TEST REPORT

IEC 60950-1 / EN 60950-1 / J60950 (H16)

Information technology equipment – Safety – Part 1: General requirements

Report Reference No. ..... :	0904C198
Tested by (+ signature) ..... :	Rich Wang
Approved by (+ signature) ..... :	Steven Chou
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Contents ..... :	47 pages

Testing laboratory

Name ..... :	**Neutron Engineering Inc.**
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Applicant

Name ..... :	**Shenzhen 3NOD Electronics Co., Ltd.**
Address ..... :	3NOD High-Tech Park 15# Zhongfu Road Tangxiayong Village Industrial Zone Songgang Town, Baoan District, Shen Zhen City China

Manufacturer

Name ..... :	**Logitech, Inc**
Address ..... :	1499 SE Tech Centre Place, Suite 350, Vancouver, WA 98683, USA

Test specification

Standard ..... :	IEC 60950-1: 2005 (2nd Edition)
	EN 60950-1: 2006/ A11: 2009
	J60950 (H16)
Test procedure ..... :	Service of PSE Marking
Procedure deviation ..... :	N.A.
Non-standard test method..... :	N.A.

Test Report Form/blank test report

Test Report Form No..... :	60950-1C
Master TRF..... :	Dated 2007-06

Testing

Date of receipt of test item. ..... :	2009-05-01
Date(s) of performance of test..... :	2009-05-01 to 2009-05-20

Test equipment

Description..... :	Speaker System Z323

Trademark .....:	Logicool
Model and/or type reference .....:	S-00075A
Rating(s)……..……:	100-240Vac, 50/60Hz, 500mA

Particulars: test item vs. test requirements		
Equipment mobility	:	Movable equipment.
Operating condition	:	Continuous
Mains supply tolerance (%)……...:		+10% and -10%
Tested for IT power systems	:	--
IT testing, phase-phase voltage (V)	:	--
Class of equipment.....	:	Class II
Mass of equipment (kg).....	:	Mass of Subwoofer: 1.87 kg Mass of Right speaker: 0.6 kg Mass of Left speaker: 0.45 kg
Protection against ingress of water	:	IPX0

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)
Test case has not been checked	:	—

General remarks

This test 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 tested.

"(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 point is used as the decimal separator.

Comments:

- The equipment under tests is Class II Speaker System Z323 with build-in switching mode power supply for using in scope of ITE.
- The equipment model S-00075A is equiped with non-detachable power supply cord.
- The enclosure of speaker system is secured by screws.
- The maximum operating temperature is defined as 45°C.
- The test samples are pre-production without serial numbers.

Copy of marking plate:

