



**BUREAU
VERITAS**

Test Report No.: RD180713N042



Test Report No.: RD180713N042

Applicant's name : Guangdong Changhong Electronics Co., Ltd.

Address : No.1 North Xingye Rd, Nantou Town, Zhongshan City, Guangdong Province, China

Test item description: LED (backlighting) TV

Model/Type reference : UGV40F6000(S1)-ESi

Testing laboratory

Name : Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

Address : No. 34, Chenwulu Section, Guantai Rd., Houjie Town, Dongguan City, Guangdong 523942, China

Test specification

Standard : ☐ IEC 60065: 2014 (Eight Edition)
☒ EN 60065: 2014

Test Result : The sample satisfies to the clauses examined.

Prepared By :

Hyman Wu

Hyman Wu
Engineer / Safety Department

2018-08-16

Date

Approved By:

Joseph Tsai

Joseph Tsai
Assistant Manager / Safety Department

2018-08-16

Date

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TEST REPORT

Report Number..... : RD180713N042

Date of issue : 2018-08-16

Total number of pages : 64

Testing laboratory : Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

Test location/Address : No. 34, Chenwulu Section, Guantai Rd., Houjie Town,
Dongguan City, Guangdong 523942, China

Applicant's name : Guangdong Changhong Electronics Co., Ltd.

Address..... : No.1 North Xingye Rd, Nantou Town, Zhongshan City,
Guangdong Province, China

Test specification:

Standard : ☐ IEC 60065:2014 (Eight Edition)
☒ EN 60065:2014

Non-standard test method : N/A

Test Report Form No. : IEC/EN 60065_DG_V201701

Test Report Form(s) Originator : BV_DG

Master TRF : Dated 2017-01


Manufacturer : Guangdong Changhong Electronics Co., Ltd.

Address..... : No.1 North Xingye Rd, Nantou Town, Zhongshan City,
Guangdong Province, China

Factory : Guangdong Changhong Electronics Co., Ltd.

Address..... : No.1 North Xingye Rd, Nantou Town, Zhongshan City,
Guangdong Province, China

Test item description..... : LED (backlighting) TV

Trade Mark..... : 

Model/Type reference..... : UGV40F6000(S1)-ESi

Ratings..... : 100-240 Vac, 50/60 Hz, 90W



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Copy of marking plate:



WEEE logo (crossed-out wheeled bin symbol with solid bar): at least 7 mm in height

Note 1: The instruction sheet and marking should be translated to the language where the product will be sold.

Note 2: Note 2: To comply with RED Directive 2014/53/EU, the manufacturer has the responsibility to put manufacturer name / trade mark and their address, batch number on the equipment. And the importer also has the responsibility to put their name / trade mark and address on the equipment before place the equipment on the market.



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Note: The instruction sheet and marking should be translated to the language where the product will be sold. :	Client commits to provide the user manual in the language where the apparatus was distributed.
Classification of installation and use :	Class II apparatus
Supply Connection :	Non-detachable power cord
Possible test case verdicts: - test case does not apply to the test object..... : N/A (Not Applicable) - test object does meet the requirement..... : P (Pass) - test object does not meet the requirement : F (Fail)	
Testing :	
Date of receipt of test item : July 13, 2018	
Date (s) of performance of tests : July 14, 2018 to August 01, 2018	
Summary of Testing and Conclusions <ul style="list-style-type: none">● The equipment under test (EUT) has been evaluated at maximum ambient (Tma) of +35°C according to the manufacturer's declaration.● All tests were measured under the most severe condition and the load conditions used during testing are:<ul style="list-style-type: none">- Playing three vertical bar signal, the EUT was operated under DTV mode to deliver 1/8 of max. non-clipped output power for two speakers, with max. brightness level, each of two USB port loading with 500 mA and ANT terminal output (18 Vdc) loaded with 400 mA.	
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 <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	
General product information: <ol style="list-style-type: none">1. The equipment is a "LED (backlighting) TV" which has a non-certified built-in power supply with one remote controller which supplied by two AAA replaceable battery.2. Mass of the equipment is approximate 7.09kg.3. Size of the equipment with stand base approx. as below: 915 mm x 590 mm x 203 mm (Included stand base)4. The equipment has two 8 ohm internal speakers, can be operated under HDMI mode, SCART mode, DTV mode, ATV mode, AV mode, USB mode, SCART mode separately, each of two USB port can be loaded 500mA and the ANT terminal can be loaded 18 Vdc, 400 mA under DTV mode only.	



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Clause	Requirement + Test	Result - Remark	Verdict
3	GENERAL REQUIREMENTS		P
	Safety class of the apparatus	Class II apparatus	P
4	GENERAL TEST CONDITIONS		P
4.1.4	Ventilation instructions require the use of the test box	According to standard	P
5	MARKING AND INSTRUCTIONS		P
5.1	General requirements		P
	Comprehensible and easily discernible	Marking plate was provided on the rear side of apparatus, it was comprehensible and easily discernible.	P
	Permanent durability against water and petroleum spirit	After rubbing test by water and petroleum spirit, the label still easily discernible, indelible and legible.	P
5.2	Identification and supply rating		P
	a) Identification, maker	Trademark: 	P
	b) Model number or type reference	Models: UGV40F6000(S1)-ESi	P
	c) Class II symbol or Class II with functional earth symbol if applicable	Symbol with "⊞" is marked	P
	d) Nature of supply	Symbol with "~" is marked	P
	e) Rated supply voltage	100-240Vac	P
	f) Mains frequency if safety dependant	50/60Hz	P
	g) Rated current or power consumption for apparatus supplied by supply apparatus for general use, on apparatus or in instruction manual	The EUT was connected to a.c. mains.	N/A
	Measured current or power consumption	--	N/A
	Deviation % (max 10%)	--	N/A
	h) Rated current or power consumption for apparatus intended for connection to an a.c. mains supply :	90W	P
	Measured current or power consumption	Max. 88.3W	P
	Measured current or power consumption for Television set	Max. 88.3W	P
	Deviation % (max 10%)	Max. -1.89 %	P



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Clause	Requirement + Test	Result - Remark	Verdict
	Symbols explained in the user manual	Correct symbol used, and explained in the user manual	P
5.3	Terminals		P
	a) Earth terminal	No such terminals.	N/A
	b) Hazardous live terminals	No such terminals.	N/A
	c) Markings on supply output terminals	Markings are marked near all output ports.	P
5.4	Caution marking		P
	a) Use of triangle with exclamation mark	Symbol according to ISO 7000-0434 provided at appropriate positions of the circuit diagram.	P
	b) Marking on loudspeaker grille, IEC 60417-5036	No such construction.	N/A
	c) User-replaceable coin / button cell battery marking	No such battery used	N/A
5.5	Instructions		P
5.5.1	Safety relevant information	Evaluated the user manual in English version, and the client will provide the user manual in the language where the apparatus is distributed.	P
5.5.2	a) Mains powered equipment not exposed to dripping or splashing. Warning concerning objects filled with liquid, etc.	Mentioned in the user manual.	P
	b) Hazardous live terminals, instructions for wiring	No such terminals in the EUT.	N/A
	c) Instructions for replacing lithium battery	No such battery used	N/A
	d) Class I earth connection warning	Class II equipment	N/A
	e) Instructions for multimedia system connection	Mentioned in the user manual.	P
	f) Special stability warning for attachment of the apparatus to the floor/wall	No special fixed installation necessary.	N/A
	g) Warning: battery exposure to heat	Mentioned in the user manual.	P
	h) Warning: protective film on CRT face	No such device.	N/A
	i) Warning: Non-floor standing TV >7kg	Mentioned in the user manual.	P
	j) Warning: User replaceable coin / button cell battery	No such battery used	N/A
5.5.3	a-b) Disconnect device: plug/coupler or all-pole mains switch location, accessibility and markings	The mains plug is used as disconnect device, and mentioned in the user manual	P
	c) Instructions for permanently connected equipment	The EUT is not permanently connected equipment.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Marking, signal lamps or similar for completely disconnection from the mains	No such construction.	N/A
6	HAZARDOUS RADIATION		P
6.1	Ionizing radiation < 36 pA/kg (0,5 mR/h)	No ionizing radiation.	N/A
	Ionizing radiation under fault condition	No ionizing radiation.	N/A
6.2	Laser radiation, emission limits to IEC 60825-1:2007	No laser radiation in the EUT	N/A
	Emission limits under fault conditions	No laser radiation in the EUT	N/A
6.3	Light emitting diodes (LEDs) according to IEC 62471	LED used as indicating lights which is considered as Low power applications of LED	P
7	HEATING UNDER NORMAL OPERATING CONDITIONS		P
7.1	General		P
7.1.1	Temperature rises not exceeding specified values; fuse links and other protective devices defeated	See appended table 7.1.	P
7.1.2	Temperature rise of accessible parts	See appended table 7.1.	P
7.1.3	Temperature rise of parts providing electrical insulation	See appended table 7.1.	P
7.1.4	Temperature rise of parts acting as a support or as a mechanical barrier	See appended table 7.1.	P
7.1.5	Temperature rise of windings	See appended table 7.1.	P
7.1.6	Parts not subject to a limit under 7.1.1 to 7.1.4	No such part	N/A
7.2	Softening temperature of insulating material supporting parts conductively connected to the mains carrying a current > 0,2 A at least 150 °C	See appended table 7.2 for pluggable connector material. Phenolic materials used for bobbin of transformer and primary inductor, which are considered fulfil the requirement without testing;	P
8	CONSTRUCTIONAL REQUIREMENTS WITH REGARD TO THE PROTECTION AGAINST ELECTRIC SHOCK		P
8.1	Conductive parts covered by lacquer, paper, untreated textile oxide films and beads etc. considered to be bare	The windings covered by lacquer were considered to be bare.	P
8.2	No shock hazard when changing voltage setting device, fuse-links or handling drawers etc.	No such device.	N/A
8.3	Insulation of hazardous live parts not provided by hygroscopic material	No hygroscopic material used for insulation.	P



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Clause	Requirement + Test	Result - Remark	Verdict
8.4	No risk of electric shock from accessible parts or from parts rendered accessible following the removal of a cover which can be removed by hand	No such cover	N/A
8.5	Class I apparatus		N/A
	Basic insulation between hazardous live parts and earthed accessible parts	Class II equipment	N/A
	Resistors bridging basic insulation complying with 14.2 a)	Class II equipment	N/A
	Capacitors bridging basic insulation complying with 14.3.2 a)	Class II equipment	N/A
	Protective earthing terminal	Class II equipment	N/A
8.6	Class II apparatus		P
	a) Basic and supplementary insulation between hazardous live parts and accessible parts	No such construction	N/A
	b) Reinforced insulation between hazardous live parts and accessible parts	Reinforced insulation is provided between hazardous live parts and accessible parts.	P
8.7	Components bridging insulation		P
	Basic insulation bridged by components complying with 14.4.5.3	No such construction	N/A
	Components bridging basic, supplementary, double or reinforced insulation complying with 14.2 a) or 14.4	Isolated transformer is used for bridging reinforced insulation.	P
	Basic and supplementary insulation each being bridged by a capacitor or RC-unit complying with 14.3.2 a)	No such component	N/A
	Double or reinforced insulation being bridged with 2 capacitors or RC-units in series complying with 14.3.2 a)	No such component	N/A
	Double or reinforced insulation being bridged with a single capacitor or RC-unit complying with 14.3.2 b)	Approved Y capacitors used.	P
8.8	Insulation thickness and thin sheet materials		P
	Basic or supplementary insulation > 0,4 mm (mm) :	Approved power cord.	P
	Reinforced insulation > 0,4 mm (mm)	Transformer's bobbin, mylar sheet, certified optocoupler and plastic enclosure are provided distance through insulation more than 0.4 mm.	P
	Thin sheet material used inside the equipment	Insulating tape used in the transformer.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Basic or supplementary insulation, at least two layers, each meeting 10.4	No such construction.	N/A
	Basic or supplementary insulation, three layers any two of which meet 10.4	No such construction.	N/A
	Reinforced insulation, two layers each of which meet 10.4	Two layers of insulating tape are wrapped around the transformer, each of which meet 10.4	P
	Reinforced insulation, three layers any two which meet 10.4	No such construction.	N/A
8.9	Adequate insulation between internal hazardous live conductors and accessible parts, or between internal hazardous live parts and conductors connected to accessible parts	Adequate insulation is provided between such parts	P
8.10	Double insulation between accessible parts and conductors connected to the mains	Reinforced insulation is provided between hazardous live parts and accessible parts.	P
	Double insulation between conductors connected to accessible parts and parts connected to the mains	Reinforced insulation is provided between hazardous live parts and accessible parts.	P
8.11	Detaching of wires		P
	No undue reduction of creepage or clearance distances if wires become detached	The necessary spacing did not reduce after the below test.	P
	Vibration test carried out	See sub-clause 12.1.3.	P
8.12	Adequate fastening of windows, lenses, lamp covers etc. (pull test 20 N for 10 s)	No such windows, lenses, lamps etc.	N/A
8.13	Adequate fastening of covers (push/pull test 50 N for 10 s)	No such cover.	N/A
8.14	No risk of damage to the insulation of internal wiring due to hot parts or sharp edges	The internal wiring does not touch heat sources or sharp edges that may damage the insulation or cause hazards when considered the 2 N force	P
8.15	Only special supply equipment can be used	No such device.	N/A
8.16	Insulated winding wire without additional interleaved insulation	All winding end use insulating tube as physical separation.	P
8.17	Endurance test as required by 8.16	No such construction.	N/A
8.18	Disconnection from the mains		P
	Disconnect device	The mains plug used as disconnect device. See sub-clause 5.5.3.	P



