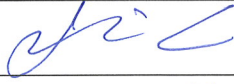




Test Report issued under the responsibility of:



TEST REPORT IEC 62368-1 Audio/video, information and communication technology equipment Part 1: Safety requirements	
Report Number	ATTCB106020
Date of issue	Jun 06, 2017
Total number of pages	80
Applicant's name	Top Victory Electronics (Taiwan) Co., Ltd.
Address	10F., No. 230, Liancheng Rd., Zhonghe Dist., New Taipei City, 23553 Taiwan
Test specification:	
Standard.....	IEC 62368-1:2014 (Second Edition)
Test procedure	CB Scheme
Non-standard test method	N/A
Test Report Form No.	IEC62368_1B
Test Report Form(s) Originator.....	UL(US)
Master TRF	2014-03
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General disclaimer: The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.	

Test Item description	LCD Monitor	
Trade Mark	NEC	
Manufacturer	NEC Display Solutions, Ltd. 4-28, Mita 1-chome, Minato-ku, Tokyo, Japan	
Model/Type reference	C501	
Ratings	100-240V~, 50/60Hz, 1.5-0.6A	
Testing procedure and testing location:		
☒ CB Testing Laboratory:	AUDIX TECHNOLOGY CORPORATION	
Testing location/ address	8TH FL., NO. 8, LANE 120, SEC. 1, NEI-HU ROAD, TAIPEI, CHINESE TAIPEI	
☐ Associated CB Testing Laboratory:		
Testing location/ address		
Tested by (name + signature)	Jim Lee/ Handler	
Approved by (name + signature)	Allen Kao/ reviewer	
☐ Testing procedure: TMP/CTF Stage 1		
Testing location/ address		
Tested by (name + signature)		
Approved by (name + signature)		
☐ Testing procedure: WMT/CTF Stage 2		
Testing location/ address		
Tested by (name + signature)		
Witnessed by (name + signature)		
Approved by (name + signature)		
☐ Testing procedure: SMT/CTF Stage 3 or 4		
Testing location/ address		
Tested by (name + signature)		
Approved by (name + signature)		
Supervised by (name + signature)		

List of Attachments (including a total number of pages in each attachment):	
EU group differences and national differences (3 pages) US & CA national differences (5 pages) Enclosures (35 pages)	
Summary of testing:	
Tests performed (name of test and test clause): Classification and limits of electrical energy sources (5.2) Protection against electrical energy sources (5.3) Insulation materials and requirements (5.4) Components as safeguards (5.5) Protective conductor (5.6) Prospective touch voltage, touch current and protective conductor current (5.7) Classification of power sources (PS) and potential ignition sources (PIS) (6.2) Safeguards against fire under normal operating conditions and abnormal operating conditions (6.3) Safeguards against fire under single fault conditions (6.4) Stability of equipment (8.6) Equipment mounted to a wall or ceiling (8.7) Thermal burn injury (9) Normal operating condition tests, abnormal operating condition tests and single fault condition tests (Annex B) Equipment markings, instructions, and instructional safeguards (Annex F) Circuits intended for interconnection with building wiring (Annex Q) Wound components (G.5) Metalized coatings and adhesives securing parts (P.4) For metalized coatings, clearances and creepage distance for pollution degree 3 shall be maintained instead of the tests of P.4.2 (P.5) Mechanical strength tests (Annex T)	Testing location: All tests as described in Test Case and Measurement Sections were performed at the laboratory described on page 2.

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

EU group differences, Canada and United States.

CENELEC member countries (EU group differences): Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

☒ **The product fulfils the requirements of EN 62368-1: 2014.**

The product fulfils the requirements of UL 62368-1, Second Edition.

The product fulfils the requirements of CAN/CSA C22.2 No. 62368-1-14.

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.



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

TEST ITEM PARTICULARS:	
Classification of use by	☒ Ordinary person ☐ Instructed person ☐ Skilled person ☒ Children likely to be present
Supply Connection	☒ AC Mains ☐ DC Mains ☐ External Circuit - not Mains connected - ☐ ES1 ☐ ES2 ☐ ES3
Supply % Tolerance	☒ +10%/-10% ☐ +20%/-15% ☐ + ____ %/ - ____ % ☐ None
Supply Connection – Type	☒ pluggable equipment type A - ☐ non-detachable supply cord ☒ appliance coupler ☐ direct plug-in ☐ mating connector ☐ pluggable equipment type B - ☐ non-detachable supply cord ☐ appliance coupler ☐ permanent connection ☐ mating connector ☐ other:
Considered current rating of protective device as part of building or equipment installation	16A or 20A for building; 8.0A (for equipment) Installation location: ☒ building; ☒ equipment
Equipment mobility	☒ movable ☐ hand-held ☐ transportable ☒ stationary ☒ for building-in ☐ direct plug-in ☐ rack-mounting ☒ wall-mounted
Over voltage category (OVC)	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other:
Class of equipment	☒ Class I ☐ Class II ☐ Class III
Access location	☐ restricted access location ☒ N/A
Pollution degree (PD)	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maximum operating ambient:	40 °C
IP protection class	☐ IPX0 ☒ IP_20_
Power Systems	☒ TN ☐ TT ☐ IT - ____ V _{L-L}
Altitude during operation (m)	☐ 2000 m or less ☒ Up to 5000 m
Altitude of test laboratory (m)	☒ 2000 m or less ☐ 200 m
Mass of equipment (kg)	☒ approx. 15.75 kg (Without stand base), Stand base : approx. 1.86 kg

POSSIBLE TEST CASE VERDICTS:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement	P (Pass)
- test object does not meet the requirement	F (Fail)
TESTING:	
Date of receipt of test item	2017-03-28
Date (s) of performance of tests	2017-03-28 to 2017-05-12
GENERAL REMARKS:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Throughout this report a ☐ comma / ☒ point is used as the decimal separator.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC60060-2:	
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) Hefei Huntkey Display Technology Co.,Ltd. South Jinxiu Road, East Qingtan Road, Economic And Technological Development Zone, Hefei, Anhui 230601, P. R. China. 3) TPV Display Technology (Wuhan) Co., Ltd Unique No. 11, Zhuankou Development, District of Economic Technological Development Zone Wuhan City 430056 P.R. China. 4) Trend Smart CE Mexico S de RL de CV Avenida Sor Juana Ines de la Cruz No. 19602 Parque Industrial la Frontera Fracc., CP. 22500NUEVA TIJUANA (OTAY) TIJUANA B.C., MEXICO 5) Envision Industry of Electronic Products Ltd. Rodovia Anhanguera S/N-KM 49, Tijuco Preto-Jundiaí-SP- 13.205-700 Brazil 6) Envision Industry of Electronic Products Ltd Av Torquato Tapajós 7503, Galpão : II Bloco: B- Condomínio de Galpões-Tarumã-Manaus AM Brazil 7) L&T Display Technology (Fujian) Ltd Optoelectronic Park, Rongqiao Economic and Technological, Development Zone Fuqing, Fujian 350301 P.R. China. 8) 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 9) TPV Technology (Qingdao) Co., Ltd. No.99 Huoju Road, High-tech Industrial, Development Zone Qingdao City, Shandong Province P.R. China 10) TPV Display Technology (China) Co., Ltd. No.106 Jinghai 3 Rd., BDA, Beijing City 100176 P.R. China 11) TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China. 12) Envision Indústria de Produtos Eletrônicos Ltda. Av. Torquato Tapajós, 2236, Flores - CEP 69058-830 - Manaus/AM - Brasil
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GENERAL PRODUCT INFORMATION:**Product Description –**

This equipment consists of the following critical constructions and housed within metal enclosure:

- (1) LCD panel (LED backlight type);
- (2) LED driver board (secondary circuit);
- (3) Building-in type non-approved switching power supply board;
- (4) Main board (micro SD *1, Display In *1, HDMI in *3, VGA in *1, Video in *1, Audio in *2, LAN *1, USB *1, RS-232 in *1, Remote in *1, Remote out *1, Audio out *1);
- (5) Key control board; Internal speaker.

Maximum Normal load condition for this equipment is to operate at maximum backlight, brightness and contrast of LED backlight, and adjust to max. volume of speakers with 1KHz sine waveform, 5V/2.0A for USB port, 3.3V/0.5A for Display port and SD card reader port.

The Clearances and Creepage Distances have additionally been assessed for suitability up to 5,000 m elevation. The required clearance is multiplied by the altitude correction factor (1.48) as specified in Table A.2 of IEC 60664-1

The product was submitted and evaluated for use at the maximum ambient temperature (T_{ma}) permitted by the manufacturer's specification of: 40 °C

The heating test were performed all ventilation openings blocked to simulate the worst condition.

The LCD Monitor can be adjustment monitor's height and operated in landscape (0 °) to portrait mode (90 °) when main board downside and with panel face downward and upward.

AC Inlet to Primary connector wire use style 1015.

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

Test samples are pre-production samples without serial numbers.

All source of L9901, L9902 are similar to each other except for type designation and manufacturer.

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

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

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

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

Additional Information

The Label in Copy of marking plate is a draft of an artwork pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.

Technical Considerations and Engineering Conditions of Acceptability -

- The power supply terminals and/or connectors are: Suitable for factory wiring only.
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJY2 insulation system with the indicated rating greater than Class B (130°C): T9101 (Class B), T9301(Class B).
- The equipment is suitable for direct connection to: AC mains supply.

Model Differences –

N/A

Additional application considerations – (Considerations used to test a component or sub-assembly) –

Some components are pre-certified, which have been evaluated according to the relevant requirements of IEC 62368-1, are employed in this product. Their suitability of use has been checked according to clauses 4.1.1 and 4.1.

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:

(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.)

(Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.

Electrically-caused injury (Clause 5):

(Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification)

Example: +5 V dc input

ES1

Source of electrical energy	Corresponding classification (ES)
Internal power board circuit	ES3
X capacitor connect between L / N	ES3
All outputs of power board	ES1
Output of LED driver board	ES2
Main board	ES1
Output connectors (micro SD, Display port, HDMI port, VGA port, Video port, Audio port, LAN port, USB 2.0 port, RS-232 port, Remote port)	ES1
External accessible part	ES1

Electrically-caused fire (Clause 6):

(Note: List sub-assembly or circuit designation and corresponding energy source classification)

Example: Battery pack (maximum 85 watts):

PS2

Source of power or PIS	Corresponding classification (PS)
All circuit within fire enclosure	PS3
Internal Speaker	PS2
Main board	PS3
Output connectors (micro SD, Display port, HDMI port, VGA port, Video port, Audio port, LAN port, USB 2.0 port, RS-232 port, Remote port)	PS2

Injury caused by hazardous substances (Clause 7)

(Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.)

Example: Liquid in filled component

Glycol

Source of hazardous substances	Corresponding chemical
N/A	N/A

Mechanically-caused injury (Clause 8)

(Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.)

Example: Wall mount unit

MS2

Source of kinetic/mechanical energy	Corresponding classification (MS)
Equipment Mass	MS2
Sharp edge and corners	MS1
Wall mount	MS3

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:**Thermal burn injury (Clause 9)**

(Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.)

Example: Hand-held scanner – thermoplastic enclosure TS1

Source of thermal energy	Corresponding classification (TS)
All accessible parts	TS1

Radiation (Clause 10)	
(Note: List the types of radiation present in the product and the corresponding energy source classification.)	
Example: DVD – Class 1 Laser Product RS1	
Type of radiation	Corresponding classification (RS)
LCD panel	RS1

ENERGY SOURCE DIAGRAM				
Indicate which energy sources are included in the energy source diagram. Insert diagram below				
☐ ES	☐ PS	☐ MS	☐ TS	☐ RS

OVERVIEW OF EMPLOYED SAFEGUARDS				
Clause	Possible Hazard			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary	ES3: Internal power board circuits	N/A	N/A	Enclosure, see 5.4.2, 5.4.3, 5.5.3 and 5.5.4.
Ordinary	ES3: CX1	N/A	N/A	See 5.5.2.2
Ordinary	ES2: Output of LED driver board	See 5.2	N/A	N/A
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
PCB	PS3	See 6.3	Min. V-1	N/A
Metal enclosure	PS3	See 6.3	See 6.4.8	N/A
External wirings	PS2	N/A	N/A	See 6.5
Internal Wirings	PS3	N/A	N/A	See 6.5
Other combustible components / material	PS3	See 6.3	See 6.4.5, 6.4.6	N/A
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary	MS2: Mass	--	--	See 8.6
Ordinary	MS3: Wall mount	--	--	See 8.7
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
Supplementary Information:				

- | |
|---|
| <p>(1) See attached energy source diagram for additional details.</p> <p>(2) "N" – Normal Condition; "A" – Abnormal Condition; "S" Single Fault</p> |
|---|

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4	GENERAL REQUIREMENTS		P
4.1.1	Acceptance of materials, components and subassemblies	See appended Table 4.1.2.	P
4.1.2	Use of components	Safeguard components are certified to IEC and/or national standards and are used correctly within their ratings.	P
4.1.3	Equipment design and construction		P
4.1.15	Markings and instructions..... :	See Annex F.	P
4.4.4	Safeguard robustness		P
4.4.4.2	Steady force tests..... :	(See Annex T.2, T.5)	P
4.4.4.3	Drop tests :		N/A
4.4.4.4	Impact tests :	(See Annex T.6)	P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests..... :		N/A
4.4.4.6	Glass Impact tests :	No such material	N/A
4.4.4.7	Thermoplastic material tests..... :	(See Annex T.8)	P
4.4.4.8	Air comprising a safeguard..... :	(See Annex T)	P
4.4.4.9	Accessibility and safeguard effectiveness	All safeguards remain effective.	P
4.5	Explosion	No explosion observed during normal/ abnormal/ single fault conditions.	P
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard		P
4.6.2	10 N force test applied to :	10N pull test performed for all relevant conductors.	P
4.7	Equipment for direct insertion into mains socket - outlets		N/A
4.7.2	Mains plug part complies with the relevant standard..... :		N/A
4.7.3	Torque (Nm) :		N/A
4.8	Products containing coin/button cell batteries	No such coin/button cell batteries provided.	N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery :		—
4.8.4	Battery Compartment Mechanical Tests :		N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object..... :	(See Annex P)	P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5	ELECTRICALLY-CAUSED INJURY		P
5.2.1	Electrical energy source classifications..... :	See table 5.2	P
5.2.2	ES1, ES2 and ES3 limits	See table 5.2	P
5.2.2.2	Steady-state voltage and current..... :	See table 5.2	P
5.2.2.3	Capacitance limits :	See table 5.2	P
5.2.2.4	Single pulse limits :		N/A
5.2.2.5	Limits for repetitive pulses :		N/A
5.2.2.6	Ringing signals :		N/A
5.2.2.7	Audio signals :		N/A
5.3	Protection against electrical energy sources		P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		P
5.3.2.1	Accessibility to electrical energy sources and safeguards		P
5.3.2.2	Contact requirements		P
	a) Test with test probe from Annex V :	Figure V.1, V.2 can't contact any bare internal conductive part	P
	b) Electric strength test potential (V) :		N/A
	c) Air gap (mm) :		N/A
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		P
5.4.1.3	Humidity conditioning :	See 5.4.8.	P
5.4.1.4	Maximum operating temperature for insulating materials :	See appended Table 5.4.1.4, 6.3.2, 9.0, B.2.6.	P
5.4.1.5	Pollution degree :	PD2.	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage		P
5.4.1.9	Insulating surfaces		N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		P
5.4.1.10.2	Vicat softening temperature..... :		N/A
5.4.1.10.3	Ball pressure :	See table 5.4.1.10.3	P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.2	Clearances	Procedure 2 is higher. Hence the determination of clearance is by procedure 2. (See table 5.4.2.3.)	P
5.4.2.2	Determining clearance using peak working voltage	Procedure 1: - Higher than 30kHz: Working voltage: 550Vp, CI: 0.14 mm for Reinforced - Up to 30kHz: a) Steady state voltage: 550Vp b) 1.1 times mains voltage: 373.3Vp c) Temporary overvoltage: 2000V CI: 2.54mm for Reinforced	P
5.4.2.3	Determining clearance using required withstand voltage	Procedure 2: - Required withstand voltage: 2500V, CI: 3.0mm for Reinforced	P
	a) a.c. mains transient voltage	2500 V _{peak} .	—
	b) d.c. mains transient voltage	N/A	—
	c) external circuit transient voltage	N/A	—
	d) transient voltage determined by measurement	N/A	—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test		N/A
5.4.2.5	Multiplication factors for clearances and test voltages	Specified the equipment op be operated up to 5000m above sea level the required clearance is multiplied by the altitude correction factor 1.48 according to table 17. (See table 5.4.4.2, 5.4.2.4 and 5.4.3)	P
5.4.3	Creepage distances	See table 5.4.3	P
5.4.3.1	General		P
5.4.3.3	Material Group	CTI rating for all material of min. 100.	—
5.4.4	Solid insulation		P
5.4.4.2	Minimum distance through insulation	See table 5.4.4.2, 5.4.4.5 c), 5.4.4.9	P
5.4.4.3	Insulation compound forming solid insulation	Certified source of photo couplers used. (See table 4.1.2)	P
5.4.4.4	Solid insulation in semiconductor devices	See 5.4.4.3	P
5.4.4.5	Cemented joints	Certified source of photo couplers used. (See table 4.1.2)	P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.4.6	Thin sheet material		P
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material	Reinforced insulation consisting of two layers of tape, however each layer pass the electric strength test. (See table 5.4.9)	P
	Number of layers (pcs) :	2	P
5.4.4.6.3	Non-separable thin sheet material		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material :		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components	See clause G.5 and G.6.	P
5.4.4.9	Solid insulation at frequencies >30 kHz :	See appended Table 5.4.4.9.	P
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ)..... :		—
5.4.6	Insulation of internal wire as part of supplementary safeguard :		N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning	Humidity treatment performed to 120hrs in condition: 93% humidity, 40 °C. Electric strength test conducted after humidity treatment.	P
	Relative humidity (%)..... :	93	—
	Temperature (°C) :	40	—
	Duration (h) :	120	—
5.4.9	Electric strength test :	See table 5.4.9	P
5.4.9.1	Test procedure for a solid insulation type test	Method 1 is used.	P
5.4.9.2	Test procedure for routine tests		N/A
5.4.10	Protection against transient voltages between external circuit		N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test :		N/A
5.4.10.2.3	Steady-state test..... :		N/A
5.4.11	Insulation between external circuits and earthed circuitry :		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage U_{op} (V).....:		—
	Nominal voltage U_{peak} (V).....:		—
	Max increase due to variation U_{sp}		—
	Max increase due to ageing ΔU_{sa}		—
	$U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$		—
5.5	Components as safeguards		
5.5.1	General	See below.	P
5.5.2	Capacitors and RC units	Approved X and Y capacitors provided. (See table 4.1.2)	P
5.5.2.1	General requirement		P
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector.....:	See table 5.5.2.2	P
5.5.3	Transformers	See Annex G.5.3	P
5.5.4	Optocouplers	See 5.4	P
5.5.5	Relays		N/A
5.5.6	Resistors		N/A
5.5.7	SPD's		P
5.5.7.1	Use of an SPD connected to reliable earthing		P
5.5.7.2	Use of an SPD between mains and protective earth		P
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable.....:		N/A
5.6	Protective conductor		
5.6.2	Requirement for protective conductors		P
5.6.2.1	General requirements		P
5.6.2.2	Colour of insulation	The insulation is Green-and-yellow colour.	P
5.6.3	Requirement for protective earthing conductors		P
	Protective earthing conductor size (mm^2)	3.5 m m^2 .	—
5.6.4	Requirement for protective bonding conductors		P
5.6.4.1	Protective bonding conductors		P
	Protective bonding conductor size (mm^2).	18AWG, 0.75 mm^2	—
	Protective current rating (A)	8A	—
5.6.4.3	Current limiting and overcurrent protective devices	No such components on the earthing / bonding path	P
5.6.5	Terminals for protective conductors		P

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Clause	Requirement + Test	Result - Remark	Verdict
5.6.5.1	Requirement		P
	Conductor size (mm ²), nominal thread diameter (mm).:	3.5 min.	P
5.6.5.2	Corrosion		P
5.6.6	Resistance of the protective system		P
5.6.6.1	Requirements		P
5.6.6.2	Test Method Resistance (Ω).....:	See table 5.6.6.2	P
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks		P
5.7.2.1	Measurement of touch current	Peak voltage used.	P
5.7.2.2	Measurement of prospective touch voltage		N/A
5.7.3	Equipment set-up, supply connections and earth connections		P
	System of interconnected equipment (separate connections/single connection)	Single connection.	—
	Multiple connections to mains (one connection at a time/simultaneous connections)		—
5.7.4	Earthed conductive accessible parts	Touch current at earthed accessible conductive parts is not exceeding ES2 limits.	P
5.7.5	Protective conductor current		P
	Supply Voltage (V).....:	240Vac.	—
	Measured current (mA).....:	1.0mA	—
	Instructional Safeguard.....:		N/A
5.7.6	Prospective touch voltage and touch current due to external circuits		N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits		N/A
	a) Equipment with earthed external circuits Measured current (mA).....:		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA)		N/A

6	ELECTRICALLY- CAUSED FIRE		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications	See Energy source identification and classification table.	P

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Clause	Requirement + Test	Result - Remark	Verdict
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault ... :	See table 6.2.2.	P
6.2.2.3	Power measurement for worst-case power source fault :	See table 6.2.2.	P
6.2.2.4	PS1 :	See 6.2.2	P
6.2.2.5	PS2 :	See 6.2.2	P
6.2.2.6	PS3 :	See 6.2.2	P
6.2.3	Classification of potential ignition sources	All conductors and devices are considered as PIS.	P
6.2.3.1	Arcing PIS :	See above.	P
6.2.3.2	Resistive PIS :	See above.	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials :	See appended Table 5.4.1.4, 6.3.2, 9.0, B.2.6.	P
6.3.1 (b)	Combustible materials outside fire enclosure		N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Method of Control fire spread used.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	General		N/A
6.4.3.2	Supplementary Safeguards		N/A
	Special conditions if conductors on printed boards are opened or peeled		N/A
6.4.3.3	Single Fault Conditions :		N/A
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		P
6.4.5	Control of fire spread in PS2 circuits		P
6.4.5.2	Supplementary safeguards :	See appended tables 4.1.2 and Annex G.	P
6.4.6	Control of fire spread in PS3 circuit	See 6.4.5 and 6.4.8	P
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.1	General :		N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers		N/A
6.4.8.1	Fire enclosure and fire barrier material properties	Equipment enclosure was evaluated as a fire enclosure.	P

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure	Material for fire enclosure was made of metal. Material for components that fill an opening in a fire enclosure is made of V-1 class material. (See table 4.1.2)	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.3.1	Fire enclosure and fire barrier openings		P
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm)	Openings didn't exceed 5 mm in any dimension.	P
	Needle Flame test	See above.	N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm)	Openings didn't exceed 3 mm in any dimension.	P
	Flammability tests for the bottom of a fire enclosure		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c)		N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating	Equipment fire enclosure was made of metal. (See table 4.1.2)	P
6.5	Internal and external wiring		P
6.5.1	Requirements	VW-1 wire used.	P
6.5.2	Cross-sectional area (mm ²)		—
6.5.3	Requirements for interconnection to building wiring		N/A
6.6	Safeguards against fire due to connection to additional equipment	See Annex Q.	P
	External port limited to PS2 or complies with Clause Q.1	See Annex Q.	P

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES		N/A
7.2	Reduction of exposure to hazardous substances	No hazardous chemicals within the equipment.	N/A
7.3	Ozone exposure	No ozone produces within this equipment.	N/A
7.4	Use of personal safeguards (PPE)	No such consideration.	N/A
	Personal safeguards and instructions	See above.	—
7.5	Use of instructional safeguards and instructions	No such consideration.	N/A
	Instructional safeguard (ISO 7010)	See above.	—

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Clause	Requirement + Test	Result - Remark	Verdict
7.6	Batteries..... :	No batteries provided.	N/A
8	MECHANICALLY-CAUSED INJURY		P
8.1	General		P
8.2	Mechanical energy source classifications		P
8.3	Safeguards against mechanical energy sources		P
8.4	Safeguards against parts with sharp edges and corners		N/A
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts	No moving parts.	N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard..... :		—
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks..... :		N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard..... :		—
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N)..... :		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test..... :		N/A
8.6	Stability		P
8.6.1	Product classification	Equipment mass 17.61 kg, classified as MS2.	P
	Instructional Safeguard..... :		—
8.6.2	Static stability		P
8.6.2.2	Static stability test		P
	Applied Force..... :	The equipment is tipped at any angle up to and including 10° from the vertical.	—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt..... :		—
8.6.4	Glass slide test		P

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Clause	Requirement + Test	Result - Remark	Verdict
8.6.5	Horizontal force test (Applied Force)..... :	22.5N (13% of EUT mass with stand) applied horizontally to the EUT. During the test, the EUT did not tip over.	P
	Position of feet or movable parts..... :		—
8.7	Equipment mounted to wall or ceiling		P
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) :	Length 12mm of screws, Wall or ceiling.	P
8.7.2	Direction and applied force..... :	Test 1 : applied 408.4N (3 times the weight of equipment without base) (A force in addition to the weight of the equipment is applied downwards through the centre of gravity of the equipment, for 1 min.) In addition, for wall mounted equipment, a horizontal force of 50N is applied laterally for 60s. Test 2 : applied 544.5N (4 times the weight of equipment without base) (Each point in the mounting system shall be subjected to a shear force perpendicular to its centre axis for 1 min. The force shall be applied in four directions, one direction at a time, separated by 90°. Each point in the mounting system, one at a time, shall be subjected to an inward directed push force parallel to its centre axis for 1 min. Each point in the mounting system, one at a time, shall be subjected to an outward directed pull force parallel to its centre axis for 1 min.) Test 3: Metal screw (Ø5.8mm) for attachment of the mounting means. Each threaded part subjected to 2.5 N.m. The each threaded part not become dislodged and remain mechanically intact and secure during the test.	P
8.8	Handles strength		N/A
8.8.1	Classification		N/A
8.8.2	Applied Force :		N/A
8.9	Wheels or casters attachment requirements		N/A
8.9.1	Classification		N/A
8.9.2	Applied force :		—
8.10	Carts, stands and similar carriers		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force		—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N)		—
8.10.6	Thermoplastic temperature stability (°C)		N/A
8.11	Mounting means for rack mounted equipment		N/A
8.11.1	General		N/A
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable <i>N</i>		N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas	No such.	N/A
	Button/Ball diameter (mm)		—

