

TEST REPORT
IEC60 950
Safety of information technology equipment

Report Reference No.: SPCLVD11138

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This report is based on a blank test report that was prepared by KEMA using information obtained from the TRF originator (see below).

Testing laboratory name: Superior Product Consulting, Inc.

Address: 3F, No. 10, Alley 6, Lane 235, Pao Chiao Rd., Hsien Tien, Taipei, Taiwan, R.O.C.

Testing location: 3F, No. 10, Alley 6, Lane 235, Pao Chiao Rd., Hsien Tien, Taipei, Taiwan, R.O.C.

Client name: Advantech Co., Ltd

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

Standard: IEC 60 950:1991 + A1:1992 + A2:1993 + A3:1995 + A4:1996
EN 60 950:1992 + A1:1993 + A2:1993 + A3:1995 + A4:1997 + A11:1997

Test procedure: Informative Test Report

Procedure deviation: N/A

Non-standard test method: N/A

Test Report Form/blank test report


Test Report Form No.: I950__D/97-06

TRF originator.: FIMKO

Master TRF: reference No. I950 D, dated 97-02

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Test item description: Personal Digital Assistant

Trademark: 

Model and/or type reference: MPC-100T

Manufacturer: Advantech Co., Ltd

Rating(s): +19.5 V dc, 2.0 A

Copy of marking plate

MPC-100T (File)

PAD

Cradle

MODEL NO.: MPC-100-X999999999

標識 XXXXXXXXX

Advantech Co., Ltd
Made in Taiwan R.O.C

CE FCC Tested To Comply With FCC Standards

UL US LISTED

MODEL NO.: MPC-100-X999999999

標識 XXXXXXXXX

Advantech Co., Ltd
Made in Taiwan R.O.C

CE FCC Tested To Comply With FCC Standards

UL US LISTED

4 cells battery

Lithium-Ion
Rechargeable smart battery must be recycled or disposed of properly.
Read instructions in user guide before using this battery.
Model name: MPC-100-xxxxxx
14.4V 1.5Ah
FINAL ASSEMBLY IN TAIWAN

CAUTION:
DO NOT expose to fire or extreme high temperature.
DO NOT short external circuit.

Advantech Co., Ltd



Test item particulars:

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 (supplied by SELV).
Mass of equipment (kg) : 2.2
Protection against ingress of water : IPXO

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

General remarks:

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

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

This report is not valid as a CB Test Report unless appended to a CB Test Certificate issued by a NCB in accordance with IECEE 02.

General product information:

The unit is intended to receive power from a separately evaluated and approved power source.

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict


1	GENERAL		Pass
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1.5	Components		Pass
1.5.1	Comply with IEC 60950 or relevant component standard	(see appended table)	Pass
1.5.2	Evaluation and testing components	Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this Standard.	Pass
	Dimensions (mm) of mains plug for direct plug-in :	The equipments is not plug-in type.	N/A
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N)		N/A
1.5.3	Transformers	Evaluated as part of approval power supply.	Pass
1.5.4	Flammability class of high voltage components (component; manufacturer; flammability) :	No high-voltage components.	N/A
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	Pass
1.5.6	Mains capacitors	X capacitors are evaluated as part of the approval power supply.	Pass

IEC 950			
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1.6	Power interface		N/A
1.6.1	Steady state input current	No connection to the mains supply. However the definition for highest load according to 1.2.2.1 for this equipments is the unit. operated under full brightness and contrast of the LCD backlight circuit. Results see appended table.	N/A
	Current deviation during normal operating cycle	<10%	N/A
1.6.2	Voltage limit of hand-held equipment	This appliance is not a hand-held equipment.	N/A
1.6.3	Neutral conductor insulated from earth and body	No connection to the mains supply.	N/A
1.6.4	Components in equipment intended for IT power system	No connection to the mains supply.	N/A
1.6.5	Mains supply tolerance (V) :	No connection to the mains supply.	N/A