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	All-pole switch or circuit breaker with >3mm contact separation	No such switch used.	N/A
	Mains switch ON indication	No such switch used.	N/A
8.19	Switch not fitted in the mains cord	No such switch used.	N/A
8.20	Bridging components comply with clause 14	No such component.	N/A
8.21	Non-separable thin sheet material	No such sheet material used	N/A
9	ELECTRIC SHOCK HAZARD UNDER NORMAL OPERATING CONDITION		P
9.1	Testing on the outside		P
9.1.1	General		P
9.1.1.1	Requirements		P
	Accessible parts shall not be hazardous live	No hazardous live on the accessible part	P
	Inaccessible terminals are not accessible or comply with relevant requirements	Complied	P
	For voltages >1000 V ac or >1500 V dc complies with clause 13.3.1 for basic insulation.....:	No such circuit inside the equipment.	N/A
9.1.1.2	Determination of hazardous live parts		P
	a) Open circuit voltages	See appended table 9.1.1.2	P
	b) Touch current measured from terminal devices using the network in annex D	See appended table 9.1.1.2	P
	c) Discharge not exceeding 45 µC	The stores charges did not exceed 45 µC.	P
	d) Energy of discharge not exceeding 350 mJ	No such circuit.	N/A
9.1.1.3	Test with test finger and test probe	The test probe B, test probe 13, test probe 18 and 19 used cannot access to hazardous live parts.	P
9.1.2	No hazardous live shafts of knobs, handles or levers	The device would not be hazardous live	P
9.1.3	Ventilation holes and other holes tested by means of 4 mm x 100 mm test pin	The test pin would not become hazardous live.	P
9.1.4	Terminal devices tested with 1 mm x 20 mm test pin (10 N); test probe D of IEC 61032	The test probe would not become hazardous live.	P
	Terminal devices tested with 1 mm x 100 mm straight wire (1 N); test probe D of IEC 61032	The test probe would not become hazardous live.	P
9.1.5	Pre-set controls tested with 2.5 mm x 100 mm test pin (10 N); test probe C of IEC 61032	No pre-set control.	N/A
9.1.6	Withdrawal of the mains plug		P

**Bureau Veritas Shenzhen Co., Ltd.
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Clause	Requirement + Test	Result - Remark	Verdict
	No shock hazard due to stored charge after 2 s	Max. 4 Vdc after 2s under normal conditions	P
	Bleeder resistor(s) comply with 14.2 or no shock hazard when open circuited	Max. 10 Vdc after 2s under R102 was opened.	P
	If C is not greater than 0,1 μ F no test needed	Capacity greater than 0.1 μ F	N/A
9.1.7	Resistance to external force		P
	a) Test probe 11 of IEC 61032 for 10 s (50 N)	Hazardous live part is not accessible.	P
	b) Test hook of fig. 4 for 10 s (20 N)	Hazardous live part is not accessible.	P
	c) 30 mm diameter test tool for 5 s (100 or 250 N)	Hazardous live part is not accessible.	P
9.2	No hazard after removing a cover by hand	No such cover	N/A
10	INSULATION REQUIREMENTS		P
10.2	Insulation resistance (M Ω) at least 2 M Ω min. after surge test for basic and 4 M Ω min. for reinforced insulation	The insulation between accessible terminal and hazardous live parts is subjected to 50 discharges at maximum rate of 12 /min, from a 1 nF capacitor charged to 10 kV, after testing, the EUT complied with the requirements of clause 10.4	P
10.3	Humidity treatment 48 h or 120 h	The humidity treatment test has performed in 95% R.H., 30 °C for 48 hours.	P
10.4	Insulation resistance and dielectric strength		P
	Between parts of different polarity directly connected to the mains	See appended table 10.4.	P
	Between parts separated by BASIC or SUPPLEMENTARY insulation	See appended table 10.4.	P
	Between parts separated by REINFORCED insulation	See appended table 10.4.	P
11	FAULT CONDITIONS		P
11.1	No shock hazard under fault condition	See appended table 11.1	P
11.2	Heating		P
11.2.1	Requirements		P
	No danger of fire to the surroundings	No danger of fire	P



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Clause	Requirement + Test	Result - Remark	Verdict
	Safety not impaired by abnormal heat	Safety not impaired by abnormal heat	P
	Flames extinguish within 10 seconds	No flame is generated during the fault condition.	P
	No hazard from softening solder	No solder point became soft after the test.	P
	Soldered terminations not used as protective mechanism	No soldered part used as protective mechanism.	P
11.2.2	Measurement of temperature rises	See appended table 11	P
11.2.3	Temperature rise of accessible parts	See appended table 11	P
11.2.4	Temperature rise of parts, other than windings and printed boards, providing electrical insulation	See appended table 11	P
11.2.5	Temperature rise of parts acting as a support or mechanical barrier	See appended table 11	P
11.2.6	Temperature rise of windings	See appended table 11	P
11.2.7	Printed boards		N/A
	Temperature rise does not exceed the limits of table 3 or exceed the limits of table 3 by max. 100 K for max. 5 min	Temperature rise of printed boards did not exceed the limit	N/A
	a) Temperature rise of V-0 or VTM-0 printed circuit boards exceeding the limits of table 3 by not more than 100 K for an area not greater than 2 cm ²	Temperature rise of printed boards did not exceed the limit	N/A
	b) Temperature rise of V-0 or VTM-0 printed circuit boards exceeding the limits of table 3 up to 300 K for an area not greater than 2 cm ² for a maximum of 5 min	Temperature rise of printed boards did not exceed the limit	N/A
	Meets all the special conditions if conductors on printed circuit boards are interrupted	No printed board were interrupted, peeled, or loosen after the test.	N/A
	Class I protective earthing maintained	Class II equipment	N/A
11.2.8	Temperature rise of parts not subject to the limits of 11.2.2 to 11.2.7 shall not exceed the limits in table 3, item e), "Fault conditions".	No such part	N/A
12	MECHNICAL STRENGTH		P
12.1	Complete apparatus		P
12.1.1	The apparatus have adequate mechanical strength	The apparatus have adequate mechanical strength	P
12.1.2	Bump test where mass >7 kg	No damage in the sense of this standard after the test	P



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12.1.3	Vibration test	No damage in the sense of this standard after the test	P
12.1.4	Impact hammer test	No damage in the sense of this standard after the test	P
	Steel ball test	No damage in the sense of this standard after the test.	P
12.1.5	Drop test for portable apparatus where mass ≤ 7 kg	The EUT is not portable apparatus	N/A
12.1.6	Thermoplastic enclosures stress relief test	Test was conducted at 70°C with acceptable result.	P
12.2	Fixing of knobs, push buttons, keys and levers	No actuating elements affecting electric shock.	N/A
12.3	Remote controls with hazardous live parts	No hazardous live part in the remote control	P
12.4	Drawers (pull test 50 N, 10 s)	No such device.	N/A
12.5	Antenna coaxial sockets providing isolation	No such device.	N/A
12.6	Telescoping or rod antennas		N/A
12.6.1	6,0mm diameter end	No such device.	N/A
	Prevented from falling into the apparatus	No such device.	N/A
12.6.2	Physical securement, removal prevented	No such device.	N/A
12.7	Apparatus containing coin / button cell batteries		N/A
12.7.2	Reduced possibility for children to remove battery	No such battery	N/A
12.7.3	Tests		N/A
12.7.3.2	Stress relief test	No such battery	N/A
12.7.3.3	Battery replacement test	No such battery	N/A
12.7.3.4	Drop test	No such battery	N/A
12.7.3.5	Impact test	No such battery	N/A
12.7.4	Battery not accessible; or not removable	No such battery	N/A
13	CLEARANCES AND CREEPAGE DISTANCES		P
13.1	Clearances in accordance with 13.3	See appended table 13.	P
	Creepage distances in accordance with 13.4	See appended table 13.	P
13.2	Determination of working voltage	The unit was connected to a 240V TN power system. Results see appended table.	P
13.3	Clearances		P



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13.3.1	Comply with 13.3 or Annex J	See appended table 13.	P
13.3.2	Circuits conductively connected to the mains comply with table 8 and, where applicable, table 9	See appended table 13.	P
13.3.3	Circuits not conductively connected to the mains comply with table 10	Secondary circuits are verified by short-circuit tests according to sub-clause 4.3.1	N/A
13.3.4	Measurement of transient voltages	Considered only normal transient voltage.	N/A
13.4	Creepage distances not less than appropriate table 11 minimum values	See appended table 13.	P
13.5	Printed boards		N/A
13.5.1	Conductors complying with pull-of and peel strength requirements, one of which may be conductively connected to the mains, as in fig. 10	No such part.	N/A
13.5.2	Type B coated printed circuit boards complying with IEC 60664-3 (basic insulation only)	No such part.	N/A
13.6	Conductive parts along uncemented joints clearances and creepage distances comply with 13.3 and 13.4	No such part.	N/A
	Conductive parts along reliably cemented joints comply with 8.8	No such part.	N/A
	Temperature cycle test and dielectric strength test	No such part.	N/A
	500V test for transformers, magnetic coupler and similar devices, if insulation is relied upon for safety	No such part.	N/A
13.7	Enclosed, enveloped or hermetically sealed parts not conductively connected to the mains, clearances and creepage distances as in table 12	No such part.	N/A
13.8	Parts filled with insulating compound, meeting the requirements of 8.8	No such part.	N/A
14	COMPONENTS		P
14.1	Flammability according to IEC 60695-11-10 or annex G, or 20.2.5	Accepted flammability category material provided	P
14.2	Resistors		N/A
	Resistors separately approved	No such component used	N/A
	a) Resistors between hazardous live parts and accessible metal parts	No such component used	N/A
	b) Resistors, other than between hazardous live parts and accessible parts	No such component used	N/A
14.3	Capacitors and RC units		P



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	Capacitors separately approved :	Approved component used.	P
14.3.1	Damp heat test duration 21 days	Approved component used.	N/A
14.3.2	Y capacitors tested to IEC 60384-14:2005	Approved Y capacitors used.	P
14.3.3	X capacitors tested to IEC 60384-14:2005	Approved X capacitors used	P
14.3.4	Capacitors operating at mains frequency but not connected to the mains: tests for X2	No such component.	N/A
14.3.6	Capacitors with volume exceeding 1750 mm ³ , where short-circuit current exceeds 0,2 A: compliance with IEC 60384-1, 4.38 category B or better	Capacitors with volume exceeding 1750 mm ³ except for X capacitor have metal shell	N/A
	Capacitors with volume exceeding 1750 mm ³ , mounted closer to a potential ignition source than table 13 permits: compliance with IEC 60384-1, 4.38 category B or better	Capacitors with volume exceeding 1750 mm ³ except for X capacitor have metal shell	N/A
14.4	Inductors and windings		P
14.4.1	Comply with IEC 61558-1, IEC 61558-2 (as relevant) and clause 20.2.5	Tested with apparatus.	N/A
	Transformers and inductors separately approved .:	Tested with apparatus.	N/A
14.4.2	Transformers and inductors marked with manufacturer's name and type	The transformer is marked with the marker and type.	P
14.4.3	General	See below.	P
	Insulation material complies with clause 20.2.5	Bobbin material complied with clause 20.2.5.	P
14.4.4	Constructional requirements		P
14.4.4.1	Clearances and creepage distances comply with clause 13	Complied with clause 13.	P
14.4.4.2	Transformers meet the constructional requirements	Reinforced insulation was provided between primary and secondary windings.	P
14.4.5	Separation between windings		P
14.4.5.1	Class II transformers have adequate separation between hazardous live parts and accessible parts (double or reinforced insulation)	Reinforced insulation was provided between primary and secondary windings.	P
	Coil formers and partition walls > 0,4 mm	See clause 8.8.	P
14.4.5.2	Class I transformers, with basic insulation and protective screening only if all 7 conditions are met	No such construction.	N/A
14.4.5.3	Separating transformers with at least basic insulation	No such construction.	N/A
14.4.6	Insulation between hazardous live parts and accessible parts		P



