



Low Voltage Directive Report



鼎安科技股份有限公司

SUPERIOR PRODUCT CONSULTING, INC

**3F, NO. 10, ALLEY 6, LANE 235, PAO CHIAO
RD., HSIEN TIEN, TAIPEI, TAIWAN R.O.C.**

**台北縣新店市寶僑路235巷6弄10號3F
TEL: 886-2-29174137 FAX: 886-2-29184517**

The test results of this report relate only to the tested sample identified in this report.
此份報告之測試結果只適用於報告中所述之那台測試樣機

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Superior Product Consulting, Inc.*

此份報告未經鼎安科技股份有限公司書面同意不得部分複製



TÜV Rheinland Taiwan Ltd.

Certificate of Appointment

for the applicant:

Superior Product Consulting, Inc.
3F., No. 10, Alley 6, Lane 235, Pao Chiao Rd., Hsin Tien,
Taipei Hsien 231, Taiwan, R.O.C.

has been authorized to carry out safety tests by order and under supervision
of TÜV Rheinland. It has successfully demonstrated capability to conduct
measurement and to process test data according to:

**European and International Safety Standards as listed in the
Scope of Authorization on the attachment to this certificate**

An assessment of the facility was conducted by TÜV Rheinland auditors according
to the TÜV Rheinland requirements for "Test Site Approval" with reference to
ISO 17 025:1999

Certificate No. : 10010807-2004

Date of expiry : July 11, 2005

TÜV Rheinland Taiwan Ltd.
Taipei, April 12, 2004

Dipl.-Ing. Andreas Klinker
Certification Body

David Lee
Lead Auditor



Attachment to

Certificate

of Appointment
SCOPE OF AUTHORIZATION
for

Superior Product Consulting, Inc.
3F., No. 10, Alley 6, Lane 235, Pao Chiao Rd., Hsin Tien,
Taipei Hsien 231, Taiwan, R.O.C.

European Standards


EN 60 950	EN 60 950-1
EN 60 065	

Basic and International Standards

IEC 60 950	IEC 60 950-1
IEC 60 065	

Certificate No. : 10010807-2004

Taipei, April 12 , 2004


David Lee
Lead Auditor



QUALIFIED INDEPENDENT LABORATORY

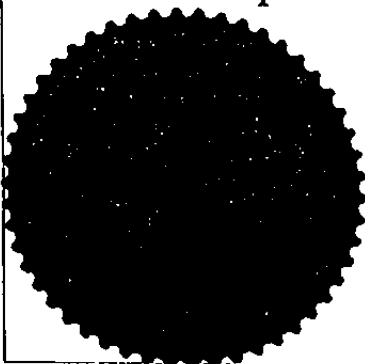
This is to confirm that:

Superior Product Consulting Inc.
(Taipei, TAIWAN)

has in the course of current cooperation projects with Nemko
shown to be qualified in safety testing of electrical equipment to
the following standards:

IEC 60950 / EN 60950

This statement is also supported by our assessment of the
laboratory testing equipment, -facilities and -procedures relative
to the requirements of EN 45001 and ISO/IEC Guide 25.



Jon Ivar Tidemann

Jon Ivar Tidemann
Head of dept. Data and Electronics

NEMKO
IT and Electronics Dept.

DECLARATION OF CONFORMITY

According to the Low Voltage Directive 73/23/EEC and the
Amendment Directive 93/68/EEC

Type of Product.....: **Computer**

Model Designation: **PPC-V106T-ACXXXX (where X = 0-9, A-Z
or blank)**

Manufacturer's Name.....: **Advantech Co., Ltd**

Manufacturer's Address: **4th Fl, No. 108-3, Ming-Chuan Rd,
Shing-Tien City, Taipei Hsien, Taiwan**

Is herewith confirmed to comply with the requirements set out in
the Council Directive 73/23/EEC for electrical equipment used
within certain voltage limits and the Amendment Directive
93/68/EEC. For the evaluation of the compliance with these
Directive, the following standard was applied:

IEC 60950-1

EN 60950-1

Person responsible for making this declaration

Name, Surname.....:

Position/Title



(Place)

(Date)

(Company stamp and signature)



COVER PAGE FOR TEST REPORT

Product:	Computer
Model/Type Reference:	PPC-V106T-ACXXXX (where X = 0-9, A-Z or blank)
Rating(s):	Input: 100-240Vac, 50/60Hz, 2-1.5 A
Standards:	IEC 60950-1 / EN 60950-1, First Edition
Applicant Name	Advantech Co., Ltd
Applicant Address:	4 th Fl, No. 108-3, Ming-Chuan Rd, Shing-Tien City, Taipei Hsien, Taiwan
Result:	Pass

This Report includes the following parts, in addition to this cover page:

1. Clause Verdicts
2. Critical Components
3. Test Results
4. Enclosures

This is to certify that representative samples of the products covered by this Test Report have been investigated by "Superior Product Consulting, Inc." in accordance with the above referenced Standards. The products have been found to comply with the requirements.
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Test Report By:

Reviewed By:

Tim Lu

Allen Huang

**TEST REPORT**

IEC 60950-1 / EN 60950-1, First Edition Information technology equipment - Safety- Part 1: General Requirements	
Report Reference No..... : SPCLVD40877	
Compiled by	Tim Lu 
Reviewed by	Allen Huang 
Date of issue : November 16, 2004	
Testing laboratory : name : Superior Product Consulting, Inc. Testing location..... : 235 6 10 3 3F, No. 10, Alley 6, Lane 235, Pao Chiao Rd., Hsien Tien, Taipei, Taiwan	
Client name : Advantech Co., Ltd Address..... : 4th Fl, No. 108-3, Ming-Chuan Rd, Shing-Tien City, Taipei Hsien, Taiwan	
Standards : IEC 60950-1 / EN 60950-1, First Edition Test procedure : QE-19 IEC/EN 60950-1 Non-standard test NA method :	
Test item description : Computer Trademark..... :  Model and/or type reference .. : PPC-V106T-ACXXXX (where X = 0-9, A-Z or blank) Rating(s) : Input: 100-240Vac, 50/60Hz, 2-1.5 A	

**Particulars: test item vs. test requirements**

	Equipment mobility	Movable
	Operating condition.....	continuous
	Mains supply tolerance (%)	+10%, -10%
IT	Tested for IT power systems	No
IT	IT testing, phase-phase voltage (V) :	N/A
-	Class of equipment.....	Class I
	Mass of equipment (kg)	< 18 kg
	Protection against ingress of water	IP X0

Possible test case verdicts:

- test case does not apply to the test object....: N / A
- test object does meet the requirement.....: Pass
- test object does not meet the requirement Fail (acceptable only if a corresponding, less stringent
.....: national requirement is "Pass")

General remarks:

- "(see Enclosure #)" refers to additional information appended to the Test Report
- "(see table)" refers to a table appended to the Test Report
- Throughout the Test Report a point is used as the decimal separator



GENERAL PRODUCT INFORMATION:	
A1.0	Report Summary
A1.1	N/A
B1.0	Product Description
B1.1	The products are Class I units with an internal AC to DC Power Supply Board, DC/AC Inverter Board, Motherboard, LCD Display, optional HDD housed in metal enclosure.
C1.0	Model Differences
C1.1	All models are indential except model designation.
D1.0	Additional Information
D1.1	N/A
E1.0	Technical Considerations
E1.2	The product was submitted and tested for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 45°C
E1.3	The means of connection to the mains supply is: Detachable power cord
E1.4	The product is intended for use on the following power systems: TN
E1.5	The equipment disconnect device is considered to be: Appliance inlet
E1.8	The following accessible locations (with circuit/schematic designation) are within a limited current circuit: DC/AC inverter board.
E1.9	The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): USB, PS/2 (Keyboard/Mouse) and VGA connector.

