CE

APPLICATION FOR LVD
On Behalf of

Liaocheng Sunsmile Musical Instrument Inc.

Product Name:	Guitar amplifier
Trademark:	N/A
Model :	AG-15 LH-380, LATE-3, GA1, GA-5, CD-G10, G10C, G10CT, PG-10, GL-10, GA-10, GA-10T, GA-10TZ, G10, UNCLE-G10, G15, GF-15, GX-15, GF-15CG20, GX20R, GF-20MC, PGA-20, UNCLE-G20, G30R, GA-3, GX-30, PG-30T, GA40R, GF-40, GX60R, GX80R, UNCLE-B10C, GB-15, GB-30.
Prepared For : Address:	Liaocheng Sunsmile Musical Instrument Inc. NO. 38 HUAYUAN NORTH ROAD LIAOCHENG, SHANDONG, CHINA
Prepared By : Address:	Shenzhen BCTC Technology Co., Ltd. B BUILDING ROOM 8518, MULTIPLE USE BUILDING OF ECONOMIC COOPERATIVE, TEAM ONE, ANLE COUNTRY, NO. 44 OF XIN'AN BLOCK, BAO'AN AREA, SHENZHEN
Test Date:	Aug. 10- Aug. 17, 2011
Date of Report :	Aug. 17, 2011
Report No.:	BCTC2011009451-SZJR

EN 60065			
Clause	Requirement Test	Result - Remark	Verdict

TEST REPORT

EN60065:2002+A1:2006+A11:2008

Audio, video and similar electronic apparatus-Safety requirements

Testing Laboratory Name ..... :	**Shenzhen BCTC Technology Co., Ltd.**
Address ..... :	B Building Room 8518, Multiple Use Building of Economic Cooperative, Team one, Anle country, No. 44 of Xin'an Block, Bao'an Area, Shenzhen
Testing location ..... :	**Shenzhen BCTC Technology Co., Ltd.**
Applicant's Name ..... :	**Liaocheng Sunsmile Musical Instrument Inc.**
Address ..... :	NO. 38 Huayuan North Road Liaocheng, Shandong, China
Manufacturer …… ……:	**Liaocheng Sunsmile Musical Instrument Inc.**
Address …… …… :	NO. 38 Huayuan North Road Liaocheng, Shandong, China
Test specification	
Standard ..... :	**EN60065:2002+A1:2006+A11:2008**
Test procedure ..... :	LVD
Procedure deviation ..... :	N/A
Non-standard test method ..... :	N/A
Test Report Form	
Test Report Form No. ..... :	IECEN 60065G
TRF originator ..... :	SEMKO
Master TRF ..... :	dated 00-08
Copyright reserved to the bodies participating in the IECEE Schemes (CB and CB-FCS) and/or the bodies participating in the C.I.G (CCA-ENEC).	
Test item description ..... :	**Guitar amplifier**
Trademark ..... :	**N/A**
Model and/or type reference ..... :	**AG-15**
Rating(s) ..... :	**AC230V 50Hz**
Test case verdicts	
Test case does not apply to the test object .. :	N/A
Test item does meet the requirement ..... :	P(ass)
Test item does not meet the requirement ..... :	F(ail)

General remarks

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item(s) tested.

”(see remark #)" refers to a remark appended to the report.

"(see Annex #)" refers to an annex appended to the report.

Clause numbers between brackets refer to clauses in EN 60065-1:2002+A1:2006+A11:2008

Throughout this report a comma is used as the decimal separator.

Brief description of the test sample:

The equipment is a **Guitar amplifier** (fixed luminaire) for general use.

The test data is based on the model: **AG-15** Except the model number is different. The additional models: Please refer to the first page are same in the constructions, shape of enclosures and electronics circuits as the basic model: **AG-15**

Copy of marking plate:

Guitar amplifier

Model: AG-15

AC230V 50HZ

Liaocheng Sunsmile Musical Instrument Inc.

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

Name and address of the testing laboratory :Shenzhen BCTC Technology Co., Ltd.

B Building Room 8518, Multiple Use Building of Economic Cooperative, Team one, Anle country,No. 44 of Xin'an Block, Bao'an Area, Shenzhen

Date of Test: **Aug. 10 - Aug. 17, 2011**

Prepared by(Engineer) :

Yoyo Mo

Reviewer(Quality Manager) :

Sophie Lee

SHENZHEN BCTC TECHNOLOGY CO., LTD. APPROVED

Approved&Authorized Signer(Manager) :

Randy Zhang

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
3	GENERAL REQUIREMENTS		P
	Safety class of the apparatus	Class Ⅰ apparatus	P
4	General test conditions		P
4.1	Conduct of tests		P
4.1.1	Tests according to this standard are type tests		P
4.1.2	The sample or samples under test shall be representative of the apparatus the user would receive.		P
4.1.3	Unless otherwise specified, the tests are carried out under normal operating conditions at: - an ambient temperature between 15℃ and 35℃ - a relative humidity of 75% maximum		P
4.1.4	Any position of intended use of the apparatus, normal ventilation not being impeded.	During normal operation tests, ventilation is not impeded	P
4.1.5	The characteristics of the supply source used during the tests shall not appreciably influence the test results.	Considering the influence, all tests are conducted at 0.9 times or/and 1.1 times of the rated supply voltage	P
4.1.6	Where relevant, a standard signal consisting of PINK NOISE, band-limited by a filter whose response conforms to that given in figure C.1 in annex C.		N
4.1.7	The a.c. values given in this standard are r.m.s values, unless specified otherwise		P
4.2	Normal operating conditions	See below.	P
4.2.1	The apparatus is connected to a supply voltage of 0.9 times or 1.1 times of any rated supply voltage for which the apparatus is designed.	Heating test is conducted at 0.9 times and 1.1 times of the rated supply voltage, and the other tests are conducted at 1.1 times of the rated supply.	P
4.2.2	Any position of controls which are accessible to the user for adjustment by hand	Controls on control panel are adjusted by hand	P
4.2.3	Any earth terminal and any protective earth of single-phase supply may be connected to either pole of the isolated supply source used during the test		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
4.2.4	For an audio Guitar amplifier:	See below.	P
	The apparatus is operated in such a way as to deliver one-eighth of the non-clipped output power to the rated load impedance using the standard signal described in 4.1.6.		P
	The most unfavorable rated load impedance of any output circuit is connected or not.	Resistance is connected instead of Guitar amplifiers, Rated impedance as follows: -	P
	Organs or similar instruments which have a tone-generator unit are operated with any combination of two bass pedal keys		P
4.2.5	Load conditions for the motor are chosen which may occur during intended use for apparatus incorporating motors.	Apparatus has not incorporation motors.	N
4.2.6	An apparatus supplying power to other apparatus is loaded to give its rated power or not loaded.	The unit is not this kind of equipments.	N
4.2.7	A supply apparatus to be used inside apparatus, for which it is intended exclusively, is tested within such apparatus after installation according to the manufacturer's instruction for use.		N
4.2.8	For citizen's band apparatus, the rated load impedance is connected or not to the antenna terminal.	This apparatus is not a citizen's band apparatus.	N
4.2.9	For antenna positioners	This apparatus is not an antenna positioners.	N
4.2.9.1	Movements and the resting periods for antenna positioners in combination with their control and supply apparatus.	This apparatus is not an antenna positioners.	N
4.2.9.2	The power supply unit shall be loaded in accordance with the marked output rating and operated with a duty cycle of 5 min on, and 15 min off for satellite antenna positioners consisting of a power supply and control unit.	This apparatus is not a satellite antenna positioners.	N
4.2.10	Apparatus designed to be supplied exclusively by a special supply apparatus shall be tested together with this special supply apparatus.		P
4.2.11	Apparatus supplied by supply apparatus for general use shall be supplied by a test power supply according to table 1.	This apparatus is not supplied by a supply apparatus for general use.	N

