Page 1 of 35

Report No.: S960056-1

Yary Wang

#### **TEST REPORT**

#### EN 60065:2002

#### Audio, video and similar electronic apparatus Safety requirements

Report No. ..... \$960056-1

Tested by (+ signature) ...... Gary Wang

Approved by (+ signature)...... Peter Kao

Date of issue...... August 21, 2007

Testing laboratory Name...... PEP Testing Laboratory

Address...... 12F-3, No. 27-1, Lane 169, Kang Ning St., Hsi-Chih, Taipei Hsien,

Taiwan 221

Testing location ...... Same as above

Client Name...... YOKO TECHNOLOGY CORP.

Standard ...... EN 60065:2002

Test procedure ...... CE LVD

Non-standard test method ...... N.A.

Test Report Form/blank test report

Test Report Form No.....: IECEN60065D

Master TRF...... Dated 2003-01

Copyright @ 2002 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.

This publication may be produced in whole or in part for non-commercial purposes as long as the IECEE is acknowledged as copyright owner and source of the material. IECEE takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context

Test item Description.....: CCD Camera

Trademark ...... YOKO TECHNOLOGY CORP.

Model and/or type reference ...... RYKxyzf

(see page 2)

Manufacturer...... YOKO TECHNOLOGY CORP.

No.199,Lide St.,Jhonghe City,Taipei County 235,Taiwan R.O.C.

Rating(s) ...... Input: 110-240V~, 50/60 Hz, max 5W, Class II

Page 2 of 35 Report No.: S960056-1

#### **Test case verdicts**

#### **Testing**

Date of receipt of test item ...... May 9, 2007

Date(s) of performance of test ...... May 9, 2007 -August 21, 2007

#### 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 appended table)" refers to a table appended to the report.

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

#### General product information

The EUT (Equipment Under Test) is a CCD Camera. The fire enclosure is made by metal. Used a separated approval power board.

The original Test Report Ref. No. S960056, dated July 10, 2007 was modified on August 21, 2007 to include the following addition(s): Report number: S960056-1.

Added new models, the model name information please see the following description:

Model name: RYKxyzf

x=4 or 7 ( 4=use colour CCD , 7=use black-and-white CCD)
 y=2,6,7 ( represents the different type of CCD Camera tubes)
 z=0-9 or A-Z (diffrient resolution and size of CCD CAMERA)
 f=A-Z or blank (different lens and additional function of CAMERA )

We took the model: RYK42X to represent the models, which used the power board R219500/2 and R219500/2LL.

If there are not any descriptions, we took the model RYK42X to represent the worst case of all models.

Attached with:

Annex A: Photos

Annex B: Critical components and materials

#### **Summary of Testing and Conclusions**

The sample(s) tested complies with the requirements of EN60065: 2002

<sup>&</sup>quot;(see remark #)" refers to a remark appended to the report.

<sup>&</sup>quot;(see Annex #) refers to an annex appended to the report.

Page 3 of 35 Report No.: S960056-1

Copy of marking plate	
( Representative )	YOKO TECHNOLOGY CORP.
	MODEL NO.: RYKxyzf
	Input: 110-240V~, 50/60 Hz, max.5W
	480 - 520
	CE

Page 4 of 35

01	EN 60065	In ,, n ,	\ / !! ·
Clause	Requirement – Test	Result - Remark	Verdict
3	GENERAL REQUIREMENTS		Р
	Safety class of the apparatus:	Class II apparatus.	Р
4	GENERAL CONDITIONS OF TESTS		Р
4.1.4	Ventilation instructions require the use of the test box		Р
5	MARKING		Р
	Comprehensible and easily discernible		Р
	Permanent durability against water and petroleum spirit	After rubbing test by water and petroleum spirit, the label still easily discernible, indelible and legible.	Р
5.1	Identification, maker, model:		Р
	Class II symbol if applicable		Р
	Rated supply voltage and symbol:	110-240 V~	Р
	Frequency if safety dependant	50/60 Hz	Р
	Rated current or power consumption:	Max.5W	Р
5.2	Earth terminal	Class II equipment.	N
	Hazardous live terminals		N
	Supply output terminals (other than mains)		N
5.3	Use of triangle with exclamation mark	None	N
5.4	Instructions for use	User's manual was provided in English. Version of other languages will be provided when national approval.	Р
5.4.1	Mains powered equipment not exposed to dripping or splashing. Warning concerning objects filled with liquid, etc.		Р
	Hazardous live terminals, instructions for wiring	No terminals are hazardous live.	N
	Instructions for replacing lithium battery	No batteries used.	N
	Instructions for modem if fitted	No modem.	N
	Class I earth connection warning		N
	Instructions for multimedia system connection		N
	Special stability warning for fixed installation		N

Page 5 of 35

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict
5.4.2	Disconnect device: plug/coupler or all-pole mains switch location, accessibility and markings	The statement should be provided in the user's manual .The disconnected device is plug.	N
	Instructions for permanently connected equipment	The equipment is not a permanently connected apparatus.	N
6	HAZARDOUS RADIATION		N
6.1	Ionizing radiation < 36 pA/kg (0,5 mR/h)	No ionisation radiation or laser inside the equipment.	N
6.1 EN 60065	European Council Directive 96/29/Euratom of 13 May 1996 10cm from outer surface of apparatus <1 µ Sv/h (0.1mR/h)	Ditto.	N
6.2	Laser radiation, emission limits to IEC 60825-1:	Ditto.	N
	Emission limits under fault conditions:	Ditto.	N
7	HEATING UNDER NORMAL OPERATING CONDI	TIONS	P
7.1	Temperature rises not exceeding specified values, no operation of fuse links	(see appended table)	Р
7.1.1	Temperature rise of accessible parts		Р
7.1.2	Temperature rise of parts providing electrical insulation	(see appended table)	Р
7.1.3	Temperature rise of parts acting as a support or as a mechanical barrier	No such device.	N
7.1.4	Temperature rise of windings	(see appended table)	Р
7.1.5	Parts not subject to a limit under 7.1.1 to 7.1.4	(see appended table)	Р
7.2	Softening temperature of insulating material supporting parts conductively connected to the mains carrying a current > 0,2 A at least 150 °C	Investigated during separated certification of power supply.	N
8	CONSTRUCTIONAL REQUIREMENTS WITH REG AGAINST ELECTRIC SHOCK	GARD TO THE PROTECTION	Р
8.1	Conductive parts covered by lacquer, paper, untreated textile oxide films and beads etc. considered to be bare	Considered.	Р

Page 6 of 35

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict
8.2	No shock hazard when changing voltage setting device, fuse-links or handling drawers etc.	Full voltage range design, no necessary adjustment and no fuse-link replaced and drawers handled while operation by hand.	N
8.3	Insulation of hazardous live parts not provided by hygroscopic material	No hygroscopic material used	N
8.4	No risk of electric shock following the removal of a cover which can be removed by hand	No cover can be removed by hand.	N
8.5	Class I equipment		Р
	Basic insulation between hazardous live parts and earthed accessible parts		Р
	Resistors bridging basic insulation complying with 14.2.1 a)	Investigated during separated certification of power supply.	N
8.6	ClassII equipment and Class II constructions within Class I equipment	Class II equipment.	Р
	Reinforced or double insulation between hazardous live parts and accessible parts	Secondary circuit to primary circuit is separated by reinforced or double insulation.	Р
	Components bridging reinforced or double insulation complying with 14.1 a) or 14.3	Investigated during separated certification of power supply.	N
	Basic and supplementary insulation each being bridged by a capacitor complying with 14.2.1 a)	Ditto	N
	Reinforced or double insulation being bridged with 2 capacitors in series complying with 14.2.1 a)	Ditto	N
	Reinforced or double insulation being bridged with a single capacitor complying with 14.2.1 b)	Ditto	N
	Basic insulation bridged by components complying with 14.3.4.3	Ditto	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	No rated supply voltage in the range of these voltages.	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	Ditto.	N
	Separation by Class II isolating transformer	Investigated during separated certification of power supply.	N
	Separation by Class I transformer		N
- <del></del>	Separation by earthed conductive part		N