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
1	GENERAL		**P**
1.5	Components		**P**
1.5.1	General	See below.	**P**
	Comply with IEC 60950-1 or relevant component standard	(see appended table 1.5.1)	**P**
1.5.2	Evaluation and testing of components	Components certified to IEC standards and/or their harmonized standards, are used within their ratings and are checked for correct application.	**P**
1.5.3	Thermal controls		**N**
1.5.4	Transformers	Transformers used are suitable for their intended applications and comply with relevant parts of this standard relevant parts of this standard and particularly Annex C.	**P**
1.5.5	Interconnecting cables	The interconnecting cables contain only SELV.	**P**
1.5.6	Capacitors bridging insulation	CY1 and CY2 capacitors used according to IEC 60384-14:1993. (see appended table 1.5.1)	**P**
1.5.7	Resistors bridging insulation	See below.	**P**
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	No bleeder resistor between live and neutral located before fuse.	**P**
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	No resistors bridging double or reinforced insulation.	**N**
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable	No such resistors.	**N**
1.5.8	Components in equipment for IT power systems	No such components.	**N**
1.5.9	Surge suppressors	See below.	**P**
1.5.9.1	General	Certified VDR (MOV1) connected between line and neutral, refer to appended table 1.5.1 and Annex Q.	**P**
1.5.9.2	Protection of VDRs	Fuse FS1 used as protection of varistor which located after the fuse.	**P**
1.5.9.3	Bridging of functional insulation by a VDR	Refer to sub-clause 1.5.9.	**P**
1.5.9.4	Bridging of basic insulation by a VDR	No such VDR.	**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR	No such VDR.	**N**
1.6	Power interface		**P**
1.6.1	AC power distribution systems ..... :	TN power system.	**P**
1.6.2	Input current	The steady state input current of the equipment did not exceed the rated current by more than 10% under normal load condition. (see appended table 1.6.2)	**P**
1.6.3	Voltage limit of hand-held equipment	The equipment is not hand-held.	**N**
1.6.4	Neutral conductor	The neutral conductor insulated from earth and from the body throughout the equipment as if it were a line conductor.	**P**
1.7	Marking and instructions		**P**
1.7.1	Power rating	The required marking is located on the outside surface of the equipment.	**P**
	Rated voltage(s) or voltage range(s) (V) ..... :	100-240Vac	**P**
	Symbol for nature of supply, for d.c. only ..... :	The equipment is for a.c. supply.	**N**
	Rated frequency or frequency range (Hz) ..... :	50/60Hz	**P**
	Rated current (mA or A) ..... :	500mA	**P**
	Manufacturer's name or trade-mark or identification mark ..... :	Logitech, Inc Logicool	**P**
	Model identification or type reference ..... :	S-00075A	**P**
	Symbol for Class II equipment only ..... :	Class II symbol (IEC 60417-1, symbol No. 5172) is applied to the label.	**P**
	Other markings and symbols ..... :	Additional symbol or marking does not give rise to misunderstanding.	**P**
1.7.2	Safety instructions and marking	User's manual provided.	**P**
1.7.2.1	General	Instructions are available.	**P**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
1.7.2.2	Disconnect devices	Plug on power will be easily accessible from socket-outlet.	**P**
1.7.2.3	Overcurrent protective device	Pluggable equipment Type A.	**N**
1.7.2.4	IT power distribution systems		**N**
1.7.2.5	Operator access with a tool	All areas containing hazard are inaccessible to the operator.	**N**
1.7.2.6	Ozone	The equipment does not produce Ozone.	**N**
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	**N**
1.7.4	Supply voltage adjustment ..... :	No voltage selector.	**N**
	Methods and means of adjustment; reference to installation instructions .....:		**N**
1.7.5	Power outlets on the equipment ..... :	No standard power outlet.	**N**
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) ..... :	Build-in fuses (FS1:T2AL / 250V) used, not located in operator access areas.	**P**
1.7.7	Wiring terminals	See below.	**N**
1.7.7.1	Protective earthing and bonding terminals	Class II equipment.	**N**
1.7.7.2	Terminal for a.c. mains supply conductors	The equipment is not permanently connected or provided with a non detachable power supply cord.	**N**
1.7.7.3	Terminals for d.c. mains supply conductors	The equipment is not supplied from d.c mains.	**N**
1.7.8	Controls and indicators	See below.	**N**
1.7.8.1	Identification, location and marking ..... :	No switch or safety involved indicators provided.	**N**
1.7.8.2	Colours ..... :	No safety relevant color for controls.	**N**
1.7.8.3	Symbols according to IEC 60417 ..... :	No symbols used.	**N**
1.7.8.4	Markings using figures ..... :	No figures used.	**N**
1.7.9	Isolation of multiple power sources ..... :	Only one connection supplying hazardous voltages and energy levels to the equipment.	**N**
1.7.10	Thermostats and other regulating devices ..... :	No thermostats or other regulating devices.	**N**
1.7.11	Durability	The marking plate has no curling and is not able to be removed easily.	**P**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
1.7.12	Removable parts	No removable part.	**N**
1.7.13	Replaceable batteries .....:	No battery.	**N**
	Language(s) .....:		**N**
1.7.14	Equipment for restricted access locations .....:	Equipment not intended for installation in a RESTRICTED ACCESS LOCATION.	**N**
2	PROTECTION FROM HAZARDS		**P**
2.1	Protection from electric shock and energy hazards		**P**
2.1.1	Protection in operator access areas	Only SELV signal interface accessible by operator.	**P**
2.1.1.1	Access to energized parts	See below.	**P**
	Test by inspection .....:	No access with test finger and test pin to any energized parts or hazardous voltage.	**P**
	Test with test finger (Figure 2A) .....:	No access to any energized parts or hazardous voltage with test finger.	**P**
	Test with test pin (Figure 2B) .....:	No access to any energized parts or hazardous voltage with test pin.	**P**
	Test with test probe (Figure 2C) .....:		**N**
2.1.1.2	Battery compartments		**N**
2.1.1.3	Access to ELV wiring		**N**
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area.	**N**
2.1.1.5	Energy hazards .....:	The energy does not exceed 240VA between any two points of accessible parts.	**P**
2.1.1.6	Manual controls	No Manual control.	**N**
2.1.1.7	Discharge of capacitors in equipment	Nominal capacitance not exceed 0.1μF	**N**
	Measured voltage (V); time-constant (s) .....:		—
2.1.1.8	Energy hazards – d.c. mains supply	No direct connected to d.c. mains supply.	**N**
	a) Capacitor connected to the d.c. mains supply . :		**N**
	b) Internal battery connected to the d.c. mains supply .....:		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
2.1.1.9	Audio amplifiers .....:	Equipment complied with 2.1.1.1.	**P**
2.1.2	Protection in service access areas	No maintenance works in operation mode necessary.	**N**
2.1.3	Protection in restricted access locations	The unit is not intended to be used in restricted locations.	**N**
2.2	SELV circuits		**P**
2.2.1	General requirements	See below.	**P**
2.2.2	Voltages under normal conditions (V) ..... :	42.4V peak or 60V d.c. are not exceeded in SELV circuit under normal operation. (See appended table 2.2.2)	**P**
2.2.3	Voltages under fault conditions (V)..... :	Single fault did not cause excessive voltage in accessible SELV circuits. Limits of 71V peak and 120V d.c. were not exceeded within 0.2 sec. and limits 42.4V peak and 60V d.c. were not exceeded for longer than 0.2 sec. (See appended table 2.2.3)	**P**
2.2.4	Connection of SELV circuits to other circuits..... :	See 2.2.2 and 2.2.3.	**P**
2.3	TNV circuits		**N**
2.3.1	Limits	No TNV circuit.	**N**
	Type of TNV circuits ..... :		—
2.3.2	Separation from other circuits and from accessible parts		**N**
2.3.2.1	General requirements		**N**
2.3.2.2	Protection by basic insulation		**N**
2.3.2.3	Protection by earthing		**N**
2.3.2.4	Protection by other constructions .....:		**N**
2.3.3	Separation from hazardous voltages		**N**
	Insulation employed..... :		—
2.3.4	Connection of TNV circuits to other circuits		**N**
	Insulation employed..... :		—
2.3.5	Test for operating voltages generated externally		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
2.4	Limited current circuits		**P**
2.4.1	General requirements	Limits are not exceeded.	**P**
2.4.2	Limit values	(See appended table 2.4.2)	**P**
	Frequency (Hz) ..... :	(See appended table 2.4.2)	—
	Measured current (mA)..... :	(See appended table 2.4.2)	—
	Measured voltage (V) ..... :	(See appended table 2.4.2)	—
	Measured capacitance (nF or µF) ..... :		—
2.4.3	Connection of limited current circuits to other circuits	Only intended to be connected with SELV circuits.	**P**
2.5	Limited power sources		**P**
	a) Inherently limited output		**N**
	b) Impedance limited output		**N**
	c) Regulating network limited output under normal operating and single fault condition	Output for left and right speaker complied with limited power source.	**P**
	d) Overcurrent protective device limited output		**N**
	Max. output voltage (V), max. output current (A), max. apparent power (VA) .....:	(See appended table 2.5)	—
	Current rating of overcurrent protective device (A)		—
2.6	Provisions for earthing and bonding		**N**
2.6.1	Protective earthing	Class II equipment.	**N**
2.6.2	Functional earthing		**N**
2.6.3	Protective earthing and protective bonding conductors		**N**
2.6.3.1	General		**N**
2.6.3.2	Size of protective earthing conductors		**N**
	Rated current (A), cross-sectional area (mm^2), AWG..... :		—
2.6.3.3	Size of protective bonding conductors		**N**
	Rated current (A), cross-sectional area (mm^2), AWG..... :		—
	Protective current rating (A), cross-sectional area (mm^2), AWG .....:		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min) ..... :		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
2.6.3.5	Colour of insulation ..... :		**N**
2.6.4	Terminals		**N**
2.6.4.1	General		**N**
2.6.4.2	Protective earthing and bonding terminals		**N**
	Rated current (A), type and nominal thread diameter (mm)..... :		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		**N**
2.6.5	Integrity of protective earthing		—
2.6.5.1	Interconnection of equipment		**N**
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		**N**
2.6.5.3	Disconnection of protective earth		**N**
2.6.5.4	Parts that can be removed by an operator		**N**
2.6.5.5	Parts removed during servicing		**N**
2.6.5.6	Corrosion resistance		**N**
2.6.5.7	Screws for protective bonding		**N**
2.6.5.8	Reliance on telecommunication network or cable distribution system		**N**
2.7	Overcurrent and earth fault protection in primary circuits		**P**
2.7.1	Basic requirements	Protective device is integrated in the equipment, see also Sub-clause 5.3.	**P**
	Instructions when protection relies on building installation	Not required for pluggable equipment type A.	**N**
2.7.2	Faults not simulated in 5.3.7	The protection devices are well dimensioned and mounted.	**P**
2.7.3	Short-circuit backup protection	Pluggable equipment type A, the building installation is considered as providing short-circuit backup protection.	**P**
2.7.4	Number and location of protective devices ..... :	Overcurrent protection by one built-in fuse.	**P**
2.7.5	Protection by several devices	Only one protective device.	**N**
2.7.6	Warning to service personnel ..... :	No fuse used in the neutral phase.	**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
2.8	Safety interlocks		**N**
2.8.1	General principles	No such device.	**N**
2.8.2	Protection requirements		**N**
2.8.3	Inadvertent reactivation		**N**
2.8.4	Fail-safe operation		**N**
2.8.5	Moving parts		**N**
2.8.6	Overriding		**N**
2.8.7	Switches and relays		**N**
2.8.7.1	Contact gaps (mm) .....:		**N**
2.8.7.2	Overload test		**N**
2.8.7.3	Endurance test		**N**
2.8.7.4	Electric strength test (V)		**N**
2.8.8	Mechanical actuators		**N**
2.9	Electrical insulation		**P**
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic material is not used.	**P**
2.9.2	Humidity conditioning	Humidity treatment performed for 120 h.	**P**
	Relative humidity (%), temperature (°C) .....:	93% R.H., 40°C	—
2.9.3	Grade of insulation	The adequate levels of safety insulation is provided and maintained to comply with the requirements of this standard.	**P**
2.9.4	Separation from hazardous voltages	See below.	**P**
	Method(s) used ..... :	Method 1.	—
2.10	Clearances, creepage distances and distances through insulation		**P**
2.10.1	General	See below.	**P**
