

Test Report

On Behalf of

Azlan Logistics Limited

SP-1800P Pair 60w Active Loudspeakers

Model: SP-1800P

Prepared For : Azlan Logistics Limited
Redwood 2, Chineham Business Park, Crockford Lane,
Basingstoke, Hampshire, RG24 8WQ, United Kingdom

Prepared By : Shenzhen Anbotek Compliance Laboratory Limited
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Date of Test: Apr. 18, 2016 to May 04, 2016

Date of Report: May 05, 2016

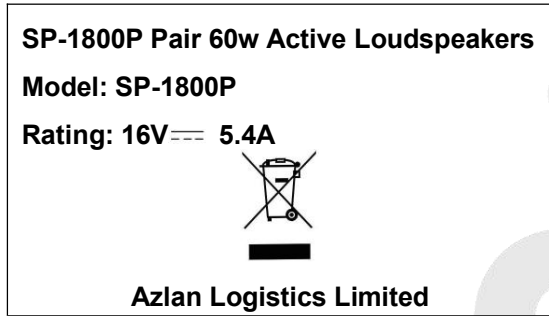
Report Number: R011605502Z

TEST REPORT	
IEC 60065	
Audio, video and similar electronic apparatus – Safety requirements	
Report	
Report reference No.....	: R011605502Z
Tested by (+ signature).....	: Damon Yan 
Approved by (+ signature).....	: Jason Xia
Date of issue.....	: May 05, 2016
Contents.....	: 38 pages (including 4 pages of photo)
Testing laboratory	
Name.....	: Shenzhen Anbotek Compliance Laboratory Limited
Address.....	: 1/F., Building 1, SEC Industrial Park, No.0409 Qianhai Road, Nanshan District, Shenzhen, Guangdong, China
Testing location.....	: As above
Client	
Name.....	: Azlan Logistics Limited
Address.....	: Redwood 2, Chineham Business Park, Crockford Lane, Basingstoke, Hampshire, RG24 8WQ, United Kingdom
Test specification	
Standard.....	: IEC 60065:2014
Test procedure.....	: Compliance with IEC 60065:2014
Non-standard test method.....	: N.A.
Test item	
Description.....	: SP-1800P Pair 60w Active Loudspeakers
Trademark.....	: VISION
Model/type reference.....	: SP-1800P
Manufacturer.....	: Azlan Logistics Limited
Address.....	: Redwood 2, Chineham Business Park, Crockford Lane, Basingstoke, Hampshire, RG24 8WQ, United Kingdom
Factory.....	: Azlan Logistics Limited
Address.....	: Redwood 2, Chineham Business Park, Crockford Lane, Basingstoke, Hampshire, RG24 8WQ, United Kingdom
Rating.....	: 16V--- 5.4A

Particulars: test item vs. test requirements	
Equipment mobility.....	: Portable apparatus
Operating condition.....	: Continuous operation
Tested for IT power systems.....	: N.A.
IT testing, phase-phase voltage (V).....	: N.A.
Class of equipment.....	: Neither class I equipment nor class II equipment
Protection against ingress of water.....	: IPX0
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.....	: Apr. 18, 2016
Data of performance of test.....	: Apr. 18, 2016 to May 04, 2016
General remarks	
"(See remark #)" refers to a remark appended to the report.	
"(See appended table)" refers to a table appended to the report.	
Throughout this report a dot is used as the decimal separator.	
The test results presented in this report relate only to the object tested.	
This report shall not be reproduced except in full without the written approval of the testing laboratory.	
Procedure deviation	
N.A.	
Comments	
N.A.	
General product information	
1. Clearance was evaluated for altitude up to 2000m above sea level.	
2. The maximum operating temperature is 35°C.	

Copy of marking plate(s)

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



IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
3	GENERAL REQUIREMENTS		
	Safety class of the apparatus	Neither class I equipment nor class II equipment	P
4	GENERAL TEST CONDITIONS		
4.1.4	Ventilation instructions require the use of the test box	Tested according to user manual	N/A
5	MARKING AND INSTRUCTIONS		
5.1	General requirements		P
	Comprehensible and easily discernible		P
	Permanent durability against water and petroleum spirit		P
5.2	Identification and supply rating		P
	a) Identification, maker	Azlan Logistics Limited	P
	b) Model number or type reference.....	SP-1800P	P
	c) Class II symbol or Class II with functional earth symbol if applicable	Not class II equipment	N/A
	d) Nature of supply.....	---	P
	e) Rated supply voltage	16V	P
	f) Mains frequency if safety dependant		N/A
	g) Rated current or power consumption for apparatus supplied by supply apparatus for general use, on apparatus or in instruction manual.....	5.4A	P
	Measured current or power consumption		P
	Deviation % (max 10%)	<10%	P
	h) Rated current or power consumption for apparatus intended for connection to an a.c. mains supply.:		N/A
	Measured current or power consumption		N/A
	Measured current or power consumption for Television set		N/A
	Deviation % (max 10%)		N/A
	Symbols explained in the user manual		P
5.3	Terminals		P
	a) Earth terminal		N/A
	b) Hazardous live terminals		N/A
	c) Markings on supply output terminals	See marking plate for details	N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
5.4	Caution marking		P
	a) Use of triangle with exclamation mark		P
	b) Marking on loudspeaker grille, IEC 60417-5036		N/A
	c) User-replaceable coin / button cell battery marking		N/A
5.5	Instructions		P
5.5.1	Safety relevant information	English	P
5.5.2	a) Mains powered equipment not exposed to dripping or splashing. Warning concerning objects filled with liquid, etc.	Mentioned in user manual	N/A
	b) Hazardous live terminals, instructions for wiring		N/A
	c) Instructions for replacing lithium battery		N/A
	d) Class I earth connection warning		N/A
	e) Instructions for multimedia system connection		P
	f) Special stability warning for attachment of the apparatus to the floor/wall		N/A
	g) Warning: battery exposure to heat	Mentioned in user manual	P
	h) Warning: protective film on CRT face		N/A
	i) Warning: Non-floor standing TV >7kg		N/A
	j) Warning: User replaceable coin / button cell battery	No battery	N/A
5.5.3	a-b) Disconnect device: plug/coupler or all-pole mains switch location, accessibility and markings		N/A
	c) Instructions for permanently connected equipment		N/A
	Marking, signal lamps or similar for completely disconnection from the mains		N/A
6	HAZARDOUS RADIATION		
6.1	Ionizing radiation < 36 pA/kg (0,5 mR/h)	No ionizing radiation	N/A
	Ionizing radiation under fault condition		N/A
6.2	Laser radiation, emission limits to IEC 60825-1:2007	No laser radiation	N/A
:		
	Emission limits under fault conditions		N/A
6.3	Light emitting diodes (LEDs) according to IEC 62471		N/A
7	HEATING UNDER NORMAL OPERATING CONDITIONS		
7.1	General		P