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Clause	Requirement – Test	Result - Remark	Verdict
4.2.12	Apparatus intended to be used with optional detachable legs or stands are tested with or without legs or stands fitted.	This apparatus is not used with detachable legs or stands.	N
4.3	Fault conditions	See below.	P
4.3.1	Short-circuit across clearances and creepage distances if they are less than the values specified in clause 13 for basic and supplementary insulation.	Clearances and creepage distances are exceeded the values specified in clause 13.	P
4.3.2	Short-circuit across parts of insulating material	The insulation of the insulating materials comply with the requirements of 10.3.	P
4.3.3	Short-circuit or interruption of :	Refer to Clause 11	P
	heaters of electronic tubes	No electronic tubes	N
	insulation between heaters and cathodes of electronic tubes	No electronic tubes	N
	spacings in electronic tubes, excluding picture tubes	No electronic tubes	N
	semiconductor devices, one lead at a time interrupted or any two leads connected together in turn.	Refer to Clause 11	P
4.3.4	Short-circuit or disconnection of resistors, capacitors, windings, loudGuitar amplifiers, optocouplers, varistors or non-linear passive components.	Refer to Clause 11	P
4.3.5	For apparatus containing an audioGuitar amplifier, using the standard signal to deliver the most unfavourable output power from zero up to the maximum attainable output power to the rated load impedance.	See appended table 11.1	P
4.3.6	Motors are stalled if this is possible.	No motors.	N
4.3.7	Motors, relay coils or the like, intended for short-time or intermittent operation, are operated continuously if this can occur during operation	No motors, relay or similar components.	N
4.3.8	The apparatus is connected simultaneously to alternative types of supply		N
4.3.9	Output terminals of apparatus supplying power to other apparatus are connected to the most unfavourable load impedance, including short circuit.	No such terminals provided.	N
4.3.10	Ventilation openings shall be covered.	See appended table 11.1	P

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Clause	Requirement – Test	Result - Remark	Verdict
4.3.11	The apparatus is tested with one or more batteries with both intended and revered polarity	There are no batteries in this apparatus.	N
4.3.12	The most unfavourable load impedance including short circuit is connected to the antenna terminal for citizen's band apparatus.	This apparatus is not a citizen's band apparatus.	N
4.3.13	Mains voltage setting device should be set at the most unfavourable position for apparatus provided with a voltage setting devices.	This apparatus not provided with a voltage setting devices.	N
4.3.14	The voltage setting device should be adjusted at any output voltage for apparatus supplied by a special apparatus with a voltage setting devices for the output voltage.	This apparatus is not Supplied by a special apparatus.	N
4.3.15	Apparatus which can be supplied by supply apparatus for general use shall be tested by using a test power supply as specified in table 1 step by step upwards.	This apparatus is not supplied by supply apparatus for general use	N
5	Marking and instructions		P
	General	See below for the detail.	P
	Easily discernible when ready for use Indelible and legible after rubbing test	Marking plates provided on the back of the enclosure. After rubbing test by water and petroleum spirit, the marking still easily discernible, indelible and legible.	P
	Letter symbols comply with IEC 60027		P
	Graphical symbols comply with IEC 60417 & and ISO 7000		P
	The on-position and off-position of switch shall be indicated in accordance with 14.6.3	Refer to 14.6.3	P
5.1	Identification and supply ratings	See below for the detail.	P
	Maker's or responsible vendor's name, trade mark or identification mark		P
	Model number or type reference		P
	Symbol of Class II		N
	Marking for apparatus designed for use in tropical climates	No used.	N
	Symbol-nature of supply	AC source	P
	Rated voltage (V)		P
	Raged frequency		P