IEC 950			
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1.7	Marking and instructions		Pass
1.7.1	Rated voltage (V)	+19.5 V dc (no connection to the mains)	N/A
	Symbol of nature of supply for d.c.	DC symbol (no connection to the mains)	N/A
	Rated frequency (Hz)	No connection to the mains.	N/A
	Rated current (A)	2.0 A	N/A
	Manufacturer	Advantech Inc.	Pass
	Trademark		Pass
	Type/model	MPC-100T	Pass
	Symbol of Class II	Class III equipment	N/A
	Certification marks	UL	Pass
1.7.2	Safety instructions	The users manual contains information for operation, installation, servicing, transport, storage and technical data.	Pass
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	N/A
1.7.4	Marking for voltage setting/frequency setting	No voltage/frequency setting.	N/A
1.7.5	Marking at power outlets	No outlet.	N/A
1.7.6	Marking at fuseholders	No fuse.	N/A
1.7.7.1	Protective earthing terminals	No mains supply.	N/A
1.7.7.2	Terminal for external primary power supply conductors	No mains supply.	N/A
1.7.8.1	Identification and location of switches and controls :	A standby switch used on the panel.	Pass

IEC 950			
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1.7.8.2	Colours of controls and indicators	<p>The colours used for LED are indicating the following function:</p> <p>-green (on position)</p> <p>As green is reserved according to IEC 60073 for safe function or "on" conditions, these indicator does comply with this standard.</p> <p>In standby, suspend or off modes, the LED will be put out.</p> <p>As the battery exist, second and third LED will be orange.</p>	Pass
1.7.8.3	Symbols according to IEC60417	Comply with IEC 60417.	Pass
1.7.8.4	Figures used for marking	No indicators for different positions.	N/A
1.7.8.5	Location of markings and indications for switches and controls	The marking for the switch is located adjacent the switch knob.	Pass
1.7.9	Isolation of multiple power sources	No mains supply.	N/A
1.7.10	Instructions for installation to IT power system	No mains supply.	N/A
1.7.11	Instructions when protection relies on building installation	No mains supply.	N/A
1.7.12	Marking when leakage current exceeds 3.5 mA	No mains supply.	N/A
1.7.13	Indication at thermostats and regulating devices	No adjustable thermostats.	N/A
1.7.14	Language of safety markings/instructions	Reviewed only English markings/instructions.	Pass
	Language	May be provided in other languages upon request from the manufacturer.	—
1.7.15	Durability and legibility	The marking(s) withstood the required test.	Pass
1.7.16	Removable parts	No required markings placed on removable part.	Pass
1.7.17	Warning text for replaceable lithium batteries	The required warning is in the service manual.	Pass
	Language	Only English language reviewed.	—
1.7.18	Operator access with a tool	Only SELV voltage and LCC inside.	N/A
1.7.19	Equipment for restricted access locations	No restricted access location.	N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

2	PROTECTION FROM HAZARDS		Pass
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2.1	Protection against electric shock and energy hazards		Pass
2.1.1	Access to energized parts	No operator access to energized parts.	Pass
2.1.2	Protection against operator contact	Only SELV and Safety Earth are accessible.	Pass
	Test by inspection		N/A
	Test with test finger		N/A
	Test with test pin	The test pin was unable to contact bare hazardous parts.	Pass
2.1.3.1	Insulation of internal wiring in an ELV circuit accessible to operator	No ELV wiring in operator accessible area.	N/A
	Working voltage (V); distance (mm) through insulation		N/A
2.1.3.2	Operator accessible insulation of internal wiring at hazardous voltage	No internal wiring accessible to the user.	N/A
2.1.4.1	Protection in service access areas	No maintenance work in operation mode necessary.	N/A
2.1.4.2	Protection in restricted access locations	It is not intended to be used in restricted locations.	N/A
2.1.5	Energy hazard in operator access area	No energy hazard in operator access area. The connectors on the back side of the equipment below 240VA	Pass
2.1.6	Clearances behind conductive enclosures	Refer to 4.2.3.	N/A
2.1.7	Shafts of manual controls	No shafts or knobs, etc. at ELV or hazardous voltage.	Pass
2.1.8	Isolation of manual controls		N/A
2.1.9	Conductive casings of capacitors		N/A
2.1.10	Risk of electric shock from stored charge on capacitors connected to mains circuit	Power supply separately evaluated, see Table 1.5.1.	N/A
	Time-constant (s); measured voltage (V)		—