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
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	(see appended table 7.1)	P
7.2	Softening temperature of insulating material supporting parts conductively connected to the mains carrying a current > 0,2 A at least 150°C		N/A

8	CONSTRUCTIONAL REQUIREMENTS WITH REGARD TO THE PROTECTION AGAINST ELECTRIC SHOCK		
8.1	Conductive parts covered by lacquer, paper, untreated textile oxide films and beads etc. considered to be bare		N/A
8.2	No shock hazard when changing voltage setting device, fuse-links or handling drawers etc.	No such components are replaced by hand	N/A
8.3	Insulation of hazardous live parts not provided by hygroscopic material	No hygroscopic material used	N/A
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 cover removable barely by hand. Tools are required.	N/A
8.5	Class I apparatus		N/A
	Basic insulation between hazardous live parts and earthed accessible parts	Not class I apparatus	N/A
	Resistors bridging basic insulation complying with 14.2 a)		N/A
	Capacitors bridging basic insulation complying with 14.3.2 a)		N/A
	Protective earthing terminal		N/A
8.6	Class II apparatus		N/A
	a) Basic and supplementary insulation between hazardous live parts and accessible parts	Not class II apparatus	N/A
	b) Reinforced insulation between hazardous live parts and accessible parts		N/A
8.7	Components bridging insulation		N/A
	Basic insulation bridged by components complying with 14.4.5.3		N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Components bridging basic, supplementary, double or reinforced insulation complying with 14.2 a) or 14.4		N/A
	Basic and supplementary insulation each being bridged by a capacitor or RC-unit complying with 14.3.2 a)		N/A
	Double or reinforced insulation being bridged with 2 capacitors or RC-units in series complying with 14.3.2 a)		N/A
	Double or reinforced insulation being bridged with a single capacitor or RC-unit complying with 14.3.2 b)		N/A
8.8	Insulation thickness and thin sheet materials		N/A
	Basic or supplementary insulation > 0,4 mm (mm) :		N/A
	Reinforced insulation > 0,4 mm (mm)		N/A
	Thin sheet material used inside the equipment		N/A
	Basic or supplementary insulation, at least two layers, each meeting 10.4		N/A
	Basic or supplementary insulation, three layers any two of which meet 10.4		N/A
	Reinforced insulation, two layers each of which meet 10.4		N/A
	Reinforced insulation, three layers any two which meet 10.4		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		N/A
8.10	Double insulation between accessible parts and conductors connected to the mains		N/A
	Double insulation between conductors connected to accessible parts and parts connected to the mains		N/A
8.11	Detaching of wires		N/A
	No undue reduction of creepage or clearance distances if wires become detached		N/A
	Vibration test carried out		N/A
8.12	Adequate fastening of windows, lenses, lamp covers etc. (pull test 20 N for 10 s)		N/A
8.13	Adequate fastening of covers (push/pull test 50 N for 10 s)		N/A
8.14	No risk of damage to the insulation of internal wiring due to hot parts or sharp edges		N/A
8.15	Only special supply equipment can be used		N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
8.16	Insulated winding wire without additional interleaved insulation		N/A
8.17	Endurance test as required by 8.16		N/A
8.18	Disconnection from the mains		N/A
	Disconnect device		N/A
	All-pole switch or circuit breaker with >3mm contact separation	No such device within the EUT	N/A
	Mains switch ON indication		N/A
8.19	Switch not fitted in the mains cord		N/A
8.20	Bridging components comply with clause 14	No such component used to bridge	N/A
8.21	Non-separable thin sheet material	No such material	N/A

9	ELECTRIC SHOCK HAZARD UNDER NORMAL OPERATING CONDITION		
9.1	Testing on the outside		N/A
9.1.1	General		N/A
9.1.1.1	Requirements		N/A
	Accessible parts shall not be hazardous live		N/A
	Inaccessible terminals are not accessible or comply with relevant requirements		N/A
	For voltages >1000 V ac or >1500 V dc complies with clause 13.3.1 for basic insulation..... :		N/A
9.1.1.2	Determination of hazardous live parts		N/A
	a) Open circuit voltages		N/A
	b) Touch current measured from terminal devices using the network in annex D		N/A
	c) Discharge not exceeding 45 µC		N/A
	d) Energy of discharge not exceeding 350 mJ		N/A
9.1.1.3	Test with test finger and test probe		N/A
9.1.2	No hazardous live shafts of knobs, handles or levers		N/A
9.1.3	Ventilation holes and other holes tested by means of 4 mm x 100 mm test pin		N/A
9.1.4	Terminal devices tested with 1 mm x 20 mm test pin (10 N); test probe D of IEC 61032		N/A
	Terminal devices tested with 1 mm x 100 mm straight wire (1 N); test probe D of IEC 61032		N/A
9.1.5	Pre-set controls tested with 2.5 mm x 100 mm test pin (10 N); test probe C of IEC 61032		N/A
9.1.6	Withdrawal of the mains plug		N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	No shock hazard due to stored charge after 2 s :		N/A
	Bleeder resistor(s) comply with 14.2 or no shock hazard when open circuited		N/A
	If C is not greater than 0,1 μ F no test needed		N/A
9.1.7	Resistance to external force		N/A
	a) Test probe 11 of IEC 61032 for 10 s (50 N)		N/A
	b) Test hook of fig. 4 for 10 s (20 N)		N/A
	c) 30 mm diameter test tool for 5 s (100 or 250 N)		N/A
9.2	No hazard after removing a cover by hand	No such cover can be removed by hand	N/A

10	INSULATION REQUIREMENTS		
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		N/A
10.3	Humidity treatment 48 h or 120 h	48 h	P
10.4	Insulation resistance and dielectric strength		P
	Between parts of different polarity directly connected to the mains	(see appended table 10.3)	N/A
	Between parts separated by BASIC or SUPPLEMENTARY insulation	(see appended table 10.3)	P
	Between parts separated by REINFORCED insulation	(see appended table 10.3)	N/A

11	FAULT CONDITIONS		
11.1	No shock hazard under fault condition		P
11.2	Heating		P
11.2.1	Requirements		P
	No danger of fire to the surroundings		P
	Safety not impaired by abnormal heat		P
	Flames extinguish within 10 seconds		N/A
	No hazard from softening solder		N/A
	Soldered terminations not used as protective mechanism		P
11.2.2	Measurement of temperature rises	(see appended table 11.2)	P
11.2.3	Temperature rise of accessible parts	(see appended table 11.2)	P
11.2.4	Temperature rise of parts, other than windings and printed boards, providing electrical insulation	(see appended table 11.2)	N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
11.2.5	Temperature rise of parts acting as a support or mechanical barrier		P
11.2.6	Temperature rise of windings	(see appended table 11.2)	N/A
11.2.7	Printed boards		P
	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	(see appended table 11.2)	P
	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		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		N/A
	Meets all the special conditions if conductors on printed circuit boards are interrupted		N/A
	Class I protective earthing maintained		N/A
11.2.8	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".	(see appended table 11.2)	P