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Clause	Requirement – Test	Result - Remark	Verdict
	Power marking		P
5.2	Terminals	Class Ⅰ equipment.	P
	The symbol of the protective earthing conductor	⏚	P
	The symbol of hazardous live under normal condition	No hazardous live terminals	N
	Marking of output terminal for supply of other apparatus	No output terminals provided for supply of other apparatus. Other terminals are marked with the type references of the apparatus, which are permitted to be connected.	N
5.3	Symbol indicating a specific component of affect safety in circuit diagram	The symbol ISO 7000-0434 is shown on the rear enclosure and electrical diagram next to every safety critical component.	P
5.4	Instructions	Instruction for use provided in English. Versions of other languages will be provided when national approval.	P
	Instruction for installation or use	See above.	P
	Language of instruction	English	P
5.4.1	For main powered apparatus, instruction shall state the apparatus shall not be exposed to dripping or splashing	The instruction statement complies with the requirement.	P
	A warning of the terminals having hazardous live	Not such terminals	N
	A warning for replaceable lithium battery	No lithium battery	N
5.4. 2	For permanently connected apparatus, instruction shall state that separation between all-poles of main switch is 3 mm at least	The apparatus is not a permanently connected apparatus.	N
6	Hazardous radiation		N
6.1	Ionizing radiation	No Ionizing radiation.	N
	Adequate protection against ionizing radiation		N
	Measure value of ionizing radiation in normal condition		N
	Measure value of ionizing radiation under fault condition		N
6.2	Laser radiation		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Protection against laser radiation under normal condition and fault condition		N
	Classification of laser radiation		N
	Measure value		N
6.2.1	a) Under normal operating conditions, the apparatus shall meet approachable emission limits of Class1 as specified in IEC60825-1		N
	b) If the apparatus comply with 6.2.1.a, the requirements mentioned under c) and d) do not apply.		N
	c) Adequate measures shall be taken to prevent the opening of any cover by hand giving access to laser radiation in excess of class 1 limits.		N
	d) Mechanical safety interlock shall be fail-safe, or shall withstand a switching test of 50000 cycles of operation.		N
6.2.2	a) When the apparatus is operated under fault conditions as specified in 4.3, the approachable emission level shall be not higher than class 3A outside the wavelength range of 400nm to 700nm and not higher than five times the limit for class 1 within the wavelength range of 400nm to 700nm.		N
	b) If the apparatus comply with 6.2.2.a, the requirements mentioned under c) and d) do not apply.		N
	c) Adequate measures shall be taken to prevent the opening of any cover by hand giving access to laser radiation in excess of the limits given in 6.2.2.a.		N
	d) Mechanical safety interlock shall be fail-safe, or shall withstand a switching test of 50000 cycles of operation.		N
7	Heating under normal operating conditions		P
7.1	During intended use, no part of the apparatus shall attain an excessive temperature.	During intended use, no part of the apparatus shall attain an excessive temperature.	P
7.1.1	Temperature rise of accessible parts	See appended table.	P
7.1.2	Temperature rise of parts providing electrical insulation, other than windings	See appended table.	P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
7.1.3	Temperature rise of support or mechanical barrier	No such parts.	N
7.1.4	Temperature rise of windings	See appended table.	P
7.1.5	Temperature rise of parts not subject to a limit under 7.1.1 to 7.1.4 inclusive	See appended table.	P
7.2	Insulating material supporting parts consecutively connected to the mains carry a current exceeding 0.2A, shall be resistant to heat.		N
8	Constructional requirements with regard to the protection against electric shock		P
8.1	Conductive parts, covered only by lacquer, solvent -based enamel, ordinary paper, untreated textile, oxide films or beads are considered to be bare.	Considered.	P
8.2	No shock hazard when changing voltage setting device, fuse-links or handling drawers etc.	Rated voltage designed. No fuse-link replaced and drawers handled when operation by hand.	N
8.3	Insulation of hazardous live parts not provided by hygroscopic materials.	No hygroscopic materials used.	P
8.4	There should be no risk of an electric shock from accessible parts or from those parts rendered accessible .	No user removable cover.	N
8.5	Class I apparatus		P
	Basic insulation between hazardous live parts and earthed accessible parts		P
	Capacitors bridging basic insulation complying with 14.2.1a		N
	Basic insulation bridged by components complying with 14.3.4.3		N
8.6	Class II apparatus and Class II constructions within Class II equipment		N
	Reinforced or double insulation between hazardous live parts and accessible parts		N
	Components bridging reinforced or double insulation complying with 14.1 a) or 14.3		N
	Basic and supplementary insulation each being bridged by a capacitor complying with 14.2.1 a)	No such capacitors are provided.	N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Reinforced or double insulation being bridged with 2 capacitors in series complying with 14.2.1 a)		N
	Reinforced or double insulation being bridged with a single capacitor complying with 14.2.1 b)		N
8.7	Basic insulation between parts at 35 V to 71 V (peak) a.c. or 60 V to 120 V d.c. and accessible parts		N
	Reinforced or double insulation between circuits operating at voltages between 35 V and 71 V (peak) a.c. or between 60 V and 120 V d.c. and hazardous live parts at higher voltage		P
	Separation by Class II isolating transformer		P
	Separation by Class I isolating transformer		N
	Separation by earthed conductive part		N
8.8	Basic or supplementary insulation ≥0.4mm	See appended table 14.	P
	Reinforced insulation≥0.4mm	See appended table 14.	P
	Thin sheet insulation	Incorporated in Transformer.	P
	Basic or supplementary insulation, at least two layers, each meeting 10.3		P
	Basic or supplementary insulation, three layers any two of which meet 10.3		P
	Reinforced insulation, two layers each of which meet 10.3		P
	Reinforced insulation, three layers any two which meet 10.3		P
8.9	Adequate insulation between internal hazardous live conductors and accessible parts	All internal wires with only basic insulation are routed so that they are not close any live bare components.	P
	Adequate insulation between internal hazardous live parts and conductors connected to accessible parts	All internal hazardous live parts are separated by double or reinforce insulation from accessible parts.	P
8.10	In class II apparatus, double insulation shall be provided between:		N
	accessible parts and conductors in wires or cables conductively connected to the mains		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	conductors in wires or cables connected to accessible conductive parts and parts conductively connected to the mains		N
8.11	Detaching of wires	No wire could be become detachable.	P
	No undue reduction of creepage of clearance distances if wires become detached	Conductors with mechanical securing, soldering and sleeves.	P
	Vibration test carried out	This unit is not transportable apparatus and enclosure is not metal.	N
8.12	Adequate cross-sectional area of internal wiring to mains socket-outlets.	No mains socket outlet provided.	N
8.13	Adequate fastening of windows, lenses, lamp covers etc. (pull test 20N for 10s)	No windows, lenses, lamp covers etc.	N
8.14	Adequate fastening of covers (pull test 50N, for 10 s)		N
8.15	No risk of damage to the insulation of internal wiring due to not hot parts or sharp edges	Internal wiring away from sharp edges, moving parts and not to contact parts exceeding the permissible temperature.	P
8.16	Only special supply equipment can be used	Supply from mains only.	P
8.17	Requirements for insulated winding wires for use without additional interleaved insulation		P
8.18	Endurance test for wound components with insulated winding wires without additional interleaved insulation.		N
	Heat run		--
	Vibration test		--
	Moisture treatment		--
	Measurements		--
8.19	Disconnection from the mains	See below.	P
8.19.1	Disconnect device	The appliance inlet used.	P
	All-pole switch or circuit breaker with >3mm contact separation		N
8.19.2	Mains switch ON indication, main switch is used as a disconnect device.		N
8.20	Switch not fitted in the mains cord	No such construction	N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
8.21	Bridging components comply with clause 14	No such components.	N
9	Electric shock hazard under normal operating conditions		P
9.1	Testing on outside		--
9.1.1	General	All secondary terminals are below 60Vdc.	P
9.1.1.1	Determination of hazardous live parts		P
	Touch current measured from terminal devices using the network in Annex D		P
	Discharge not exceeding 45 uC		N
	Energy of discharge not exceeding 350 mJ		N
9.1.1.2	Determination of accessible parts		P
9.1.2	No hazardous live shafts of knobs, handlers or levers		P
9.1.3	Ventilation holes tested by means of 4 mm x 100 mm test pin		N
9.1.4	Terminal devices tested with 1 mm x 20 mm test pin (10 N); test probe D of IEC 61 032		N
9.1.5	Pre-set controls tested with 2 mm x 100 mm test pin (10 N); test probe C of IEC 61 032	No pre-set controls.	N
9.1.6	No shock hazard due to stored charge on withdrawal of the mains plug; voltage (V) after 2 s	No X-capacitor used.	N
	If C is not greater than 0.1 µF no test needed		--
9.1.7	Enclosure sufficiently resistant to external force	See below.	P
	Test probe 11 of IEC 61 032 for 10 s (50N)	50 N force applied to rear enclosure, no hazard.	P
	Test hook of fig.4 for 10s (20N)	20 N force directed outwards, is applied for 10s at all points where this is possible, no hazard.	P
	30 mm diameter test tool for 5 s (100 or 250N)	This unit not floor-standing apparatus.	N
9.2	No hazard after removing a cover by hand	No cover provided.	N
10	Insulation requirements		P