2.10.1.1	Frequency .....:	Considered.	**P**
2.10.1.2	Pollution degrees .....:	Pollution Degree 2.	**P**
2.10.1.3	Reduced values for functional insulation	The functional insulation complied with clause 5.3.4.	**P**
2.10.1.4	Intervening unconnected conductive parts	Considered.	**P**
2.10.1.5	Insulation with varying dimensions	No such transfomer used.	**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
2.10.1.6	Special separation requirements	Special separation is not used.	**N**
2.10.1.7	Insulation in circuits generating starting pulses	No insulation in circuit generating starting pulses.	**N**
2.10.2	Determination of working voltage	See below.	**P**
2.10.2.1	General	The rms and the peak voltage of the appliance is mains voltage 240V. The unit was connected to a 240V TN power system.	**P**
2.10.2.2	RMS working voltage	(See appended table 2.10.2)	**P**
2.10.2.3	Peak working voltage	(See appended table 2.10.2)	**P**
2.10.3	Clearances	See below	**P**
2.10.3.1	General	Alternate method of Annex G was not considered.	**P**
2.10.3.2	Mains transient voltages	Measurement not relevant.	**N**
	a) AC mains supply .....:		**N**
	b) Earthed d.c. mains supplies .....:		**N**
	c) Unearthed d.c. mains supplies .....:		**N**
	d) Battery operation .....:		**N**
2.10.3.3	Clearances in primary circuits	(See appended table 2.10.3 and 2.10.4).	**P**
2.10.3.4	Clearances in secondary circuits	Only the functional insulation in secondary circuits complied with clause 5.3.4.	**P**
2.10.3.5	Clearances in circuits having starting pulses	The circuit will not generating starting pulse.	**N**
2.10.3.6	Transients from a.c. mains supply .....:	Considered.	**P**
2.10.3.7	Transients from d.c. mains supply .....:	Not connected to d.c mains supply.	**N**
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....:	Not connected to telecommunication networks and cable distribution system.	**N**
2.10.3.9	Measurement of transient voltage levels	Measurement not relevant.	**N**
	a) Transients from a mains supply		**N**
	For an a.c. mains supply .....:		**N**
	For a d.c. mains supply .....:		**N**
	b) Transients from a telecommunication network :		**N**
2.10.4	Creepage distances	See below.	**P**
2.10.4.1	General	Considered.	**P**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
2.10.4.2	Material group and comparative tracking index	Material group IIIb is assumed to be used.	**P**
	CTI tests .....:	CTI rating for all materials of min. 100.	—
2.10.4.3	Minimum creepage distances	(See appended table 2.10.3 and 2.10.4).	**P**
2.10.5	Solid insulation	See below.	**P**
2.10.5.1	General	Considered.	**P**
2.10.5.2	Distances through insulation	(See appended table 2.10.5)	**P**
2.10.5.3	Insulating compound as solid insulation	No such construction used.	**P**
2.10.5.4	Semiconductor devices	Optocoupler is certified component. (See appended table 1.5.1)	**P**
2.10.5.5.	Cemented joints	Not used.	**N**
2.10.5.6	Thin sheet material – General	The thin sheet materials of polyester tape used in and around transformer TR1.	**P**
2.10.5.7	Separable thin sheet material	Not used.	**N**
	Number of layers (pcs) .....:		—
2.10.5.8	Non-separable thin sheet material	Not used.	**N**
2.10.5.9	Thin sheet material – standard test procedure	Not used.	**N**
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure	Not used.	**N**
	Electric strength test		—
2.10.5.11	Insulation in wound components		**N**
2.10.5.12	Wire in wound components		**N**
	Working voltage ..... .:		**N**
	a) Basic insulation not under stress .....:		**N**
	b) Basic, supplementary, reinforced insulation ....:		**N**
	c) Compliance with Annex U ..... :		**N**
	Two wires in contact inside wound component; angle between 45° and 90° .....:		**N**
2.10.5.13	Wire with solvent-based enamel in wound components		**N**
	Electric strength test		—
	Routine test		**N**
2.10.5.14	Additional insulation in wound components	No additional insulation used.	**N**
	Working voltage .....:		**N**
	- Basic insulation not under stress ..... .:		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
	- Supplementary, reinforced insulation .....:		**N**
2.10.6	Construction of printed boards		**N**
2.10.6.1	Uncoated printed boards		**N**
2.10.6.2	Coated printed boards		**N**
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		**N**
2.10.6.4	Insulation between conductors on different layers of a printed board		**N**
	Distance through insulation		**N**
	Number of insulation layers (pcs) .....:		**N**
2.10.7	Component external terminations		**N**
2.10.8	Tests on coated printed boards and coated components	No special coating in order to reduce distance.	**N**
2.10.8.1	Sample preparation and preliminary inspection		**N**
2.10.8.2	Thermal conditioning		**N**
2.10.8.3	Electric strength test		**N**
2.10.8.4	Abrasion resistance test		**N**
2.10.9	Thermal cycling	No special insulation in order to reduce distance.	**N**
2.10.10	Test for Pollution Degree 1 environment and insulating compound		**N**
2.10.11	Tests for semiconductor devices and cemented joints		**N**
2.10.12	Enclosed and sealed parts	No hermetically sealed component.	**N**
3	WIRING, CONNECTIONS AND SUPPLY		**P**
3.1	General		**P**
3.1.1	Current rating and overcurrent protection	All internal wires are UL recognized wiring which is PVC insulated, rated VW-1, min. 80°C. Internal wiring gauge is suitable for current intended to be carried. No internal wire for primary power distribution.	**P**
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges and heatsinks which could damage the insulation and cause hazard.	**P**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
3.1.3	Securing of internal wiring	The wires are secured by soldering, solder pins and quick connect terminals so that a loosening of the terminal connection is unlikely.	**P**
3.1.4	Insulation of conductors	The insulation of the individual conductors are suitable for the application and the working voltage. For the insulation material see 3.1.1.	**P**
3.1.5	Beads and ceramic insulators	Not used.	**N**
3.1.6	Screws for electrical contact pressure	No such screws provided.	**N**
3.1.7	Insulating materials in electrical connections		**N**
3.1.8	Self-tapping and spaced thread screws	No self tapping screws are used.	**N**
3.1.9	Termination of conductors	All conductors are reliable secured.	**P**
	10 N pull test		**P**
3.1.10	Sleeving on wiring		**N**
3.2	Connection to a mains supply		**P**
3.2.1	Means of connection	See below.	**P**
3.2.1.1	Connection to an a.c. mains supply	Plug used.	**P**
3.2.1.2	Connection to a d.c. mains supply	The equipment is not forconnection to a d.c.mains supply.	**N**
3.2.2	Multiple supply connections	Only one supply.	**N**
3.2.3	Permanently connected equipment	Not a permanently connected equipment.	**N**
	Number of conductors, diameter of cable and conduits (mm) .....:		**—**
3.2.4	Appliance inlets		**N**
3.2.5	Power supply cords	Certified power supply cord used.	**P**
3.2.5.1	AC Power supply cords	(See appended table 1.5.1.)	**P**
	Type .....:	(See appended table 1.5.1.)	**—**
	Rated current (A), cross-sectional area (mm^2), AWG .....:	(See appended table 1.5.1.)	**—**
3.2.5.2	DC power supply cords		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
3.2.6	Cord anchorages and strain relief	See below	**P**
	Mass of equipment (kg), pull (N) .....:	1.87kg, 60N, 25 times,1s.	—
	Longitudinal displacement (mm) .....:	0.8mm	—
3.2.7	Protection against mechanical damage	Strain Releif for power supply cord provided.	**P**
3.2.8	Cord guards	No cord guard used.	**N**
	D (mm); test mass (g) .....:		—
	Radius of curvature of cord (mm).....:		—
3.2.9	Supply wiring space	Complied checked.	**P**
3.3	Wiring terminals for connection of external conductors		**P**
3.3.1	Wiring terminals	Compliance checked for non-detachable cord.	**P**
3.3.2	Connection of non-detachable power supply cords	Power cord soldered on PCB and glued. Excess of temperature rise on terminal is unlikely.	**P**
3.3.3	Screw terminals		**N**
3.3.4	Conductor sizes to be connected	H03VV-F.	**P**
	Rated current (A), cord/cable type, cross-sectional area (mm^2).....:	Cross-sectional area of each conductor 0.75mm^2, 18AWG.	—
3.3.5	Wiring terminals sizes		**N**
	Rated current (A), type, nominal thread diameter (mm).....:		—
3.3.6	Wiring terminals design		**N**
3.3.7	Grouping of wiring terminals		**N**
3.3.8	Standard wire	Compliance check.	**P**
3.4	Disconnection from the mains supply		**P**
3.4.1	General requirement	See Sub-clause 3.4.2.	**P**
3.4.2	Disconnect devices	Plug on power cord provided as disconnect devices.	**P**
3.4.3	Permanently connected equipment	Not a permanently connected equipment.	**N**
3.4.4	Parts which remain energised	When plug is disconnected no remaining parts with hazardous voltage in the equipment.	**P**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
3.4.5	Switches in flexible cords	No switch.	**N**
3.4.6	Number of poles - single-phase and d.c. equipment	The disconnect device disconnects both poles simultaneously.	**P**
3.4.7	Number of poles - three-phase equipment	Single phase equipment.	**N**
3.4.8	Switches as disconnect devices	No switches provided.	**N**
3.4.9	Plugs as disconnect devices	See 1.7.2.1	**P**
3.4.10	Interconnected equipment	Interconnection to other devices by secondary output only.	**N**
3.4.11	Multiple power sources	Only one supply connection provided.	**N**
3.5	Interconnection of equipment		**P**
3.5.1	General requirements	See below.	**P**
3.5.2	Types of interconnection circuits ..... :	Interconnection circuits are SELV CIRCUITS.	**P**
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection.	**N**
3.5.4	Data ports for additional equipment		**N**
4	PHYSICAL REQUIREMENTS		**P**
4.1	Stability		**N**
	Angle of 10°	Mass of equipment not exceed 7kg	**N**
	Test: force (N) ..... :		**N**
4.2	Mechanical strength		**P**
4.2.1	General	See below.	**P**
4.2.2	Steady force test, 10 N	Considered.	**P**
4.2.3	Steady force test, 30 N	No internal enclosure.	**N**
4.2.4	Steady force test, 250 N	250N applied to battery enclosure. No energy or other hazards.	**P**
4.2.5	Impact test		**N**
	Fall test		**N**
	Swing test		**N**
4.2.6	Drop test; height (mm) .....:		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
4.2.7	Stress relief	After 7 hours at 84°C and cooling down to room temperature, no shrinkage, distortion or loosening any enclosure part was noticeable.	**P**
4.2.8	Cathode ray tubes	No CRT in the unit.	**N**
	Picture tube separately certified ..... :		**N**
4.2.9	High pressure lamps	No high pressure lamp.	**N**
4.2.10	Wall or ceiling mounted equipment; force (N) ...:	Not wall or ceiling mounted.	**N**
4.3	Design and construction		**P**
4.3.1	Edges and corners	All edges and corners are judged to be sufficiently well rounded so as not to constitute a hazard.	**P**
4.3.2	Handles and manual controls; force (N).....:	No handle or manual control.	**N**
4.3.3	Adjustable controls	No control device.	**N**
4.3.4	Securing of parts	No connection likely to be exposed to mechanical stress.	**P**
4.3.5	Connection by plugs and sockets	No mismatch of connector, plug or socket possible. IEC 60083 and IEC 60320-1 connectors are not used in SELV.	**P**
4.3.6	Direct plug-in equipment		**N**
	Torque .....:		—
	Compliance with the relevant mains plug standard .....:		**N**
4.3.7	Heating elements in earthed equipment	No heating element.	**N**
4.3.8	Batteries	No battery.	**N**
	- Overcharging of a rechargeable battery		**N**
	- Unintentional charging of a non-rechargeable battery		**N**
	- Reverse charging of a rechargeable battery		**N**
	- Excessive discharging rate for any battery		**N**
4.3.9	Oil and grease	No oil or grease.	**N**
4.3.10	Dust, powders, liquids and gases	The equipment in intended use not considered to be exposed to dust, powers, liquids and gases.	**N**
4.3.11	Containers for liquids or gases	No container for liquid or gas.	**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
4.3.12	Flammable liquids.....:	No flammable liquid.	**N**
	Quantity of liquid (l).....:		**N**
	Flash point (°C).....:		**N**
4.3.13	Radiation		**N**
4.3.13.1	General		**N**
4.3.13.2	Ionizing radiation		**N**
	Measured radiation (pA/kg) .....:		—
	Measured high-voltage (kV) .....:		—
	Measured focus voltage (kV) .....:		—
	CRT markings .....:		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		**N**
	Part, property, retention after test, flammability classification .....:		**N**
4.3.13.4	Human exposure to ultraviolet (UV) radiation ...:		**N**
4.3.13.5	Laser (including LEDs)		**N**
	Laser class .....:		—
4.3.13.6	Other types .....:		**N**