1	GENERAL		Pass
1.5	Components		Pass
1.5.1	General		Pass
	Comply with IEC 60950 or relevant component standard	Components which are found to affect safety, comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards. See appended table 1.5.1.	Pass
1.5.2	Evaluation and testing of components	Components, which are certified to IEC and/or national standards, are used correctly within their ratings or have been evaluated during this approval.	Pass
1.5.3	Thermal controls	No thermal controls provided.	N/A
1.5.4	Transformers	Transformer used is suitable for its intended application and complies with the relevant requirements of the standard and particularly Annex C.	Pass
1.5.5	Interconnecting cables		N/A
1.5.6	Capacitors in primary circuits... :	Line-to-Line capacitors are subclass X1 or X2. Primary-to-earth capacitors are subclass Y1 or Y2.	Pass
1.5.7	Double insulation or reinforced insulation bridged by components		Pass
1.5.7.1	General		Pass
1.5.7.2	Bridging capacitors	Double Insulation bridged by a single capacitor complying with IEC 384-14: 1993, subclass Y1.	Pass
1.5.7.3	Bridging resistors		N/A
1.5.7.4	Accessible parts		N/A
1.5.8	IT Components in equipment for IT power systems	Not for use on IT systems.	N/A
1.6	Power interface		Pass
1.6.1	AC power distribution systems		Pass

1.6.2	Input current	Highest load according to 1.2.2.1 for this equipment is the operation with the maximum specified DC-load.	Pass
1.6.3	Voltage limit of hand-held equipment		N/A
1.6.4	Neutral conductor	Neutral is insulated from earth with basic insulation.	Pass

1.7	Marking and instructions		Pass
1.7.1	Power rating	See page 2 for details.	Pass
	(V) Rated voltage(s) or voltage range(s) (V)	See page 2 for details.	Pass
	Symbol for nature of supply, for d.c. only		N/A
	Hz Rated frequency or rated frequency range (Hz)	See page 2 for details.	Pass
	(mA A) Rated current (mA or A)	See page 2 for details.	Pass
	Manufacturer's name or trademark or identification mark	See page 2 for details.	Pass
	Type/model or type reference :	See page 2 for details.	Pass
	II " " II Symbol for Class II equipment only	Class I equipment	N/A
	Other symbols		N/A
	Certification marks.....		N/A
1.7.2	Safety instructions		Pass
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment		N/A
1.7.5	Power outlets on the equipment :		N/A
1.7.6	Fuse identification	Fuse marking provided as follows: 3.15A/250V	Pass
1.7.7	Wiring terminals		Pass
1.7.7.1	Protective earthing and bonding terminals	The PWB is marked with the standard earth symbol (60417-2-IEC-5017).	Pass
1.7.7.2	Terminal for a.c. mains supply conductors	Class I equipment, no direct connect to mains supply	N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators		N/A
1.7.8.1	Identification, location and marking		N/A
1.7.8.2	Colours		N/A
1.7.8.3	Symbols according to IEC 60417		N/A



1.7.8.4	Markings using figures		N/A
1.7.9	Isolation of multiple power sources	N/A
1.7.10	IT IT power distribution systems		N/A
1.7.11	Thermostats and other regulating devices		N/A
1.7.12	Language	English	-
1.7.13	Durability	All markings provided on UL Recognized Component labels suitable for surface they are applied upon and meet the durability test.	Pass
1.7.14	Removable parts	No marking is located on removable part.	Pass
1.7.15	Replaceable batteries		N/A
	Language		-
1.7.16	Operator access with a tool:		N/A
1.7.17	Equipment for restricted access locations		N/A

2	PROTECTION FROM HAZARDS		Pass
2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in operator access areas		Pass
2.1.1.1	Access to energized parts	No operator access to energized parts.	Pass
	Test by inspection	User can not contact any parts with only basic insulation to HAZ/V or HAZ/V parts.	Pass
	(2A)Test with test finger	User can not contact any parts with only basic insulation to HAZ/V or HAZ/V parts.	Pass
	(2B)Test with test pin	User can not contact any parts with only basic insulation to HAZ/V or HAZ/V parts.	Pass
	(2C)Test with test probe ...		N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	ELV Access to ELV wiring		N/A
	(V), (mm) Working voltage (V) ; minimum distance (mm) through insulation		-
2.1.1.4	Access to hazardous Voltage circuit wiring	Should be investigated in the final system assembly.	N/A

2.1.1.5	Energy hazards	The hazardous energy circuits can't be bridged by the test finger in a straight position.	Pass
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment	No risk of electric shock.	Pass
	(s); (V) Time-constant (s) ; measured voltage (V)	Fuse In/Switch Off The voltage (maximum 384Vpk) across-line capacitors did decay to less than 37% of its original value in 0.004 second. Fuse In/Switch On The voltage (maximum 380Vpk) across-line capacitors did decay to less than 37% of its original value in 0.266 second.	-
2.1.2	Protection in service access areas		Pass
2.1.3	Protection in restricted access locations		N/A

2.2	SELV SELV circuits		Pass
2.2.1	General requirements	SELV levels are maintained after single fault condition.	Pass
2.2.2	(V) Voltages under normal conditions (V)	All accessible voltages are less than 42.4 Vpk or 60 V dc and are classified as SELV.	Pass
2.2.3	(V) Voltages under fault conditions (V)	Under fault conditions. voltages never exceed 71V peak and 120Vdc and do not exceed 42.2V peak or 60V dc for more than 0.2 sec.	Pass
2.2.3.1	(1) Separation by double insulation or reinforced insulation (method 1)	Double or reinforced for the highest working voltage across a particular insulation is provided.	Pass
2.2.3.2	(2) Separation by earthed screen (method 2)		N/A
2.2.3.3	SELV (3) Protection by earthing of the SELV circuit (method 3)		N/A

2.2.4	SELV circuits to other circuits : Connection of SELV	SELV circuits are only connected to other secondary circuits. SELV circuit and all interconnected circuits separated from primary by Reinforced insulation. The SELV circuit does not exceed the SELV limits under normal and fault conditions.	Pass
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2.3	TNV TNV circuits		N/A
2.3.1	Limits		N/A
	TNV Type of TNV circuits :		-
2.3.2	Separation from other circuits and from accessible parts		N/A
	Insulation employed :		-
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed :		-
2.3.4	TNV Connection of TNV circuits to other circuits		N/A
	Insulation employed :		-
2.3.5	Test for operating voltages generated externally		N/A