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Clause	Requirement – Test	Result - Remark	Verdict
10.1	Insulation resistance (MΩ) at least a 2 MΩ min. after surge test for basic and 4 MΩ min. for reinforced insulation		P
10.2	Humidity treatment 48 h of 120 h	At 93% R.H., 30℃, 48 hours.	P
10.3.1	Insulation material of live parts be adequate to resistant to electric shock	See appended table.	P
10.3.2	The insulation listed in table 5 shall be tested for insulation resistance and for dielectric strength.	See appended table.	P
11	Fault conditions		P
11.1	No shock hazard under fault conditions	The voltage of the audio connectors did not exceed the specified voltage. (see appended table)	P
11.2	Heating under fault condition	During fault conditions, no fire propagated beyond the equipment.	P
11.2.1	Measurement of temperature rises	See appended table.	P
11.2.2	Temperature rise of accessible parts	See appended table.	P
11.2.3	Temperature rise of parts, other than windings, providing electrical insulation.	See appended table.	P
	Temperature rise of printed circuit boards (PCB) exceeding the limits of Table 2 by max. 100 K for max. 5 min		N
	a) Temperature rise of printed circuit boards (PCB) to 20.3.1, exceeding the limits of Table 2 by not more than 100 K for an area not greater than 2 cm²		N
	b) Temperature rise of printed circuit boards (PCB) to 20.3.1 up to 300 K for an area not greater than 2 cm² for a maximum of 5 min		N
	Meets all the special conditions if conductors on printed circuit boards are interrupted		N
11.2.4	Temperature rise of parts acting as a support or a mechanical barrier	No such parts, see 7.1.3	N
11.2.5	Temperature rise of windings	See appended table.	P
11.2.6	Temperature rise of other parts not subject to the limits of 11.2.1 to 11.2.5	See appended table.	P

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Clause	Requirement – Test	Result - Remark	Verdict
12	Mechanical strength		P
12.1	Adequate mechanical strength		P
12.1.1	Bump test for apparatus with a mass exceeding 7Kg	3.158Kg<7Kg	N
12.1.2	Vibration test (Amplitude 0.35 mm, Frequency range 10Hz, 55Hz, 10Hz, Sweep rate 1 octave/min)		N
12.1.3	Impact test (The apparatus is subjected to three blows from a spring-operated impact hammer, applied with an impact of 0.5J to energy point of the exterior likely to be weak).	After the test, the apparatus can withstand the dielectric strength test as specified in 10.3 and show no damage.	P
	Steel ball test	No damaged to the equipment after the impact test.	P
12.1.4	Drop test for portable apparatus having where mass < 7 kg	The equipment is not portable apparatus having.	N
12.1.5	Stress relief test	Tested at 70℃ and passed.	P
12.2	Fixing of knobs, push buttons, keys and levers	Knobs and push buttons are fastened that their use did not impair the protection against electric shock.	P
12.3	Remote controls with hazardous live parts	Remote control has no hazardous live part.	N
12.4	Drawers (pull test 50 N, 10 s)	No drawers.	N
12.5	Antenna coaxial withstand mechanical stresses	No antenna coaxial	N
	Endurance test		--
	Impact test		--
	Torque test		--
12.6	Telescoping or rod antennas construction	No such construction	N
12.6.1	Telescoping or rod antennas securement	No such construction	N
13	Clearances and creepage distances		P
13.1	General	See 13.2, 13.3 and 13.4.	P
13.2	Determination of operating voltage		P
13.3	Clearances	See below.	P
13.3.1	General	Annex and minimum clearances considered.	P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
13.3.2	Clearances in circuits conductively connected to the mains	See appended table.	P
13.3.3	Clearances in circuits not conductively connected to the mains	See appended table.	P
13.4	Creepage distances	See appended table.	P
	CTI tests	CTI rating for all materials of min. 100.	P
13.5	Printed boards	See below	P
13.5.1	The minimum clearances and creepage	The PCB complied with the pull-off and peel strength requirements of IEC 60249-2 are given in figure 10.	P
13.5.2	Type B coated printed circuit boards complying with IEC 60664-3 (basic insulation only)	Printed boards inside this apparatus are not type B coated printed boards.	N
13.6	Jointed insulation	No such construction.	N
13.7	Enclosed, enveloped or hermitically sealed parts: clearances and creepage distances to table 12	No such construction.	N
13.8	Parts filled with insulating compound, meeting the requirements of 8.8	No such parts.	N
14	Components		P
14.1	Resistors	No resistors short-circuiting or disconnected of which would cause an infringement of the requirement.	N
	a) Resistors between hazardous live parts and accessible metal parts	No such resistors.	N
	b) Resistors, other than between hazardous live parts and accessible parts	No such resistors.	N
	b) Resistors separately approved	No such resistors.	N
14.2	Capacitors and RC-units		P
	Capacitors separately approved		--
14.2.1	a) Sub-class Y2 or Y4 capacitors or RC-units withstand the tests as specified in IEC60384-14, table II		N
	b) Sub-class Y1 or Y2 capacitors or RC-units withstand the tests as specified in IEC60384-14, table II	No such components	N