Page 7 of 35

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict
8.8	Basic or supplementary insulation > 0,4 mm (mm)		Р
	Reinforced insulation > 0,4 mm (mm):	The tubes are provided on the internal wire of CCD camera, which providing reinforced insulation. And the photocoupler is investigated during the separate certification of power supply.	Р
	Thin sheet insulation	Investigated during the separate certification of power supply.	N
	Basic or supplementary insulation, at least two layers, each meeting 10.3	Ditto	N
	Basic or supplementary insulation, three layers any two of which meet 10.3	Ditto	N
	Reinforced insulation, two layers each of which meet 10.3	Ditto	N
	Reinforced insulation, three layers any two which meet 10.3	Ditto	N
8.9	Adequate insulation between internal hazardous live conductors and accessible parts		Р
	Adequate insulation between internal hazardous live parts and conductors connected to accessible parts		Р
8.10	Double insulation between conductors connected to the mains and accessible parts		Р
8.11	Detaching of wires		Р
	No undue reduction of creepages or clearance distances if wires become detached		Р
	Vibration test carried out:		N
8.12	Adequate cross-sectional area of internal wiring to mains socket-outlets	No mains socket outlet.	N
8.13	Adequate fastening of windows, lenses, lamp covers etc. (pull test 20 N for 10 s)		Р
8.14	Adequate fastening of covers (pull test 50 N for 10 s)		Р
8.15	No risk of damage to the insulation of internal wiring due to hot parts or sharp edges		Р
8.16	Only special supply equipment can be used	Supply from mains only.	N

Page 8 of 35

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict
8.17	Insulated winding wire without additional interleaved insulation	Investigated during the separated certificated of power supply board.	N
8.18	Endurance test as required by 8.17	Ditto	N
8.19	Disconnection from the mains	See below.	Р
8.19.1	Disconnect device	Mains plug as the disconnect device.	Р
	All-pole switch or circuit breaker with >3mm contact separation		N
8.19.2	Mains switch ON indication	No switches.	N
8.20	Switch not fitted in the mains cord	No switches.	N
8.21	Bridging components comply with clause 14		N
9	ELECTRIC SHOCK HAZARD UNDER NORMAL C	PERATING CONDITIONS	Р
9.1	Testing on the outside		Р
9.1.1	For voltages >1000 V ac or >1500 V dc complies with clause 13.3.1 for basic insulation		N
9.1.1.1	Touch current measured from terminal devices using the network in annex D		Р
	Discharge not exceeding 45 μC		N
	Energy of discharge not exceeding 350 mJ		N
9.1.1.2	Test with test finger and test probe		N
9.1.2	No hazardous live shafts of knobs, handles or levers	No operating knobs, handles, levers used.	N
9.1.3	Ventilation holes tested by means of 4 mm x 100 mm test pin	No ventilation holes in the whole enclosure.	N
9.1.4	Terminal devices tested with 1 mm x 20 mm test pin (10 N); test probe D of IEC 61032		Р
	Terminal devices tested with 1 mm x 100 mm straight wire (1 N); test probe D of IEC 61032		Р
9.1.5	Pre-set controls tested with 2 mm x 100 mm test pin (10 N); test probe C of IEC 61032		Р
9.1.6	No shock hazard due to stored charge on withdrawal of the mains plug; voltage (V) after 2 s	After 2 sec. The measured voltage is 0V.	Р
	If C is not greater than 0,1 µF no test needed		N
9.1.7	Enclosure sufficiently resistant to external force		N
	Test probe 11 of IEC 61032 for 10 s (50 N)	Ditto.	N

Page 9 of 35

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict
	Test hook of fig. 4 for 10 s (20 N)	Ditto.	N
	30 mm diameter test tool for 5 s (100 or 250 N):	Ditto.	N
9.2	No hazard after removing a cover by hand	No cover can be removed by hand.	N
10	INSULATION REQUIREMENTS		Р
10.1	Insulation resistance (MO) at least 2 MO min. after surge test for basic and 4 MO min. for reinforced insulation:	More than 4 MO	Р
10.2	Humidity treatment 48 h or 120 h	48h	Р
10.3	Insulation resistance and dielectric strength	(see appended table)	Р

Page 10 of 35 Report No.: S960056-1

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict
11	FAULT CONDITIONS		Р
11.1	No shock hazard under fault condition		Р
11.2	Heating under fault condition	(see appended table)	Р
	No hazard from softening solder		Р
11.2.1	Measurement of temperature rises	(see appended table)	Р
11.2.2	Temperature rise of accessible parts	No accessible parts.	N
11.2.3	Temperature rise of parts, other than windings, providing electrical insulation	(see appended table)	Р
	Temperature rise of printed circuit boards (PCB) exceeding the limits of table 3 by max. 100 K for max. 5 min	Temperatures were not exceeded.	N
	a) Temperature rise of printed circuit boards (PCB) to 20.1.3, exceeding the limits of table 3 by not more than 100 K for an area not greater than 2 cm²	Temperatures were not exceeded.	N
	b) Temperature rise of printed circuit boards (PCB) to 20.1.3 up to 300 K for an area not greater than 2 cm² for a maximum of 5 min	Temperatures were not exceeded.	N
	Meets all the special conditions if conductors on printed circuit boards are interrupted		N
	Class I protective earthing maintained		N
11.2.4	Temperature rise of parts acting as a support or mechanical barrier	No such parts	N
11.2.5	Temperature rise of windings	(see appended table)	Р
11.2.6	Temperature rise of parts not subject to the limits of 11.2.1 to 11.2.5	(see appended table)	Р
12	MECHANICAL STRENGTH		Р
		4.7L.	
12.1.1	Bump test where mass >7 kg	< 7kg	N
12.1.2	Vibration test	Not transportable or portable apparatus.	N
12.1.3	Impact hammer test	No damage to the equipment after the impact test.	Р
	Steel ball test	No damaged.	Р
12.1.4	Drop test for portable apparatus where mass < 7 kg	Not portable apparatus.	N
12.1.5	Thermoplastic enclosures stress relief test	Metal enclosure.	N
12.2	Fixing of knobs, push buttons, keys and levers	No such parts.	N

Page 11 of 35

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict
12.3	Remote controls with hazardous live parts		N
12.4	Drawers (pull test 50 N, 10 s)	No drawers.	N
12.5	Antenna coaxial sockets providing isolation		N
12.6	Telescoping or rod antennas construction	No such construction.	N
12.6.1	Telescoping or rod antennas securement	Ditto.	N
13	CLEARANCE AND CREEPAGE DISTANCES		P
13.1	Clearances in accordance with 13.3	See 13.3	Р
	Creepage distances in accordance with 13.4	See 13.4	Р
13.2	Determination of operating voltage	(see appended table)	Р
13.3	Clearances	See below.	Р
13.3.2	Circuits conductively connected to the mains comply with table 8 and, where applicable, table 9	(see appended table)	Р
13.3.3	Circuits not conductively connected to the mains comply with table 10		N
13.4	Creepage distances	(see appended table)	Р
	Creepage distances greater than table 11 minimum		Р
13.5	Printed boards	Not applied for.	N
13.5.1	Clearances and creepage distances between conductors on printed circuit boards, one of which may be conductively connected to the mains, as in fig. 10	Ditto.	N
13.5.2	Type B coated printed circuit boards complying with IEC 60664-3 (basic insulation only)	Ditto.	N
13.6	Conductive parts along uncemented joints clearances and creepage distances comply with 13.3 and 13.4	No such components.	N
	Conductive parts along reliably cemented joints comply with 8.8	Ditto.	N
13.7	Enclosed, enveloped or hermetically sealed parts: not conductively connected to the mains: clearances and creepage distances as in table 12	No such a construction.	N
13.8	Parts filled with insulating compound, meeting the requirements of 8.8	Investigated during the separated certificated of power supply board.	N