4.4	Protection against hazardous moving parts		**N**
4.4.1	General	No hazardous moving part.	**N**
4.4.2	Protection in operator access areas		**N**
4.4.3	Protection in restricted access locations		**N**
4.4.4	Protection in service access areas		**N**

4.5	Thermal requirements		**P**
4.5.1	General	No exceeding temperature.	**P**
4.5.2	Temperature tests	(See appended table 4.5)	**P**
	Normal load condition per Annex L .....:	(See Annex L)	—
4.5.3	Temperature limits for materials	(See appended table 4.5)	**P**
4.5.4	Touch temperature limits	(See appended table 4.5)	**P**
4.5.5	Resistance to abnormal heat .....:	(See appended table 4.5.5)	**P**

4.6	Openings in enclosures		**P**
4.6.1	Top and side openings	No openings.	**P**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
	Dimensions (mm) ……..:		—
4.6.2	Bottoms of fire enclosures	No openings.	P
	Construction of the bottom, dimensions (mm) ....:		—
4.6.3	Doors or covers in fire enclosures		N
4.6.4	Openings in transportable equipment		N
4.6.4.1	Constructional design measures		N
	Dimensions (mm) .....:		—
4.6.4.2	Evaluation measures for larger openings		N
4.6.4.3	Use of metallized parts		N
4.6.5	Adhesives for constructional purposes		N
	Conditioning temperature (°C), time (weeks)..…..:		—
4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame	Use of materials with the required flammability classes.	P
	Method 1, selection and application of components wiring and materials	Selection and application of components and materials which minimize the possibility of ignition and spread of flame.	P
	Method 2, application of all of simulated fault condition tests		N
4.7.2	Conditions for a fire enclosure	See below	P
4.7.2.1	Parts requiring a fire enclosure	With having the following components: ■ Components in primary. ■ Insulated wiring. the fire enclosure is required	P
4.7.2.2	Parts not requiring a fire enclosure	Left and rignt speaker supplied by limited power source.	P
4.7.3	Materials	See below.	P
4.7.3.1	General	PCB rated V-1 or better.	P
4.7.3.2	Materials for fire enclosures	V-1 or better.	P
4.7.3.3	Materials for components and other parts outside fire enclosures	HB or better for enclosure of left and right speaker.	P

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are V-2, HF-2 or better.	**P**
4.7.3.5	Materials for air filter assemblies	No air filter provided.	**N**
4.7.3.6	Materials used in high-voltage components	No high voltage component.	**N**
5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		**P**
5.1	Touch current and protective conductor current		**P**
5.1.1	General	See sub-clauses 5.1.2 to 5.1.6.	**P**
5.1.2	Configuration of equipment under test (EUT)	See below.	**P**
5.1.2.1	Single connection to an a.c. mains supply	EUT has only one mains connection.	**P**
5.1.2.2	Redundant multiple connections to an a.c. mains supply		**N**
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		**N**
5.1.3	Test circuit	Using figure 5A.	**P**
5.1.4	Application of measuring instrument	Using measuring instrument in annex D.	**P**
5.1.5	Test procedure	The touch current was measured from mains to output terminals.	**P**
5.1.6	Test measurements	See below.	**P**
	Supply voltage (V) ..... :	(See appended table 5.1.6)	—
	Measured touch current (mA) ..... :	(See appended table 5.1.6)	—
	Max. allowed touch current (mA) ..... :	(See appended table 5.1.6)	—
	Measured protective conductor current (mA) .... :		—
	Max. allowed protective conductor current (mA) :		—
5.1.7	Equipment with touch current exceeding 3,5 mA		**N**
5.1.7.1	General .....:		**N**
5.1.7.2	Simultaneous multiple connections to the supply		**N**
5.1.8	Touch currents to and from telecommunication networks and cable distribution systems and from telecommunication networks	No TNV circuits.	**N**
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		**N**
	Supply voltage (V) ..... :		—

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
	Measured touch current (mA) ..... :		—
	Max. allowed touch current (mA) ..... :		—
5.1.8.2	Summation of touch currents from telecommunication networks ..... :		**N**
	a) EUT with earthed telecommunication ports		**N**
	b) EUT whose telecommunication ports have no reference to protective earth		**N**
5.2	Electric strength		**P**
5.2.1	General	(See appended table 5.2)	**P**
5.2.2	Test procedure	(See appended table 5.2)	**P**
5.3	Abnormal operating and fault conditions		**P**
5.3.1	Protection against overload and abnormal operation	(See appended table 5.3).	**P**
5.3.2	Motors	No motor.	**N**
5.3.3	Transformers	With the shorted and overload of the transformer, no high temperature of the transformer was recorded. Results of the tests see appended table 5.3 and Annex C.	**P**
5.3.4	Functional insulation ..... :	Method c) used.	**P**
5.3.5	Electromechanical components	No electromechanical component.	**N**
5.3.6	Audio amplifiers in ITE ..... :		**N**
5.3.7	Simulation of faults	(See appended table 5.3).	**P**
5.3.8	Unattended equipment		**N**
5.3.9	Compliance criteria for abnormal operating and fault conditions	See below	**P**
5.3.9.1	During the tests	Neither fire burns the equipment nor molten metal.	**P**
5.3.9.2	After the tests	No reduction of clearance and creepage distances. Electric strength test is made on reinforced insulation after tests.	**P**
6	CONNECTION TO TELECOMMUNICATION NETWORKS .		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
6.1	Protection of telecommunication network service personnel, and users of other equipment connected to the network, from hazards in the equipment		**N**
6.1.1	Protection from hazardous voltages		**N**
6.1.2	Separation of the telecommunication network from earth		**N**
6.1.2.1	Requirements		**N**
	Supply voltage (V) .....:		—
	Current in the test circuit (mA) .....:		—
6.1.2.2	Exclusions.....:		**N**
6.2	Protection of equipment users from overvoltages on telecommunication networks		**N**
6.2.1	Separation requirements		**N**
6.2.2	Electric strength test procedure		**N**
6.2.2.1	Impulse test		**N**
6.2.2.2	Steady-state test		**N**
6.2.2.3	Compliance criteria		**N**
6.3	Protection of telecommunication wiring system from overheating		**N**
	Max. output current (A) .....:		—
	Current limiting method .....:		—
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		**N**
7.1	General		**N**
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		**N**
7.3	Protection of equipment users from overvoltages on the cable distribution system		**N**
7.4	Insulation between primary circuits and cable distribution systems		**N**
7.4.1	General		**N**
7.4.2	Voltage surge test		**N**
7.4.3	Impulse test		**N**
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		**N**
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
A.1.1	Samples		**N**
	Wall thickness (mm)....:		—
A.1.2	Conditioning of samples; temperature (°C) ....:		**N**
A.1.3	Mounting of samples....:		**N**
A.1.4	Test flame (see IEC 60695-11-3)		**N**
	Flame A, B, C or D ....:		—
A.1.5	Test procedure		**N**
A.1.6	Compliance criteria		**N**
	Sample 1 burning time (s)....:		—
	Sample 2 burning time (s)....:		—
	Sample 3 burning time (s)....:		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		**N**
A.2.1	Samples		**N**
	Wall thickness (mm)....:		—
A.2.2	Conditioning of samples; temperature (°C) ....:		**N**
A.2.3	Mounting of samples....:		**N**
A.2.4	Test flame (see IEC 60695-11-4)		**N**
	Flame A, B or C ....:		—
A.2.5	Test procedure		**N**
A.2.6	Compliance criteria		**N**
	Sample 1 burning time (s)....:		—
	Sample 2 burning time (s)....:		—
	Sample 3 burning time (s)....:		—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		**N**
	Sample 1 burning time (s)....:		—
	Sample 2 burning time (s)....:		—
	Sample 3 burning time (s)....:		—
A.3	Hot flaming oil test (see 4.6.2)		**N**
A.3.1	Mounting of samples		**N**
A.3.2	Test procedure		**N**
A.3.3	Compliance criterion		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		**N**
B.1	General requirements		**N**
	Position ..... :		—
	Manufacturer ..... :		—
	Type ..... :		—
	Rated values ..... :		—
B.2	Test conditions		**N**
B.3	Maximum temperatures		**N**
B.4	Running overload test		**N**
B.5	Locked-rotor overload test		**N**
	Test duration (days) ..... :		—
	Electric strength test: test voltage (V) ..... :		—
B.6	Running overload test for DC motors in secondary circuits		**N**
B.7	Locked-rotor overload test for DC motors in secondary circuits		**N**
B.7.1	General		**N**
B.7.2	Test procedure		**N**
B.7.3	Alternative test procedure		**N**
B.7.4	Electric strength test; test voltage (V) ..... :		**N**
B.8	Test for motors with capacitors		**N**
B.9	Test for three-phase motors		**N**
B.10	Test for series motors		**N**
	Operating voltage (V) ..... :		—
C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		**P**
	Position ..... :	TR1	—
	Manufacturer ..... :	See appended table 1.5.1.	—
	Type ..... :	See appended table 1.5.1.	—
	Rated values ..... :	Class A	
	Method of protection ..... :	Protection by inherent or external impedance.	—
C.1	Overload test	See appended table 5.3.	**P**
C.2	Insulation	See appended table C.2.	**P**
	Protection from displacement of windings ..... :	See appended table C.2.	—