12	MECHNICAL STRENGTH		
12.1	Complete apparatus		P
12.1.1	The apparatus have adequate mechanical strength		P
12.1.2	Bump test where mass >7 kg	<7Kg	N/A
12.1.3	Vibration test		P
12.1.4	Impact hammer test		P
	Steel ball test		P
12.1.5	Drop test for portable apparatus where mass ≤ 7 kg		P
12.1.6	Thermoplastic enclosures stress relief test	70°C, 7hour	P
12.2	Fixing of knobs, push buttons, keys and levers		P
12.3	Remote controls with hazardous live parts		N/A
12.4	Drawers (pull test 50 N, 10 s)		N/A
12.5	Antenna coaxial sockets providing isolation		N/A
12.6	Telescoping or rod antennas		N/A
12.6.1	6,0mm diameter end		N/A
	Prevented from falling into the apparatus		N/A
12.6.2	Physical securement, removal prevented		N/A
12.7	Apparatus containing coin / button cell batteries		N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
12.7.2	Reduced possibility for children to remove battery		N/A
12.7.3	Tests		N/A
12.7.3.2	Stress relief test		N/A
12.7.3.3	Battery replacement test		N/A
12.7.3.4	Drop test		N/A
12.7.3.5	Impact test		N/A
12.7.4	Battery not accessible; or not removable		N/A
13	CLEARANCES AND CREEPAGE DISTANCES		
13.1	Clearances in accordance with 13.3		N/A
	Creepage distances in accordance with 13.4		N/A
13.2	Determination of working voltage		N/A
13.3	Clearances		N/A
13.3.1	Comply with 13.3 or Annex J		N/A
13.3.2	Circuits conductively connected to the mains comply with table 8 and, where applicable, table 9..... :		N/A
13.3.3	Circuits not conductively connected to the mains comply with table 10		N/A
13.3.4	Measurement of transient voltages		N/A
13.4	Creepage distances not less than appropriate table 11 minimum values		N/A
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	Certified PCB used	N/A
13.5.2	Type B coated printed circuit boards complying with IEC 60664-3 (basic insulation only)		N/A
13.6	Conductive parts along uncemented joints clearances and creepage distances comply with 13.3 and 13.4		N/A
	Conductive parts along reliably cemented joints comply with 8.8		N/A
	Temperature cycle test and dielectric strength test		N/A
	500V test for transformers, magnetic coupler and similar devices, if insulation is relied upon for safety		N/A
13.7	Enclosed, enveloped or hermetically sealed parts not conductively connected to the mains, clearances and creepage distances as in table 12		N/A
13.8	Parts filled with insulating compound, meeting the requirements of 8.8		N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
14	COMPONENTS		
14.1	Flammability according to IEC 60695-11-10 or annex G, or 20.2.5		P
14.2	Resistors		N/A
	Resistors separately approved		N/A
	a) Resistors between hazardous live parts and accessible metal parts		N/A
	b) Resistors, other than between hazardous live parts and accessible parts		N/A
14.3	Capacitors and RC units		N/A
	Capacitors separately approved :		N/A
14.3.1	Damp heat test duration 21 days		N/A
14.3.2	Y capacitors tested to IEC 60384- 14:2005	No Y-cap. used	N/A
14.3.3	X capacitors tested to IEC 60384- 14:2005	No X-cap. used	N/A
14.3.4	Capacitors operating at mains frequency but not connected to the mains: tests for X2		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		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		N/A
14.4	Inductors and windings		N/A
14.4.1	Comply with IEC 61558-1, IEC 61558-2 (as relevant) and clause 20.2.5		N/A
	Transformers and inductors separately approved ..		N/A
14.4.2	Transformers and inductors marked with manufacturer's name and type		N/A
14.4.3	General		N/A
	1.1.1.1 Insulation material complies with clause 20.2.5		N/A
14.4.4	Constructional requirements		N/A
14.4.4.1	Clearances and creepage distances comply with clause 13		N/A
14.4.4.2	Transformers meet the constructional requirements		N/A
14.4.5	Separation between windings		N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
14.4.5.1	Class II transformers have adequate separation between hazardous live parts and accessible parts (double or reinforced insulation).....:		N/A
	Coil formers and partition walls > 0,4 mm		N/A
14.4.5.2	Class I transformers, with basic insulation and protective screening only if all 7 conditions are met		N/A
14.4.5.3	Separating transformers with at least basic insulation		N/A
14.4.6	Insulation between hazardous live parts and accessible parts		N/A
14.4.6.1	Class II transformers have adequate insulation between hazardous live parts and accessible parts (double or reinforced insulation)		N/A
	Coil formers and partition walls > 0,4 mm		N/A
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		N/A
	Winding wires connected to protective earth have adequate current-carrying capacity		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		N/A
14.5.2	High voltage transformers and multipliers		N/A
14.5.3	High voltage assemblies and other parts		N/A
14.6	Protective devices		N/A
14.6.1	Protective devices used within their ratings		N/A
	External clearances and creepage distances meet requirement of clause 13 for the voltage across the device when opened		N/A
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		N/A
14.6.2.2	a) Thermal cut-outs separately approved		N/A
	b) Thermal cut-outs tested as part of the submission		N/A
14.6.2.3	a) Thermal links separately approved		N/A
	b) Thermal links tested as part of the submission		N/A
14.6.2.4	Thermal devices re-settable by soldering		N/A
14.6.3	Fuses and fuse holders		N/A
14.6.3.1	Fuse-links in the mains circuit according to IEC 60127		N/A
14.6.3.2	Correct marking of fuse-links adjacent to holder		N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
14.6.3.3	Not possible to connect fuses in parallel		N/A
14.6.3.4	Not possible to touch hazardous live parts when replacing fuse-links without the use of a tool		N/A
14.6.4	PTC thermistors comply with IEC 60730-1:2010		N/A
	PTC devices (>15 W) category V-1 or better		N/A
14.6.5	Circuit protectors have adequate breaking capacity and their position is correctly marked		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		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		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		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		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		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		N/A
14.7.4	Switch tested to 14.6.1 b) has adequate dielectric strength		N/A
14.7.5	Mains switch controlling mains socket outlets additional tests to IEC 61058-1		N/A
14.8	Safety interlocks according to 2.8 of IEC 60950-1		N/A
14.9	Voltage setting device and the like are not likely to be changed accidentally		N/A
14.10	Motors		N/A
14.10.1	a) Endurance test on motors		N/A
	b) Motor start test		N/A
	Dielectric strength test		N/A
14.10.2	Not adversely affected by oil or grease etc.		N/A
14.10.3	Protection against moving parts		N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
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		N/A
14.11	Batteries		N/A
14.11.1	Comply with IEC 62133 if applicable		N/A
	Batteries mounted with no risk of accumulation of flammable gases		N/A
14.11.2	No possibility of recharging user replaceable non-rechargeable batteries		N/A
14.11.3	Recharging currents and times within manufacturers limits		N/A
	Lithium batteries discharge and reverse currents within the manufacturers limits		N/A
14.11.4	Battery mould stress relief		N/A
14.11.5	Battery drop test		N/A
14.12	Optocouplers		N/A
	Comply with constructional requirements of clause 8		N/A
	External clearances and creepage comply with 13.1		N/A
	Compound completely filling the casing or internal clearances and creepage comply with 13.1..... :		N/A
	a) Complies with 13.6 (jointed insulation) and N.3.2		N/A
	b) Complies with IEC 60747-5-5:2007		N/A
	c) Complies with 13.8		N/A
14.13	Surge suppression varistors		N/A
	Comply with IEC 61051-2		N/A
	Not connected between mains and accessible parts except for earthed parts of permanently connected apparatus		N/A
	GDT bridging basic insulation complies with electric strength and distance requirements		N/A
	Complies with the climatic, voltage, current pulse, fire hazard and thermal stress requirements of 14.13		N/A