Page 12 of 35 Report No.: S960056-1

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict
14	COMPONENTS		Р
14.1	Resistors		N
	a) Resistors between hazardous live parts and accessible metal parts	Investigated during the separated certificated of power supply board.	N
	b) Resistors, other than between hazardous live parts and accessible parts	Ditto.	N
	b) Resistors separately approved:	Ditto.	N
14.2	Capacitors and RC units	Investigated during the separated certificated of power supply board.	N
	Capacitors separately approved		N
14.2.1	Y capacitors tested to IEC 60384-14, 2 <sup>nd</sup> edition:		N
14.2.2	X capacitors tested to IEC 60384-14, 2 <sup>nd</sup> edition:		N
14.2.3	Capacitors operating at mains frequency but not connected to the mains: tests for X2:		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		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:	Ditto.	N
	Shielded by a barrier to V-0 or metal:		N
14.3	Inductors and windings	Investigated during the separated certificated of power supply board.	N
	Comply with IEC 61558-1, IEC 61558-2 (as relevant) and clause 20.1.4		N
14.3.1	Transformers and inductors marked with manufacturer's name and type:	Investigated during the separated certificated of power supply board.	N
	Transformers and inductors separately approved :	Ditto	N
14.3.2	General	See 14.3.3,14.3.4 and 14.3.5.	Р
14.3.3	Constructional requirements	See below.	Р
14.3.3.1	Clearances and creepage distances comply with clause 13	(see attached table)	Р

Page 13 of 35

	EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict	
14.3.3.2	Transformers meet the constructional requirements	Investigated during the separated certificated of power supply board.	N	
14.3.4.1	Class II transformers have adequate separation between hazardous live parts and accessible parts (double or reinforced insulation)	Investigated during the separated certificated of power supply board.	N	
	Coil formers and partition walls > 0,4 mm		N	
14.3.4.2	Class I transformers, with basic insulation and protective screening only if all 7 conditions of 14.3.4.2 are met		N	
14.3.4.3	Separating transformers with at least basic insulation		N	
14.3.5.1	Class II transformers have adequate insulation between hazardous live parts and accessible parts (double or reinforced insulation)	Investigated during the separated certificated of power supply board.	N	
	Coil formers and partition walls > 0,4 mm		N	
14.3.5.2	Class I transformers have adequate insulation between hazardous live parts and accessible conductive parts or those conductive parts or protective screens connected to a protective earth terminal	Investigated during the separated certificated of power supply board.	N	
	Winding wires connected to protective earth have adequate current-carrying capacity		N	
14.4	High voltage components	No such components.	N	
	High-voltage components and assemblies: U > 4 kV (peak) separately approved	Ditto.	N	
	Component meets category V-1 of IEC 60707	Ditto.	N	
14.4.1	High voltage transformers and multipliers tested as part of the submission	Ditto.	N	
14.4.2	High voltage assemblies and other parts tested as part of the submission	Ditto.	N	
14.5	Protective devices		Р	
	Protective devices used within their ratings		Р	
	External clearances and creepage distances meet requirement of clause 13 for the voltage across the device when opened		Р	
14.5.1.1	a) Thermal cut-outs separately approved	No thermal cut-outs used.	N	
	b) Thermal cut-outs tested as part of the submission	Ditto.	N	
14.5.1.2	a) Thermal links separately approved	No thermal links used.	N	
14.5.1.2	a) Thermal links separately approved	No thermal links used.	N	

Page 14 of 35 Report No.: S960056-1

	EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict	
	b) Thermal links tested as part of the submission	Ditto.	N	
14.5.1.3	Thermal devices re-settable by soldering	No such components.	N	
14.5.2.1	Fuse-links in the mains circuit according to IEC 60127	Investigated during the separated certificated of power supply board.	N	
14.5.2.2	Correct marking of fuse-links adjacent to holder:	Ditto.	N	
14.5.2.3	Not possible to connect fuses in parallel:	Ditto.	N	
14.5.2.4	Not possible to touch hazardous live parts when replacing fuse-links without the use of a tool:		N	
14.5.3	PTC-S thermistors comply with IEC 60730-1	No such components.	N	
	PTC-S devices (15 W) category V-1 or better	Ditto.	N	
14.5.4	Circuit protectors have adequate breaking capacity and their position is correctly marked	No such components.	N	
14.6	Switches	No such components.	N	
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	
14.6.1 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	

Page 15 of 35

EN 60065				
Clause	Requirement – Test	Result - Remark	Verdict	
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.	N	
	Safety interlocks to 2.8 of IEC 60950		N	
14.8	Voltage setting devices	Full range voltage design, no necessary adjustment.	N	
	Voltage setting device not likely to be changed accidentally		N	
14.9	Motors	No motors.	N	
14.9.1	Endurance test on motors		N	
	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	No moving parts.	N	
14.9.4	Motors with phase-shifting capacitors, three-phase motors and series motors meet clause. B.8, B.9 and B.10 of IEC 60950, Annex B		N	
14.10	Batteries	No battery.	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	Investigated during the separated certificated of power supply board.	N	
	Optocouplers comply with Cl. 8		N	
	Internal and external dimensions to 13.1. or alternatively 13.6 (jointed insulation)		N	
14.12	Surge suppression varistors	Investigated during the separated certificated of power supply board.	N	

Page 16 of 35

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	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		Р
15.1.1	Mains plug, appliance inlet, interconnection couplers and mains socket-outlet meet the appropriate standard	Approved mains plug used.	Р
15.1.2	Connectors for antenna, earth, audio, video or data:		Р
	No risk of insertion in mains socket-outlets	No such components.	N
	No risk of insertion into audio or video: outlets marked with the symbol of 5.2	No such components.	N
15.1.3	Output terminals of a.c. adaptors or similar devices not compatible with household mains socket-outlets	Ditto.	N
15.2	Provision for protective earthing		
	Accessible conductive parts of Class I equipment reliably connected to earth terminal, within equipment	Class II equipment.	N
	Class I supply equipment with non-hazardous live output voltage: output circuit not connected to earth		N
	Protective earth conductors correctly coloured		N
	Equipment with non-detachable mains cord provided with separate protective earth terminal near mains input		N
	Protective earth terminal resistant to corrosion		N
	Earth resistance test: $< 0.1 \Omega$ at 25 A:		N
15.3	Terminals for external flexible cords and for permanent connection to the mains supply		Р
15.3.1	Adequate terminals for connection of permanent wiring		N
15.3.2	Reliable connection of non-detachable cords:		Р
	Not soldered to conductors of a printed circuit board		Р
	•		-