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		**P**
D.1	Measuring instrument	Figure D.1 used.	**P**
D.2	Alternative measuring instrument		**N**
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		**N**
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		**P**
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		**N**
G.1	Clearances		**N**
G.1.1	General		**N**
G.1.2	Summary of the procedure for determining minimum clearances		**N**
G.2	Determination of mains transient voltage (V)		**N**
G.2.1	AC mains supply .....:		**N**
G.2.2	Earthed d.c. mains supplies ..... :		**N**
G.2.3	Unearthed d.c. mains supplies ..... :		**N**
G.2.4	Battery operation .....:		**N**
G.3	Determination of telecommunication network transient voltage (V) .....:		**N**
G.4	Determination of required withstand voltage (V)		**N**
G.4.1	Mains transients and internal repetitive peaks ...:		**N**
G.4.2	Transients from telecommunication networks ....:		**N**
G.4.3	Combination of transients		**N**
G.4.4	Transients from cable distribution systems		**N**
G.5	Measurement of transient voltages (V)		**N**
	a) Transients from a mains supply		**N**
	For an a.c. mains supply		**N**
	For a d.c. mains supply		**N**
	b) Transients from a telecommunication network		**N**
G.6	Determination of minimum clearances .....:		**N**
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		**N**
	Metal(s) used .....:		—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		**N**
K.1	Making and breaking capacity	No thermal control.	**N**
K.2	Thermostat reliability; operating voltage (V) ……:		**N**
K.3	Thermostat endurance test; operating voltage(V):		**N**
K.4	Temperature limiter endurance; operating voltage (V) .....:		**N**
K.5	Thermal cut-out reliability		**N**
K.6	Stability of operation		**N**
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		**P**
L.1	Typewriters		**N**
L.2	Adding machines and cash registers		**N**
L.3	Erasers		**N**
L.4	Pencil sharpeners		**N**
L.5	Duplicators and copy machines		**N**
L.6	Motor-operated files		**N**
L.7	Other business equipment	Maximum normal load.	**P**
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		**N**
M.1	Introduction	No telephone signal.	**N**
M.2	Method A		**N**
M.3	Method B		**N**
M.3.1	Ringing signal		**N**
M.3.1.1	Frequency (Hz) ..... :		**N**
M.3.1.2	Voltage (V) ..... :		**N**
M.3.1.3	Cadence; time (s), voltage (V) ..... :		**N**
M.3.1.4	Single fault current (mA) ..... :		**N**
M.3.2	Tripping device and monitoring voltage..... :		**N**
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		**N**
M.3.2.2	Tripping device		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
M.3.2.3	Monitoring voltage (V)..... :		**N**
N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)		**N**
N.1	ITU-T impulse test generators		**N**
N.2	IEC 60065 impulse test generator		**N**
P	ANNEX P, NORMATIVE REFERENCES		**P**
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		**P**
	a) Preferred climatic categories .....:		**P**
	b) Maximum continuous voltage .....:		**P**
	c) Pulse current .....:		**P**
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		**N**
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		**N**
R.2	Reduced clearances (see 2.10.3)		**N**
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		**N**
S.1	Test equipment		**N**
S.2	Test procedure		**N**
S.3	Examples of waveforms during impulse testing		**N**
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		**N**
			—
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		**N**
	Separate test report		—
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		**P**
V.1	Introduction		**P**
V.2	TN power systems		**P**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		**N**
W.1	Touch current from electronic circuits		**N**
W.1.1	Floating circuits		**N**
W.1.2	Earthed circuits		**N**
W.2	Interconnection of several equipments		**N**
W.2.1	Isolation		**N**
W.2.2	Common return, isolated from earth		**N**
W.2.3	Common return, connected to protective earth		**N**
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSRORMER TESTS (see clause C.1)		**N**
X.1	Determination of maximum input current		**N**
X.2	Overload test procedure		**N**
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		**N**
Y.1	Test apparatus ..... :		**N**
Y.2	Mounting of test samples ..... :		**N**
Y.3	Carbon-arc light-exposure apparatus ..... :		**N**
Y.4	Xenon-arc light exposure apparatus ..... :		**N**
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		**N**
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		**N**
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components

object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity[1])
Japan plug	Various	Various	125VAC, 7A	JISC8303	JET
Power cord	Various	VCTFK	2x0.75mm^2	JISC3304	JET
Plastic Enclosure (for Subwoofer)	LG CHEMICAL LTD	AF312A	V-0 or better, 1.5mm thickness min., 75°C min.	UL 94	UL
Wood Enclosure (for Subwoofer)	--	--	Wooden, 6.0mm thickness min.	--	--
Plastic enclosure (for Right and Left speaker)	Various	Various	HB or better	UL 94	UL
Speaker (for Subwoofer)	--	--	6Ω, 15W max.	--	--
Speaker (for Right and Left speaker)	--	--	8Ω, 5W max.	--	--
PCB (for other than power board)	Various	Various	V-1 or better, 130°C min.	UL 796	UL
For Power Board					
Primary Connector (CON1)	Zhejiang Jinda Electronics Co., Ltd	3.96T-02	2.5A, 250V	--	UL
Current fuse (FS1)	XC Electronics	3T-Serie(s)	T 2.0AL, 250 V	EN 60127	VDE
	Shenzhen Lanson	3K	T 2.0AL, 250 V	EN 60127	VDE
Varistor (MOV1) (optional)	Shaanxi Huaxing Varistor Factory	MYG14471	470V	IEC 61051-2 UL 1449	UL, VDE
	Hongzhi Enterprises Ltd	HEL14D471	470V	IEC 61051-2 UL 1449	UL, VDE
Thermistor (NTC1) (Optional)	Various	Various	NTC, min. 2 A, 5Ω at 25°C	--	--
X-Capacitors (CX1) (optional)	Tenta Electric Industrial Co., Ltd.	MEX	Max. 0.1 uF, min. 250 V, min. 85°C, X1 or X2 type	IEC 60384-14	VDE

