

TRENDware
TEW-226PC
LVD TEST REPORT

Report No: C51LV841

Report No	C51LV841
Applicant	TRENDware International Inc. 3135 Kashiwa Street Torrance, CA 90505, USA
Test item	Low Voltage Directive
Items tested	802.11b Wireless LAN Card Bus Adapter
Model No.	TEW-226PC
Sample No.	# C51269
Rating	SELV
Sample received date	07/21/2003
Specifications	EN60950, 2000 / IEC 60950, 3 rd Ed, 1999
Results	As detailed within this report
Prepared by	<u>Flora Shih</u> project engineer
Authorized by	<u>Tony Chen</u> Laboratory Manager
Issue date	Jul. / 24 / 2003 (month / day / year)
Modifications	None
Tested by	Lily Technology Co., Ltd.
Office at	No. 3, Alley 5, Lane 217, Chung Hsiao E. Road, Sec.3, Taipei Taiwan.

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Trademark	Model
TRENDware	TEW-226PC

SAFETY TEST RESULTS

The results appear in the following order:

EN60950, 2000 / IEC 60950, 3rd Ed, 1999

Safety of information technology equipment –

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Test Report EN 60950, 2000 / IEC 60950, 3rd Ed, 1999

Equipment mobility.: Movable
Operating condition.: Continuous
Tested for IT power systems.: No
IT testing, phase-phase voltage (V).: N/A
Class of equipment.: Class III
Mass of equipment (kg).: <18kg
Protection against ingress of water.: N/A

Possible test case verdicts:

- test case does not apply to the test object.: N
- test object does meet the requirement.: P
- test object does not meet the requirements.: F

General remarks

“ (see appended table) ” refers to a table appended the report.
Throughout this report a point is used as the decimal separator.

1. Safety Strategy
 - The equipment is powered from SELV by PCMCIA slot.

2. Testing Environment:

All testing was conducted at:

- An ambient temperature in the range 25 °C to 35 °C.
- A relative humidity in the range 25% to 75%
- An air pressure in the range 86KPa to 106Kpa

RESULTS

Clause	Requirement – Test	Result - Remark	Verdict
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1.	GENERAL		
1.1	SCOPE		
1.1.1	Equipment covered by this standard.	The product is within the scope of IEC 60950	--
1.1.2	Additional requirements:		
	Exposure to extreme temperatures, excessive dust, moisture or vibration; to flammable gases; to corrosive or explosive atmospheres.	This equipment is not intended to operate in a “ normal” environment (Offices and homes).	--
	Electro medical equipment connected to the patient.	This equipment is not an electromedical equipment intended to be physically connected to a patient.	--
	Equipment used in vehicles, ships or aircrafts, in tropical countries, or at elevations > 2000m.	This equipment is intended to operate in a “normal ” environment. (Office and homes)	--
	Equipment intended for use where ingress of water is possible.	This equipment is intended to be used in applications where ingress of water is not regarded possible. The equipment is non- protected according to IEC 60529	--
	IP-classification (IEC 60529) (IP)	IP X0.	--

1.2.2	OPERATING CONDITIONS		
1.2.2.1	Normal load as described in Annex L or as close as possible to the most severe normal use.	The unit is running to Communicate and transmit data.	--
1.2.2.2	Rated operating time as assigned by the Manufacturer.	The manufacturer has not declared a rated operating time.	

Clause	Requirement - Test	Result - Remark	Verdict
1.2.2.3	-1.2.2.5 Continuous operation / Shot-time operation / Inter mitten operation.	The equipment is regarded to be for continuous operation.	--
1.5.	COMPONENTS		P
1.5.1	General	Components which were found to affect safety aspects comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards. (see appended tables)	P
1.5.2	Evaluation and testing components	Components which are certified to IEC and /or national standards are used correctly within their ratings. components not covered by IEC standards are tested under the conditions present in the equipment.	P
	Dimensions (mm) of mains plug for direct plug-in	The equipment is not plug-in type.	N
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N)	The equipment is not plug-in type.	N
1.5.3	Thermal controls		N
1.5.4	Transformers	Transformer used are suitable for their intended application and comply with the relevant requirements of the standard.	N
1.5.5	Interconnecting cables	No interconnection cables.	N

Clause	Requirement - Test	Result - Remark	Verdict
1.5.6	Capacitors in primary circuits	No X-capacitor.	N
1.5.7	Double or reinforced insulation bridged by component.		N
1.5.7.1	Bridging capacitor	Class III equipment.	N
1.5.7.2	Bridging resistor		N
1.5.7.3	Accessible parts		N
1.5.8	Components in equipment for IT power system		N

1.6.	POWER INTERFACE	Class III equipment	N
1.6.1	AC power distribution systems		N
1.6.2	Input current		N
1.6.3	Voltage limit of hand – held equipments		N
1.6.4	Neutral conductor		N