Page 17 of 35

	EN 60065	Γ	T
Clause	Requirement – Test	Result - Remark	Verdict
	Adequate clearances and creepage distances between connections should a wire break away		Р
	Wire secured by additional means to the conductor		Р
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		Р
	Clamping of conductor and insulation if not soldered or held by screws		N
15.3.5	Terminals allow connection of appropriate cross- sectional area of conductors, for the rated current of the equipment		Р
15.3.6	Terminals to 15.3.3 have sizes required by table 16		Р
15.3.7	Terminals clamp conductors between metal and have adequate pressure		Р
	Terminals designed to avoid conductor slipping out when tightened or loosened		Р
	Terminals adequately fixed to avoid loosening when the clamping is tightened or loosened and stress on internal wiring is avoided		Р
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	The equipment was provided with non-detachable cords.	Р
	Terminals located and shielded: test with 8 mm strand		Р
15.4	Devices forming a part of the mains plug	Not direct plug-in equipment.	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		Р
16.1	Mains cords sheathed type, complying with IEC 60227 for PVC or IEC 60245 for synthetic rubber cords	Used certified mains plug.	Р

Page 18 of 35

EN 60065				
Clause	Requirement – Test	Result - Remark	Verdict	
	Non-detachable cords for Class I have green/yellow core for protective earth		Р	
16.2	Mains cords conductors have adequate cross- sectional area for rated current consumption of the equipment		Р	
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 60227-2)		N	
16.4	Flexible cords used for connection between equipment have adequate cross-sectional areas to avoid temperature rise under normal and fault conditions		Р	
16.5	Adequate strain relief on external flexible cords		Р	
	Not possible to push cord back into equipment		Р	
	Strain relief device unlikely to damage flexible cord		Р	
	For mains cords of Class I equipment, hazardous live conductors become taut before earth conductor		Р	
16.6	Apertures for external flexible cord: no risk of damage to the cord during assembly or movement in use		Р	
16.7	Transportable musical instruments and amplifiers fitted with detachable cord set with appliance inlet to IEC 60320-1		N	
	Transportable musical instruments and amplifiers fitted with detachable cord sets or with means of stowage to protect the cord		N	
17	ELECTRICAL CONNECTIONS AND MECHANICA	L FIXINGS	Р	
17.1	Torque test to table 20:		P	
	- screws into metal: 5 times		Р	
	- screws into non-metallic material: 10 times		N	
17.2	Correct introduction into female threads in non- metallic material		N	
17.3	Cover fixing screws: captive		Р	

Page 19 of 35 Report No.: S960056-1

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict
	Non-captive fixing screws: no hazard when replaced by a screw whose length is 10 times its diameter		N
17.4	No loosening of conductive parts carrying a current > 0,2 A		N
17.5	Contact pressure not transmitted through plastic other than ceramic for connections carrying a current > 0,2 A		N
17.6	Stranded conductors of flexible supply cords carrying a current > 0,2 A with screw terminals not consolidated by solder		Р
17.7	Cover fixing devices other than screws have adequate strength and their positioning is unambiguous		N
17.8	Fixing devices for detachable legs or stands provided	No detachable legs or stands.	N
17.9	Internal pluggable connections, affecting safety, unlikely to become disconnected		N
18	MECHANICAL STRENGTH OF PICTURE TUBES THE EFFECTS OF IMPLOSION  No picture tube.	AND PROTECTION AGAINST	N
	Picture tube separately approved to IEC 61965:		N
	Picture tube separately approved to 18.1		N
18.1	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

Page 20 of 35

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict
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		Р
	Mass of the equipment exceeding 7 kg:	<7kg	N
	Apparatus intended to be fastened in place – suitable instructions		N
19.1	Test on a plane, inclined at 10° to the horizontal		N
19.2	100 N force applied vertically downwards		N
19.3	Apparatus mass > 25 kg or height > 1 M or supplied with cart or stand		N
19.4	Edges or corners not hazardous		Р
19.5	Glass surfaces with an area exceeding 0,1 m <sup>2</sup> or maximum dimension > 450 mm, pass the test of 19.5.1		N
19.6	Wall or ceiling mountings adequate		N
20	RESISTANCE TO FIRE		Р
20.1	Electrical components and mechanical parts		N
	a) Exemption for components contained in an enclosure of material V-0 to IEC 60707 with openings not exceeding 1 mm in width	Metal enclosure.	N
	b) Exemption for small components as defined in 20.1		N
20.1.1	Electrical components meet the requirements of Clause 14 or 20.1.4	See sub clause 14 and 20.1.4.	Р
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

Page 21 of 35

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict
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 V-1 or better to IEC60707, unless used in a fire enclosure	V-0, not exceeds 15 W.	N
	Material of printed circuit boards on which the available power exceeds 15 W at a voltage >400 V (peak) a.c. or d.c. meets V-0 to IEC 60707		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 21 comply with the relevant flammability category in Table 21		Р
	Components and parts as above but shielded from a potential ignition source, with the barrier area in accordance with Table 21 and fig. 13		N
20.2	Fire enclosure	Metal	Р
20.2.1	Potential ignition sources with open circuit voltage > 4 kV (peak) a.c. or d.c. contained in a fire enclosure to V-1		N
20.2.2	Internal fire enclosures with openings not exceeding 1 mm in width and with openings for wires completely filled	No openings.	N
20.2.3	Requirements of 20.2.1 and 20.2.2 met by an internal fire enclosure	No internal fire enclosure.	N

Page 22 of 35

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict
		•	•
Α	APPENDIX A, ADDITIONAL REQUIREMENTS FO PROTECTION AGAINST SPLASHING WATER	OR APPARATUS WITH	N
A.5.1	j) Marked with IPX4 (IEC 60529), 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
В	APPENDIX B, APPARATUS TO BE CONNECTED TELECOMMUNICATION NETWORKS	TO THE	N
	Complies with IEC 62151 clause 1		N
	Complies with IEC 62151 clause 2		N
	Complies with IEC 62151 clause 3 but with 3.5.4 modified to 2.4.10 of this standard		N
	Complies with IEC 62151 clause 4 but with 4.1.2, 4.1.3 and 4.2.1.2 modified in accordance with annex B of this standard		N
	Complies with IEC 62151 cause 5 but with 5.3.1 modified in accordance with annex B of this standard		N
	Complies with IEC 62151 clause 6		N
	Complies with IEC 62151 clause 7		N
	Complies with IEC 62151 annex A, B and C		N

Page 23 of 35 Report No.: S960056-1

		EN 60065		
Clause	Requirement – Test		Result - Remark	Verdict

#### Annex ZB

(normative)

#### **Special national conditions**

**Special national condition:** National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions. If it affects harmonization, it forms part of the European Standard or Harmonization Document.

For the countries in which the relevant special national condition apply these provisions are normative, for other countries they are informative.