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity[1])
	Shenzhen Su Rong Capacitors Co., Ltd	MPX/MKP	Max. 0.1 uF, min. 250 V, min. 85°C, X1 or X2 type	IEC 60384-14	VDE
Bridge Rectifier (D1-D4)	--	--	Min. 1 A, Min. 1000 V	--	--
Electrolytic Capacitor (C11)	--	--	Min. 400 V, min. 47uF, min. 105°C.	--	--
Transistor (Q1)	--	--	Min. 4.5 A, min. 600 V	--	--
Y-Capacitors (CY1) (optional)	Xi'an Jiu Yuan High Voltage Capacitor Factory	CT7	Max. 2200 pF, min. 250 V, min. 85°C, Y1 type	IEC 60384-14	VDE
	Shantou High-New Technology	STE	Max. 2200 pF, min. 250 V, min. 85°C, Y1 type	IEC 60384-14	VDE
	Jyh Chung Electronics Co., Ltd	JD	Max. 2200 pF, min. 250 V, min. 85°C, Y1 type	IEC 60384-14	VDE
Y-Capacitors (CY2) (optional)	Xi'an Jiu Yuan High Voltage Capacitor Factory	CT7	Max. 1000 pF, min. 250 V, min. 85°C, Y1 type	IEC 60384-14	VDE
	Shantou High-New Technology	STE	Max. 1000 pF, min. 250 V, min. 85°C, Y1 type	IEC 60384-14	VDE
	Jyh Chung Electronics Co., Ltd	JD	Max. 1000 pF, min. 250 V, min. 85°C, Y1 type	IEC 60384-14	VDE
Optocoupler (U2)	Bright Led Electronics Corp	BPC 817B	Distance through insulation: $\geq$ 0.4mm	EN 60950-1, EN 60747-5-2	VDE
Line filter (LF1) (optional)	DONGGUAN YONGCHENG ELECTRONIC CO., LTD	UU10.5	105°C	--	Tested in appliance
	Huangshi Hongguang Electronic Co., Ltd	UU10.5	105°C	--	Tested in appliance

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity[1])
Transformer (TR1)	DONGGUAN YONGCHENG ELECTRONIC CO., LTD	EI-28	Class A	--	Tested in appliance
	Huangshi Hongguang Electronic Co., Ltd	EI28	Class A	--	Tested in appliance
PCB	Various	Various	V-1 or better, 130°C	UL 796	UL
Supplementary information:					

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

1.6.2	TABLE: electrical data (in normal conditions)	**P**

fuse #	Irated (A)	U (V)/F(Hz)	P (W)	I (A)	Ifuse (A)	condition/status
Signal input from right speaker						
FS1	--	90/50	17.6	0.341	0.341	Maximum normal load
FS1	--	90/60	17.6	0.343	0.343	Maximum normal load
FS1	0.5	100/50	17.6	0.315	0.315	Maximum normal load
FS1	0.5	100/60	17.6	0.317	0.317	Maximum normal load
FS1	0.5	240/50	17.4	0.164	0.164	Maximum normal load
FS1	0.5	240/60	17.4	0.164	0.164	Maximum normal load
FS1	--	254/50	17.4	0.157	0.157	Maximum normal load
FS1	--	254/60	17.4	0.157	0.157	Maximum normal load
FS1	--	264/50	17.4	0.152	0.152	Maximum normal load
FS1	--	264/60	17.4	0.152	0.152	Maximum normal load
Signal input from AUX terminal						
FS1	--	90/50	17.3	0.339	0.339	Maximum normal load
FS1	--	90/60	17.3	0.339	0.339	Maximum normal load
FS1	0.5	100/50	17.3	0.312	0.312	Maximum normal load
FS1	0.5	100/60	17.3	0.313	0.313	Maximum normal load
FS1	0.5	240/50	17.0	0.161	0.161	Maximum normal load
FS1	0.5	240/60	17.0	0.161	0.161	Maximum normal load
FS1	--	254/50	17.1	0.155	0.155	Maximum normal load
FS1	--	254/60	17.1	0.155	0.155	Maximum normal load
FS1	--	264/50	17.1	0.151	0.151	Maximum normal load
FS1	--	264/60	17.1	0.152	0.152	Maximum normal load

Supplementary information:

Maximum normal load: 1/8 power of max. non-clipped output with 100Hz for subwoofer and 1kHz for right and left speaker sine wave signal.

2.1.1.5	TABLE: max. V, A, VA test	**N**

Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)
--	--	--	--	--

Note(s):

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

2.1.1.7	TABLE: discharge test				**N**
Condition	τ calculated (s)	τ measured (s)	t u→ 0V (s)	Comments	
--	--	--	--	--	
Notes: Overall capacity: CX1 = 0.1uF					

2.2.2	TABLE: Hazardous voltage measurement			**P**
Transformer	Location	max. Voltage		Voltage Limitation Component
		V peak	V d.c.	
TR1	Pin 6 – return	59.6V	--	--
	Pin 6 after D7 – return	--	15.3 Vdc	D7
Note(s):				

2.2.3	TABLE: SEL voltage measurement		**P**
Location	Voltage measured (V)	Comments	
Power board output	0	D7 shorted	
Note(s):			

2.4.2	TABLE: limited current circuit measurement					**P**
Location	Voltage (V)	Current (mA)	Freq. (Hz)	Limit (mA)	Comments	
CY1 & CY2 secondary to earth	1.03	0.515	60	0.70	CY1=2200pF, CY2=1000pF	
Note: Test Voltage: 264V, 60Hz						

2.5	TABLE: limited power source measurement		**P**
	Limits	Measured	Verdict
Output of power board			
According to Table 2B (normal condition) (Uoc = 15.067Vdc)			
current (in A)	8	5.3	Pass
apparent power (in VA)	100	77.47 (14.898V*5.2A)	Pass
According to Table 2B (U2 pin1-2 shorted) (Uoc = 0Vdc)			
current (in A)	8	0 (Unit shutdown)	Pass

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

apparent power (in VA)	100	0 (Unit shutdown)	Pass
According to Table 2B (U2 pin1 opened) (Uoc = 0Vdc)			
current (in A)	8	0 (Unit shutdown)	Pass
apparent power (in VA)	100	0 (Unit shutdown)	Pass
According to Table 2B (U2 pin3-4 shorted) (Uoc = 0Vdc)			
current (in A)	8	0 (Unit shutdown)	Pass
apparent power (in VA)	100	0 (Unit shutdown)	Pass
According to Table 2B (U2 pin3 opened) (Uoc = 0Vdc)			
current (in A)	8	0 (Unit shutdown)	Pass
apparent power (in VA)	100	0 (Unit shutdown)	Pass
According to Table 2B (R3 shorted) (Uoc = 0Vdc)			
current (in A)	8	0 (Unit shutdown)	Pass
apparent power (in VA)	100	0 (Unit shutdown)	Pass
Note(s): Test voltage: 240Vac, 60Hz			

2.6.3.4	TABLE: ground continue test	**N**
Location	Resistance measured (mΩ)	Comments
--	--	--
Note(s):		

2.10.2	Table: working voltage measurement		**P**
Location	RMS voltage (V)	Peak voltage (V)	Comments
TR1: pin 1- pin 6, 7, 8	205	340	
TR1: pin 1- pin 9, 10	208	397	
TR1: pin 2- pin 6, 7, 8	219	401	
TR1: pin 2- pin 9, 10	218	363	
TR1: pin 4- pin 6, 7, 8	**251**	**475**	Cl=4.2mm, Cr=5.2mm
TR1: pin 4- pin 9, 10	237	460	
TR1: pin 5- pin 6, 7, 8	216	359	
TR1: pin 5- pin 9,10	219	374	
CY1: pri. – sec.	216	359	
CY2: pri. – sec.	207	342	

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

U2: pin 1- pin 3	229	373	
U2: pin 1- pin 4	226	369	
U2: pin 2- pin 3	228	371	
U2: pin 2- pin 4	226	369	
Note(s): Test voltage: 240Vac, 60Hz			

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements					**P**
Clearance cl and creepage distance dcr at/of:	U p (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required dcr (mm)	dcr (mm)
Under Fuse (FS1)	< 420	< 250	1.5	4.2	2.5	4.2
L to N before fuse (FS1)	< 420	< 250	2.0	4.6	2.5	4.6
Primary components (10N) to secondary components (10N)	< 420	< 250	4.0	See below	5.0	See below
CY1 primary pin to secondary pin	< 420	< 250	4.0	8.0	5.0	8.0
CY2 primary pin to secondary pin	< 420	< 250	4.0	8.0	5.0	8.0
Primary trace to secondary trace	< 420	< 250	4.0	See below	5.0	See below
Trace under CY1	359	216	4.0	6.8	5.0	6.8
Trace under CY2	342	207	4.0	7.0	5.0	7.0
Trace under U2	373	229	4.0	5.8	5.0	5.8
Trace under TR1	475	251	4.2	6.6	5.2	6.6

Notes:
1. Functional insulation shorted, see 5.3.4 a).
2. Other functional insulation evaluated according to sub-clause 5.3.4 c).
3. All internal wires were fixed by soldering and glued.
4. Fuse (FS1) (for provided lead wire type) is covered with tube.
5. Clearance and creepage not described above are far larger than limit above.