1.7.	MARKING AND INSTRUCTIONS		P
1.7.1	Power rating	The equipment marking is located on outside surface of the equipment.	P
	Rated voltage (V)	5 VDC	--
	Symbol of nature of supply for d.c.		--
	Rated frequency (Hz)		--
	Rated current (A)		--
	Manufacturer	TRENDware International Inc.	
	Trademark		--
	Type/model	TEW-226PC	
	Symbol of Class II	Class III	--
	Certification marks	CE mark	--
1.7.2	Safety instructions	The user's manual contains information for operation, installation, servicing, transport, storage and	P

Clause	Requirement - Test	Result - Remark	Verdict
		technical data. continuous operation.	
1.7.3	Short duty cycles		N
1.7.4	Supply voltage adjustment	Class III equipment.	N
1.7.5	Power outlets on the equipment	Class III equipment.	N
1.7.6	Fuse identification	No primary fuse.	N
1.7.7	Wiring terminals		N
1.7.7.1	Protective earthing and bonding terminals	Class III equipment	N
1.7.7.2	Terminal for ac. mains supply conductors	Class III equipment	N
1.7.8	Controls and indicators		N
1.7.8.1	Identification, location and marking		N
1.7.8.2	Colours	No safety involved controls or indicators.	N
1.7.8.3	Symbols.		N
1.7.8.4	Markings using figures	No indicators for different positions.	N
1.7.9	Isolation of multiple power sources		N
1.7.10	IT power system		N
1.7.11	Thermostats and other regulating devices		N
1.7.12	Language	User's manual and marking were provided in English	P
	Language	English	--
1.7.13	Durability	The label was subjected to the permanence of marking test. The label was rubbed with cloth for 15 Sec. And then again for 15 sec. With the cloth soaked with HEXANE.	N
		After this test there was no damage to the label. The marking on the label did not fade. There was no curling	

Clause	Requirement – Test	Result – Remark	Verdict
		nor lifting of the label edge.	
1.7.14	Removable parts		N
1.7.15	Replaceable batteries	No lithium batteries	N
1.7.16	Operator access with a tool	No operator access area with tool.	N
1.7.17	Equipment for restricted access location		N

2..	PROTECTION FORM HAZARDS		P
2.1.	PROTECTION AGAINST ELECTRIC SHOCK AND ENERGY HAZARDS		P
2.1.1	Protection in operator access areas		N
2.1.1.1	Access to energized parts		N
	Test by inspection		N
	Test with test finger		N
	Test with test pin		N
2.1.1.2	Battery compartments		N
2.1.1.3	Access to ELV wiring		N
2.1.1.4	Access to hazardous voltage circuit wiring		N
2.1.1.5	Energy hazards	There shall be no energy hazard in operator areas.	N
2.1.1.6	Manual controls		N
2.1.1.7	Discharge of capacitors in the primary circuit		N
2.1.2	Protection in service access areas		N
2.1.3	Protection in restricted access locations		N

2.2.	SELV CIRCUITS		N
2.2.1	General requirement		N
2.2.2	Voltage under normal conditions		N
2.2.3	Voltage under fault condition	Moreover a limit of 71 V peak , or 120 V dc., shall not be exceeded.	N -- --

Clause	Requirement – Test	Result – Remark	Verdict
2.2.3.1	Separation by double or reinforced insulation (Method 1)		N
2.2.3.2	Separation by earthed screen (Method 2)		N
2.2.3.3	Protection by earthing of the SELV circuit (Method 3)		N
2.2.4	Connection of SELV circuits to other circuits		N

2.3	TNV CIRCUITS		N
2.3.1	Limits		N
2.3.1a)	TNV-1 circuits	The modem generates only signals within the limits of TNV-1 circuits.	N
2.3.1b)	TNV-2 and TNV-3 circuits	The telecommunication network is considered to be TNV-3 circuits.	N
2.3.2	Separation from other circuits and from accessible parts	Basic insulation between TNV and SELV provided. Requirements of 6.4.1 are applicable.	N
	Voltage (V) in SELV circuits. TNV-1 circuits and accessible conductive parts in event of single insulation fault or component failure ...	Signal converter with turn ratio 1:1 Limits of TNV-3 can not be exceeded.	
2.3.3	Operating voltages generated externally	Basic insulation provided.	N
	Voltage (V) in SELV circuits. TNV~1 circuits insulation between TNV circuit and circuit at hazardous voltage		N
	Method used		N
2.3.4	Connection of TNV circuits to other circuits	TNV circuit only connected to SELV circuits.	N
	TNV circuit supplied conductively from a Secondary circuit	Considered.	N

Clause	Requirement – Test	Result – Remark	Verdict
2.3.5	Test for operating voltage generated externally	With the disconnected telecommunication cable the connector pins at the modem or at the plug may be touched. However, in this case the generated voltages are in Compliance with the requirements for TNV-1 circuits.	N

2.4.	LIMITED CURRENT CIRCUIT:		N
2.4.1	Test voltage (V)		--
2.4.2	Measured current (mA)		N
2.4.3	Measured capacitance (µF)		N
	Measured charge (µC)		N
	Measured energy (mJ)		N