2.6.1	Denmark The following is added: Certain types of CLASS I apparatus, see 15.1.1, may be provided with a plug not establishing	N
	earthing continuity when inserted in Danish socketoutlets  Justification:  Heavy Current Regulations, Section 107	
13.3.1	Norway To the second paragraph the following is added: 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 230 V in case of a single earth fault.  Justification: Based on a use in Norway of an IT power distribution system where the neutral is not provided	N

Page 24 of 35 Report No.: S960056-1

	EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict	
15.1.1	Denmark To the first paragraph the following is added: In Denmark, supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations Section 107-2- D1. Appliances of CLASS I provided with socket- outlets with earth contact or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with the Heavy Current Regulations, Section 107-		Р	
	2-D1 standard sheet DK 2-1a.  To the second paragraph the following is added: Socket outlets intended for providing power to CLASS II apparatus with a rated current of 2,5 A shall have the following dimensions:  See EN 60065:2002  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			
	To the third paragraph the following is added: Mains socket-outlets with earthing contact shall be in compliance with HeavyCurrent Regulations Section 107-2-D1, Standard sheet DK 1-3a, DK 1-5a or DK 1-7a Justification: Heavy Current Regulations, Section 107			
15.1.1	Ireland Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997.  Justification: SI 525: 1997		N	

Page 25 of 35 Report No.: S960056-1

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict
15.1.1	Norway Mains socket-outlets mounted on CLASS II apparatus shall comply with the specifications given in CEE Publ. 7 as far as applicable, with the following amendments: § 8 Dimensions a 2,5 A 250 V two-pole socket-outlets for	No mains socket-outlet.	N
	electronic apparatus shall comply with the enclosed Standard Sheet I.  See EN 60065:2002 Other dimensions according to CEE Publication 7 Standard Sheet I "Portable Single-Way Socket-Outlets".		
	§ 24 Mechanical strength a 2,5 A, 250 V socket-outlets for CLASS II electronic apparatus are tested as specified in 12.1.3 of EN 60065. Also the protecting rim shall be tested Justification: Act of 24 May 1929 relating to supervision of electrical installation (TEA 1929/FEL 1998).		
15.1.1	United Kingdom Apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug shall be fitted with a "standard plug" in accordance with Statutory Instrument 1768: 1994: The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those Regulations.		N
	NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug. <i>Justification</i> : SI 1768: 1994		
J.2	Norway After Table J.1 the following is added: 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 230 V in case of a single earth fault.  Justification: Based on a use in Norway of an IT power distribution system where the neutral is not provided		N

Page 26 of 35 Report No.: S960056-1

EN 60065				
Clause	Requirement – Test	Result - Remark	Verdict	

ZC A	A-deviations A-deviation: A national deviation due to regulation the time being - outside the competence of the CE		st for
Tack - Ell - ta - a r sk v e - t t t C F a k c v C F a	Germany The following markings are required: a) In case of intrinsically ionizing radiation safe cathode-ray tubes with accelerating voltages between 20 kV and 30 kV: - On the cathode-ray tube itself the wording: Eigensichere Kathodenstrahlröhre nach Anlage III Röntgen-verordnung - Inside the apparatus: the maximum allowed accelerating voltage in kV, and the maximum allowed beam current in mA On the outer of the apparatus: a notice in German language that produced X-rays are sufficiently shielded by the intrinsically safe cathode-ray tube. b) In case of approval of the whole TV receiver with an accelerating voltage exceeding 20 kV: - On the outer of the apparatus: the licence number///Rö, and the following text: Die in diesem Gerät entstehende Röntgenstrahlung ist ausreichend abgeschirmt. Beschleunigungsspannung: max: kV Supplied with the apparatus: a copy of the "Zulassungsschein", together with the notices required there. c) In case of TV receivers with accelerating voltages not exceeding 20 kV: Die in diesem Gerät entstehende Röntgenstrahlung ist ausreichend abgeschirmt. Beschleunigungsspannung: max: kV. Justification: German ministerial decree against ionizing radiation ( Röntgenverordnung), dated 1987-01-08.  NOTE The German ministerial decree (Röntgenverordnung) is under revision.	No CRT or TV receivers.	Z

Page 27 of 35 Report No.: S960056-1

	EN 60065					
Clause	Clause Requirement – Test Result - Remark					
5.1	Italy The following requirements shall be fulfilled: - The power consumption in Watts (W) shall be indicated on TV receivers and in their instruction for use (Measurement according to EN 60555-2) NOTE EN 60555-2 has since been replaced by IEC 60107-1:1997 TV receivers shall be provided with an instruction for use, schematic diagrams and adjustments procedure in Italian language Marking for controls and terminals shall be in Italian language. Abbreviation and international symbols are allowed provided that they are explained in the instruction for use The ECC manufacturers are bound to issue a conformity declaration according to the above requirements in the instruction manual. The correct statement for conformity to be written in the instruction manual, shall be: Questo apparecchio è fabbricato nella CEE nel rispetto delle disposizioni del D.M. marzo 1992 ed è in particolare conforme alle prescrizioni dell'art. 1 dello stesso D.M The first importers of TV receivers manufactured outside EEC are bound to submit the TV receivers for previous conformity certification to the Italian Post Ministry (PP.TT). The TV receivers shall have on the backcover the certification number in the following form: D.M. 26/03/1992 xxxxx/xxxxx/s or T or pT S for stereo T for teletext pT for retrofitable teletext  Justification: Ministerial Decree of 26 March 1992: National rules for television receivers trade.		N			
14	not safety relevant requirements.  Sweden The following is added: Switches containing mercury such as thermostats, relays and level controllers are not allowed.  Justification: Ordinance (1990:944) on Prohibition in connection with Handling, Importation and Exportation of Chemical Products (Certain Cases)		N			

Page 28 of 35 Report No.: S960056-1

		EN 60065		
Clause	Requirement -	- Test	Result - Remark	Verdict
			•	
5.1	Input Test	nput Test		
Operating of	condition: Maxim	um normal load		
Un (V) In (mA)		Pn (W)		
Input: 110-2	240V~, 50/60Hz,	max.5W		
RYK42x				
99\	V/50Hz	49.6	2.3	
110	0/50Hz	46.2	2.34	
240/50Hz 2		29.3	2.48	
264/50Hz 28.4 2.55		2.55		
204	4/3002	20.4		