9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications		P
9.3	Safeguard against thermal energy sources		P
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard		P
9.4.2	Instructional safeguard		N/A

10	RADIATION		P
10.2	Radiation energy source classification		P
10.2.1	General classification		P
10.3	Protection against laser radiation		N/A
	Laser radiation that exists equipment:		—
	Normal, abnormal, single-fault.....		N/A
	Instructional safeguard		—
	Tool.....		—
10.4	Protection against visible, infrared, and UV radiation		N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons		N/A
10.4.1.b)	RS3 accessible to a skilled person.....		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Personal safeguard (PPE) instructional safeguard..... :		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1 . :		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions :		N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque..... :		N/A
10.4.1.f)	UV attenuation :		N/A
10.4.1.g)	Materials resistant to degradation UV :		N/A
10.4.1.h)	Enclosure containment of optical radiation..... :		N/A
10.4.1.i)	Exempt Group under normal operating conditions..... :		N/A
10.4.2	Instructional safeguard :		N/A
10.5	Protection against x-radiation		N/A
10.5.1	X- radiation energy source that exists equipment : :		N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards..... :		N/A
	Instructional safeguard for skilled person..... :		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation :		—
	Abnormal and single-fault condition :		N/A
	Maximum radiation (pA/kg)..... :		N/A
10.6	Protection against acoustic energy sources		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output, dB(A) :		N/A
	Output voltage, unweighted r.m.s..... :		N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards :		N/A
	Equipment safeguard prevent ordinary person to RS2..... :		—
	Means to actively inform user of increase sound pressure..... :		—
	Equipment safeguard prevent ordinary person to RS2..... :		—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output..... :		—
10.6.5.2	Corded listening devices with digital input		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Maximum dB(A)..... :		—
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A)..... :		—

B	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		P
B.2	Normal Operating Conditions	See below	P
B.2.1	General requirements..... :	See Test Item Particulars and appended test tables.	P
	Audio Amplifiers and equipment with audio amplifiers		N/A
B.2.3	Supply voltage and tolerances	+10% and -10% for a.c. mains.	P
B.2.5	Input test..... :	See Table B.2.5.	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements..... :	See table B.3.	P
B.3.2	Covering of ventilation openings	Refer table 5.4.1.4.	P
B.3.3	D.C. mains polarity test		N/A
B.3.4	Setting of voltage selector..... :		N/A
B.3.5	Maximum load at output terminals	See table B.3.	P
B.3.6	Reverse battery polarity		N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions		P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited		N/A
B.4.3	Motor tests		N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature		N/A
B.4.4	Short circuit of functional insulation		P
B.4.4.1	Short circuit of clearances for functional insulation		P
B.4.4.2	Short circuit of creepage distances for functional insulation		P
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors	See table B.4	P
B.4.6	Short circuit or disconnect of passive components	See table B.4	P
B.4.7	Continuous operation of components		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions	See table B.4	P
B.4.9	Battery charging under single fault conditions ... :		N/A

C	UV RADIATION		N/A
C.1	Protection of materials in equipment from UV radiation		N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A

D	TEST GENERATORS		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A

E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		N/A
E.1	Audio amplifier normal operating conditions	No such amplifier provided with the equipment.	N/A
	Audio signal voltage (V) :		—
	Rated load impedance (Ω) :		
E.2	Audio amplifier abnormal operating conditions		N/A

F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General requirements		P
	Instructions – Language :	English.	—
F.2	Letter symbols and graphical symbols	See below	P
F.2.1	Letter symbols according to IEC60027-1	Letter symbols and units are complied with IEC 60027-1	P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	The equipment marking is located on the surface and is easily visible.	P
F.3.2	Equipment identification markings		P

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.2.1	Manufacturer identification	See copy of marking plate.	—
F.3.2.2	Model identification	See copy of marking plate.	—
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains		P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage.....	See copy of marking plate.	—
F.3.3.4	Rated voltage	See copy of marking plate.	—
F.3.3.4	Rated frequency	See copy of marking plate.	—
F.3.3.6	Rated current or rated power	See copy of marking plate.	—
F.3.3.7	Equipment with multiple supply connections		N/A
F.3.4	Voltage setting device		N/A
F.3.5	Terminals and operating devices		P
F.3.5.1	Mains appliance outlet and socket-outlet markings		N/A
F.3.5.2	Switch position identification marking	Complies.	P
F.3.5.3	Replacement fuse identification and rating markings	Fuse marking on PCB near fuse (F901): T8AH/250V.	P
F.3.5.4	Replacement battery identification marking		N/A
F.3.5.5	Terminal marking location		P
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment		P
F.3.6.1.1	Protective earthing conductor terminal		P
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		P
F.3.6.2	Class II equipment (IEC60417-5172)		N/A
F.3.6.2.1	Class II equipment with or without functional earth		N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking	IP20 declared.	—
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking		P
F.3.10	Test for permanence of markings	The label was subjected to the permanence of marking test, 15 sec. for water and 15 sec. for petroleum spirit. After each test, the marking remained legible.	P
F.4	Instructions		P

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Clause	Requirement + Test	Result - Remark	Verdict
	a) Equipment for use in locations where children not likely to be present – marking		N/A
	b) Instructions given for installation or initial use	Relevant safety caution texts and installation instruction are available.	P
	c) Equipment intended to be fastened in place		N/A
	d) Equipment intended for use only in restricted access area	The equipment not intended for installation in a restricted access area.	N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard		P
	g) Protective earthing conductor current exceeding ES 2 limits		N/A
	h) Symbols used on equipment		N/A
	i) Permanently connected equipment not provided with all-pole mains switch		N/A
	j) Replaceable components or modules providing safeguard function		N/A
F.5	Instructional safeguards		P
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction		P

G	COMPONENTS		P
G.1	Switches		P
G.1.1	General requirements	Certified source used. See table 4.1.2	P
G.1.2	Ratings, endurance, spacing, maximum load		P
G.2	Relays		N/A
G.2.1	General requirements		N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
G.3	Protection Devices		P
G.3.1	Thermal cut-offs		N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691		N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H) :		—
	Single Fault Condition :		—
	Test Voltage (V) and Insulation Resistance (Ω) . :		—
G.3.3	PTC Thermistors		N/A
G.3.4	Overcurrent protection devices		P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions..... :		N/A
G.4	Connectors		P
G.4.1	Spacings		P
G.4.2	Mains connector configuration :	Certified source used. See table 4.1.2	P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		P
G.5	Wound Components		P
G.5.1	Wire insulation in wound components.....	Considered.	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°	Mechanical stress relief achieved by tube and insulation tape.	P
G.5.1.2 b)	Construction subject to routine testing		P
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s) :		—
	Temperature (°C) :		—
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	Transformers		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1)..... :	The transformer meets the requirements given in G.5.3.2 and G.5.3.3	P
	Position..... :	T9101, T9301	—
	Method of protection :	By protection circuit.	—
G.5.3.2	Insulation		P
	Protection from displacement of windings..... :	Insulation tape and tubing used.	—
G.5.3.3	Overload test :	See table B.3	P
G.5.3.3.1	Test conditions	Tested in the complete equipment.	P

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.3.3.2	Winding Temperatures testing in the unit	See table B.3	P
G.5.3.3.3	Winding Temperatures - Alternative test method		N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements		N/A
	Position		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days)		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V)		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h)		N/A
	Electric strength test (V)		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature		N/A
	Electric strength test (V)		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h)		N/A
	Electric strength test (V)		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage		—
G.6	Wire Insulation		P
G.6.1	General		P
G.6.2	Solvent-based enamel wiring insulation		N/A
G.7	Mains supply cords		N/A
G.7.1	General requirements	No such components provided.	N/A
	Type.....		—
	Rated current (A)		—
	Cross-sectional area (mm ²), (AWG).....		—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N) :		—
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm).... :		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry :		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g) :		—
	Diameter (m) :		—
	Temperature (°C) :		—
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	Varistors		P
G.8.1	General requirements	Certified source used. See table 4.1.2	P
G.8.2	Safeguard against shock		P
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test :		N/A
G.8.3.3	Temporary overvoltage :		N/A
G.9	Integrated Circuit (IC) Current Limiters		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.		N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA :		—
G.9.1 d)	IC limiter output current (max. 5A) :		—
G.9.1 e)	Manufacturers' defined drift :		—
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	Resistors		N/A
G.10.1	General requirements		N/A
G.10.2	Resistor test		N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	Capacitor and RC units		P
G.11.1	General requirements	X and Y-Capacitor used as safeguard and complied with IEC/EN 60384-14 (See table 4.1.2)	P
G.11.2	Conditioning of capacitors and RC units		P
G.11.3	Rules for selecting capacitors		P
G.12	Optocouplers		P
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results)		N/A
	Type test voltage V _{ini}		—
	Routine test voltage, V _{ini,b}		—
G.13	Printed boards		P
G.13.1	General requirements		P
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction)		—
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs)		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
G.14	Coating on components terminals		N/A
G.14.1	Requirements		N/A
G.15	Liquid filled components		N/A
G.15.1	General requirements		N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	IC including capacitor discharge function (ICX)		P
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours	Certified source used. See table 4.1.2	N/A
b)	Impulse test using circuit 2 with $U_c =$ to transient voltage		N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A
D2)	Capacitance		—
D3)	Resistance		—

H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N/A
H.1	General	No telephone ringing signal.	N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringing signal		N/A
H.3.1.1	Frequency (Hz)		—
H.3.1.2	Voltage (V)		—
H.3.1.3	Cadence; time (s) and voltage (V)		—
H.3.1.4	Single fault current (mA):.....		—
H.3.2	Tripping device and monitoring voltage		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V)		—

J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		P
	General requirements	Approved triple insulated wire used. (See appended table 4.1.2.)	P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
K	SAFETY INTERLOCKS		N/A
K.1	General requirements	No such components used.	N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location)		N/A
K.7.2	Overload test, Current (A)		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test		N/A

L	DISCONNECT DEVICES		P
L.1	General requirements		P
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized		N/A
L.4	Single phase equipment	The disconnect device disconnect both poles simultaneously.	P
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		N/A
L.8	Multiple power sources		N/A

M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		P
M.1	General requirements		P
M.2	Safety of batteries and their cells		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method) .. :		N/A
M.3	Protection circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Tests		N/A
	- Overcharging of a rechargeable battery		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance :		N/A
M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
M.4.2.2 a)	Charging voltage, current and temperature :		—
M.4.2.2 b)	Single faults in charging circuitry :		—
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		N/A
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method) :		N/A
M.6.2	Leakage current (mA) :		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume V_z (m ³ /s)..... :		—
M.8.2.3	Correction factors..... :		—
M.8.2.4	Calculation of distance d (mm) :		—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) :	For Remote control.	P

N	ELECTROCHEMICAL POTENTIALS		P
	Metal(s) used :	Suitable materials used.	—

O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		P
	Figures O.1 to O.20 of this Annex applied..... :	Complied.	—

P	SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS		P
P.1	General requirements		P
P.2.2	Safeguards against entry of foreign object		P
	Location and Dimensions (mm) :	For rear enclosure opening, the dimensions are less than 5.0 mm	—
P.2.3	Safeguard against the consequences of entry of foreign object		P
P.2.3.1	Safeguards against the entry of a foreign object		P
	Openings in transportable equipment		N/A
	Transportable equipment with metalized plastic parts :		N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) :		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts	See below.	P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
P.4.2 a)	Conditioning testing	(For base stand non-slip mat, Adhesive test, marital: NITTO DENKO CORP / 5000NS)	P
	Tc (°C)	100 (100+0=100)	—
	Tr (°C)	100	—
	Ta (°C).....	33.1 (Reference metal enclosure temp.)	—
P.4.2 b)	Abrasion testing		N/A
P.4.2 c)	Mechanical strength testing	see appended tables Annex T	P

Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		P
Q.1	Limited power sources		P
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		P
	- Regulating network limited output under normal operating and simulated single fault condition	(See appended tables Annex Q.1)	P
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method	(See appended tables Annex Q.1)	P
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A)		—
	Current limiting method		—

R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General requirements		N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)).		N/A

S	TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (°C).....		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (°C).....		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material		—
	Wall thickness (mm).....		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (test condition), (°C)		—
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	After every test specimen was not consumed completely		N/A
	After fifth flame application, flame extinguished within 1 min		N/A

T	MECHANICAL STRENGTH TESTS		P
T.1	General requirements		P
T.2	Steady force test, 10 N	See table T.2.	P
T.3	Steady force test, 30 N		N/A
T.4	Steady force test, 100 N		N/A
T.5	Steady force test, 250 N	See table T.5.	P
T.6	Enclosure impact test		P
	Fall test	See table T.6.	P
	Swing test		N/A
T.7	Drop test		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
T.8	Stress relief test	See table T.8.	P
T.9	Impact Test (glass)		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J)		—
	Height (m)		—
T.10	Glass fragmentation test		N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm)		—

U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N/A
U.1	General requirements		N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen.....		N/A

V	DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)		P
V.1	Accessible parts of equipment	Following the probes test specified in this annex Figure V.1, V.2 are suitable.	P
V.2	Accessible part criterion	No live parts can be accessible.	P

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

4.1.2	TABLE: List of critical components					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹	
Metal enclosure	--	--	Metal ,thickness: 0.81mm min (for bottom and side cover), Metal, thickness: 0.45mm min. (for Rear cover)	--	--	
Front frame	Interchangeable	Interchangeable	Plastic, min. HB, min. 2.0 mm	UL94	UL	
LCD Panel	AUO	P500HVF**** (* =A~Z, a~z, 0~9, -, .)	50.0" TFT type, with LED backlight.	--	--	
Remote controller (Optional)	--	--	--	--	--	
- Battery for remote used	--	--	AAA type, non- rechargeable, two provided.	--	--	
- Enclosure for remote controller	Interchangeable	Interchangeable	Min. HB	UL 94	UL	
Stand base (2 sets) (Optional)	--	--	metal, total weight: 1.86 kg	UL 94	UL	
Internal speaker (two provided)	--	--	Each rated 12 ohm max., 18W	--	--	
AC inlet	Solteam	ST-01	10A, 250Vac; 15A, 250Vac, 100 °C	IEC/EN 60320-1, ANSI/UL498	UL, VDE	
	Zhang Jia Gang- Hua Jie	SA-4S	10A, 250Vac; 15A, 250Vac, 60 °C	IEC/EN 60320-1, ANSI/UL498	UL, VDE	
	Rong Feng	SS-120, SS-7B	10A, 250Vac; 15A, 250Vac, 120 °C	IEC/EN 60320-1, ANSI/UL498	UL, VDE	
	Shenzhen Delikang / Douling	CDJ-3, CDJ-3-1	10A, 250Vac, 70 °C	IEC/EN 60320-1, ANSI/UL498	UL,VDE	
	Inalways	0707-1	10A, 250Vac; 15A, 250Vac, 100 °C	IEC/EN 60320-1, ANSI/UL498	UL,N	
	Inalways	0711-2	10A, 250Vac; 15A, 250Vac, 90 °C	IEC/EN 60320-1, ANSI/UL498	UL,N	
	Inalways	0714	10A, 250Vac, 100 °C	IEC/EN 60320-1, ANSI/UL498	UL,VDE	

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
	TECX	TU-301 series	10A, 250Vac; 15A, 250Vac, 105 °C	IEC/EN 60320-1, ANSI/UL498	UL, VDE
	Yueqing Hongchang	DB-14	10A/250Vac; 15A, 250Vac, 105 °C	IEC/EN 60320-1, ANSI/UL498	UL, VDE
	Solteam	SC04	10A/250Vac; UL: 10A / 250Vac, 12A / 250Vac, 70 °C	IEC/EN 60320-1, ANSI/UL498	UL, VDE
	Zhang Jia Gang-Hua Jie	SA-4D	10A, 250Vac; 15A, 250Vac, 90 °C	IEC/EN 60320-1, UL498	UL, TUV
Power Switch	CHILY	3024 series	16(4)A, 250Vac 15A, 125/250Vac 8A, 277Vac	IEC/EN 61058-1, ANSI/UL 1054	ENEC, UL
	Zhangjiagang Huajie	PS8-338	8A, 250Vac; 12(4), 250Vac	IEC/EN 61058-1, ANSI/UL 1054	TUV, UL
	Hongchang	RS and RT series	10A,125Vac, 6A, 250Vac	IEC/EN 61058-1, ANSI/UL 1054	ENEC, UL
Mylar sheet (Between power trace side and panel, Between power component side and Metal enclosure)	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX FRPC-1860B, KLX FRPC-1870B	V-0 or VTM-0, dimension 310mm by 242.5mm (Between power trace side and panel), 214mm by 242mm (Between power component side and Metal enclosure)	UL 94	UL
	SUZHOU OMAY OPTICAL MATERIAL CO LTD	SE42B, SE42B-F	V-0 or VTM-0, dimension 310mm by 242.5mm (Between power trace side and panel), 214mm by 242 mm (Between power component side and Metal enclosure)	UL 94	UL

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
	SICHUAN DONGFANG INSULATING MATERIAL CO LTD	DFR117, DFR117ECOA, DFR117ECOB, DFR117ECOC	V-0 or VTM-0, dimension 310mm by 242.5mm (Between power trace side and panel), 214mm by 242 mm (Between power component side and Metal enclosure)	UL 94	UL
	Sichuan Dongfang Insulating Material Co., Ltd.	DFPET 6023, DFR700, DFR700F	V-0 or VTM-0, dimension 310mm by 242.5mm (Between power trace side and panel), 214mm by 242 mm (Between power component side and Metal enclosure)	UL 94	UL
-Adhesive	3M CHINA CO LTD	55236@\$	80 °C	--	--
	TESA SE	68646	80 °C	--	--
	Symbio Inc	DS50-A	100 °C	--	--
	NITTO DENKO CORP	GA606	80 °C	--	--
Base stand non-slip mat	JIANGSU HONGDA NEW MATERIAL CO LTD	HD-8750	V-0 or better Min. 150°C	UL 94	UL
-Adhesive (for base stand non-slip mat)	NITTO DENKO CORP	5000NS	80 °C	--	--
P.C.B	Interchangeable	Interchangeable	V-1 or better Min. 105°C	UL 796	UL
Power supply board (Top Victory Electronics (Taiwan) Co., Ltd.)					
Primary connector (CN901)	Pontronics	3962 –Y2-X2 series (Y2=WR, WS, X2=2-14)	7 A, 250 Vac	IEC/EN 61984, UL1977	TÜV , UL
	Jowle	A3963 series	7 A, 250 Vac	IEC/EN 61984 , UL1977	TÜV ,UL
	J.S.T	VH series	7 A, 250 Vac	IEC/EN 61984, UL1977	TÜV ,UL

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
	J.S.T	VT series	7 A, 250 Vac	IEC/EN 61984, UL1977	TÜV ,UL
	Xinya	TÜV: M3962 series UL: 3962 series	TÜV: 6 A, 250 Vac UL: 7 A, 250 Vac	IEC/EN 61984 UL 1977	TÜV NORD UL
	Xinya	W7913 series	7 A, 250 Vac	IEC/EN 61984 UL 1977	TÜV NORD UL
Fuse (F901)	Walter	TSC series	T8A, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-2, ANSI/UL 248-1, ANSI/ UL 248-14	VDE, UL
	LITTELFUSE	0215015.MXEP	T8A, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-2, ANSI/UL 248-1, ANSI/ UL 248-14	VDE, UL
	Conquer	UDA, UDA-A+	T8A, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-2, ANSI/UL 248-1, ANSI/ UL 248-14	VDE, UL
	Cooper Bussmann	S505-xxx-R, S505-V-xxx-R	T8A, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-2, ANSI/UL 248-1, ANSI/ UL 248-14	VDE, UL
Varistor (RV9901, RV9902)	Thinking Electronic Industrial Co., Ltd.	TVR14681	Rated 420 Vac, 560Vdc, 40/85/56, 6KV/3KA, pluse test passed V-0 coating	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd	VDE, UL
	Centra Science corp.	CNR-14D681K	Rated 420 Vac, 560Vdc, 40/85/56, 6KV/3KA, pluse test passed V-0 coating	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd	VDE, UL
	EPCOS	SIOV-S14KV681 SIOV- SNF14K420	Rated 420 Vac, 560Vdc, 40/85/56, 6KV/3KA, pluse test passed V-0 coating	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd	VDE, UL
Y-Capacitors (C9904, C9903, C9905, C9906, C9909) (Y1 type) (Optional)	Walsin	AH	Max.4700pF, min. 250Vac, min. 85 °C	IEC / EN 60384- 14: 2013 UL 60384-14	VDE, FI, UL

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
	TDK	CD	Max.4700pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI, UL
	Murata	KX	Max.4700pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI, UL
	JYA-NAY	JN	Max.4700pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
	Kunshan Wansheng	CT7	Max.4700pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
	YINAN DON'S ELECTRONI C COMPONENT CO.,LTD	CT81	Max.4700pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
	SUCCESS	SE	Max. 4700 pF, min. 250 Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
	Interchangeable	Interchangeable	Max.4700pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL, FI
Bridge-Capacitors (C9907, C9908) (Y1 type) (Optional)	Walsin	AH	Max.2200pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI, UL
	TDK	CD	Max.2200pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI, UL
	Murata	KX	Max.2200pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
	JYA-NAY	JN	Max.2200pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
	Kunshan Wansheng	CT7	Max.2200pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
	YINAN DON'S ELECTRONI C COMPONENT CO.,LTD	CT81	Max.2200pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
	SUCCESS	SE, SB	Max.2200pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
	Interchangeable	Interchangeable	Max.2200pF, min. 250Vac, min. 85 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL, FI
Thermistors (TH9901, TH9902)	Interchangeable	Interchangeable	Min. 2 ohm, min. 8 A at 25 °C	--	--
X-Capacitors (C9901, C9902) (X1 or X2 type) (Optional)	Ultra Tech Xiphi Enterprise Co., Ltd.	HQX	Max. 0.22 µF for C9902, Max. 0.82 µF for C9901, min. 250 Vac, min. 100 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI, UL
	Hua Jung Components Co., Ltd.	MKP	Max. 0.22 µF for C9902, Max. 0.82 µF for C9901, min. 250 Vac, min. 100 °C	IEC / EN 60384-14: 2013 UL 60384-14	ENEC, FI, UL
	Europtronic (Taiwan) Industrial Corp.	MPX, MPX2	Max. 0.22 µF for C9902, Max. 0.82 µF for C9901, min. 250 Vac, min. 100 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI, UL
	Liow Gu Electronics Industry Co., Ltd.	GS-L	Max. 0.22 µF for C9902, Max. 0.82 µF for C9901, min. 250 Vac, min. 100 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, FI
	Kemet	R.46	Max. 0.22 µF for C9902, Max. 0.82 µF for C9901, min. 250 Vac, min. 100 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
	Epcos Electronic Components S A	B3292#	Max. 0.22 µF for C9902, Max. 0.82 µF for C9901, min. 250 Vac, min. 100 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
	NANJING TENGGEN RONG GUANG DA ELECTRONICS (GROUP) CO LTD	MKP	Max. 0.22 µF for C9902, Max. 0.82 µF for C9901, min. 250 Vac, min. 100 °C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
	FARAD	PXK	Max. 0.22 μ F for C9902, Max. 0.82 μ F for C9901, min. 250 Vac, min. 100°C	IEC / EN 60384-14: 2013 UL 60384-14	VDE,UL
	Interchangeable	Interchangeable	Max. 0.22 μ F for C9902, Max. 0.82 μ F for C9901, min. 250 Vac, min. 100°C	IEC / EN 60384-14: 2013 UL 60384-14	VDE, UL
Inductor (L9901, L9902) (Optional)	Darfon	73G174-272-DN	Min. 105 °C	--	--
	TPV	73G174-272-V	Min. 105 °C	--	--
	LI TAI	73G174-272-L	Min. 105 °C	--	--
	CHANNELON	73G174-272-H	Min. 105 °C	--	--
	ASET	73G174-272-X	Min. 105 °C	--	--
Inductor (L9801) (Optional)	LFDJ	373G0174360J	Min. 105 °C	--	---
	CHENPING	373G0174360C P	Min. 105 °C	--	--
	ASET	373G0174360X	Min. 105 °C	--	--
	YAO SHENG	373G0174360YS	Min. 105 °C	--	--
Bleeder Resistors (R9901, R9902, R9903, R9904)	--	SMD type	430K Ω , min. 1/4W (four provided, located after fuse)	--	--
Discharge IC (U9901)	POWER INTEGRATIONS	CAP200DG	1000V	IEC 60950-1:2005+A1+A2 IEC/EN 62368-1:2014	CB by Nemko (NO82701-A1) (NO81546/A1/M2)
Transistors (Q9801)	Interchangeable	Interchangeable	Min.600V, 17A	--	--
Transistors (Q9101 , Q9102)	Interchangeable	Interchangeable	Min.600V, 13A	--	--
Transistors (U9301)	Interchangeable	Interchangeable	Min.700V, 0.3mA	--	--
Bridge Diodes (BD9901)	Interchangeable	Interchangeable	Min. 10A, min. 800V	--	--