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14.4.6.1	Class II transformers have adequate insulation between hazardous live parts and accessible parts (double or reinforced insulation)	Reinforced insulation was provided in the transformer.	P
	Coil formers and partition walls > 0,4 mm	See clause 8.8.	P
14.4.6.2	Class I transformers have adequate insulation between hazardous live parts and accessible conductive parts or those conductive parts or protective screens connected to a protective earth terminal	Not class I transformer design.	N/A
	Winding wires connected to protective earth have adequate current-carrying capacity	Not such transformer design.	N/A
14.5	High voltage components and assemblies (U > 4kV peak)		N/A
14.5.1	Component meets category V-1 of IEC 60695-11-10	No component operated at voltage higher than 4kV.	N/A
14.5.2	High voltage transformers and multipliers	No component operated at voltage higher than 4kV.	N/A
14.5.3	High voltage assemblies and other parts	No component operated at voltage higher than 4kV.	N/A
14.6	Protective devices		P
14.6.1	Protective devices used within their ratings	See sub-clause 14.6.3	P
	External clearances and creepage distances meet requirement of clause 13 for the voltage across the device when opened	Basic insulation was provided between the terminals of the protective device.	P
14.6.2	Thermal releases		N/A
14.6.2.1	Comply with 14.6.2.2, 14.6.2.3 or 14.6.2.4	No such component	N/A
14.6.2.2	a) Thermal cut-outs separately approved	No such component	N/A
	b) Thermal cut-outs tested as part of the submission	No such component	N/A
14.6.2.3	a) Thermal links separately approved	No such component	N/A
	b) Thermal links tested as part of the submission	No such component	N/A
14.6.2.4	Thermal devices re-settable by soldering	No such device.	N/A
14.6.3	Fuses and fuse holders		P
14.6.3.1	Fuse-links in the mains circuit according to IEC 60127	Approved fuse used	P
14.6.3.2	Correct marking of fuse-links adjacent to holder ...:	F101: T3.15AL / 250V	P
14.6.3.3	Not possible to connect fuses in parallel	Only one fuse used	N/A
14.6.3.4	Not possible to touch hazardous live parts when replacing fuse-links without the use of a tool	Not possible to replace fuse without the use of a tool.	N/A
14.6.4	PTC thermistors comply with IEC 60730-1:2010	No PTC used.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	PTC devices (>15 W) category V-1 or better	No PTC used.	N/A
14.6.5	Circuit protectors have adequate breaking capacity and their position is correctly marked	No such component.	N/A
14.7	Switches		N/A
14.7.1 a)	Separate testing to IEC 61058-1 including: - 10 000 operations - Normal pollution suitability - For CRT TV's, make and break speed independent of speed of actuation - V-0 or compliance with G.1.1	No such switch used	N/A
14.7.1 b)	Tested in the apparatus		N/A
	Switch controlling > 0.2A with open contact voltage > 35 V (peak) / 24 V dc complying with 14.6.3, 14.6.4 and V-0 or G.1.1	No such switch used	N/A
	Switch controlling > 0.2A with open contact voltage < 35 V (peak) / 24 V dc complying with 14.6.3 and V-0 or G.1.1	No such switch used	N/A
	Switch controlling ≤ 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.4 and V-0 or G.1.1	No such switch used	N/A
14.7.2	Switch tested to 14.7.1 b) checked according to IEC 61058-1 clause 13.1 and 10 000 operation test	No such switch used	N/A
14.7.3	Switch tested to 14.6.1 b) compliant with IEC 61058-1 subclause 16.2.2 d) and m) not attaining excessive temperatures in use	No such switch used	N/A
14.7.4	Switch tested to 14.6.1 b) has adequate dielectric strength	No such switch used	N/A
14.7.5	Mains switch controlling mains socket outlets additional tests to IEC 61058-1	No mains socket outlets used	N/A
14.8	Safety interlocks according to 2.8 of IEC 60950-1	No such device	N/A
14.9	Voltage setting device and the like are not likely to be changed accidentally	No such device	N/A
14.10	Motors		N/A
14.10.1	a) Endurance test on motors	No motor used.	N/A
	b) Motor start test	No motor used.	N/A
	Dielectric strength test	No motor used.	N/A
14.10.2	Not adversely affected by oil or grease etc.	No motor used.	N/A
14.10.3	Protection against moving parts	No motor used.	N/A
14.10.4	Motors with phase-shifting capacitors, three-phase motors and series motors meet clause. B.8, B.9 and B.10 of IEC 60950-1, Annex B	No motor used.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
14.11	Batteries		P
14.11.1	Comply with IEC 62133 if applicable	No such battery used	N/A
	Batteries mounted with no risk of accumulation of flammable gases	No risk	P
14.11.2	No possibility of recharging user replaceable non-rechargeable batteries	No recharging circuit in remote control.	P
14.11.3	Recharging currents and times within manufacturers limits	No such battery used	N/A
	Lithium batteries discharge and reverse currents within the manufacturers limits	No such battery used	N/A
14.11.4	Battery mould stress relief	No such battery used	N/A
14.11.5	Battery drop test	No such battery used	N/A
14.12	Optocouplers		P
	Comply with constructional requirements of clause 8	Approved optocoupler used	P
	External clearances and creepage comply with 13.1	Approved optocoupler used	P
	Compound completely filling the casing or internal clearances and creepage comply with 13.1..... :	Approved optocoupler used	P
	a) Complies with 13.6 (jointed insulation) and N.3.2	Approved optocoupler used	P
	b) Complies with IEC 60747-5-5:2007	Approved optocoupler used	P
	c) Complies with 13.8	Approved optocoupler used	N/A
14.13	Surge suppression varistors		P
	Comply with IEC 61051-2	Approved varistor used.	P
	Not connected between mains and accessible parts except for earthed parts of permanently connected apparatus	The approved varistor did not connect between mains and accessible parts.	P
	GDT bridging basic insulation complies with electric strength and distance requirements	No such component used.	N/A
	Complies with the climatic, voltage, current pulse, fire hazard and thermal stress requirements of 14.13	Approved varistor used.	P
15	TERMINALS		P
15.1	Plugs and sockets		P
15.1.1	Mains plug, appliance inlet, interconnection couplers and mains socket-outlet meet the appropriate standard	Approved plug used	P
	Overloading of plugs or appliance inlets prevented if the apparatus has mains socket outlets	No socket-outlet in the EUT.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Overloading of internal wiring prevented if the apparatus has mains socket outlets	No socket-outlet in the EUT.	N/A
15.1.2	Design of connectors other than for mains power	See below.	P
	Design of sockets with symbol of 5.3 b) design	No risk to insert into mains socket outlets	P
15.1.3	Design of terminals and connectors used in output circuits of supply apparatus	No such device.	N/A
15.2	Provision for protective earthing		N/A
	Accessible conductive parts of Class I equipment reliably connected to earth terminal, within equipment	Class II apparatus	N/A
	Protective earth conductors correctly fixed and coloured	Class II apparatus	N/A
	Separate protective earth terminal near mains terminal and comply with 15.3	Class II apparatus	N/A
	Protective earth terminal resistant to corrosion	Class II apparatus	N/A
	Earth resistance test: $< 0,1 \Omega$ at 25 A	Class II apparatus	N/A
15.3	Terminals for external flexible cords and for permanent connection to the mains supply		P
15.3.1	Adequate terminals for connection of permanent wiring	Not permanently connected apparatus.	N/A
15.3.2	Reliable connection of non-detachable cords	The power cord is connected to PCB by approved pluggable connector	P
	Not soldered to conductors of a printed circuit board	The power cord is connected to PCB by approved pluggable connector	P
	Adequate clearances and creepage distances between connections should a wire break away	The power cord is connected to PCB by approved pluggable connector	P
	Wire secured by additional means to the conductor	The power cord is connected to PCB by approved pluggable connector	P
15.3.3	Screws and nuts clamping conductors have adequate threads: ISO 261, ISO 262 or similar	No such terminal used	N/A
15.3.4	Conductors adequately fixed (two independent fixings)	The power cord is connected to PCB by approved pluggable connector	P
15.3.5	Terminals allow connection of conductors having appropriate cross-sectional area	The pluggable connector is used within its rating	P
15.3.6	Terminals to 15.3.3 have sizes required by table 16	No such terminal used	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
15.3.7	Terminals clamp conductors between metal and have adequate pressure	No such terminal used	N/A
	Terminals designed to avoid conductor slipping out when tightened	No such terminal used	N/A
	Terminals adequately fixed when tightened or loosened (no loosening, wiring not stressed, distances not reduced)	No such terminal used	N/A
15.3.8	Terminals carrying a current more than 0,2 A: contact pressure not transmitted by insulating material except ceramic	Contact pressure not transmitted by insulating material	P
15.3.9	Termination of non-detachable cords: wires terminated near to each other	The power cord is connected to PCB by approved pluggable connector	P
	Terminals located and shielded: test with 8 mm strand	The power cord is connected to PCB by approved pluggable connector	P
15.4	Devices forming a part of the mains plug		N/A
15.4.1	No undue strain on mains socket-outlets	No such construction.	N/A
15.4.2	Device complies with standard for dimensions of mains plugs	No such construction.	N/A
15.4.3	Device has adequate mechanical strength (tests a,b,c)	No such construction.	N/A
16	EXTERNAL FLEXIBLE CORDS		P
16.1	Mains cords sheathed type, complying with IEC 60227 for PVC or IEC 60245 for synthetic rubber cords	Approved power cord used	P
	Non-detachable cords for Class I have green/yellow core for protective earth	Class II apparatus	N/A
16.2	Mains cords conductors have adequate cross-sectional area for rated current consumption of the equipment	Approved power cord used within its rating.	P
16.3	Flexible cords not complying with 16.1, used for interconnections between separate units of equipment used in combination and carrying hazardous live voltages comply with a) and b)	No such kinds of flexible cord used.	N/A
16.4	Flexible cords used for connection between equipment have adequate cross-sectional areas to avoid temperature rise under normal and fault conditions	No such construction.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
16.5	Adequate strain relief on external flexible cords	A strain relief is provided to prevent the external strain from outside.	P
	Not possible to push cord back into equipment	The cord not be push back into equipment	P
	Strain relief device unlikely to damage flexible cord	A strain relief is provided.	P
	For mains cords of Class I equipment, hazardous live conductors become taut before earth conductor	Class II apparatus	N/A
16.6	Apertures for external flexible cord: no risk of damage to the cord during assembly or movement in use	No risk of damage to the cord	P
16.7	Transportable apparatus have appliance inlet according to IEC 60320-1 or means of stowage to protect the cord	The EUT is not transportable equipment.	N/A

17	ELECTRICAL CONNECTIONS AND MECHANICAL FIXINGS		P
17.1	Table 20 torque test metal thread, 5 times	Diameter of screw: max. 2.93 mm Torque: 0.5 Nm; After testing, no damaged.	P
	Table 20 torque test non-metallic thread, 10 times ..	No such screw used.	N/A
17.2	Correct introduction into female threads in non-metallic material	No such screw used.	N/A
17.3	Cover fixing screws captive or no hazard when replaced by a screw whose length is 10 times its diameter	No hazard when replaced by a screw whose length is 10 times its diameter.	P
17.4	No loosening of conductive parts carrying a current > 0,2 A	The conductive parts were fixed together securely	P
17.5	Contact pressure not transmitted through insulating material other than ceramic for connections carrying a current > 0,2 A	No plastic used for contact pressure.	P
17.6	Stranded conductors of flexible supply cords carrying a current > 0,2 A with screw terminals not consolidated by solder	No such construction.	N/A
17.7	Cover fixing devices have adequate strength and their positioning is unambiguous	No such construction.	N/A
17.8	Fixing means for detachable legs or stands provided	No such construction.	N/A
17.9	Internal pluggable connections, affecting safety, unlikely to become disconnected	Internal pluggable connector would not be disconnected under 2 N force	P



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Clause	Requirement + Test	Result - Remark	Verdict
18	MECHANICAL STRENGTH OF PICTURE TUBES AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N/A
18.1	Comply with IEC 61965 or 18.2	No picture tube used.	N/A
18.2	Non-intrinsically protected tubes	No picture tube used.	N/A
19	STABILITY AND MECHANICAL HAZARDS		P
19.1	Apparatus > 7kg have adequate stability or is required to be fastened in place and provided with the warning of 5.5.2 f)	The apparatus has adequate stability, see below testing	P
19.2	Test at 10° to the horizontal	No overturn during testing	P
19.3	Vertical force test 100 N applied downwards	No overturn during testing	P
19.4	Horizontal force test, 100 N or 13% of weight, applied horizontally to point of least stability	Apparatus with a mass less than 25 kg and height less than 1 m	N/A
19.5	Edges or corners not hazardous	No dangerous edges or corner in the equipment.	P
19.6	Mechanical strength of glass		N/A
19.6.1	Glass surfaces (exc.laminated) with an area exceeding 0,1 m² or major dimension > 450 mm, pass the test of 12.1.4	No such part.	N/A
19.6.2	Fragmentation test	No such part.	N/A
19.7	Wall or ceiling mounting means		P
19.7.1 - 19.7.3	Not dislodged and remain mechanically intact after test according to 19.7.2 Test 1, Test 2 or Test 3	There are four attachment points provided on EUT: A force of 71 N was applied to each point according to clause 19.7.2 Test 2, additionally performed for Test 3. Not dislodged and remain mechanically intact after test.	P
20	RESISTANCE TO FIRE		P
20.1	Start and spread of fire is prevented	Complied	P
20.2	Electrical components and mechanical parts		P
20.2.1	a) Exemption for components contained in an enclosure of material V-0 to IEC 60695-11-10 with openings not exceeding 1 mm in width	No such enclosure.	N/A
	b) Exemption for small components	Refer to 20.2.5.	P