2.5	LIMITED POWER SOURCE		N
	Use of limited power source		N
2.5.1	Reliable connection		N
	Warning label for service personnel		N
2.5.2	Protective earthing in Class I equipment		N
2.5.3	Switches/fuses in earthing conductors		N
2.5.4	Assured earthing connection for Class II equipment in Systems comprising Class II and Class I equipment		N
2.5.5	Green/yellow insulation		N
2.5.6	Continuity of earth connections		N
2.5.7	Making and breaking of protective earthing Connections		N
2.5.9	Protective earthing terminals for fixed supply conductors or for non-detachable power supply cords		N

Clause	Requirement – Test	Result – Remark	Verdict
2.5.10	Risk of corrosion		N
2.5.11	Earth connector resistance <0.1 ohm		N
	Test current (A)		--

2.6.	PROVISIONS FOR EARTHING AND BONDING	Class III equipment	N
2.6.1	Protective earthing		N
2.6.2	Functional earthing		N
2.6.3	Protective earthing and protective bonding conductors		N
2.6.3.1	Size of protective earthing conductors		N
2.6.3.2	Size of protective bonding conductors		N
2.6.3.3	Resistance of earthing conductors and their terminations		N
2.6.3.4	Colour of insulation		N
2.6.4	Terminals		N
2.6.4.1	Protective earthing and bonding terminals		N
2.6.4.2	Separation of the protective earthing conductor form protective bonding conductors		N
2.6.5	Integrity of protective earthing		N
2.6.5.1	Interconnection of equipment		N
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N
2.6.5.3	Disconnection of protective earth		N
2.6.5.4	Parts that can be removed by an operator		N
2.6.5.5	Parts removed during servicing		N
2.6.5.6	Corrosion resistance		N
2.6.5.7	Screws for protective bonding		N

Clause	Requirement – Test	Result – Remark	Verdict
2.7.	OVERCURRENT AND EARTH FAULT PROTECTION IN PRIMARY CIRCUITS	Class III equipment	N
2.7.1	Basic requirements		N
2.7.2	Protection against faults not covered in 5.4		N
2.7.3	Adequate breaking capacity		N
2.7.4	Number and location		N
2.7.5	Protection by several devices		N
2.7.6	Warning to service personnel		N
2.8.	SAFETY INTERLOCKS		N
2.8.2	Protection requirements	It' s no hazard shock voltage.	N
2.8.3	Inadvertent reactivation		N
2.8.4	Fail-safe operation		N
2.8.5	Interlocks with moving parts		N
2.8.6	Overriding an interlock		N
2.8.7	Switches and relays in interlock system		N
2.8.7.1	Contact gaps		N
2.8.7.2	Overload test		N
2.8.7.3	Protection against overstress		N
2.8.7.4	Electric strength test	Class III equipment.	N
2.8.8	Mechanical actuator		N
2.9	ELECTRICAL INSULATION	The insulation materials provided in the equipment with adequate thickness and adequate creepage distance over their surface and clearance distance through air.	N
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic materials are not used	N

Clause	Requirement – Test	Result – Remark	Verdict
2.9.2	Humidity treatment	48Hrs	N
	Humidity (%)	91-95%	--
	Temperature (°C)	25° C	--
2.9.3	Requirements for insulation	Please refer to 4.5.1 and except 2.1.1.3 or 2.1.1.4	N
2.9.4	Insulation parameters	Both parameters were considered.	N
2.9.5	Categories of insulation	The adequate levels of safety insulation is provided and maintained to comply with the requirements of this standard.	N

2.10	CLEARANCES, CREEPAGE DISTANCES AND DISTANCE THROUGH INSULATION		N
	Normal voltage		--
	Pollution degree		--
	CTI rating		--
2.10.1	General	Considered. see the following clauses:	--
2.10.2	Determination of working voltages	Working voltage is considered to be within the TNV-3 parameters with Urms <100V Udc<125V, Upeak <140V	N
2.10.3	Clearances		N
2.10.3.2	Clearances in primary circuits	Class III equipments.	N
2.10.3.3	Clearances in secondary circuits	Considered	P
2.10.3.4	Measurement of transient levels	Considered	P
2.10.4	Creepage distances	Considered	P
2.10.5	Solid insulation		

Clause	Requirement – Test	Result – Remark	Verdict
2.10.5.1	Minimum distances through insulation	No requirements for basic insulation.	N
2.10.5.2	Thin sheet material		N
	Number of layers (pcs)		N
	Electrical strength test: test voltage (V)		N
2.10.5.3	Printed boards	Not applied for	N
	Distance (mm) through insulation		N
	Electric strength test at voltage (V) for thin sheet insulating material.		N
	Number of layers (pcs)		N
2.10.5.4	Wound components	No wound components without interleaved insulation.	N
2.10.6	Distances (mm) on coated printed boards.	No coated printed wiring boards.	N
	Routine testing for electric strength		N
2.10.7	Internal creepage distances in hermetically sealed components	No hermetically sealed components	N
2.10.8	Internal distances in potted components	photocoupler is approved components	N
2.10.9	Spacings between external terminations of components	See appended table 2.9.2 and 2.9.3.	N

3..	WIRING, CONNECTIONS AND SUPPLY		N
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3.1.	GENERAL		N
3.1.1	Current rating and overcurrent protection The cross-sectional area of internal wiring/interconnecting cables	No internal wiring/interconnection cables.	N
	Protection of internal wiring and interconnecting cables		N