2.4	Limited current circuits		Pass
2.4.1	General requirements		Pass
2.4.2	Limit values	See Enclosure test record for details.	Pass
	Frequency (Hz) :	Ditto	-
	Measured current (mA) :	Ditto	-
	Measured voltage (V) :	Ditto	-
	Measured capacitance (mF) :	Ditto	-
2.4.3	Connection of limited current circuits to other circuits	The limited current circuits connected to other circuits complies with the requirements of Sub-clause 2.4.1.	Pass

2.5	Limited power sources		Pass
	Inherently limited output		N/A
	Impedance limited output	Protection by PTCs, see table 1.5.1 for details.	Pass

	Overcurrent protective device limited output		N/A
	Regulating network limited output under normal operating and single fault condition		N/A
	Regulating network limited output under normal operating conditions and overcurrent protective device limited output under single fault condition		N/A
	Output voltage (V), output current (A) , apparent power (VA):..... :	See Enclosure test record for details.	-
	Current rating of overcurrent protective device (A):..... :		-

2.6	Provisions for earthing and bonding		Pass
2.6.1	Protective earthing		Pass
2.6.2	Functional earthing	Secondary functional earthing is separated to primary by reinforced or double insulation.	Pass
2.6.3	Protective earthing and protective bonding conductors		Pass
2.6.3.1	General		Pass
2.6.3.2	Size of protective earthing conductors	No power cord provided.	N/A
	Rated current (A), cross-sectional area (mm ²), AWG:..... :		-
2.6.3.3	Size of protective bonding conductors	Protective bonding conductors evaluated based on 2.6.3.3.	Pass
	Rated current (A), cross-sectional area (mm ²), AWG:..... :	Not specified due to current rating of the circuit is less than 16 A	-
2.6.3.4	Resistance (W) of earthing conductors and their terminations, test current (A) :	See Enclosure test record for details.	Pass
2.6.3.5	Colour of insulation:..... :	Protective bonding conductors are green with yellow stripe.	Pass
2.6.4	Terminals		N/A
2.6.4.1	General		N/A

2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type and nominal thread diameter (mm)		-
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		Pass
2.6.5.1	Interconnection of equipment		Pass
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switches or fuses in earthing conductors.	Pass
2.6.5.3	Disconnection of protective earth	Disconnection of the protective earth at one assembly removes connection of HAZARDOUS VOLTAGES from the other assemblies at the same time.	Pass
2.6.5.4	Parts that can be removed by an operator	It is not possible to disconnect earth without disconnecting mains.	Pass
2.6.5.5	Parts removed during servicing	Connections to protective earthing cannot be removed unless hazardous voltage is removed from the part simultaneously.	Pass
2.6.5.6	Corrosion resistance	No risk of corrosion. Complies with Annex J.	Pass
2.6.5.7	Screws for protective bonding	At least two screws used.	Pass
2.6.5.8	Reliance on telecommunication network or cable distribution system	No TNV circuits.	N/A

2.7	Overcurrent and earth fault protection in primary circuits		Pass
2.7.1	Basic requirements	Equipment protection relies on final-system assembly. Final evaluation has to be performed after build in of the equipment. However over current protection is provided by the built-in fuse.	Pass
	Instructions when protection relies on building installation	Pluggable Type A.	Pass



2.7.2	5.3	Faults not covered in 5.3	Adequate fault protection provided.	Pass
2.7.3		Short-circuit backup protection	The building installation is considered as providing short-circuit backup protection.	Pass
2.7.4		Number and location of protective devices :	One protective device in each phase conductor.	Pass
2.7.5		Protection by several devices		Pass
2.7.6		Warning to service personnel :	The following warning or its equivalent is provided in the servicing instructions. CAUTION. Double pole/neutral fusing.	Pass

2.8	Safety interlocks		N/A
2.8.1	General principles		N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches and relays		N/A
2.8.7.1	Contact gaps (mm) :		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

2.9	Electrical insulation		Pass
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic materials are not used.	Pass
2.9.2	Humidity conditioning	120 hours	Pass
	Humidity (%) :	95%	-
	Temperature (°C) :	40°C	-
2.9.3	Grade of insulation	The adequate levels of safety insulation are provided and maintained to comply with the requirements of this standard.	Pass

2.10	Clearances, creepage distances and distances through insulation		Pass
2.10.1	General		Pass
2.10.2	Determination of working voltage		Pass
2.10.3	Clearances		Pass
2.10.3.1	General		Pass
2.10.3.2	Clearances in primary circuit	See table 2.10.3 and 2.10.4.	Pass
2.10.3.3	Clearances in secondary circuits	See Clause 5.3.4.	Pass
2.10.3.4	Measurement of transient voltage levels		N/A
2.10.4	Creepage distances	See table 2.10.3 and 2.10.4.	Pass
	CTI () CTI tests	Material group IIIb; 100 <= CTI < 175.	-
2.10.5	Solid insulation	Solid or laminated insulating materials having adequate thickness are provided.	Pass
2.10.5.1	Minimum distance through insulation	See table 2.10.5	Pass
2.10.5.2	Thin sheet material	See table 5.2	Pass
	Number of layers (pcs)	Three layers for T Two layers for T2	-
	Electric strength test	3000Vac	-
2.10.5.3	Printed boards		N/A
	Distance through insulation		N/A
	Electric strength test for thin sheet insulating material :		-
	Number of layers (pcs)		N/A
2.10.5.4	Wound components		N/A
	Number of layers (pcs)		N/A
	Two wires in contact inside wound component; angle between 45° and 90°		N/A
2.10.6	Coated printed boards		N/A
2.10.6.1	General		N/A
2.10.6.2	Sample preparation and preliminary inspection		N/A

2.10.6.3	Thermal cycling		N/A
2.10.6.4	Thermal ageing (°C)		N/A
2.10.6.5	Electric strength test		-
2.10.6.6	Abrasion resistance test		N/A
	Electric strength test		-
2.10.7	Enclosed and sealed parts	No hermetically sealed component.	N/A
	Temperature T1=T2 = Tma - Tamb +10K (°C).....		N/A
2.10.8	Spacings filled by insulating compound	Certified sources of optical isolators are used. No other components applied for. (See table 1.5.1)	Pass
	Electric strength test	Certified sources, passed voltage withstand 3000 minimum. Double protected device, meets reinforced insulation requirements.	-
2.10.9	Component external terminations	See table 2.10.3 and 2.10.4	Pass
2.10.10	Insulation with varying dimensions		N/A