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Clause	Requirement + Test	Result - Remark	Verdict
20.2.2	Electrical components meet the requirements of Clause 14 or 20.2.5	For components covered in the Clause 14, the certified components were used.	P
20.2.3	Insulation of internal wiring working at voltages > 4 kV or leaving an internal fire enclosure, or located within the areas mentioned in Table 21, comply with G.2	No H.V. wiring in the EUT.	N/A
20.2.4	Material of printed circuit boards on which the available power exceeds 15 W at a voltage between 50 V and 400 V (peak) a.c. or d.c. meets V-1 or better to IEC 60695-11-10, unless used in a fire enclosure	Rated V-0 or better PCB material used	P
	Material of printed circuit boards on which the available power exceeds 15 W at a voltage >400 V (peak) a.c. or d.c. meets V-0 to IEC 60695-11-10.	Rated V-0 or better PCB material used	P
20.2.5	Components and parts not covered by 20.1.1, 20.1.2 and 20.1.3 (other than fire enclosures) mounted nearer to a potential ignition source than the distances in Table 21 comply with the relevant flammability category in Table 21	Metallic enclosure and V-0 plastic enclosure used.	P
	Components and parts as above but shielded from a potential ignition source, with the barrier area in accordance with Table 21 and fig. 13	Metallic enclosure and V-0 plastic enclosure used.	P
	Apparatus with voltages >4kV under normal operating conditions and distances to the enclosure exceed those specified Table 21, flammability classification HB40 or better is required for the enclosure	No circuits are working at the voltage higher than 4kV.	N/A
20.3	Fire enclosure		N/A
20.3.1	Potential ignition sources with open circuit voltage > 4 kV (peak) a.c. or d.c. contained in a fire enclosure to V-1	No parts are working at voltage higher than 4KV.	N/A
20.3.2	Internal fire enclosures with openings not exceeding 1 mm in width and with openings for wires completely filled	No such construction.	N/A
20.3.3	Requirements of 20.2.1 and 20.2.2 met by an internal fire enclosure	No such construction.	N/A
ANNEX A	ADDITIONAL REQUIREMENTS FOR APPARATUS WITH PROTECTION AGAINST SPLASHING WATER		N/A
A.5	Marking and instructions		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
A.5.1	A.5.2 i) Marked with at least IPX4 (IEC 60529) 5.5.2 a) does not apply	No such requirement with protection against splashing water.	N/A
A.10	Insulation requirements		N/A
A.10.3	Splash and humidity treatment		N/A
A.10.3.1	The enclosure provide adequate protection against splashing water	No such requirement with protection against splashing water.	N/A
A.10.3.2	Complies with 10.3,duration of the test is 168h	No such requirement with protection against splashing water.	N/A

ANNEX B	APPARATUS TO BE CONNECTED TO TELECOMMUNICATION THE TELECOMMUNICATION NETWORKS		N/A
	Complies with IEC 62151 clause 1	The EUT does not be connected to telecommunication networks.	N/A
	Complies with IEC 62151 clause 2	The EUT does not be connected to telecommunication networks.	N/A
	Complies with IEC 62151 clause 3 modified	The EUT does not be connected to telecommunication networks.	N/A
	Complies with IEC 62151 clause 4 modified	The EUT does not be connected to telecommunication networks.	N/A
	Complies with IEC 62151 cause 5 modified	The EUT does not be connected to telecommunication networks.	N/A
	Complies with IEC 62151 clause 6	The EUT does not be connected to telecommunication networks.	N/A
	Complies with IEC 62151 clause 7	The EUT does not be connected to telecommunication networks.	N/A
	Complies with IEC 62151 annex A, B and C	The EUT does not be connected to telecommunication networks.	N/A

ANNEX L	ADDITIONAL REQUIREMENTS FOR ELECTRONIC FLASH APPARATUS FOR PHOTOGRAPHIC PURPOSES		N/A
L.5	Marking and instructions		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
L.5.5.1	Instructions for battery chargers and Supply apparatus indicating type or model number of flash apparatus with which it is to be used	No electronic flash device.	N/A
	Instructions for flash apparatus indicating type or model number of battery chargers or Supply apparatus with which it is to be used	No electronic flash device.	N/A
L.7	Heating under normal operating conditions		N/A
L.7.1.6	Lithium batteries meet permissible temp rise in Table 3	No electronic flash device.	N/A
L.9	Electric shock hazard under normal operating conditions		N/A
L. 9.1.1.1	Terminals for connection to synchroniser not hazardous live	No electronic flash device.	N/A
L.14	Components		N/A
L.14.6.7	Mains switch characteristics appropriate to its function under normal conditions	No electronic flash device.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
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7.1	TABLE: Heating Test						P
	Ambient (°C)..... :						See below
	Loudspeaker impedance (Ω)..... :						8 ohm × 2
Cond.	U _n (V)	Hz	I _n (A)	P _n (W)	U _{out} (V)	P _{out} (W)	Operating Condition / Status
1.	90 Vac	50	1.010	89.1	2.12X2	0.56X2	Playing three vertical bar signal, the EUT was operated under DTV mode to deliver 1/8 of max. non-clipped output power for two speakers, with max. brightness level, each of two USB port loading with 500 mA and ANT terminal output (18 Vdc) loaded with 400 mA.
2.	100 Vac	50	0.899	88.3	2.12X2	0.56X2	
3.	240 Vac	50	0.399	87.3	2.12X2	0.56X2	
4.	264 Vac	50	0.366	86.5	2.12X2	0.56X2	
5.	90 Vac	60	0.998	89.0	2.12X2	0.56X2	
6.	100 Vac	60	0.895	88.3	2.12X2	0.56X2	
7.	240 Vac	60	0.402	87.0	2.12X2	0.56X2	
8.	264 Vac	60	0.368	86.5	2.12X2	0.56X2	

Note: All signal input mode were considered, the maximum power consumption mode is DTV mode.

Test condition No.	No. 1	No. 8	No. _	No. _	dT (K) limit
Thermocouple Locations	dT (K)	dT (K)	dT (K)	dT (K)	
Power cord	14.1	11.9	--	--	60
AC Connector CON101	15.0	12.1	--	--	50
MOV RV101	18.1	13.5	--	--	50
NTC RT101	34.9	17.8	--	--	85
Y-cap CY106	13.6	13.4	--	--	90
Inductance FL103 winding	24.5	16.1	--	--	85
X-cap CX101	22.8	16.6	--	--	65
Inductance FL101 winding	30.2	19.4	--	--	85
X-cap CX102	26.2	19.7	--	--	65
Inductance FL102 winding	34.1	22.9	--	--	85
Y-cap CY101	17.2	14.5	--	--	90
Y-cap CY104	20.4	17.1	--	--	90
PCB near D103	45.1	29.2	--	--	85
Cap C101	39.2	28.0	--	--	85
Inductance L601 winding	49.2	36.9	--	--	85
Inductance L601 core	44.6	35.9	--	--	85

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Clause	Requirement + Test		Result - Remark		Verdict
PCB near Q602	51.3	49.1	--	--	85
PCB near Q201	48.0	46.4	--	--	85
Opto-coupler N202	23.2	23.2	--	--	65
Y-cap CY105	26.3	25.9	--	--	90
E-cap C206	27.0	24.7	--	--	70
Transformer T101 winding	31.8	32.2	--	--	75
Transformer T101 core	27.2	30.9	--	--	75
PCB near D503	14.7	15.6	--	--	85
E-cap C505	19.9	21.0	--	--	70
PCB near D501	24.8	23.9	--	--	85
E-cap C503	19.8	20.5	--	--	70
Filter L402 winding	41.0	40.7	--	--	85
E-cap C416	16.0	16.5	--	--	70
PCB near heat sink S201	30.8	29.3	--	--	85
PCB near UA1 on main board	28.7	27.5	--	--	85
TV tuner	12.8	12.3	--	--	40
Internal plastic enclosure near T101	12.0	11.9	--	--	25
Between insulation sheet and plastic enclosure	6.3	6.1	--	--	25
Outside plastic enclosure near T101	10.8	10.9	--	--	60
Metal enclosure	15.9	16.1	--	--	40
Button	1.4	2.8	--	--	60
LED panel	4.8	5.2	--	--	60
Ambient(°C)	26.9	26.8	--	--	--
Supplementary information:					
	TABLE: Heating test, resistance method				
	Test condition No. :	--	--	--	--
	Ambient, t1 (°C) :	--	--	--	--
	Ambient, t2 (°C) :	--	--	--	--
Temperature rise of winding	R ₁ (Ω)	R ₂ (Ω)	ΔT (K)	Max. dT (K)	Insulation class
--	--	--	--	--	--
Supplementary information: --					



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EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
7.2	TABLE: Heat Resistance of Insulating Materials		P
Temperature T of part	T - normal conditions (°C)	T - fault conditions (°C)	Min T softening (°C)
Pluggable connector (CON101)	50.0	52.7	151.0
Supplementary information: --			

9.1.1.2	TABLE: Determination of hazardous live parts					P
Measured between:		Uoc (V)	U1 (V)	Limit U1	U2 (V)	Limit U2
L /N and accessible terminal and metallic enclosure		Max. 238 Vp	Max. 0.349 Vp	35 Vp	Max. 0.134 Vp	0.35 Vp
L /N and enclosure with foil		Max. 192 Vp	Max. 0.124 Vp	35 Vp	Max. 0.008 Vp	0.35 Vp
L /N and panel with foil		Max. 220 Vp	Max. 0.286 Vp	35 Vp	Max. 0.013 Vp	0.35 Vp
After clause 11.1 fault condition:						
L /N and accessible terminal and metallic enclosure		Max. 332 Vp	Max. 0.603 Vp	70.0 Vp	Max. 0.197 Vp	1.40 Vp
L /N and enclosure with foil		Max. 238 Vp	Max. 0.293 Vp	70.0 Vp	Max. 0.013 Vp	1.40 Vp
L /N and panel with foil		Max. 291 Vp	Max. 0.356 Vp	70.0 Vp	Max. 0.016 Vp	1.40 Vp
Supplementary information: --						
Note: The voltage of LED driver is 102.6Vdc, which was evaluated by fault condition.						

10.4	TABLE: Insulation Resistance Measurements		P
Insulation resistance between:		R (MΩ)	Required R (MΩ)
Different polarity of AC mains (after fuse opened)		500	Min. 2
L/N and accessible terminal		500	Min. 4
L/N and metallic enclosure		500	Min. 4
L /N and plastic enclosure with foil		500	Min. 4
L /N and panel with foil		500	Min. 4
Transformer (T101) primary winding and secondary winding		500	Min. 4
Transformer (T101) primary winding and core		500	Min. 4
One layer of insulating tape used on transformer		500	Min. 4
Mylar sheet		500	Min. 4
Supplementary information: All types of transformer have been considered.			



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Clause	Requirement + Test	Result - Remark	Verdict
10.4	TABLE: Dielectric Strength		P
Test voltage applied between:		Test potential applied (V dc)	Breakdown / flashover (Yes/No)
Different polarity of AC mains (after fuse opened)		2120	No
L/N and accessible terminal		4240	No
L/N and metallic enclosure		4240	No
L /N and plastic enclosure with foil		4240	No
L /N and panel with foil		4240	No
Transformer (T101) primary winding and secondary winding		4240	No
Transformer (T101) primary winding and core		4240	No
One layer of insulating tape used on transformer		4240	No
Mylar sheet		4240	No
Supplementary information: All types of transformer have been considered.			

11	TABLE: Fault Conditions			P
No.	Component	Fault	dT (K) / Component	Test conditions, test duration, test result
Input voltage 264Vac 50Hz:				
1.	D101	Shorted	--	The fuse *F101 opened with breaking current exceeding 2.1 times of the fuse rating, no hazard. Test duration: 1s.
2.	C206	Shorted	--	The fuse *F101 opened with breaking current exceeding 2.1 times of the fuse rating, no hazard. Test duration: 1s.
3.	Q201 pin 1-3	Shorted	--	The unit working as normally. After testing, no damaged, no hazards. Test duration: 30 minutes
4.	Q201 pin 1-2	Shorted	--	The fuse *F101 opened with breaking current exceeding 2.1 times of the fuse rating, and components R205, R206, C203, R209, Q201, Q202 damaged, no hazard. Test duration: 1s.
5.	Q201 pin 3-2	Shorted	--	The fuse *F101 opened with breaking current exceeding 2.1 times of the fuse rating, and components R205, R206, C203, R209, Q201, Q202 damaged, no hazard. Test duration: 1s.