Clause	Requirement – Test	Result – Remark	Verdict
3.1.2	Protection against mechanical damage		N
3.1.3	Securing of internal wiring		N
3.1.4	Insulation of conductors	The insulation of the individual conductors are suitable for the application and the working voltage. For the insulation material see 3.1.4	N
3.1.5	Beads and ceramic insulators	Not used.	N
3.1.6	Screws for electrical contact pressure	Class III equipment. No requirements for electrical contact pressure.	N
3.1.7	Non-metallic materials in electrical connections	All current carrying and safety earthing connections are metal to metal.	N
3.1.8	Self-tapping and spaced thread screws	No self tapping screws are used.	N
3.1.9	Termination of conductors		N
3.1.10	Sleeving on wiring		N

3.2.	CONNECTION TO A.C. MAINS SUPPLIES	Class III equipment	N
3.2.1	Means of connection		N
	Design of product with more than one supply connection		N
3.2.2	Multiple supply connections		N
3.2.3	Provision for permanent connection		N
	Size (mm) of cables and conduits		N
3.2.4	Appliance inlets		N
3.2.5	Type and cross-sectional area (mm ²) of power supply cord.		N
3.2.6	Cord anchorage and strain relief		N
	Test: 25 times; 1 ; pull (N)		--
	Longitudinal displacement < 2 m		N
3.2.7	Protection against mechanical damage		N

Clause	Requirement – Test	Result – Remark	Verdict
3.2.8	Cord guard		N
	D (mm)		--
	Test: mass (g)		--
	Radius of curvature of the cord < 1.5		N
3.2.9	Supply wiring space		N

3.3.	WIRING TERMINALS FOR CONNECTION OF EXTERNAL CONDUCTORS	Class III equipment	N
3.3.1	Wiring terminals		N
3.3.2	Special non-detachable cord		N
	Type of connection		--
	Pull test at 5		N
3.3.3	Screws terminal		N
3.3.4	Connection size of connectors		N
3.3.5	Wiring terminals sizes		N
	Nominal thread diameter (mm)		N
3.3.6	Wiring terminal design		N
3.3.7	Grouping of wiring terminals		N
3.3.8	Stranded wire		N

3.4.	DISCONNECTION FROM THE A.C. MAINS SUPPLY		N
3.4.1	Disconnect device	Class III equipment, no disconnect device provided	N
3.4.2	Type of disconnect device		N
3.4.3	Disconnect device in permanently connected equipment	Refer to 3.4.1 above.	N
3.4.4	Protection of service personnel	Refer to 3.4.1 above.	N
3.4.5	Isolating switch in a flexible cord	No isolating switch provided.	N
3.4.6	Disconnection of both poles simultaneously for single-phase equipment	Refer to 3.4.1 above.	N

Clause	Requirement – Test	Result – Remark	Verdict
3.4.7	Disconnection of all phases for three-phase equipment	Single-phase equipment.	N
3.4.8	Marking of switch acting as disconnect device	Refer to 3.4.1 above.	N
3.4.9	Installation instructions	Refer to 3.4.1 above.	N
	Language		--
3.4.10	Disconnection of group of units		N
3.4.11	Marking at each disconnect device	Only one supply connection.	N
3.5	INTERCONNECTION OF EQUIPMENT		N
3.5.1	Connection of SELV and TNV circuits	See below	N
3.5.2	Type of interconnection circuits	TNV –3 circuit.	N
3.5.3	Connection to host equipment	No ELV interconnection	N
4..	PHYSICAL REOUIAEMENTS		P
4.1.	Stability and mechanical hazards		N
4.1.1	Stability tests	Built-in component.	N
	Angle of 10°		N
	Test: force (N)	Not floor standing.	N
4.2.	MECHANICAL STRENGTH		P
4.2.2	Steady force test, 10 N		N
4.2.3	Internal enclosures 30N 3 ; 5	Built-in component	N
4.2.4	External enclosures 250N 10 ; 5	Refer to 4.2.2	N
4.2.5	Impact test		N
	Fall test		N
	Swing test		N
4.2.6	Drop test		N
4.2.7	Heat test for enclosures of moulded or formed thermoplastic materials: 7h T(°C) ...	Refer to 4.2.2	N

Clause	Requirement – Test	Result – Remark	Verdict
4.2.8	Cathode ray tubes	Unit does not employ a cathode ray tube	N
4.2.9	High pressure lamps		N
4.2.10	Well or ceiling mounted equipment		N

4.3.	CONSTRUCTION DETAILS		P
4 3 1	Changing of setting for different power supply voltages	No setting.	N
4.3.2	Adjustment of accessible control devices	None that would cause hazard.	P
4.3.4	Prevention of dangerous concentration of dust, powder, liquid and gas	Equipment in intended use not considered to be exposed to these.	N
4.3.5	Fixing of knobs grips, handles, levers		N
	Test force (N)		N
4.3.6	Driving belt/couplings shall not ensure electrical insulation.	Not used for insulation.	N
4.3.7	Retaining of sleeves	No sleeves.	N
4.3.8	Batteries Construction of protection circuit	No lithium batteries.	N
4.3.9	Resistance to oil and grease	Insulation not in contact with oil or grease.	N
4.3.12	Protection against spreading of flammable liquids.	No flammable liquids in this unit.	N
4.3.13	Protection against harmful concentration of ionizing radiation, ultraviolet light, laser or flammable gases (for laser see IEC 60825-1)	No ionizing radiation or flammable liquids presents.	N