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
Ripple Capacitors (C9801, C9802, C9803, C9804)	Interchangeable	Interchangeable	47 μ F, min. 450 V, 105 °C	--	--
Transformer (T9101)	Channelon / Dadon / HA	380GL52P509H	Class 130 material (B)	Applicable parts of IEC 62368-1 and according to IEC 60085	--
-Bobbin	SUMITOMO	PM-9820	V-0, phenolic, 150°C	UL 94	UL
-Insulation tape	Symbio	35660Y	130°C	UL 510	UL
	Jingjiang Yahua Pressure Sensitive Co Ltd	CT	130°C	UL 510	UL
Transformer (T9101) (alternate)	YAO SHENG	380GL52P509Y S	Class 130 material (B)	Applicable parts of IEC 62368-1 and according to IEC 60085	--
-Bobbin	SUMITOMO	PM-9820, PM-9630	V-0, phenolic, 150°C	UL 94	UL
-Insulation tape	Jingjiang Yahua Pressure Sensitive Co Ltd	CT	130°C	UL 510	UL
	Symbio	35660Y	130°C	UL 510	UL
Transformer (T9101) (alternate)	TPV	S80GL52P509V	Class 130 material (B)	Applicable parts of IEC 62368-1 and according to IEC 60085	--
-Bobbin	SUMITOMO	PM-9820	V-0, phenolic, 150°C	UL 94	UL
-Insulation tape	Symbio	35660Y	130°C	UL 510	UL
	Jingjiang Yahua Pressure Sensitive Co Ltd	CT	130°C	UL 510	UL
Transformer (T9301)	Channelon	80GL52P-10-H	Class 130 material (B)	Applicable parts of IEC 62368-1 and according to IEC 60085	--
-Bobbin	CHANG CHUN PLASTICS CO LTD	T375J	V-0, phenolic, 150°C	UL 94	UL

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
-Insulation tape	Symbio	35660Y	130 °C	UL 510	UL
-Triple Insulation Wire	GREAT LEOFLON INDUSTRIAL CO LTD	TRW(B)	130 °C	UL 2353	UL
Transformer (T9301) (alternate)	LITAI	80GL52P-10-L	Class 130 material (B)	Applicable parts of IEC 62368-1 and according to IEC 60085	--
-Bobbin	CHANG CHUN PLASTICS CO LTD	T375J	V-0, phenolic, 150 °C	UL 94	UL
-Insulation tape	Symbio	35660Y	130 °C	UL 510	UL
	3M COMPANY	1350F-1	130 °C	UL 510	UL
-Triple Insulation Wire	COSMOLINK CO LTD	TIW-M	130 °C	UL 2353	UL
Transformer (T9301) (alternate)	YUVA	80GL52P-10-N	Class 130 material (B)	Applicable parts of IEC 62368-1 and according to IEC 60085	--
-Bobbin	SUMITOMO	PM-9820	V-0, phenolic, 150 °C	UL 94	UL
-Insulation tape	Symbio	35660Y	130 °C	UL 510	UL
-Triple Insulation Wire	COSMOLINK CO LTD	TIW-M	130 °C	UL 2353	UL
Transformer (T9301) (alternate)	TAICHANG	80GL52P-10-S	Class 130 material (B)	Applicable parts of IEC 62368-1 and according to IEC 60085	--
-Bobbin	CHANG CHUN PLASTICS CO LTD	T375J	V-0, phenolic, 150 °C	UL 94	UL
-Insulation tape	3M COMPANY	1350F-1	130 °C	UL 510	UL
-Triple Insulation Wire	GREAT LEOFLON INDUSTRIAL CO LTD	TRW(B)	130 °C	UL 2353	UL

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
Transformer (T9301) (alternate)	TPV	80GL52P-10-V	Class 130 material (B)	Applicable parts of IEC 62368-1 and according to IEC 60085	--
-Bobbin	SUMITOMO	PM-9820	V-0, phenolic, 150°C	UL 94	UL
-Insulation tape	Symbio	35660Y	130°C	UL 510	UL
-Triple Insulation Wire	FURUKAWA ELECTRIC CO.,LTD	TEX-E	130°C	UL 2353	UL
Photo couplers (U9102, U9303, U9302)	Sharp	PC123	Di more than 0.4mm, int = thermal cycling test,ext. more than 8.0mm, 5000 Vac, 100°C	DIN EN 60747-5- 5:2007 IEC 60747-5- 5:2007 IEC/EN 60950-1 UL 1577	VDE, UL, Semko, Fimko, Nemko
	Vishay Semiconductor	TCET1103	Di more than 0.5mm, int. cr more than 6.0mm, ext. cr more than 7.7mm, 3000Vac, 100°C	DIN EN 60747-5- 5:2007 IEC 60747-5- 5:2007 IEC/EN 60950-1 UL 1577	VDE, UL, Semko, Fimko, Nemko
	Everlight Electronics Co., Ltd.	EL817, EL817M	Di more than 0.5mm, int. cr = thermal cycling test, ext. cr more than 7.7mm, 3000Vac, 100°C	DIN EN 60747-5- 5:2007 IEC 60747-5- 5:2007 IEC/EN 60950-1 UL 1577	VDE,UL, Semko, Fimko, Nemko
	TOSHIBA	TLP781F , TLP781	Di more than 0.5mm, int. cr =thermal cycling test, ext. cr more than 8.0mm, 4800 Vac, 100°C	DIN EN 60747-5- 5:2007 IEC 60747-5- 5:2007 IEC/EN 60950-1 UL 1577	VDE,UL, Semko, Fimko
	TOSHIBA	TLP421F	Di more than 0.4mm, int.cr=thermal cycling test, ext. cr more than 8.0mm, 5000 Vac, 100°C	DIN EN 60747-5- 5:2007 IEC 60747-5- 5:2007 IEC/EN 60950-1 UL 1577	VDE,UL, Semko, Fimko
	RENESAS ELECTRONICS CORPORATION	PS2561-1, PS2561L-1, PS2561L1-1, PS2561L2-1. PS2561DL1-1	Di more than 0.4mm, int.cr=thermal cycling test, ext. cr more than 8.0mm, 5000Vac, 100°C	DIN EN 60747-5- 5:2007 IEC 60747-5- 5:2007 IEC/EN 60950-1 UL 1577	VDE,UL, Nemko, Fimko

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
	Everlight Electronics Co., Ltd.	EL1013	Di more than 0.4mm, int.cr=thermal cycling test, ext. cr more than 8.1mm, 3000Vac, 100 °C	DIN EN 60747-5-5:2007 IEC 60747-5-5:2007 IEC/EN 60950-1 UL 1577	VDE,UL, Semko, Fimko, Nemko
	Lite-On	LTV-817	Di more than 0.6mm, int.cr=thermal cycling test, ext. cr more than 8.0mm, 4800Vac, 100 °C	DIN EN 60747-5-5:2007 IEC 60747-5-5:2007 IEC/EN 60950-1 UL 1577	VDE,UL, Semko, Fimko, Nemko
Gas tube (SG9905)	Mitsubishi	DA38-362MBy (y=0 to 9 or A to X), DA38-452MTy (y=0 to 9 or A to X)	250Vac, basic insulation	IEC/EN 60950-1 cl.1.5, 2.9, 2.10, 5.2 and Annex G, UL 1449	TUV, UL
	MITSUBISHI MATERIALS CORP	FA55-302, FA55-362, FA55-402	250Vac, basic insulation	IEC/EN 60950-1 cl.1.5, 2.9, 2.10, 5.2 and Annex G, UL 1449	TUV, UL
	SIN NAGATA ELECTRONICS CO LTD	LSE-4500LX2P	250Vac, basic insulation	UL 1449 IEC/EN 60950-1 cl.1.5, 2.9, 2.10, 5.2 and Annex G test within equipment	UL
	SIN NAGATA ELECTRONICS CO LTD	LSE-402M	220Vac, basic insulation	UL 1449 IEC/EN 60950-1 cl.1.5, 2.9, 2.10, 5.2 and Annex G test within equipment	UL
Supplementary information:					
1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					
2) Description line content is optional. Main line description needs to clearly detail the component used for testing.					

4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests			N/A
(The following mechanical tests are conducted in the sequence noted.)				
4.8.4.2	TABLE: Stress Relief test			—
Part		Material	Oven Temperature (°C)	Comments

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests		N/A
(The following mechanical tests are conducted in the sequence noted.)			
4.8.4.3	TABLE: Battery replacement test		—
Battery part no.:			—
Battery Installation/withdrawal		Battery Installation/Removal Cycle	Comments
		1	
		2	
		3	
		4	
		5	
		6	
		8	
		9	
		10	
4.8.4.4	TABLE: Drop test		—
Impact Area	Drop Distance	Drop No.	Observations
		1	
		2	
		3	
4.8.4.5	TABLE: Impact		—
Impacts per surface	Surface tested	Impact energy (Nm)	Comments
4.8.4.6	TABLE: Crush test		—
Test position	Surface tested	Crushing Force (N)	Duration force applied (s)
Supplementary information:			

4.8.5	TABLE: Lithium coin/button cell batteries mechanical test result			N/A
Test position		Surface tested	Force (N)	Duration force applied (s)
Supplementary information:				

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

5.2		Table: Classification of electrical energy sources					P
5.2.2.2 – Steady State Voltage and Current conditions							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				U (Vrms or Vpk)	I (Apk or Arms)	Hz	
1	264Vac	+24V - GND	Normal	24.07Vdc	--	--	ES1
			Abnormal- output SC and overload	0	--	--	
			Single fault – see table B.4 for detail	Max. 24.0Vdc	--	--	
2	264Vac	+16V_A - GND	Normal	15.8Vdc	--	--	ES1
			Abnormal- output SC and overload	0	--	--	
			Single fault – see table B.4 for detail	Max. 16.0Vdc	--	--	
3	264Vac	+16V - GND	Normal	15.9Vdc	--	--	ES1
			Abnormal- output SC and overload	0	--	--	
			Single fault – see table B.4 for detail	Max. 16.0Vdc	--	--	
4	264Vac	+5.2V - GND	Normal	5.2Vdc	--	--	ES1
			Abnormal- output SC and overload	0	--	--	
			Single fault – see table B.4 for detail	Max. 5.2Vdc	--	--	
5	264Vac	C9904 to GND 901	Single fault - C9904 to GND 901 Short circuit	0	--	--	ES1
6	264Vac	TH9901 to GND 901	Single fault - TH9901 to GND 901 Short circuit	0	--	--	ES1
5.2.2.3 - Capacitance Limits							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class	
				Capacitance, nF	Upk (V)		
--	--	--	Normal	--	--	--	
			Abnormal	--	--		

IEC 62368-1							
Clause		Requirement + Test			Result - Remark		Verdict
			Single fault –	--	--		
5.2.2.4 - Single Pulses							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Duration (ms)	Upk (V)	Ipk (mA)	
--	--	--	Normal	--	--	--	--
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	
5.2.2.5 - Repetitive Pulses							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Off time (ms)	Upk (V)	Ipk (mA)	
--	--	--	Normal	--	--	--	--
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	
Test Conditions:							
Normal - Max. normal load.							
Abnormal - Output short							
Supplementary information: SC=Short Circuit, OC=Short Circuit							
C9901 = 0.82 uF, C9902 = 0.22 uF, R9901=R9902=R9903=R9904= 430KΩ.							

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements			P
	Supply voltage (V) :	90Vac, 60Hz	264Vac, 60Hz	—
	Ambient T _{min} (°C) :	--	--	—
	Ambient T _{max} (°C) :	--	--	—
	Tma (°C) :	--	--	—
Maximum measured temperature T of part/at:		T (°C)		Allowed T _{max} (°C)
Test results shift to Tma				
CN901 body near L pin (Power board)		48.7	47.4	85
L9901 Coil (Power board)		88.2	62.4	105
RV9902 body (Power board)		63.0	52.6	85
C9902 body (Power board)		59.6	51.0	85
L9902 Coil (Power board)		61.2	52.6	105
PCB near BD9901 (Power board)		71.0	58.3	105
L9801 coil (Power board)		74.4	61.5	105
PCB near D9801, Q9801 (Power board)		64.5	63.8	105

IEC 62368-1							
Clause	Requirement + Test			Result - Remark			Verdict
C9802 body (Power board)	51.4			50.3			105
PCB near Q9101, Q9102 (Power board)	62.9			62.1			105
PCB near U9301(Power board)	65.2			64.9			105
T9301 coil (Power board)	58.8			58.3			110
T9301 core (Power board)	58.5			58.1			110
U9102 body (Power board)	56.8			56.2			100
T9101 coil (Power board)	78.3			77.3			110
T9101 core (Power board)	74.5			73.7			110
C9907 body (Power board)	61.9			59.5			85
C9906 body (Power board)	55.8			49.7			85
PCB near D9107, D9108 (Power board)	67.7			66.2			105
PCB near D9109, D9110 (Power board)	68.3			67.4			105
PCB near D9305 (Power board)	57.5			57.1			105
L9304 coil (Power board)	54.8			54.2			105
L9101 coil (Power board)	59.1			58.4			105
L9102 coil (Power board)	60.6			60.0			105
L9103 coil (Power board)	63.0			62.2			105
PCB near HS401 (Main board)	65.0			65.0			105
PCB near U402 (Main board)	60.0			60.1			105
Mylar near T9101 (between power and panel)	53.4			50.3			80
L1 coil (LED driver board)	72.8			72.3			105
PCB near D212 (LED driver board)	80.3			79.7			105
Mylar near T9101 (between power and rear enclosure)	49.4			46.9			80
Ambient (actual temp.)	40.0 (23.1)			40.0 (24.7)			--
AC inlet near L pin	33.0			31.9			48
Switch body	31.8			31.4			48
Metal enclosure outside near T9101	33.1			32.0			48
Button (Key control)	30.1			30.1			48
Panel interface	31.4			31.2			48
Ambient (actual temp.)	25.0 (23.1)			25.0 (24.7)			--
Supplementary information:							
Temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class

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

Supplementary information:

Note 1: Tma should be considered as directed by applicable requirement

Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9)

Note 3: The temperatures were measured under the worse case normal mode defined in the table B.2.5.

5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics		N/A
Penetration (mm)..... :			—
Object/ Part No./Material	Manufacturer/t rademark	T softening (°C)	
Supplementary information:			

5.4.1.10.3	TABLE: Ball pressure test of thermoplastics			P
Allowed impression diameter (mm) : ≤ 2 mm				—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)	
Primary Receptacle / Plastic	Xinya Electronic Co Ltd / H3962	125	1.8	
Primary Receptacle / Plastic	Japan Solderless Terminal Mfg Co., Ltd. / VHR	125	1.7	
Primary Receptacle / Plastic	Jowle Technology Co Ltd / A3963H02	125	1.8	
Primary Receptacle / Plastic	Japan Solderless Terminal Mfg Co Ltd / VTR	125	1.6	
Primary Receptacle / Plastic	Xinya Electronic Co Ltd / D7913	125	1.8	
Primary Receptacle / Plastic	Dong Guan Xin Pei Plastic & Metal Electronic Co Ltd / A3961H	125	1.7	
Supplementary information:				

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance						P
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequenc y (kHz) ¹	Required cl (mm)	cl (mm) ²	Required ³ cr (mm)	cr (mm)
Functional							
Line to Neutral before Fuse F901	420	250	--	2.3 (1.5x1.48)	3.1	2.5	3.1
Under Fuse F901	420	250	--	2.3 (1.5x1.48)	12.1	2.5	12.1
Basic/supplementary							

IEC 62368-1							
Clause	Requirement + Test			Result - Remark			Verdict
Under C9903, C9904, C9905	420	250	62	2.3 (1.5x1.48)	8.0	2.5	8.0
Under C9906, C9909	420	250	62	2.3 (1.5x1.48)	7.4	2.5	7.4
Gas Tub body between terminals (outside)	420	250	62	2.3 (1.5x1.48)	6.4	2.5	6.4
Gas Tub body between terminals (inside)	420	250	62	2.3 (1.5x1.48)	4.8	2.5	4.8
Primary component to user accessible metal part	420	250	--	2.3 (1.5x1.48)	More than 10	2.5	More than 10
Reinforced:							
Under C9907	420	250	62	4.5 (3.0x1.48)	7.6	4.5	7.6
Under C9908	420	250	62	4.5 (3.0x1.48)	7.4	4.5	7.4
Under U9302, U9303	420	250	62	4.5 (3.0x1.48)	8.0	4.5	8.0
Under U9102	420	250	62	4.5 (3.0x1.48)	8.2	4.5	8.2
Primary component R9801 to T9101 Secondary Core	420	250	62	4.5 (3.0x1.48)	14.2	4.5	14.2
Primary conductor of power switch to user accessible area (evaluated for all sources of power switch)	420	250	--	4.5 (3.0x1.48)	More than 10	4.5	More than 10
Unter Transformer (T9301)	550	384	122	4.5 (3.0x1.48)	7.8	7.8	7.8
Unter Transformer (T9101)	510	270	123	4.5 (3.0x1.48)	8.1	5.4	8.1
Supplementary information: Note 1: Only for frequency above 30 kHz Note 2: See table 5.4.2.4 if this is based on electric strength test Note 3: Provide Material Group 1. The required clearances multiplied by 1.48 considering that EUT operates up to 5000 m. 2. For clearance and creepage did not describe above are far larger than limit above. 3. All internal wires are located by mechanical fixings to keep distance.							

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4. UL1015 wire used for L/N wire.
5. One Insulation sheet used between SPS trace layout side and panel metal part and fixed by adhesives.
6. One insulation sheet used between SPS component side and metal chassis and fixed by adhesives.
7. The working voltage were measured under both Input = 100V and 240V, the Vp and Vrms value being recoded above were the highest among the two.
8. All source are considered for Gas Tube distance. The minimum distance was description in table.
9. The measurement were conducted on both component side and trace layout side, only smaller value being recorded above.
10. All internal wires are located by mechanical fixings to keep distance.

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage			P
	Overvoltage Category (OV):			II
	Pollution Degree:			2
Clearance distanced between:		Required withstand voltage	Required cl (mm)	Measured cl (mm)
1)		2500	4.5 (3.0*1.48)	1)
Supplementary information:				
1) See table 5.4.2.2, 5.4.2.4 and 5.4.3 for measurements.				

5.4.2.4	TABLE: Clearances based on electric strength test			N/A
Test voltage applied between:		Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No
Supplementary information:				

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements					P
Distance through insulation di at/of:	Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)	
Optocouplers (U9102, U9304, U9302) (reinforced insulation)	420	62	1)	0.4	1)	
Insulation Mylar Sheet (under power board) (reinforced insulation)	550	123	1)	0.4	1)	
Insulation Mylar Sheet (between power and rear metal enclosure) (reinforced insulation)	550	123	1)	0.4	1)	
Bobbin (T9101 / T9301) (reinforced insulation)	550	123	1)	0.45	1)	

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Clause	Requirement + Test		Result - Remark		Verdict
insulation tape (For Transformer) (reinforced insulation)	550	123	1)	2 layer	1)
Supplementary information: 1) See table 4.1.2 2) According to clause 5.4.4.9: For <u>bobbin</u> (type: Sumitomo / PM-9820, PM-9630), alternate method is used: $Kr=0.53$, $Vpw=550Vp$. Required electric strength test voltage: $1.2 \times 2 \times 550 / 0.53 = 2491V_{peak}$ For <u>bobbin</u> (type: CHANG CHUN / T375J), alternate method is used: $Kr=0.53$, $Vpw=550Vp$. Required electric strength test voltage: $1.2 \times 2 \times 550 / 0.53 = 2491V_{peak}$ For <u>Insulation tape</u> (type: 3M / 1350F-1(b)) , alternate method is used: $Kr=0.34$, $Vpw=550Vp$. Required electric strength test voltage: $1.2 \times 2 \times 550 / 0.34 = 3883V_{peak}$ For <u>Photo coupler</u> , alternate method is used: $Kr=0.35$, $Vpw=420Vp$. Required electric strength test voltage: $1.2 \times 2 \times 420 / 0.35 = 2880V_{peak}$ For <u>Insulation mylar sheet</u> , alternate method is used: $Kr=0.30$, $Vpw=550Vp$. Required electric strength test voltage: $1.2 \times 2 \times 550 / 0.30 = 4400V_{peak}$					

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Functional:				
Unit: Line and Neutral (without fuse)		DC	2500	No
Basic/supplementary:				
Unit: primary and earth (Metal enclosure)		DC	2500	No
Discharge Gas Tube (SG9905) (for all sources)		DC	2500	No
Reinforced:				
Unit: primary and secondary		DC	4000	No
Photo coupler		DC	4000	No
Mylar sheet		DC	4400	No
Transformer (T9101): primary and secondary (for all sources)		DC	4000	No
Transformer (T9101): primary and core (for all sources)		DC	4000	No
Transformer (T9101): one layer of insulation tape (for all sources)		DC	4000	No
Transformer (T9101): bobbin (for all sources)		DC	4000	No
Transformer (T9301): primary and secondary (for all sources)		DC	4000	No
Transformer (T9301): secondary and core (for all sources)		DC	4000	No
Transformer (T9301): one layer of insulation tape (for all sources)		DC	4000	No
Routine Tests:				

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
--		--	--	--
Supplementary information: Test was performed on all sources of transformer and tape. (See table 4.1.2) Test was performed on all sources of GDT (SG9905). (See table 4.1.2) Test was performed on all sources of Mylar sheet. (See table 4.1.2) All testing Including after Humidity required of clause 5.4.8, there are including unit, transformer and all material of transformer, see appended tables 4.1.2				

5.5.2.2	TABLE: Stored discharge on capacitors				P
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification
264, 60	Phase to Neutral	N	--	4.17	ES1
264, 60	Phase to Neutral	S (R9901 open)	--	12.5	ES1
264, 60	Phase to Neutral	S (R9904 open)	--	10.42	ES1
Supplementary information: X-capacitors installed for testing are: C9901 = 0.82 μ F, C9902 = 0.22 μ F ☒ bleeding resistor rating: 1) R9901=R9902=R9903=R9904=430k Ω ☒ ICX: U9901 =1000V Notes: A. Test Location: Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth B. Operating condition abbreviations: N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition					

5.6.6.2	TABLE: Resistance of protective conductors and terminations				P
Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (m Ω)	
AC inlet earth pin to Metal enclosure	40	2	1.04	26	
Trace (earth screw) to C9904 / C9905 / C9903 earth	40	2	0.640	16	
Trace (earth screw) to C9909 earth	40	2	0.920	23	
Trace (earth screw) to C9906 earth	40	2	0.440	11	
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		P
Supply voltage :			—
Location		Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)
Line to earth, Neutral to earthed accessible parts		1	Max. 0.86
		2*	--
		3	--
		4	--
		5	--
		6	--
		8	--
Supplementary Information: Notes: [1] Supply voltage is the anticipated maximum Touch Voltage [2] Earthed neutral conductor [Voltage differences less than 1% or more] [3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3 [4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable. [5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.			

6.2.2	Table: Electrical power sources (PS) measurements for classification				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s ^{*)}	PS Classification
A	For +24V output (power board) (Normal)	Power (W) :	--	255.97	3
		V _A (V) :	--	23.27	
		I _A (A) :	--	11.0	
B	For +16V output (power board) (Normal)	Power (W) :	--	167.7	3
		V _A (V) :	--	14.84	
		I _A (A) :	--	11.3	
C	For +5.2V output (power board) (Normal)	Power (W) :	--	41.34	2
		V _A (V) :	--	4.98	
		I _A (A) :	--	8.3	
D	For +24V output	Power (W) :	0	--	1
		V _A (V) :	0	--	

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Clause	Requirement + Test		Result - Remark		Verdict
	R9112 / R9115 SC (power board) (Normal)	I _A (A) :	0	--	
E	For +16V output R9112 / R9115 SC (power board) (Normal)	Power (W) :	0	--	1
		V _A (V) :	0	--	
		I _A (A) :	0	--	
F	For +5.2V output R9301 SC (power board) (Normal)	Power (W) :	0	--	1
		V _A (V) :	0	--	
		I _A (A) :	0	--	
Supplementary Information: (*) Measurement taken only when limits at 3 seconds exceed PS1 limits All circuits within the equipment are considered as PS3 except +5.2V output. SC : short circuit.					

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)				N/A
Location		Open circuit voltage After 3 s (V_p)	Measured r.m.s current (I_{rms})	Calculated value ($V_p \times I_{rms}$)	Arcing PIS? Yes / No
Supplementary information: An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V_p) and normal operating condition rms current (I_{rms}) is greater than 15. All components in the equipment are considered as arcing PIS.					

6.2.3.2	Table: Determination of Potential Ignition Sources (Resistive PIS)				N/A
Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured wattage or VA During first 30 s (W / VA)	Measured wattage or VA After 30 s (W / VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary Information:

A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter.

If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification.

A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, or (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.