3	WIRING, CONNECTIONS AND SUPPLY		Pass
3.1	General		Pass
3.1.1	Current rating and overcurrent protection	All internal wiring used in the distribution of primary power protected against overcurrent and short circuit by suitably rated protective devices.	Pass
3.1.2	Protection against mechanical damage	The wires are routed away from sharp edges and parts which could damage insulation.	Pass
3.1.3	Securing of internal wiring		Pass
3.1.4	Insulation of conductors		Pass
3.1.5	Beads and ceramic insulators	The equipment does not have any beads or similar insulators.	N/A
3.1.6	Screws for electrical contact pressure	All electrical screw connections are by metal screw with more than 2 threads into a metal plate.	Pass
3.1.7	Insulating materials in electrical connections		N/A
3.1.8	Self-tapping and spaced thread screws		N/A

3.1.9	Termination of conductors		Pass
	10N 10 N pull test		Pass
3.1.10	Sleeving on wiring	Sleeving is not used as supplementary insulation.	Pass

3.2	Connection to an a.c. mains supply or a d.c. mains supply		Pass
3.2.1	Means of connection	The unit is provided with an appliance inlet.	Pass
3.2.1.1	Connection to an a.c. mains supply		Pass
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter (mm) of cable and conduits		-
3.2.4	Appliance inlets	The appliance inlet complies with IEC 60320.	Pass
3.2.5	Power supply cords	A power supply cord is not provided.	N/A
3.2.5.1	AC power supply cords	Not provided.	N/A
	Type		-
	Rated current (A), cross-sectional area (mm ²), AWG		-
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N):		-
	Longitudinal displacement (mm).....		-
3.2.7	Protection against mechanical damage	Cord not exposed to sharp points or edges.	N/A
3.2.8	Cord guards		N/A
	D (mm); test mass (g)		-
	Radius of curvature of cord (mm)		-
3.2.9	Supply wiring space		N/A

3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord / cable type, cross-sectional area (mm2)		-
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm)		-
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

3.4	Disconnection from the mains supply		N/A
3.4.1	General requirement		N/A
3.4.2	Disconnect devices	The equipment is provided with an appliance coupler.	Pass
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Single-phase equipment and d.c. equipment		N/A
3.4.7	Three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment	Interconnection to other devices by secondary output only.	Pass
3.4.11	Multiple power sources		N/A

3.5	Interconnection of equipment		Pass
3.5.1	General requirements	SELV output circuits of power supply to be connected to other SELV circuits only.	Pass
3.5.2	Types of interconnection circuits . :	Interconnection circuits are SELV circuits.	Pass
3.5.3	ELV ELV circuits as interconnection circuits		N/A

4	PHYSICAL REQUIREMENTS		Pass
4.1	Stability		Pass
	10° Angle of 10°	The equipment is not floor-standing or does not weigh over 25 kg. Test was waived.	N/A
	Test: force (N)		N/A

4.2	Mechanical strength		Pass
4.2.1	General		Pass
4.2.2	10N Steady force test, 10 N		Pass
4.2.3	30N Steady force test, 30 N		N/A
4.2.4	250N Steady force test, 250 N	No hazards as a result of the 250 N test.	Pass
4.2.5	Impact test	No hazards as a result of the impact test.	Pass
	Fall test		Pass
	Swing test		N/A
4.2.6	Drop test		N/A
4.2.7	Stress relief test	Metal enclosure.	N/A
4.2.8	Cathode ray tubes		N/A
	CNS_(IEC 61965) Picture tube separately certified		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N)		N/A

4.3	Design and construction		Pass
4.3.1	Edges and corners		Pass
4.3.2	Handles and manual controls; force (N)		N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts		Pass
4.3.5	Connection of plugs and sockets		Pass
4.3.6	Direct plug-in equipment		N/A
	Dimensions (mm) of mains plug for direct plug-in . :		N/A
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N)		N/A
4.3.7	Heating elements in earthed equipment		N/A

4.3.8	Batteries	Battery is protected against charging current by multiple components within the system clock integrated circuit package. See Critical Components List.	Pass
4.3.9	Oil and grease		N/A
4.3.10	Dust, powders, liquids and gases		N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids		N/A
	Quantity of liquid (l)		N/A
	Flash point (°C)		N/A
4.3.13	Radiation; type of radiation		N/A
4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation		N/A
	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/A
	Part, property, retention after test, flammability classification		N/A
4.3.13.4	(UV) Human exposure to ultraviolet (UV) radiation		N/A
4.3.13.5	()Laser (including LEDs)		N/A
	Laser class		-
4.3.13.6	Other types		N/A

4.4	Protection against hazardous moving parts		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas		N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A

4.5	Thermal requirements		Pass
4.5.1	Maximum temperatures	See TABLE: 4.5 temperature rise measurements. Components working at high temperatures are shielded to prevent overheating of their surrounding materials. The equipment and its component parts did not attain excessive temperatures during normal operation.	Pass
	L Normal load condition per Annex L..... :	Per Annex L.7 and clause 1.6.2, test according to manufacturer's recommended maximum load on its output.	Pass
4.5.2	Resistance to abnormal heat	See table 4.5.2	Pass

4.6	Openings in enclosures		N/A
4.6.1	Top and side openings	There are no openings in the top of the enclosure.	N/A
	Dimensions (mm)		-
4.6.2	Bottoms of fire enclosures	There are no openings in the top of the enclosure.	Pass
	Construction of the bottom		-
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A
4.6.5	Adhesives for constructional purposes		N/A
	/ Conditioning temperature (°C) /time (weeks)		-

4.7	Resistance to fire		Pass
4.7.1	Reducing the risk of ignition and spread of flame	See below.	Pass
	?? 1- ? ? ? ? ? ? ? ? ? ? Method 1, selection and application of components wiring and materials	Method 1: Selection and application of components and materials which minimize the possibility of ignition and spread of flame.	Pass
	?? 2-? ? ? ? ? 5.3.6 ? ? ? ? ? Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure		N/A
4.7.2.1	Parts requiring a fire enclosure		N/A

4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		Pass
4.7.3.1	General	PCB rated V-1 or better.	Pass
4.7.3.2	Materials for fire enclosures		N/A
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are V-2 or better.	Pass
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		Pass
5.1	Touch current and protective conductor current		Pass
5.1.1	General		Pass
5.1.2	Equipment under test (EUT)	EUT has only one mains connection.	Pass
5.1.3	Test circuit	Using test circuit as in figure 5A.	Pass
5.1.4	Application of measuring instrument	Using measuring instrument in annex D1.	Pass
5.1.5	Test procedure		Pass
5.1.6	Test measurements	See Enclosure test record for details.	Pass
	Test voltage (V)	Ditto.	-
	Measured touch current (mA)	--	-
	Max. allowed touch current (mA)	--	-
	Measured protective conductor current (mA)	Ditto.	-
	Max. allowed protective conductor current (mA)	Ditto.	-
5.1.7	3.5mA Equipment with touch current exceeding 3.5 mA		N/A

5.1.8	Touch currents to and from telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network and a cable distribution system		N/A
	Test voltage (V)		-
	Measured touch current (mA)		-
	Max. allowed touch current (mA):		-
5.1.8.2	Summation of touch currents from telecommunication networks.....		N/A