4.4	PROTECTION AGAINST HAZARDOUS MOVING PARTS		N
4.4.1	General		N
4.4.2	Protection in operator access areas		N
4.4.3	Protection in restricted access areas		N

Clause	Requirement – Test	Result – Remark	Verdict
4.4.4	Protection in service access areas		N
4.5	THERMAL REQUIREMENTS		N
4.5.1	Temper rises	(see appended table)	N
4.5.2	Resistance to abnormal heat		N
4.6	OPENING IN ENCLOSURE		N
4.6.1	Openings in the top of enclosure	Refer to 4.2.2	N
	Dimensions (mm)		--
	Openings in the sides of enclosure	Refer to 4.2.2	--
	Dimensions (mm)		--
4. 6.2	Bottom of fire enclosures	Protection against emission of flame, molten metal, flaming or glowing particles or drops by the fire enclosure with no bottom opening (see appended table).	N
4.6.3	Doors and covers in fire enclosure	No door or cover.	N
4.6.4	Opening in transportable equipment		N
4.6.5	Adhesives for constructional purposes		N
	Day 1: temperature (°C); time (weeks)		N
	Day 8/22/57: a).temperature (°C) for 1 h b).temperature (°C) for 4 h c).temperature (°C) over 8 h		N
	Day 9/23/58: a).relative humidity (%) for 72 h b).temperature (°C) for 1 h c).temperature (°C) for 4 h d).temperature (°C) over 6 h		N

Clause	Requirement – Test	Result – Remark	Verdict
4.7.	RESISTANCE TO FIRE	Metallic Enclosure	P
4.7.1	Reducing the risk of ignition and spread of flame		N
4.7.2	Condition for a fire enclosure		N
4.7.2.1	Parts requiring a fire enclosure		N
4.7.2.2	Parts not requiring a fire enclosure		N
4.7.3	Materials		N
4.7.3.2	Enclosures and decorative parts: manufacturer; flammability	Plastic enclosure rating 94HB or better.	N
4.7.3.3	Material for components and other parts outside fire enclosure	The plastic enclosure rated 94HB or better.	P
4.7.3.4	Materials for components and other parts inside fire enclosure	The plastic enclosure rated 94V-0 or better.	P
4.7.3.5	Materials for air filter assemblies	No air filter assemblies	N
4.7.3.6	Materials used in high-voltage components	No used high-voltage components.	N

5.	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		N
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5.1	Touch current and simulated abnormal conductions	Class III equipment.	N
5.1.2	Equipment under test (EUT)		N
5.1.3	Test circuit		N
5.1.4	Application of measuring instrument		N
5.1.5	Test procedure		N
5.1.6	Test measurements		N

Clause	Requirement – Test	Result – Remark	Verdict
5.1.7	Equipment with earth leakage current exceeding 3.5 A		N
	Test voltage (V)		--
	Measured current (mA)		--
	Max. allowed current (mA)		--
	Cross sectional area (mm ²) of internal protective earthing conductor		--
	Wiring label		N
5.1.8	Touch currents to and from telecommunication network.		N
5.1.8.1	Limitation of the touch current to a telecommunication network	None of the values measured shall exceed 0.25 mA r.m.s	N
5.1.8.2	Summation of touch currents from telecommunication networks		N
5.2.	ELECTRIC STRENGTH		N
	Electric strength unit	see appended table	
5.3.	ABNORMAL OPERATING AND FAULT CONDITIONS		N
5.3.1	Protection against overload and abnormal operation		N
5.3.2	Motors	No motors.	N
5.3.3	Transformers		N
5.3.4	Functional insulation	Refer to 5.3.8	N
5.3.5	Electromechanical components	Refer to 5.3.8	N
5.3.6	Simulation of faults	Refer to 5.3.8	N
5.3.7	Unattended equipment		N
5.3.8	Compliance criteria for abnormal operating and fault conditions	No fire propagated beyond the equipment. No molten metal was emitted. Electric strength test primary -->SELV was passed.	N

Clause	Requirement – Test	Result – Remark	Verdict
6.	CONNECTION TO TELECOMMUNICATION NETWORKS		N
6.1.	PROTECTION OF TELECOMMUNICATION NETWORK SERVICE PERSONNEL, AND USERS OF OTHER EQUIPMENT CONNECTED TO THE NETWORK, FROM HAZARDS IN THE EQUIPMENT.		N
6.1.1	Protection from hazardous voltages	The modem card generates only signals within the limits of TNV circuits.	N
6.1.2.1	Use of protective earthing	The protection of the telecommunication network does not rely on earthing	N
	Language of installation instructions		N
6.1.2.2	Insulation between TNV circuit and parts or circuitry that may be earthed	It is unknown if the SELV is earthed in the final system assembly. However, basic insulation between TNV circuit and SELV ground provided.	N
	Insulation (mm) between TNV circuit and circuitry that may be earthed	See above	N
6.2	PROTECTION OF THE EQUIPMENT USERS FROM VOLTAGES ON THE TELECOMMUNICATION NETWORKS.		P
6.2.1	Separation requirement	Applied.	P
6.2.2	Electric strength test procedure	6.2.2.2 applied.	P
6.2.2.1	Impulse test; separation between TNV circuit and		N