8.5.5	TABLE: High Pressure Lamp		N/A
Description		Values	Energy Source Classification
Lamp type.....:			—
Manufacturer			—
Cat no.:			—
Pressure (cold) (MPa).....:			MS_
Pressure (operating) (MPa)			MS_
Operating time (minutes)			—
Explosion method			—
Max particle length escaping enclosure (mm) .:			MS_
Max particle length beyond 1 m (mm).....:			MS_
Overall result			
Supplementary information:			

B.2.5	TABLE: Input test							P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status	
HDMI Mode								
90/50	1.25	--	111.2	--	F901	1.25	Max. normal load	
90/60	1.25	--	111.3	--	F901	1.25	Max. normal load	
100/50	1.11	1.5	110.4	--	F901	1.11	Max. normal load	
100/60	1.12	1.5	110.4	--	F901	1.12	Max. normal load	
240/50	0.52	0.6	107.3	--	F901	0.52	Max. normal load	
240/60	0.52	0.6	107.3	--	F901	0.52	Max. normal load	
264/50	0.48	--	106.6	--	F901	0.48	Max. normal load	
264/60	0.48	--	106.6	--	F901	0.48	Max. normal load	
VGA Mode								

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Clause	Requirement + Test			Result - Remark			Verdict
B.2.5	TABLE: Input test						P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
90/50	1.24	--	110.3	--	F901	1.24	Max. normal load
90/60	1.24	--	110.3	--	F901	1.24	Max. normal load
100/50	1.11	1.5	109.4	--	F901	1.11	Max. normal load
100/60	1.11	1.5	109.5	--	F901	1.11	Max. normal load
240/50	0.51	0.6	106.0	--	F901	0.51	Max. normal load
240/60	0.51	0.6	106.1	--	F901	0.51	Max. normal load
264/50	0.48	--	106.0	--	F901	0.48	Max. normal load
264/60	0.48	--	106.0	--	F901	0.48	Max. normal load
AV Mode							
90/50	1.23	--	109.6	--	F901	1.23	Max. normal load
90/60	1.23	--	109.6	--	F901	1.23	Max. normal load
100/50	1.10	1.5	108.7	--	F901	1.10	Max. normal load
100/60	1.10	1.5	108.8	--	F901	1.10	Max. normal load
240/50	0.50	0.6	105.4	--	F901	0.50	Max. normal load
240/60	0.51	0.6	105.5	--	F901	0.51	Max. normal load
264/50	0.47	--	105.1	--	F901	0.47	Max. normal load
264/60	0.48	--	105.1	--	F901	0.48	Max. normal load
Display Mode							
90/50	1.24	--	110.6	--	F901	1.24	Max. normal load
90/60	1.24	--	110.7	--	F901	1.24	Max. normal load
100/50	1.11	1.5	109.7	--	F901	1.11	Max. normal load
100/60	1.11	1.5	109.8	--	F901	1.11	Max. normal load
240/50	0.51	0.6	106.5	--	F901	0.51	Max. normal load
240/60	0.51	0.6	106.5	--	F901	0.51	Max. normal load
264/50	0.48	--	106.1	--	F901	0.48	Max. normal load
264/60	0.48	--	106.2	--	F901	0.48	Max. normal load
Media Play mode (USB and micro SD)							

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Clause	Requirement + Test	Result - Remark	Verdict

B.2.5	TABLE: Input test						P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
90/50	1.07	--	95.2	--	F901	1.07	Max. normal load
90/60	1.08	--	95.9	--	F901	1.08	Max. normal load
100/50	0.96	1.5	94.5	--	F901	0.96	Max. normal load
100/60	0.97	1.5	95.4	--	F901	0.97	Max. normal load
240/50	0.44	0.6	92.1	--	F901	0.44	Max. normal load
240/60	0.45	0.6	92.6	--	F901	0.45	Max. normal load
264/50	0.42	--	91.7	--	F901	0.42	Max. normal load
264/60	0.43	--	92.3	--	F901	0.43	Max. normal load
Supplementary information: Maximum Normal load condition for this equipment is to operate at maximum backlight, brightness and contrast of LED backlight, and adjust to max. volume of speakers with 1KHz sine waveform, 5V/2.0A for USB port, 3.3V/0.5A for Display port and SD card reader port.							

B.3	TABLE: Abnormal operating condition tests	P
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Clause	Requirement + Test				Result - Remark			Verdict
Ambient temperature (°C)					40 °C, Max. operated temp.			—
Power source for EUT: Manufacturer, model/type, output rating ...:					--			—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
T9301 (After D9305 +5.2V)	overload	240	3.1hr	F901	0.63	Type J	T9301 coil= 85.8 °C T9101= 76.9 °C Ambient= 40.0 °C	Temperature is stabled at output overload condition 4.5 A, then unit shutdown when increase to 4.8 A. No damage, NB, NC, NT, ASRE.
T9101 (After D9107, D9108 +24V)	overload	240	4.1hr	F901	0.90	Type J	T9301 coil=58.7 °C T9101 coil=120.9 °C Ambient= 40.0 °C	Temperature is stabled at output overload condition 5.0 A, then unit shutdown when increase to 5.5 A. No damage, NB, NC, NT, ASRE.
T9101 (After D9109, D9110 +16V)	overload	240	3.4hr	F901	1.0	Type J	T9301 coil=59.2 °C T9101 coil=140.0 °C Ambient= 40.0 °C	Temperature is stabled at output overload condition 9.0 A, then unit shutdown when increase to 9.5 A. No damage, NB, NC, NT, ASRE.
+5.2V output	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, TC: max. 2.2mA _{pk} , ASRE.
+24V output	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, TC: max. 2.2mA _{pk} , ASRE.

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Clause	Requirement + Test				Result - Remark			Verdict
B.3	TABLE: Abnormal operating condition tests							P
Ambient temperature (°C)					40 °C, Max. operated temp.			—
Power source for EUT: Manufacturer, model/type, output rating ..:					--			—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
+16V / +16V_A output	short	240	10 min	F901	0.08	--	--	Unit shutdown, no damage, NB, NC, NT, TC: max. 2.1mVpk, ASRE.
USB output	overload	240	4.1hr	F901	0.55	Type J	PCB near U427 =69.9 °C, Ambient= 40.0 °C	Temperature is stabled at USB output overload condition 2.1 A, then USB no output when increase to 2.2 A. No damage, NB, NC, NT, max. 2.1mVpk, ASRE.
T9301 (after L9304) (+5.2V)	overload	240	7hr 32mins	F901	0.64	Type J	T9301=8 3.8°C T9101=7 4.7°C Amb=40.0°C Temperature for all components < 300 °C	Temperature is stabled at output overload condition 4.7A, then unit shutdown when increase to 5.0 A. No damage, NB, NC, NT, max. 2.1mVpk, ASRE.
T9101 (after L9103) (+24V)	overload	240	3hr 8mins	F901	0.62	Type J	T9301=5 8.7°C T9101=1 40.2°C Amb=40.0°C Temperature for all components < 300 °C	Temperature is stabled at output overload condition 4.5 A, then unit shutdown when increase to 4.7 A. No damage, NB, NC, NT, max. 2.1mVpk, ASRE.

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Clause	Requirement + Test				Result - Remark			Verdict
B.3	TABLE: Abnormal operating condition tests							P
Ambient temperature (°C)					40 °C, Max. operated temp.			—
Power source for EUT: Manufacturer, model/type, output rating ...:					--			—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
T9101 (after L9101) (+16V-A)	overload	240	2hr 33mins	F901	1.04	Type J	T9301=5 9.2°C T9101=1 51.1 °C Amb=40.0°C Tempera ture for all compo nents < 300 °C	Temperature is stabled at output overload condition 9.5 A, then unit shutdown when increase to 10.0 A. No damage, NB, NC, NT, max. 2.1mVpk, ASRE.
T9101 (after L9102) (+16V)	Overload	240	3hr 37mins	F901	1.04	Type J	T9301=5 8.8°C T9101=1 55.7°C Amb=40.0°C Temperat ure for all compone nts < 300 °C	Temperature is stabled at output overload condition 9.5 A, then unit shutdown when increase to 10.0 A. No damage, NB, NC, NT, max. 2.1mVpk, ASRE.
SD port overload	overload	240	2hr 42mins	F901	0.54	Type J	PCB near U447=67.5°C Amb=40.0°C Temperat ure for all compone nts < 300 °C	Temperature is stabled at output overload condition 1.5 A, then SD port shutdown when increase to 1.8 A. No damage, NB, NC, NT, max. 2.1mVpk, ASRE.

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Clause	Requirement + Test				Result - Remark			Verdict
B.3	TABLE: Abnormal operating condition tests							P
Ambient temperature (°C)					40 °C, Max. operated temp.			—
Power source for EUT: Manufacturer, model/type, output rating ..:					--			—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
DP port overload	overload	240	3hr 59mins	F901	0.53	Type J	PCB near U552=65.7°C Amb=40.0°C Temperature for all components < 300 °C	Temperature is stabled at output overload condition 0.7 A, then DP port shutdown when increase to 1.0 A. No damage, NB, NC, NT, max. 2.1mVpk, ASRE.
Supplementary information:								
1) Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column “Abnormal/Fault.” Specify if test condition by indicating “Abnormal” then the condition for a Clause B.3 test or “Single Fault” then the condition for Clause B.4.								
2) Results Key: IP = Internal protection operated (Component indicated); CT = Constant temperatures were obtained; TW = Transformer winding opened; CD = Components damaged (damaged components indicated); NB = No indication of dielectric breakdown; YB = Dielectric breakdown (time and location indicated); NC = Cheesecloth remained intact; YC = Cheesecloth charred or flamed; NT = Tissue paper remained intact; YT = Tissue paper charred or flamed. TC = Touch Current measured; ASRE = All safeguards remained effectively.								

B.4	TABLE: Fault condition tests							P
Ambient temperature (°C)					25 °C, if nothing else specified.			—
Power source for EUT: Manufacturer, model/type, output rating ..					--			—
Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
BD9901 pin1-4	short	240	1 sec	F901	0	--	--	F901 opened immediately, no other components damaged, NB, NC, NT, max. 1.2mVpk, ASRE.

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Clause	Requirement + Test				Result - Remark			Verdict
C9802	short	240	1 sec	F901	0	--	--	F901 opened immediately, no other components damaged, NB, NC, NT, max. 1.2mVpk, ASRE.
Q9801 pin G-S	short	240	10 min	F901	0.51	--	--	Unit normally operated, No damaged, NB, NC, NT, TC max. 2.1mVpk, ASRE.
Q9801 pin G-D	short	240	1 sec	F901	0	--	--	F901 opened immediately, no other components damaged, NB, NC, NT, max. 1.2mVpk, ASRE.
Q9801 pin S-D	short	240	1 sec	F901	0	--	--	F901 opened immediately, no other components damaged, NB, NC, NT, max. 1.2mVpk, ASRE.
Q9101 pin G-S	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
Q9101 pin G-D	short	240	1 sec	F901	0	--	--	F901 opened immediately, no other components damaged, NB, NC, NT, max. 1.2mVpk, ASRE.
Q9101 pin S-D	short	240	1 sec	F901	0	--	--	F901 opened immediately, no other components damaged, NB, NC, NT, max. 1.2mVpk, ASRE.
Q9102 pin G-S	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.

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Clause	Requirement + Test				Result - Remark			Verdict
Q9102 pin G-D	short	240	1 sec	F901	0	--	--	F901 opened immediately, no other components damaged, NB, NC, NT, max. 1.2mA _{pk} , ASRE.
Q9102 pin S-D	short	240	1 sec	F901	0	--	--	F901 opened immediately, no other components damaged, NB, NC, NT, max. 1.2mV _{pk} , ASRE.
U9801 pin 2-7	short	240	10 min	F901	0.51	--	--	Unit normally operated, No damaged, NB, NC, NT, TC max. 2.1mV _{pk} , ASRE.
U9101 pin 3-16	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
U9101 pin 11-3	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
T9101 pin 1-4	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
T9101 pin 5,6 -7,8	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
T9101 pin 7,8 - 9,10	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
T9101 pin 9,10 - 11	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
T9101 pin 12 - 11	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
T9301 pin 6-8	short	240	10 min	F901	0.11	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
T9301 pin 9 -8	short	240	10 min	F901	0.11	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.

IEC 62368-1								
Clause	Requirement + Test				Result - Remark			Verdict
T9301 pin 10-9	short	240	10 min	F901	0.11	--	--	Unit shutdown, CD (U903), TC max. 1.8mVpk, NB, NC, NT, ASRE, test total 3 times with same result.
T9301 pin 1,2-4,5	short	240	10 min	F901	0.11	--	--	Unit shutdown, CD (U903), TC max. 1.8mVpk, NB, NC, NT, ASRE, test total 3 times with same result..
D9305	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
D9108	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
D9107	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
D9109	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
D9110	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
Speaker	short	240	10 min	F901	0.50	--	--	Unit normally operated, No damaged, NB, NC, NT, TC max. 2.1mVpk, ASRE.
J3 (LED connector) to matel part	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, TC max. 1.8mVpk, ASRE.
J3 (LED connector) to Secondary connector part	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, TC max. 1.8mVpk, ASRE.

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
C9904 to GND 901	short	240	10 min	F901	0.51	--	--	Unit normally operated, No damaged, NB, NC, NT, TC max. 2.1mVpk, ASRE.
TH9901 to GND 901	short	240	10 min	F901	0.51	--	--	Unit normally operated, No damaged, NB, NC, NT, TC max. 2.1mVpk, ASRE.
U9301 pin 1-8	short	240	10 min	F901	0.14	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
U9301 pin 1-3	short	240	10 min	F901	0.14	--	--	Unit shutdown, CD (U903), TC max. 1.8mVpk, NB, NC, NT, ASRE, test total 3 times with same result..
U9301 pin 3-8	short	240	10 min	F901	0.14	--	--	Unit shutdown, CD (U903), TC max. 1.8mVpk, NB, NC, NT, ASRE, test total 3 times with same result.
U9102 pin 1-2	short	240	10 min	F901	0.11	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
U9102 pin 3-4	short	240	10 min	F901	0.11	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
U9102 pin 1	open	240	10 min	F901	0.11	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
U9302 pin 1-2	short	240	10 min	F901	0.11	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
U9302 pin 3-4	short	240	10 min	F901	0.11	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
U9302 pin 1	open	240	10 min	F901	0.11	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.

IEC 62368-1								
Clause	Requirement + Test				Result - Remark			Verdict
U9303 pin 1-2	short	240	10 min	F901	0.11	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
U9303 pin 3-4	short	240	10 min	F901	0.11	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
U9303 pin 1	open	240	10 min	F901	0.11	--	--	Unit shutdown, no damage, NB, NC, NT, ASRE.
The following considered for Super Capacitor (C4512) / ²⁾								
Q421 pin C-B	short	240	10 min	F901	0.51	--	--	Unit normally operated, No damaged, NB, NC, NT, TC max. 2.1mVpk, ASRE.
Q421 pin C-E	short	240	10 min	F901	0.51	--	--	Unit normally operated, No damaged, NB, NC, NT, TC max. 2.1mVpk, ASRE.
Q421 pin E-B	short	240	10 min	F901	0.51	--	--	Unit normally operated, No damaged, NB, NC, NT, TC max. 2.1mVpk, ASRE.
R4550	short	240	10 min	F901	0.51	--	--	Unit normally operated, No damaged, NB, NC, NT, TC max. 2.1mVpk, ASRE.
C4512	short	240	10 min	F901	0.51	--	--	Unit normally operated, No damaged, NB, NC, NT, TC max. 2.1mVpk, ASRE.
Supplementary information:								
1) Results Key: IP = Internal protection operated (Component indicated); CT = Constant temperatures were obtained; TW = Transformer winding opened; CD = Components damaged (damaged components indicated); NB = No indication of dielectric breakdown; YB = Dielectric breakdown (time and location indicated); NC = Cheesecloth remained intact; YC = Cheesecloth charred or flamed; NT = Tissue paper remained intact; YT = Tissue paper charred or flamed. TV = Touch voltage measured; ASRE = All safeguards remained effectively.								
2) Super Capacitor (C4512) Mfr.: Panasonic Electronic Devices, model name / type: EECF5R5H474 (5.5Vdc / 0.47F)								

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

Annex M	TABLE: Batteries								N/A	
The tests of Annex M are applicable only when appropriate battery data is not available										
Is it possible to install the battery in a reverse polarity position?.....:										
	Non-rechargeable batteries			Rechargeable batteries						
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging		
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	
Max. current during normal condition										
Max. current during fault condition										
Test results:									Verdict	
- Chemical leaks										
- Explosion of the battery										
- Emission of flame or expulsion of molten metal										
- Electric strength tests of equipment after completion of tests										
Supplementary information:										

Annex M.4	Table: Additional safeguards for equipment containing secondary lithium batteries					N/A
Battery/Cell No.	Test conditions	Measurements			Observation	
		U	I (A)	Temp (C)		
	Normal					
	Abnormal					
	Single fault –SC/OC					
	Normal					
	Abnormal					
	Single fault – SC/OC					
Supplementary Information:						

Battery identification	Charging at T_{lowest} (°C)	Observation	Charging at $T_{highest}$ (°C)	Observation
Supplementary Information:				

IEC 62368-1						
Clause	Requirement + Test		Result - Remark		Verdict	
Annex Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)					P
Note: Measured UOC (V) with all load circuits disconnected:						
Output Circuit	Components	U _{oc} (V)	I _{sc} (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
Display connector (CN506)						
Pin 18	Normal	2.62	0	8.0	0	100
Pin 20	Normal	3.33	0.7	8.0	1.78	100
U522 pin 1-5	SC	3.34	1.6	8.0	2.42	100
C5302	SC	0	--	8.0	--	100
Other pins	Normal	0	--	8.0	--	100
According to table 2B, for HDMI connector (CN503)						
Pin 13	Normal	2.95	0	8.0	0	100
Pin 15	Normal	1.78	0	8.0	0	100
Pin 16	Normal	1.26	0	8.0	0	100
Pin 19	Normal	1.29	0	8.0	0	100
Other pins	Normal	0	--	8.0	--	100
According to table 2B, for HDMI connector (CN502)						
Pin 13	Normal	2.95	0	8.0	0	100
Pin 15	Normal	1.78	0	8.0	0	100
Pin 16	Normal	1.26	0	8.0	0	100
Pin 19	Normal	1.29	0	8.0	0	100
Other pins	Normal	0	--	8.0	--	100
According to table 2B, for HDMI connector (CN501)						
Pin1, 3, 7, 9	Normal	3.31	0	8.0	5.6	100
Pin4, 6, 10, 12, 13	Normal	2.95	0	8.0	6.83	100
Other pins	Normal	0	--	8.0	--	100
According to table 2B, for USB connector (CN409)						
Pin 1	Normal	5.08	3.3	8.0	7.26	100
C4435	SC	0	--	8.0	--	100
U427 pin 1-6	SC	5.08	7.2	8.0	14.7	100
Other pins	Normal	0	--	8.0	--	100
According to table 2B, for micro SD connector (CN408)						
Pin 4	Normal	3.32	1.6	8.0	2.44	100
C4597	SC	0	--	8.0	--	100
U447 pin 1-5	SC	3.34	3.4	8.0	3.84	100
Other pins	Normal	0	--	8.0	--	100

IEC 62368-1						
Clause	Requirement + Test			Result - Remark		Verdict
According to table 2B, for VGA connector (CN101)						
Pin 5	Normal	2.64	0	8.0	0	100
Pin 9	Normal	1.73	0	8.0	0	100
Pin 12, 15	Normal	3.46	0	8.0	0	100
Other pins	Normal	0	--	8.0	--	100
According to table 2B, for Audio in connector (CN605)						
All pins	Normal	0	--	8.0	--	100
According to table 2B, for Audio in connector (CN604)						
All pins	Normal	0	--	8.0	--	100
According to table 2B, for Vedio in connector (CN121)						
All pins	Normal	0	--	8.0	--	100
According to table 2B, for RS232 in connector (CN415)						
All pins	Normal	0	--	8.0	--	100
According to table 2B, for Remote out connector (CN402)						
All pins	Normal	0	--	8.0	--	100
According to table 2B, for Remote in connector (CN401)						
All pins	Normal	0	--	8.0	--	100
According to table 2B, for Audio out connector (CN603)						
All pins	Normal	0	--	8.0	--	100
According to table 2B, for LAN connector (CN707)						
All pins	Normal	0	--	8.0	--	100
According to table 2B, for internal Speaker connector (CN607)						
Pin 2, Pin 4	Normal	12.38	2.2	8.0	26.65	100
Other pins	Normal	0	--	8.0	--	100
Supplementary Information: SC=Short circuit, OC=Open circuit						

T.2, T.3, T.4, T.5		TABLE: Steady force test				P
Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation	
Adhesive	See appended table 4.1.2	See appended table 4.1.2	10 N / 250N	5	All safeguards remain effective.	
Enclosure / Top	See appended table 4.1.2	See appended table 4.1.2	250N	5	No cracking. All safeguards remain effective.	
Enclosure / Side	See appended table 4.1.2	See appended table 4.1.2	250N	5	No cracking. All safeguards remain effective.	

IEC 62368-1					
Clause	Requirement + Test			Result - Remark	Verdict
Enclosure / Bottom	See appended table 4.1.2	See appended table 4.1.2	250N	5	No cracking. All safeguards remain effective.
Supplementary information:					

T.6, T.9	TABLE: Impact tests				P
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation	
Enclosure / Rear	See appended table 4.1.2	See appended table 4.1.2	1300	No cracking, NB. All safeguards remain effective.	
Adhesives / Base stand	See appended table 4.1.2	See appended table 4.1.2	1300	No cracking, NB. All safeguards remain effective.	
Supplementary information: NB = No indication of dielectric breakdown.					

T.7	TABLE: Drop tests				N/A
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation	
Supplementary information:					

T.8	TABLE: Stress relief test					P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
unit	See appended table 4.1.2	See appended table 4.1.2	70	7	No indication of shrinkage or distortion on enclosures due to the stress relief test.	
Insulation Sheet	See appended table 4.1.2	See appended table 4.1.2	70	7	No indication of shrinkage or distortion on enclosures due to the stress relief test.	
Supplementary information:						

List of test equipment used:

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

Clause	Measurement / testing	Testing / measuring equipment / material used	Range used	Calibration date

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

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 62368-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES (Audio/video, information and communication technology equipment Part 1: Safety requirements)			
Differences according to: EN 62368-1:2014			
Attachment Form No.: EU_GD_IEC62368_1B			
Attachment Originator: Intertek Semko AB			
Master Attachment: Date (2015-08)			
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	CENELEC COMMON MODIFICATIONS (EN)		N/A
1	NOTE Z1		N/A
4.Z1	Protective devices included as integral parts of the equipment or as parts of the building installation:	The equipment if for building-in and shall be evaluated for the final system.	N/A
	a) Included as parts of the equipment		N/A
	b) For components in series with the mains; by devices in the building installation		N/A
	c) For pluggable type B or permanently connected; by devices in the building installation		N/A
5.4.2.3.2.4	Interconnection with external circuit	No external circuit.	N/A
10.2.1	Additional requirements in 10.5.1	No such radiation provided.	N/A
10.5.1	RS1 compliance measurement conditions	See above.	N/A
10.6.2.1	EN 71-1:2011, 4.20 and methods and distances	See above.	N/A
10.Z1	Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz		N/A
G.7.1	NOTE Z1	No power supply cord provided.	N/A

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		P
4.1.15	Denmark, Finland, Norway and Sweden: Class I pluggable equipment type A marking		P
4.7.3	United Kingdom: Torque test socket-outlet BS 1363, and the plug part BS 1363.	Not intended to plug directly into a wall socket-outlet.	N/A
5.2.2.2	Denmark: Warning for high touchcurrent	The touch current not exceeds the limits of 3.5mA a.c. or 10mA d.c..	N/A
5.4.11.1 and Annex G	Finland and Sweden: Separation of the telecommunication network from earth	No telephone ringing signal.	N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.2.1	Norway: Capacitors rated for the applicable line-to-line voltage (230 V).	Class III equipment.	N/A
5.5.6	Finland, Norway and Sweden: Resistors used as basic safeguard or bridging basic insulation comply with G.10.1 and G.10.2.		P
5.6.1	Denmark: Protection for pluggable equipment type A; integral part of the equipment		N/A
5.6.4.2.1	Ireland and United Kingdom: The protective current rating is taken to be 13 A		N/A
5.6.5.1	Ireland and United Kingdom: Conductor sizes of flexible cords to be accepted by terminals for equipment rated 10 A to 13 A		N/A
5.7.5	Denmark: The installation instruction affixed to the equipment if high protective conductor current		N/A
5.7.6.1	Norway and Sweden: Television distribution system isolation text in user manual	No such external circuit provided.	N/A
5.7.6.2	Denmark: Warning for high touch current	No such external circuit provided.	N/A
B.3.1 and B.4	Ireland and United Kingdom: Tests conducted using an external miniature circuit breaker or protective devices included as an integral part of the direct plug-in equipment		N/A
G.4.2	Denmark: Appliances rated ≤ 13 A provided with a plug according to DS 60884-2-D1:2011.		N/A
	Class I equipment provided with socket-outlets provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.		N/A
	If a single-phase equipment having rated >13 A or poly-phase equipment provided with a supply cord with a plug, plug in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.		N/A
	Mains socket outlets intended for providing power to Class II apparatus rated 2,5 A in accordance with DS 60884-2-D1:2011 standard sheet DKA 1-4a.		N/A
	Other current rating socket outlets in compliance with Standard Sheet DKA 1-3a or DKA 1-1c.		N/A
	Mains socket-outlets with earth in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	United Kingdom: The plug part of direct plug-in equipment assessed to BS 1363		N/A
G.7.1	United Kingdom: Equipment fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768	No power supply cord provided.	N/A
G.7.1	Ireland: Apparatus provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use	No power supply cord provided.	N/A
G.7.2	Ireland and United Kingdom: A power supply cord for equipment which is rated over 10 A and up to and including 13 A.	No power supply cord provided.	N/A

ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N/A
10.5.2	Germany: Cathode ray tube intended for the display of visual images, authorization or application of type approval and marking.	No cathode ray tube.	N/A
F.1	Italy: The power consumption in Watts (W) indicated on TV receiver and in instruction for use	No such equipment.	N/A
	TV receivers provided with an instruction for use, schematic diagrams and adjustments procedure in Italian language.		N/A
	Marking for controls and terminals in Italian language.		N/A
	Conformity declaration according to the above requirements in the instruction manual		N/A
	First importers of TV receivers manufactured outside EEC previous conformity certification to the Italian Post Ministry and Certification number on the backcover.		N/A

ATTACHMENT TO TEST REPORT IEC 62368-1 2th Ed. U.S.A. NATIONAL DIFFERENCES Audio/video, information and communication technology equipment – Part 1: Safety requirements	
Differences according to.....:	CSA/UL 62368-1:2014
Attachment Form No.....:	US&CA_ND_IEC623681B
Attachment Originator	UL(US)
Master Attachment	Date 2015-06
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Clause	Requirement + Test	Result - Remark	Verdict
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IEC 62368-1 - US and Canadian National Differences Special National Conditions based on Regulations and Other National Differences			
1.1	All equipment is to be designed to allow installation according to the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, for such equipment marked or otherwise identified, installation is allowed per the Standard for the Protection of Information Technology Equipment, ANSI/NFPA 75.	Considered.	P
1.4	Additional requirements apply to some forms of power distribution equipment, including sub-assemblies.	Considered.	P
4.1.17	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the NEC.		N/A
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC generally are required to have special construction features and identification markings.		N/A
4.8	Lithium coin / button cell batteries have modified special construction and performance requirements.		N/A
5.6.3	Protective earthing conductors comply with the minimum conductor sizes in Table G.5, except as required by Table G.7ADV.1 for cord connected equipment, or Annex DVH for permanently connected equipment		N/A
5.7.7	Equipment intended to receive telecommunication ringing signals complies with a special touch current measurement tests.		N/A
6.5.1	PS3 wiring outside a fire enclosure complies with single fault testing in B.4, or be current limited per one of the permitted methods.		N/A