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Clause	Requirement + Test			Result - Remark	Verdict
6.	U201 pin 5-6	Shorted	--	The fuse *F101 opened with breaking current exceeding 2.1 times of the fuse rating, and components RR205, R206, C203, ZD201, D204, D301, U201, R209, Q202 damaged, no hazard. Test duration: 1s.	
7.	R209	Shorted	--	The unit working as normally. After testing, no damaged, no hazards. Test duration: 30 minutes	
8.	N201 pin 1-2	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes	
9.	N201 pin 3-4	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes	
10.	N201 Pin 1	Opened	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes	
11.	N201 Pin 3	Opened	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes	
12.	N202 pin 1-2	Shorted	--	The unit working as normally. After testing, no damaged, no hazards. Test duration: 30 minutes	
13.	N202 pin 3-4	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes	
14.	N202 Pin 1	Opened	--	The unit working as normally. After testing, no damaged, no hazards. Test duration: 30 minutes	
15.	N202 Pin 3	Opened	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes	
16.	N301 pin 1-2	Shorted	--	The unit working as normally. After testing, no damaged, no hazards. Test duration: 30 minutes	
17.	N301 pin 3-4	Shorted	--	The unit working as normally. After testing, no damaged, no hazards. Test duration: 30 minutes	
18.	N301 Pin 1	Opened	--	The unit working as normally. After testing, no damaged, no hazards. Test duration: 30 minutes	
19.	N301 Pin 3	Opened	--	The unit working as normally. After testing, no damaged, no hazards. Test duration: 30 minutes	

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Clause	Requirement + Test			Result - Remark
20.	Transformer T101 pin 1-3	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes
21.	Transformer T101 pin 4-5	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes
22.	Transformer T101 pin 6-9	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes
23.	Transformer T101 pin 6-10	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes
24.	D503 pin 1-2	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes
25.	D501	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes
26.	C505	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes
27.	C502	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes
28.	Q404 pin 1-3	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes
29.	Q404 pin 1-2	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes
30.	Q404 pin 3-2	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes
31.	C416	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes
32.	USB output	Shorted	--	The unit was shut down immediately. After testing, no damaged, no hazards. Test duration: 30 minutes
33.	Speaker output	Shorted	--	Unit speaker output shutdown with input power decreased to 83.6 W. After testing, no damaged, no hazards. Test duration: 30 minutes

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Clause	Requirement + Test			Result - Remark	Verdict
34.	Ventilation opening	Blocked	Refer to next table	Stable temperature rise was obtained. After testing, no damaged, no hazards. Test duration: 1 hour 30 minutes	
35.	Speaker output	Max. non-clipped	Refer to next table	Stable temperature rise was obtained. After testing, no damaged, no hazards. Test duration: 1 hour 20 minutes	
36.	USB output	Overload	Refer to next table	Max. loading current was 1.0A, when the loading current was increased to 1.1A, the unit shutdown. After testing, no damaged, no hazards. Test duration: 2 hours 40 minutes	
37.	DTV output	Overload	Refer to next table	Max. loading current was 0.5A, when the loading current was increased to 0.6A, the unit shutdown. After testing, no damaged, no hazards. Test duration: 2 hours 20 minutes	
38.	T101 pin6-9 output	Overload	Refer to next table	Max. loading current was 3.5A, when the loading current was increased to 3.6A, the unit shutdown. After testing, no damaged, no hazards. Test duration: 4 hours 20 minutes	
39.	T101 pin6-10 output	Overload	Refer to next table	Max. loading current was 0.7A, when the loading current was increased to 0.8A, the unit shutdown. After testing, no damaged, no hazards. Test duration: 4 hours 30 minutes	

Supplementary information:

Note*: All the sources of fuse which listed in table 14 were checked, the same result was obtained;

Note: The USB1 and USB2 ports with the same result.

Test conditions:

No. 34: Ventilation opening blocked; **No. 35:** Speaker output Max. non-clipped; **No. 36:** USB output overload; **No. 37:** DTV output overload; **No. 38:** T101 pin 6-9 output overload; **No. 39:** T101 pin 6-10 output overload

Test condition No.	No. 33	No. 34	No. 36	No. 37	dT (K) limit
Thermocouple Locations	dT (K)	dT (K)	dT (K)	dT (K)	
Power cord	16.9	14.3	12.3	12.1	100
AC Connector CON101	17.7	14.6	12.6	12.3	50
MOV RV101	19.3	16.1	14.0	13.7	110
NTC RT101	23.0	21.2	18.6	18.2	110
Y-cap CY106	19.1	15.8	13.8	13.6	110
Inductance FL103 winding	21.9	19.0	16.7	16.5	150
X-cap CX101	22.9	19.7	17.2	16.9	110

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Clause	Requirement + Test		Result - Remark		Verdict
Inductance FL101 winding	26.8	22.9	20.0	19.8	150
X-cap CX102	27.8	23.2	20.4	19.9	110
Inductance FL102 winding	31.5	26.9	23.7	23.5	150
Y-cap CY101	22.6	17.2	15.0	14.9	110
Y-cap CY104	25.5	20.2	17.7	17.3	110
PCB near D103	38.0	33.7	30.1	29.6	110
Cap C101	35.8	32.3	28.7	28.4	110
Inductance L601 winding	46.3	42.8	37.5	37.3	150
Inductance L601 core	44.0	40.8	36.6	36.2	150
PCB near Q602	58.6	56.7	49.9	49.6	110
PCB near Q201	57.4	54.8	47.3	46.5	110
Opto-coupler N202	28.9	26.1	23.8	23.7	110
Y-cap CY105	32.5	29.6	26.7	26.5	110
E-cap C206	31.4	24.8	27.8	31.1	110
Transformer T101 winding	39.1	35.9	36.4	36.3	140
Transformer T101 core	34.6	32.9	31.6	32.4	140
PCB near D503	21.4	16.2	20.0	22.2	110
E-cap C505	23.7	22.9	24.6	21.7	110
PCB near D501	28.8	24.7	28.0	27.0	110
E-cap C503	25.3	21.9	24.0	22.8	110
Filter L402 winding	45.4	42.8	44.2	42.9	150
E-cap C416	21.5	17.4	19.5	18.4	110
PCB near heat sink S201	31.8	32.4	30.5	31.0	110
PCB near UA1 on main board	33.6	48.0	28.8	27.6	110
TV tuner	15.0	13.3	12.6	20.7	65
Internal plastic enclosure near T101	14.4	12.9	13.5	14.6	25
Between insulation sheet and plastic enclosure	9.1	3.9	7.3	9.1	25
Outside plastic enclosure near T101	13.4	11.3	12.8	11.7	65
Metal enclosure	16.6	16.5	17.2	16.3	65
Button	2.9	3.5	3.3	3.0	65
LED panel	6.4	5.5	6.4	6.4	65
Ambient(°C)	25.6	24.7	26.5	27.4	--



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Clause	Requirement + Test		Result - Remark		Verdict
Test condition No.	No. 38	No. 39	--	--	dT (K) limit
Thermocouple Locations	dT (K)	dT (K)	dT (K)	dT (K)	
Power cord	12.5	12.4	--	--	100
AC Connector CON101	12.7	12.2	--	--	50
MOV RV101	14.6	13.9	--	--	110
NTC RT101	23.9	24.1	--	--	110
Y-cap CY106	13.5	13.6	--	--	110
Inductance FL103 winding	18.8	16.5	--	--	150
X-cap CX101	18.2	17.0	--	--	110
Inductance FL101 winding	22.9	22.0	--	--	150
X-cap CX102	21.6	20.3	--	--	110
Inductance FL102 winding	27.2	26.1	--	--	150
Y-cap CY101	14.7	15.1	--	--	110
Y-cap CY104	18.3	17.8	--	--	110
PCB near D103	35.9	35.7	--	--	110
Cap C101	32.8	31.5	--	--	110
Inductance L601 winding	42.8	41.5	--	--	150
Inductance L601 core	41.5	40.6	--	--	150
PCB near Q602	59.3	63.7	--	--	110
PCB near Q201	59.5	66.6	--	--	110
Opto-coupler N202	27.9	23.5	--	--	110
Y-cap CY105	32.4	27.9	--	--	110
E-cap C206	42.3	41.3	--	--	110
Transformer T101 winding	62.9	59.1	--	--	140
Transformer T101 core	60.2	55.3	--	--	140
PCB near D503	61.1	32.1	--	--	110
E-cap C505	33.2	21.7	--	--	110
PCB near D501	60.0	67.3	--	--	110
E-cap C503	43.8	42.6	--	--	110
Filter L402 winding	63.6	64.4	--	--	150
E-cap C416	33.9	31.4	--	--	110
PCB near heat sink S201	32.1	31.4	--	--	110
PCB near UA1 on main board	26.3	26.2	--	--	110

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Clause	Requirement + Test		Result - Remark		Verdict
TV tuner	14.1	14.5	--	--	65
Internal plastic enclosure near T101	16.1	14.2	--	--	25
Between insulation sheet and plastic enclosure	7.1	7.4	--	--	25
Outside plastic enclosure near T101	12.2	11.9	--	--	65
Metal enclosure	18.6	18.2	--	--	65
Button	3.6	3.3	--	--	65
LED panel	6.1	6.0	--	--	65
Ambient(°C)	27.6	27.5	--	--	--
Supplementary information:					

13	TABLE: Clearance And Creepage Distance Measurements					P
Rated supply voltage:	100-240 Vac	Pollution degree:	2	Material Group:	IIIa or IIIb	
2 N force on internal parts applied:	Internal lead wires and components				P	
30 N force on outside of conductive enclosure applied:	Metallic enclosure				P	
clearance and creepage distance at/of:	Working voltage (V)		Clearance (mm)		Creepage (mm)	
	U peak	U r.m.s.	Required	Measured	required	Measured
Different polarity of AC mains before fuse (F101) on the PCB (B)	420	250	2.0	3.5	2.5	3.5
Two poles of fuse (F101) on the PCB (B)	420	250	2.0	3.0	2.5	3.0
Live part to metal part of enclosure (R)	690	348	4.8	7.7	7.0	7.7
T101 primary winding to secondary Pin (R)	690	348	4.8	7.7	7.0	7.7
T101 primary winding to iron core (R)	690	348	4.8	7.7	7.0	7.7
Primary trace to secondary trace of PCB under T101(R)	690	348	4.8	7.7	7.0	7.7
Primary and secondary of optocoupler (N201, N202, N301) (R)	420	250	4.0	6.4	5.0	6.4
Primary trace to secondary trace of PCB under CY101, CY102, CY103, CY104, CY105, CY106 (R)	420	250	4.0	7.7	5.0	7.7
Supplementary information:						
B=Basic insulation, S=Supplementary insulation, D=Double insulation, R=Reinforced insulation						
1. All internal wire was fixed by tape.						
2. Primary lead wires are connected to PCB with approved pluggable connector.						
3. Two types transformer have been considered and have the same construction.						
4. Transformer description:						
- The iron core of transformer is considered as secondary part;						
- Two layers of insulating tape wrapped the bottom of iron core;						

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Clause	Requirement + Test	Result - Remark	Verdict
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- Concentric windings on phenolic bobbin;
- Teflon tube is provided on the end of all windings;
- 5. Mylar sheet with size approx. 210 mm (L) x 180 mm (W) used between metal shell of panel and power board.
- 6. The primary components (FL103, FL102, C206) are soldered to PCB and fixed by glued.