Clause	Requirement – Test	Result – Remark	Verdict
6.2.2.1a)	unearthed conductive parts/non-conductive parts of the equipment which are held or touched during normal use, test at 2.5 KV.	See 6.2.2.2	N
6.2.2.1b)	parts and circuit that can be touched by the test finger; test at 1.5 KV.	See 6.2.2.2	N
6.2.2.1c)	circuitry which is provided for connection of other equipment test at 1.5 KV.	See 6.2.2.2	N
6.2.2.2	Steady-state test; separation between TNV circuit and		N
6.2.2.2a)	unearthed conductive parts/non-conductive parts of the equipment which are held or touched during normal use test at 1.5 KV.	No isolation breakdown.	N
6.2.2.2b)	parts and circuitry that can be touched by the test finger; test at 1.0 KV.	No isolation breakdown.	N
6.2.2.2c)	circuitry which is provided for connection of other equipment; test at 1.0 KV	No isolation breakdown.	N
6.2.2.3	Compliance criteria	No breakdown of insulation	N
		during above tests.	
6.3.	PROTECTION OF TELECOMMUNICATION WIRING SYSTEM FROM OVERHEATING		N
	Maximum continuous output current (A)...		--
	Current limiting method		--

Clause	Requirement - Test	Result – Remark	Verdict
A	ANNEX , TESTS FOR RESISTANCE TO HEAT ND FIRE Plastic enclosure rated 94HB or better		N
A.1	Flammability test for fire enclosures of moveable equipment having a total mass exceeding 18kg, and of stationary equipment.		N
A.2	Flammability test for fire enclosures of moveable equipment having a total mass not exceeding 18kg, and for materials located within fire enclosure.		N
A	Tested material		N
	Mounting of samples during test,;		--
	Wall thickness		--
	Sample 1 burning time		N
	Sample 2 burning time		N
	Sample 3 burning time		N
	Material: compliance with the requirements		N
	Manufacturer of tested material		--
	Type of tested material		--
	Additional information		--

B	ANNEX , MOTOR TESTS UNDER ABNORMAL CONDITIONS See 5.3.2		N
	Position		--
	Manufacturer		--
	Type		--
	Rated voltage (V) or current (A)		--
B.2	Temperatures	(see appended table 5.4)	N
B.4	Running overload test		N
B.5	Locked-rotor overload test		N
	Test duration (days)		--
	Electric strength test: test voltage (V)		--
B.6	Running overload test for DC motor in secondary circuits		N

Clause	Requirement - Test	Result – Remark	Verdict
B.7	Locked-rotor overload test for DC motor in secondary circuits		N
B.7.2	Test time (h)		N
B.7.3	Test lime (h)		N
B.8	Test for motors with capacitor		N
B.9	Test for three-phase motor		N
B.10	Test for series motors		N
	Test voltage (V)		--
C	ANNEX , TRANSFORMERS		N
	Position		--
	Manufacturer		
	Type		--
	Rated values		--
	Temperatures		N
C.1	Overload test		N
	Conventional transformer		N
C.2	Insulation		N
	Precautions		N
	Retaining of end turns of all windings	Dto	N
	Earthing test at 25A	Dto	N
C.3	Electric strength test		N

APPENDED TABLES

1.5		List of critical components			P
Object/part No	Manufacturer/ Trademark	Type / model	Technical Data		Mark(s) of Conformity
Metal enclosure	Applicant's Spec.	----	min. 025mm		--
Plastic of Material	Applicant's Spec.	---	94V-0 or better		UL, R/C
Main PCB	Recognized	---	94V-0		UL, R/C