Clause	Requirement + Test	Result - Remark	Verdict
Annex F (F.3.3.8)	Output terminals provided for supply of other equipment, except mains, supply are marked with a maximum rating or references to which equipment it is permitted to be connected.		N/A
Annex G (G.7.1)	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		N/A
Annex G (G.7.3)	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.	No power supply cord provided.	N/A
	Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
Annex G (G.7.5)	Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Power supply cords are required to be no longer than 4.5 m in length if used in ITE Rooms.	No power supply cord provided.	N/A
Annex H.2	Continuous ringing signals under normal operating conditions up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	No telephone ringing signal.	N/A
Annex H.4	For circuits with other than ringing signals and with voltages exceeding 42.4 V _{peak} or 60 V d.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.	No telephone ringing signal.	N/A
Annex M	Battery packs for stationary applications comply with special component requirements.	No such parts.	N/A
Annex DVA (1)	Equipment intended for use in spaces used for environmental air are subjected to special flammability requirements for heat and visible smoke release.	No such equipment.	N/A
	For ITE room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A
	Consumer products designed or intended primarily for children 12 years of age or younger are subject to additional requirements in accordance with U.S. & Canadian Regulations.		N/A
	Baby monitors additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
Annex DVA (5.6.3)	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.		N/A

Clause	Requirement + Test	Result - Remark	Verdict
Annex DVA (6.3)	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30.	No flammable liquid.	N/A
Annex DVA (6.4.8)	For ITE room applications, enclosures with combustible material measuring greater than 0.9 m ² (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less. For equipment with the same dimensions for other applications, an external surface that is not a fire enclosure requires a min. flammability classification of V-1.	The equipment has no combustible material greater than 0.9 m ² or single dimension greater than 1.8 m.	N/A
Annex DVA (10.3.1)	Equipment with lasers meets the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No lasers.	N/A
Annex DVA (10.5.1)	Equipment that produces ionizing radiation complies with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No x-radiation.	N/A
Annex DVA (F.3.3.3)	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. Additional considerations apply for voltage ratings that exceed the attachment cap rating or are lower than the "Normal Operating Condition" in Table 2 of CAN/CSA C22.2 No. 235."		N/A
Annex DVA (F.3.3.5)	Equipment identified for ITE (computer) room installation is marked with the rated current		N/A
Annex DVA (G.1)	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position	No switch.	N/A
Annex DVA (G.3.4)	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.	No such components used.	N/A
Annex DVA (G.4.2)	Equipment with isolated ground (earthing) receptacles complies with NEC 250.146(D) and CEC 10-112 and 10-906(8).		N/A
Annex DVA (G.4.3)	Where a fuse is used to provide Class 2 or Class 3 current limiting, it is not operator-accessible unless it is non- interchangeable.		N/A
Annex DVA (G.5.3)	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.		N/A
Annex DVA (G.5.4)	Motor control devices are required for cord-connected equipment with a mains-connected motor if the equipment is rated more than 12 A, or if the equipment has a nominal voltage rating greater than 120 V, or if the motor is rated more than 1/3 hp (locked rotor current over 43 A).		N/A

Clause	Requirement + Test	Result - Remark	Verdict
Annex DVA (Annex M)	For ITE room applications, equipment with battery systems capable of supplying 750 VA for five minutes have a battery disconnect means that may be connected to the ITE room remote power-off circuit.	No such battery system used.	N/A
Annex DVA (Q)	Wiring terminals intended to supply Class 2 outputs according to the NEC or CEC Part 1 are marked with the voltage rating and "Class 2" or equivalent; marking is located adjacent to the terminals and visible during wiring.		N/A
Annex DVB (1)	Additional requirements apply for equipment used for entertainment purposes intended for installation in general patient care areas of health care facilities.	No such equipment.	N/A
Annex DVC (1)	Additional requirements apply for equipment intended for mounting under kitchen cabinets.	No such equipment.	N/A
Annex DVE (4.1.1)	Some equipment, components, sub-assemblies and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material requirements. Components required to comply include: appliance couplers, attachment plugs, battery back-up systems, battery packs, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultra-capacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), ground-fault current interrupters, interconnecting cables, data storage equipment, printed wiring, protectors for communications circuits, receptacles, surge protective devices, vehicle battery adapters, wire connectors, and wire and cables.	All components identified are either comply with IEC standards or relevant requirements of CSA and UL component standards.	P
Annex DVH	Equipment for permanent connection to the mains supply is subjected to additional requirements.		N/A
Annex DVH (DVH.1)	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains are in accordance with the NEC/CEC.		N/A
Annex DVH (DVH.3.2)	Terminals for permanent wiring, including protective earthing terminals, are suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and are specially marked when specified.	No such terminals.	N/A
Annex DVH (DVH.3.2)	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm ²).	No wire binding screws.	N/A
Annex DVH (DVH.4)	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	Not permanently connected equipment.	N/A

Clause	Requirement + Test	Result - Remark	Verdict
Annex DVH (DVH 5.5)	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, complies with special earthing, wiring, marking and installation instruction requirements.	Not for connection to a DC mains supply.	N/A
Annex DVI (6.7)	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses.	No telephone ringing signal.	N/A
Annex DVJ (10.6.1)	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.	No telephone ringing signal.	N/A

Enclosure

Type	Supplement ID	Description
Photographs	3-01	Overall front view
Photographs	3-02	Overall rear view
Photographs	3-03	Connector side view-1
Photographs	3-04	Connector side view-2
Photographs	3-05	Internal view -1
Photographs	3-06	Internal view -2
Photographs	3-07	Top view of power board
Photographs	3-08	Bottom view of power board
Photographs	3-09	Top view of main board
Photographs	3-10	Bottom view of main board
Photographs	3-11	Rear enclosure inside with mylar sheet
Photographs	3-12	Top view of LED board
Photographs	3-13	Bottom view of LED board
Photographs	3-14	stand base
Diagrams	4-01	Front bezel dimension
Diagrams	4-02	Rear cover dimension
Diagrams	4-03	Side cover dimension (Right)
Diagrams	4-04	Side cover dimension (Left)
Diagrams	4-05	Top cover dimension
Diagrams	4-06	Bottom cover dimension
Diagrams	4-07	Choke (L9901, L9902)
Diagrams	4-08	Choke (L9801)
Diagrams	4-09	Transformer (T9101)
Diagrams	4-10	Transformer (T9301)
Schematics + PWB	5-01	Power board layout
Miscellaneous	6-01	Additional Table