5.2	Electric strength		Pass
5.2.1	General		Pass
5.2.2	Test procedure	See table 5.2	Pass

5.3	Abnormal operating and fault conditions		Pass
5.3.1	Protection against overload and abnormal operation	See table 5.3	Pass
5.3.2	Motors	UL certified DC fan used.	Pass
5.3.3	Transformers	Transformers are constructed in accordance with Annex C.	Pass
5.3.4	Functional insulation.....	Functional insulation complies with the requirements (c).	Pass
5.3.5	Electromechanical components		N/A
5.3.6	Simulation of faults	See table 5.3.	Pass
5.3.7	Unattended equipment		N/A
5.3.8	Compliance criteria for abnormal operating and fault conditions	During the tests: No fire occurred. No molten metal was emitted. After the tests: Electric strength test primary to secondary and primary to earth were passed.	Pass

6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A

6.1.1	Protection from hazardous voltages	N/A
6.1.2	Separation of the telecommunication network from earth	N/A
6.1.2.1	Requirements	N/A
	Test voltage (V)	-
	Current in the test circuit (mA) ..	-
6.1.2.2	Exclusions	N/A

6.2	Protection of equipment users from overvoltages on telecommunication networks	N/A
6.2.1	Separation requirements	N/A
6.2.2	Electric strength test procedure	N/A
6.2.2.1	Impulse test	N/A
6.2.2.2	Steady-state test	N/A
6.2.2.3	Compliance criteria	N/A

6.3	Protection of the telecommunication wiring system from overheating	N/A
	Max. output current (A)	-
	Current limiting method	-

7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS	N/A
7.1	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment	N/A
7.2	Protection of equipment users from overvoltages on the cable distribution system	N/A
7.3	Insulation between primary circuits and cable distribution systems	N/A
7.3.1	General	N/A
7.3.2	Voltage surge test	N/A
7.3.3	Impulse test	N/A

A	Annex A, TESTS FOR RESISTANCE TO HEAT AND FIRE	N/A
A.1	1Bkg test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)	N/A
A.1.1	Samples..... :	-
	Wall thickness (mm) :	-
A.1.2	Conditioning of samples; temperature (°C) :	N/A
A.1.3	Mounting of samples :	N/A
A.1.4	Test flame	N/A
A.1.5	Test procedure	N/A
A.1.6	Compliance criteria	N/A
	Sample 1 burning time (s) :	-
	Sample 2 burning time (s) :	-
	Sample 3 burning time (s) :	-

A.2	<p> ? ? ? ? ? ? 18kg ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? , ? ? ? ? ? ? ? ? ? ? ? ? ? ? (? 4.7.3.2 ? 4.7.3.4 ?)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) </p>	N/A
A.2.1	Samples, material..... :	-
	Wall thickness (mm) :	-
A.2.2	Conditioning of samples	N/A
A.2.3	Mounting of samples	N/A
A.2.4	Test flame	N/A
A.2.5	Test procedure	N/A
A.2.6	Compliance criteria	N/A
	Sample 1 burning time (s) :	-
	Sample 2 burning time (s) :	-
	Sample 3 burning time (s) :	-
A.2.7	Alternative test acc. to IEC 60695-2-2, cl. 4, 8	N/A
	Sample 1 burning time (s) :	-
	Sample 2 burning time (s) :	-
	Sample 3 burning time (s) :	-

A.3	? ? ? ? ? (? ? ? 4.6.2 ?)Hot flaming oil test (see 4.6.2)	N/A
A.3.1	Mounting of samples	N/A
A.3.2	Test procedure	N/A



A.3.3	Compliance criterion		N/A
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B	Annex B, ? ? ? ? ? ? ? ? MOTOR TESTS UNDER ABNORMAL CONDITIONS(see 4.7.2.2 and 5.3.2)		N/A
B.1	General requirements		N/A
	Position		-
	Manufacturer		-
	Type		-
	Rated values		-
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days)		-
	Electric strength test: test voltage (V)		-
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	Test procedure		N/A
B.7.2	Alternative test procedure; test time (h)		N/A
B.7.3	Electric strength test		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V)		-

C	Annex C, TRANSFORMERS (see 1.5.4 and 5.3.3)		Pass
	Position.....	T1, See table 1.5.1 for details.	-
	Manufacturer	See table 1.5.1	-
	Type.....	See table 1.5.1	-
	Rated values	See table 1.5.1	-
	Method of protection.....	See table 1.5.1	-
C.1	Overload test	See table 1.5.1	Pass
C.2	Insulation	See table 1.5.1	Pass

	Protection from displacement of windings	See table 1.5.1	Pass
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D	Annex D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS		Pass
D.1	Measuring instrument		Pass
D.2	Alternative measuring instrument		N/A

E	Annex E, TEMPERATURE RISE OF A WINDING		N/A
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F	Annex F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10)		Pass
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G	Annex G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	DC mains supply		N/A
G.3	Determination of telecommunication network transient voltage (V):.....:		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.5	Measurement of transient levels (V)		N/A
G.6	Determination of minimum clearances		N/A

H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
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J	Annex J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		Pass
	Metal used	Copper alloy.	-

K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.7)		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V)		N/A

K.3	Thermostat endurance test; operating voltage (V)		N/A
K.4	Temperature limiter endurance; operating voltage (V)		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A

L	Annex L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.1)		N/A
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment		Pass

M	Annex M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N/A
M.1	Introduction		N/A
M.2	A Method A		N/A
M.3	B Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz)		-
M.3.1.2	Voltage (V)		-
M.3.1.3	Cadence ; time (s), voltage (V)		-
M.3.1.4	Single fault current (mA)		-
M.3.2	Tripping device and monitoring voltage		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V)		N/A

N	Annex N, IMPULSE TEST GENERATORS (see 2.10.3.4, 6.2.2.1, 7.3.2 and clause G.5)		N/A
N.1	ITU- T generators	ITU-T impulse test	N/A



N.2	CNS 14408 test generator	(IEC 60065) impulse	N/A
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P	Annex P,	NORMATIVE REFERENCES	Pass
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Q	Annex Q,	BIBLIOGRAPHY	Pass
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R	Annex R,	EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES	N/A
R.1	(2.10.6)Minimum separation distances for unpopulated coated printed boards (see 2.10.6)		N/A
R.2	(2.10.3)Reduced clearances (see 2.10.3)		N/A

S	Annex S,	(6.2.2.3)PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)	N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A

T	Annex T,	(1.1.2)GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)	N/A
 :		-

U	Annex U,	(2.10.5.4)INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)	N/A
 :		-