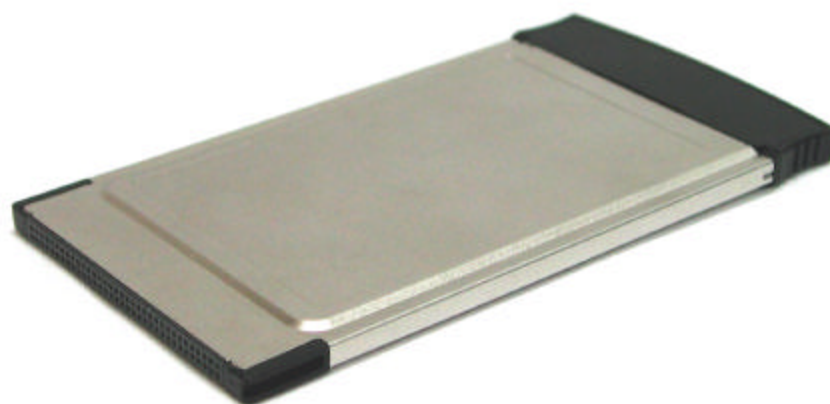
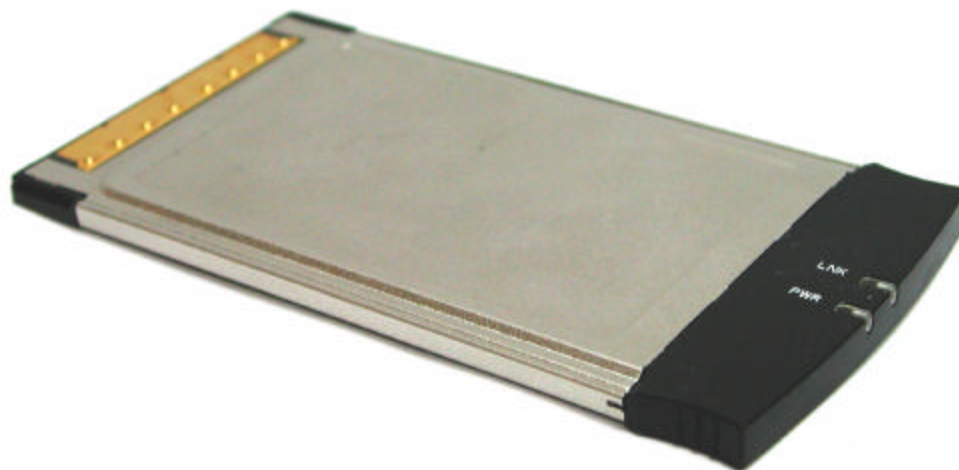
1.6		Input Test			P
Operating Condition	Input Condition		Input Current (A)		Average Power Watts
	Volts		Rated	Measured	
Max. Normal Load	5		0.1	0.025	0.075

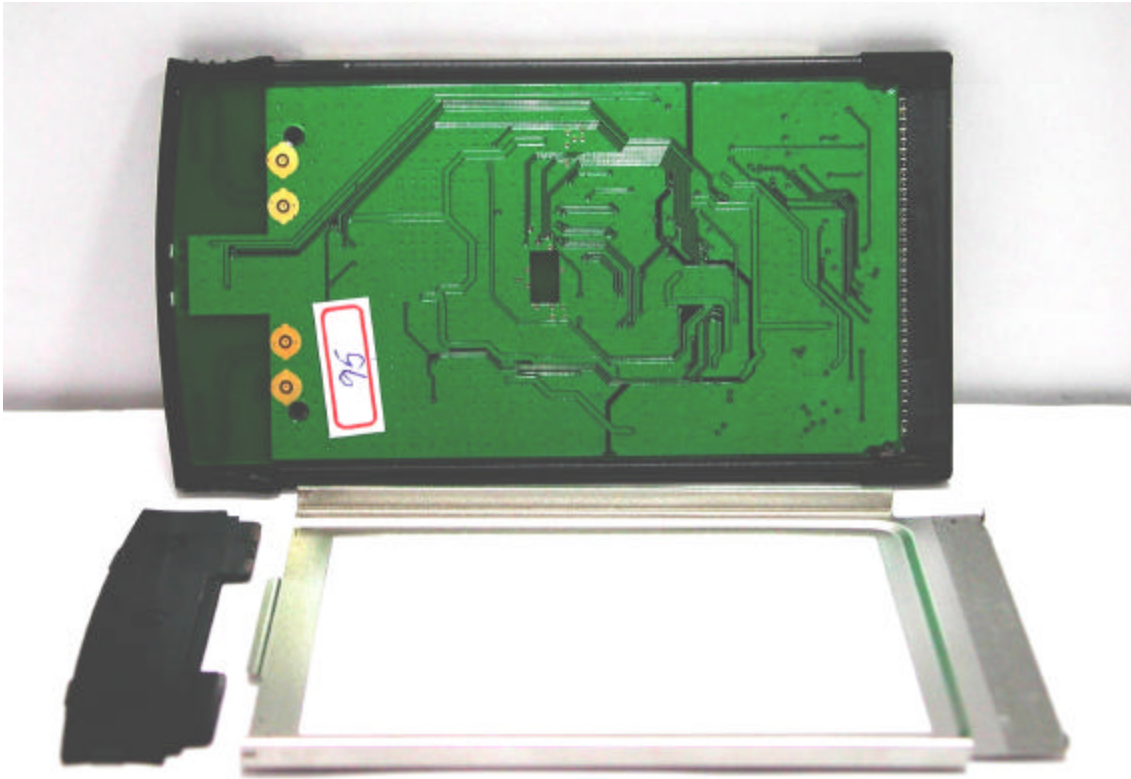
4.7		Resistance to Fire		P
Item	UL Recognized		Declared Rating	
PCB			V-0	