Photographs 3-02

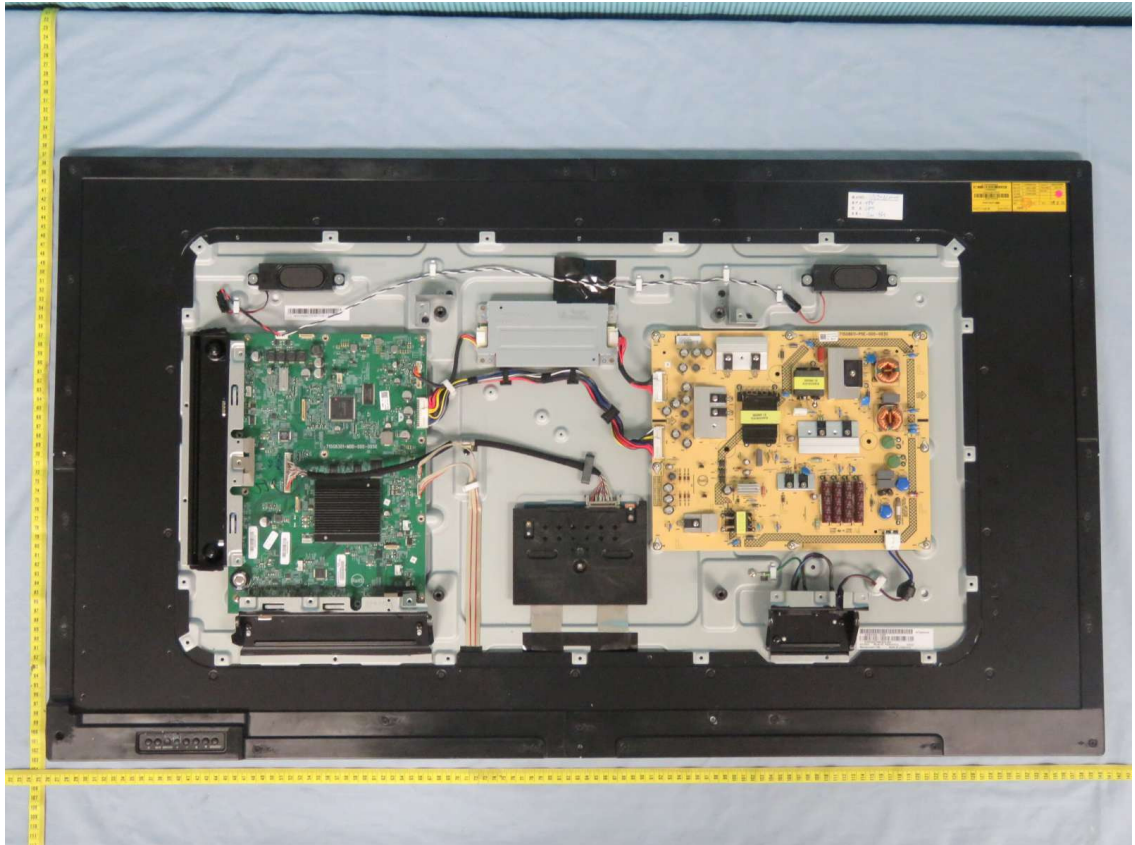


Photographs 3-03

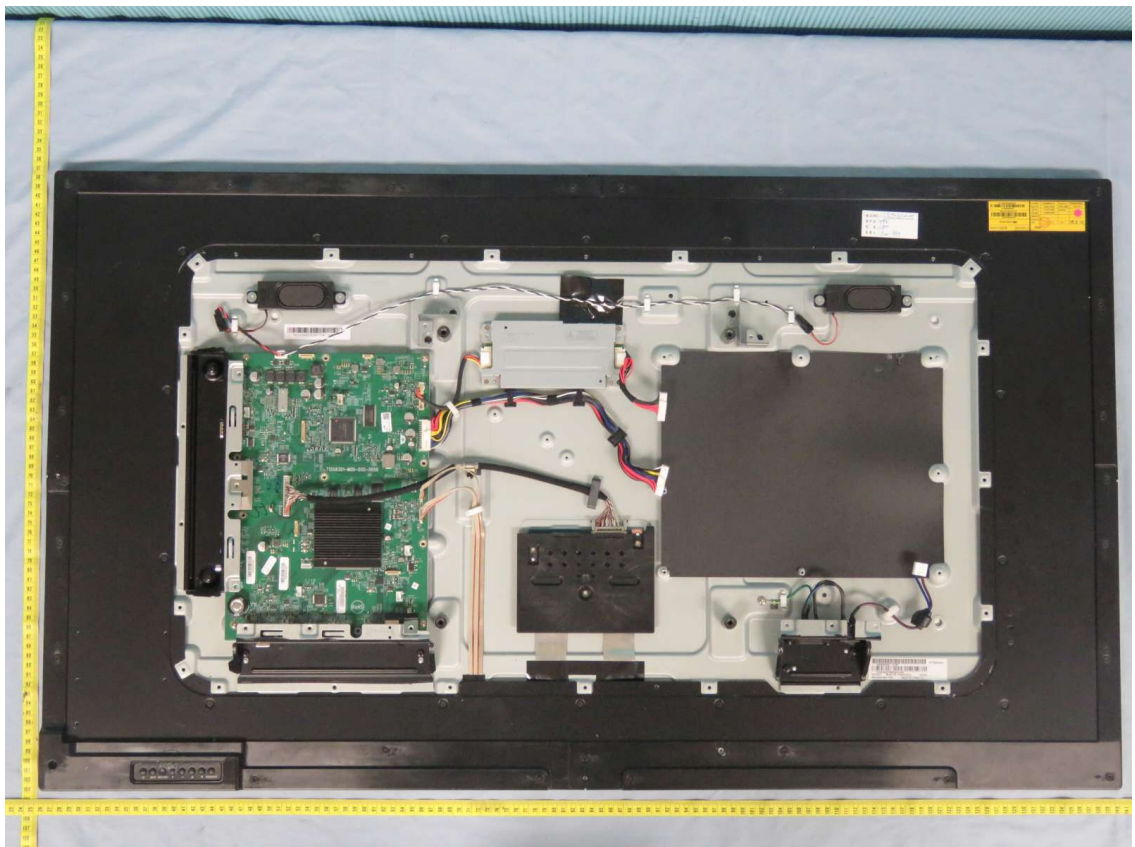


Photographs 3-04

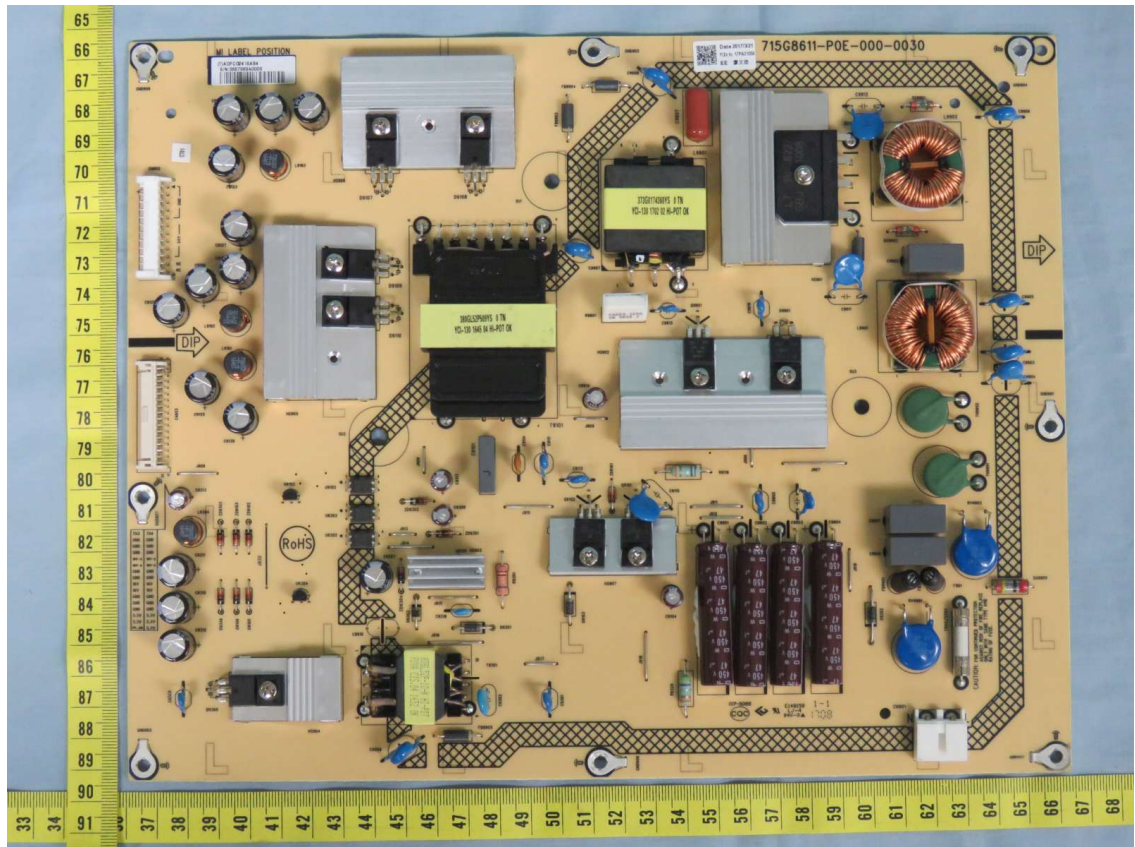




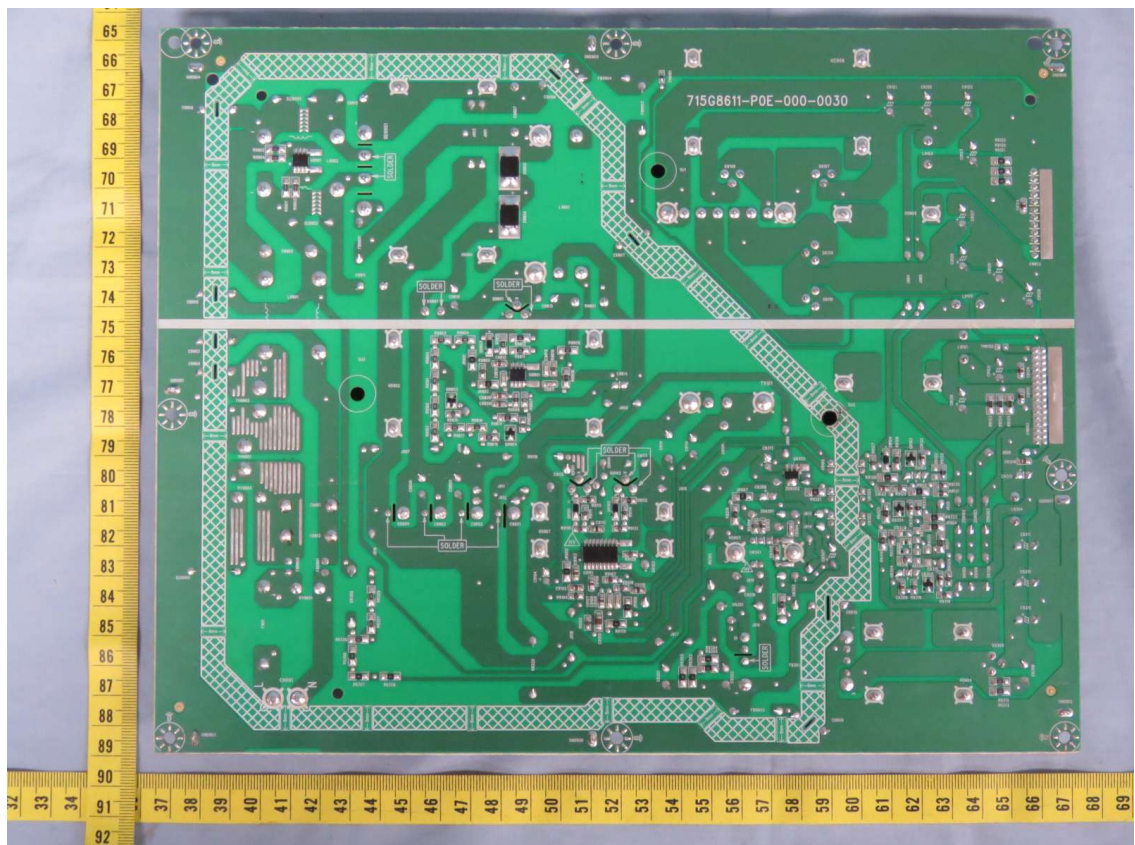
Photographs 3-06



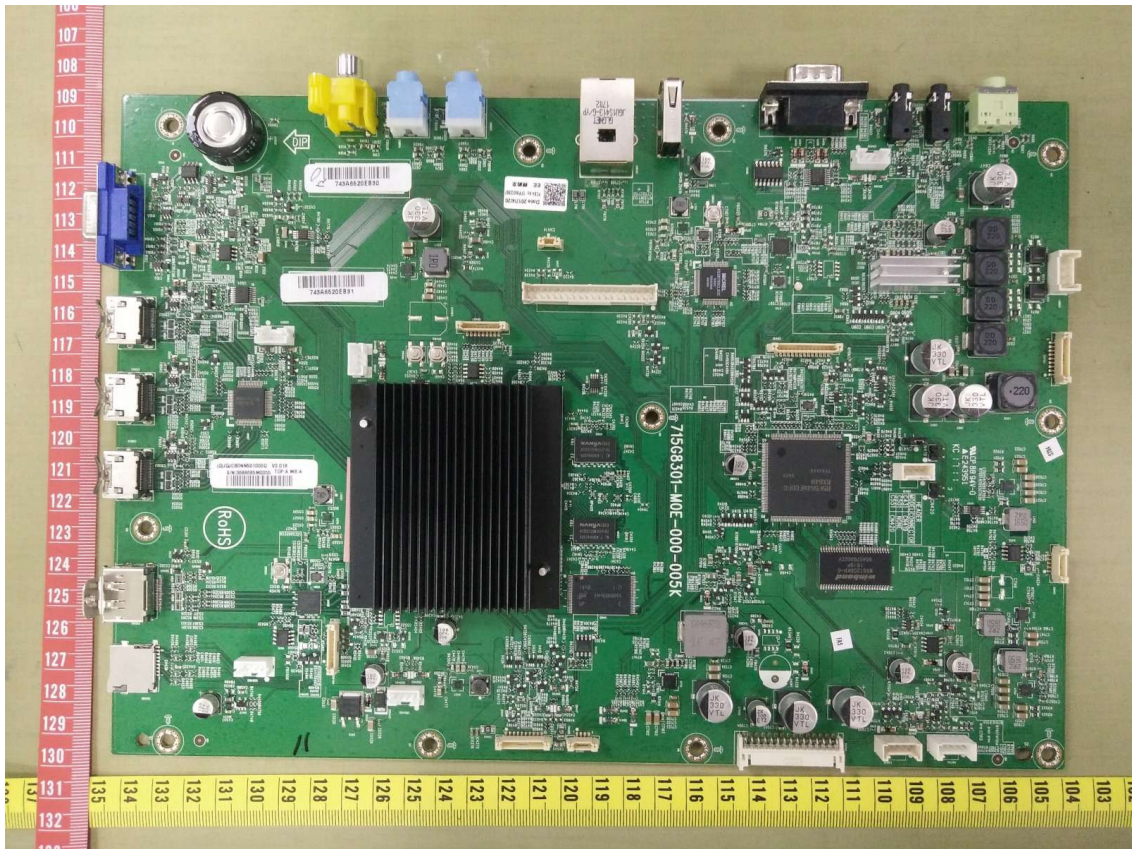
Photographs 3-07



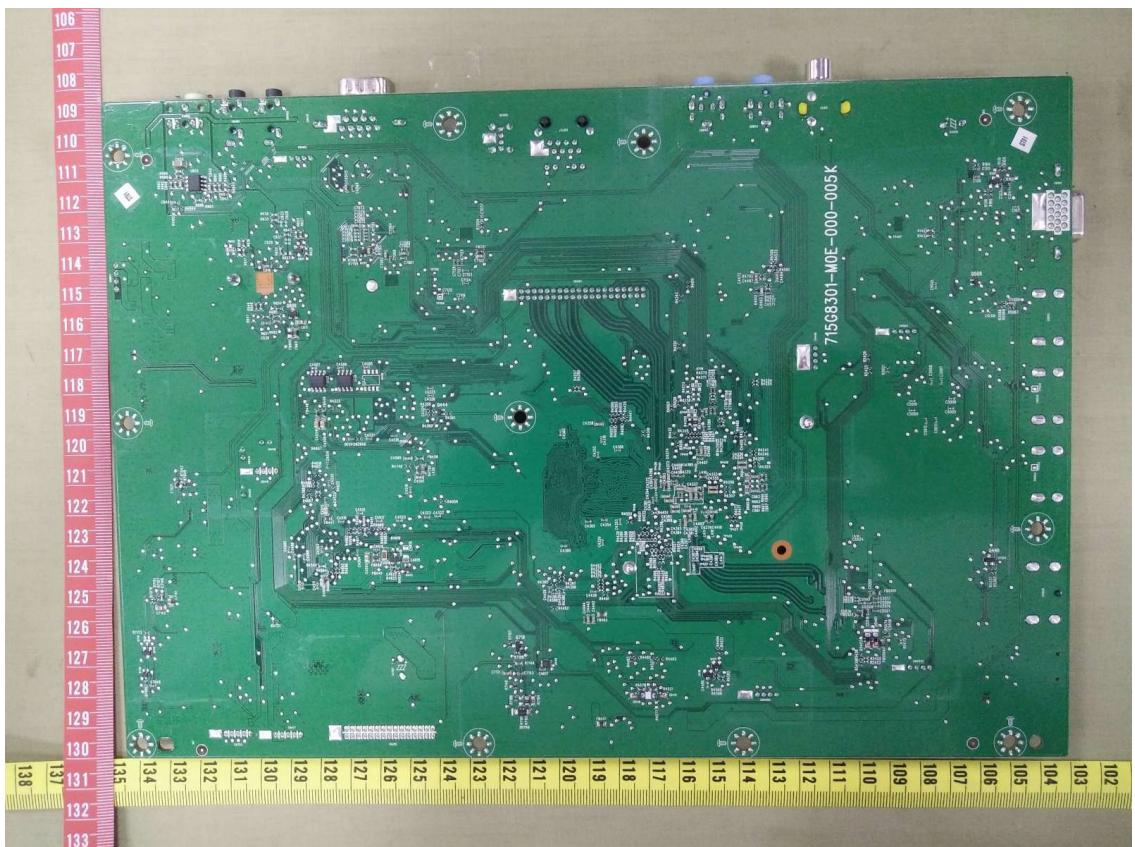
Photographs 3-08



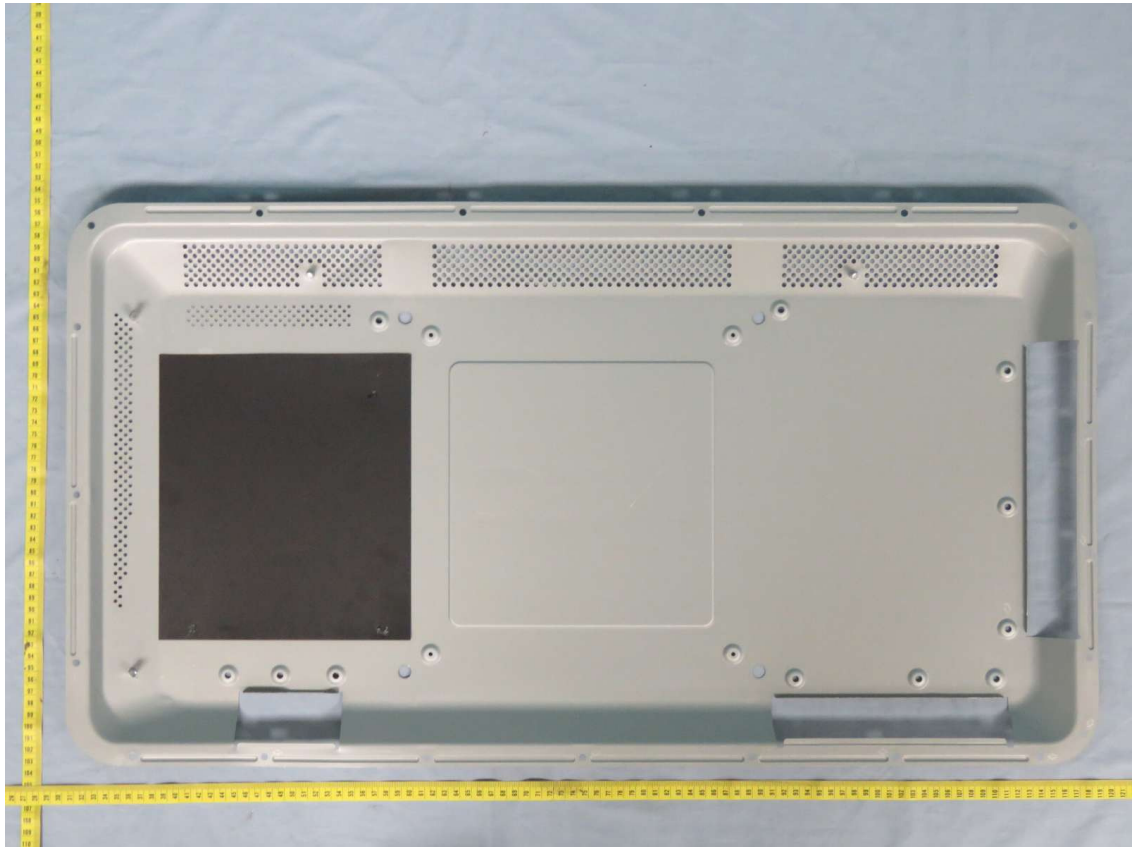
Photographs 3-09



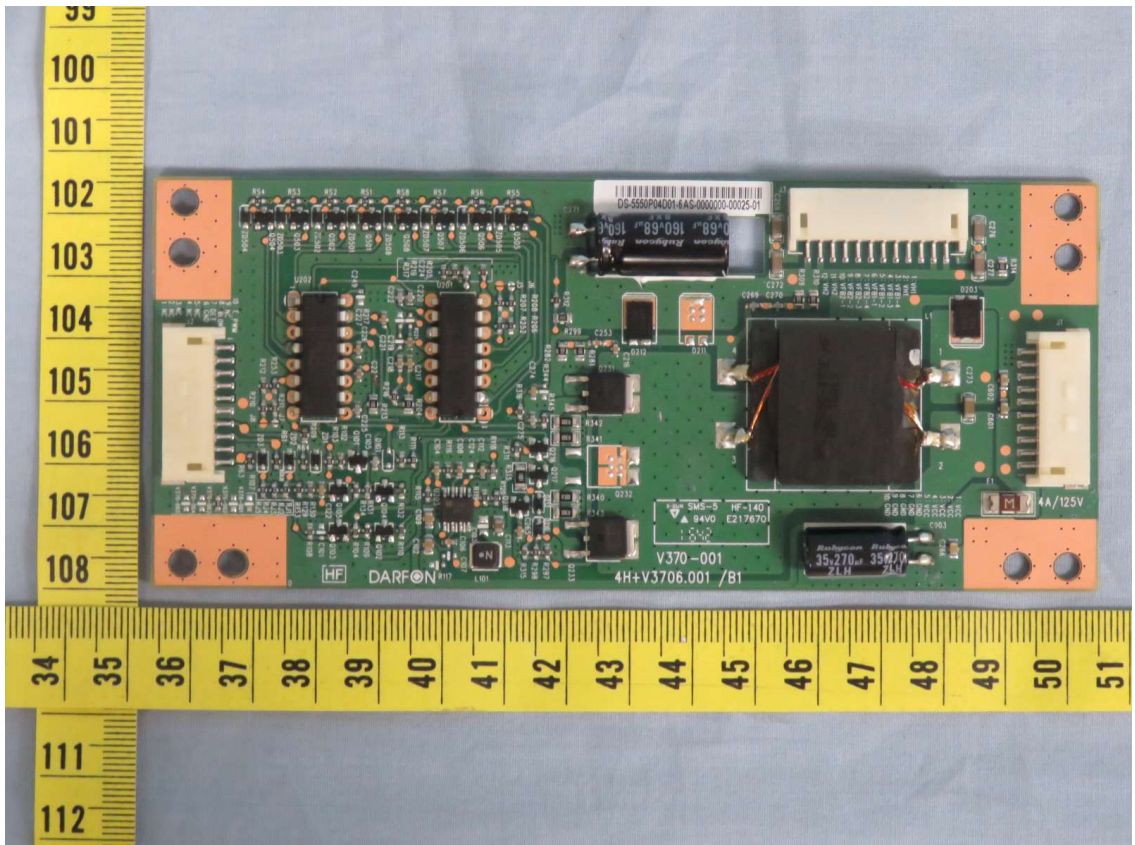
Photographs 3-10



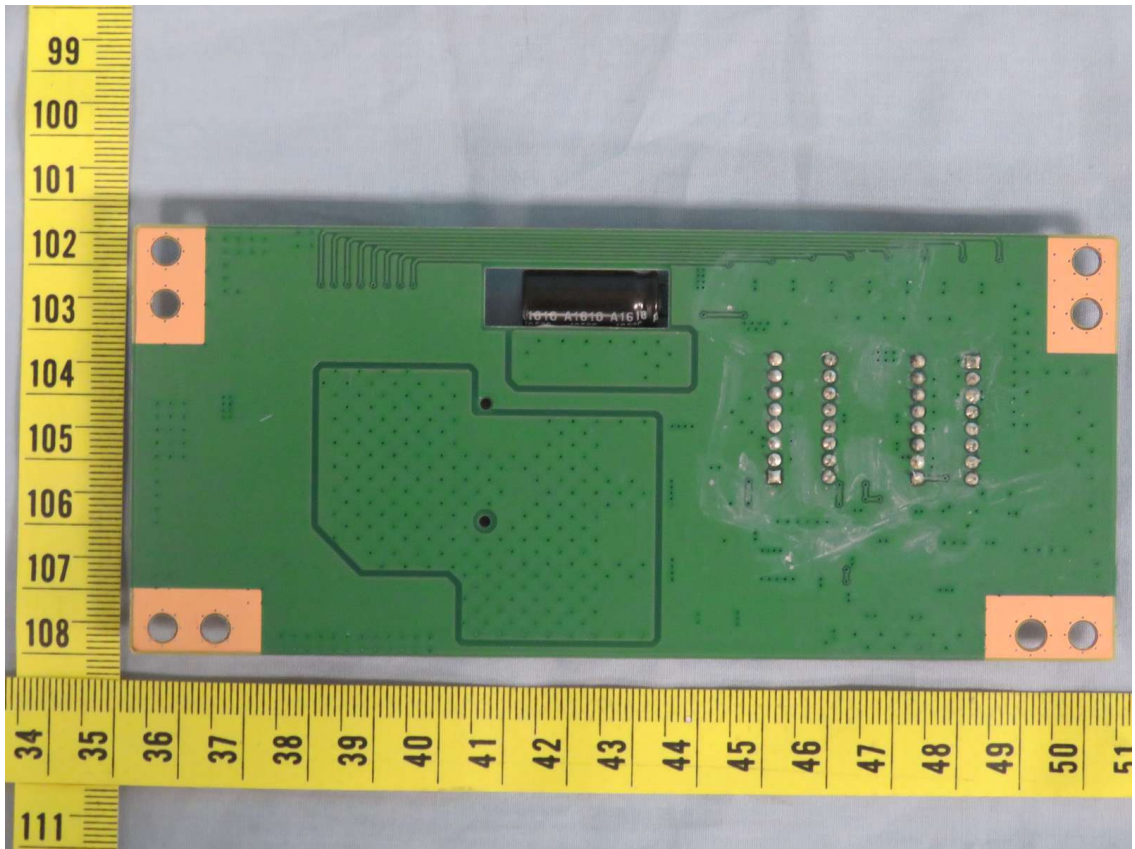
Photographs 3-11



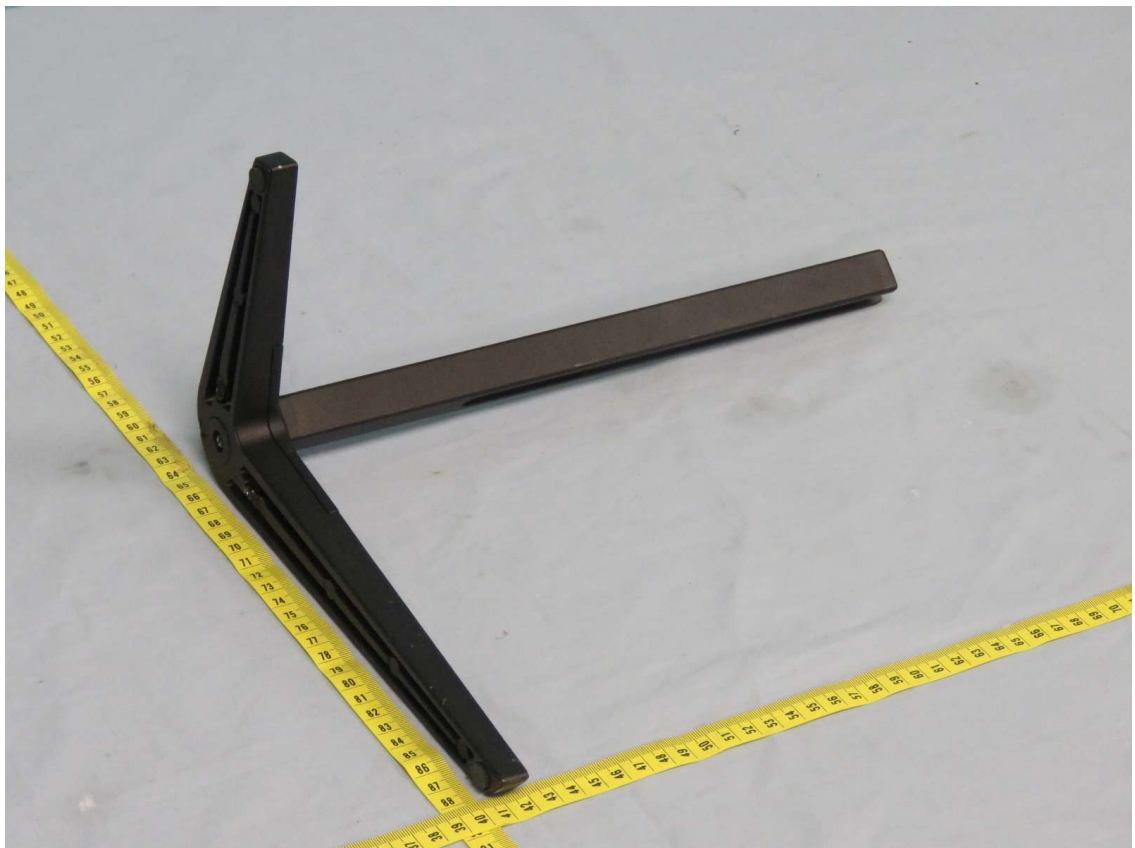
Photographs 3-12



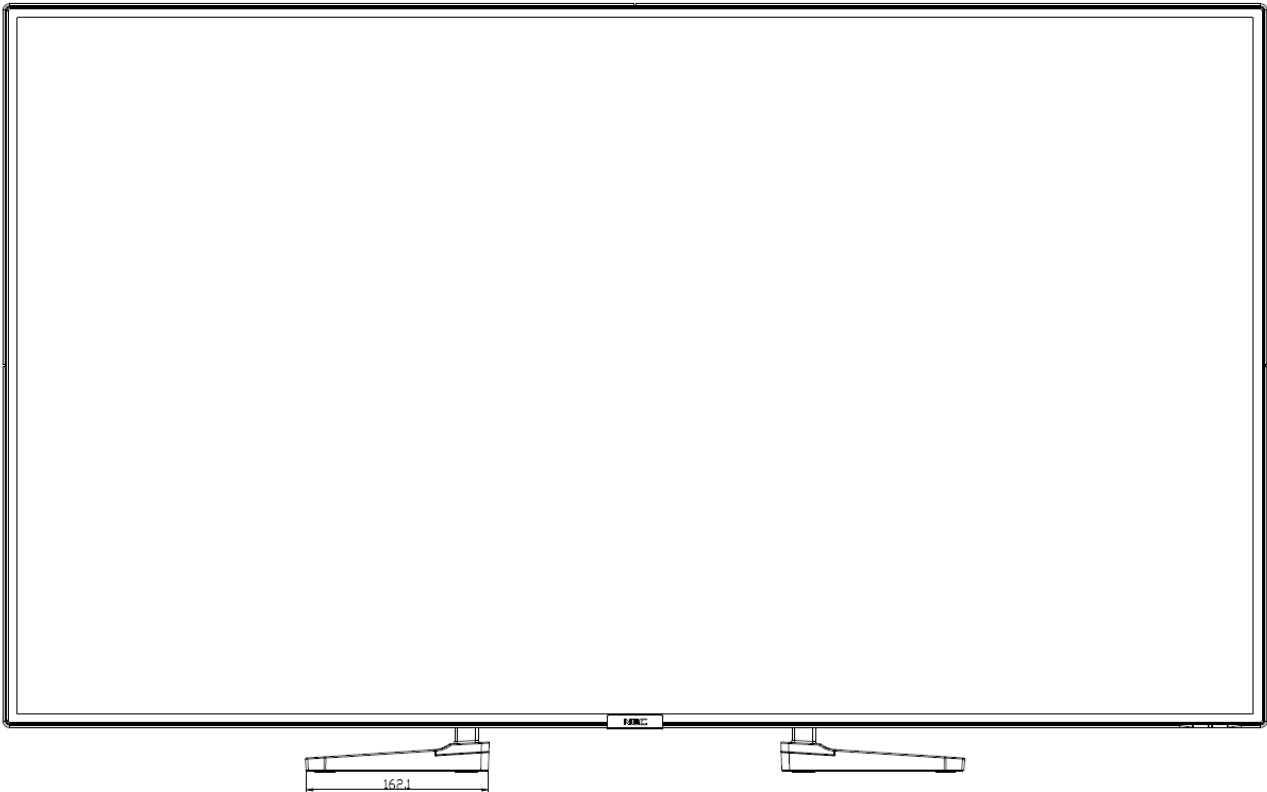
Photographs 3-13



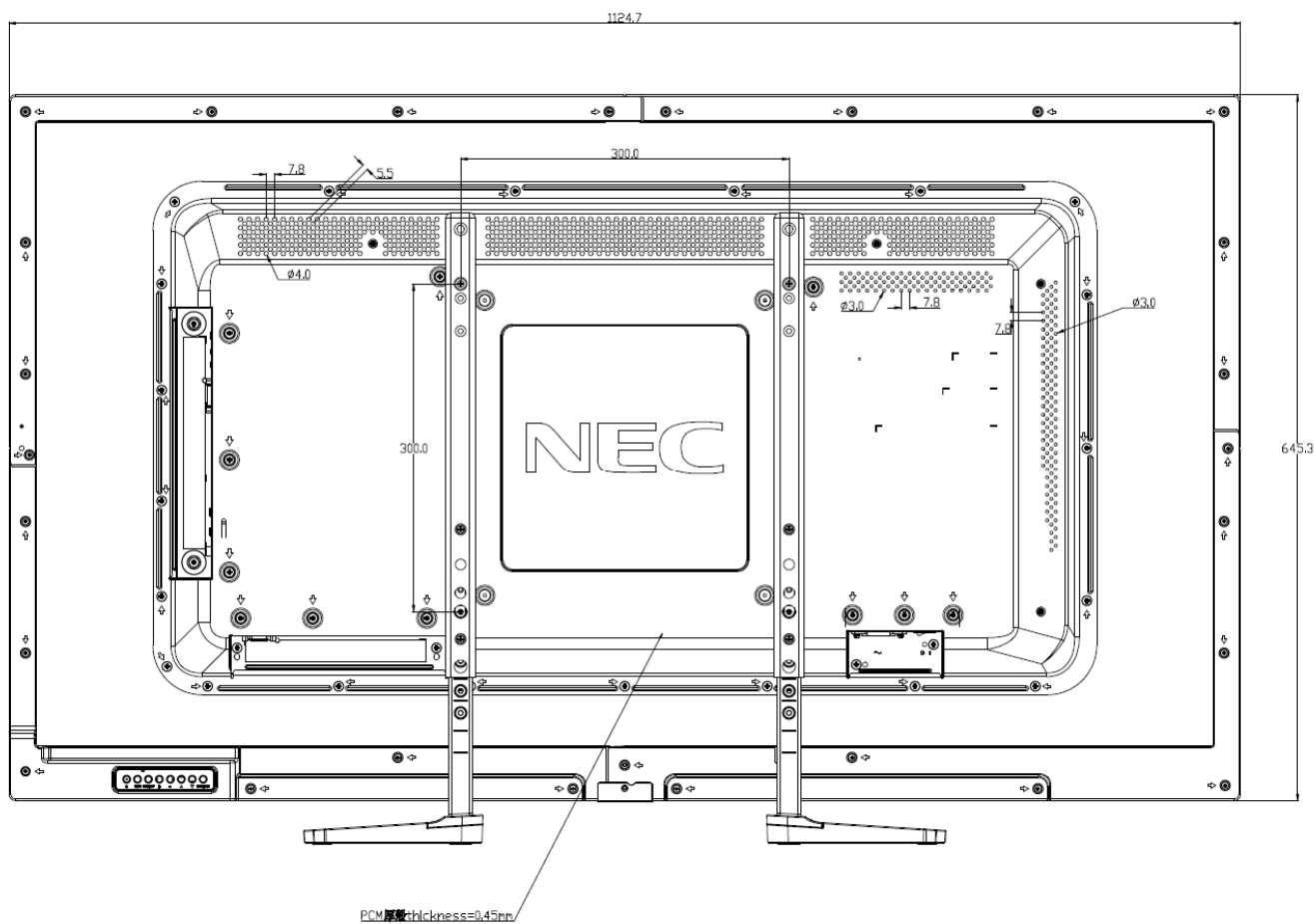
Photographs 3-14



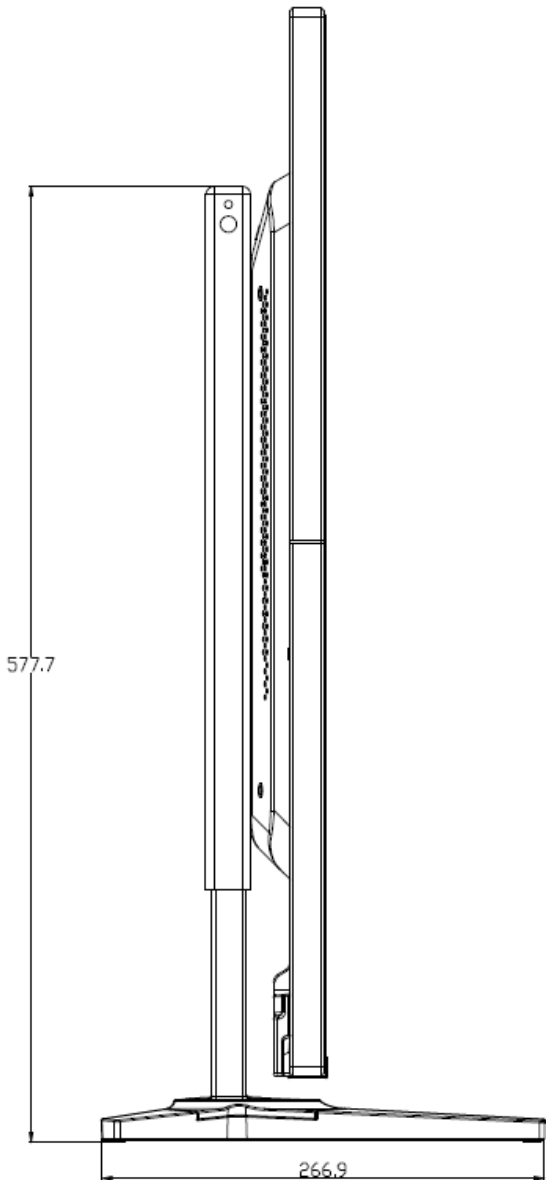
Diagrams 4-01



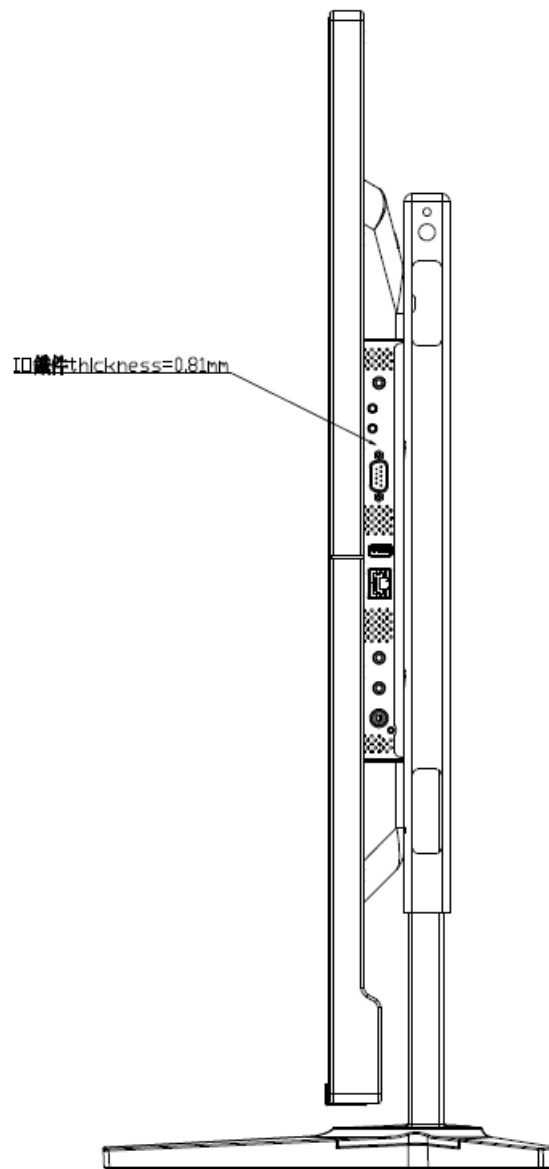
Diagrams 4-02



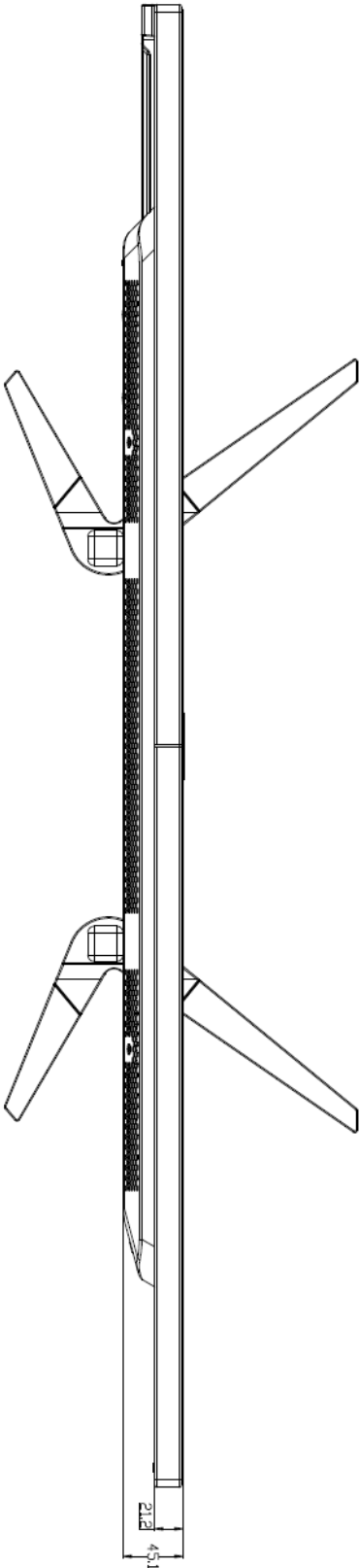
Diagrams 4-03



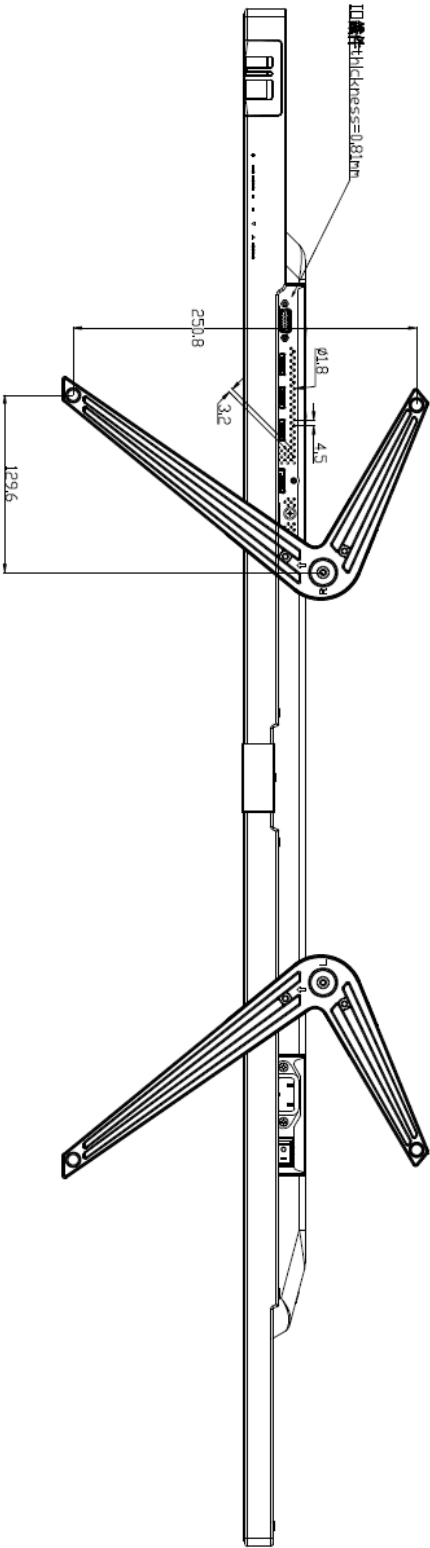
Diagrams 4-04



Diagrams 4-05



Diagrams 4-06



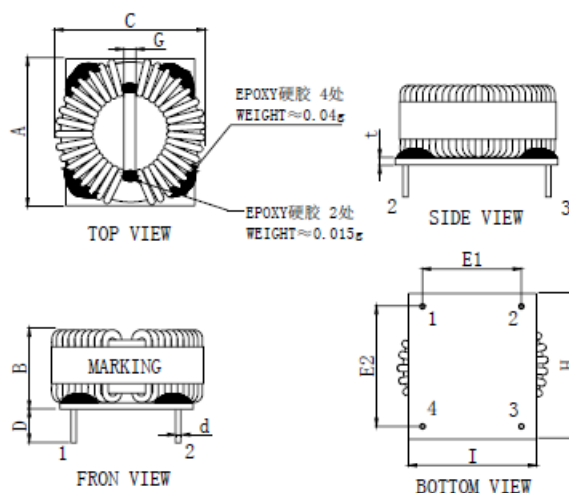
Diagrams 4-07



TPV Component Specification

1, Mechanical Characteristics

1.1, Dimensions



UNIT: mm

A = 29.5 MAX

B = 17.0 MAX

C = 32.0 MAX

D = 3.5 ± 0.3 E1 = 17.5 ± 0.5 E2 = 24.0 ± 0.5

G = 1.5 MIN

d = 0.90 ± 0.05 H = 28.0 ± 0.5 I = 24.0 ± 0.5 t = 1.6 ± 0.2

Lead wire composition



NOTE:

- 1、繞線方式：採用四分繞線法，由 CORE 中間出入線，線圈需點膠固定。
- 2、引線掛PIN圈數：ALL PIN IS 1Ts
- 3、WEIGHT: $28.2 \pm 2g$ (1 PCS)

1.2 Marking Contents:

(1) TPV P/N: 73G174-272-H(2) Vendor Name or Trade Mark: HA

(3) Date Code: XXXXX XX-- xx(YEAR) & xx(WEEK) , x(PRODUCT LINE)XX--(Core marking)

(4) Marking Standards:

73G174-272-H

HA XXXXX XX

(5) Manufacture site: CHANNELON(JIANGSU HAIAN) or HA

1.3 Technique Request:

- 1.3.1 The part must be dipped varnish and must be dipped in vacuum. Varnish must go through the neighborhood layers of the coil. The coil should not loose.
- 1.3.2 External of part must be immaculate, marking must be clear.
- 1.3.3 Winding Model: Closed Winding
- 1.3.4 Rated Current: 5.0A
- 1.3.5 Rated Voltage: 100V / 220V AC

1.4 Condition of work

1. The part normal work be allowed ambient temperature: $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$.
2. The part must be allowed maximum high temperature: $+130^{\circ}\text{C}$.
3. The part normal work be allowed temperature rise: 40°C
4. The part is allowed storage ambient temperature: $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$.
5. Storage life: one year
6. The part be allowed work ambient frequency: 50/60Hz

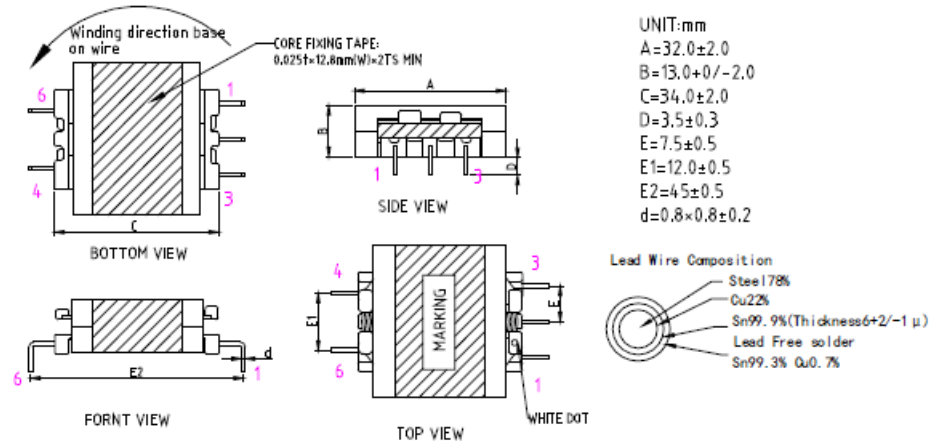
Diagrams 4-08



TPV Component Specification

3. Mechanical Characteristics

3.1 Dimensions



NOTES:

1. GAP CORE装TOP端,中柱需点胶.
2. 引线挂脚圈数: All Pin is 1Ts min.
3. PIN5 CUT OFF.

3.2. Marking contents :

- (1). TPV P/N : 373G0174360X 00
- (2). Vendor Name or Trade Mark : ASET
- (3). Date Code: XXXXX XX -- xx(Year) & xx(Week) & x(Product line) & xx(Core supplier)
- (4). Class 130 (B) electrical insulation systems, designated ASET 01.
- (5). Marking Standards:

373G0174360X 00 HI-POT
 ASET ASET 01 XXXXX XX OK

- (6). Manufacture site: (□□□□)

ASET: SUZHOU.WUJIANG,China

No.	Supplier of core
01	TDG CO.,LTD
02	DMEGC CO.,LTD

3.3. Technics request:

- (1). The part must be dipped varnish and must be dipped in vacuum.
- (2). Externals of part must be immaculate, marking must be clear.
- (3). Two cores must be aim, not shift. Core and winding should not move.
- (4). Script or marking orient Pin 1.
- (5). Lead wire of every pin must set an individual groove.
- (6). 1 PCS PFC choke weight is $41.0\pm2.0g$.

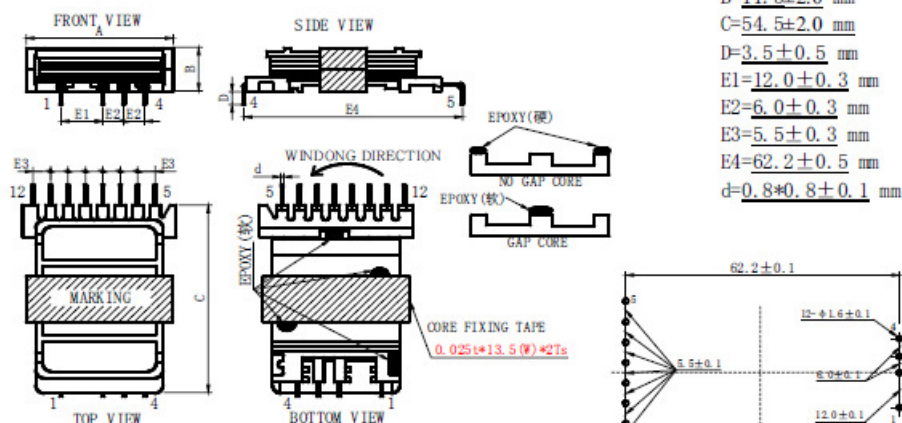
3.4 Condition of work

- (1). The part normal work be allowed ambient temperature: $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$.
- (2). The part must be allowed maximum high temperature: $+130^{\circ}\text{C}$.
- (3). The part normal work be allowed temperature rise: 40°C .
- (4). The part is allowed storage ambient temperature: $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$.
- (5). Storage life: one year.
- (6). The part be allowed work ambient frequency: 1KHz~200KHz.

TPV Component Specification

3. APPEARANCE & MECHANICAL CHARACTERISTICS

3.1. DIMENSIONS



- a. 1 PCS POWER TRANS WEIGHT IS: 42.7±2g
- b. 引线镀层结构图
- c. MARKING 打印在产品TOP端。
- d. 引脚挂 PIN 圈数: 配线 ALL PIN 1.0TS MIN
- e. CORE GAP(单边) AT PIN SIDE; 中柱点胶
两边柱用环氧胶固定;底部按图示4点位置点胶。

3.2. MARKING CONTENTS:

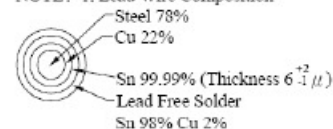
- a. TPV P/N: 380GL52P509H 00
b. VENDOR NAME OR TRADE MARK: HA
c. DATE CODE: YEAR & WEEK (XX=year / XX=week)
d. "HI-POT OK" MODEL OF WRITTEN CHARACTERS.
e. CLASS B (130 DEGREE) INSULATION SYSTEM DESIGNATION: CIS.04 TABLE III
f. MARKING STANDARDS:

380GL52P509H 00 HI-POT
HA CIS.04 XXXXX OK
XXXX: DATE CODE.
X: PRODUCT LINE CODE
HA: MANUFACTURE SITE(1N Sunzhuang RD Haian County Nantong Jiangsu China)

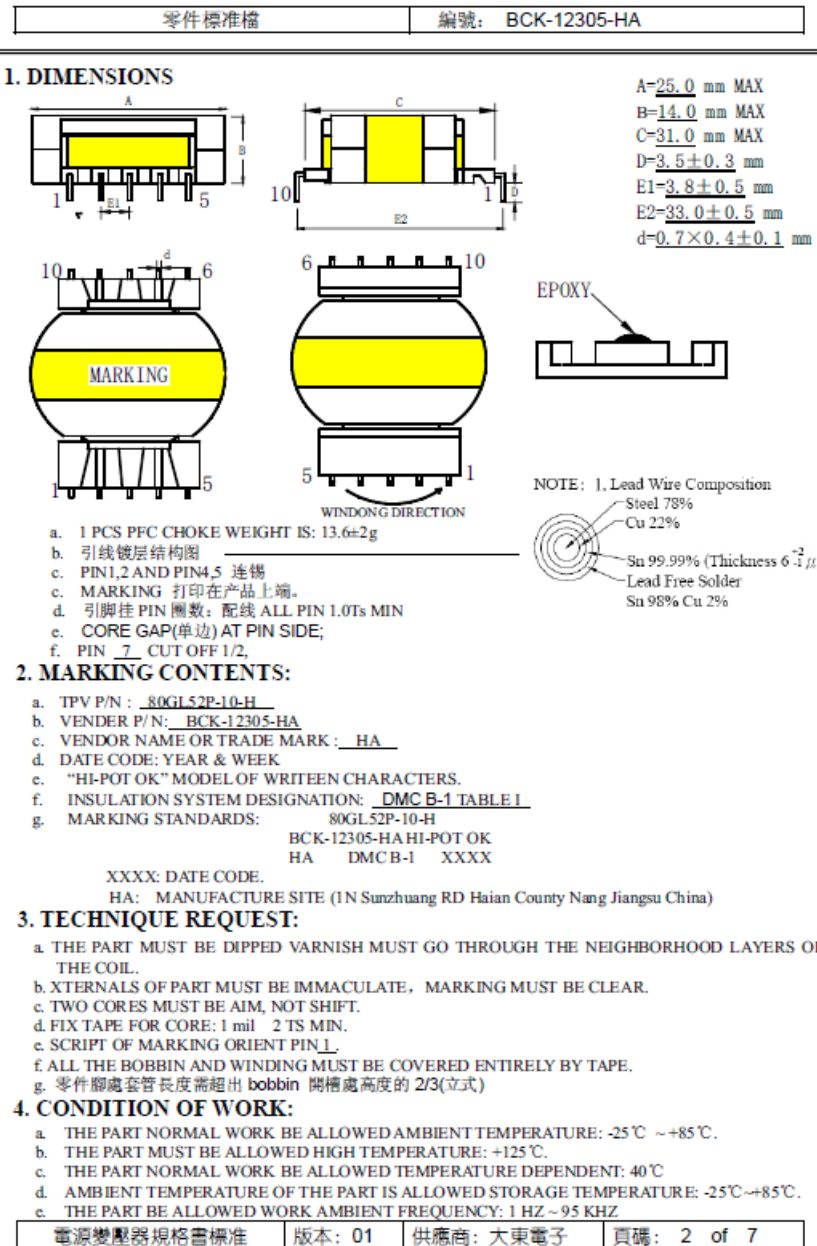
3.3. TECHNIQUE REQUEST:

- 3.3.1 External of part must be immaculate, marking must be clear.
- 3.3.2 Two cores must be aim, not malposition.
- 3.3.3. Fix yellow tape for core: 1 mil 2 Ts.
- 3.3.4 Script or marking orient Pin 1-4.
- 3.3.5 core and winding must be tight, not move.
- 3.3.6 Lead wire of every pin must set an individual groove
- 3.3.7.. The transformer is a lead free product. solder material: (99.3% Sn 0.7%Cu)
- 3.3.8 变压器点胶固定, CORE 不能松动。

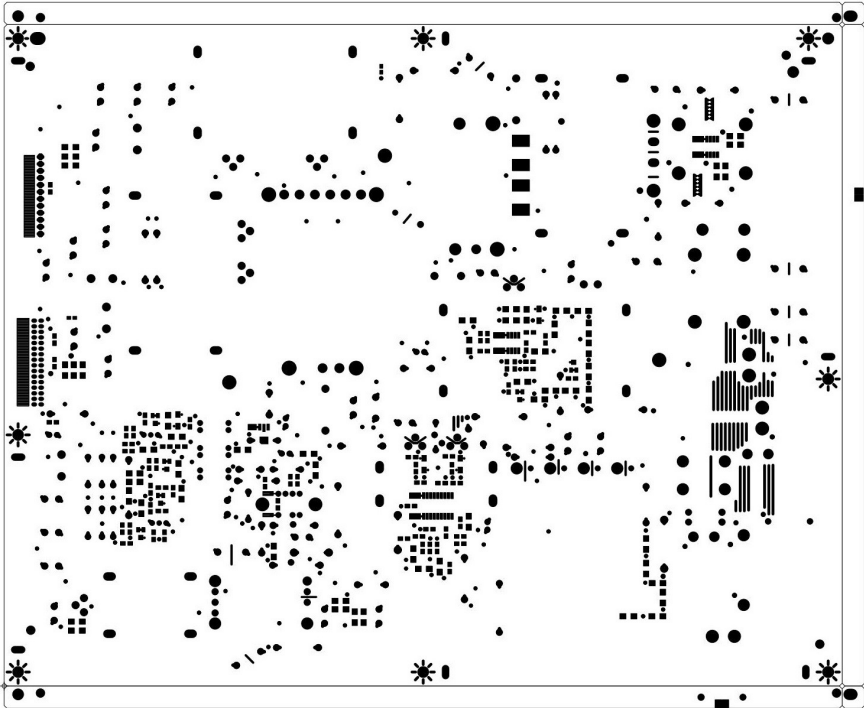
NOTE: 1. Lead Wire Composition



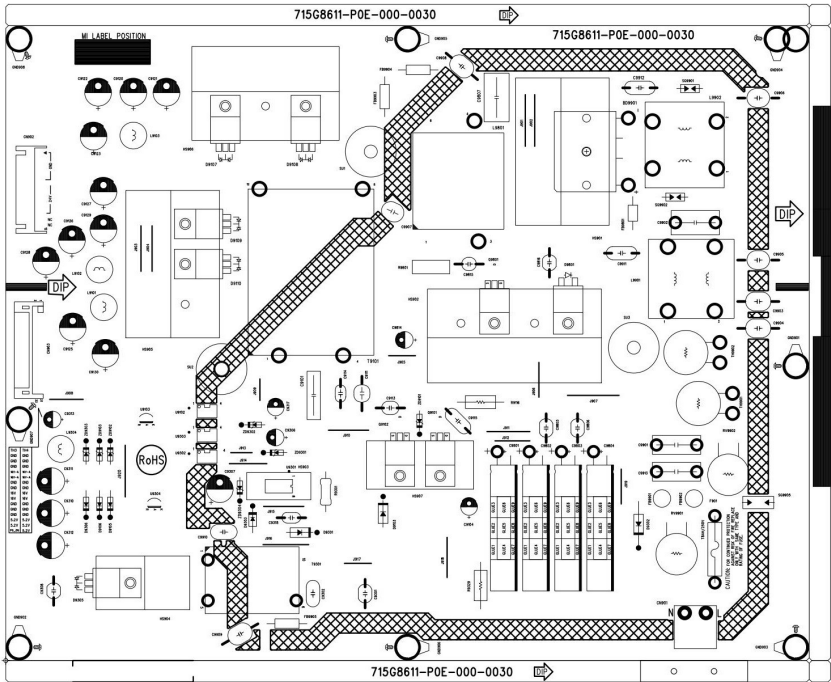
Diagrams 4-10



Schematics + PWB 5-01

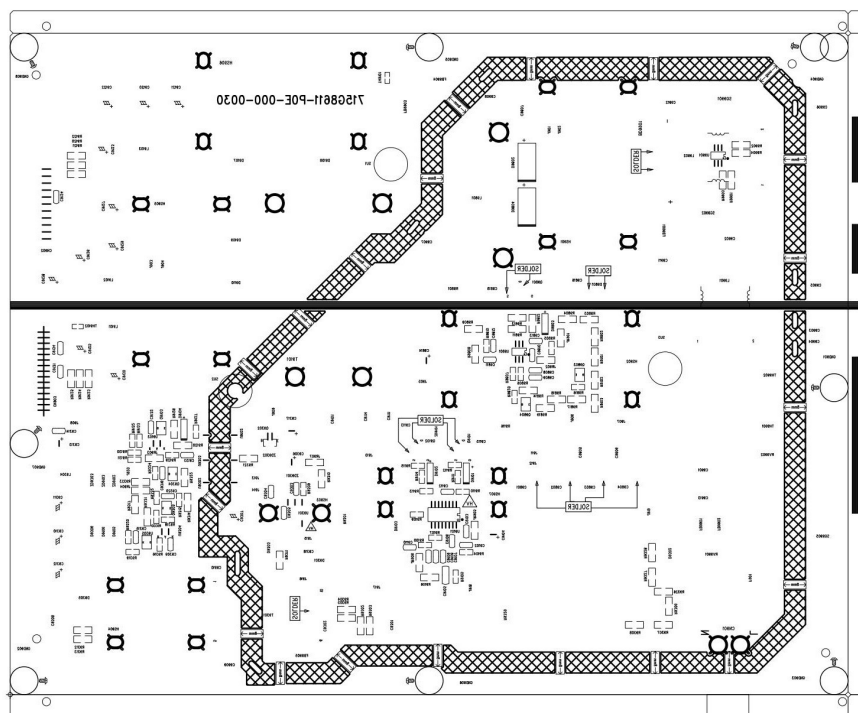


Top Victory Electronics(Taiwan)Co.,Ltd		
TPV	PCB NAME : 715G8611-P0E-000-0030	DATE : 2017-2/24
	LAYER : MASK-BOT	



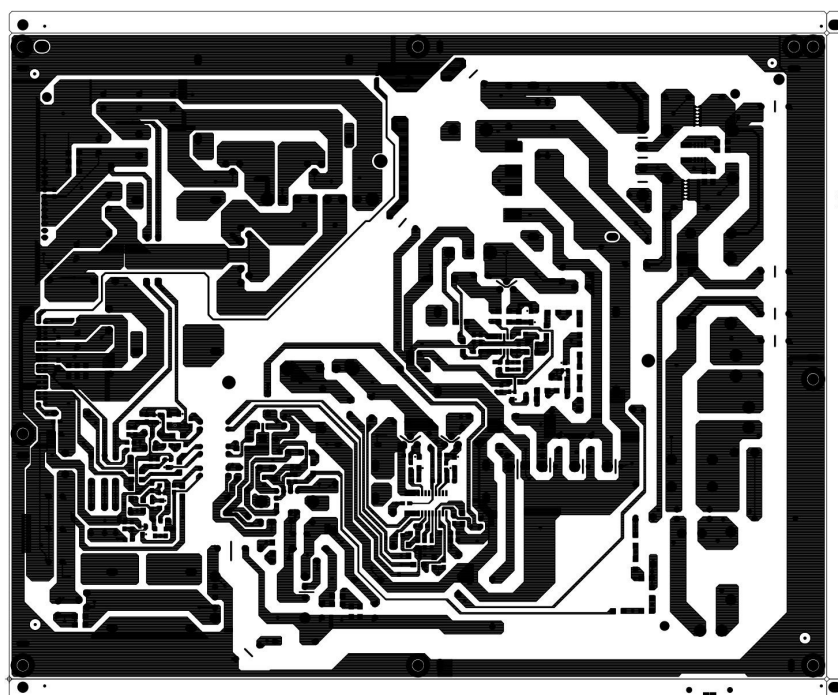
Top Victory Electronics(Taiwan)Co.,Ltd		
TPV	PCB NAME : 715G8611-P0E-000-0030	DATE : 2017-2/24
	LAYER : SLA-TOP	





Top Victory Electronics(Taiwan)Co.,Ltd	
PCB NAME : 7050801-P0E-000-0030	
TPV	DATE : 2017-2/24
LAYER : SLK-801	

1 LAYER
BSK



Top Victory Electronics(Taiwan)Co.,Ltd	
PCB NAME : 7050801-P0E-000-0030	
TPV	DATE : 2017-2/24
LAYER : SOLDER SIDE	

1 LAYER
BOTTOM

Miscellaneous 6-01

5.4.1.8	TABLE: Determination of working voltage			P
Test voltage / Frequency.....:		240Vac / 60Hz		
Location	Measured voltage/frequency			Comments
	RMS voltage (V)	Peak Voltage (V)	Hz	
T9101 Pin1 -5,6	158	264	--	
T9101 Pin1-7,8	156	264	--	
T9101 Pin1-9,10	161	288	--	
T9101 Pin1-11	156	280	--	
T9101 Pin1 -12	163	296	--	
T9101 Pin4-5,6	244	492	--	
T9101 Pin4-7,8	258	472	--	
T9101 Pin4-9,10	233	444	--	
T9101 Pin4-11	269	510	123K	Maximum voltage for T9101
T9101 Pin4-12	227	420	--	
T9301 Pin6-1,2	309	416	--	
T9301 Pin6-4,5	309	444	--	
T9301 Pin8-1,2	341	550	122K	Maximum voltage for T9301
T9301 Pin8-4,5	340	550	--	
T9301 Pin9-1,2	173	444	--	
T9301 Pin9-4,5	172	400	--	
T9301 Pin10-1,2	171	340	--	
T9301 Pin10-4,5	171	360	--	
C9907 Primary - Secondary	172	352	--	
C9908 Primary - Secondary	172	356	--	
C9906 Primary - Secondary	241	344	--	
C9905 Primary - Secondary	3.55	64.2	--	
C9903 Primary - Secondary	4.42	76.0	--	
C9904 Primary - Secondary	241	364	--	
C9909 Primary - Secondary	309	420	--	
U9302 Pin1-3	174	348	--	
U9302 Pin1-4	174	348	--	
U9302 Pin2-3	174	348	--	
U9302 Pin2-4	174	348	--	

U9303 Pin1-3	162	332	--	
U9303 Pin1-4	162	332	--	
U9303 Pin2-3	162	332	--	
U9303 Pin2-4	162	331	--	
U9102 Pin1-3	184	364	--	
U9102 Pin1-4	184	364	--	
U9102 Pin2-3	184	365	--	
U9102 Pin2-4	184	364	--	
Supplementary information:				

5.4.1.8	TABLE: Determination of working voltage			P
Test voltage / Frequency.....:		100Vac / 60Hz		
Location	Measured voltage/frequency			Comments
	RMS voltage (V)	Peak Voltage (V)	Hz	
T9101 Pin1 -5,6	168	276	--	
T9101 Pin1-7,8	166	258	--	
T9101 Pin1-9,10	170	288	--	
T9101 Pin1-11	166	270	--	
T9101 Pin1 -12	173	300	--	
T9101 Pin4-5,6	253	404	--	
T9101 Pin4-7,8	262	440	--	
T9101 Pin4-9,10	244	428	--	
T9101 Pin4-11	270	504	123K	Maximum voltage for T9101
T9101 Pin4-12	234	420	--	
T9301 Pin6-1,2	356	418	--	
T9301 Pin6-4,5	356	444	--	
T9301 Pin8-1,2	384	544	122K	Maximum voltage for T9301
T9301 Pin8-4,5	376	536	--	
T9301 Pin9-1,2	72.8	222	--	
T9301 Pin9-4,5	71.2	208	--	
T9301 Pin10-1,2	69.4	152	--	
T9301 Pin10-4,5	69.8	150	--	
C9907 Primary - Secondary	69.9	144	--	
C9908 Primary - Secondary	69.9	142	--	
C9906 Primary - Secondary	99.9	144	--	
C9905 Primary - Secondary	2.0	8.0	--	

C9903 Primary - Secondary	2.91	8.0	--	
C9904 Primary - Secondary	100	144	--	
C9909 Primary - Secondary	356	416	--	
U9302 Pin1-3	71.9	156	--	
U9302 Pin1-4	71.9	156	--	
U9302 Pin2-3	71.9	156	--	
U9302 Pin2-4	71.9	156	--	
U9303 Pin1-3	61.6	132	--	
U9303 Pin1-4	61.6	132	--	
U9303 Pin2-3	61.6	132	--	
U9303 Pin2-4	61.6	132	--	
U9102 Pin1-3	83.0	165	--	
U9102 Pin1-4	83.0	166	--	
U9102 Pin2-3	82.9	165	--	
U9102 Pin2-4	83.0	166	--	
Supplementary information:				

G.5.3.2		TABLE: transformers						P
Loc.	Tested insulation	Working voltage peak / V (5.4.1.8)	Working voltage rms / V (5.4.1.8)	Require d electric strength (5.4.9)	Required clearance / mm (5.4.2)	Required creepage distance / mm (5.4.3)	Required distance thr. insul. (5.4.4)	
T9101	Primary / input winding and secondary / output winding (internal) (DI)	510	270	3000 Vac	4.5 (3.0x1.48)	5.4	--	
T9101	Primary / input winding and core (internal) (DI)	510	270	3000 Vac	4.5 (3.0x1.48)	5.4	--	
T9101	Primary / input part and secondary / output part (external) (DI)	510	270	3000 Vac	4.5 (3.0x1.48)	5.4	--	
T9101	Primary / input part and secondary / output winding (external) (DI)	510	270	3000 Vac	4.5 (3.0x1.48)	5.4	--	
T9101	Primary / input part and core (external) (DI)	510	270	3000 Vac	4.5 (3.0x1.48)	5.4	--	
T9101	Secondary / output part and primary / input winding (external) (DI)	510	270	3000 Vac	4.5 (3.0x1.48)	5.4	--	
T9101	Secondary / output winding and core (internal)	--	--	--	--	--	--	
T9101	Secondary / output part and core (external)	--	--	--	--	--	--	
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers	

T9101	Primary / input winding and secondary / output winding (internal) (DI)	3000 Vac	7.1	7.1	--
T9101	Primary / input winding and core (internal) (DI)	3000 Vac	7.0	7.0	--
T9101	Primary / input part and secondary / output part (external) (DI)	3000 Vac	51.5	51.5	--
T9101	Primary / input part and secondary / output winding (external) (DI)	3000 Vac	11.8	11.8	--
T9101	Primary / input part and core (external) (DI)	3000 Vac	17.1	17.1	--
T9101	Secondary / output part and primary / input winding (external) (DI)	3000 Vac	13.0	13.0	--
T9101	Secondary / output winding and core (internal)	3000 Vac	--	--	--
T9101	Secondary / output part and core (external)	3000 Vac	--	--	--

supplementary information:

The Clearances and Creepage Distances have additionally been assessed for suitability up to 5000 m elevation. The required clearance is multiplied by the altitude correction factor (1.48) as specified in Table A.2 of IEC 60664-1.