1.5.1	TABLE: list of critical components				Pass
Object/part No.	/ Manufacturer/ trademark	type/model	technical data	Marks of Conformity	Standard
Enclosure	Various	Various	Metal, painted, overall approximately 310 by 255 by 80 mm. thickness minimum 2 mm.	--	--
Appliance Inlet	Supercom Wire & Cable Co Ltd	SC-8	5A, 250V. Secured to chassis by snap - fit.	UL	UL498
Power switch	Swann Industries Pte Ltd	33 Series	16/8A, 125/250V. Secured to chassis by snap - fit.	UL	UL1054
Earthing wires	Various	Various	Green/yellow lead wire, minimum 18 AWG; mechanically secured and solder to earthing terminal of Appliance Inlet; other end terminates a ring connector and secured to Chassis with dedicated threaded screw, and lock-washer. Earthing symbol (IEC 60417, No. 5019) provided adjacent to termination.	UL	UL758
LCD display module	AU Optronics Corp	G104SN03, B104SN0	10.4 inch SVGA , TFT type	--	--
All PCBs	Various	Various	Minimum V-1, minimum 130	UL	UL 796
RTC Battery (BT1)	Rayovac Corp	BR2032	Maximum abnormal Charging Current 5 mA. Reverse current protection by series circuit of diode D6 and resistor (R184, rated 1k ohm)	UL	UL 1642
Alternate RTC battery	Mitsubishi Electric Corp	CR2032	Same as above except abnormal Charging Current 10mA.	UL	UL 1642

Alternate RTC battery	Matsushita Electric Industrial Co Ltd	CR-2032	Same as above except abnormal Charging Current 5mA.	UL	UL 1642
Polyswitch (FS1, FS2, FS3, FS4, FS7, FS11)	Tyco Corp. (Raychem)	miniSMDC110	PTC type, 8Vdc, 1.1A(Ih), 2.2A(It)	UL, TUV	UL 1434
Alternate Polyswitch	Polytronics Technology Corp (EVENFUSE)	SMD2920P100TS	PTC type, 33Vdc, 1.1A(Ih), 2.2A(It)	UL, TUV	UL 1434
Connectors (optional)	Various	Various	SELV. Provided with three RS-232 port; one LAN port; one Print port (SPP/EPP/ECP parallel); two PCMCIA slots.	--	--
PS/2 connector (keyboard/ mouse)	Various	Various	SELV, LPS, two provided. Protected by Polyswitch (FS7).	--	--
VGA Connector	Various	Various	SELV, LPS, protected by Polyswitch (FS11).	--	--
USB connector	Various	Various	(SELV, LPS), two provided maximum. Each loaded +5 V dc, 0.5 A maximum. Protected by polyswitch(FS1, FS2, FS3, FS4)	--	--
HDD Drive (Optional)	Various	Various	5Vdc/0.55A max.	UL	UL60950
Power Switch	Switchlab	D16LAV1	125V, 8A.	UL	UL1054
Label material	Various	Various	Rated minimum 45° C, suitable for surface to applied.	UL	UL969
Internal wires	Various	Various	Minimum 28 AWG,	UL	UL758

			minimum 90 deg. C		
DC/AC Inverter board	King core electronics Inc	HY1006	(Output evaluated as Limited Current Circuitry). The DC/AC Inverter consists of the following major components	--	--
Transformer of inverter (T1)	--	--	Open type construction. Core: Ferrite, overall 33.6 mm by 8.2 mm by 3.3 mm include bobbin. Coil: Copper magnet wire wound on bobbin. (QMFZ2), rated minimum V-2.	--	--
Fuse of inverter (F1)	Cooper Industries Inc	3216FF (-1A)	1A, 32V	UL	UL 198
Alternate fuse	Littelfuse Inc	451001	1A, 32V	UL	UL 198
AC to DC power supply board	--	SNP-9563-M	AC to DC Power Supply consists of the following major components	--	--
Primary Connector (TB1)	Long Chu Enterprise Co Ltd	P3060 series	7A, 250Vac	UL, VDE	UL 498, UL 1977, IEC 60950, IEC 60950-1
Fuses (F1, F2)	Bel	5HTP	Time delay. Ceramic type. Rated 3.15 A, 250 Vac. Pig-tail fuse leads mechanically secured and soldered to Printed Wiring Board. (Provided with tubing)	UL	UL 248, UL 198G
Thermistor (R1)	Various	Various	NTC, minimum 4 A, 20 ohm at 25 degree C.	--	--
X Capacitor (C1) (Optional)	Vishay Electronic GmbH	F 1772 series	Maximum 0.68uF, minimum 250Vac	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate X-Capacitor	Arcotronics	1.40, 1.47	Maximum 0.68uF, minimum 250Vac	UL, Fimko	UL 1414, IEC 60384-14/1993

(C1) (Optional)					
Alternate X-Capacitor (C1) (Optional)	Iskra Kondenzatorji D D	KNB1560, KNB1562, KNB1563	Maximum 0.68uF, minimum 250Vac	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate X-Capacitor (C1) (Optional)	Matsushita Electric Co., Ltd.	ECQUG	Maximum 0.68uF, minimum 250Vac	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate X-Capacitor (C1) (Optional)	Nitsuko Electronics Corp	CFKC,CFJC	Maximum 0.68uF, minimum 250Vac	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate X-Capacitor (C1) (Optional)	Carli Electronics Co., Ltd.	MPX	Maximum 0.68uF, minimum 250Vac	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate X-Capacitor (C1) (Optional)	Jenn Fu Electronics Corp.	MPX	Maximum 0.68uF, minimum 250Vac	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate X-Capacitor (C1) (Optional)	Okaya Electric Industries Co., Ltd.	RE, PA	Maximum 0.68uF, minimum 250Vac	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate X-Capacitor (C1) (Optional)	Pilkor Electronics Ltd.	PCX2 335 M, PCX2 337	Maximum 0.68uF, minimum 250Vac	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate X-Capacitor (C1) (Optional)	EVOX RIFA AB	PHE 830M	Maximum 0.68uF, minimum 250Vac	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate X-Capacitor (C1) (Optional)	Chiefcon Electronics Co., Ltd.	CKX	Maximum 0.68uF, minimum 250Vac	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate X-Capacitor (C1) (Optional)	Cheng Tung Industrial Co., Ltd.	CTX	Maximum 0.68uF, minimum 250Vac	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate X-Capacitor (C1) (Optional)	Hua Jung Components Co., Ltd.	MKP	Maximum 0.68uF, minimum 250Vac	UL, Fimko	UL 1414, IEC 60384-14/1993
Inductor (L1)	Various	Various	Open-type construction. Core: Ferrite, overall 19.3 by 25 by 6.3 mm. Coil: Copper magnet wire wound on bobbin, (QMFZ2), phenolic, rated V-2	--	--

