1) min. 50 mm in upwards	P
	Components and parts as above but shielded from a potential ignition source, with the barrier area in accordance with Table 21 and fig. 13		N/A
	Apparatus with voltages >4kV under normal operating conditions and distances to the enclosure exceed those specified Table 21, flammability classification HB40 or better is required for the enclosure	No voltages more than 4 kV.	N/A
20.2	Fire enclosure		N/A
20.2.1	Potential ignition sources with open circuit voltage > 4 kV (peak) a.c. or d.c. contained in a fire enclosure to V-1	No open circuit voltage more than 4 kV.	N/A
20.2.2	Internal fire enclosures with openings not exceeding 1 mm in width and with openings for wires completely filled		N/A
20.2.3	Requirements of 20.2.1 and 20.2.2 met by an internal fire enclosure		N/A

A	**Annex A, Additional requirements for apparatus with protection against splashing water**		**N/A**
A.5	Marking and instructions		N/A
A.5.1	j) Marked with IPX4 (IEC 60529), 5.4.1 a) does not apply		N/A
A.10	Insulation requirements		N/A
A.10.2	Splash and humidity treatment		N/A
A.10.2.1	Enclosure provides protection against splashing water		N/A
A.10.2.2	Humidity treatment carried out for 7 days		N/A

B	**Annex B, Apparatus to be connected to the TELECOMMUNICATION NETWORKS**		**N/A**
	Complies with IEC 62151 clause 1		N/A
	Complies with IEC 62151 clause 2		N/A
	Complies with IEC 62151 clause 3 but with 3.5.4 modified to 2.4.10 of this standard		N/A
	Complies with IEC 62151 clause 4 but with 4.1.2, 4.1.3 and 4.2.1.2 modified in accordance with annex B of this standard		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Complies with IEC 62151 cause 5 but with 5.3.1 modified in accordance with annex B of this standard		N/A
	Complies with IEC 62151 clause 6		N/A
	Complies with IEC 62151 clause 7		N/A
	Complies with IEC 62151 annex A, B and C		N/A
L	**ANNEX L, Additional requirements for electronic flash apparatus for photographic purposes**		**N/A**
L. 5	Marking and instructions		N/A
L. 5.4	Instructions for battery chargers and Supply apparatus indicating type or model number of flash apparatus with which it is to be used		N/A
	Instructions for flash apparatus indicating type or model number of battery chargers or Supply apparatus with which it is to be used		N/A
L. 7	Heating under normal operating conditions		N/A
L7.1.5 & L11.2.7	Lithium batteries meet permissible temp rise in Table 3, unless comply with 6.2.2.1 or 6.2.2.2 of IEC 60086-4		N/A
L. 9	Electric shock hazard under normal operating conditions		N/A
L. 9.1.1	Terminals to connection to synchroniser not HAZARDOUS LIVE		N/A
L.10	Insulation requirements		N/A
L. 10.3.2	High frequency puls ignition		N/A
L. 12	Mechanical strength		N/A
L. 12.1.3	Windows for flash tubes are excluded from steel ball impact test		N/A
L. 14	Components		N/A
L14.6.6	Mains switch characteristics appropriate to its function under normal conditions		N/A
L. 20	Resistance to fire		N/A
L. 20.1 c)	Trigger coil for discharge purpose is not considered to be a POTENTIAL IGNITION SOURCE		N/A

7.1	TABLE: temperature rise measurements:						P
	Power consumption in the OFF/Stand-by mode of the functional switch (W) .....:				0.4W (Stand-by mode)		—

Cond.	Un (V)	Hz	In (A)	Pn (W)	Uout (V)	Pout (W)	Operating Condition / Status
For HDMI mode							
1	90	50	0.94	52.9	--	--	Maximum normal load.
2	90	60	0.94	52.9	--	--	Maximum normal load.
3	100	50	0.85	52.8	--	--	Maximum normal load.
4	100	60	0.85	52.8	--	--	Maximum normal load.
5	240	50	0.47	51.1	--	--	Maximum normal load.
6	240	60	0.47	51.1	--	--	Maximum normal load.
7	264	50	0.44	50.9	--	--	Maximum normal load.
8	264	60	0.44	50.9	--	--	Maximum normal load.
For AV mode							
9	90	50	52.8	0.95	--	--	Maximum normal load.
10	90	60	52.8	0.95	--	--	Maximum normal load.
11	100	50	52.4	0.85	--	--	Maximum normal load.
12	100	60	52.4	0.85	--	--	Maximum normal load.
13	240	50	50.4	0.46	--	--	Maximum normal load.
14	240	60	50.4	0.46	--	--	Maximum normal load.
15	264	50	50.2	0.43	--	--	Maximum normal load.
16	264	60	50.2	0.43	--	--	Maximum normal load.
For USB mode							
17	90	50	51.1	0.93	--	--	Maximum normal load.
18	90	60	51.1	0.93	--	--	Maximum normal load.
19	100	50	51.0	0.84	--	--	Maximum normal load.
20	100	60	51.0	0.84	--	--	Maximum normal load.
21	240	50	50.1	0.45	--	--	Maximum normal load.
22	240	60	50.1	0.45	--	--	Maximum normal load.
23	264	50	50.0	0.43	--	--	Maximum normal load.
24	264	60	50.0	0.43	--	--	Maximum normal load.
For DVI mode							
25	90	50	50.1	0.92	--	--	Maximum normal load.
26	90	60	50.1	0.92	--	--	Maximum normal load.
27	100	50	50.1	0.82	--	--	Maximum normal load.
28	100	60	50.1	0.82	--	--	Maximum normal load.
29	240	50	49.8	0.45	--	--	Maximum normal load.
30	240	60	49.8	0.45	--	--	Maximum normal load.
31	264	50	49.1	0.42	--	--	Maximum normal load.
32	264	60	49.1	0.42	--	--	Maximum normal load.
For YPbPr mode							
33	90	50	52.5	0.93	--	--	Maximum normal load.
34	90	60	52.5	0.93	--	--	Maximum normal load.

35	100	50	52.2	0.84	--	--	Maximum normal load.
36	100	60	52.2	0.84	--	--	Maximum normal load.
37	240	50	50.2	0.46	--	--	Maximum normal load.
38	240	60	50.2	0.46	--	--	Maximum normal load.
39	264	50	50.1	0.43	--	--	Maximum normal load.
40	264	60	50.1	0.43	--	--	Maximum normal load.
For VGA mode							
41	90	50	50.3	0.92	--	--	Maximum normal load.
42	90	60	50.3	0.92	--	--	Maximum normal load.
43	100	50	50.2	0.82	--	--	Maximum normal load.
44	100	60	50.2	0.82	--	--	Maximum normal load.
45	240	50	50.1	0.45	--	--	Maximum normal load.
46	240	60	50.1	0.45	--	--	Maximum normal load.
47	264	50	49.9	0.43	--	--	Maximum normal load.
48	264	60	49.9	0.43	--	--	Maximum normal load.

	Loudspeaker impedance (Ω) .....:	--	—
	Several loudspeaker systems .....:	--	N/A
	Marking of loudspeaker terminals .....:	--	N/A

Temperature Rise dT of Part	dT (K)			Limit max dT (K)
Test Condition No.	No 2	No 6	No ___	
01. AC inlet (power board)	17.5	15.0	--	25
02. CN901 near L pin	18.0	16.2	--	--
03. NR9901 body (power board)	32.5	30.2	--	60
04. C9901 body (power board)	31.8	29.1	--	40
05. C9902 body (power board)	30.8	26.4	--	40
05. C9906 body (power board)	19.7	18.5	--	40
06. L9901 coil (power board)	31.0	29.7	--	60
07. L9902 coil (power board)	30.5	27.1	--	60
08. PCB near TH9901	32.5	30.2	--	60
09. PCB near BD9901 (power board)	34.1	32.2	--	60
10. PCB near Q9101	35.5	32.5	--	60
11. C9908 body (power board)	29.9	24.3	--	40
12. C9103 body (power board)	31.9	29.5	--	60
13. T9101 coil (power board)	37.2	33.6	--	65
14.T9101 core (power board)	33.9	31.3	--	65
15. U9102 body (power board)	33.5	29.8	--	55
16. PCB near Main IC Body (main board)	31.2	29.4	--	60
17. PCB near D9107	34.1	29.8	--	60
18. L801 coil	30.7	26.7	--	65
19. Inside enclosure near T9101	17.9	16.5	--	--
20. Outside enclosure near T9101	10.3	8.9	--	50

21. Panel	21.3	19.6	--	50
22. Switch	19.3	17.9	--	50
23. Ambient (^{o}C)	17.4	17.9	--	--

Note(s):

1. The temperatures were measured under the following load condition :
   The equipment operated under maximum brightness, maximum contrast of LED backlight circuit with three vertical bar signal, audio with maximum volume with 1kHz recorder adjusted to maximum attainable output power, USB port provided with 0.5A and RJ-45 transmitted data by high speed.
2. Specified maximum ambient temperature for operation is 45 °C.
   Winding components:
   - Polyurethane resin, 85K → ΔTmax = 85 K – (45-35) K – 10 K = 65 K

   Electrolyte capacitor or components with:
   - max. absolute temp. of 85 °C → ΔTmax = (85-45) K = 40 K
   - max. absolute temp. of 70 °C → ΔTmax = (70-45) K = 25 K
   - max. absolute temp. of 100 °C → ΔTmax = (100-45) K = 55 K
   - max. absolute temp. of 105 °C → ΔTmax = (105-45) K = 60 K

   Accessible part:
   - non-metallic → ΔTmax = 60 K – (45-35) K = 50 K

Winding temperature rise measurements

Ambient temperature t1 (^{o}C) ..... :					—
Ambient temperature t2 (^{o}C) ..... :					—

Temperature rise dT of winding: $dT = \frac{(R_2 - R_1)}{R_1} \times (234.5 + t1) - (t2 - t1)$	R_1 (Ω)	R_2 (Ω)	dT (K)	Limit max (K)	Insulation class

7.2	TABLE: softening temperature of thermoplastics	N/A

Temperature T of part	T - normal conditions (^{o}C)	T - fault conditions (^{o}C)	Min T softening (^{o}C)

10.3	TABLE: insulation resistance measurements	P

Insulation resistance R between:	R (MΩ)	Required R (MΩ)
Between mains poles (Pri. Fuse-link disconnected)	>4	2
Primary to secondary	>4	4
Primary to outer plastic enclosure with metal foil	>4	4
Mylar sheet between power board and panel plate [3.]	>4	4
Transformer [1.]		
T9101 primary to secondary	>4	4
T9101 secondary to core	>4	4
One layer insulation tape used on transformer[2.]	>4	4

Note:
1. Test with all sources of transformer.
2. Test with all sources of insulation tape, one layer insulation tape was tested as worst condition for reinforced insulation comprises at least two layers insulation tape or three layers insulation tape construction.
3. Test with all types of Mylar sheet.

10.3	**TABLE: electric strength measurements**	**P**

Test voltage applied between:	**Test voltage (V)**	**Breakdown**
Between mains poles (Pri. Fuse-link disconnected)	2120 Vdc	No
Primary to secondary	4240 Vdc	No
Primary to outer plastic enclosure with metal foil	4240 Vdc	No
Mylar sheet between power board and panel plate [3.]	4240 Vdc	No
Transformer [1.]		
T9101 primary to secondary	4240 Vdc	No
T9101 secondary to core	4240 Vdc	No
One layer insulation tape used on transformer[2.]	4240 Vdc	No

Note:
1. Test with all sources of transformer.
2. Test with all sources of insulation tape, one layer insulation tape was tested as worst condition for reinforced insulation comprises at least two layers insulation tape or three layers insulation tape construction.
3. Test with all types of Insulation sheet.

11.2	**TABLE: summary of fault condition tests**		**P**
	Voltage (V) 0,9 or 1,1 times rated voltage .....:	264 Vac	—
	Frequency (Hz) .....:	60	—
	Ambient temperature (^{o}C) .....:	25, if no other specified.	—

No.	Component	Fault	dT (K) / Component	Other results (include description and test duration)
1.	USB	o-l	39.8/ T9101 coil, 35.1/ T9101 core, 36.1/ U9102 (ambient = 18.1°C)	Unit normal operation, no hazards, no damage. Test duration: 8 hrs 30 min., measured current through fuse: 1.7A.
2.	Speaker	s-c	31.8/ T9101 coil, 38.7/ T9101 core, 26.2/ U9102 (ambient = 21.1°C)	Unit normal operation, no hazards, no damage. Test duration: 4 hrs 30 min., measured current through fuse: 0.39A.
3.	T9101 after D9305 (+5.2V)	o-l	70.1/ T9101 coil, 63.7/ T9101 core, 51.1/ U9102 (ambient = 17.3°C)	Unit shut down when increase to 2.7A, no hazards, no damage. Test duration: 4 hrs 46 min., measured current through fuse: 0.71A.
4.	T9101 after D9108 (+18V)	o-l	67.1/ T9101 coil, 63.5/ T9101 core, 54.1/ U9102 (ambient = 18.1°C)	Unit shut down when increase to 2.0A, no hazards, no damage. Test duration: 7 hrs 6 min., measured current through fuse: 0.68A.