15	TERMINALS		
15.1	Plugs and sockets		P
15.1.1	Mains plug, appliance inlet, interconnection couplers and mains socket-outlet meet the appropriate standard	(see appended table 14)	P

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Overloading of plugs or appliance inlets prevented if the apparatus has mains socket outlets		N/A
	Overloading of internal wiring prevented if the apparatus has mains socket outlets		N/A
15.1.2	Design of connectors other than for mains power		N/A
	Design of sockets with symbol of 5.3 b) design		N/A
15.1.3	Design of terminals and connectors used in output circuits of supply apparatus		N/A
15.2	Provision for protective earthing		N/A
	Accessible conductive parts of Class I equipment reliably connected to earth terminal, within equipment	Not class I equipment	N/A
	Protective earth conductors correctly fixed and coloured		N/A
	Separate protective earth terminal near mains terminal and comply with 15.3		N/A
	Protective earth terminal resistant to corrosion		N/A
	Earth resistance test: < 0,1 Ω at 25 A		N/A
15.3	Terminals for external flexible cords and for permanent connection to the mains supply		N/A
15.3.1	Adequate terminals for connection of permanent wiring		N/A
15.3.2	Reliable connection of non-detachable cords		N/A
	Not soldered to conductors of a printed circuit board		N/A
	Adequate clearances and creepage distances between connections should a wire break away		N/A
	Wire secured by additional means to the conductor		N/A
15.3.3	Screws and nuts clamping conductors have adequate threads: ISO 261, ISO 262 or similar		N/A
15.3.4	Conductors adequately fixed (two independent fixings)		N/A
15.3.5	Terminals allow connection of conductors having appropriate cross-sectional area		N/A
15.3.6	Terminals to 15.3.3 have sizes required by table 16		N/A
15.3.7	Terminals clamp conductors between metal and have adequate pressure		N/A
	Terminals designed to avoid conductor slipping out when tightened		N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Terminals adequately fixed when tightened or loosened (no loosening, wiring not stressed, distances not reduced)		N/A
15.3.8	Terminals carrying a current more than 0,2 A: contact pressure not transmitted by insulating material except ceramic		N/A
15.3.9	Termination of non-detachable cords: wires terminated near to each other		N/A
	Terminals located and shielded: test with 8 mm strand		N/A
15.4	Devices forming a part of the mains plug		N/A
15.4.1	No undue strain on mains socket-outlets		N/A
15.4.2	Device complies with standard for dimensions of mains plugs		N/A
15.4.3	Device has adequate mechanical strength (tests a,b,c)		N/A
16	EXTERNAL FLEXIBLE CORDS		
16.1	Mains cords sheathed type, complying with IEC 60227 for PVC or IEC 60245 for synthetic rubber cords	No such EXTERNAL FLEXIBLE CORDS	N/A
	Non-detachable cords for Class I have green/yellow core for protective earth		N/A
16.2	Mains cords conductors have adequate cross-sectional area for rated current consumption of the equipment		N/A
16.3	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)		N/A
16.4	Flexible cords used for connection between equipment have adequate cross-sectional areas to avoid temperature rise under normal and fault conditions		N/A
16.5	Adequate strain relief on external flexible cords		N/A
	Not possible to push cord back into equipment		N/A
	Strain relief device unlikely to damage flexible cord		N/A
	For mains cords of Class I equipment, hazardous live conductors become taut before earth conductor		N/A
16.6	Apertures for external flexible cord: no risk of damage to the cord during assembly or movement in use		N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
16.7	Transportable apparatus have appliance inlet according to IEC 60320- 1 or means of stowage to protect the cord		N/A
17	ELECTRICAL CONNECTIONS AND MECHANICAL FIXINGS		
17.1	Table 20 torque test metal thread, 5 times..... :		N/A
	Table 20 torque test non-metallic thread, 10 times... :		N/A
17.2	Correct introduction into female threads in non-metallic material		P
17.3	Cover fixing screws captive or 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		P
17.5	Contact pressure not transmitted through insulating material other than ceramic for connections carrying a current > 0,2 A		N/A
17.6	Stranded conductors of flexible supply cords carrying a current > 0,2 A with screw terminals not consolidated by solder		N/A
17.7	Cover fixing devices have adequate strength and their positioning is unambiguous		N/A
17.8	Fixing means for detachable legs or stands provided		N/A
17.9	Internal pluggable connections, affecting safety, unlikely to become disconnected		P
18	MECHANICAL STRENGTH OF PICTURE TUBES AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		
18.1	Comply with IEC 61965 or 18.2		N/A
18.2	Non-intrinsically protected tubes		N/A
19	STABILITY AND MECHANICAL HAZARDS		
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) :	<7Kg	N/A
19.2	Test at 10° to the horizontal		N/A
19.3	Vertical force test 100 N applied downwards		N/A
19.4	Horizontal force test, 100 N or 13% of weight, applied horizontally to point of least stability		N/A
19.5	Edges or corners not hazardous		P
19.6	Mechanical strength of glass		N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
19.6.1	Glass surfaces (exc.laminated) with an area exceeding 0,1 m ² or major dimension > 450 mm, pass the test of 12.1.4		N/A
19.6.2	Fragmentation test		N/A
19.7	Wall or ceiling mounting means		N/A
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.....:		N/A