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Clause	Requirement – Test	Result - Remark	Verdict
14.2.2	X-capacitors withstand test for Sub-class X1 or X2		N
14.2.3	Capacitors operating at mains frequency but not connected to the mains: tests for X2	No such capacitors provided.	N
14.2.4	Intentionally kept free for future requirements for capacitors or RC-units others than those mentioned in 14.2.1 to 14.2.3	See above.	N
14.2.5	Capacitors with volume exceeding 1750 mm³, where short-circuit current exceeds 0,2 A: compliance with IEC60384-1, 4.38 category B or better	The enclosure of ripple capacitor is made by metal.	N
	Capacitors with volume exceeding 1750 mm³, mounted closer to a potential ignition source than table 5 permits: compliance with IEC 60 384-1, 4.38 category B or better		N
	Shielded by a barrier to FV 0 or metal		N
14.3	Inductors and windings		P
14.3.1	Transformers and inductors marked with manufacturer's name and type	Trade mark of manufacturer and part number are marked on the isolated transformer. See appended table for detail.	P
	Transformers and inductors separately approved	Tested in appliance	N
14.3.2	General	See below.	P
	Isolating transformers shall comply with 14.3.3 and 14.3.4.1 or 14.3.4.2 and 14.3.5.1 or 14.3.5.2		P
	Separating transformers shall comply with 14.3.3 and 14.3.4.03and 14.3.5.1 or 14.3.5.2	No such transformer.	N
14.3.3	Constructional requirements		P
14.3.3.1	Clearances and creepage distances of all windings shall comply with the requirement of clause 13.	See appended table 13.1.	P
14.3.3.2	Designs with more than one winding The input and output windings shall be electrically separated from each other.	An insulation barrier consisting of an uncemented puched-on partition wall was used.	P
14.3.4	Separation between windings	See below.	P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
14.3.4.1	Windings of class II construction	Reinforced insulation used between hazardous live windings and windings intended to be connected to accessible conductive parts	P
14.3.4.2	Windings of class I construction	No such component.	N
14.3.4.3	Windings of separating construction	No such component.	N
14.3.5	Insulation between hazardous live parts and accessible parts	Reinforced insulation used.	P
14.3.5.1	Windings of class II construction	See 14.3.4.1	P
14.3.5.2	Windings of class I construction	No such component.	N
14.4	High voltage components	No high voltage components used.	N
	High-voltage components and assemblies: U > 4 kV (peak) separately approved		--
	Component meets category FV 1 of IEC 60 707		--
14.4.1	High voltage transformers and multipliers tested as part of the submission	See above.	N
14.4.2	High voltage assemblies and other parts tested as part of the submission		N
14.5	Protective devices		P
	Protective devices used within their ratings	See 14.5.2.1.	P
	External clearance and creepage distances appropriate for the voltage across the device when opened		N
14.5.1.1	a) Thermal cut-outs separately approved		N
	b) Thermal cut-outs tested as part of the submission		N
14.5.1.2	a) Thermal links separately approved	No thermal links used.	N
	b) Thermal links tested as part of the submission		N
14.5.1.3	Thermal devices resettable by soldering	No such components.	N
14.5.2.1	Fuse-links in the mains circuit according to IEC 60 127	No fuse-links used in the mains circuit.	N
14.5.2.2	Correct marking of fuse-links adjacent to holder		N
14.5.2.3	Not possible to connect fuses in parallel	Not used.	N
14.5.2.4	Not possible to touch hazardous live parts when replacing fuse-links without the use of a tool	See 14.5.2.1	N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
14.5.3	PTC-S thermistors comply with IEC 60 738	No PTC-S Thermistors	N
	PTC-S devices (15 W) category FV 1 or better		--
14.5.4	Circuit protectors have adequate breaking capacity and their position is correctly marked	Not such protectors used.	N
14.6	Switches		P
14.6.1	a) Separate testing to IEC 61058 including: 10 000 operations Normal pollution suitability Resistance to heat and fire level 3 And V-0 compliance with annex G, G.1.1		N
	b) Tested in the apparatus:		N
	Switch controlling > 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.3, 14.6.4 and V-0 in annex G, G.1.1		N
	Switch controlling > 0.2A with open contact voltage < 35 V (peak)/24 V dc complying with 14.6.3 and V-0 in annex G, G.1.1		N
	Switch controlling < 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.4 and V-0 in annex G, G.1.1		N
14.6.2	Switch tested to 14.6.1 b) constructed to IEC 61058-1 subclause 13.1 and has making/breaking action independent of speed of actuation		N
14.6.3	Switch tested to 14.6.1 b) compliant with IEC 61058-1 subclause 16.2.2 d) and m) not attaining excessive temperatures in use		N
14.6.4	Switch tested to 14.6.1 b) has adequate dielectric strength		N
14.6.5	Mains switch controlling mains socket outlets additional tests to IEC 60058-1		N
	Socket outlet current marking correct		N
14.7	Safety interlocks	No safety interlocks used.	N
	Safety interlocks to 2.8 of IEC 60 950		N
14.8	Voltage setting devices	Apparatus is designed for rated rating, no voltage setting device used.	N
	Voltage setting device not likely to be changed accidentally		N
14.9	Motors		N
14.9.1	Endurance test on motors		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Motor start test		N
	Dielectric strength test		N
14.9.2	Not adversely affected by oil or grease etc.		N
14.9.3	Protection against moving parts		N
14.9.4	Motors with phase-shifting capacitors, three-phase motors and series motors meet Cl. B.8, B.9 and B.10 of IEC 60 950, Annex B		N
14.10	Batteries	No battery used.	N
14.10.1	Batteries mounted with no risk of accumulation of flammable gases		N
14.10.2	No possibility of recharging non-rechargeable batteries		N
14.10.3	Recharging currents and times within manufacturers limits		N
	Lithium batteries discharge and reverse currents within the manufacturers limits		N
14.10.4	Battery mould stress relief		N
14.10.5	Battery drop test		N
14.11	Optocouplers	No optocouplers used.	N
	Optocouplers comply with Cl. 8		N
	Internal and external dimensions to 13.1.1		N
14.12	Surge suppression varistors	No such component	N
	Comply with IEC 61051-2		N
	Not connected between mains and accessible parts except for earthed parts of permanently connected apparatus		N
	Complies with the current pulse, fire hazard and thermal stress requirements of 14.12		N
15	Terminals		P
15.1.1	Mains plug, appliance inlet, interconnection couplers and mains socket-outlet meet the appropriate standard	The plug and cord comply with the appropriate component standard. No mains supply of this unit to other equipment.	P
15.1.2	Connectors for antenna, earth, audio, video or data	See below.	P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	No risk of insertion in mains socket-outlets	No mains socket-outlets provided.	N
	No risk of insertion into audio or video: outlets marked with the symbol of 5.2	See sub-clause 5.2 for detail.	N
15.1.3	Output terminals of AC adaptors or similar devices not compatible with household mains socket-outlets	This unit is not AC adaptor or similar devices.	N
15.2	Provision for protective earthing		P
	Accessible conductive parts of Class I equipment reliably connected to earth terminal, within equipment		P
	Class I supply equipment with non-hazardous live output voltage: output circuit not connected to earth		N
	Protective earth conductors correctly coloured		P
	Equipment with non-detachable mains cord provided with separate protective earth terminal near mains input		N
	Protective earth terminal resistant to corrosion		P
	Earth resistance ≤0,1		P
15.3	Terminals for external flexible cords and for permanent connection to the mains supply	Apparatus is not designed for permanent connection.	N
15.3.1	Adequate terminals for connection of permanent wiring		N
15.3.2	Reliable connection of non-detachable cords		N
	not soldered to conductors of a printed circuit board		N
	adequate clearances and creepage distances between connections should a wire break away		N
	wire secured by additional means to the conductor		N
15.3.3	Screws and nuts clamping conductors have adequate threads: ISO 261, ISO 262 or similar		N
15.3.4	Soldered conductors wrapped around terminal prior to soldering or held in place by additional means		N
	Clamping of conductor and insulation if not soldered or held by screws		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
15.3.5	Terminals allow connection of appropriate cross-sectional area of conductors, for the rated current of the equipment		N
15.3.6	Terminals to 15.3.3 have sizes required by Table 8		N
15.3.7	Terminals clamp conductors between metal and have adequate pressure		N
	Terminals designed to avoid conductor slipping out when tightened or loosened		N
	Terminals adequately fixed to avoid loosening when the clamping is tightened or loosened and stress on internal wiring is avoided		N
15.3.8	Terminals carrying a current more than 0,2 A: contact pressure not transmitted by insulating material except ceramic		N
15.3.9	Termination of non-detachable cords: wires terminated near to each other		N
15.4	Devices forming a part of the mains plug		N
15.4.1	No undue strain on mains socket-outlets		N
15.4.2	Device complies with standard for dimensions of mains plugs		N
15.4.3	Device has adequate mechanical strength (tests a,b,c)		N
16	External flexible cords		P
16.1	Mains cords sheathed type, complying with IEC 60 227 for PVC or IEC 60 245 for synthetic rubber cords		P
	Non-detachable cords for Class I have green/yellow core for protective earth		P
16.2	Mains cords conductors have adequate cross-sectional area for rated current consumption of the equipment		P
16.3	a) Flexible cords not complying with 16.1, used for interconnections between separate units of equipment used in combination and carrying hazardous live voltages, have adequate dielectric strength		N
	b) Flexible cords not complying with 16.1, withstand bending and mechanical stress (3.2 of IEC 60 227-2)		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
16.4	Flexible cords used for connection between equipment have adequate cross-sectional areas to avoid temperature rise under normal and fault conditions		N
16.5	Adequate strain relief on external flexible cords		P
	Not possible to push cord back into equipment		P
	Strain relief device unlikely to damage flexible cord		P
	For mains cords of Class I equipment, hazardous live conductors become taut before earth conductor		P
16.6	Apertures for external flexible cord: no risk of damage to the cord during assembly or movement in use		N
16.7	Transportable musical instruments andGuitar amplifiers fitted with detachable cord set with appliance inlet to IEC 60 320-1		N