2.10.5	TABLE: distance through insulation measurements			**P**
Distance through insulation di at/of:	U r.m.s. (V)	Test voltage (V)	Required di (mm)	di (mm)
Optocoupler (reinforced insulation)	250	3000	0.4	1)
Note(s): 1) Refer to appended table 1.5.1 for details.				

4.5	TABLE: temperature rise measurements	**P**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

	test voltage (V) ..... :	A. 90Vac B. 264Vac	—
	t_{amb1} (°C) .....:	--	—
	t_{amb2} (°C) .....:	--	—

maximum temperature T of part/at::	T (°C)				allowed T_{max} (°C)
Locations:	A		B		--
	Mea	Cal	Mea	Cal	--
1. TR1 coil (power board)	68.8	87.1	69.4	88.2	90
2. TR1 core (power board)	67.0	85.3	67.9	86.7	90
3. Input wire (power board)	49.1	67.4	45.2	64.0	80
4. CON1 body (power board)	52.9	71.2	47.5	66.3	85
5. PWB near NTC1 (power board)	56.3	74.6	49.5	68.3	105
6. CX1 body (power board)	51.5	69.8	43.8	62.6	85
7. LF1 coil (power board)	60.3	78.6	45.5	64.3	105
8. PWB near D4 (power board)	60.3	78.6	52.7	71.5	105
9. C11 body (power board)	57.1	75.4	51.1	69.9	85
10. PWB near Q1 (power board)	64.0	82.3	65.2	84.0	105
11. PWB near U1 (power board)	61.0	79.3	61.2	80.0	105
12. CY1 body (power board)	60.5	78.8	60.4	79.2	85
13. CY2 body (power board)	61.2	79.5	61.5	80.3	85
14. U2 body (power board)	59.7	78.0	59.5	78.3	100
15. PWB near D7 (power board)	77.2	95.5	77.0	95.8	105
16. C8 body (power board)	68.2	86.5	68.4	87.2	105
17. L1 coil (power board)	66.5	84.8	66.8	85.6	105
18. LF2 coil (power board)	62.9	81.2	62.3	81.1	105
19. CON2 body (power board)	64.9	83.2	64.3	83.1	85
20. Output wire (power board)	58.8	77.1	57.8	76.6	85
21. PWB near IC1 (main board)	95.0	113.3	92.2	111.0	130
22. C7 body (main board)	43.0	61.3	41.7	60.5	85
23. Internal plastic enclosure	55.7	74.0	54.5	73.3	--
24. Outer plastic enclosure	50.5	68.8	49.2	68.0	95
25. Outer wood enclosure	34.2	52.5	34.1	52.9	95

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

26. Ambient	26.7	45	26.2	45	--
Note:					
Supplementary information: • The temperatures were measured under worst case normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above. • With a maximum ambient temperature of 45 °C for model as declared by the manufacturer. • All values for T (°C) are re-calculated from actual ambient which the actual ambient lower than manufacturer's specification ambient temperature.					

4.5.5	TABLE: ball pressure test of thermoplastic parts		**P**
	allowed impression diameter (mm) .....:	≤ 2 mm	—
Part		Test temperature (°C)	Impression diameter (mm)
Primary Connector (Zhejiang Jinda, type: 3.96T-02)		125	0.8
Note: Bobbin of T1 and TR1 is made of Phenolic material, which is accepted without test.			

4.6	Table: enclosure openings		**P**
Location		Size (mm)	Comments
Top/side/bottom		--	No openings.
Note(s):			

5.1.6	TABLE: touch current measurement				**P**
Condition	L→ terminal A (mA)	N → terminal A (mA)	Limit (mA)	Comments	
Fuse in	0.24	0.24	0.25	To secondary terminal, swtch "e" closed	
Fuse in	0.03	0.03	0.25	To enclosure with copper foil, switch "e" closed	
Note(s): Input voltage : 264V Input frequency : 60Hz Overall capacity : CY1=2200pF, CY2=1000pF					

5.2	TABLE: electric strength tests and impulse tests		**P**
Test voltage applied between:		Test voltage (V)	Breakdown
Primary and secondary		DC 4242	No

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

Primary and enclosure with copper foil	DC 4242	No
Transformer (TR1) primary and secondary	AC 3000	No
Transformer (TR1) primary to core	AC 1707	No
Transformer (TR1) secondary to core	AC 1707	No
One layer of insulation tape used in transformer	AC 3000	No
Note(s):		

5.3	TABLE: fault condition tests		**P**
	ambient temperature (°C) .....:	25 °C, if not otherwise stated	—
	model/type of power supply .....:	--	—
	manufacturer of power supply .....:	--	—
	rated markings of power supply .....:	--	—

No.	Component no.	Fault	Test voltage (V)	Test time	Fuse no.	Fuse current (A)	Result
1	D1	s-c	240V60Hz	1s	FS1	0.16 → 0	Result: FS1 opened instantly, no damaged, no hazards.
2	C11	s-c	240V60Hz	1s	FS1	0.16 → 0	Result: FS1 opened instantly, no damaged, no hazards.
3	R2	s-c	240V60Hz	30mins	FS1	0.16 → 0.15	Result: Unit operated normally, no damaged, no hazards.
4	Q1 G-D	s-c	240V60Hz	1s	FS1	0.16 → 0	Result: FS1 opened instantly, Q1, U1, R3 damaged, no hazards.
5	Q1 D-S	s-c	240V60Hz	1s	FS1	0.16 → 0	Result: FS1 opened instantly, R3 damaged, no hazards.
6	Q1 G-S	s-c	240V60Hz	30mins	FS1	0.16 → 0.01	Result: Unit shutdown instantly, no damaged, no hazards.
7	R3	s-c	240V60Hz	1s	FS1	0.16 → 0	Result: FS1 opened instantly, Q1 damaged, no hazards.
8	D5	s-c	240V60Hz	1s	FS1	0.16 → 0	Result: FS1 opened instantly, Q1, R3 damaged, no hazards.
9	U2 pin 1-2	s-c	240V60Hz	30mins	FS1	0.16 → 0.01	Result: Unit shutdown instantly, no damaged, no hazards.
10	U2 pin 1	o-c	240V60Hz	30mins	FS1	0.16 → 0.01	Result: Unit shutdown instantly, no damaged, no hazards.

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

No.	Component no.	Fault	Test voltage (V)	Test time	Fuse no.	Fuse current (A)	Result
11	U2 pin 3-4	s-c	240V60Hz	30mins	FS1	0.16 → 0.002	Result: Unit shutdown instantly, no damaged, no hazards.
12	U2 pin 3	o-c	240V60Hz	30mins	FS1	0.16 → 0.002	Result: Unit shutdown instantly, no damaged, no hazards.
13	TR1 pin 2-5	s-c	240V60Hz	30mins	FS1	0.16 → 0.01	Result: Unit shutdown instantly, no damaged, no hazards.
14	TR1 pin 6-9	s-c	240V60Hz	1s	FS1	0.16 → 0	Result: FS1 opened instantly, Q1, R3 damaged, no hazards.
15	Subwoofer speaker	s-c	240V60Hz	4hrs	FS1	0.16 → 0.12	Result: Speaker outputs all shutdown, no damaged, no hazards. TR1 coil=69.6°C, TR1 core=68.1°C, U2=59.6°C, Ambient=26.5°C
16	Speaker output	Max. non-clipped power	240V60Hz	4hrs	FS1	0.16 → 0.36	Result: Unit into cycle protection, input current were bouncing between 0.02A to 0.36A, no damaged, no hazards. TR1 coil=107.2°C, TR1 core=101.0°C, U2=78.6°C, Ambient=27.8°C
17	TR1 pin 6-9	o-l	240V60Hz	5hrs	FS1	0.16 → 0.51 → 0	Result: FS1 opened, Q1, D7 damaged when TR1 pin 6-9 overload to 2.5A, no hazards. TR1 coil=134.0°C, TR1 core=125.0°C, U2=89.2°C, Ambient=28.0°C

Note(s):

1) In fault column, where s-c = short-circuited, o-c = open-circuited, o-l=overloaded.