20	RESISTANCE TO FIRE		
20.1	Start and spread of fire is prevented		P
20.2	Electrical components and mechanical parts		N/A
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		N/A
	b) Exemption for small components		P
20.2.2	Electrical components meet the requirements of Clause 14 or 20.2.5		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		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	PWB is of V-0 material	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.	PWB is of V-0 material	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	(see appended table 14)	P
	Components and parts as above but shielded from a potential ignition source, with the barrier area in accordance with Table 21 and fig. 13		N/A
	Apparatus with voltages >4kV under normal operating conditions and distances to the enclosure exceed those specified Table 21, flammability classification HB40 or better is required for the enclosure		N/A
20.3	Fire enclosure		N/A

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
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		N/A
20.3.2	Internal fire enclosures with openings not exceeding 1 mm in width and with openings for wires completely filled		N/A
20.3.3	Requirements of 20.2.1 and 20.2.2 met by an internal fire enclosure		N/A

ANNEX A	ADDITIONAL REQUIREMENTS FOR APPARATUS WITH PROTECTION AGAINST SPLASHING WATER		
A.5	Marking and instructions		N/A
A.5.1	A.5.2 i) Marked with at least IPX4 (IEC 60529) 5.5.2 a) does not apply		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		N/A
A.10.3.2	Complies with 10.3,duration of the test is 168h		N/A

ANNEX B	APPARATUS TO BE CONNECTED TO TELECOMMUNICATION THE TELECOMMUNICATION NETWORKS		
	Complies with IEC 62151 clause 1		N/A
	Complies with IEC 62151 clause 2		N/A
	Complies with IEC 62151 clause 3 modified		N/A
	Complies with IEC 62151 clause 4 modified		N/A
	Complies with IEC 62151 cause 5 modified		N/A
	Complies with IEC 62151 clause 6		N/A
	Complies with IEC 62151 clause 7		N/A
	Complies with IEC 62151 annex A, B and C		N/A

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

IEC 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Instructions for flash apparatus indicating type or model number of battery chargers or Supply apparatus with which it is to be used		N/A
L.7	Heating under normal operating conditions		N/A
L.7.1.6	Lithium batteries meet permissible temp rise in Table 3		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		N/A
L.14	Components		N/A
L.14.6.7	Mains switch characteristics appropriate to its function under normal conditions		N/A

IEC60065			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60065	
NATIONAL DIFFERENCES	
Audio, video and similar electronic apparatus-Safety requirements	
Differences according to :	AS/NZS: 60065:2012
Attachment Form No. :	Difference between AS/NZS: 60065:2012 and IEC 60065:2001 (Seventh Edition) + A1:2005 + A2:2010
Attachment Originator :	
Master Attachment :	Dated 2012-12
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Australia			
Clause	Requirement – Test	Result – Remark	Verdict
5.2	Unless the TERMINALS are marked with the type references of the apparatus that are permitted to be connected		P
	The nominal output voltage		P
	The maximum output current or power, if with the most unfavourable load, temperature rises higher than those allowed in Table 3 for normal operating conditions can occur.		P
5.3	To prevent electric shock hazard, do not connect to mains power supply while grille is removed.		N
6.2.1	Laser radiation, emission limits to IEC 60825-1:2007, 8.2	Laser Class 1	P
7.15	In Table 3 under item c) add an h) in both columns against 'thermoplastic materials' and add the following new footnote: h As an alternative to the method described in footnote f) the following variation may be used where there is any doubt about the suitability of the material: The ball-pressure test described in AS/NZS 60695.10.2 may be carried out. To assess compliance under normal operating conditions, the test shall be made in a heating cabinet at a temperature of 40°C ± 2°C plus the maximum temperature rise determined under normal operating conditions but, it shall be at least -for external parts 75°C ± 2°C -for materials supporting parts conductively Connected to the mains 125°C ± 2°C		N
7.2	After the second paragraph, add the following: The alternative method described in footnote h) of Table 3 may be used.		N
11.2.1	Measurement of temperature rises		P

IEC60065			
Clause	Requirement + Test	Result - Remark	Verdict
	During this period, the apparatus shall meet the requirements of 11.2.2 up to and including 11.2.7.		P
11.2.3	Parts, other than windings, providing electrical insulation		N
	The temperature rise of insulating parts other than windings and PRINTED BOARDS, the failure of which would cause an infringement of the requirements of 11.1, 11.2.2 and 11.2.4, shall not exceed the values given in Table 3, item b) "Fault conditions".		--
11.2.6	PRINTED BOARDS		N
	Where a failure would cause an infringement of the requirements of 11.1, 11.2.2 and 11.2.4, the temperature rise on a PRINTED BOARD shall not exceed the values given under "Fault conditions" in Table 3, item b), with the following exceptions.		--
	The temperature rise may exceed the above values by not more than 100 K for a maximum period of 5 min.		--
	For PRINTED BOARDS classified as V-0 according to IEC 60695-11-10 or Clause G.1, the temperature rise may exceed:		--
	a) the values given under "Fault conditions" in Table 3, item b), by not more than 100 K on one or more small areas providing that the total area does not exceed 2 cm ² for each fault condition and no electric shock hazard is involved;		--
	b) for a maximum period of 5 min, the values given under "Fault conditions" in Table 3, item b), up to the temperature rise value given for "other parts" under "Fault conditions" in Table 3, item e), on one or more small areas, providing that the total area does not exceed 2 cm ² for each fault condition and no electric shock hazard is involved.		--
13.2	Determination of WORKING VOLTAGE		P
	In determining the WORKING VOLTAGE, all of the following requirements apply:		P
	No voltage variation (0,9 or 1,1) shall be applied to the RATED SUPPLY VOLTAGE of the apparatus;		N
1.3.3	CLEARANCES		P
13.3.1	In Norway, due to the IT power distribution system used, the a.c. MAINS voltage is considered to be equal to the line-to-line voltage, and will remain 230 V in case of a single earth fault.		--