	Transportable musical instruments andGuitar amplifiers fitted with detachable cord sets or with means of stowage to protect the cord		N
17	Electrical connections and mechanical fixings		P
17.1	Torque test to Table 12		P
	screws into metal: 5 times		N
	screws into non-metallic material: 10 times		P
17.2	Correct introduction into female threads in non-metallic material		P
17.3	Cover fixing screws: captive		N
	Non-captive fixing screws: 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 plastic other than ceramic for connections carrying a current > 0,2 A		P
17.6	Stranded conductors of flexible supply cords carrying a current > 0,2 A with screw terminals not consolidated by solder	No stranded conductors connected to screw terminals.	N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
17.7	Cover fixing devices other than screws have adequate strength and their positioning is unambiguous	No cover fixing devices.	N
17.8	Fixing devices for detachable legs or stands provided	No detachable legs of stands.	N
17.9	Internal pluggable connections, affecting safety, unlikely to become disconnected	Adequate connectors withstand 2N pull test, no loosening.	P
18	Mechanical strength of picture tubes and protection against the effects of implosion		N
18.1	Picture tube separately approved	No picture tube	N
	Picture tubes > 16 cm intrinsically protected		N
	Non-intrinsically protected tubes > 16 cm used with protective screen		N
18.2	Intrinsically protected tubes: tests on 12 samples		N
18.2.1	Samples subject to ageing: 6		N
18.2.2	Samples subject to implosion test: 6		N
18.2.3	Samples subject to mechanical strength test (steel ball): 6		N
18.3	Non-intrinsically protected tubes tested to 18.3		N
19	Stability and mechanical hazards		P
	Mass of the equipment exceeding 7 kg		N
19.1	Test on a plane, inclined at 10°C to the horizontal		N
19.2	100 N applied vertically downwards		N
19.3	13% of the weight of the apparatus for 100 N applied horizontal force.		N
19.4	Smooth edges and corners	Edge and comers are smooth.	P
19.5	Glass surfaces with an area exceeding 0,1 m² or maximum dimension > 450 mm, pass the test of 19.5.1	No glass surfaces.	N
19.5.1	Fragmentation test		N
19.6	Wall or ceiling mountings adequate	The unit not intended for wall or ceiling mounting.	N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
20	Resistance to fire		P
20.1	Electrical components and mechanical parts		P
	a) Exemption for components contained in an enclosure of material FV 0 to IEC 60 707 with openings not exceeding 1 mm in width		P
	b) Exemption for small components as defined in 20.1	All components are smaller than 1750 mm^3 except transformer and mounted on PCB.	P
20.1.1	Electrical components meet the requirements of 14.2.5, 14.4, 14.5.3, 14.6.6 or 20.1.4	Compliance with 20.1.4	P
20.1.2	Insulation of internal wiring working at voltages > 4 kV or leaving an internal fire enclosure, not contributing to the spread of fire		N
20.1.3	Material of printed circuit boards on which the available power exceeds 15 W at a voltage between 50 V and 400 V (peak) a.c. or d.c. meets FV 1 or better to IEC 60 707, unless used in a fire enclosure	V-0 PCB used, also see 20.1	P
	Material of printed circuit boards on which the available power exceeds 15 W at a voltage 400V (peak) a.c. or d.c. meets FV 0 to IEC 60 707		N
20.1.4	Components and parts not covered by 20.1.1, 20.1.2 and 20.1.3 (other than fire enclosures) mounted nearer to a potential ignition source than the distances in Table 13 comply with the relevant flammability category in Table 13	Transformer materials used are at least V-2 considered, and transformer is separated from plastic enclosure by required distance, also see table 14	P
	Components and parts as above but shielded from a potential ignition source, with the barrier area in accordance with Table 13 and fig. 13		N
20.2	Fire enclosure		N
20.2.1	Potential ignition sources with open circuit voltage > 4 kV (peak) a.c. or d.c. contained in a fire enclosure to FV 1	No voltage > 4 kV	N
20.2.2	Internal fire enclosures with openings not exceeding 1 mm in width and with openings for wires completely filled	No internal fire enclosure	N
20.2.3	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		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
A.5.1	Marked with IPX4 (IEC 60 529), 5.4.1 a) does not apply		N
A.10.2.1	Enclosure provides protection against splashing water		N
A.10.2.2	Humidity treatment carried out for 7 days		N
B	ANNEX B: APPARATUS TO BE CONNECTED TO THE TEL ECOMMUNICATION NETWORKS		N
B.5.4.1	Where the separation of TNV circuits from other circuits relies on protective earthing the instructions make it clear that protective earthing is essential		N
B.8.1	TNV circuits separated from the mains circuit and from hazardous live parts by either		N
	double or reinforced insulation		N
	basic insulation with earthed protective screening		N
B.8.2	TNV circuits separated from circuits other than those in B.8.1 and from accessible conductive parts by basic insulation meeting the requirements for clearances and creepage distances for the voltages concerned		N
B.9.1.1	TNV circuit terminals contacts which cannot be touched by probe B.1, exempt from the requirements inaccessible terminal contacts in 9.1.1		N
B.10.1	Insulation between TNV terminals and antenna terminals (including interconnection terminals which may be connected to equipment with antenna terminals) withstands the 50 discharges of 10.1		N
B.14.12	Surge suppressors between TNV circuits and other parts of the equipment have breakdown voltage at least 1,8 times the mains voltage		N
C	ANNEX C: BAND-PASS FILTER FOR WIDE-BAND NOISE MEASUREMENT		N
D	ANNEX D: MEASURING NETWORK FOR TOUCH CURRENTS (see 9.1.1.1)		N
	Measuring instrument	As in figure D.1 used.	N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
E	ANNEX E: MEASURENENT OF CLEARANCES AND CREEPAGE DISTANCES (see 13)		N
F	ANNEX F: TABLE OF ELECTROCHEMICAL POTENTIALS		N
G	ANNEX G: FLAMMABILITY TEST METHODS		N
H	ANNEX H: INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		N
H.1	Intentionally kept free		N
H.2	Type tests		N
H.2.1	Dielectric strength		N
H.2.2	Flexibility and adherence		N
H.2.3	Heat shock		N
H.2.4	Retention of dielectric strength after bending		N
H.3	Testing during manufacture		N
H.3.1	Routine test		N
H.3.2	Sampling test		N
J	ANNEX J: ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N
J.1	Summary of the procedure of for determining minimum clearances		N
J.2	Determination of mains transient voltage		N
J.3	Determination of telecommunication network transient voltage		N
J.4	Determination of required withstand voltage		N
J.5	Measurement of transient levels		N
J.6	Determination of minimum clearances		N
K	ANNEX K: IMPULSE TEST GENERATORS		N
M	ANNEX M: EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N
M.1	Reduced clearances (see 13.3)		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
N	ANNEX M: ROUTINE TESTS		N
N.1	Tests during the production process		N
N.1.1	Correct polarity and connection of components or subassemblies		N
N.1.2	Correct values of components		N
N.1.3	Protective earthing connection of screens and metal barriers		N
N.1.4	Correct position of internal wiring		N
N.1.5	Correct fit of internal plug connections		N
N.1.6	Safety relevant markings inside the apparatus		N
N.1.7	Correct mounting of mechanical parts		N
N.2	Tests at the end of the production process		N
N.2.1	Dielectric strength test		N
N.2.2	Protective earthing connection		N
N.2.3	Safety relevant marking on the outside of the apparatus		N
ZA	ANNEX ZA: OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD WITH THE REFERENCES OF THE RELEVANT EURPEAN PUBLICATIONS		N
ZB	ANNEX ZB: SPECIAL NATIONAL CONDITIONS		N
2.6.1	DK: 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		N
13.3.1	NO: In Norway, 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 230V in case of a single earth fault		N
15.1.1	DK: mains cord for single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to Heavy Current Regulations Section 107-2-D1		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	DK: Class I equipment with socket-outlets with earthing contact, or which are intended to be used in locations where protection against indirect contact is required shall be provided with a plug in compliance with Standard Sheet DK 2-1a		N
	DK: socket-outlets for providing power to Class II equipment with a rated current of 2,5 A shall have dimensions according to the drawing on page 131 of EN 60 065:98 other dimensions shall be to IEC 60 083 Standard Sheet C 1a for portable socket-outlets		N
	DK: other dimensions shall be in compliance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DKA 1-3 for portable socket-outlets shutters are not required		N
	DK: mains socket-outlets with earthing contact shall comply with Heavy Current Regulations Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a		N
	IE: equipment fitted with a flexible cable or cord provided with a 13 A plug in accordance with Statutory Instrument 525:97, 13 A plugs and Conversion Adapters for Domestic Use Regulations: 1997		N
	NO: mains socket-outlets on Class II equipment meet CEE Publication 7 with the following amendments:		N
	dimensions 2,5 A, 250 V two-pole socket-outlets for electronic apparatus shall comply with the enclosed Standard Sheet I		N
	mechanical strength 2,5 A, 250 V socket-outlets for CLASS II electronic apparatus tested as specified in EN 60 065, 12.1.3		N
	protecting rim also tested		N
	United kingdom: equipment fitted with a flexible cable or cord provided with a 13A BS 1363 plug as in Statutory Instrument 1768:94		N
J.2	NO: due to the IT power distribution system used, the a.c. MAINS supply voltage is considered to equal to the line-to-line voltage, and will remain 230V in case of single earth fault		N
ZC	ANNEX ZC: A-DEVIATIONS		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
5	DE: additional markings required in German language:		N
	cathode ray tubes with an accelerating voltage between 20 kV and 30 kV (marking on the tube)		N
	TV receivers whose picture tube has an accelerating voltage between 20 kV and 30 kV		N
	TV receivers whose picture tube has an accelerating voltage greater than 30 kV		N
	TV receivers whose picture tube has an accelerating voltage less than 20 kV		N
5.1	IT: additional markings on the outside of the TV receiver in Italian language		N
	IT: user instructions in Italian language including a conformity declaration		N
	IT: certification number on the back cover		N
14	Sweden: switches containing mercury such as thermostats, relays and level controllers are no allowed		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