No.	Component	Fault	dT (K) / Component	Other results (include description and test duration)
5.	T9101 after D9109 (+12V)	o-l	67.0/ T9101 coil, 63.5/ T9101 core, 54.1/ U9102 (ambient = 17.5°C)	Unit shut down when increase to 2.4A, no hazards, no damage. Test duration: 7 hrs 12 min., measured current through fuse: 0.65A.
6.	BD9901 pin 4 to pin 2	s-c	--	F9901 opened, BD9901 damaged, no hazards. Fuse current: 0 A Test time: 1 min. Test Voltage:264V/50Hz
7.	C9326	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.08A Test time: 1 min. Test Voltage:264V/50Hz
8.	C9157	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.08A Test time: 1 min. Test Voltage:264V/50Hz
9.	U9101 pin 8 to pin 5	s-c	--	Unit shutdown, U9101, R9111 damaged no hazards. Same test has been repeated twice, and all came out with same results. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
10.	U9101 pin 4 to pin 8	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.03A Test time: 1 min. Test Voltage:264V/50Hz
11.	U9101 pin 8 to pin 6	s-c	--	Unit shutdown, U9101 damaged no hazards. Same test has been repeated twice, and all came out with same results. Fuse current: 0.03A Test time: 1 min. Test Voltage:264V/50Hz
12.	U9305 pin 8 to pin 2	s-c	--	Unit shutdown, U9305, R9339 damaged no hazards. Same test has been repeated twice, and all came out with same results. Fuse current: 0.03A Test time: 1 min. Test Voltage:264V/50Hz
13.	U9305 pin 7 to pin 8	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.03A Test time: 1 min. Test Voltage:264V/50Hz

No.	Component	Fault	dT (K) / Component	Other results (include description and test duration)
14.	U9305 pin 2 to pin 4	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.03A Test time: 1 min. Test Voltage:264V/50Hz
15.	Q9101 D to S	s-c	--	F9901 opened, Q9111 damaged, no hazards. Fuse current: 0 A Test time: 1 min. Test Voltage:264V/50Hz
16.	Q9101 G to D	s-c	--	F9901 opened, Q9101 damaged, no hazards. Fuse current: 0 A Test time: 1 min. Test Voltage:264V/50Hz
17.	Q9101 G to S	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.04A Test time: 1 min. Test Voltage:264V/50Hz
18.	T9101 pin 1 to pin 7,8	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.05A Test time: 1 min. Test Voltage:264V/50Hz
19.	T9101 pin 1 to pin 9	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
20.	T9101 pin 1 to pin 10,11	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
21.	T9101 pin 1 to pin 12	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
22.	T9101 pin 2 to pin 7,8	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz

No.	Component	Fault	dT (K) / Component	Other results (include description and test duration)
23.	T9101 pin 2 to pin 9	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
24.	T9101 pin 2 to pin 10,11	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
25.	T9101 pin 2 to pin 12	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
26.	T9101 pin 3 to pin 7,8	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
27.	T9101 pin 3 to pin 9	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
28.	T9101 pin 3 to pin 10,11	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
29.	T9101 pin 3 to pin 12	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
30.	T9101 pin 5 to pin 7,8	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
31.	T9101 pin 5 to pin 9	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz

No.	Component	Fault	dT (K) / Component	Other results (include description and test duration)
32.	T9101 pin 5 to pin 10,11	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
33.	T9101 pin 5 to pin 12	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.02A Test time: 1 min. Test Voltage:264V/50Hz
34.	D9251 pin 1 to pin 2	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.08A Test time: 1 min. Test Voltage:264V/50Hz
35.	D9107 pin 1 to pin 2	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.05A Test time: 1 min. Test Voltage:264V/50Hz
36.	+18V to metal part	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.08A Test time: 1 min. Test Voltage:264V/50Hz
37.	+12V to metal part	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.08A Test time: 1 min. Test Voltage:264V/50Hz
38.	+5.2V to metal part	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.08A Test time: 1 min. Test Voltage:264V/50Hz
39.	CN802 pin 1 to metal part	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.04A Test time: 1 min. Test Voltage:264V/50Hz
40.	CN 802 pin 1 to secondary connector	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.03A Test time: 1 min. Test Voltage:264V/50Hz

No.	Component	Fault	dT (K) / Component	Other results (include description and test duration)
41.	U9102 Pin 1 to Pin 2	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.04A Test time: 1 min. Test Voltage:264V/50Hz
42.	U9102 Pin 2 to Pin 3	s-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.04A Test time: 10mins Test Voltage:264V/50Hz
43.	U9102 Pin 1	o-c	--	Unit shutdown immediately, no damaged, no hazards. Fuse current: 0.05A Test time: 1 min. Test Voltage:264V/50Hz
44.	Opening	blocked	58.2/ T9101 coil, 55.7/ T9101 core, 53.6/ U9102 (ambient = 21.1°C)	Unit normal operation, no hazards, no damage. Test duration: 2 hrs 14 min., measured current through fuse: 0.59A.
	Winding temperature rise measurements			N/A
	Ambient temperature t1 (^{o}C) ..... :			—
	Ambient temperature t2 (^{o}C) ..... :			—

Note(s):.

1. Maximum permitted temperature rises calculated as:
   Winding wires (providing safety isolation):
   - Insulated with polyurethane resins → Limit dT = 150 K – (45-35) K – 10 K = 130 K
2. Fault column, where s-c = short-circuited, o-l = over-loaded, o-c = open-circuited.
3. For component damaged without fuse opened condition have been repeated two times with same result.
4. For all fuse sources, test with fuse opened condition has same result come out.
5. All test items were performed on the worst mode with maximum normal load condition.
6. Input voltage for LED backlight is Max. 36 Vdc as mentioned in panel specification.

13	**TABLES: clearances and creepage distances**				**P**
Rated supply voltage:	100-240 V	Pollution degree.. :	2	Material Group.... :	IIIb
2 N force on internal parts applied:		Considered.			P
30 N force on outside of conductive enclosure applied:		Considered.			P

Location	Working Voltage		Clearance (mm)		Creepage (mm)	
	V rms	V peak	Min	Actual	Min	Actual
L to N on PCB (before fuse F9901) (B)	250	420	3.0	3.1	3.0	5.7
Fuse (F9901) terminal (B)	250	420	3.0	3.1	3.0	4.3
L to N on PCB (after fuse F9901)(B)	250	420	3.0	3.1	3.0	3.1
Under U9102 on PCB trace side (R)	250	420	6.0	8.0	6.0	8.0
Under T9101 on PCB trace side(R)	250	**494**	6.6	8.9	6.6	8.9

Sec. pin to core of transformer T9101 (R)	250	**494**	6.6	17.1	6.6	17.1
Secondary component FB9903 to core of transformer T9101 (B)	250	**494**	3.3	14.2	3.3	14.2
Under Y capacitor C9905 on PCB trace side (R)	250	420	6.0	7.5	6.0	9.0
Under Y capacitor C9906 on PCB trace side (R)	250	420	6.0	7.5	6.0	9.0
Under Y capacitor C9908 on PCB trace side (R)	250	420	6.0	7.5	6.0	9.0
Under Y capacitor C9909 on PCB trace side (R)	250	420	6.0	7.5	6.0	9.0
Under Y capacitor C9910 on PCB trace side (R)	250	420	6.0	7.5	6.0	9.0
Circuits conductively connected to the mains (use Tables 8, 9 and 11): see note below.						

Notes:

1. If the minimum creepage distance in Table 11 is less than the minimum required clearance in Tables 8, 9 or 10 as required, then the value for clearance is used as the minimum creepage distance.

"Min" = minimum required.

"Actual = Actual dimensions measured.

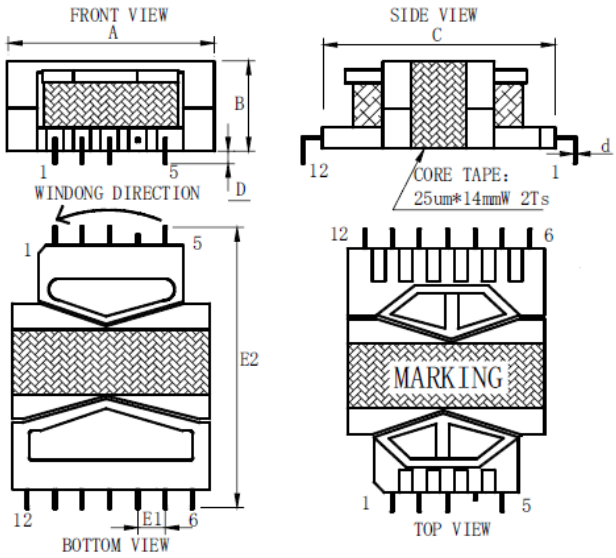
2. Glued components: C9101, C9102, C9103 and C9251.

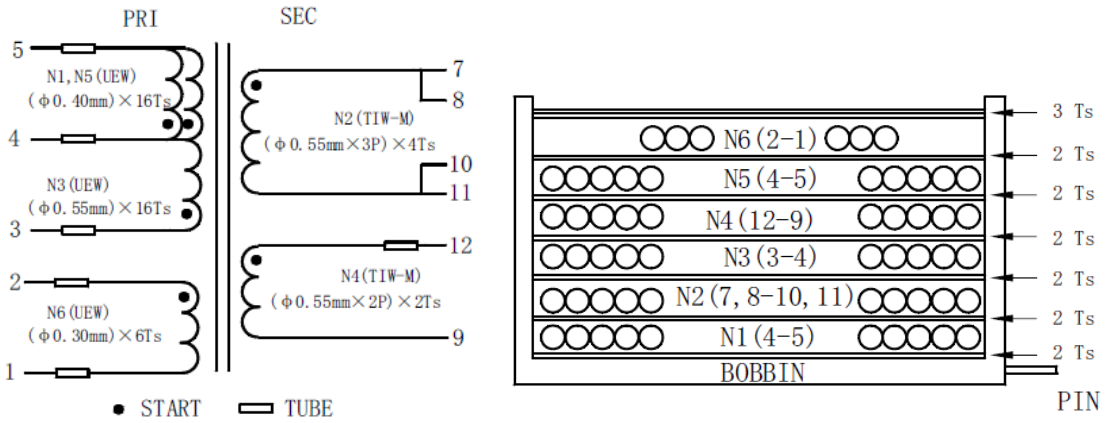
3. For clearance and creepage did not describe above are far larger than limit above.

4. Altitude correction factor for clearances for an altitude of 5000 m (based on IEC 60664-1:1992): 1.48.

Construction details for safety isolation transformers:		
Transformer: T9101		
Manufacturer: See appended table 14		
Type: See appended table 14		
The constructions of all sources of T9101 are identical, only model designation, manufacturer and source of bobbin different. Altitude correction factor for clearances for an altitude of 5000 m (based on IEC 60664-1:1992): 1.48.		
Recurring peak voltage	494 Vpk	
Required clearance for reinforced		
insulation (from tables 8 and 9)	6.6 mm	
Effective voltage rms	250 Vrms	
Required creepage for reinforced		
insulation (from table 11)	6.6 mm	
Measured min. creepage distances		
Location	inside (mm)	outside (mm)
Winding conductively connected to the mains and winding not conductively connected to the mains (Primary – Secondary)	Certificate triple insulated wire used.	54.7 (Primary pin to secondary pin)
Winding conductively connected to the mains and core (Primary – Core)	--	--
Winding not conductively connected to the mains and core (Secondary – Core)	Certificate triple insulated wire used.	17.4 (outer pin to core)
Measured min. clearances		
Location	inside (mm)	outside (mm)
Winding conductively connected to the mains and winding not conductively connected to the mains (Primary – Secondary)	Certificate triple insulated wire used.	54.7 (Primary pin to secondary pin)
Winding conductively connected to the mains and core (Primary – Core)	--	--
Winding not conductively connected to the mains and core (Secondary – Core)	Certificate triple insulated wire used.	17.4 (outer pin to core)

Construction:





No.	COIL	TERMINAL	WIRE GAUGE	WIRE TYPE	TUNS	WINDING METHOD	TAPE 2Ts
1	N1	4--5	φ0.40 mm	UEW	16	CLOSED	2Ts
2	N2	7,8--10,11	φ0.55mm×3	TIW-M	4	CLOSED	2Ts
3	N3	3--4	φ0.55 mm	UEW	16	CLOSED	2Ts
4	N4	12--9	φ0.55 mm×2	TIW-M	2	CLOSED	2Ts
5	N5	4--5	φ0.40 mm	UEW	16	CLOSED	2Ts
6	N6	2--1	φ0.30 mm	UEW	6	CLOSED	3Ts

Concentric windings on bobbin (vertical type core), outer winding is primary windings. Certificate triple insulated wire used in secondary windings, core is considered as primary circuit. There are min. two layers of insulation tapes provided on complete core of transformer to keep sufficient insulation for double insulation request. There are three layers of insulation tape provided on outer winding, the details information see above.

Pin numbers	
Winding conductively connected to the mains	1-2, 4-5-6
Winding not conductively connected to the mains	9-12, 7,8-10,11
Bobbin	
Material	Phenolic, Sumitomo Bakelite Co., Ltd. Type PM-9820, PM-9630, V-0, 150°C
Thickness	0.45 mm

TRF No. IEC60065K

Electric strength test	
With AC 3000V after humidity treatment	
Result	pass

14	TABLE: list of critical components and materials	P

Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1)]
EUT					
LCD Panel with LED Backlight	TPV	TPT315B*-******** (* can be A-Z, a-z, 0 - 9, "+", "-", "." or blank, series model name is same to each other except for model designation for market issue.)	31.5 inch TFT-LCD, LED Backlight type, power consumption: 33.5W	--	--
Plastic enclosure (use for back cover and front frame cover)	SAMSUNG SDI	NH-1017(p); NE-1030(+); VE-1890(+); HM-1100(+); LS-1159(r); NE-1059(+); VE-0819(+); VH-0810 (+)	Min V-1, Min. 2.0mm, Min. 50°C	UL 94, UL746	UL (E115797)
	LG CHEMICAL LTD	AF312T; AF365(&)	Min V-1, Min. 2.0mm, 60°C	UL 94, UL746	UL (E67171)
	LG CHEMICAL LTD	LUPOY GN-5001RF(T)	Min.V-1, Min. 2.0mm, 80°C	UL 94, UL746	UL (E67171)
	LG CHEMICAL LTD	LUPOY EF-5001RF(#)	Min.V-1, Min. 2.0mm, 60°C	UL 94, UL746	UL (E67171)
	LG CHEMICAL LTD	LUMILOY GN1106F(o3)(#)	Min.V-1, Min. 2.0mm, 60°C	UL 94, UL746	UL (E67171)
	LG CHEMICAL LTD	LUPOY GN-1000FA(#)	Min.V-1, Min. 2.0mm, 80°C	UL 94, UL746	UL (E67171)
	LG CHEMICAL LTD	LUPOY GN-1001F(#)	Min.V-1, Min. 2.0mm, 80°C	UL 94, UL746	UL (E67171)
	LG CHEMICAL LTD	LUPOY GN-1006F	Min.V-1, Min. 2.0mm, 110°C	UL 94, UL746	UL (E67171)
	LG CHEMICAL LTD	LUPOY GN-1006F(m)(#)	Min.V-1, Min. 2.0mm, 110°C	UL 94, UL746	UL (E67171)
	LG CHEMICAL LTD	LUPOY GN-5101F	Min.V-1, Min. 2.0mm, 110°C	UL 94, UL746	UL (E67171)