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

2.2	Insulation		N/A
2.2.1	Methods of insulation	Unit is designed for use only in a SELV circuit.	N/A
2.2.2	Properties of insulating materials		N/A
2.2.3	Humidity treatment		N/A
	Humidity (%)		—
	Temperature (°C)		—
2.2.4	Requirements for insulation		N/A
2.2.5	Insulation parameters		N/A
2.2.6	Categories of insulation	Operational.	N/A
2.2.7.1	General rules for working voltages		N/A
2.2.7.2	Clearances in primary circuits		N/A
2.2.7.3	Clearances in secondary circuits	See 5.4.4.	N/A
2.2.7.4	Creepage distances	See 5.4.4.	N/A
2.2.7.5	Electric strength tests	See 5.4.4.	N/A
2.2.8.1	Bridging capacitors		N/A
2.2.8.2	Bridging resistors		N/A
2.2.8.3	Accessible parts		N/A

IEC 950			
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2.3	Safety extra-low voltage (SELV) circuits		Pass
2.3.1	Voltage (V) of SELV circuits under normal operating conditions and after a single fault	42.4V peak or 60Vdc are not exceeded in SELV circuit under normal operation or single fault condition.	—
2.3.2	Voltage (V) between any two conductors of SELV circuit(s) and for Class I equipment between any conductor of SELV circuit and equipment protective earthing terminal under normal operating conditions	Between any SELV circuits 42.4V peak or 60Vdc are not exceeded.	Pass
2.3.3	Voltage (V) of SELV in the event of a single failure of basic or supplementary insulation or of a component	Single fault did not cause excessive voltage in accessible SELV circuits. Limits of 71V peak and 120Vdc were not exceed and SELV limits not for longer than 0.2 seconds, see abnormal results 5.4.6.	—
	Method used for separation	Class III equipment.	N/A
2.3.4	Additional constructional requirements	The SELV circuit is adequately constructed in order to prevent reduction of distances, loosening of terminals, breaking of wiring at terminals, accidental shorting to hazardous voltages and the improper use of connectors.	Pass
2.3.5	Connection of SELV circuits to other circuits	See 2.3.2 and 2.3.3 No direct connection between SELV and any primary circuits.	N/A

2.4	Limited current circuits		Pass
2.4.2	Frequency (Hz)	The peak drop voltage was measured with a scope at a 2k Ω resistor. Results see appended table.	—
	Measured current (mA)	See above.	Pass
2.4.3	Measured voltage (V)	>450Vpk	—
	Measured capacitance (μ F)	The circuit capacitance did not exceed 0.1	Pass
2.4.4	Measured voltage (V)	840Vpk	—
	Measured charge (μ C)	<45 μ C	Pass

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict
2.4.5	Measured voltage (V)		—
	Measured energy (mJ)		N/A
2.4.6	Limited current circuit supplied from or connected to other circuits		Pass

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

2.5	Provisions for earthing		N/A
2.5.1	Class I equipment	Class III equipment.	N/A
	Warning label for service personnel		N/A
2.5.2	Protective earthing in Class II equipment		N/A
2.5.3	Switches/fuses in earthing conductors		N/A
2.5.4	Assured earthing connection for Class I equipment in systems comprising Class I and Class II equipment		N/A
2.5.5	Green/yellow insulation		N/A
2.5.6	Continuity of earth connections		N/A
2.5.7	Making and breaking of protective earthing connections		N/A
2.5.8	Disconnection protective earthing connections		N/A
2.5.9	Protective earthing terminals for fixed supply conductors or for non-detachable power supply cords		N/A
2.5.10	Corrosion resistance		N/A
2.5.11	Resistance (Ohm) of protective earthing conductors $\leq 0.1 \text{ Ohm}$		N/A
	Test current (A) :		—