Page 29 of 35 Report No.: S960056-1

7.1 TABLE: temperature rise measurements P Loudspeaker impedance (W)			EN 6006	65				
Loudspeaker impedance (W)	Clause	Requirement – Test			Resul	t - Remark	(	Verdict
Loudspeaker impedance (W)								
Several loudspeaker systems	7.1	TABLE: temperature rise mea	asurements					Р
Marking of loudspeaker terminals		Loudspeaker impedance (W)						
Input voltage		Several loudspeaker systems	;					_
Monitored point:    Model RYK42x		Marking of loudspeaker termi	nals					_
Model RYK42x	Input volta	ge			99Va	0	264Vac	
1.T1 coil	Monitored	point:				dT	(K)	Limit dT (K)
2. T1 bobbin       19.2       24.7       85         3. T2 coil       16.4       19.4       85         4. T2 bobbin       16.2       19.7       85         5. C4       15.6       20.8       70         6.PCB near IC (sony)       24.9       26.1       70         7. PCB near Line       9.8       11.2       70         8. Line(wire)       9.8       11.4       60         9.enclosure near T1 (inside)       8.3       9.7       40         10. External Enclosure       7.4       8.4       40         11. Enclosure near switch (DC DRIVE)       3.1       2.9       40         12. Ambient       (28.3)       (28.8)       -         Comments:       1. The temperatures were measured under worst case normal mode defined in 4.2.1.       2.         2. The max. temperature rise is calculated as follows which based upon maximum working ambient of 35       :         Winding components: T1 ,T2 coil       Tmax=85K.         Electrolyte capacitor or components with:       -         - max. absolute temp. of 85       Tmax=(85-35)K=50K         - max. absolute temp. of 105       Tmax=(85-35)K=70K         Winding temperature rise measurements       -         - Ambient temperature 12 (	Model RYI							
16.4	1.T1 coil				15.4		15.4	85
4. T2 bobbin       16.2       19.7       85         5. C4       15.6       20.8       70         6.PCB near IC (sony)       24.9       26.1       70         7. PCB near Line       9.8       11.2       70         8. Line(wire)       9.8       11.4       60         9.enclosure near T1 (inside)       8.3       9.7       40         10. External Enclosure       7.4       8.4       40         11. Enclosure near switch (DC DRIVE)       3.1       2.9       40         12. Ambient       (28.3)       (28.8)       -         Comments:         1. The temperatures were measured under worst case normal mode defined in 4.2.1.         2. The max. temperature rise is calculated as follows which based upon maximum working ambient of 35:       Winding components: T1,T2 coil       Tmax=85K.         Electrolyte capacitor or components with:       -       -         - max. absolute temp. of 85       Tmax=(85-35)K=50K         - max. absolute temp. of 105       Tmax=(105-35)K=70K         Winding temperature rise measurements       -         Ambient temperature t1 (°C)       -         Ambient temperature t2 (°C)       -         Temperature rise dT of winding:       R1 (O)       R2 (O)	2. T1 bobb	oin			19.2		24.7	85
15.6	3. T2 coil	3. T2 coil						85
6.PCB near IC (sony)       24.9       26.1       70         7. PCB near Line       9.8       11.2       70         8. Line(wire)       9.8       11.4       60         9.enclosure near T1 (inside)       8.3       9.7       40         10. External Enclosure       7.4       8.4       40         11. Enclosure near switch (DC DRIVE)       3.1       2.9       40         12. Ambient       (28.3)       (28.8)       -         Comments:         1. The temperatures were measured under worst case normal mode defined in 4.2.1.         2. The max. temperature rise is calculated as follows which based upon maximum working ambient of 35:         Winding components: T1 ,T2 coil       Tmax=85K.         Electrolyte capacitor or components with:         - max. absolute temp. of 85       Tmax=(85-35)K=50K         - max. absolute temp. of 105       Tmax=(105-35)K=70K         Winding temperature rise measurements							_	
7. PCB near Line       9.8       11.2       70         8. Line(wire)       9.8       11.4       60         9.enclosure near T1 (inside)       8.3       9.7       40         10. External Enclosure       7.4       8.4       40         11. Enclosure near switch (DC DRIVE)       3.1       2.9       40         12. Ambient       (28.3)       (28.8)       -         Comments:         1. The temperatures were measured under worst case normal mode defined in 4.2.1.         2. The max. temperature rise is calculated as follows which based upon maximum working ambient of 35:       Winding components: T1,T2 coil       Tmax=85K.         Electrolyte capacitor or components with:       -       -         - max. absolute temp. of 85       Tmax=(85-35)K=50K         - max. absolute temp. of 105       Tmax=(105-35)K=70K         Winding temperature rise measurements       -         Winding temperature t1 (°C)       -         Ambient temperature t2 (°C)       -         Temperature rise dT of winding:       R1 (O)       R2 (O)       dT (K)       Limit dT (K)       Insulation								
8. Line(wire) 9.enclosure near T1 (inside) 10. External Enclosure 11. Enclosure near switch (DC DRIVE) 12. Ambient 13. The temperatures were measured under worst case normal mode defined in 4.2.1. 13. The max. temperature rise is calculated as follows which based upon maximum working ambient of 35 :  Winding components: T1 ,T2 coil Tmax=85K.  Electrolyte capacitor or components with:  - max. absolute temp. of 85 Tmax=(85-35)K=50K  - max. absolute temp. of 105 Tmax=85K.  Winding temperature rise measurements  - Ambient temperature t1 (°C)								
9.enclosure near T1 (inside) 10. External Enclosure 11. Enclosure near switch (DC DRIVE) 12. Ambient 13. 1 14. Enclosure near switch (DC DRIVE) 13. 1 14. Enclosure near switch (DC DRIVE) 15. Ambient 16. Comments: 16. The temperatures were measured under worst case normal mode defined in 4.2.1. 17. The max. temperature rise is calculated as follows which based upon maximum working ambient of 35 is Winding components: T1 ,T2 coil Tmax=85K.  18. Electrolyte capacitor or components with:  19. max. absolute temp. of 85 Tmax=(85-35)K=50K  19. max. absolute temp. of 105 Tmax=(105-35)K=70K   Winding temperature rise measurements  20. Ambient temperature t1 (°C)								
10. External Enclosure 11. Enclosure near switch (DC DRIVE) 12. Ambient (28.3 ) (28.8 ) -  Comments: 1. The temperatures were measured under worst case normal mode defined in 4.2.1. 2. The max. temperature rise is calculated as follows which based upon maximum working ambient of 35: Winding components: T1 ,T2 coil Tmax=85K. Electrolyte capacitor or components with: - max. absolute temp. of 85 Tmax=(85-35)K=50K - max. absolute temp. of 105 Tmax=(105-35)K=70K  Winding temperature rise measurements Ambient temperature t1 (°C)								
11. Enclosure near switch (DC DRIVE)  12. Ambient  (28.3 )  (28.8 )  Comments:  1. The temperatures were measured under worst case normal mode defined in 4.2.1.  2. The max. temperature rise is calculated as follows which based upon maximum working ambient of 35:  Winding components: T1 ,T2 coil Tmax=85K.  Electrolyte capacitor or components with:  - max. absolute temp. of 85  - max. absolute temp. of 105  Winding temperature rise measurements  Winding temperature t1 (°C)		, ,						
12. Ambient (28.3 ) (28.8 ) -  Comments:  1. The temperatures were measured under worst case normal mode defined in 4.2.1.  2. The max. temperature rise is calculated as follows which based upon maximum working ambient of 35 :  Winding components: T1 ,T2 coil Tmax=85K.  Electrolyte capacitor or components with:  - max. absolute temp. of 85 Tmax=(85-35)K=50K  - max. absolute temp. of 105 Tmax=(105-35)K=70K  Winding temperature rise measurements  Ambient temperature t1 (°C)								
Comments:  1. The temperatures were measured under worst case normal mode defined in 4.2.1.  2. The max. temperature rise is calculated as follows which based upon maximum working ambient of 35:  Winding components: T1 ,T2 coil Tmax=85K.  Electrolyte capacitor or components with:  - max. absolute temp. of 85 Tmax=(85-35)K=50K  - max. absolute temp. of 105 Tmax=(105-35)K=70K  Winding temperature rise measurements  Ambient temperature t1 (°C)  Ambient temperature t2 (°C)  Temperature rise dT of winding: R <sub>1</sub> (O) R <sub>2</sub> (O) dT (K) Limit dT (K) Insulation						)		-
1. The temperatures were measured under worst case normal mode defined in 4.2.1.  2. The max. temperature rise is calculated as follows which based upon maximum working ambient of 35:  Winding components: T1, T2 coil Tmax=85K.  Electrolyte capacitor or components with:  - max. absolute temp. of 85 Tmax=(85-35)K=50K  - max. absolute temp. of 105 Tmax=(105-35)K=70K   Winding temperature rise measurements  Ambient temperature t1 (°C)  Ambient temperature t2 (°C)  Temperature rise dT of winding: R1 (O) R2 (O) dT (K) Limit dT (K) Insulation	,	···			(=0:0	/	(=0.0 )	
2. The max. temperature rise is calculated as follows which based upon maximum working ambient of 35:  Winding components: T1 ,T2 coil Tmax=85K.  Electrolyte capacitor or components with:  - max. absolute temp. of 85 Tmax=(85-35)K=50K  - max. absolute temp. of 105 Tmax=(105-35)K=70K  Winding temperature rise measurements  Ambient temperature t1 (°C)  Ambient temperature t2 (°C)  Temperature rise dT of winding: R <sub>1</sub> (O) R <sub>2</sub> (O) dT (K) Limit dT (K) Insulation	Comments	S:						
2. The max. temperature rise is calculated as follows which based upon maximum working ambient of 35:  Winding components: T1 ,T2 coil Tmax=85K.  Electrolyte capacitor or components with:  - max. absolute temp. of 85 Tmax=(85-35)K=50K  - max. absolute temp. of 105 Tmax=(105-35)K=70K  Winding temperature rise measurements  Ambient temperature t1 (°C)  Ambient temperature t2 (°C)  Temperature rise dT of winding: R <sub>1</sub> (O) R <sub>2</sub> (O) dT (K) Limit dT (K) Insulation	1. The te	mperatures were measured und	er worst case n	ormal r	node d	lefined in 4	1.2.1.	
Winding components: T1 ,T2 coil Tmax=85K.  Electrolyte capacitor or components with:  - max. absolute temp. of 85 Tmax=(85-35)K=50K  - max. absolute temp. of 105 Tmax=(105-35)K=70K  Winding temperature rise measurements  Ambient temperature t1 (°C)  Ambient temperature t2 (°C)  Temperature rise dT of winding: R <sub>1</sub> (O) R <sub>2</sub> (O) dT (K) Limit dT (K) Insulation		•						mbient of 35
Electrolyte capacitor or components with:  - max. absolute temp. of 85  - max absolute temp. of 105  Tmax=(85-35)K=50K  - max. absolute temp. of 105  Tmax=(105-35)K=70K   Winding temperature rise measurements   Ambient temperature t1 (°C)		·		on bas	cu upo	iii iiiaxiiiia	iii working ar	indicint of 55 .
- max. absolute temp. of 85	Windi	ng components: 11,12 coil	Imax=85K.					
- max. absolute temp. of 105         Tmax=(105-35)K=70K           Winding temperature rise measurements            Ambient temperature t1 (°C)            Ambient temperature t2 (°C)            Temperature rise dT of winding:         R <sub>1</sub> (O)         R <sub>2</sub> (O)         dT (K)         Limit dT (K)         Insulation	Electr	olyte capacitor or components w	ith:					
Winding temperature rise measurements  Ambient temperature t1 (°C)	- max.	absolute temp. of 85	Tmax=(85-	35)K=5	60K			
Ambient temperature t1 (°C)	- max.	absolute temp. of 105	Tmax=(10	5-35)K	=70K			
Ambient temperature t1 (°C)								
Ambient temperature t2 (°C)	Winding temperature rise measurements							
Temperature rise dT of winding: R <sub>1</sub> (O) R <sub>2</sub> (O) dT (K) Limit dT (K) Insulation		Ambient temperature t1 (°C)		:				_
		Ambient temperature t2 (°C)		:				_
	Temperatu	re rise dT of winding:	R <sub>1</sub> (O)	R <sub>2</sub>	(O)	dT (K)	Limit dT	