	BAYER MATERIALSCIENCE AG	FR3110 TV+(z) (h8); FR3120 TV+(z); FR3310 TV+(z); FR3305 TV+(z)	Min.V-1, Min. 2.0mm, 60°C	UL 94, UL746	UL (E41613)
	KINGFA SCI & TECH CO LTD	HF-606	Min.V-1, Min. 2.0mm, 60°C	UL 94, UL746	UL (E171666)
	KINGFA SCI & TECH CO LTD	FRHIPS-960	Min.V-1, Min. 2.0mm, 50°C	UL 94, UL746	UL (E171666)
	KINGFA SCI & TECH CO LTD	JH960 6(M)	Min.V-1, Min. 2.0mm, 60°C	UL 94, UL746	UL (E171666)
	STYRON EUROPE GMBH	EMERGE PC/ABS 7570EP; EMERGE PC/ABS 7570	Min.V-1, Min. 2.0mm, 60°C	UL 94, UL746	UL (E213639)
	SAMYANG	2(xx)GNH(e); 210NHF(@); 3025N; 3025N2(f2)	Min.V-1, Min. 2.0mm, Min. 60°C	UL 94, UL746	UL (E121254)
	CHI MEI CORPORATION	PC-540H; PA-765A(+)	Min.V-1, Min. 2.0mm, Min. 60°C	UL 94, UL746	UL (E56070)
	CHI LIN TECHNOLOGY CO LTD	PBG-71(XX)(+)	Min.V-1, Min. 2.0mm, Min. 60°C	UL 94, UL746	UL (E177071)
	SABIC INNOVATIVE PLASTICS JAPAN L L C	CM4219 (gg*); CY5100 (GG); CY5005 (gg*)	Min.V-1, Min. 2.0mm, Min. 60°C	UL 94, UL746	UL (E207780)
	ORINKO (HEFEI) ADVANCED PLASTIC CO LTD	HIPS-2000; ABS-3070H; PC/ABS 5140; HIPS-2230; PC/ABS-551X; PC-TH112	Min.HB, Min.2.0mm, Min. 60°C	UL 94, UL746	UL (E328304)
	KINGFA SCI & TECH CO LTD	HIPS-5197; CK-61(M) (##)	Min.HB, Min.2.0mm, Min. 60°C	UL 94, UL746	UL (E171666)
	Cheil	SD-0150(+); HR-1360	Min.HB, Min.2.0mm, Min. 60°C	UL 94, UL746	UL (E115797)
	LG CHEMICAL LTD	HF380(#) HF380(m); HF-380(#); HF-380(m); HF-380	Min.HB, Min.2.0mm, Min. 60°C	UL 94, UL746	UL (E67171)
	VIDEOLAR S A	HIPS 825($)	Min.HB, Min.2.0mm, Min. 60°C	UL 94, UL746	UL (E235814)

	TOTAL PETROCHEMICALS FOSHAN LTD	Innova 4600 1000 F347	Min.HB, Min.2.0mm, Min. 60°C	UL 94, UL746	UL (E197828)
PCB (For power board)	interchangeable	interchangeable	V-0 or better, Min 105°C	UL 94, UL796	UL
PCB (except for power board)	interchangeable	interchangeable	V-1 or better, Min 105°C	UL 94, UL796	UL
Speakers (two provided)	interchangeable	interchangeable	Each 16Ω, Max. 12W	--	--
Battery for remote Controller used (optional)	interchangeable	interchangeable	1.5Vdc, Two AAA consumer type batteries provided.	--	--
Mylar sheet between power board and panel plate	interchangeable	interchangeable	Min. V-0, Thick min. 0.4mm, min. 80°C	UL94	UL
Main switch	Ningbo Yinzhou Lihe Switch Factory	RL3-4	16A, 125Vac 10(4), 250Vac	IEC 61058-1 ANSI/UL 61058-1 ANSI/UL 1054	VDE, UL
	SOLTEAM ELECTRONICS CO LTD	MR-21S	6A, 250Vac 10A, 125Vac	IEC 61058-1 ANSI/UL 61058-1 ANSI/UL 1054	SGS, UL
	Zhangjiagang Huajie	PS8-338	8A, 250Vac; 12(4), 250Vac	IEC 61058-1 ANSI/UL 61058-1 ANSI/UL 1054	SGS, UL
Appliance Inlet	Solteam	ST58, ST68	250V, 2.5A 250V, 5A; 125V, 7A	EN 60320-1, UL60320-1	ENEC UL
	Delikang	CDJ-8S, CDJ-8, CDJ-8S-1	250V, 2.5A 250V, 5A	EN 60320-1, UL60320-1	VDE UL
	Yueqing Hongchang	DB-8, DB-8-03, DB-8-03E, DB-8-01A	250V, 2.5A 250V, 5A	EN 60320-1, UL60320-1	VDE UL
	ZHANGJIAGANG HUAJIE ELECTRONIC CO LTD	SA-2S, SA-2SG	250Vac, 5 A.	EN 60320-1, UL60320-1	VDE UL
Switching Power Supply board: TPV, type 715G7339					
Primary Connectors (CN9901)	Xinya	TÜV: M3962 series UL: 3962 series	TÜV: 6 A, 250 Vac UL: 7 A, 250 Vac	IEC 61984 UL 1997	TÜV Nord UL
	Xinya	W7913 series	7A, 250Vac	IEC 61984 UL 1997	TÜV Nord UL
	J.S.T	VH series VT series	7A, 250Vac	IEC 61984 UL 1997	TUV UL

	LEOCO	3962 series	7A, 250Vac	IEC 61984 UL 1997	TUV UL
	Jowle	A3963 series	7A, 250Vac	IEC 61984 UL 1997	TUV UL
Fuse (F9901)	Littelfuse / Wickmann	392 series, 382 series, TE5 400	T5AL, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
	Conquer	MET, MST	T5AL, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
	Cooper Bussmann	SR-5, SS-5	T5AL, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
	Ever Island Electric Co., Ltd & Walter Electric	2000 series, 2010 series	T5AL, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Bridge - Capacitors (C9905, C9906, C9909, C9910) (Optional)	Murata	KX	Max. 220 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Walsin Technology Corp.	AH	Max. 220 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	JYA-NAY Co., Ltd.	JN	Max. 220 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Hongming	F	Max. 220 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	TDK	CD	Max. 220 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Yinan Don's	CT81	Max. 220 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Haohua Electronic	CT7	Max. 220 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Success	SE,SB	Max. 220 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Kunshan Wansheng	CT7	Max. 220 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Panasonic	NS-A	Max. 220 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
Bridging-Capacitor (C9908) (Optional)	Murata	KX	Max. 3300 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Walsin Technology Corp.	AH	Max. 3300 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	JYA-NAY Co., Ltd.	JN	Max. 3300 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Hongming	F	Max. 3300 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL

	TDK	CD	Max. 3300 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Yinan Don's	CT81	Max. 3300 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Haohua Electronic	CT7	Max. 3300 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Success	SE,SB	Max. 3300 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Kunshan Wansheng	CT7	Max. 3300 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
	Panasonic	NS-A	Max. 3300 pF, Min. 250 V, Y1	IEC/EN 60384-14 UL 1414	VDE, UL
X capacitor (C9901, C9902) (optional)	Europtronic	MPX, MPX2	Max. 0.22μF, Min. 250 V, X2	IEC/EN 60384-14 UL 1414	VDE, UL
	Arcotronics	R.46	Max. 0.22μF, Min. 250 V, X2	IEC/EN 60384-14 UL 1414	VDE, UL
	Hua Jung	MKP	Max. 0.22μF, Min. 250 V, X2	IEC/EN 60384-14 UL 1414	VDE, UL
	Ultra Tech Xiphi	HQX	Max. 0.22μF, Min. 250 V, X2	IEC/EN 60384-14 UL 1414	VDE, UL
	Liow GU	GS-L	Max. 0.22μF, Min. 250 V, X2	IEC/EN 60384-14 UL 1414	VDE, UL
	EPCOS	B3292#	Max. 0.22μF, Min. 250 V, X2	IEC/EN 60384-14 UL 1414	VDE, UL
	Zhuhai Sung Ho	CMPP	Max. 0.22μF, Min. 250 V, X2	IEC/EN 60384-14 UL 1414	VDE, UL
Bleeder Resistors (R9901, R9903)	--	--	Max. 390K ohm, min. 1/4W	--	--
Discharge IC (U9901)	Power integrations	CAP004DG	825V	IEC 60065 DSH 1080	Nemko
Thermistors (TH9901, TH9902)	Interchangeable	Interchangeable	Min. 8 A, min. 1.5 ohm at 25 degree C	--	--
Bridging Diode (BD9901)	Interchangeable	Interchangeable	Min.10 A, min. 800Vac	--	--
Ripple Capacitors (C9101, C9102, C9103) (Optional)	Interchangeable	Interchangeable	68uF, min. 450V, Min. 105 °C.	--	--
Transistors (Q9101) (Optional)	Interchangeable	Interchangeable	Min. 600 V, 17A.	--	--

Varistor (RV9901) (RV9902 optional)	Thinking Electronic Industrial Co., Ltd.	TVR14561	350 Vac, 450Vdc, 40/85/56, 6KV / 3 KA pulse test passed (Located after mains fuse)	UL1449, IEC 61051-1, IEC 61051-2, IEC 61051-2-2	UL, VDE
	Thinking Electronic Industrial Co., Ltd.	TVR14511	320 Vac, 410Vdc, 40/85/56, 6KV / 3 KA pulse test passed (Located after mains fuse)	UL1449, IEC 61051-1, IEC 61051-2, IEC 61051-2-2	UL, VDE
	Thinking Electronic Industrial Co., Ltd.	TVR14681	420 Vac, 560Vdc, 40/85/56, 6KV / 3KA pulse test passed (Located after mains fuse)	UL1449, IEC 61051-1, IEC 61051-2, IEC 61051-2-2	UL, VDE
	Panasonic Corpoation, Panasonic Corpoation of North America	V14621U	385 Vac, 505Vdc, 40/85/56, 6KV / 3 KA pulse test passed (Located after mains fuse)	UL1449, IEC 61051-1, IEC 61051-2, IEC 61051-2-2	UL, VDE
	Thinking Electronic Industrial Co., Ltd.	TVR14621	395 Vac, 510Vdc, 40/85/56, 6KV / 3KA pulse test passed (Located after mains fuse)	UL1449, IEC 61051-1, IEC 61051-2, IEC 61051-2-2	UL, VDE
	Panasonic Corpoation, Panasonic Corpoation of North America	V14681U	420 Vac, 560Vdc, 40/85/56, 6KV / 3 KA pulse test passed (Located after mains fuse)	UL1449, IEC 61051-1, IEC 61051-2, IEC 61051-2-2	UL, VDE
	EPCOS (Zhuhai Ftz) Co Ltd	SIOV-S14KV621	385 Vac, 505Vdc, 40/85/56, 6KV / 3KA pulse test passed (Located after mains fuse)	UL1449, IEC 61051-1, IEC 61051-2, IEC 61051-2-2	UL, VDE
	EPCOS (Zhuhai Ftz) Co Ltd	SIOV-S14KV681	420 Vac, 560Vdc, 40/85/56, 6KV / 3KA pulse test passed (Located after mains fuse)	UL1449, IEC 61051-1, IEC 61051-2, IEC 61051-2-2	UL, VDE
Opto-coupler (U9102)	Vishay Semiconductor	TCET1103	Di=0.4mm min., Clearance/Creepage distance between input and output = 7.0mm min., 100°C	IEC 60747-5-2	VDE, UL

	Sharp	PC123	Di=0.4mm min., Clearance/Creepage distance between input and output = 8.0mm, 110°C	IEC 60747-5-2	VDE, UL
	Everlight Electronics Co., Ltd.	EL817	Di=0.4mm min., Clearance/Creepage distance between input and output = 7.6mm min., 110°C	IEC 60747-5-2	VDE, UL
	TOSHIBA	TLP781	Di=0.4mm min., Clearance/Creepage distance between input and output = 6.5mm min., 115°C	IEC 60747-5-2	VDE, UL
	TOSHIBA	TLP781F	Di=0.4mm min., Clearance/Creepage distance between input and output = 8.0mm min., 115°C	IEC 60747-5-2	VDE, UL
	Renesas	PS2561DL1-1	Di=0.4mm min., Clearance/Creepage distance between input and output = 8.0mm min., 110°C	IEC 60747-5-2	VDE, UL
Choke (L9901, L9902) (Optional)	ASET	373G0174314X	Min. 105 °C	--	--
	LI TAI	373G0174314L	Min. 105 °C	--	--
	Dadon	373G0174314H	Min. 105 °C	--	--
Transformer (T9101)	YUVA	380GL32P118N	Polyurethane	--	Test in equipment
	Dadon	380GL32P118H	Polyurethane	--	Test in equipment
	TPV	S80GL32P118V	Polyurethane	--	Test in equipment
-Triple Insulation wire (for T9101 use)	Cosmolink	TIW-M	130 °C	IEC/EN 60950-1, VDE0805 Teil1, UL 2353	UL, VDE
	FURUKAWA	TEX-E	130 °C	IEC/EN 60950-1, VDE0805 Teil1, UL 2353	UL, VDE
	FURUKAWA	TEX-ELZ	130 °C	IEC/EN 60950-1, VDE0805 Teil1, UL 2353	UL, VDE

Supplementary information:

1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.
2) Dti=Distance through insulation; Int. cr = internal creepage distance; Ext. cr = external creepage distance.
3) All sources of optocoupler were certified according to DIN EN 60747-5-2 which complies with the requirements and provisions of IEC 60747-5-5.
4) All sources of optocoupler comply with IECEE CTL DSH 759.

9.1.1	TABLE: Electric shock hazard under normal condition					**P**
Measured between:		Uoc (V)	U_1 (V)	Limit U_1	U_2 (V)	Limit U_2
Test for Unit						
L/N to all non-hazardous connectors		--	0.62	35	0.23	0.35
L/N to plastic enclosure (with metal foil)		--	0.08	35	0.08	0.35
L/N to metal chassis		--	0.60	35	0.23	0.35
Note(s): 1. Test condition: I/P 264 Vac, 60 Hz with power switch on/off condition.						