IEC60065			
Clause	Requirement + Test	Result - Remark	Verdict
13.6	For transformers, magnetic couplers and similar devices, if insulation is relied upon for safety, a voltage of 500 V r.m.s. at a frequency of 50 Hz or 60 Hz is applied between windings, and also between windings and other conductive parts, during the thermal cycling condition above.		N
14	Components		P
	In Australia and New Zealand the special national conditions of clause 20, NOTE 2, also apply to all components.		P
	In Sweden, switches containing mercury such as thermostats, relays and level controllers are not allowed.	No such parts	N
14.1	For resistors connected between HAZARDOUS LIVE parts and ACCESSIBLE conductive parts and for resistors bridging contact gaps of MAINS SWITCHES, the 10 specimens are each subjected to 50 discharges at a maximum rate of 12/min, from a 1 nF capacitor charged to 10 kV in a test circuit as shown in Figure 5a.		P
	For other resistors, the 10 specimens are each subjected to a voltage of such a value that the current through it is 1,5 times the value measured through a resistor, having a resistance equal to the specified rated value, which is fitted to the apparatus, when operated under fault conditions. During the test the voltage is kept constant.		P
	The value of resistance is measured when steady state is attained and shall not differ more than 20 % from the value measured before the damp heat test.		N
14.5.3	For PTC THERMISTORS whose power dissipation exceeds 15 W for the rated zero-power resistance at an ambient temperature of 25 °C, the encapsulation or tubing shall comply with the flammability category V-1 or better according to IEC 60695-11-10.		N
14.11	Internal and external CLEARANCES and CREEPAGE DISTANCES of optocouplers shall comply with 13.1.	Approved adaptor used	N
	There is no minimum distance through insulation for SUPPLEMENTARY INSULATION or REINFORCED INSULATION consisting of an insulating compound completely filling the casing of an optocoupler, provided that the component satisfies one of the following, a) or b):		N
	a) it passes		N
	the TYPE TESTS and inspection criteria of 13.6; and		N

IEC60065			
Clause	Requirement + Test	Result - Remark	Verdict
	ROUTINE TESTS for dielectric strength during manufacturing, per Subclause N.2.1 using the appropriate value of the test voltage in 10.3.2 applied for 1 s; or		N
	b) complies with the requirements of IEC 60747-5-5, where the test voltages are as specified in 5.2.6 of IEC 60747-5-5:2007:		N
	the voltage $V_{ini,a}$ for TYPE TESTING; and		N
	the voltage $V_{ini,b}$ for ROUTINE TESTING, applied for 1 s		N
	shall be the appropriate value of the test voltage in 10.3.2 of this standard.		N
	As an alternative to a) and b) above, it is permitted to treat an opt coupler according to 13.8, if applicable.		N
15.1.1	After the second paragraph, add the following: Plugs for the connection of apparatus to mains powered socket-outlets shall comply with AS/NZS 3112 or AS/NZS 3123. Apparatus with a plug portion, suitable for insertion into a 10 A 3-pin flat-pin socket-outlet complying with AS/NZS 3112, shall comply with the requirements of AS/NZS 3112 for equipment with integral pins for insertion into socket outlets.	Integral plug comply with AS/NZS 3112	P
15.3.5	In Table 15, in the second and third rows of the first column replace '6' with '7.5'.		N
16.2	In Table 18, in the second and third rows of the first column replace '6' with '7.5'.		N
16.3	In item (b), add the following: A flexible cord complying with AS/NZS 3191 need not undergo this test.		N
18.1	Compliance is checked by inspection, by measurement, and by the tests of:		P
	IEC 61965 for intrinsically protected tubes, including those having integral protective screens		N
18.2	Ageing process	Delete this section	--
20	Add the following after NOTE 2: For alternative test refer to Clause 20.201.		N
20.1.3	Compliance is checked for the smallest thickness of PRINTED BOARD used, in accordance with either:		P
	a) IEC 60695-11-10; or		--
	b) with Clause G.1 on specimens of boards as used in the apparatus, but without components.		--
	The tests under b) are performed after a preconditioning of 24 h at a temperature of (125 ± 2) °C in an air-circulating oven and a subsequent cooling period of 4 h at room temperature in a desiccator over anhydrous calcium chloride.		--

IEC60065			
Clause	Requirement + Test	Result - Remark	Verdict
20.1.4	In Table 21, in the third and fourth columns change both 'HB75' and 'No requirement' to 'V-1'.		N
20.2.3	After this Clause, add the following variation: 20.201 Resistance to fire—Alternative tests 20.201.1 General Parts of non-metallic material shall be resistant to ignition and the spread of fire.		N
	This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames originating from inside the apparatus, or the following:		N
	a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1 mm in width regardless of length.		N
	b) The following parts which would contribute negligible fuel to a fire: - small mechanical parts, the mass of which does not exceed 4 g, such as mounting parts, gears, cams, belts and bearings; - small electrical components, such as capacitors with a volume not exceeding 1 750 mm ³ , integrated circuits, transistors and optocoupler packages, if these components are mounted on material of flammability category V-1 or better according to AS/NZS 60695.11.10.		N
	effect of propagating fire from one part to another. Compliance shall be checked by the tests of 20.201.2.1, 20.201.2.2. and 20.201.2.3 For the base material of printed boards, compliance shall be checked by the test of 20.201.2.4. The tests shall be carried out on parts of nonmetallic material which have been removed from the apparatus. When the glow-wire test is carried out, they are placed in the same orientation as they would be in normal use. These tests are not carried out on internal wiring.		N
20.201.2	Tests		N

IEC60065			
Clause	Requirement + Test	Result - Remark	Verdict
20.201.2. 1	<p>Testing of non-metallic parts</p> <p>Part of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550°C.</p> <p>Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glow-wire test shall not be carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part.</p>		N
20.201.2. 2	<p>Testing of insulated parts</p> <p>Part of insulating material supporting potential ignition sources shall be subject to the glowwire test of AS/NZS 64695.2.11 which shall be carried out at 750°C.</p>		N

Anbotek

IEC60065											
Clause	Requirement + Test	Result - Remark	Verdict								
	<p>NOTE – Contacts in components such as switch contacts are considered to be connections.</p> <p>For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test. However, parts shielded by a barrier which meets the needle-flame test need not be tested.</p> <p>The needle-flame test shall be made in accordance with AS/NZS 4695.2.2 with the following modifications:</p> <table border="1"> <thead> <tr> <th>Clause of AS/NZS 4695.2.2</th> <th>Change</th> </tr> </thead> <tbody> <tr> <td>5 Severities</td> <td>Replace with: The duration of application of the test flame shall be 30 s 1 s.</td> </tr> <tr> <td>8 Test procedure 8.2 8.4</td> <td>Replace the first sentence with: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. The first paragraph does not apply. Addition: If possible, the flame shall be applied at least 10 mm from a corner.</td> </tr> <tr> <td>8.5</td> <td>Replace with:</td> </tr> </tbody> </table>	Clause of AS/NZS 4695.2.2	Change	5 Severities	Replace with: The duration of application of the test flame shall be 30 s 1 s.	8 Test procedure 8.2 8.4	Replace the first sentence with: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. The first paragraph does not apply. Addition: If possible, the flame shall be applied at least 10 mm from a corner.	8.5	Replace with:		N
Clause of AS/NZS 4695.2.2	Change										
5 Severities	Replace with: The duration of application of the test flame shall be 30 s 1 s.										
8 Test procedure 8.2 8.4	Replace the first sentence with: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. The first paragraph does not apply. Addition: If possible, the flame shall be applied at least 10 mm from a corner.										
8.5	Replace with:										