			minimum.		
Bleeder Resistor (R4)	Various	Various	470 k ohm, minimum 1/4W	--	--
Y Capacitors (C2, C23, C24, C26) (Optional) (C2, C26 =1000pF)	Pan Overseas Electronic Co., Ltd.	AC	Rated maximum 3300pF, minimum 250Vac (Line-to-Ground)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Y-Capacitors (C2, C23, C24, C26) (Optional) (C2, C26 =1000pF)	Matsushita Electric Industrial Co., Ltd.	RS, NS, NS-A	Rated maximum 3300pF, minimum 250Vac (Line-to-Ground)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Y-Capacitors (C2, C23, C24, C26) (Optional) (C2, C26 =1000pF)	Welson Industrial Co., Ltd.	KL, WD	Rated maximum 3300pF, minimum 250Vac (Line-to-Ground)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Y-Capacitors (C2, C23, C24, C26) (Optional) (C2, C26 =1000pF)	Murata Manufacture Co., Ltd.	KC	Rated maximum 3300pF, minimum 250Vac (Line-to-Ground)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Y-Capacitors (C2, C23, C24, C26) (Optional) (C2, C26 =1000pF)	Vishay Electronic GmbH	WYO	Rated maximum 3300pF, minimum 250Vac (Line-to-Ground)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Y-Capacitors (C2, C23, C24, C26) (Optional) (C2, C26 =1000pF)	Evov Rifa AB	PME289M	Rated maximum 3300pF, minimum 250Vac (Line-to-Ground)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Y-Capacitors (C2, C23, C24, C26) (Optional) (C2, C26 =1000pF)	TDK Corp.	CS	Rated maximum 3300pF, minimum 250Vac (Line-to-Ground)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Y-Capacitors (C2, C23, C24, C26)	Mitsubishi Materials Corp.	AH, AM	Rated maximum 3300pF, minimum 250Vac (Line-to-Ground)	UL, Fimko	UL 1414, IEC 60384-14/1993

(Optional) (C2, C26 =1000pF)					
Alternate Y- Capacitors (C2, C23, C24, C26) (Optional) (C2, C26 =1000pF)	Samwha Capacitor Co. Ltd.	SD, SC	Rated maximum 3300pF, minimum 250Vac (Line-to-Ground)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Y- Capacitors (C2, C23, C24, C26) (Optional) (C2, C26 =1000pF)	Jya-Nay Co. Ltd.	JN	Rated maximum 3300pF, minimum 250Vac (Line-to-Ground)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Y- Capacitors (C2, C23, C24, C26) (Optional) (C2, C26 =1000pF)	Success Electronics Co., Ltd.	SE, SB, SF	Rated maximum 3300pF, minimum 250Vac (Line-to-Ground)	UL, Fimko	UL 1414, IEC 60384-14/1993
Bridge Rectifier (DB1)	Various	Various	Rated minimum 800V, 1.5A.	--	--
Electrolytic Capacitor (C7)	Various	Electrolytic can type	minimum 400 V, 105 degree C. Integral pressure relief	--	--
Transistor (Q1)	Various	Various	Rated minimum 9A, 600V. Secured to Heat sink (HS1) by screw and lock washer.	--	--
Optical Isolator (IC1)	Vishay Semiconductor GmbH	TCET1100	di = 0.6 mm Int.= 4.7 mm Voltage withstand 3000 minimum. Double protected device, meets reinforced insulation requirements.	UL, Fimko	UL 1577, IEC60747-5, VDE 884
Alternate Optical Isolator (IC1)	Sharp Corp Electronic Components Group	PC123 series	di = 0.7 mm Int.= 5.0 mm Voltage withstand 3000 minimum. Double protected device, meets reinforced insulation requirements.	UL, Fimko	UL 1577, IEC60747-5, VDE 884
Alternate Optical Isolator (IC1)	Cosmo Electronics Corp	KPC 817 series, K1010 series	di = 0.5 mm, Int.= 5.3 mm Voltage withstand 3000 minimum. Double	UL, Fimko	UL 1577, IEC60747-5, VDE 884

			protected device, meets reinforced insulation requirements.		
Alternate Optical Isolator (IC1)	Lite-On Technology Corp	LTV-817 series	di = 0.4 mm, Int.= 4.0 mm Voltage withstand 3000 minimum. Double protected device, meets reinforced insulation requirements.	UL, Fimko	UL 1577, IEC60747-5, VDE 884
Alternate Optical Isolator (IC1)	Toshiba Corp, Semiconductor Co.,	TLP 721 series	di = 0.4 mm, Int.= 4.0 mm Voltage withstand 3000 minimum. Double protected device, meets reinforced insulation requirements.	UL, Fimko	UL 1577, IEC60747-5, VDE 884
Optical Isolator (IC4)	Toshiba Corp, Semiconductor Co.,	TLP747 series	di = 0.4 mm, Int.= 4.0 mm Voltage withstand 3000 minimum. Double protected device, meets reinforced insulation requirements.	UL, Fimko	UL 1577, IEC60747-5, VDE 884
Bridging Capacitor (C5) (Optional)	Matsushita Electric Industrial Co. Ltd.	NS-A	Rated maximum 10000pF, 250Vac. (Y1 type) (Provided with tubing)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Bridging Capacitor (C5) (Optional)	Murata Mfg. Co. Ltd.	KX	Rated maximum 10000pF, 250Vac. (Y1 type) (Provided with tubing)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Bridging Capacitor (C5) (Optional)	Welson Industrial Co. Ltd	WD	Rated maximum 10000pF, 250Vac. (Y1 type) (Provided with tubing)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Bridging Capacitor (C5) (Optional)	TDK Corp.	CD	Rated maximum 10000pF, 250Vac. (Y1 type) (Provided with tubing)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Bridging Capacitor (C5) (Optional)	Pan Overseas Electronics Co., Ltd.	AH	Rated maximum 10000pF, 250Vac. (Y1 type) (Provided with tubing)	UL, Fimko	UL 1414, IEC 60384-14/1993
Alternate Bridging Capacitor	Netron Tech Co Ltd. (Samsung)	AD	Rated maximum 10000pF, 250Vac. (Y1 type) (Provided	UL, Fimko	UL 1414, IEC 60384-14/1993



(C5) (Optional)			with tubing)		
Alternate Bridging Capacitor (C5) (Optional)	Success Electronics Co. Ltd.	SE	Rated maximum 10000pF, 250Vac. (Y1 type) (Provided with tubing)	UL, Fimko	UL 1414, IEC 60384-14/1993
Transformer (T1)	Various	Various	(OBJY2) Class B insulation system, Skynet Electronic Co., Ltd. designated Dash 2 B-5. Open type construction. Core: Ferrite, overall 35 mm by 35 mm by 15 mm. Coil Copper magnet wire wound on bobbin. Bobbin (QMFZ2) Phenolic, min. 0.71 mm thick, rated min. V-2. Insulation: Location/#Layers/total thickness/material Outerwrapp 3/0.075/Polyester film tape. Cross-over 1/0.025/Polyester film tape. PRI/SEC 3/0.075/Polyester film tape. PRI/Core 1/0.71/Bobbin. SEC/Core 1/0.71/Bobbin. Exit leads provided with tubing/sleeving. Extends minimum 3.0 mm into transformer. Provided margin tape 3.0 mm minimum at primary side and secondary side.	--	--
Heat Sink (HS1)	Various	Various	Aluminum, L shaped, Overall 30 mm by 72 mm by 20 mm by 36 mm high, minimum 1.5 mm thick. Connected to “-“ supply and secured to PWB by bent tabs. (Heat sink is Live)	--	--
Heat Sink (HS2)	Various	Various	Aluminum, Shaped as shown. Overall 30 mm by 72 mm by 35 mm high, minimum	--	--

			1.5 mm thick. Secured to PWB by bent tabs. (Heat sink is Secondary)		
PCB	Various	Various	Minimum V-1, minimum 105 degree C	UL	UL 796

1.6.2	TABLE: ()electrical data (in normal conditions)					Pass
fuse #	I rated (A)	U (V)	P (W)	I (mA)	I fuse (mA)	condition/status
--	--	--	--	--	--	--
supplementary information:						
See Enclosure test data sheet for details.						