11.1	TABLE: Electric shock hazard under fault condition					**P**
Measured between:	Fault conditions	Uoc (V)	U_1 (V)	Limit U_1	U_2 (V)	Limit U_2
Test for Unit						
L/N to all non-hazardous connectors	[2.]	--	0.62	70	0.23	1.4
L/N to enclosure (with metal foil)	[2.]	--	0.07	70	0.01	1.4
L/N to metal chassis	[2.]	--	0.60	70	0.23	1.4
Note(s): 1. Test condition: i/p 264 Vac, 60 Hz. 2. All component faults (see appended table 11.2) and only maximum voltage recorded.						

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60065
JAPAN NATIONAL DIFFERENCES

Audio, video and similar electronic apparatus – Safety requirements

Differences according .....: J60065 (H23)

Attachment Form No.....:

Attachment Form Originator .....: TUV Rheinland Taiwan

Master Attachment Form .....: IECEE CB Bulletin on 2012-04-12

Clause	Requirement + Test	Result - Remark	Verdict
1.1.3	**Addition:** Add the following as a NOTE after the first sentence. NOTE 1 In Japan, the requirements for regions with moderate apply.	Added.	P
2.4.9	**Replacement:** In NOTE 1, replace “see 4.2.2 of IEC 62151” by “see 4.2.2 of IEC 62151 [27]”.	No TNV circuit.	N/A
2.6.2A	**Addition:** Add this sub clause. CLASS 0I EQUIPMENT: Equipment which has, as for protection against electric shock, - at least using BASIC INSULATION, and - providing a means of connecting to the protective earthing conductor in the building wiring those conductive parts that are otherwise capable of assuming HAZARDOUS VOLTAGES if the BASIC INSULATION fails, and - using a supply cord without earthing conductor or a plug without earthing pin although the equipment has externally an earth terminal or a lead wire for earthing. Equipment provided with a cord set having a two-pin type plug with a lead wire for earthing or having three pin - tow pin adaptor is also regarded as Class 0I. NOTE Class 0I equipment may have a part constructed with Double Insulation or Reinforced Insulation.	Added	P
3.2	**Addition:** Add the “Class 0I equipment” in the first sentence of this sub-clause.	Added	P
3.2	**Addition:** Add the following after the first sentence of this sub-clause. NOTE Equipment often transported and used should not be Class I equipment nor Class 0I	Added.	N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	equipment.		
4.2.8	**Deletion:** Delete this clause.	Deleted.	N/A
4.3.4, b)	**Replacement:** Replace IEC 60730-1 by JIS C 9730-1 (corresponding to IEC 60730-1).	Replaced.	N/A
4.3.12	**Deletion:** Delete this clause.	Deleted.	N/A
4.3.13	**Replacement:** Replace “250 V a.c.” by “the maximum of the variable range”.	Replaced.	N/A
5.4.2A	**Addition:** For CLASS 0I EQUIPMENT, the following instruction shall be indicated where readily visible on the mains plug or the product: “WARNING: Provide an earthing connection” *Example in Japanese:* 警告 必ず接地接続を行ってください。 Moreover, for CLASS 0I EQUIPMENT, the following instruction shall be indicated where readily visible on the product or written in the operating instructions: “WARNING: Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains.” *Example in Japanese:* 警告 接地接続は必ず、主電源プラグを主電源につなぐ前に行って下さい。また、接地接続を外す場合は、必ず主電源プラグを主電源から切り離してから行って下さい。		N/A
6.2	**Replacement:** In NOTE 1, replace IEC 61040 [10] by JIS C 6181:1995 [10].	Replaced.	N/A
7.1.5	**Addition:** Add the words, “without dimensions restrictions” after the figure, “65 K” in the first sentence of Condition “b” in Table 3 as follows. For parts not likely to be touched during intended use, temperature rises up to 65 K <u>without dimensions restrictions</u> are allowed under normal operating conditions.	Added.	P

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Addition: Add the following paragraph as 2nd paragraph of Condition “d “in Table 3. For materials which are not listed in Table 3, temperature rises in the normal operating conditions are considered satisfactory if these materials comply with item 3 of detailed regulations, 1.(1),b, Appendix 4 in the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material. Permissible temperature rise of “Supply cords and wiring insulation” is applicable only to the materials used in supply cords complying with JIS C 3662 (corresponding to IEC 60227) or JIS C 3663 (corresponding to IEC 60245). Materials used in other wiring shall comply with item 3 of detailed regulations, 1.(1).b, Appendix 4 in the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material.	Added.	P
	Addition: In the first paragraph of Condition “f” of Table 3, add ”JIS K 7206:1999 or” before the reference, ISO 306.	Added.	N/A
	Addition: In Condition “f,” 1) of Table 3, add ”JIS K 7206:1999 or” before the reference, ISO 306.	Added.	N/A
7.2	**Addition:** In NOTE 2, add ”or JIS standard (identical to or modified IEC)” after the word, IEC standard.	Added.	N/A
8.5	**Addition:** In the first paragraph, add “and Class 0I Equipment” after the words, Class I Equipment.	Added.	P
8.5	**Addition:** In the six paragraph (before NOTE 3), add the following to the end of the first sentence. CLASS 0I EQUIPMENT shall be provided with a protective earthing terminal at any point outside the apparatus where easily visible or a protective external earth wire from mains plug.	Added.	P
8.11	**Addition:** In NOTE 2, c), add “or JIS C 2107, JIS C 2336, JIS C 2338” after the reference, IEC 60454.	Added.	N/A
9.1.1.1	**Addition:** In the last paragraph, add the following sentence after the first sentence. For CLASS 0I EQUIPMENT, the r.m.s. TOUCH-CURRENT to earth shall not be more than 1.0 mA.	Added.	P

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

10	**Replacement:** In NOTE, replace “IEC 60664-1 and IEC 60664-4 [9]” by “JIS C 0664:2003 and IEC/TR3 60664-4 [8]”	Replaced.	N/A
10.1	**Addition:** Add “CLASS 0I EQUIPMENT and” to the head of the first paragraph.		N/A
10.3.2	**Addition:** In Table 5, add the following values to the sub-table of NOTE. Operating Voltage *U* (peak) | Test voltage (peak) | Curve A | Curve B **142 V** | **1 414 V** | **2 828 V**	Added.	N/A
11.2.1	**Addition:** Add the following after the original NOTE. NOTE 2 Fuses except for the ones according to IEC 60127 shall be tested in consideration of the characteristic.	Added.	P
11.2.3	**Addition:** Add “and CLASS 0I” after the words, CLASS I.		N/A
13.4	**Replacement:** In NOTE 2 of Table 11, replace “IEC 60664-1” by “JIS C 0664:2003” (corresponding to IEC 60664-1).	Replaced.	P
14.3.3.2	**Addition:** In the second sentence of the first paragraph, add “or JIS C 2107, JIS C 2336 and JIS C 2338” after the reference, IEC 60454.	Added.	P
14.5.1.1	**Addition:** In item a), add “JIS C 9730 series or” before the reference, IEC 60730 series.	Added.	N/A
14.5.1.2	**Replacement:** In the first sentence of item a), replace IEC 60691 by “IEC 60691 or JIS C 6691:2003 or Appendix 3 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material”.	Added.	N/A
	Replacement: After the second sentence of item a), replace “IEC 60691” by “JIS C 6691:2003 or IEC 60691”.	Added.	N/A
14.5.2.1	**Replacement:** Replace the first and the second sentence as follows:	Replaced.	P

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Fuse-links, DIRECTLY CONNECTED TO THE MAINS, used in order to prevent the apparatus from becoming unsafe within the sense of this standard shall comply with - the relevant part of IEC 60127 or JIS C 6575, unless they have a rated current outside the range specified in that standard. In the latter case, they shall comply with the relevant part of IEC 60127 or JIS C 6575 as far as applicable, or - Appendix 3 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material (limited to Fuses with the rated current of 1 A or more).		
14.5.2.2	**Addition:** Add the following sentence before the last paragraph. For fuses according to Appendix 3 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material, all that needs to be marked is the rated current.	Added.	N/A
14.5.3	**Replacement:** Replace “IEC 60730-1” by “JIS C 9730-1” (corresponding to IEC 60730-1).	Added.	N/A
14.5.4	**Replacement:** Replace “IEC 60127” by “IEC 60127 or JIS C 6575 ”.	Replaced.	N/A
14.6.1	**Addition:** Add the following paragraph after NOTE. The following manually operated mechanical switches shall meet the requirements specified in item a) or b) below. - the controlling current exceeds 0.2 A r.m.s a.c. or d.c. - the voltage across the open switch contacts exceeds 35 Vpeak ac or 24 Vdc.	Added.	N/A
14.6.1	**Replacement:** In item a), replace “IEC 61058-1” by “IEC 61058-1 or JIS C 4526-1:1999”.	Replaced.	N/A
14.6.2	**Replacement:** Replace “IEC 61058-1” by “IEC 61058-1 or JIS C 4526-1:1999”.	Replaced.	N/A
14.6.3	**Replacement:** Replace “IEC 61058-1” by “ IEC 61058-1 or JIS C 4526-1:1999”.	Replaced.	N/A
14.6.5	**Replacement:** Replace “IEC 61058-1” by “ IEC 61058-1 or JIS C 4526-1:1999”.	Replaced.	N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
14.7	**Replacement:** Replace “IEC 60950” by “JIS C 6950:2006”.	Replaced.	N/A
15.1.1	**Replacement:** Replace the first and second paragraph by the following. Plugs and appliance couplers for the connection of the apparatus to the MAINS and socket-outlets and interconnection couplers for providing MAINS power to other apparatus shall comply with the relevant JIS standards for plugs, socket-outlets, appliance couplers or interconnection couplers. If there is no appropriate JIS standard, they shall comply with the relevant IEC standards. Appliance connectors, interconnection outlets and interconnection plug-connectors compiled with Appendix 3 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material are accepted. In that case, if due to the shape the contact parts are connectable to those specified in standard sheets of IEC 60320-1, they shall comply with dimensions and ratings specified in the relevant standard sheets of IEC 60320-1. Examples of relevant specifications and standards: - Plugs / Socket-outlets: Appendix 4 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance. Article 2 (corresponding to IEC 60884) of the Ordinance. - Appliance couplers: Appendix 4 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance. Article 2 (corresponding to IEC 60320-1) of the Ordinance. - Appliance inlets: IEC 60320-1 - Interconnection outlets: Appendix 4 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance. IEC 60320-2-2. - Interconnection couplers: Appendix 4 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance. Delete NOTE 1 and NOTE 2.	Replaced. Shall be evaluated in national approval.	N/A
15.1.1	**Replacement:** Replace the paragraph after NOTE 2 by the following. MAINS socket-outlets and interconnection couplers mounted on CLASS 0I and CLASS II apparatus shall not permit connection of CLASS I apparatus.		N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
15.1.1	**Replacement:** Replace the paragraph before NOTE 3 by the following. MAINS socket-outlets and interconnection couplers mounted on CLASS I apparatus shall be provided with protective earthing contacts which are reliably connected to the PROTECTIVE EARTHING TERMINAL or contact of the apparatus. If not, it shall not permit connection of CLASS I apparatus.		N/A
	Replacement: Replace NOTE 4 by the following. NOTE 4 Socket-outlets not allowing the connection of CLASS I apparatus can be designed, for instance, similar to IEC 60906-1, standard sheets 3-1 or 3-2, or according to IEC 60320-2-2, standard sheets D or H.		N/A
15.1.2	**Deletion:** Delete the following sentence in NOTE. An example of a connector not meeting the requirements of this sub clause is the so-called "banana" plug.		N/A
15.1.3	**Replacement:** Replace the references, “IEC 60083 [1], IEC 60320, IEC 60884, IEC 60906” by “JIS C 8282 (corresponding to IEC 60884), JIS C 8303, IEC 60320 and IEC 60906”.	Shall be evaluated during national approval.	N/A
15.2	**Addition:** Add “and CLASS 0I EQUIPMENT” after the words, “CLASS I EQUIPMENT”		N/A
15.2	**Addition:** Add the following paragraphs after the first paragraph. The external earth wire of plug with an external earth wire shall not be earthed by a clip. Rated voltage of plug with an protective external earth wire shall be less 150 Vac.	Added. Shall be evaluated in national approval.	N/A
	Deletion: Delete the following paragraph. In SUPPLY APPARATUS of CLASS I with non-HAZARDOUS LIVE output voltage, output circuits shall not be connected to the protective earthing conductor.		N/A
15.3.1	**Replacement:** In the first paragraph, replace “IEC 60998-2-2” by “ IEC 60998-2-2 or JIS C 2814-2-2:2001”.	Replaced.	N/A
	Replacement: In the first paragraph, replace “IEC 60999” by	Replaced.	N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	"IEC 60999-1".		
	Replacement: In the third paragraph, replace "IEC 60335-1" by "JIS C 9335-1:2003 (corresponding to IEC 60335-1)".	Replaced.	N/A
15.3.3	**Replacement:** Replace "ISO 261 or ISO 262" by "JIS B 0205-2:2001 or JIS B 0205-3:2001".	Replaced.	N/A
15.3.5	**Replacement:** In the second paragraph, replace "IEC 60950" by "JIS C 6950:2006".	Replaced.	N/A
15.3.5	**Replacement:** Replace Table 15 by the following.	Replaced.	N/A

RATED CURRENT CONSUMPTION of the apparatus [a] A	Nominal cross-sectional area mm^2
Up to and including 6	0.75 to 1
Over 6 up to and including 10	1 to 1.5
Over 10 up to and including 16	1.5 to 2.5
[a] The RATED CURRENT CONSUMPTION includes currents which can be drawn from socket-outlets providing MAINS power for other apparatus.	