Same construction for all source.

G.5.3.2

TABLE: transformers

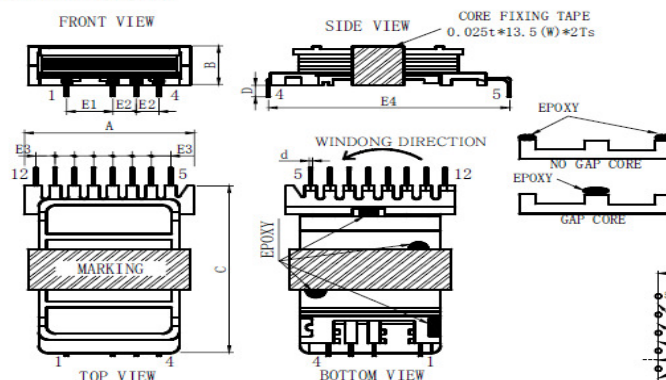
P

Transformer T9101:

The transformer two separated windings (primary and secondary) on bobbin design (vertical type core). Outer winding is secondary winding. Core is consider as secondary circuit. For construction details, refer to below illustrations from manufacturer spec.

3. APPEARANCE & MECHANICAL CHARACTERISTICS

3.1. DIMENSIONS



A=46.0±2 mm
 B=14.0+0/-1.5 mm
 C=55.5±1.5 mm
 D=3.5±0.5 mm
 E1=12.0±0.3 mm
 E2=6.0±0.3 mm
 E3=5.5±0.3 mm
 E4=62.2±0.5 mm
 d=0.8*0.8±0.1 mm

- 1 PCS POWER TRANS WEIGHT IS: 43.5±3g
- 引线镀层结构图
- MARKING 打印在产品TOP端。
- 引脚挂 PIN 圈数: 配线 ALL PIN 1.0Ts MIN
- CORE GAP(单边) AT PIN SIDE; 中柱点胶 两边柱用环氧胶固定;底部按图示4点位置点胶。

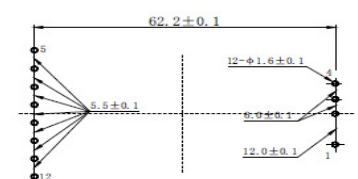
3.2. MARKING CONTENTS:

- TPV P/N : 380GL
- VENDOR NAME OR TRADE MARK : HA
- DATE CODE: YEAR & WEEK(XX=year / XX=week)
- "HI-POT OK" MODEL OF WRITEN CHARACTERS.
- CLASS B (130 DEGREE)INSULATION SYSTEM DESIGNATION
- MARKING STANDARDS:

380GL HI-POT
 HA CIS.04 XXXXX OK
 XXXX: DATE CODE.
 X: PRODUCT LINE CODE
 HA: MANUFACTURE SITE(1N Sunzhuang RD Haian County Nantong Jiangsu China)

3.3. TECHNIQUE REQUEST:

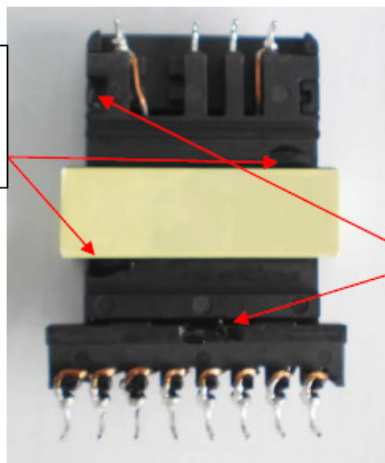
- External of part must be immaculate, marking must be clear.
- Two cores must be aim, not malposition.
- Fix yellow tape for core: 1 mil 2Ts.
- Marking method: Laser marking or ink on TOP
- core and winding must be tight,not move.
- Lead wire of every pin must set an individual groove
- The transformer is a lead free product. solder material: (99.3% Sn 0.7%Cu)
- 变压器点胶固定, CORE 不能松动。



NOTE: 1. Lead Wire Composition
 Steel 78%
 Cu 22%
 Sn 99.99% (Thickness 6~12 μ)
 Lead Free Solder
 Sn 98% Cu 2%

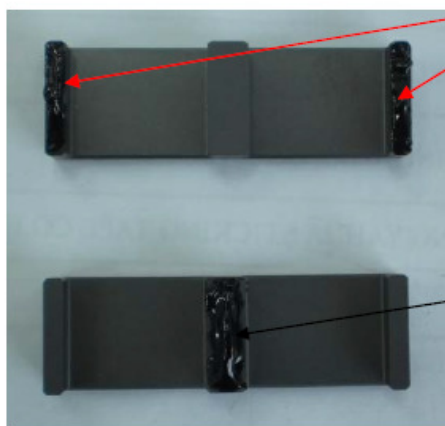


底部骨架与 CORE 接触处
EPOXY WEIGHT(E-500-1)
ALMOST 0.1g $\pm$ 0.05(REF)
胶不能超出 CORE 面

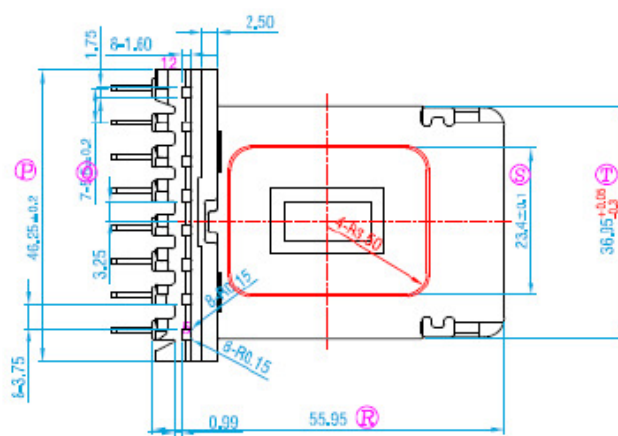
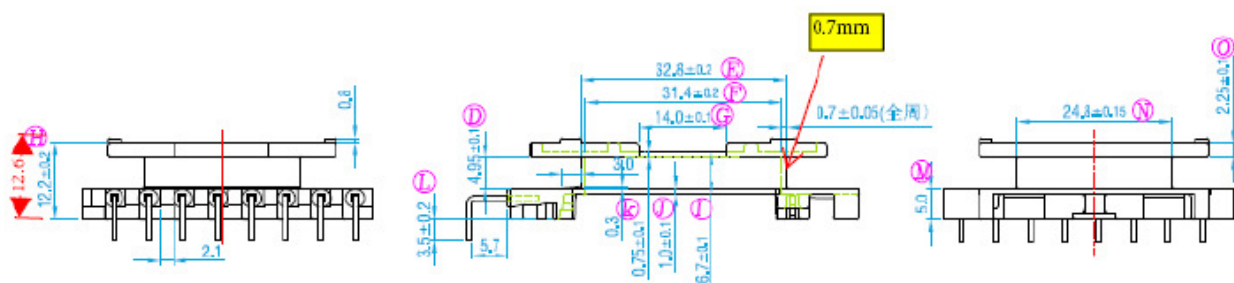
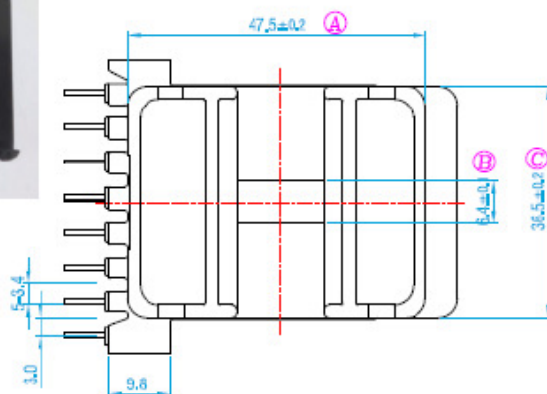


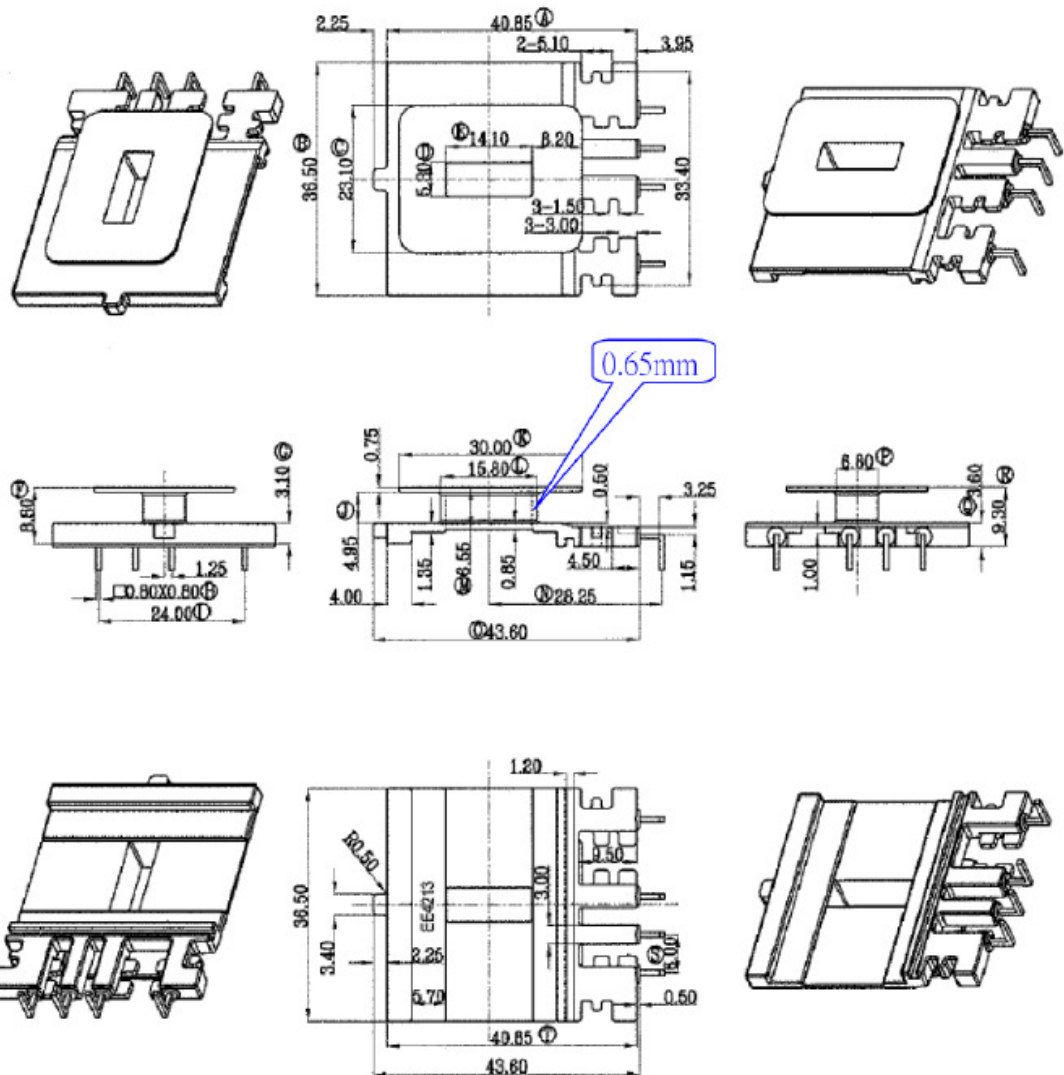
底部骨架凹槽处
EPOXY WEIGHT(E-500-1)
ALMOST 0.1g $\pm$ 0.05(REF)
胶不能超出骨架面

平面 CORE (TOP SIDE)
EPOXY WEIGHT(E-500-1)
ALMOST 0.1g $\pm$ 0.05(REF)



GAP CORE (PIN SIDE)
EPOXY WEIGHT(E-500)
ALMOST 0.1g $\pm$ 0.05(REF)

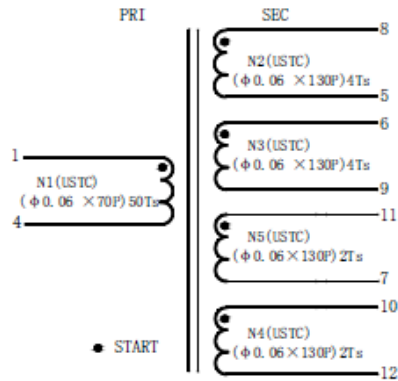




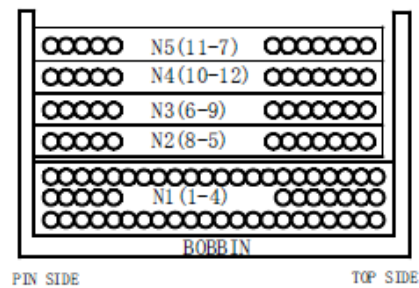


TPV Component Specification

3.4. SCHEMATIC:



3.5. WINDING CONSTRUCTION:



3.6. WINDING MODE:

No.	COIL	TERMINAL	WIRE GAUGE	WIRE TYPE	TUNS	WINDING METHOD
1	N1	1-4	$\phi 0.06\text{mm} \times 70$	USTC	50	CLOSE
2	N2	8-5	$\phi 0.06\text{mm} \times 130$	USTC	4	CLOSE
3	N3	6-9	$\phi 0.06\text{mm} \times 130$	USTC	4	CLOSE
4	N4	10-12	$\phi 0.06\text{mm} \times 130$	USTC	2	CLOSE
5	N5	11-7	$\phi 0.06\text{mm} \times 130$	USTC	2	CLOSE

3.7. Winding Direction: It Is anti-clockwise From bottom Side

G.5.3.2		TABLE: transformers						P
Loc.	Tested insulation	Working voltage peak / V (5.4.1.8)	Working voltage rms / V (5.4.1.8)	Require d electric strength (5.4.9)	Required clearance / mm (5.4.2)	Required creepage distance / mm (5.4.3)	Required distance thr. insul. (5.4.4)	
T9301	Primary / input winding and secondary / output winding (internal) (DI)	550	384	3000 Vac	4.5 (3.0x1.48)	7.8	--	
T9301	Secondary / output winding and core (internal) (DI)	550	384	3000 Vac	4.5 (3.0x1.48)	7.8	--	
T9301	Primary / input part and secondary / output part (external) (DI)	550	384	3000 Vac	4.5 (3.0x1.48)	7.8	--	
T9301	Primary / input part and secondary / output winding (external) (DI)	550	384	3000 Vac	4.5 (3.0x1.48)	7.8	--	
T9301	Secondary / output part and core (external) (DI)	550	384	3000 Vac	4.5 (3.0x1.48)	7.8	--	
T9301	Secondary / output part and primary / input winding (external) (DI)	550	384	3000 Vac	4.5 (3.0x1.48)	7.8	--	
T9301	Primary / input winding and core (internal)	--	--	--	--	--	--	
T9301	Primary / input part and core (external)	--	--	--	--	--	--	
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers	

T9301	Primary / input winding and secondary / output winding (internal) (DI)	3000 Vac	Triple insulation wire used	Triple insulation wire used	--
T9301	Secondary / output winding and core (internal) (DI)	3000 Vac	Triple insulation wire used	Triple insulation wire used	--
T9301	Primary / input part and secondary / output part (external) (DI)	3000 Vac	28.6	28.6	--
T9301	Primary / input part and secondary / output winding (external) (DI)	3000 Vac	Triple insulation wire used	Triple insulation wire used	--
T9301	Secondary / output part and core (external) (DI)	3000 Vac	8.6	8.6	--
T9301	Secondary / output part and primary / input winding (external) (DI)	3000 Vac	8.6	8.6	--
T9301	Primary / input winding and core (internal)	--	--	--	--
T9301	Primary / input part and core (external)	--	--	--	--
supplementary information:					
The Clearances and Creepage Distances have additionally been assessed for suitability up to 5000 m elevation. The required clearance is multiplied by the altitude correction factor (1.48) as specified in Table A.2 of IEC 60664-1. Same construction for all source.					

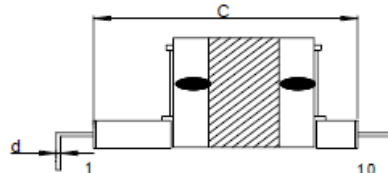
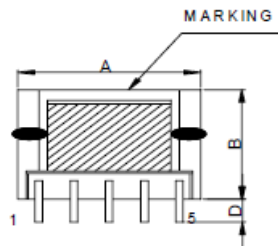
G.5.3.2

TABLE: transformers

P

Transformer T9301:

Concentric windings on bobbin (vertical type core), outer winding is primary windings. Certificate triple insulated wire used in secondary windings, therefore core is considered as primary circuit. The bobbin which near secondary pin side to keep least min. 8.0 mm length. The angle of triple insulated wire between 45° and 90° provided with insulation tube to prevent winding tension. There are two layer of insulation tapes provided on complete core of transformer to keep sufficient insulation for double insulation request. There are three layer of insulation tape provided on outer winding, For other details, refer to below illustration.



A = 25.0 mm MAX

B = 14.0 mm MAX

C = 31.0 mm MAX

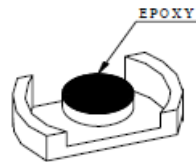
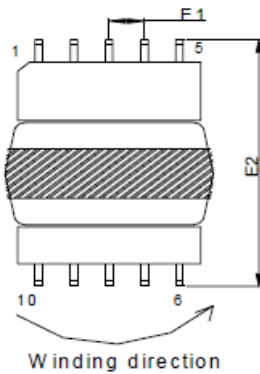
D = 3.5±0.3 mm

E1 = 3.8±0.5 mm

E2 = 33.0±0.5 mm

 $\Phi d = 0.6 \times 0.4 \pm 0.1$ mm

WEIGHT IS 13.6g±2g.



NOTE: 1. Lead Wire Composition

Steel 78%

Cu 22%

Sn 99.99% (Thickness 6.35 μ)

Lead Free Solder

Sn 98% Cu 2%

NOTE :

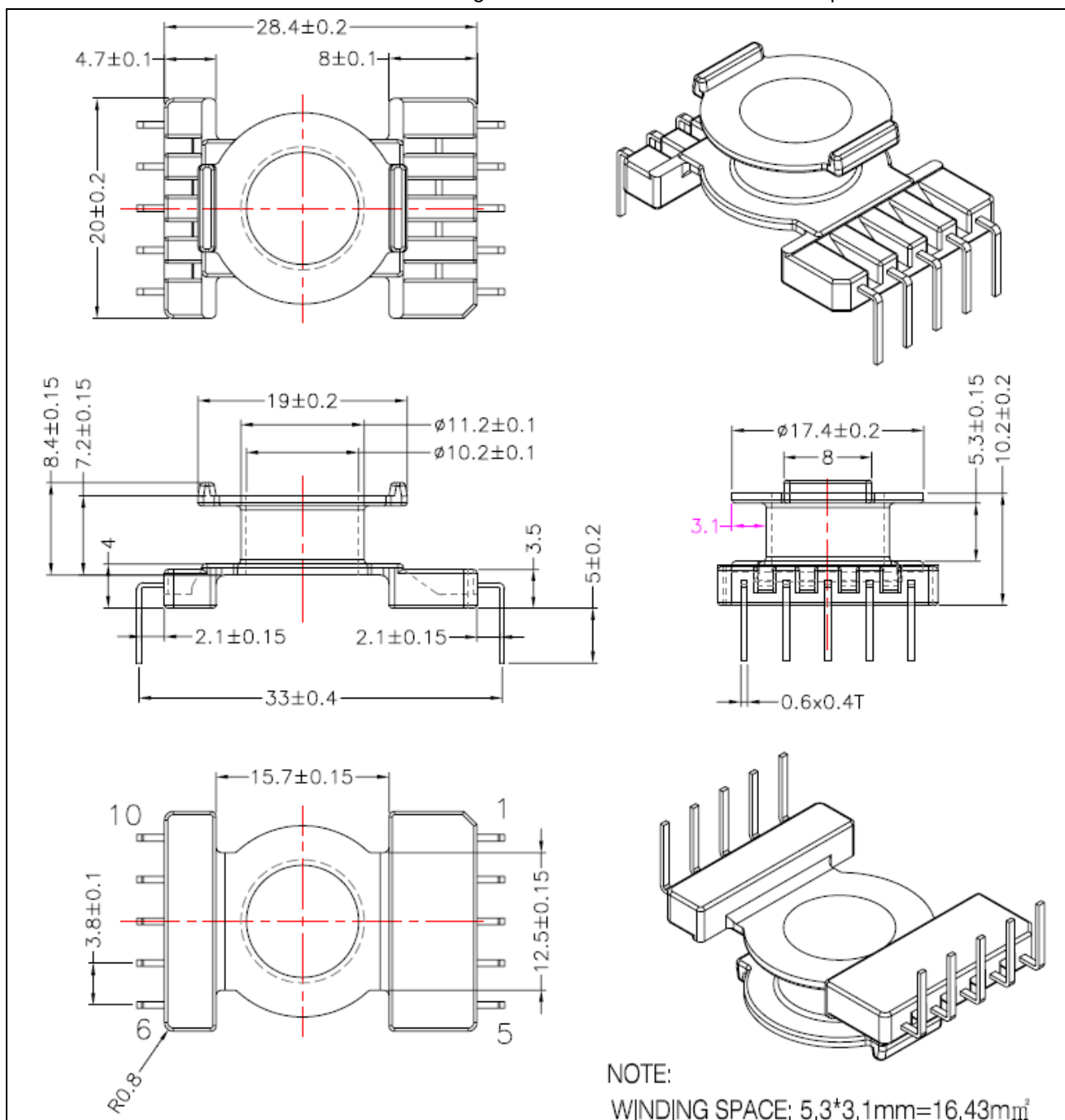
1. GAP CORE PIN SIDE.

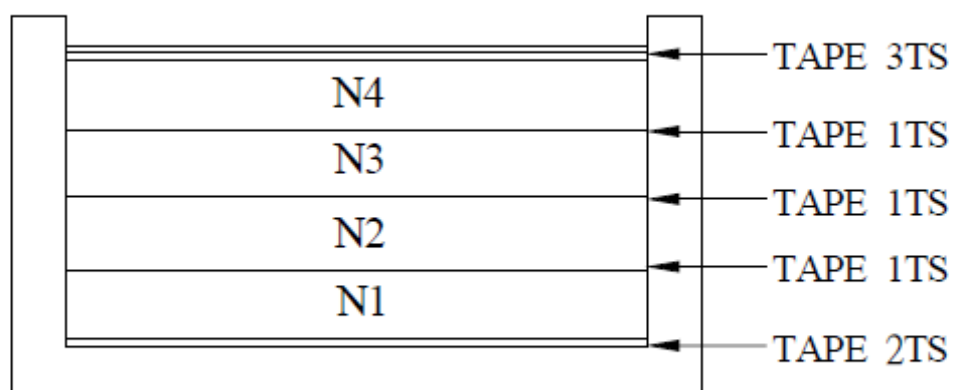
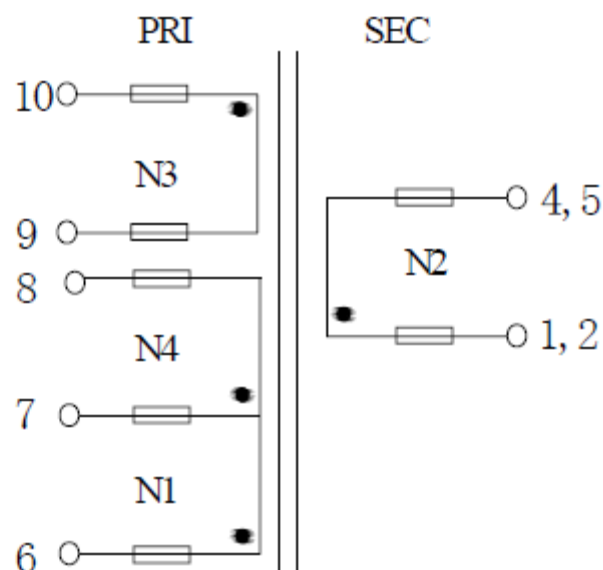
2. PIN 7 CUT OFF 1/2.

3. CORE中柱接縫處點膠固定.

4. P1,2/P4,5需連錫.

5. ALL PINS 1.0TS MIN.





NO.	Winding	Terminal	Wire	Turns	Remark	MARGIN TAPE	TAPE 2Ts
1	N1	6---7	DD-NYU Ø 0.15x2	26	CLOSED	/	1Ts
2	N2	1,2---4,5	TIW-M Ø 0.4x4	3	CLOSED	/	1Ts
3	N3	10---9	DD-NYU Ø 0.15x1	9	SPREAD	/	1Ts
4	N4	7---8	DD-NYU Ø 0.15x2	26	CLOSED	/	3Ts