14	TABLE: Critical components information					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Metal enclosure	--	--	Measured thickness is min. 1.0 mm	EN 60065	Tested with appliance	
Power plug	Shenzhen Tongyuan Industrial Co., Ltd	TY-E201	2.5 A, 250 Vac	DIN VDE 0620-1, EN 50075	VDE	
Or	Interchangeable	-	250 Vac, 2.5 A	DIN VDE 0620 EN 50075	VDE or other EU Cert.	
-Description:	Interchangeability based on specified rating					
Power cord	Shenzhen Tongyuan Industrial Co., Ltd.	H03VV-F, H03VVH2-F	2 x 0.5 mm ² , or 2 x 0.75 mm ²	EN 50525-2-11	VDE	
Or	Interchangeable	-	2 x 0.5 mm ² or 2 x 0.75 mm ²	EN 50525-2-11	VDE or other EU Cert.	
-Description:	Interchangeability based on specified rating					
Strain relief bushing materials	Kingfa Sci & Tech Co Ltd	JH9606(M)	V-0, 60 °C, see Attachment 1 for the dimension drawing	UL 94	UL	
Plastic enclosure	SHENZHEN GUANGJUTAI PLASTIC INDUSTRIAL CO LTD	RD30+	V-0, 60 °C, require thickness min. 1.5mm, measure thickness 2.5mm.	UL 94	UL	
Heat-shrinkable tubing	Dongguan Salipt Co Ltd	SALIPT S-901-300, SALIPT S-901-600	VW-1, min. 300 V, 125 °C	UL 224	UL	
Or	Changyuan Electronics Group Co Ltd	CB-DWT, CB-HFT	VW-1, min. 300 V, 125 °C	UL 224	UL	
Or	Shenzhen Woer Heat-Shrinkable Material Co Ltd	RSFR-H	VW-1, min. 300 V, 125 °C	UL 224	UL	

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Clause	Requirement + Test		Result - Remark		Verdict
Or	Interchangeable	--	Min. 300 V, Min.125 °C, VW-1	UL 224	UL
-Description:	Interchangeability based on specified rating				
LED display screen	CHANGHONG 长虹	C400U18-E60-S(G11)	TFT, 40 inch	EN 60065	Tested within appliance
Mylar sheet (located between metal shell of panel and power board)	SICHUAN DONGFANG INSULATING MATERIAL CO LTD	DFR-BK(b)	V-0, 65 °C, Required thickness min.0.35 mm; Measured thickness min. 0.40 mm; (Dimension approx.210 mm(L)x180 mm(W) located between metal shell of panel and power board)	UL 94	UL
PCB	SICHUAN CHANGHONG ELECTRIC CO LTD	CH-1, CH-2, CH-4	V-0, 130 °C	UL796	UL
Or	SICHUAN HAIYING ELECTRIC CO LTD	HY-1, HY-2, 1C	V-0, 130 °C	UL796	UL
Or	CHONGQING KAIGE ELECTRONICS CO LTD	3M, 4M(H), 1D, 2D, 4D, 1S	V-0, 130 °C	UL796	UL
Or	Interchangeable	--	V-0 or better, min. 130 °C	UL 796 or UL 794	UL
-Description:	Interchangeability based on specified rating				
Pluggable connector (CON101) (housing connect power cord)	Zhejiang Jieshitai Electronics Co., Ltd.	VH-03Y	250Vac, 7A, 85°C	UL 1977	UL
Connector (CON101) (on power board)	SHENZHEN YONG FENG YING ELECTRONIC CO LTD	CS-1120-02 thru CS-1120-10, CS-1120R-02 thru CS-1120R-10	250 Vac or dc, 10 A, 85 °C	UL 1977	UL

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Clause	Requirement + Test			Result - Remark	Verdict
Or	CHANGJIANG CONNECTORS CO LTD	A2001, A3963	250 Vac or dc, 10 A, 85 °C	UL 1977	UL
Fuse (F101)	Hollyland Company Limited	5ET	T3.15A, 250Vac	IEC/EN 60127-1, IEC/EN 60127-2	VDE
Or	Dongguan Better Electronic Technology Co., Ltd.	932	T3.15AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-2	VDE
Or	Littelfuse, Inc.	392	T3.15A, 250Vac	EN60127-1, EN60127-3	VDE
Varistor (RV101)	Thinking Electronic Industrial Co., Ltd.	TVR14621	Max. continuous voltage: 620Vac, 85°C	IEC/EN 61051-2	VDE
Or	Chengdu Tieda Electronic Co., Ltd.	MYN15-621K	Max. continuous voltage: 620Vac, 85°C	IEC/EN 61051-2	VDE
NTC (RT101)	Chengdu Hongming Electronics Co. Ltd.	MF72-1R5D15	5.5 A, 1.5 ohm at 25°C	EN 60065	Tested within appliance
Or	Thinking Electronic Industrial Co., Ltd.	SCK-1R58M	8 A, 1.5 ohm at 25°C	EN 60065	Tested within appliance
Or	Jiangsu Xingshun Electronics Co., Ltd.	10D2-15	5 A, 1.5 ohm at 25°C	EN 60065	Tested within appliance
X-Capacitors (CX101, CX102)	Europtronic (SuZhou) Co. Ltd.	MPX	Max.0.47 uF for CX101; Max. 0.22 uF for CX102; Min.275 Vac, Min.105 °C	IEC60384-14	VDE
Or	Xiamen Faratronic Co. Ltd.	MKP62	Max.0.47 uF for CX101; Max. 0.22 uF for CX102; Min.275 Vac, Min.110 °C	IEC 60384-14	VDE
Or	Nistronics (Jiangxi) Co., Ltd	MPR	Max.0.47 uF for CX101; Max. 0.22 uF for CX102; Min.275 Vac, Min.100 °C	IEC 60384-14	VDE



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EN 60065					
Clause	Requirement + Test		Result - Remark		Verdict
Or	Wuxi Huayu Electronic Co., Ltd	MKP	Max.0.47 uF for CX101; Max. 0.22 uF for CX102; Min.275 Vac, Min.105 °C	IEC 60384-14	VDE
Bleeder resistors (R101,R102, R103)	Fenghua Advanced Technology (Holding) Co., Ltd	RC-06K684JT	Max. 1 Mohm,1/4 W	EN 60065	Tested within appliance
Or	Interchangeable	-	Max. 1 Mohm,1/4 W	EN 60065	Tested within appliance
-Description:	Interchangeability based on specified rating				
E-Cap (C206)	Interchangeable	-	82 uF, min. 450 V, min. 105 °C	EN 60065	Tested with appliance
-Description:	Interchangeability based on specified rating				
Transistor (Q602)	Interchangeable	-	min. 500 V, min. 12A	EN 60065	Tested with appliance
-Description:	Interchangeability based on specified rating				
Transistor (Q201)	Interchangeable	-	min. 650 V, min. 8A	EN 60065	Tested with appliance
-Description:	Interchangeability based on specified rating				
-Description:	Interchangeability based on specified rating				
Capacitor (C101)	NISSEI ELECTRIC Co., Ltd.	MMXC 0450J105	450 V, 1 uF	EN 60065	Tested with appliance
Or	Xiamen Faratronic Co.,Ltd.	CL21X Series	450 V, 1 uF	EN 60065	Tested with appliance
Or	WuXi HuaYU electronics co., LTD	MKP25	450 V, 1 uF	EN 60065	Tested with appliance
Inductors (FL101)	Sichuan Changhong Component Technology Co., Ltd	UC19C-02F110HA-HAI	Polyvinyl-formaldehyde or polyurethane resins	EN 60065	Tested within appliance
Alt. Inductor (FL101)	UENO SEIKI CO., LTD	UC19C-02F110HA-HAI	Polyvinyl-formaldehyde or polyurethane resins	EN 60065	Tested within appliance



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Clause	Requirement + Test		Result - Remark		Verdict
Inductors (FL102)	Sichuan Changhong Component Technology Co., Ltd	LCL-E55	Polyvinyl-formaldehyde or polyurethane resins	EN 60065	Tested within appliance
Alt. Inductor (FL102)	NAN TAI ELECTRIC CO., LTD.	LCL-E55	Polyvinyl-formaldehyde or polyurethane resins	EN 60065	Tested within appliance
Inductor (FL103)	Sichuan Changhong Electronic Component Technology Co., Ltd	LCL-E177	Polyvinyl-formaldehyde or polyurethane resins	EN 60065	Tested within appliance
-Triple insulation wire	Shanghai Xiangxiang Electron Co., Ltd.	TKW-B	130 °C	IEC/EN 60950-1	VDE
Alt. Inductor (FL103)	NAN TAI ELECTRIC CO., LTD.	LCL-E177	Polyvinyl-formaldehyde or polyurethane resins	EN 60065	Tested within appliance
-Triple insulation wire	Shanghai Xiangxiang Electron Co., Ltd.	TKW-B	130 °C	IEC/EN 60950-1	VDE
Alt. Inductor (FL103)	JIAZHI ELECTRONICS CO., LTD	LCL-E177	Polyvinyl-formaldehyde or polyurethane resins	EN 60065	Tested within appliance
-Triple insulation wire	FURUKAWA ELECTRIC CO.,LTD	TEX-E	130 °C	IEC/EN 62368-1:2014	VDE
Inductor (L601)	Sichuan Changhong Electronic Component Technology Co., Ltd	LGT-230uH-F	Polyvinyl-formaldehyde or polyurethane resins	EN 60065	Tested within appliance
-Bobbin	CHANGSHU SOUTH-EAST PLASTIC CO.,LTD	PF2A5-151J (b)	V-0, 150 °C, phenolic material	UL 94	UL
-Or	CHANG CHUN PLASTICS CO LTD	T375J	V-0, 150 °C, phenolic material	UL 94	UL
Alt. Inductor (L601)	NAN TAI ELECTRONICS CO., LTD.	LGT-230uH-F	Polyvinyl-formaldehyde or polyurethane resins	EN 60065	Tested within appliance

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Clause	Requirement + Test			Result - Remark	Verdict
-Bobbin	SUMITOMO BAKELITE CO LTD	PM9820	V-0, 150 °C, phenolic material	UL 94	UL
Inductor (L402)	Sichuan Changhong Electronic Component Technology Co., Ltd	LGT-120uH-G	Polyvinyl- formaldehyde or polyurethane resins	EN 60065	Tested within appliance
-Bobbin	CHANGSHU SOUTH-EAST PLASTIC CO.,LTD	PF2A5-151J(b)	V-0, 150 °C, phenolic material	UL 94	UL
-Or	CHANG CHUN PLASTICS CO LTD	T375J	V-0, 150 °C, phenolic material	UL 94	UL
Y- Capacitor (CY101, CY102, CY103, CY104, CY105, CY106)	Yinan Don's Electronic Component Co., Ltd.	CT81	Min. 250 V, Max. 220 pF for CY101, CY102, CY103, CY104; Max. 470 pF for CY105; Max. 100 pF for CY106; 85 °C, Y1 type	IEC/EN60384-14	VDE
Or	Anshan Kei Fat Electronic Ceramic Technical Co., Ltd.	CT7	Min. 250 V, Max. 220 pF for CY101, CY102, CY103, CY104; Max. 470 pF for CY105; Max. 100 pF for CY106; 85 °C; Y1 type	IEC/EN60384-14	VDE
Or	Kunshan Wansheng Electronics Co., Ltd.	CT7	Min. 250 V, Max. 220 pF for CY101, CY102, CY103, CY104; Max. 470 pF for CY105; Max. 100 pF for CY106; 125 °C; Y1 type	IEC60384-14	VDE
Optocoupler (N201, N202, N301)	Everlight Electronics Co., Ltd.	EL817V	Cr ≥ 7.6 mm, Cl ≥ 7.6 mm, Dti ≥ 0.4 mm, 110 °C	EN 60747-5-5	VDE



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Clause	Requirement + Test		Result - Remark		Verdict
Or	AUK CORPORATION	PC-17K1/ PC-17L1	Cr ≥ 7.0 mm, Cl ≥ 7.0 mm, Dti ≥ 0.4 mm, 100 °C	EN 60747-5-5	VDE
Transformer (T101)	Sichuan Changhong Component Technology Co., Ltd	BCK-04017L	Polyvinyl-formaldehyde or polyurethane resins	EN 60065	Tested within appliance
- Bobbin	CHANGSHU SOUTH-EAST PLASTIC CO LTD	PF2A5-151J(b)	Phenolic, rated V-0, 150 °C, Required thickness min.0.45 mm; Measured thickness min.0.54 mm	UL 94,	UL
-Or	CHANG CHUN PLASTICS CO LTD	T375J T375HF	Phenolic, rated V-0, 150 °C, Required thickness min.0.45 mm; Measured thickness min. 0.54 mm	UL 94,	UL
-Or	SUMITOMO BAKELITE CO LTD	PM-9820, PM-9630	V-0, 150 °C, Required thickness min.0.16 mm; Measured thickness min.0.54 mm phenolic material	UL 94	UL
- Insulating tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT-286F	130 °C	UL 510A	UL
- Insulation tube	GREAT HOLDING INDUSTRIAL CO LTD	TFT	300 Vrms, 200 °C, VW-1	UL 224	UL
Alt. Transformer (T101)	NAN TAI ELECTRIC CO., LTD.	BCK-04014L	Polyvinyl-formaldehyde or polyurethane resins	EN 60065	Tested within appliance



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Clause	Requirement + Test	Result - Remark	Verdict
- Bobbin	CHANGSHU SOUTH-EAST PLASTIC CO LTD	PF2A5-151J(b) Phenolic, rated V-0, 150 °C, Required thickness min.0.45 mm; Measured thickness min.0.54 mm	UL 94, UL
-Or	CHANG CHUN PLASTICS CO LTD	T375J T375HF Phenolic, rated V-0, 150 °C, Required thickness min.0.45 mm; Measured thickness min. 0.54 mm	UL 94, UL
-Or	SUMITOMO BAKELITE CO LTD	PM-9820, PM-9630 V-0, 150 °C, Required thickness min.0.16 mm; Measured thickness min.0.54 mm phenolic material	UL 94 UL
- Insulating tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT-286F 130 °C	UL 510A UL
- Insulation tube	GREAT HOLDING INDUSTRIAL CO LTD	TFT 300 Vrms, 200 °C, VW-1	UL 224 UL

Supplementary information:

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



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EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 60065 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES (AUDIO, VIDEO AND SIMILAR ELECTRONIC APPARATUS – SAFETY REQUIREMENTS)			
Differences according to: EN 60065:2014			
Attachment Form No.: EU_GD_IEC60065L			
Attachment Originator: Intertek Semko AB			
Master Attachment: Date 2015-03			
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CENELEC COMMON MODIFICATIONS (EN)			P
General	1.1.3 Note 2 5.4 Note 5.5.2 Note 1 and Note 2 13.3.1 Note 4 14.1 Note 1 and Note 2 15.1.1 Note 1 and Note 2 15.2 Note 2 16.1 Note 2 16.2 Note 20 Note J.3 Note 1 and Table J.1 Note 2		P
1.2	Normative references		N/A
	Add the following: EN 71-1, <i>Safety of toys – Part 1: Mechanical and physical properties</i> EN 50332-1, <i>Sound system equipment: Headphones and earphones associated with personal music players – Maximum sound pressure level measurement methodology – Part 1: General method for "one package equipment"</i> EN 50332-2, <i>Sound system equipment: Headphones and earphones associated with personal music players – Maximum sound pressure level measurement methodology – Part 2: Matching of sets with headphones if either or both are offered separately, or are offered as one package equipment but with standardised connectors between the two allowing to combine components of different manufacturers or different design</i>	Added	N/A



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EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
3	General requirements		P
3.Z1	Protective devices To protect against excessive current, short-circuits and earth faults in MAINS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of Clause 11 shall be included as parts of the equipment; b) for components in series or parallel with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for equipment supplied via an industrial mains plug or for PERMANENTLY CONNECTED APPARATUS, to rely on dedicated over current and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for apparatus not supplied via an industrial mains plug or for PERMANENTLY CONNECTED APPARATUS the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.	Complied item a)	P
4	General test conditions		N/A
4.1.1	Replace the text of the note by: NOTE For ROUTINE TEST, reference is made to EN 50514:2008.	Replaced	N/A



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EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
6	Hazardous radiations		N/A
6.1	<p>Replace the entire subclause by the following: Apparatus including a potential source of ionizing radiation shall be so constructed that personal protection against ionizing radiation is provided under normal operating conditions and under fault conditions. <i>Compliance is checked by measurement under the following conditions:</i> <i>In addition to the normal operating conditions, all controls adjustable from the outside BY HAND, by any object such as a tool or a coin, and those internal adjustments or pre-sets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.</i> NOTE 1 Soldered joints and paint lockings are examples of adequate locking. <i>The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus</i> <i>Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.</i> <i>The dose-rate shall not exceed 1 μSv/h (0,1 mR/h) taking account of the background level.</i> NOTE 2 These values appear in Council Directive 96/29/Euratom of 13 May 1996. <i>A picture is considered to be intelligible if the following conditions are met:</i> - a scanning amplitude of at least 70 % of the usable screen width; - a minimum luminance of 50 cd/m² with locked blank raster provided by a test generator; - a horizontal resolution corresponding to at least 1,5 MHz in the centre, with a similar vertical degradation; - not more than one flashover per 5 min.</p>	No ionizing radiation.	N/A
16	External flexible cords		N/A
16.1	<p>Add the following note after the first paragraph: NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.</p>	Added	N/A



EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
Z1	Protection against excessive sound pressure from personal music players		N/A
Z1.1	<p>General</p> <p>This subclause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. Requirements for earphones and headphones intended for use with personal music players are also covered.</p> <p>A personal music player is a portable equipment for personal use, that:</p> <ul style="list-style-type: none"> – is designed to allow the user to listen to recorded or broadcast sound or video; and – uses a listening device, such as headphones or earphones that can be worn in or on or around the ears; and – is body worn (of a size suitable to be carried in a clothing pocket) and is intended for the user to walk around while in use. <p>EXAMPLES CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment.</p> <p>A personal music player shall comply with the requirements of this subclause.</p> <p>NOTE 1 Protection against acoustic energy sources from telecom terminal equipment is referenced to ITU-T Recommendation P.360.</p> <p>The requirements in this subclause are valid for music or video mode only.</p> <p>The requirements do not apply to:</p> <ul style="list-style-type: none"> – professional equipment; <p>NOTE 2 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.</p> <ul style="list-style-type: none"> – hearing aid equipment and other devices for assistive listening; – the following types of analogue personal music players: <ul style="list-style-type: none"> • long distance radio receiver (for example, a multiband radio receiver or a world band radio receiver, an AM radio receiver) and • cassette player/recorder; <p>NOTE 3 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies.</p> <ul style="list-style-type: none"> – player while connected to an external amplifier that does not allow the user to walk around while in use. <p>For equipment clearly designed or intended for use by young children, the limits of EN 71-1 apply.</p>	Not such equipment	N/A




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EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
Z1.2	<p>Equipment requirements</p> <p>No safety provision is required for equipment that complies with the following:</p> <ul style="list-style-type: none">– equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dB(A) measured while playing the fixed “programme simulation noise” as described in EN 50332-1; and– personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” as described in EN 50332-1. <p>NOTE 1 Wherever the term acoustic output is used in this subclause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Z1.5 and Annex ZE.</p> <p>All other equipment shall:</p> <ul style="list-style-type: none">a) protect the user from unintentional acoustic outputs exceeding those mentioned above; andb) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; andc) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and <p>NOTE 2 Examples of means include visual or audible signals. Action from the user is always required.</p> <p>NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off.</p> <ul style="list-style-type: none">d) have a warning as specified in Z1.3; ande) not exceed the following: <ul style="list-style-type: none">1) equipment provided as a package (player with its listening device), the acoustic output shall be ≤ 100 dB(A) measured while playing the fixed “programme simulation noise” described in EN 50332-1; and2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” described in EN 50332-1.	Not such equipment	N/A



EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song does not exceed the basic limit of 85 dB(A). In this case, T becomes the duration of the song.</p> <p><small>NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dB(A).</small></p> <p><small>NOTE 5 For example, if the player is set with the programme simulation noise to 85 dB(A), but the average music level of the song is only 65 dB(A), there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dB(A).</small></p>	Not such equipment	N/A
Z1.3	<p>The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following:</p> <ul style="list-style-type: none"> – the symbol of Figure Z1 with a minimum height of 5 mm; and – the following wording, or similar: <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>To prevent possible hearing damage, do not listen at high volume levels for long periods.</p> </div> <div style="text-align: center; margin: 10px auto;">  </div> <p>Figure Z1 – Warning label (IEC 60417-6044)</p> <p>Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.</p>	Not such equipment	N/A
Z1.4	Requirements for listening devices (headphones, earphones, etc.)		N/A
Z1.4.1	<p>Corded passive listening devices with analogue input</p> <p>With 94 dB(A) sound pressure output $L_{Aeq,T}$, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be ≥ 75 mV. This requirement is applicable in any mode where the headphones can operate including any available setting (for example built-in volume level control, an additional sound feature like equalization, etc.).</p> <p><small>NOTE The values of 94 dB(A) – 75 mV correspond with 85 dB(A) – 27 mV and 100 dB(A) – 150 mV.</small></p>	Not such equipment	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
Z1.4.3	Cordless listening devices In wireless mode: – with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and – respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and – with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the above-mentioned programme simulation noise, the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dB(A).	Not such equipment	N/A
Z1.5	Measurement methods Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s. NOTE Test method for cordless equipment provided without listening device should be defined.	Not such equipment	N/A
	ANNEXES		N/A
Annex B	Replace the text of Note 1 by the following: In the CENELEC countries listed in IEC 62151, special national conditions apply.	Replaced	N/A
Annex N	After the note in N.1, add the following: For ROUTINE TEST, reference is made to EN 50514:2008.	Added	N/A
ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		—
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		P
2.6.1	Denmark The following is added: Certain types of Class I apparatus, see 15.1.1, may be provided with a plug not establishing earthing continuity when inserted in Danish socket-outlets <i>Justification:</i> Heavy Current Regulations, Section 6c	Class II apparatus	N/A



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EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
3.Z1	Denmark Add to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. <i>Justification:</i> In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.	No socket outlet in the EUT	N/A
5.4	Denmark, Finland, Norway and Sweden To the end of the subclause the following is added: CLASS I apparatus which is intended for connection to the building installation wiring via a plug or an appliance coupler, or both and in addition is intended for connection to other apparatus or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network TERMINALS and ACCESSIBLE parts, have a marking stating that the apparatus must be connected to an earthed MAINS socket-outlet. The marking text in the applicable countries shall be as follows: In Denmark : "Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord." In Finland : "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway : "Apparatet må tilkoples jordet stikkontakt" In Sweden : "Apparaten skall anslutas till jordat uttag"	Class II apparatus	N/A



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EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.2	<p>Norway and Sweden Add to the end of 5.5.2 (after the compliance statement) the following: The screen of the coaxial cable of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a coaxial cable based television distribution system. It is however accepted to provide the insulation external to the apparatus by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the apparatus is intended to be used in: “Apparatus connected to the protective earthing of the building installation through the MAINS connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)” NOTE In Norway, due to regulation for installations of CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel-TV nettet.” Translation to Swedish: ”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”</p>	Need to be checked when distribution the country.	N/A



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EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
13.3.1	<p>Norway Add to the second paragraph the following: Due to the IT power distribution system used, the a.c. MAINS supply voltage is considered to be equal to the line-to-line voltage, and will remain 230 V in case of a single earth fault. <i>Justification:</i> Based on a use in Norway of an IT power distribution system where the neutral is not provided</p>	The EUT was operated at 100-240 V voltage, it includes 230 V	P
15.1.1	<p>Denmark To the first paragraph the following is added: In Denmark, supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1. Appliances of Class I provided with socket-outlets with earth contact or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug which assure earth continuity with the socket-outlet in accordance with DS 60884-2-D1. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-1. To the second paragraph the following is added: Socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance with DS 60884-2-D1 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with DS 60884-2-D1 Standard Sheet DKA 1-3a or DKA 1-1c. To the third paragraph the following is added: Mains socket-outlets with earthing contact shall be in compliance with DS 60884-2-D1, Standard sheet DK 1-3a, DK 1-1c, DK 1-1d, DK 1-5a or DK 1-7a <i>Justification:</i> Heavy Current Regulations, Section 6c</p>	Need to be checked when distribution the country.	N/A
15.1.1	<p>Ireland Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. <i>Justification:</i> SI 525: 1997</p>	Need to be checked when distribution the country.	N/A



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15.1.1	<p>Norway Mains socket-outlets mounted on Class II apparatus shall comply with the specifications given in CEE Publ. 7 as far as applicable, with the following amendments: § 8 Dimensions a) 2,5 A 250 V two-pole socket-outlets for electronic apparatus shall comply with the enclosed Standard Sheet I.</p> <div data-bbox="389 627 941 1089" data-label="Diagram"> <p>STANDARD SHEET I 2,5 A/250 V SOCKET-OUTLET FOR ELECTRONIC APPLIANCES OF CLASS II</p> <p>Dimensions in mm Other dimensions according to CEE Publication 7 Standard Sheet I "Portable Single-Way Socket-Outlets".</p> </div> <p>§ 24 Mechanical strength a) 2,5 A, 250 V socket-outlets for Class II electronic apparatus are tested as specified in EN 60065:2014, 12.1.3. Also the protecting rim shall be tested. <i>Justification:</i> Act of 24 May 1929 relating to supervision of electrical installation (TEA 1929/FEL 1998).</p>	No socket-outlet used.	N/A
15.1.1	<p>United Kingdom Apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug shall be fitted with a "standard plug" in accordance with Statutory Instrument 1768: 1994: The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those Regulations. NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug. <i>Justification:</i> SI 1768: 1994</p>	Need to be checked when distribution the country.	N/A



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Annex B	<p>Finland, Norway and Sweden All sub clauses given below are sub clauses of IEC 62151 (ref. corrigenda 1 and 2 to IEC 62151). Subclause 4.1.1 (corrigendum 2): Add after the first paragraph: NOTE In Finland, Norway and Sweden, CLASS I equipment which is intended for connection to the building installation via a non-industrial plug or a non-industrial appliance coupler, or both and in addition is intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and ACCESSIBLE parts, has a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Finland: " Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan " In Norway: "Apparatet må tilkoples jordet stikkontakt" In Sweden: "Apparaten skall anslutas till jordat uttag" Subclause 4.1.4 (corrigendum 1) Add at the end of the subclause: NOTE In Norway, for requirements see 4.1.1, note and 5.3.1, note 1. Subclause 4.2.1.2 (corrigendum 1) Add at the end of the subclause: NOTE 3 In Norway, for requirements see 5.3.1, note 1. Subclause 4.2.1.3 (corrigendum 2) Add at the end of the subclause: NOTE In Norway, for requirements see 4.1.1, note and 5.3.1, note 1. Subclause 4.2.1.4 (corrigendum 1) Number the existing note as NOTE 1 and add at the end of the subclause the following NOTE 2: NOTE 2 In Norway, for requirements see 4.1.1, note and 5.3.1, note 1. Subclause 5.3.1 (corrigendum 1) Add after the first test specifications paragraph: NOTE 1 In Finland, Norway and Sweden, there are additional requirements for the insulation. Renumber the existing note as NOTE 2. For additional requirements for the insulation in Finland, Norway and Sweden in NOTE 1 the following text is added between the first and the second paragraph (this text is identical to the corresponding EN 60950-1:2001):</p>	The EUT does not be connected to telecommunication networks.	N/A