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements						N/A
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)	
supplementary information:							
All circuits are SELV, only functional insulation has been required.							

2.10.5	TABLE: distance through insulation measurements				N/A
distance through insulation di at/of:	Up (V)	test voltage (V)	required di (mm)	di (mm)	
Opto-coupler	--	--	--	--	
supplementary information:					

4.5	TABLE: temperature rise measurements					Pass
test voltage (V)	--	--	--	--	--	—
t1 (°C)	--	--	--	--	--	—
t2 (°C)	--	--	--	--	--	—



maximum temperature T of part/at:	T (°C)					allowed Tmax (°C)
--	--	--	--	--	--	--
temperature T of winding:		R ₁ (Ω)	R ₂ (Ω)	T (°C)	allowed Tmax (°C)	insulation class
--		--	--	--	--	--
supplementary information:						
See Enclosure test data sheet for details.						

4.5.2	TABLE: ball pressure test of thermoplastics			N/A
	allowed impression diameter (mm)..... :	<2		—
part		test temperature (°C)	impression diameter (mm)	
--		--	--	
supplementary information:				
--				

4.7	TABLE: resistance to fire				Pass
part		manufacturer of material	type of material	thickness(mm)	flammability class
--		--	--	--	--
supplementary information:					
Certified components used with suitable flammability ratings.					

5.2	TABLE: , electric strength tests, impulse tests and voltage surge tests			N/A
test voltage applied between:		test voltage (V) a.c./d.c.	breakdown Yes / No	
--		--	--	



supplementary information:

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5.3	TABLE: fault condition tests						Pass
	ambient temperature (°C)..... :				--		—
	model/type of power supply..... :				--		—
	manufacturer of power supply..... :				--		—
	rated markings of power supply :				--		—
component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result	
--	--	--	--	--	--	--	
supplementary information:							
See Enclosure test data sheet for details.							

ENCLOSURE No. 1

Photographs

(Total 6 Pages including this Cover Page)

Model PPC-V106T-ACXXXX
Shows an overall view of the subject unit.



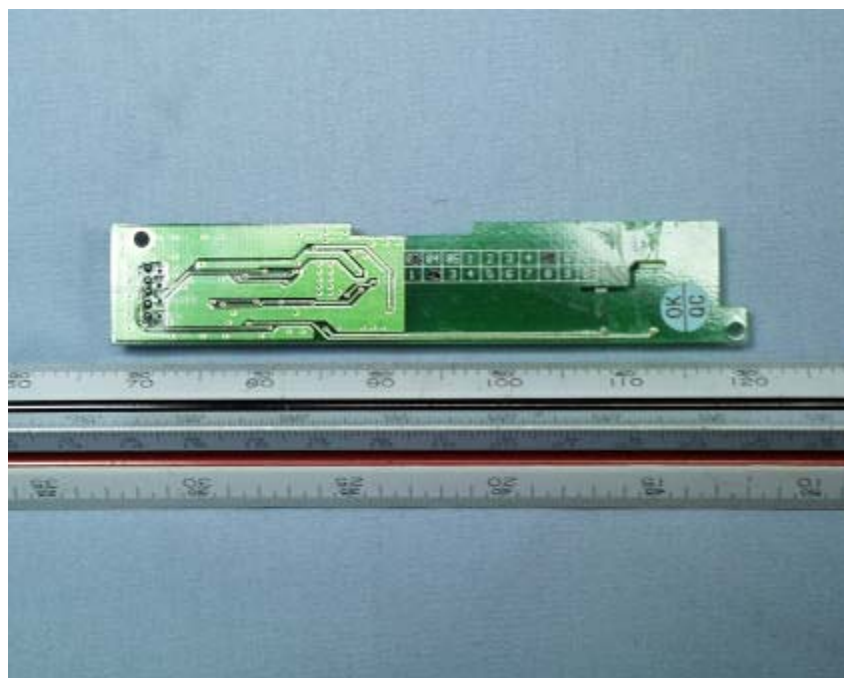
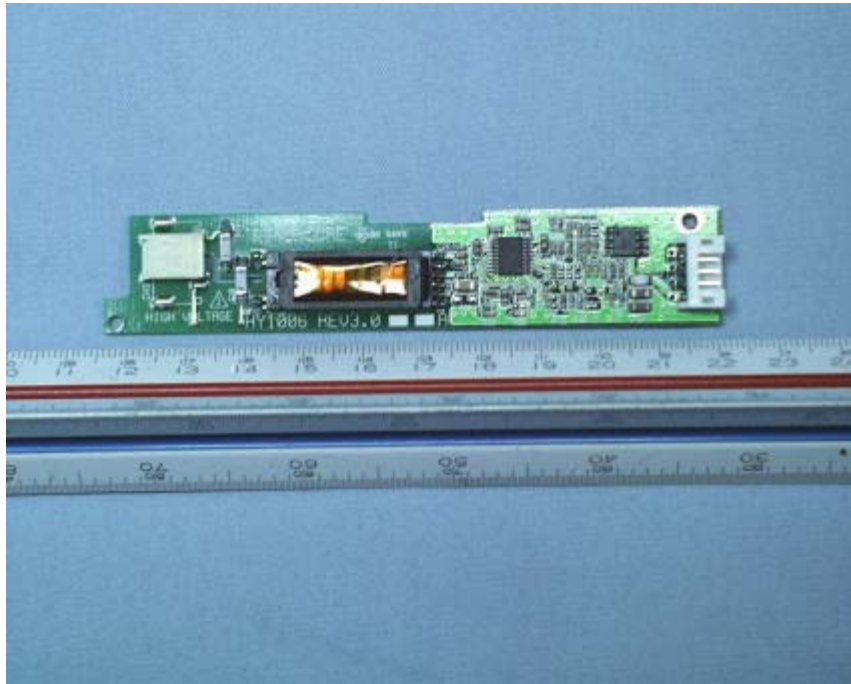
Model PPC-V106T-ACXXX
Shows an overall view of the subject unit.



Model PPC-V106T-ACXXXX
Shows an interior view of subject unit.



Model PPC-V106T-ACXXXX
Shows an interior view of Inverter.



Model PPC-V106T-ACXXX
Shows an interior view of Power Supply.