Page 30 of 35 Report No.: S960056-1

EN 60065				
Clause	Requirement – Test	Result - Remark	Verdict	

7.2	TABLE: softening temperature of thermoplastics				N
Temperature	e T of part	T - normal conditions (°C)	T - fault condi- tions (°C)	Т	softening (°C)
Investigated	Investigated during the separated certificated of power supply board.				

9.1.1 Table :Elec	ctric shock haza	ard under normal condition		
Measured between:	U1(V)	Required U1(Vpk)	U2(V)	Required U2(Vpk)
L terminal	0.4	35	0.3	0.35
L metal screw	0.4	35	0.3	0.35
N terminal	0.4	35	0.3	0.35
N metal screw	0.4	35	0.3	0.35
Input voltage: 264V/50	Hz			

9.1.6	TABLE: W	E: Withdrawal of mains plug (discharge)		
Condition Max. I		Max. Mains voltage	Voltage after withdrawal of mains	plug at 2s
Line – Neutr	al	368 Vac	Vac 0 V	
Input voltage: 264V/50Hz				

9.1.7	TABLE:	Enclosure resistance	to external forces test	external forces test		
Test part		Pull force	Duration	Result		
Top Enclosure		100N	5s	No damage.		
Right Enclosure		100N	5s	No damage.		
Left Enclosure		100N	5s	No damage.		
Notes:						

10.1 TABLE: Voltage surge			Р	
	Test voltage applied between	Test voltage breakdown		akdown
Primary and SELV		10kV		No
Notes:				

10.1 TABLE: Electric strength after voltage surge			Р	
Test voltage applied between:		Test voltage (V)	Breakdown	
Primary & SELV		DC 4240V		No

Page 31 of 35 Report No.: S960056-1

			EN 60065				
Clause	Requi	rement – Test		Res	sult - Remark		Verdict
	•					•	
10.1	TABL	TABLE: Insulation resistance after voltage surge					Р
Test voltag	ge applie	d between:			Resistan	ce (M )	
Primary &	SELV				>	4	
10.2	ТЛВІ	E: Humidity treatment					P
		-	D 1 2 11 12				
Test cor	altion	Temperature	Relative Humidity				
		30	93%	48 hours			
10.3	TABL	E: Insulation resistance r	neasurements				P
Insulation	resistanc	e R between:			R (MO)	Required R (MO	
RI: Betwee	en Pri. &	Sec.		>4 4			4
							_
10.3	TABL	E: Electric strength meas	urements			Р	
Test voltage applied between:			1	Test voltage (V) Breakdow		akdown	
For Unit							
Pri. ? SELV				4240 Vdc No		No	
Transform	er is Inve	estigated during the sepa	rated certificated of po	owe	r supply board.		

Page 32 of 35 Report No.: S960056-1

	EN 60065									
Clau	se	Requi	rement –	Test				Result - Re	emark	Verdict
11.2 TABLE: summary of fault condition tests							Р			
11.2		Voltage (V) 0,9 or 1,1 times rated voltage:						_		
		Ambie	ent tempe	rature (°	C)		25			_
No.	Compo	onent	Fault	Input	Test	Fuse No.	Fuse current/		Result	
	No	).		(V)	time		mea	sured(A),		
							Input	power (W)		
1	Q	1	S-C	240	10 min.	F1		0	Unit shut down, no dar	naged, no
	Pin3-	pin4							Hazaius.	
2.	C <sup>2</sup>	4	S-C	240	<1s	F1		0	Fuse F1 opened, no da hazards,	amaged, no

Page 33 of 35 Report No.: S960056-1

EN 60065					
Clause	Requirement – Test		Result - Remark	Verdict	
12.1.3	TABLE: Impact test				
Location		Force (J)	Obtained		
Тор		0.5	No damage.		
Side		0.5	No damage.		
Rear		0.5	No damage.		

12.1.3	TABLE: Electric strength after impact			Р
Test voltage applied between:		Test voltage (V)	Breakdown	
RI: Between	Pri. & Sec.	DC 4240		No

13.2	TABLE : determin	TABLE: determination of operating voltage			
Location		Peak voltage(V)	RMS voltage (V)	Comments	
Investigated during the separated certificated of power supply board.					