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	<p>NOTE 1 In Finland, Norway and Sweden, if this insulation is solid, including insulation forming part of a component, it shall at least consist of either • two layers of thin sheet material, each of which shall pass the electric strength test below, or</p> <ul style="list-style-type: none">• one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below <p>If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in the accordance with the compliance clause below and in addition:</p> <ul style="list-style-type: none">• passes the test and inspection criteria of 13.6 with an electric strength test of 10.3 using the test voltage of 1,5 kV multiplied by 1,6, and• is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5 kV (for performance of the test see N.2.1). <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none">• the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in IEC 62151:2000, 6.2.1;• the additional testing shall be performed on all the test specimens as described in EN 132400;• the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400 in the sequence of tests as described in EN 132400. <p>Subclause 5.3.2 (corrigendum 1) Add after the fourth dash:</p> <p>NOTE In Finland, Norway and Sweden, exclusions are applicable for equipment which is intended for connection to the building installation wiring using screw terminals or other reliable means, and for equipment which is intended for connection to the building installation wiring via an industrial plug and socket -outlet or an appliance coupler, or both, complying with EN 60309 or with a comparable national standard.</p>	<p>The EUT does not be connected to telecommunication networks.</p>	<p>N/A</p>
J.2	<p>Norway</p> <p>After Table J.1 the following is added:</p> <p>Due to the IT power distribution system used, the a.c. MAINS supply voltage is considered to be equal to the line-to-line voltage, and will remain 230 V in case of a single earth fault.</p> <p><i>Justification:</i></p> <p>Based on a use in Norway of an IT power distribution system where the neutral is not provided</p>	<p>The EUT was operated at 100-240 V voltage, it includes 230 V</p>	<p>P</p>



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Clause	Requirement + Test	Result - Remark	Verdict
C	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N/A
5.1	<p>Italy</p> <p>The following requirements shall be fulfilled:</p> <ul style="list-style-type: none">- The power consumption in Watts (W) shall be indicated on TV receivers and in their instruction for use (Measurement according to IEC 60107-1) <p>NOTE EN 60555-2 has since been replaced by IEC 60107-1:1997.</p> <ul style="list-style-type: none">- TV receivers shall be provided with an instruction for use, schematic diagrams and adjustments procedure in Italian language.- Marking for controls and terminals shall be in Italian language. Abbreviation and international symbols are allowed provided that they are explained in the instruction for use.- The ECC manufacturers are bound to issue a conformity declaration according to the above requirements in the instruction manual. The correct statement for conformity to be written in the instruction manual, shall be: <p>Questo apparecchio è fabbricato nella CEE nel rispetto delle disposizioni del D.M. marzo 1992 ed è in particolare conforme alle prescrizioni dell'art. 1 dello stesso D.M.</p> <ul style="list-style-type: none">- The first importers of TV receivers manufactured outside EEC are bound to submit the TV receivers for previous conformity certification to the Italian Post Ministry (PP.TT). <p>The TV receivers shall have on the backcover the certification number in the following form: D.M. 26/03/1992 xxxxx/xxxxx/S or T or pT S for stereo T for teletext pT for retrofittable teletext</p> <p><i>Justification:</i> Ministerial Decree of 26 March 1992: National rules for television receivers trade.</p> <p>NOTE The ministerial decree above contains additional, but not safety relevant requirements.</p>	Need to be checked when distribution the country.	N/A



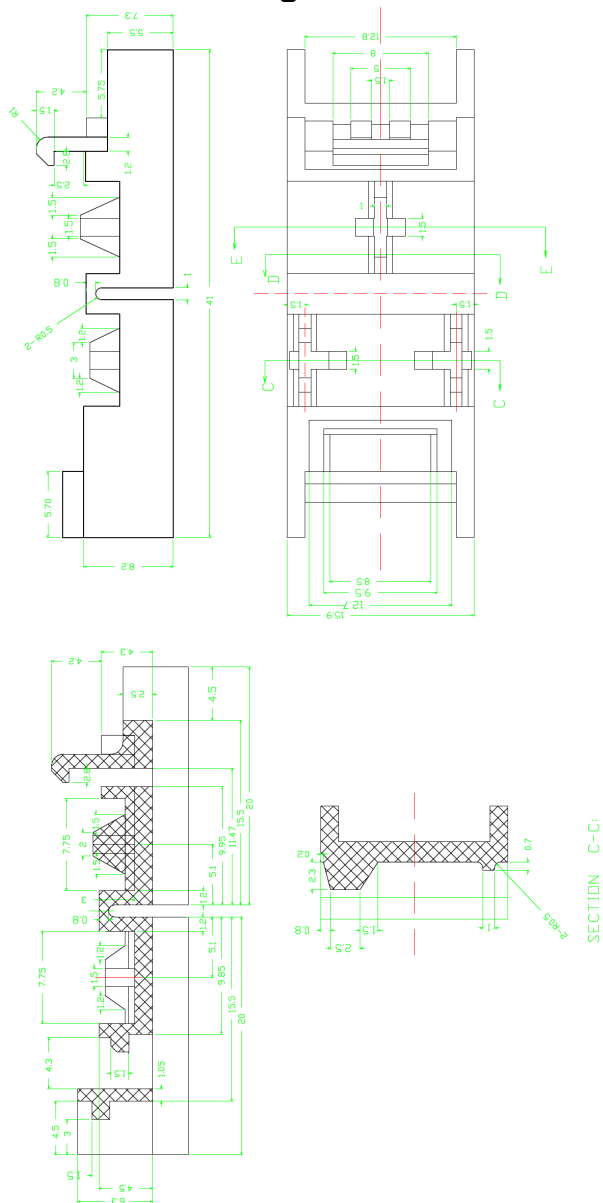
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Clause	Requirement + Test	Result - Remark	Verdict
6.1	<p>Germany</p> <p>The following requirement applies: For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking.</p> <p><i>Justification:</i> German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the Council Directive 96/29/Euratom in Germany.</p> <p>NOTE Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int+49-531-592-6320, Internet: http://www.ptb.de</p>	No cathode ray in the EUT	N/A
14.1	<p>Sweden</p> <p>The following requirements shall be fulfilled: Switches containing mercury such as thermostats, relays and level controllers are not allowed.</p>	No such device	N/A

Attachments 1

Strain relief bushing dimensions drawing





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Product Photos



General view – 1



General view - 2



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General view - 3



Internal view - 1

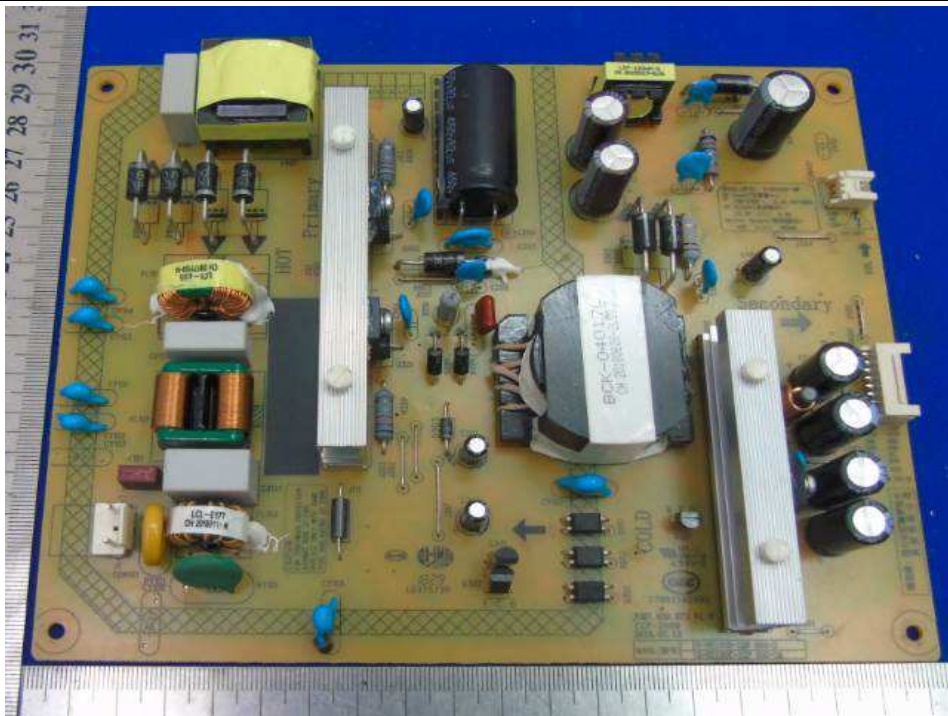


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Internal view - 2

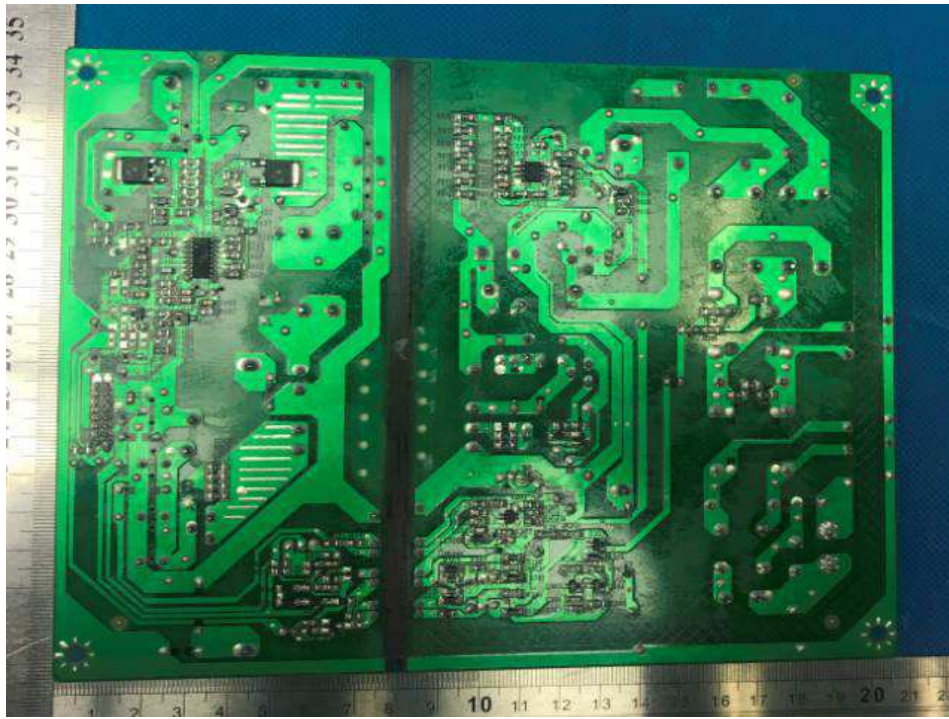


Power board view - 1



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Power board view - 2

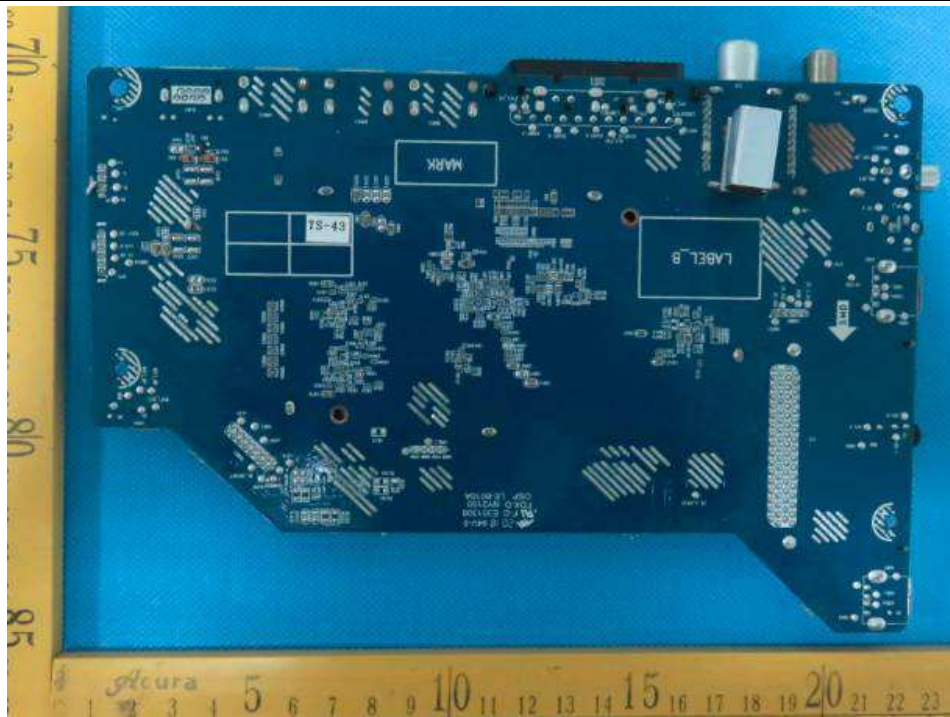


Main board view - 1



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Main board view - 2