IEC60065			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10 provided that the sample tested was not thicker than the relevant part.</p> <p>20.201.2.3 Testing by needle-flame test</p> <p>If parts, other than enclosures, do not withstand the glow wire tests of 20.201.2.2, by failure to extinguish within 30 s after the removal of the glow-wire tip, the needle-flame test detailed in 20.201.2.2 shall be made on all parts of non-metallic material which are within a distance of 50 mm or which are likely to be impinged upon by flame during the tests of 20.201.2.2. Parts shielded by a separate barrier which meets the needle-flame test shall not be tested.</p> <p>NOTE 1 – If the enclosure does not withstand the glow-wire test the appliance is considered to have failed to meet the requirements of Clause 21.201 without the need for consequential testing.</p> <p>NOTE 2 – If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the apparatus, the apparatus is considered to have failed to meet the requirements of Clause 21.201 without the need for consequential testing</p> <p>NOTE 3 – Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting, in contact with, or in close proximity to, connections.</p>		N
20.201.2.4	<p>Testing of printed boards</p> <p>The base material of printed boards shall be subject to the needle-flame test of Clause 21.201.2.3. The flame shall be applied to the edge of the board where the heatsink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge consisting of broken perforations, unless the edge is less than 3 mm from a potential ignition source.</p>		N
	The test is not carried out if the—		N
	- printed board does not carry any potential ignition source;		N

IEC60065			
Clause	Requirement + Test	Result - Remark	Verdict
	- base material of printed boards, on which the available power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category V-1 or better according to AS/NZS 60695.11.10, or the printed boards are protected by an enclosure meeting the flammability category V-0 according to AS/NZS 60695.11.10, or made of metal, having openings only for connecting wires which fill the openings completely; or		N
	- base material of printed boards, on which the available power at a connection exceeds 15 VA operating at a voltage exceeding 400 V (peak) a.c. or d.c. under normal operating conditions, and base material of printed boards supporting spark gaps which provides protection against overvoltages, is of flammability category V-0 according to AS/NZS 60695.11.10 or the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely.		N
21.201.3	For open circuit voltages greater than 4 kV Potential ignition sources with open circuit voltages exceeding 4 kV (peak) a.c. or d.c. under normal operating conditions shall be contained in a fire enclosure which shall comply with flammability category V-1 or better according to AS/NZS 60695.11.10.		N
Annex B	After the heading add: For Australia only, this Annex is replaced by the requirements of the Telecommunications Labelling Notice issued under the Telecommunications Act. NOTE – The Telecommunications Act is administered by the Australian Communications Authority.		N

Test Tables

7.1	TABLE: Temperature rise measurement						P
	Power consumption in the OFF/Stand-by.....:					--	--
	Position of the functional switch (W).....:					--	--
Operating conditons:							
Un (V)	Hz	In (A)	Pn (W)	Uout (V)	Pout (W)	Operating Condition/Status	
By adapter:							
90	50	0.388	26.5	--	--	1KHz audio signal to deliver the 1/8 Max. Non-Clipped output power on speakers	
90	60	0.385	26.3	--	--	Ditto	
100	50	0.356	26.5	--	--	Ditto	
100	60	0.352	26.5	--	--	Ditto	
240	50	0.171	27.8	--	--	Ditto	
240	60	0.176	27.9	--	--	Ditto	
264	50	0.164	28.1	--	--	Ditto	
264	60	0.160	28.0	--	--	Ditto	
By DC source:							
16Vd.c.	--	1.83	29.28	--	--	Ditto	
	Loudspeaker impedance (Ω).....:					--	
	Several loudspeaker systems.....:					--	
	Marking of loudspeaker terminals.....:					--	
Monitored point:				dT (K)		Limit max. dT (K)	
Test condition				90V/50Hz	264V/50Hz	16Vdc	--
DC inlet				4.8	5.5	5.7	Ref.
Surface of E-cap(C1)				21.2	20.9	22.4	70
Surface of U3				20.6	22.1	22.1	Ref.
PWB (near U3)				9.5	10.4	11.0	95
PWB (near E2)				7.3	8.1	8.2	95
Enclosure inside near U3				6.4	7.6	7.7	Ref.
Enclosure outside near U3				5.2	5.4	5.3	Ref.
Ambient				35°C	35°C	35°C	--

Test Tables

Comments:						
For components with temperature marking, allowed Tmax = Tmax - Tma (Tma = 35 ° C)						
Winding temperature rise measurements					--	
Ambient temperature t1 (°C)			--	--		
Ambient temperature t2 (°C).....			--	--		
Temperature rise dT of winding: $dT = \frac{(R_2 - R_1) \times (234.5 + t_1) - (t_2 - t_1)}{R_1}$		R ₁ (Ω)	R ₂ (Ω)	dT (K)	Limit max. (K)	Insulation class
--		--	--	--	--	--
Note: According to the user manual, the appliance is intended to be used in moderate climate, so the basic ambient temperature is 35°C.						

7.2	TABLE: Softening temperature of thermoplastics			N/A
Temperature T of part		T – normal conditions (°C)	T – fault conditions (°C)	Min. T softening (°C)
--		--	--	--
Note:				

10.4	TABLE: Insulation resistance measurements		N/A
Insulation resistance R between		R (MΩ)	Required R (MΩ)
--		--	--
--		--	--
Note: 1) BI: Basic insulation; SI: Supplementary insulation; DI: Double insulation; RI: Reinforced insulation			

10.3	TABLE: Electric strength measurements		P
Test voltage applied between		Test voltage (V)	Breakdown
Input and enclosure (Metal)		DC 500	No
Input and output terminals		DC 500	No
Note: 1) BI: Basic insulation; SI: Supplementary insulation; DI: Double insulation; RI: Reinforced insulation			

11.2	TABLE :Summary if fault condition Tests		P
Voltage (V) 0,9 or 1,1 times rated Voltage.....		Rated voltage: 100-240V~(adapter). Test voltage: 264V~.	--
Frequency (Hz).....		60Hz	--
Ambient temperature (°C).....		25	--

Test Tables

No.	Component no.	Fault	Test time	Fuse current (A)	Result
1	Whole apparatus	Blocked Ventilation	6h	0.069	No hazard, until steady conditions were established.
2	C1	s-c	<1s	0.005	EUT shut down immediately, no component damaged no hazard.
3	U3	s-c	<1s	0.005	After SC, unit shut down immediately. No damaged, no hazard.
4	U2	s-c	<1s	0.069	No hazard.