15.3.9	**Addition:** Add the following to the last of the first paragraph. This does not apply to CLASS 0I EQUIPMENT with a protectiive earthing terminal separately.	Added.	N/A
15.4.1	**Replacement:** In NOTE 1, replace "IEC 60884-1" by "JIS C 8282 (corresponding to IEC 60884-1)".		N/A
	Replacement: In NOTE 2, replace "IEC 60083 [1]" by "JIS C 8303".	The apparatus is not direct plug-in apparatus.	N/A
15.4.2	**Replacement:** In NOTE, replace "IEC 60083 [1]" by "JIS C 8303:1993 [1]".	Replaced.	N/A
15.4.3	**Addition:** Add the following NOTE to Table 17. NOTE If mains plug is parallel blade, a pull force as given in "Over 10 A up to and including 16 A, 130/250 V" of Table 17 is applied.	Added.	N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

16.1	**Addition:** Add the following to the last of first paragraph. Or mains cords shall be of the sheathed type complying with Appendix 1 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance.. **Deletion:** Delete NOTE 1. **Replacement:** Replace the second paragraph by the following. Compliance is checked by testing MAINS supply flexible cords in accordance with JIS C 3662 (corresponding to IEC60227) or JIS C 3663 (corresponding to IEC 60245), or Appendix 1 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance.	Added.	N/A
	Replacement: In this sub-clause, replace “IEC 60227” by “JIS C 3662 (corresponding to IEC 60227)”. In this sub-clause, replace “IEC 60245” by “JIS C 3663 (corresponding to IEC 60245)”.	Added.	N/A
	Addition: Add the following paragraph after the third paragraph. An external earth wire of Class 0I equipment shall be green/yellow, and the length of the external earth wire of plug with an external earth wire shall be equal or more than 10 cm from the plug.		N/A
16.2	**Replacement:** Replace the first paragraph by the following. Power supply cord conductors complied with JIS C 3662 (corresponding to IEC 60227) or JIS C 3663 (corresponding to IEC 60245) shall have a nominal cross-sectional area not less than those shown in table 18. If power supply cord conductors comply with other standards, it shall comply with relevant wiring requirements.	Replaced.	N/A
16.2	**Replacement:** Replace Table 18 by the following.	Replaced.	N/A

RATED CURRENT CONSUMPTION of the apparatus [a] A	Nominal cross-sectional area mm^2

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	up to and including 6 — 0,75 Over 6 up to and including 10 — 1 Over 10 up to and including 16 — 1,5 [a] The RATED CURRENT CONSUMPTION includes currents which can be drawn from the socket-outlets providing MAINS power for other apparatus.		
16.3	**Replacement:** In item a), replace “IEC 60885-1” by “JIS C 3661-1:1998”.	Replaced.	N/A
	Replacement: In item b), replace “IEC 60227-2” by “JIS C 3662-2 (corresponding to IEC 60227-2)”.	Replaced.	N/A
16.5	**Addition:** Add “or CLASS 0I EQUIPMENT used a plug with an external earth wire” after the words, CLASS I EQUIPMENT.		N/A
20.1	**Replacement:** In Note 3, replace each IEC 60065 and IEC 60707 by “JIS C 6065” and “JIS C 0066:2001 (IEC 60707).	Replaced.	N/A
Annex B	**Replacement:** Replace normative by Informative.	Replaced.	N/A
Annex G	**Replacement:** Replace IEC 60707 by JIS C 0066:2001 Replace IEC 60695-2-2 by JIS C 60695-2-2:2000. Replace IEC 60695-11-10 by JIS Z 2391:1999.	Replaced.	N/A
Annex N	**Addition:** Add “- protective earthing lead wire, protective earthing contact of appliance inlet or external protective earthing terminal in case of Class 0I apparatus.” after the second dash of N.1.3.	Added	N/A
	Replacement: Replace the first sentence and two dashes of N.2.2, as follows: The continuity of the protective earthing conecction between - the ACCESSIBLE conductive parts, including TERMINALS regarded as ACCESSIBLE (see 8.4), which should be connected to the PROTECTIVE EARTHING TERMINAL, and - the protective earthing contact of socket-outlets respectively, if provided to deliver power to other apparatus		N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	should be checked between - the protective earthing contact of the MAINS plug or appliance inlet, or the PROTECTIVE EARTHING TERMINAL in case of a PERMANENTLY CONNECTED APPARATUS, for CLASS I apparatus, and - the protective earthing lead wire, the protective earthing contact of appliance inlet, or external protective earthing terminal, for CLASS 0I apparatus.		

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60065
KOREA NATIONAL DIFFERENCES

Audio, video and similar electronic apparatus – Safety requirements

Differences according .....: K 60065

Attachment Form No.....:

Attachment Form Originator .....: TUV Rheinland Taiwan

Master Attachment Form .....: IECEE CB Bulletin on 2012-05-31

Clause	Requirement + Test	Result - Remark	Verdict
5.101	Other Marking: Wording 고압주의 or an information regulated in IEC Publication 417 giving high voltage warning to layman shall be marked, if an apparatus contains a part more than 600 volts.	Shall be evaluated during national approval	N/A
15.1.1	Plugs for the connection of the apparatus to the supply mains and socket outlets for providing mains power to other apparatus shall comply with the Korean requirement (KSC8300 and 8305)	No power cord provided, shall be evaluated during national approval	N/A
31	Radio frequency interference The apparatus shall comply with the relevant CISPR requirements (EMC=EMI+EMS)		N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60065
USA NATIONAL DIFFERENCES

Audio, video and similar electronic apparatus – Safety requirements

Differences according .....: UL 60065

Attachment Form No.....:

Attachment Form Originator .....: TUV Rheinland Taiwan

Master Attachment Form .....: IECEE CB Bulletin on 2013-03-06

Clause	Requirement + Test	Result - Remark	Verdict
1.1.1	Delete reference to Annex L: Electronic flash apparatus for photographic purposes. Replace this with reference to UL 122.		N/A
1.1.1	Mains connected apparatus intended for field installation complies with the National Electrical Code, ANSI, NFPA 70.		N/A
1.1.3	Requirements of apparatus intended for outdoor use comply with applicable clause of Annex A		N/A
1.1.5	Some apparatus covered by these requirements may also be required to comply with applicable requirements in other appropriate standards :		N/A
1.1.6	Apparatus with nonmetallic enclosures intended to be installed in air-handling spaces shall additionally comply with UL 2043		N/A
4.2.1	The rated supply voltage for single phase apparatus is assumed to be 120V or 120/240V	Model LE32B7500 is rated 100-240Vac.	P
4.2.4	a) Minimum audio output is not less than 0.5 W per channel unless the maximum audio output is less than 0.5 W per channel		N/A
4.2.4.1	An apparatus with multiple modes of operation, multiple signal input sources, or both, is operated according to the manufacturer's instructions to produce the maximum power input	No such equipment	N/A
Table 2	Table 2 - External supply sources are assumed to be capable of delivering 30 A, unless otherwise specified (UL 60065 no-load voltage and internal resistance values)		N/A
4.3.4	As an alternative, PTC thermistors may also comply with UL 1434.		N/A
5	Test for conductive labels secured in place by adhesive		N/A
5.1	Component power supplies and adapters complying with UL 1310, UL 1950, UL 60950, or UL 60950-1 are considered to fulfill items "a" through "i" of this clause.		N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.1f	Rated mains frequency marking on apparatus	50/60Hz	P
5.1j	Date of Manufacture marking		N/A
5.1k	Factory origin identification marking		N/A
5.1l	Combination of two graphical symbols and supplementary marking and/or single graphical symbol marking		N/A
5.1m	Equipment rack marking for audio/video systems	No such equipment	N/A
5.1n	Class I apparatus having touch current levels greater than 0.75 MIU and equal to or less than 3.5 MIU must be marked with a high touch current marking.		N/A
5.1o	Marking on apparatus having grille/ventilation areas of the top surface that are permitted to have higher temperature rises according to Note b of Table 3		N/A
5.1p	Marking for apparatus intended to be installed in air-handling spaces		N/A
5.2c	Output terminals are marked with voltage, frequency and current or power; output terminals installed or interconnected in the field must be marked with the class of wiring	No such terminals	N/A
5.2d	Speaker terminals are marked "Class 1 Wiring", "Class 2 Wiring" or "Class 3 Wiring".	No such audio output	N/A
5.2d	Operation manual explains risks and proper connecting and insulating techniques when connecting a speaker		N/A
5.3c	An explanation and illustration of safety related graphical symbols used on the apparatus are included in the user instructions preceding any operating instructions		N/A
5.4	Important safety instructions are packed with each apparatus	Label markings and Manual are in English.	P
5.4.1	Outdoor use marking for apparatus having no protection against exposure to water	Indoor use only	N/A
5.4.1e	Deleted		N/A
5.4.1e	Reference to IEC 61695 is replaced by UL 61965		N/A
5.4.3	When user operation and installation instructions contains instructions for use by skilled persons, the instructions are separate in format and preceded by a precautionary warning statement		N/A
6.1	Compliance is checked in accordance with the requirements in the U.S. Code of Federal Regulations, Title 21, Chapter 1, Subchapter J, Sections 1010.2, 1010.3, and 1020.10 by measuring the radiation produced by the apparatus employing a production chassis		N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
6.2	References to IEC 60825-1 are deleted		N/A
6.2	Apparatus is classified and labeled according to the Code of Federal Regulations, Title 21, Chapter 1, Subchapter J, Sections 1010.2, 1010.3, 1040.10 and 1040.11.	No laser	N/A
6.2.2	Deleted		N/A
7	Table 3: Delete reference to conditions h and i under Table item e for lithium batteries		N/A
7	Table 3: Temperature limits for various classes of insulation systems according to UL 60065		P
7	Table 3, Note a: Materials rated in accordance with UL 746B may be used within their rated temperature		P
7	Table 3, Note b: For grille/ventilation areas in the top surface directly above internal heatsinks, a temperature rise up to 65 K is allowed		N/A
7.2	Applies to thermoplastic materials only. A material temperature rating can be accepted in lieu of the softening temperature.		P
7.2	The softening test need not be performed on materials used in UL Listed or Recognized components		N/A
8.1	Metal parts are corrosion resistant	No such metal parts	N/A
8.9.1	Sleeving, tape, tubing, and wire insulation comply with UL 224, UL 510, or UL 1441		P
8.10	Component power supplies and their internal insulation complying with UL 1310, UL 1950 Third Edition, UL 60950, or UL 60950-1 are considered to fulfill the clause		N/A
8.17	As an option, winding wire insulation complies with the requirements in UL 2353		N/A
8.19.1	An all-pole switch or circuit breaker is not required to have contact separation of 3 mm		N/A
8.23	Printed wiring boards involved with the risk of electric shock comply with the requirements in UL 796.		N/A
9.1.1.1a	For audio signals of professional and commercial apparatus, 120 V r.m.s.		N/A
9.1.1.1a	For audio signals other than professional and commercial apparatus, 71 V r.m.s.		N/A
9.1.1.1b	Touch current carried out in accordance with UL 101 with the measuring instrument described in Annex D shall not exceed 0.5 MIU. Delete Note 2.	See appended table 9.1.1	P
9.1.1.2	UL articulated finger (figure 18) used instead of the test probe B (IEC 61032)	No access with test finger or test probe to any parts bearing	P

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
		hazardous voltage.	
9.1.1.2	Reference to test probes 18 and 19 of IEC 61032 are deleted		N/A
10	Table 5, Note 1: With respect to mains voltages in the range of 105-130 V (r.m.s.), the test voltages are considered to be 1414 V peak for basic and supplementary insulation and 2828 V peak for reinforced insulation		N/A
11	Component power supplies and their power transformers complying with UL 1310, UL 1950 Third Edition, UL 60950, or UL 60950-1 are considered to fulfill the clause		P
11.1	The permissible touch current for terminal contacts has been increased to twice the value given in 9.1.1.1.	See appended table 11.1	P
11.2.1	Additional fuse testing is not required if the temperature is limited by fuses	Considered.	P
12	Component power supply adaptors and their enclosures complying with UL 1310, UL 1950 Third Edition, UL 60950, or UL 60950-1 are considered to fulfill the clause.		N/A
12.1.3	Impact test uses the 50 mm steel sphere only		P
12.1.3	Table 6 - Impact test criteria detailing impact location, impact energy and additional pass/fail results applied according to UL 60065		P
12.1.4	As an alternative, any number from one to three samples are permitted to be used in any combination that results in a total of three drops		N/A
12.1.6	Handle strength test. When polymeric materials are involved, testing is to be conducted before and after the sub-clause 12.1.5 stress relief test.		N/A
12.8	Test for enclosures, barriers, components and leads that rely on adhesive		N/A
13	Component power supplies and their power transformers complying with UL 1310, UL 1950 Third Edition, UL 60950, or UL 60950-1 are considered to fulfill the clause.		P
13.4	The material group is verified according to UL 746A	UL listed materials used	N/A
13.4	Reference to the IEC 60112 PTI test is deleted		N/A
13.5.1	Reference to IEC 60249-2 is replaced by UL 796	No such printed wiring boards	N/A
13.5.2	Coated printed wiring boards comply with UL 746C	No such printed wiring boards	N/A
13.5.3	Multilayer printed boards comply with relevant requirements in UL 60950-1		N/A
14	Annex Y and additional component requirements applied according to UL 60065		P