7.1	**TABLE: temperature rise measurements**		P
	Power consumption in the OFF/Stand-by	--	--
	Position of the functional switch (W) .....:	--	—
Operating conditions			
The equipment operated at screen with maximum brightness, maximum contrast and maximum volume of Guitar amplifiers with 1KHz signal.			
Un (V)	In (A)	Pn (W)	Pout (W)
maximum non-clipped output			
207/50Hz	0.025	3.89	--
230/50Hz	0.031	4.38	--
253/50Hz	0.042	5.12	--
1/8 of maximum non-clipped output			
207/50Hz	0.014	2.27	--
230/50Hz	0.016	2.74	--
253/50Hz	0.020	3.30	--
Note: Temperature rise is test on 1/8 of 100% or max available non-clipped output power			
	LoudGuitar amplifier impedance (Ω) .....:	8Ω×1	—
	Several loudGuitar amplifier systems	--	--
	Marking of loudGuitar amplifier terminals	--	--
Monitored point:		dT (K)	Limit dT (K)
Test voltage: 207Vac, 60Hz (Test for 1/8 maximum non-clipped output YPbPr mode)			

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

AC supply cord	14.8	80
Internal wire	33.8	60
E-capacitor	41.9	70
Switch	2.2	50
Knob	1.9	50
PCB near HS1	33.8	95
T1 coil	57.1	95
T1 core	52.8	95
Primary wire of T1	48.6	70
Secondary wire of T1	46.2	70
Enclosure	11.6	60
Ambient (°C) during test	25.4°C	--

Comments:
The temperatures were measured under worst case normal mode defined in 4.2.1
All values for dT(K) are re-calculated from ambient temperature respectively.
The maximum ambient temperature is defined as 35°C.
Winding components:
- polyvinyl-formaldehyde or polyurethane resins → dTmax = 85K -10K = 75K
Components with:
- max. absolute temp. of 130°C → dTmax = (130-35)K = 95K
- max. absolute temp. of 105°C → dTmax = (105-35)K = 70K
- max. absolute temp. of 100°C → dTmax = (100-35)K = 65K
- max. absolute temp. of 85°C → dTmax = (85-35)K = 50K
- max. absolute temp. of 70°C → dTmax = (70-35)K = 35K
Accessible parts:
- enclosure (Plastic) → 60K