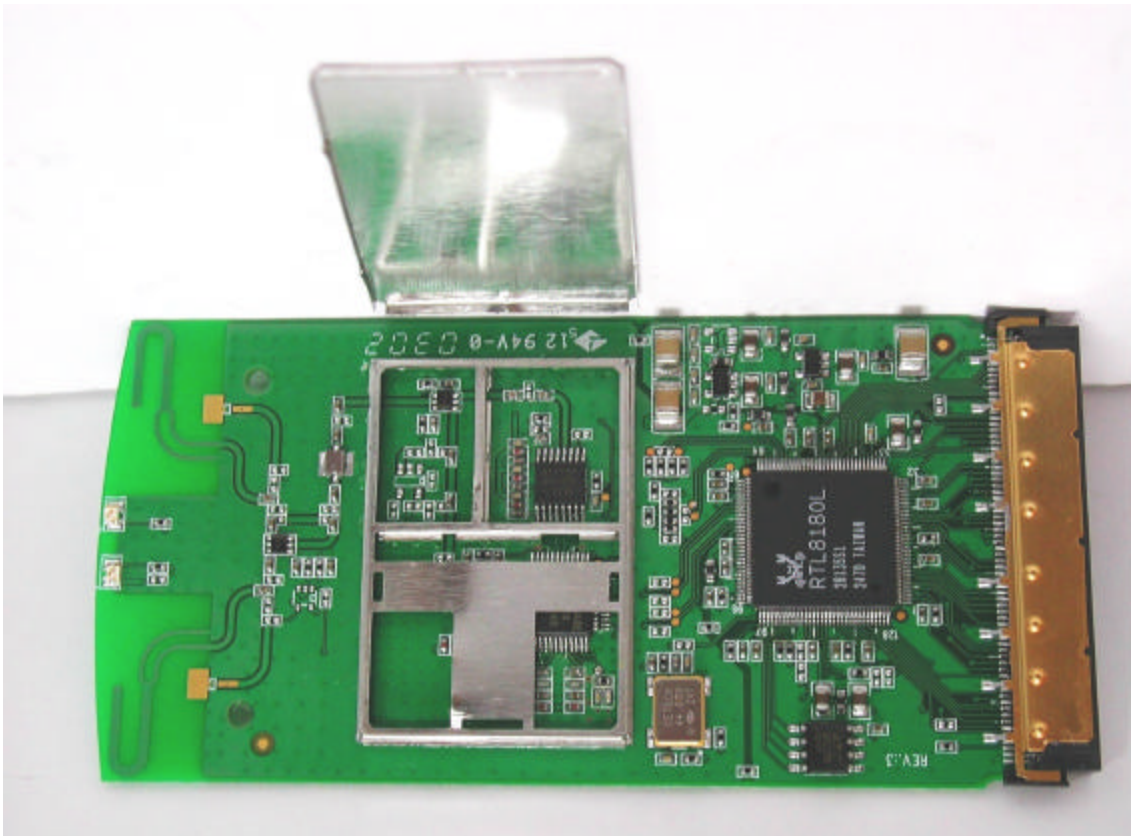
APPENDIX –TEST INSTRUMENTS

Inst. ID	Instrument No.	Range Used	Instruments Type
LTC01	THS-ML1	Temperature : 70 °C R. Humidity :. 60%	Temperature Humidity Chambers
LTC02	GPI-615	Cutoff Current:10mA: Voltage:1500VAC	Withstand Voltage Tester
LTC03	GDM-8039	VAC	Digital Multimeter
LTC04	HP OSCILLO SCOPE	DC/AC 0-500 V	54600A
LTC05	CHITAI 2402A	Auto	Digital Power Meter (DC/AC)
LTC06	CHENHWA DC Electronic Load	60V/60A	2600
LTC07	IMADA FB-50	50 KG Resolution: 0.5N	Portable Force Indicator
LTC08	N/A	Ball Impact Test H.: 1.30 m	Steel Sphere
LTC09	OVEN	50-300	Thermal Oven
LTC10	YOKOGAWA HR1300	CH1-CH20	HYBRID Recorder
LTC11	ED&D LT-952HC	20 Ma, 2 mA	Leakage Current Tester
LTC12	GW GFG-813	100 Hz – 10 KHz	13 MHz Function Generator
LTC13	APC AFC-3KB	90V-260V 47-63Hz, 3KVA	AC Power Source
LTC14	GDM 8055	200 Ma (DC A)	Digital Multimeter
LTC15	GDM 8055	20 VAC	Digital Multimeter
LTC16	B&K 4155	12.5 mV/Pa	Microphone
LTC17	B&K ZC0020	Gain: 0dB	Pre- Amplifier
LTC18	B&K TYPE 2230	70-140 dBspl	Precision Sound Level Meter
LTC19	1036-AF	ANSI S3.7-1973	Acoustic Coupling
LTC20	TRC 1102	Press T1 V1	Surge Testor
LTC21	OTS	All	Overvoltage Test Simulator
LTC22	GDM-8039	VAC	Digital Multimeter
LTC23	Lufkin 5m/16'	1 Meter 1.3 Meter	Roll Ruler
LTC24	GW GCT-630	Ohm.& A.	Ground Continuty Tester

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Test date : 07/21/2003, Lily Technology Co., Ltd., TEL : 886-2-8773-6799 , Fax : 886-2-8773-6794