Notes:

- 1) After each of above test, EUT can pass the dielectric strength test which specified in clause 10.3
- 2) Supplementary information : o-c: open circuit, s-c: short circuit, o-l: overload, b-l: blocked

13.3/13.4	TABLE: Clearances and creepage distances					N/A
Location	Operating Voltage [V]		Clearance [mm]		Creepage [mm]	
	Urms [V]	Upeak [V]	Minimum	Actual	Minimum	Actual

Test conditions: - Pollution degree: II
 - Material group: IIIb
 - Main transient voltage: 2,50KV
 Note: (RI) = Reinforced insulation, (SI) = Supplementary insulation, (BI) = Basic insulation

14	TABLE: List of critical components					P
Object/part No.	Manufacturer/trademark	Type/model	Technical data	Standard	Mark(s) of conformity ¹⁾	
PCB	TREASURE ELECTRONIC TECHNOLOGY (SHENZHEN) LTD	T-D	130°C, V-0	UL 94	UL E254667	
(Alternative)	Interchangeable	Interchangeable	130°C, V-0	UL 94	UL E181900	
Adapter	SHENZHEN BOYAXUAN TECHNOLOGY DEVELOPMENT CO LTD	BX-16005400	Input: 100-240Va.c., 50/60Hz, 0.5A Max. Output: 18Vd.c., 1A	IEC/EN 60065	TUV SUD-CB UL E365975	

Note:

¹⁾ an asterisk indicates a mark which assures the agreed level of surveillance

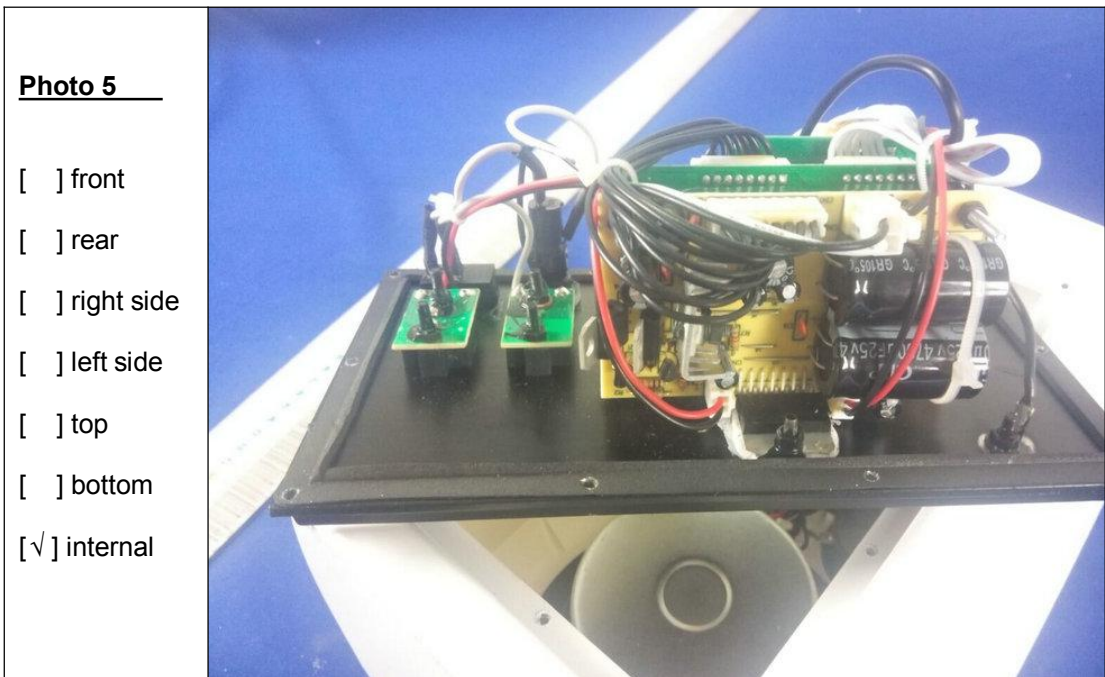
Photos



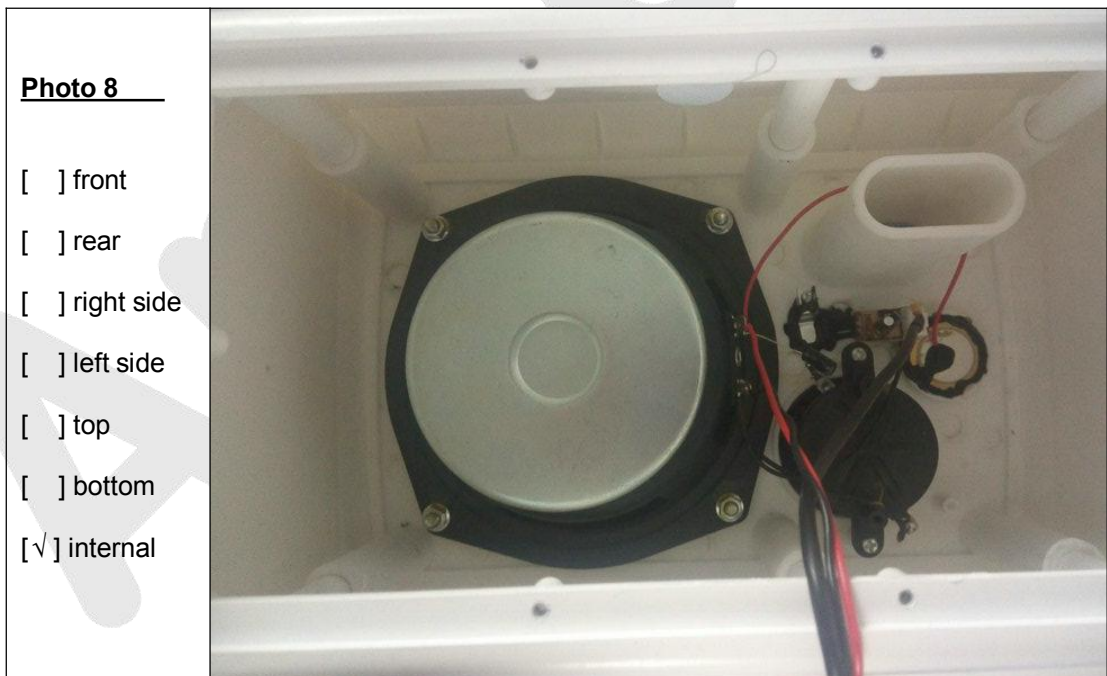
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End of the report