13.3/13.4	TAB	LE: clearan	ce and cree	page distance	measurements		Р
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)
Model: RYK4:	2×						
Between F1(B)	)	< 420	< 250	2.0	2.51	2.5	2.51
Line Neutral(B)		< 420	< 250	2.0	3.0	2.5	3.0
Pri. sec. traces Under Q1(R)		< 420	< 250	4.0	6.3	5.0	> 6.3
Pri. circuit – Enclosure (R)		< 420	< 250	4.0	> 5.0	5.0	> 5.0

Page 34 of 35 Report No.: S960056-1

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict

14	TAB	BLE: list of critical components and materials		Р			
Component		Manufacturer/ trademark	Type/model	Value / rating	Standard		oproval/ eference
Power plug		Lian Dung	LT-207	2.5A, 250V~	EN 50075:1990	VDE	
Power supply cord		Rhythm Wire Industrial Co., Ltd.,/RHYTHM	H03VVH2-F	300V 0.75mm/2C BLK 5FT	- VDE		
		STANDARD ELECTRIC WIRE & CABLE CO., LTD.	H03VVH2-F	300V 0.75mm/2C BLK 5FT	-	VDE	
Power board	k	YOKO TECHNOLOGY CORP.	R219500/2LL ;R219500/2	Input: 110-240V~, 50/60 Hz, max 5W Output: 12V	EN 60065	CE	
Enclosure		Various	Various	Metal	-	-	
PCB		Various	Various	V-1 min., 105 min.	UL94	UL	
		-			-		

Page 35 of 35 Report No.: S960056-1

	EN 60065		
Clause	Requirement – Test	Result - Remark	Verdict

- 1. This report is submitted for the exclusive use of the client to whom it is addressed. Its significance is subject to the adequacy and representative character of the sample(s) and to the comprehensiveness of the tests, examinations or surveys made.
- 2. The CE marking may only be used if all relevant and effective EC directives are complied with.
- 3. The instruction specified by the standard has to be in official language of each country, however, only English is checked for this report. It is the applicant's responsibility to provide instruction in each official language of the EU.

#### Annex A: Photos

Page 1 of 4

Report No.: S960056-1

**Annex A: Photos** 

Model: RYK42X

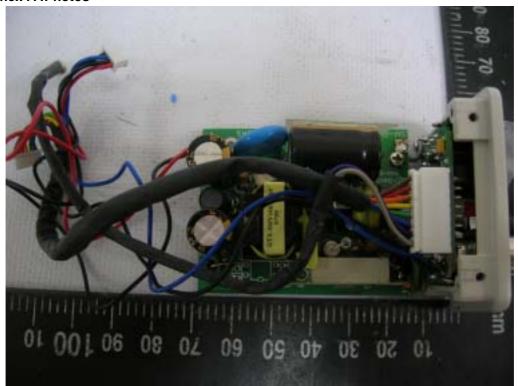




Page 2 of 4

Report No.: S960056-1

**Annex A: Photos** 



Model: RYK46X



Page 3 of 4 Report No.: S960056-1

Annex A: Photos





Page 4 of 4

Report No.: S960056-1

Annex A:Photos

Model: RYK47X



#### Annex B: Critical components and materials





/ Prüfinstitut-Homepage / Catalogue of VDE-certified products / Printversion VDE-LOC

**TESTING** 

**STANDARDS** 

Address:

**REPORTS** 

**E-SERVICE** 

**MEMBERSHIP** 

**SEARCH** 

\*

**ADVANCED SEARCH** 

**SITEMAP** 

**CONTACT** 

DEUTSCH >>

Homepage

**About ourselves** 

**Testing + Certification** 

International

Infodesk + Service

**Catalogue** of **VDE-certified products** 

Catalogue of VDE-certified products

**Online Search** 

Unlawful use

**VDE tested Product** 

**Back to the Searchresult** 

Approval No.: 40007469

Product: Plug non-rewirable

Productgroup: Plugs with cord, Household

Lian Dung Electric Wire Material Co., Ltd. Company:

No. 957-16 San Feng Road

Feng Yuan City

420 TAICHUNG HSIEN

Taiwan

**VDE Mark** Mark:

LT-207 Typ:

technical Data: Rated voltage AC 250 V

Rated current 2,5 A

Degree of protection ordinary

Kind of construction Standard sheet 1 (EN 50075)

Cord(s) H03VVH2-F 2x 0,75 mm2 (a;b) H05VVH2-F 2x 0,75 mm2

(a;b)

**VDE** 

DKE

**VDE-PUBLISHERS** 

**VDE GLOBAL SERVICES** 

**Technology Center** 

VDE Association for Electrical, Electronic & Information Technologies

1 of 1 2007/7/5 下午 06:52





/ Prüfinstitut-Homepage / Catalogue of VDE-certified products / Printversion VDE-LOC

**TESTING** 

**STANDARDS** 

**REPORTS** 

**E-SERVICE** 

**MEMBERSHIP** 

**Back to the Searchresult** 

**SEARCH** 



**ADVANCED SEARCH** 

**SITEMAP** 

**CONTACT** 

DEUTSCH >>

Approval No.: 094010

Product: Flexible cable (cord)

**VDE tested Product** 

Productgroup: PVC insulated cables of rated voltages up to and including

450/750 V

Homepage Company: Rhythm Wire Industrial Co., Ltd. Address: Yih-Lin Rd., Jen Te Hsiang **About ourselves** 

**TAINAN COUNTY** 

Taiwan

H03VV-F

International **VDE Cable Mark or Identification Thread** Mark:

Infodesk + Service

**Catalogue** of

**Testing + Certification** 

**VDE-certified products** 

Catalogue of VDE-certified

products

**Online Search** 

Typ: technical Data:

H03VVH2-F Typ:

technical Data:

Typ: H05VV-F 2...5 x 0,75...1,5 mm<sup>2</sup> Unlawful use

technical Data:

H05VVH2-F 2x0,75 mm<sup>2</sup> Typ:

technical Data:

**VDE** 

DKE

**VDE-PUBLISHERS** 

**VDE GLOBAL SERVICES** 

**Technology Center** 

VDE Association for Electrical, Electronic & Information Technologies

1 of 1 2007/7/9 下午 05:00





/ Prüfinstitut-Homepage / Catalogue of VDE-certified products / Printversion VDE-LOC

**TESTING** 

STANDARDS

**EVENTS REPORTS** 

**E-SERVICE** 

**MEMBERSHIP** 

**Back to the Searchresult** 

**SEARCH** 

\*

**ADVANCED SEARCH** 

SITEMAP

CONTACT

DEUTSCH >>

**About ourselves** 

**Testing + Certification** 

Approval No.: 100610

Product: Flexible cable (cord)

Productgroup: PVC insulated cables of rated voltages up to and including

450/750 V

**VDE tested Product** 

Homepage Company: Standard Electric Wire & Cable Co., Ltd.

Address: Kuo-Chi Road

Hsin-Shih Hsiang TAINAN COUNTY

Taiwan

Infodesk + Service Mark: VDE Cable Mark or Identification Thread

**Catalogue of**

International

**VDE-certified products** 

Catalogue of VDE-certified

products

**Online Search** 

Unlawful use

Typ: H03VV-F

technical Data:

Typ: H03VVH2-F 2x0,75 mm<sup>2</sup>

technical Data:

Typ: H05VV-F 2...3 x 0,75...1,5 mm<sup>2</sup>

technical Data:

Typ: H05VVH2-F 2x0,75 mm<sup>2</sup>

technical Data:

**VDE** 

DKE

**VDE-PUBLISHERS** 

**VDE GLOBAL SERVICES** 

**Technology Center** 

VDE Association for Electrical, Electronic & Information Technologies

1 of 1 2007/7/9 下午 05:03

# **VERIFICATION**

# of conformity with **European Low Voltage Directive**

No. S960002-1

Document holder:	YOKO TECHNOLOGY CORP.				
Type of equipment:	POWER BOARD				
Type designation:	R219500/2LL, R219500/2				
A sample of the equipment has	as been tested for CE-marking according to the Low Voltage				
Directive, (2006/95/EC).					
Standard(s) used for showing	g compliance with the essential requirements of the directive:				
	EN 60065: 2002				
On this basis, together with the	that the product fulfills the requirements in the LVD Directive for CE marking. e manufacturer's own documented production control, the manufacturer (or his ative) can in his EC Declaration of Conformity verify compliance with the LVD				
	<b>Signed for and on behalf of</b> PEP Testing Laboratory				
DEL					

Date: August 21, 2007 Peter Kao/ President

Poters Kao