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
14.1	Component power supplies and their resistors complying with UL 1310, UL 1950 Third Edition, UL 60950, or UL 60950-1 are considered to fulfil the clause		N/A
14.2	Component power supplies and their resistors complying with UL 1310, UL 1950 Third Edition, UL 60950, or UL 60950-1 are considered to fulfil the clause		P
14.2.1	As an alternative, a component such as a capacitor, a combination capacitor and resistor, or a suppressor may comply with UL 1414.	See appended table 14	P
14.2.2	As an alternative, a capacitor, a combination capacitor and resistor, or a varistor, or a suppressor may comply with UL 1414.	See appended table 14	P
14.2.4	Components subjected to the requirements in 14.2.1 and 14.2.2 also comply with UL 1414 enclosure requirements	See appended table 14	P
14.3	Component power supplies and their inductors and windings complying with UL 1310, UL 1950 Third Edition, UL 60950, or UL 60950-1 are considered to fulfill the clause		P
14.3.2	Planar transformers comply with the requirements for multilayer printed boards		N/A
14.4	Planar transformers comply with the requirements for multilayer printed boards	No high voltage components	N/A
14.4.1	High voltage arcing test replaces the High voltage transformers and multipliers test		N/A
14.4.2	Deleted		N/A
14.4.3	High voltage component part flame test		N/A
14.4.4	High voltage isolating component test		N/A
14.5.1.1	Thermal cut-outs comply with UL 873 or UL 60730-2-9	No thermal cut-outs used	N/A
14.5.1.2	Thermal links comply with UL 60691	No thermal links used	N/A
14.5.1.3	Deleted		N/A
14.5.2.1	Fuse links comply with UL 248-14	See appended table 14	P
14.5.2.2	Reference to IEC 60127 is deleted		N/A
14.5.2.2	Pre-arcing time/current characteristic and breaking capacity marking requirements are deleted		N/A
14.5.3	As an alternative, a PTC thermistor may comply with requirements of UL 1434	No PTC thermistor used	N/A
14.5.4	Reference to fuse-links is deleted	Deleted	N/A
14.5.3A	Other protective devices directly connected to the mains have adequate breaking capacity and comply with UL 873, UL 1416, UL 1417 or UL	No such devices	N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	2111		
14.6.1	Switches and relays comply with UL 1054, UL 61058-1 or UL 508	No such component.	N/A
14.6.1	Mains switch or relay are rated for the total rated current consumption of the apparatus		N/A
14.6.1	Rating of a mains switch or relay in audio apparatus intended for commercial use		N/A
14.6.2, 14.6.3, 14.6.4	deleted.		N/A
14.6.5	A switch or relay that controls a mains socket-outlet have a rating equal to the rated current consumption of the apparatus plus the current rating of the socket-outlet		N/A
14.6.6	Mains switches comply with (a), (b) or (c). The contacts of a mains relay complies with (a), (b) or (d). A switch that controls a mains receptacle complies with (b) and a relay that controls a mains receptacle complies with (b) or (d)		N/A
14.6.6a	Switch or relay contacts have an rms current rating equal to or greater than the peak inrush current of the apparatus divided by 1.414		N/A
14.6.6a	Switch or relay contacts have an rms current rating equal to or greater than the peak inrush current of the apparatus divided by 10, when: - the rms current during normal operation controlled by the switch is less than or equal to ½ the rms rating of the switch, and - the switch has double or multiple poles controlling the mains current, either in series or switching each mains line		N/A
14.6.6b	Switch or relay is TV rated		N/A
14.6.6c	Switch is located on the back of apparatus and is not operable from a remote control		N/A
14.6.6d	Relay is to be subjected to the Relay endurance test		N/A
14.6.6.1	Peak inrush current test		N/A
14.6.6.2	Relay endurance test		N/A
14.6.7	Double pole switch controlling a.c. and d.c. circuits		N/A
14.7	The jointed test finger (figure 18) is used to determine accessibility and operation of the interlock	No safety interlocks used	N/A
14.10.1	Internal rechargeable and non-rechargeable batteries that are replaceable by the user or skilled persons shall additionally comply with 14.10.2 – 14.10.5.	No such component.	N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
14.10.1	Test requirements from UL 2054 are added for special battery packs that are removable by the user from the apparatus and may be carried separately from the apparatus – Short circuit test, Abnormal charging test, Forced-discharge test, and 250-N steady force test.		N/A
14.10.1	Note: Consumer grade, non-rechargeable carbon-zinc or alkaline batteries are not subjected to the tests specified in 14.10.2 –14.10.5.		N/A
14.10.5	As an alternative, one sample may be subjected to three drops		N/A
14.10.6	Location of overcurrent protective device	No such device	N/A
14.10.6	As an alternative, the overcurrent protective device in the apparatus battery-supply circuit is not required if the apparatus is intended to be connected to a vehicle power outlet using a UL 2089 vehicle battery adapter		N/A
14.11	As an alternative, the overcurrent protective device in the apparatus battery-supply circuit is not required if the apparatus is intended to be connected to a vehicle power outlet using a UL 2089 vehicle battery adapter		N/A
14.11	As an alternative, the overcurrent protective device in the apparatus battery-supply circuit is not required if the apparatus is intended to be connected to a vehicle power outlet using a UL 2089 vehicle battery adapter		N/A
14.11	Optocouplers bridging reinforced insulation comply with requirements for double protection as specified in UL 1577		P
14.11	External clearances and creepage distances of optocouplers comply with 13.1		P
14.12	Reference to IEC 61051-2 replaced by UL 1449		P
14.12	Reference to IEC 60695-11-10 replaced by UL 94		P
14.12	All references to IEC 60151 are deleted		N/A
15.1.1	Attachment plug current rating (no less than 125% of the current drawn under normal operating conditions) and voltage rating	No power cord or plug provided.	N/A
15.1.1	Configuration and electrical rating of an attachment plug for apparatus designed to be used on more than one supply voltage by means of a voltage selector		N/A
15.1.1	Polarized attachment plug		N/A
15.1.1	Wire gauge of conductors and internal wiring connecting mains socket-outlets		N/A
15.1.3.1	Means of output connections on an audio amplifier having an open-circuit audio output voltage not		N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	limited to 120 V that is permanently connected to the mains		
15.1.3.1	Quick Connect Terminals: a) Male tabs firmly mounted in place; b) Mating female connectors provided with the apparatus; c) Strain Relief Test of Clause 16.5; d) Installation instructions provided for assembly of terminal to a conductor and strain relief e) Terminals are appropriate for use with the size and type of wire specified		N/A
15.1.3.2	Audio amplifiers having an audio output not limited to 120 V that are connected to the mains by a flexible cord		N/A
15.2	Protective earthing conductor termination construction		P
15.2	Cross-sectional area of the earthing conductor in a supply cord or in an interconnecting cable		P
15.2	Earthing conductors may have green or green/yellow insulation		N/A
15.3.5	Reference to IEC 60950 is replaced by Article 310 of the National Electrical Code, ANSI/NFPA 70		N/A
15.3.5	Table 15 - "AWG" replace mm2 values		N/A
15.4	Component power supply adaptors complying with UL 1310, UL 1950 Third Edition, UL 60950, or UL 60950-1 fulfill the clause		N/A
15.4.2	NOTE – include references to UL 498 and ANSI/NEMA WD6 for mains plug dimensions		N/A
15.4.2.1	Construction of the mains plug blade assembly complies with UL 1310		N/A
15.4.2.1	Direct plug-in units designed for use by travelers comply with UL 1310		N/A
16.1	Reference in the first paragraph to “sheathed” flexible cords is deleted		N/A
	References to IEC 60227 and IEC 60245 are deleted		N/A
	Ampacity and VW-1 marking of mains supply flexible cords		N/A
	Table 17A - Cords for apparatus		N/A
	Table 17A: Certain supply apparatus may be provided with a supply cord having 0,5 m minimum length		
16.2	Power supply cord earthing conductor size		N/A
	Reference to IEC 60950, Table 3B is replaced by Article 400 of the National Electrical Code		N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Table 18 - Upper current limit in column 1 increased from 16 to 30 A and "AWG" wire sizes used		N/A
16.3	c) Flexible cords not complying with 16.1, used as connection between the apparatus and other apparatus are marked VW-1		N/A
16.5	When polymeric materials are involved, strain and twist testing is to be conducted before and after the sub-clause 12.1.5 stress relief test.		N/A
17.8	Expanded to include all cart/stand parts supplied by the manufacturer, such as casters and brackets. Suitable assembly instructions are required.		N/A
17.8	Relevant fixing means are not required when installation is to be done by a skilled person		N/A
17.10	Termination of aluminum conductors used as internal wiring		N/A
17.11	An accessory was investigated to determine that: a) The accessory, and the combination of the accessory and the apparatus presents no hazard in the sense of this standard, and b) The accessory is provided with installation instructions.	No accessories	N/A
17.11.1	Installation of an accessory by a skilled person: a) The mechanical positioning is accomplished by means of tools normally available or by means of special tools provided as part of the installation kit, b) The electrical connections are made by using existing terminals and connections in the apparatus or the building wiring		N/A
18	Non-intrinsically protected picture tubes shall comply with 18.1, 18.2.2 and 18.3. Intrinsically protected picture tubes with a maximum face dimension exceeding 7.5 cm shall comply with UL 61965.	No picture tube used	N/A
	Enclosure opening dimensions		N/A
18.1	All tubes are mounted such that the enclosure of the apparatus protects the tube against the effects of implosion.	See above	N/A
	Reference to IEC 61965 replaced by UL 61965		N/A
19	The tests in 19.1, 19.2 and 19.3 do not cause the apparatus to overturn.		P
	The test in 19.2.1 does not cause the apparatus to slide		N/A
	When polymeric materials are involved, testing is to be conducted before and after the sub-clause 12.1.5 stress relief test.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
19.1	References to an apparatus in combination with a supplied cart or recommended stand are deleted		N/A
19.2	References to an apparatus in combination with a supplied cart or recommended stand are deleted		N/A
19.2.1	Glass Slide test	No such device	N/A
19.3	Horizontal force stability test using Table 20A values from UL 60065	No such apparatus	N/A
19.5	Reference to the impact hammer in the first compliance paragraph is deleted		N/A
19.6.	Includes Equipment rack mounting test		N/A
20.1a	Delete	This clause not considered for US requirement	P
20.1b	Exception for parts such as protection TV lenses, loudspeaker parts, external accessories, and fibrous materials	No such parts	P
	Reference to IEC 60695-11-10 is replaced by UL 94		P
20.1.2	Sleeving, extruded tubing and insulation on wiring are rated VW-1: a) wiring located in a circuit that is considered a potential ignition source, or b) wiring not located in a circuit that is a potential ignition source but is in contact with wiring located in a circuit that is a potential ignition source		P
	Tape in contact with parts of circuits that are potential ignition sources is flame retardant	UL listed material used (see appended table 14)	P
20.1.3	Printed wiring boards, on which the available power as the connection exceeds 15 W or the operating voltage exceeds 50 V a.c. or d.c under normal operating conditions, is of flammability category V-1 or better	PCB rated V-1 or better	P
	Reference to IEC 60695-11-10 replaced by UL 94		P
	Exception for printed boards housed in metal enclosures is deleted		N/A
	Option to use Clause G.1 of Annex G is deleted		N/A
20.1.4	Components and parts comply with the relevant flammability category according to UL 94 as specified in table 21	The plastic enclosure with HB min. used.	P
20.1.4	Component power supplies complying with UL 1310, UL 1950 Third Edition, UL 60950, or UL 60950-1 fulfill the clause		N/A
20.1.4	Table 21 - Flammability categories for components and parts		P
20.2.1	Fire enclosure required: 1) circuits and components where the available		N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	power exceeds 15 W, 2) inductors and windings conductively connected to the mains, and 3) high-voltage products.		
20.2.1	The fire enclosure complies with the flammability requirements of Table 22 according to UL 94 and 746C		N/A
20.2.1	Reference to IEC 60695-11-10 or clause G.1 of annex G replaced by UL 94 or UL 746C		N/A
20.2.1	Table 22 - Flammability categories for fire enclosures		N/A
20.2.2	Internal fire enclosures openings and material requirements		N/A
20.2.2	Compliance is checked by inspection and measurement and using the articulated finger probe, figure 18.		N/A
20.2.3	Outer enclosures have a minimum flammability rating of HB when an internal fire enclosure is provided		N/A
A	Apparatus intended for outdoor use or for wet locations has any of the following attributes: a) provided with a means to be transportable, b) has a mass less than 35 kg, c) can be battery operated, or d) associated literature states or implies such use		N/A
A	An apparatus as described in a), b), or c) above that is marked as specified in 5.4.1 a) is not intended for outdoor or wet location use		N/A
A	Apparatus permanently installed outdoors is considered to be for permanent outdoor use		N/A
A.5	Clauses A.5, A.5.1 and A.5.4.1 are deleted		N/A
A.9.1.1	Touch current test after the water spray test described in A.11.1.1		N/A
A.10	Clauses A.10, A.10.2 and A.10.2.1-2 are deleted		N/A
A.11.1.1	Clauses A.10, A.10.2 and A.10.2.1-2 are deleted		N/A
A.16.1	Flexible cords are suitable for outdoor use		N/A
A.20.2.1	Enclosures for an apparatus intended for permanent outdoor location comply with requirements for Type 3 enclosures in UL 50		N/A
B	IEC 62151 Clause 4 applies except for 4.1.2, 4.1.3, 4.2.1.1 and 4.2.1.2		N/A
B	The requirements of 4.2.1.1 are replaced by the requirements or 2.3.1 of UL 60950, Third Edition or UL 60950-1		N/A
B	Voltages on the TNV-0 circuits, TNV-1 circuits and		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	accessible conductive parts in the event of a single insulation fault		
	Apparatus intended to be connected to telecommunication networks and having ringing voltages applied to the apparatus is subjected to touch current limits in accordance with clause 5.1.8.1.1 of UL 60950, Third Edition or 5.1.8.3 of UL 60950-1		N/A
	Telecommunication network that uses outside cable complies with the requirements for protection against overvoltage from power line crosses per 6.4 of UL 60950, Third Edition or UL 60950-1		N/A
	UL 60950, Third Edition or UL 60950-1 Acoustic tests for apparatus containing an earphone held against the ear		N/A
	Apparatus provided with appropriate markings and instructions as described in Annex NAA of UL 60950, 3rd Edition or UL 60950-1		N/A
D	Reference to IEC 60990 replaced by UL 101		N/A
D	Reference to IEC 60990 replaced by UL 101		N/A
G	Annex G is deleted		N/A
I	Safety requirements for coin/button cell batteries		N/A
L	Annex L is deleted		N/A
Q	Safety requirements for video apparatus for use in health care facilities		N/A
R	Safety requirements for under-cabinet apparatus		N/A
S	Safety requirements for in-wall mounted apparatus		N/A
T	Safety requirements for apparatus with projection lamps		N/A
U	Safety requirements for permanently connected apparatus		N/A
V	Safety requirements for carts, stands, and similar apparatus for use with specific apparatus covered by this standard		N/A
W	Construction details for a 0.02-ohm shunt for use in the peak inrush-current measurement		N/A
X	Manufacturing and production-line tests and verification		N/A
Y	Standards for components		P

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Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60065
NEW ZEALAND NATIONAL DIFFERENCES
Audio, video and similar electronic apparatus – Safety requirements

Differences according .....: AS/NZS 60065:2012

Attachment Form No.....:

Attachment Form Originator .....: TUV Rheinland Taiwan

Master Attachment Form .....: IECEE CB Bulletin on 2013-07-31

Clause	Requirement + Test	Result - Remark	Verdict
Table 3	1 In Table 3, Item c) add ' 201)' in both columns against 'Thermoplastic materials'. 2 Add new footnote 201 as follows: 201) As an alternative to the method described in footnote f) the following variation may be used where there is any doubt about the suitability of the material: The ball-pressure test described in AS/NZS 60695.10.2 may be carried out. To assess compliance under normal operating conditions, the test shall be made in a heating cabinet at a temperature of 40ºC ±2ºC plus the maximum temperature rise determined under normal operating conditions but, it shall be at Least. - for external parts .....75ºC ±2ºC - for materials supporting parts CONDUCTIVEL Y CONNECTED TO THE MAINS .. .. 125°C ±2°C		N/A
7.2	After the second paragraph, add the following: The alternative method described in footnote 201 of Table 3 may be used.	Approved primary connector (CN901) and phenolic materials used where parts at hazardous voltage are directly mounted. Accepted without further testing.	P
15.1.1	After the second paragraph, add the following: Plugs for the connection of apparatus to mains-powered socket-outlets shall comply with AS/NZS 3112 or AS/NZS 3123. Apparatus 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 of AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets.	No plug contained.	N/A
Table 15	In the second and third rows of the first column replace ' 6' with ' 7.5'.		N/A
Table 18	In the second and third rows of the first column		N/A

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	replace ' 6' with '7.5'.		
16.3	In item (b), add the following: A flexible cord complying with AS/NZS 3191 need not undergo this test.	No external flexible cords contained.	N/A
19.201	Add the following after Clause 19.6: **19.201 Additional stability requirements for television receivers** Television receivers and display devices that may be used for television purposes, with a mass of 7 kg or more, shall have additional stability requirements. Compliance is checked by inspection and by the tests of 19.201.2 2 and 19.201.3 as applicable. Apparatus designed only for fixing to a wall, ceiling or equipment rack are not required to be subjected to these additional requirements if the marking of 5.4.1 f) is provided on or with the apparatus.	See blow.	P
	19.201.1 Warning notice Television receivers and display devices that may be used for television purposes, shall be provided with information in the instructions for install ation or use, containing the following information or similar: **IMPORTANT INFORMATION** If a television is not positioned in a sufficiently stable location, it can be potentially hazardous due to falling. Many injuries, particularly to children, can be avoided by taking simple precautions such as: • Using cabinets or stands recommended by the manufacturer of the television. • Only using furniture that can safely support the television. • Ensuring the television is not overhanging the edge of the supporting furniture. • Not placing the television on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television to a suitable support. • Not standing the television on cloth or other materials placed between the television and supporting furniture. • Educating children about the dangers of climbing on furniture to reach the television or its controls. Such information should also be provided as a label on the apparatus.	The unit is wall-mounted type equipment. Necessary information provided in user manual.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	19.201.2 Restraining device **19.201.2.1** Television receivers should be provided with a restraining device such as a fixing point to facilitate restraining the television from toppling forward. **19.201.2.2** Where a restraining device is provided in accordance with 19.201.2.1 information shall be provided in the instructions for installation or use, to ensure correct and safe installation. Such information should also be provided as a label on the television receiver. Any such restraining device shall be capable of withstanding a pull of 100 N in all directions without damage. **19.201.3 Glass slide test ǂ** Television receivers and display devices that may be used for television purposes, with a mass of 18 kg or more, are placed on a clean, dry, glass covered horizontal surface such that only the supporting feet are in contact with the glass. The glass-covered surface is then tilted in the most unfavourable direction through an angle of 10°. During the tests, the equipment shall not slide. **ǂ** Clause 19.201.3 forms part of the Standard on 31 January 2013.		
20	Delete the following paragraph: 'The requirements are considered to be fulfilled if the apparatus complies with the requirements of 20.1 and 20.2' and replace with 'The requirements are considered to be fulfilled if the apparatus complies with the requirements of 20.1 and 20.2. Alternatively the requirements are considered to be fulfilled if the apparatus complies with the requirements of Clause 20.201.'	The apparatus can fulfil the requirement evaluated according to 20.1 and 20.2.	P
Table 21	In the third and fourth columns delete ' HB75' and 'No requirement' and replace both with 'V-1 '.	Considered.	P
20.2.3	After Clause 20.2.3, add the following variation: **20.201 Resistance to fire-Alternative tests** **20.201.1 General** Parts of non-metallic material shall be resistant to ignition and the spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames originating from inside the apparatus, or the following: 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		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	openings completely, and for ventilation not exceeding 1 mm in width regardless of length. b) The following parts which would contribute negligible fuel to a fire: - small mechanical parts, the mass of which does not exceed 4 g, - such as mounting parts, gears, cams, belts and bearings; small electrical components, such as capacitors with a volume not exceeding 1750 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 fire from one part to another. Compliance shall be checked by the tests of 20.201.2.1, 20.201.2.2. and 20.201.2.3 For the base material of PRINTED BOARDS, compliance shall be checked by the test of 20.201.2.4. 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, they are placed in the same orientation as they would be in normal use. These tests are not carried out on internal wiring. **20.201.2 Tests** **20.201.2.1 Testing of non-metallic parts** Part 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 not be carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part. **20.201.2.2 Testing of insulated parts** Part of insulating material supporting POTENTIAL IGNITION SOURCES shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750°C. The test shall be also carried out on other parts of insulating material which are within a distance of		

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Clause	Requirement + Test	Result - Remark	Verdict

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 need not be tested.

The needle-flame test shalt be made in accordance with AS/NZS 60695.11.5 with the following modifications:

Clause of AS/NZS 60695.11.5	**Change**
9 Test Procedure	
9.2 Application of needle-flame	Replace the second sentence of the first paragraph with: The specimen shall be arranged so that the flame can be applied t o a vertical or horizontal edge as shown in the examples of figure 1. Add to the end of the first paragraph: If possible, the flame shall be applied at least 10 mm from a corner. Replace the second paragraph with: The duration of application of the test flame shalt be 30 ±1 s.
9.3 Number of specimens	Replace with: 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 then withstand the test
11 Evaluation of test results	Replace with: The duration of burning (tb} shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.

The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10 provided that

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	the sample tested was not thicker than the relevant part. **20.201.2.3 Testing by needle-flame test** If parts, other than enclosures, do not withstand the glow wire tests of 20.201.2.2, by failure to extinguish within 30 s after the removal of the glow-wire tip, the needle-flame test detailed in 20.201.2.2 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 20.201.2.2. Parts shielded by a separate barrier that meets the needle-flame test shall not be tested. NOTE 1 - If the enclosure does not withstand the glow-wire test the appliance is considered to have failed to meet the requirements of Clause 21.201 without the need for consequential testing. NOTE 2- If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the apparatus, the apparatus is considered to have failed to meet the requirements of Clause 21 .201 without the need for consequential testing NOTE 3 - Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame , positioned above the point of the material supporting, in contact with, or in close proximity to, connections. **20.201.2.4 Testing of printed boards** The base material of PRINTED BOARDS shall be subject to the needle-flame test of Clause 21.201.2.3. The flame shall be applied to the edge of the board where the heats ink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge consisting of broken perforations, unless the edge is less than 3 mm from a POTENTIAL IGNITION SOURCE. The test is not carried out if the - PRINTED BOARD does not carry any potential ignition source; - base material of PRINTED BOARDS, on which the available power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category V-1 or better according to AS/NZS 60695.11.10, or		

IEC 60065 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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 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. Compliance shall be determined using the smallest thickness of the material. NOTE- Available power is the maximum power which can be drawn from the supplying circuit through a resistive load whose value is chosen to maximize the power for more than 2 min when the circuit supplied is disconnected. **20.201.3 For open circuit voltages greater than 4 kV** POTENTIAL IGNITION SOURCES with open circuit voltages exceeding 4 kV (peak) a.c. or d.c. under normal operating conditions shall be contained in a FIRE ENCLOSURE which shall comply with flammability category V-1 or better according to AS/NZS 60695.11.10.		