	Winding temperature rise measurements		N
	Ambient temperature t1 (°C) .....:	--	—
	Ambient temperature t2 (°C) .....:	--	—

Temperature rise dT of winding:	R_1 (Ω)	R_2 (Ω)	dT (K)	Limit dT (K)	Insulation class
--	--	--	--	--	--

Table 7.2	**Softening temperature of thermoplastics**		**N**
Temperature T of part	T – normal conditions (℃)	T – fault conditions (℃)	T softening (℃)

Note:

The test have been performed on each bobbin at a temperature of the penetrations are as following:
Transformer: < 0.1mm

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

Table 9.1.1	**Electric shock hazard under normal condition**				P
Measured between:	Uoc(V)	U1(V)	Limit U1	U2(V)	Limit U2
Line to Enclosure	--	1.11	3.5	0.10	0.35
Neutral to Enclosure	--	1.11	3.5	0.09	0.35
Line to all non-hazardous connectors	--	1.38	3.5	0.13	0.35
Neutral to all non-hazardous connectors	--	1.24	3.5	0.12	0.35
Note(s): Test at 253Vac, 50Hz					

Table 10.2	**Humidity treatment**		**P**
Test condition	Temperature	Relative Humidity	Duration
	30	93%	48 hours
Note: After humidity test, insulation resistance and dielectric strength specified in clause 10.3 Should be applied.			

Table 10.3	**Insulation resistance and dielectric strength**		**P**
Test points		Measured insulation	Limited insulation resistance
Between	To		
Line	Neutral	>20MΩ	2MΩ
Line & neutral	enclosure	>20MΩ	4MΩ
Transformer primary	Transformer secondary	>20MΩ	4MΩ
Transformer primary	Transformer core	>20MΩ	4MΩ
Test points		Test voltage	Results
Between	To		
Line	Neutral	1500Vac	No breakdown
Line & neutral	Enclosure	3000Vac	No breakdown
Transformer primary	Transformer secondary	3000Vac	No breakdown
Transformer primary	Transformer core	3000Vac	No breakdown

Table 11.1	**Fault Condition Tests**			**P**
Component No.	Fault	Test voltage	duration	Test result
D1	s-c	253V	1 s	Fuse opened immediately, no hazard.
Speaker	s-c	253V	15min	Unit shut down immediately, no damaged, no hazard.
Transformer	s-c	253V	1 s	Fuse opened immediately, no hazard.

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Clause	Requirement – Test	Result - Remark	Verdict

Notes :After each fault condition, dielectric strength test is conducted between mains poles and output terminals at 4240Vdc. No breakdown.
s-c: short circuit; o-c: open circuit; o-l: overload

Table 13.1	**Clearance and creepage distance measurements**					**P**
clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)
Between primary winding and secondary winding	<420	250	4	>4	5	>5
Between core and primary winding of transformer	<420	250	4	>4	5	>5

Table 14	**List of critical component**				**P**
Component	Manufacture/ Trademark	Type/Model	Value/rating	Standard	Approval/ Reference
Transformer	GUANGYUAN OF ANQIU	GY-201066	Input: 230VAC, 50Hz Output: AC11V*2 0.5A	EN 60065	Test in appliance
Pri. Winding of transformer	DONGGUAN DONGWEI MAGNET WIRE ELECTRIC MATERIAL CO LTD or equivalent	Various	130℃	UL1446	UL
Sec. Winding of transformer	GUANGDONG WELLKEY ELECTRIC MATERIAL CO LTD or equivalent	Various	130℃	UL1446	UL
Bobbin of transformer	E I DUPONT DE NEMOURS & CO INC	Various	V-0, 130℃	UL94	UL
Fuse holder	SUN ELECTRIC CO	Various	250Vac, 10A	UL 248-1 UL 248-14	UL
Fuse	SUN ELECTRIC CO	Various	T1A L250V	UL 248-1 UL 248-14	UL
Power switch	Jakson	JS-608R	10A, 250V	IEC61058-1 EN61058-1	VDE, UL
Power supply cord	Xinya Electronics Co., Ltd.	H03VVH2-F	3 x 0.75 mm2	IEC 60227-5	VDE
Internal wire	Various	UL 1617	VW-1, Min.300V, 85℃	--	UL
PCB	Various	Various	V-1 or better, min 105℃	UL94	UL

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

ANNEX A:

Photo-documentation

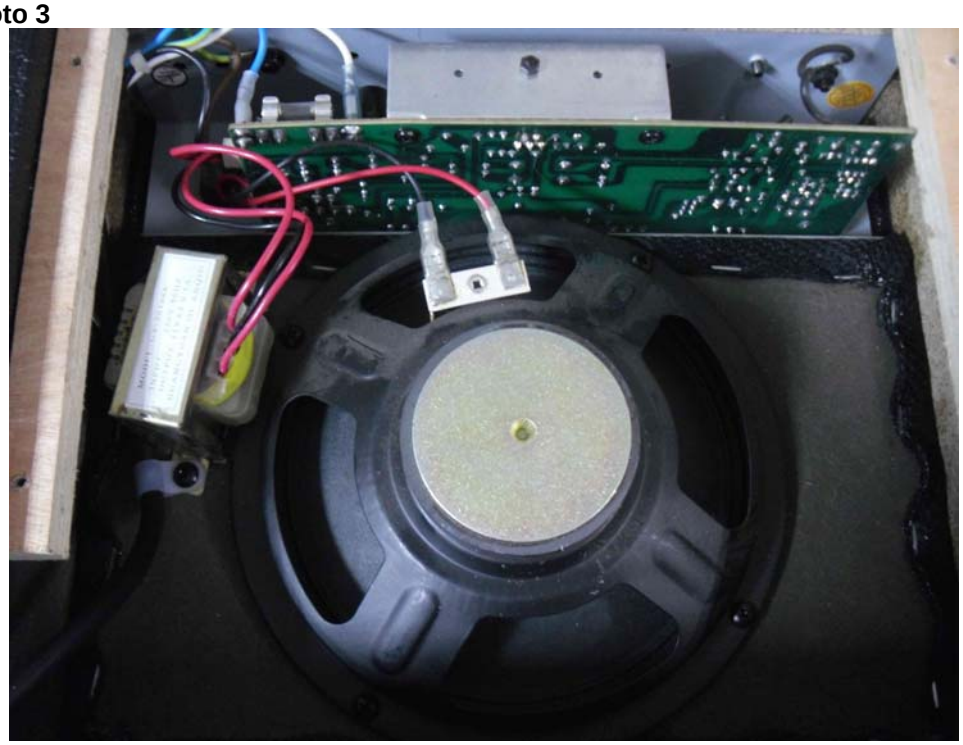
EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

EUT Photo 1

EUT Photo 2

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

EUT Photo 3



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