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

C.2	Safety isolation transformer		**P**
	Construction details:		
Transformer part name: TR1			
Manufacturer:	See appended table 1.5.1		
Type:	See appended table 1.5.1		
Recurring peak voltage		475 Vpeak	
Required clearance for reinforced insulation (from table 2H and 2J)		4+0.4 = 4.2 mm	
Effective voltage rms		251 Vrms	
Required creepage distance for reinforced insulation (from table 2L with linear interpolation)		5.2 mm	
Measured min. clearances			
Location		inside (mm)	outside (mm)
Primary-secondary		6.0	7.0
Primary-core		3.0	2.6
Secondary-core		3.0	2.6
Primary-primary		--	--
Measured min. creepage distance			
Location		inside (mm)	outside (mm)
Primary-secondary		6.0	7.0
Primary-core		3.0	3.0
Secondary-core		3.0	3.0
Primary-primary		--	--
Construction:			
Concentric windings on Phenolic bobbin with 3mm margin tape, three layers insulation tape between primary and secondary windings. Winding ends additionally fixed with tape. Tubing on winding exit ends.			
Pin numbers			
Prim.		4 – 3 – 1; 2 – 5	
Sec.		6, 7, 8 – 9, 10	
Bobbin			

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

Material	Chang Chun, T375J (Phenolic), flammability class V-0, 150 °C
Thickness	0.71 mm min.
Electric strength test	
With 3000 V a.c. after humidity treatment	
Result	Pass

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
APPENDIX	Japan National Differences according to CB Bulletin No. 110A, June 2006 (J 60950(H16)) (IEC Publication 60950: 1999)		**P**
	Special National Conditions		
1.2	**Addition:** Add the following terms. Equipment, Class 0I 1.2.4.101 Material, VTM 1.2.12.101		**N**
1.2.4.101	**Addition:** CLASS 0I EQUIPMENT: Equipment where protection against electric shock is achieved by: a) using BASIC INSULATION, and b) providing a means of connecting to the protective earthing conductor in the building wiring those conductive parts that are otherwise capable of assuming HAZARDOUS VOLTAGES if the BASIC INSULATION fails, and c) using a supply cord without earthing conductor and a plug without earthing wire although the equipment has externally an earth terminal or a lead wire for earthing. Equipment provided with a cord set having a two-pin type plug with a lead wire for earthing is also regarded as Class 0I. NOTE – Class 0I equipment may have a part constructed with Double Insulation or Reinforced Insulation as well as an operating part as SELV circuit.		**N**
1.2.12.1	**Replacement:** FLAMMABILITY CLASSIFICATION OF MATERIALS: The recognition of the burning behaviour of materials and their ability to extinguish if ignited. Materials are classified as in 1.2.12.2 to 1.2.12.9, and 1.2.12.101 when tested in accordance with annex A. NOTE 1 - When applying the requirements in this standard, HF-1 CLASS FOAMED MATERIALS are regarded as better than those of CLASS HF-2, and HF-2 better than HBF. NOTE 2 - Similarly, other MATERIALS, including rigid (engineering structural) foam of CLASSES 5V or V-0 are regarded as better than those of CLASS V-1, V-1 better than V-2, and V-2 better than HB. NOTE 3 - Similarly, for thin MATERIALS, VTM-0 Class materials are regarded as better than those of VTM-1 Class, and VTM-1 better than VTM-2.	Replaced.	**P**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
1.2.12.101	**Addition:** VTM CLASS MATERIAL: Thin MATERIALS fulfil the specified conditions during the test of clause A.101 applied for materials that the test and evaluation of clauses A.6 to A.10 is difficult to enforce. Materials are classified to three classifications as VTM-0, VTM-1 and VTM-2 according to the conditions after the removal of the test flame.	Added.	**P**
1.7.101	**Addition:** Marking for CLASS 0I EQUIPMENT For CLASS 0I EQUIPMENT, the following instruction shall be indicated on the visible place of the mains plug or the main body: “Provide an earthing connection” Moreover, for CLASS 0I EQUIPMENT, the following instruction shall be indicated on the visible place of the main body or written in the operating instructions: “Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains.”		**N**
2.1.1.1	**Replacement:** Replace “IEC 60083” to “IEC 60083 or JIS C 8303” in 2.1.1.1 b).	Replaced.	**P**
2.6.3.1	**Addition:** Add the following after 1st paragraph. This also applies to the conductor of lead wire for protective earthing of CLASS 0I EQUIPMENT.		**N**
2.6.4.1	**Replacement:** Replace 2nd sentence in 1st paragraph. For CLASS I EQUIPMENT with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal.		**N**
2.6.5.4	**Replacement:** Replace 1st sentence. Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:		**N**
2.6.101	**Addition:** Earthing of CLASS 0I EQUIPMENT Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V. For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip. CLASS 0I EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external where easily visible.		**N**
3.2.5	Delete 1) in Table 3B.		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
4.2.8	**Addition:** Add the following to suffix 5) as specified in "Conditions applicable to Table 4A, Parts 1 and 2". With regard to Table 4A, insulating materials complying with Japanese requirements (refer to Japanese differences for the current IEC 60335-1 (3rd Edition) in CB Bulletin 101B) are also acceptable. Add a suffix 7) in "Conditions applicable to Table 4A, Parts 1 and 2". In the right column of Table 4A, Part 1, add suffix 7) to "50" (K), corresponding to "- without T – marking" in the left column so as to become "50 7)". Add 7) to Table 4A, Part 2 as follows. 7) This value shall apply only to wiring or cords complying with relevant IEC standards. Others shall comply with Japanese requirements (refer to Japanese differences for the current IEC 60335-1 (3rd Edition) in CB Bulletin 101B).		**N**
4.7.3.2	**Addition:** Add the following in 7th paragraph. **-** for thin materials, e.g., flexible printed boards, etc., used inside equipment, be of FLAMMABILITY CLASS VTM-2 or better.		**N**
5.1.6	**Replacement:** Replace Table 5A.	Replaced.	**P**
5.3.8.2	**Replacement:** Replace 3rd Item as follows. - BASIC INSULATION between the PRIMARY CIRCUIT and accessible conductive parts of CLASS I or 0I EQUIPMENT;		**N**
Annex A	**Addition:** Add the subclause **A.101**with the title "Flammability tests for classifying materials VTM" and the following: Thin sheet materials shall comply with ISO 9773.		**N**
Annex G	**Addition:** Add the following to the Note for Table G.1. 2. In Japan, MAINS TRANSIENT VOLTAGE for equipment with a Nominal AC MAINS SUPPLY VOLTAGE of 100V is to be decided based on the column where Nominal AC MAINS SUPPLY VOLTAGE in Table G.1 is 150V.		**N**
Annex P	**Addition:** Add "IEC 61965:2000, Mechanical Safety for Cathode Ray Tubes".		**N**
Annex U	**Replacement:** Replace 2nd paragraph. This annex covers to round winding wires having diameters between 0.05 mm and 5.00 mm.		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
U.2.1	**Replacement:** **Electric strength** The test sample is prepared according to IEC 60851-5:1996, 4.4.1 (for a twisted pair). The sample is then subjected to the test of 5.2.2 of this standard, with a test voltage not less than twice the appropriate voltage in table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows: - for BASIC INSULATION or SUPPLEMENTARY INSULATION, 3000 V, or; - for REINFORCED INSULATION, 6000 V.		**N**
U.2.2	**Replacement:** **Flexibility and adherence** Test 8 of IEC 60851-3:1996, 5.1.1, using the mandrel diameters of table U.1. The test sample is then examined in accordance with IEC 60851-3:1996, 5.1.1.4, followed by the test of 5.2.2 of this standard except applying the test voltage between the wire and the mandrel. A test voltage shall be the appropriate voltage in table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows: - for BASIC INSULATION or SUPPLEMENTARY INSULATION, 1500 V, or; - for REINFORCED INSULATION, 3000 V.		**N**
Table U.1	**Replacement:** **Mandrel diameter**		**N**
U.2.3	**Replacement:** Replace the first paragraph with the following. Test 9 of IEC 60851-6:1996, followed by the electric strength test of 5.2.2 of this standard except applying the test voltage between the wire and the mandrel. A test voltage shall be the appropriate voltage in table 5B (see 5.2.2) of this standard.However, the minimum values shall be as follows: - for BASIC INSULATION or SUPPLEMENTARY INSULATION, 1500 V, or; - for REINFORCED INSULATION, 3000 V.		**N**
U.2.4	**Replacement:** Replace the third paragraph describing the test voltage with the following. The test voltage shall not be less than the appropriate voltage in table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows: - for BASIC INSULATION or SUPPLEMENTARY INSULATION, 1500 V, or; - for REINFORCED INSULATION, 3000 V. It is applied between the shot and the conductor.		**N**

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
U.3.1	**Replacement:** Replace with the following. The test voltage for ROUTINE TESTING shall be the appropriate voltage in table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows: - for BASIC INSULATION or SUPPLEMENTARY INSULATION, 1500 V r.m.s. or 2100 V peak, or; - for REINFORCED INSULATION, 3000 V r.m.s. or 4200 V peak.		**N**
U.3.2	**Replacement:** Replace with the following. Twisted pair samples shall be tested in accordance with IEC 60851-5:1996, 4.4.1. The minimum breakdown voltage shall not be less than twice the appropriate voltage in table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows: - for BASIC INSULATION or SUPPLEMENTARY INSULATION, 3000 V r.m.s. or 4200 V peak, or; - for REINFORCED INSULATION, 6000 V r.m.s. or 8400 V peak.		**N**