Figure 1. Front view without base

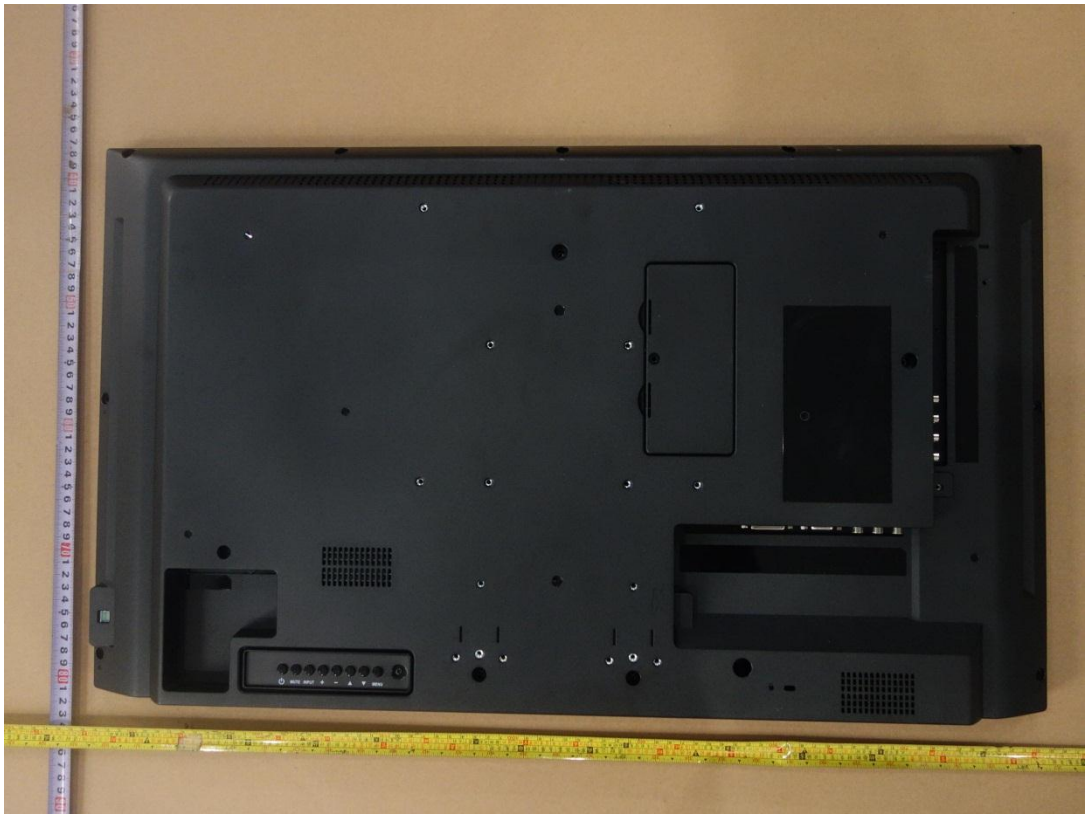

Figure 2. Rear view without base

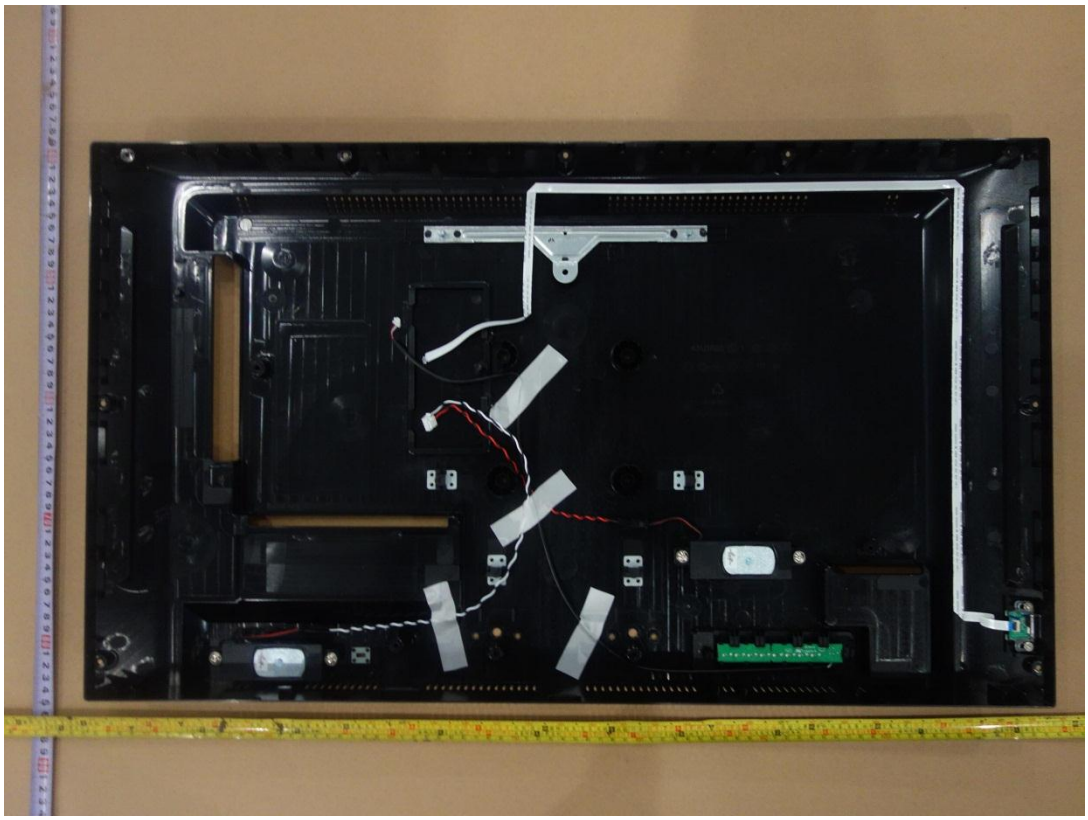

Figure 3. Internal view

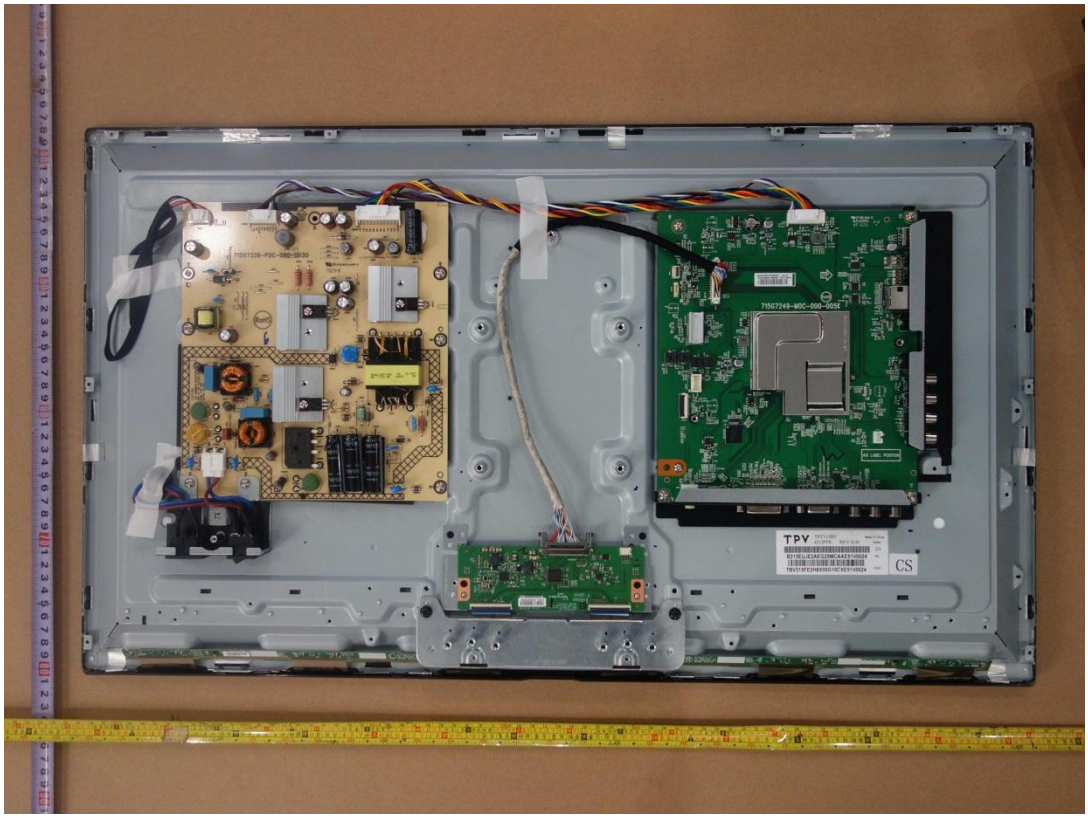

Figure 4. Internal view

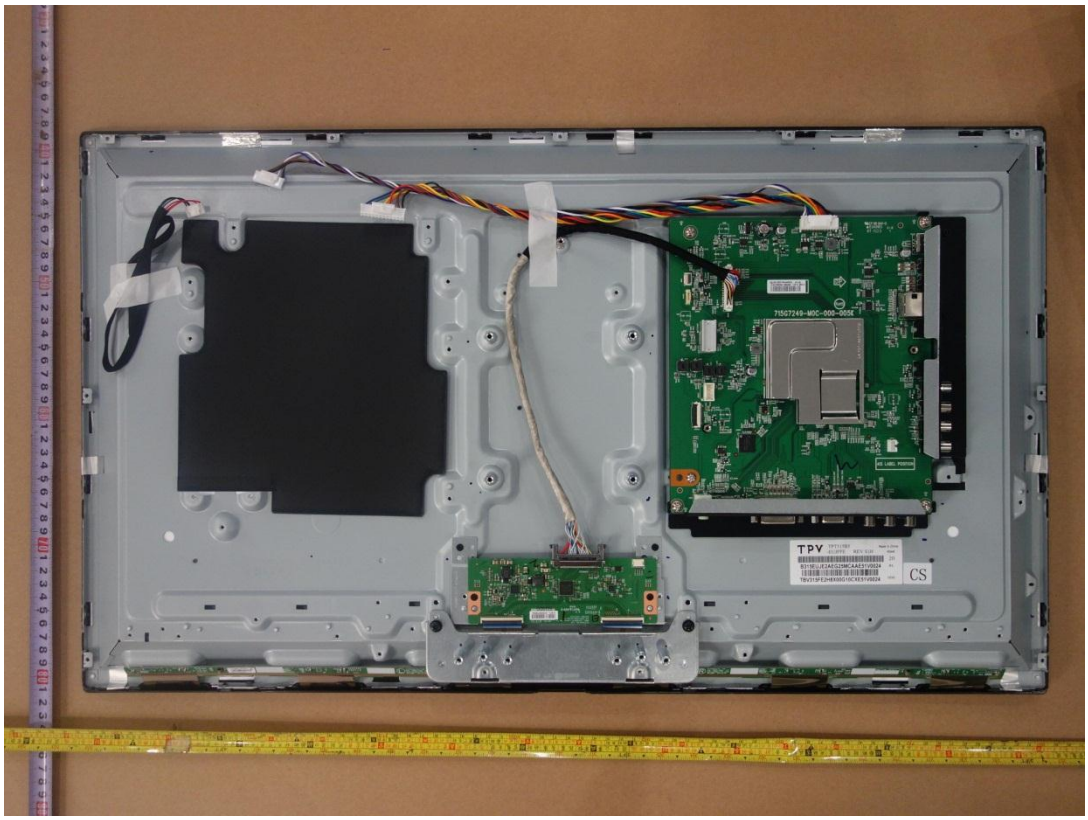

Figure 5. Internal view

Figure 6. Data ports on main board

Figure 7. Data ports on main board

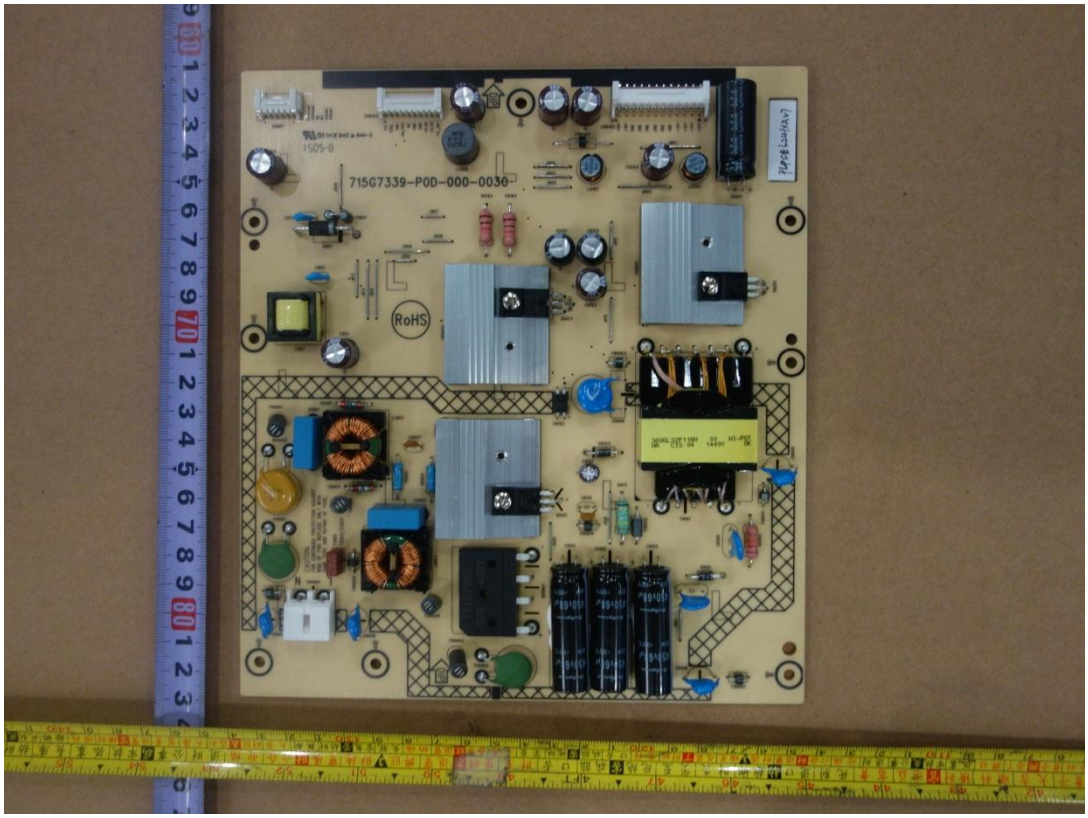

Figure 8. Power board

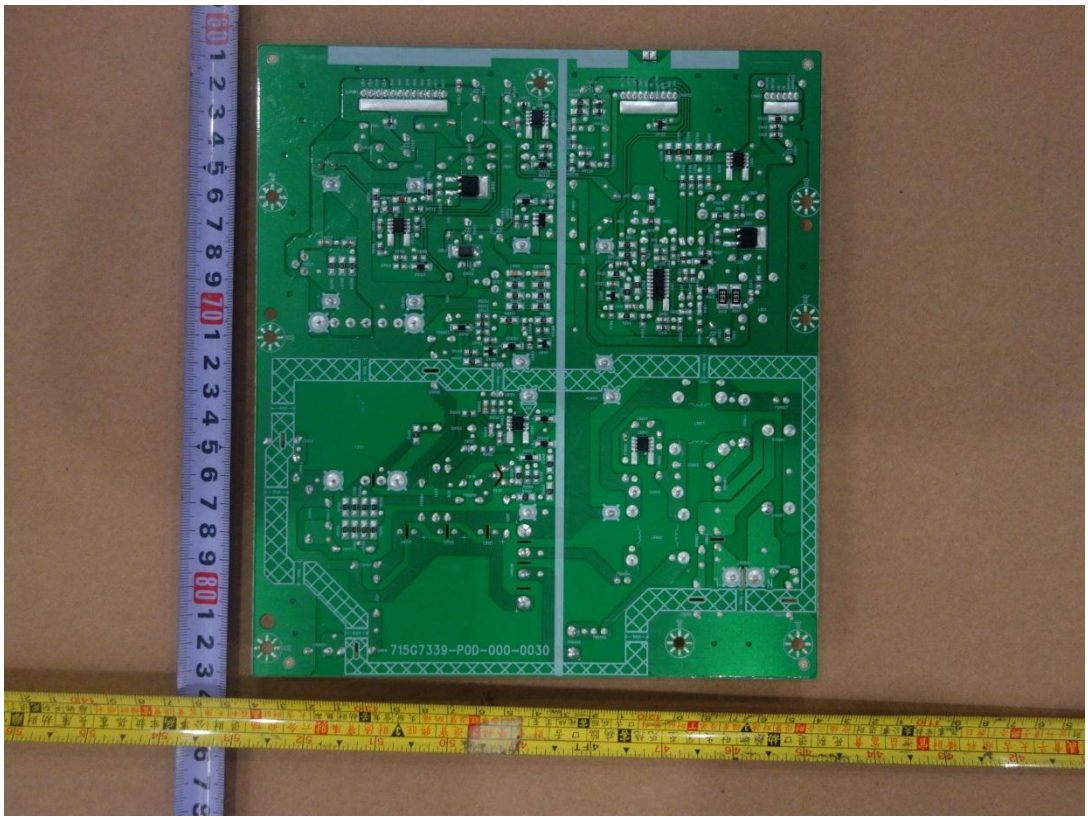

Figure 9. Power board

Figure 10. Main board

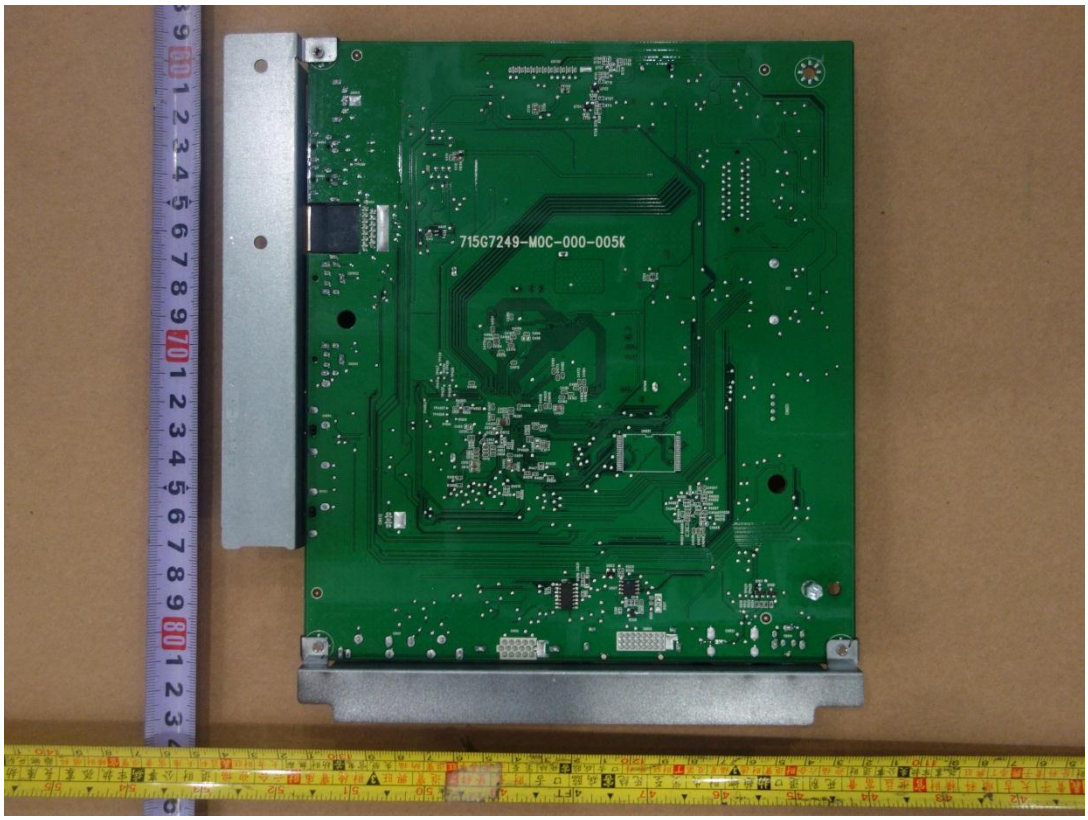

Figure 11.