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

2.6	Disconnection from primary power		N/A
2.6.1	General requirements	Clas III equipment.	N/A
2.6.2	Type of disconnect device :		N/A
2.6.3	Disconnect device in permanently connected equipment		N/A
2.6.4	Parts of disconnect device which remain energized		N/A
2.6.5	Switches in flexible cords		N/A
2.6.6	Disconnection of both poles simultaneously for single-phase equipment		N/A
2.6.7	Disconnection of all phase conductors of supply in three-phase equipment		N/A
2.6.8	Marking of switch acting as disconnect device		N/A
2.6.9	Installation instructions if plug on power supply cord acts as disconnect device		N/A
	Language :		—
2.6.11	Interconnected equipment		N/A
2.6.12	Multiple power sources		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

2.7	Overcurrent and earth fault protection in primary circuits		N/A
2.7.1	Basic requirements		N/A
2.7.2	Protection against faults not covered in 5.4		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices :		N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel		N/A

2.8	Safety interlock		N/A
2.8.2	Design		N/A
2.8.3	Protection against inadvertent reactivation		N/A
2.8.4	Reliability		N/A
2.8.5	Override an interlock		N/A
2.8.6.1	Contact gap (mm) :		N/A
2.8.6.2	Switch performing 50 cycles		N/A
2.8.6.3	Electric strength test: test voltage (V) :		N/A
2.8.7	Protection against overstress		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

2.9	Clearances, creepage distances and distances through insulation		N/A
	Nominal voltage (V)	Unit is located in a SELV circuit.	—
	General		N/A
2.9.2	Clearances	See 5.4.4.	N/A
2.9.2.1	Clearances in primary circuits		N/A
2.9.2.2	Clearances in secondary circuits	See 5.4.4.	N/A
2.9.3	Creepage distances	See 5.4.4.	N/A
	CTI tests		—
2.9.4.1	Minimum distances through insulation		N/A
2.9.4.2	Thin sheet material		N/A
	Number of layers (pcs)		N/A
	Electrical strength test: test voltage (V)		N/A
2.9.4.3	Printed boards		N/A
	Distance through insulation		N/A
	Electric strength test at voltage (V) for thin sheet insulating material		N/A
	Number of layers (pcs)		N/A
2.9.4.4	Wound components without interleaved insulation		N/A
	Number of layers (pcs)		N/A
	Two wires in contact inside component; angle between 45° and 90°		N/A
	Routine testing for finished component		N/A
2.9.5	Distances on coated printed boards		N/A
	Routine testing for electric strength		N/A
2.9.6	Enclosed and sealed parts		N/A
	Temperature T1 (°C)		N/A
	Humidity %		N/A
2.9.7	Spacings filled by insulating compound		N/A
	Temperature T1 (°C)		N/A
	Humidity %		N/A
2.9.8	Component external terminations		N/A
2.9.9	Insulation with varying dimensions	(see appended table 2.9.2 and 2.9.3 and 2.9.4)	N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

2.10	Interconnection of equipment		Pass
2.10.1	General requirements	see below	N/A
2.10.2	Type of interconnection circuits :	Interconnection circuits of SELV through the connectors.No ELV interconnection circuits.	Pass
2.10.3	ELV circuits as interconnection circuits	No ELV interconnection.	N/A

2.11	Limited power source		Pass
	Use of limited power source :	The adapter used is tested as limited power source during the approval of adapter.	Pass

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

3	WIRING, CONNECTIONS AND SUPPLY		Pass
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3.1	General		Pass
3.1.1	Cross-sectional area of internal wiring/interconnecting cables	All internal wires are UL recognized wiring that is PVC insulated, rated VW-1, min. 80°C, 300V. Internal internal wiring gauge is suitable for current intended to be carried.	Pass
	Protection of internal wiring and interconnecting cables	No internal wire for primary power distribution.	N/A
3.1.2	Wireways	wires do not touch sharp edges and heatsinks.	Pass
3.1.3	Fixing of internal wiring	Reliable fixed.	Pass
3.1.4	Fixing of uninsulated conductors	Securely held on PCB. No hazard.	Pass
3.1.5	Insulation of internal wiring		N/A
3.1.6	Wires coloured green/yellow only for protective earth connection	See 2.5.5	N/A
3.1.7	Fixing of beads and similar ceramic insulators	Not used.	N/A
3.1.8	Required electrical contact pressure	Electrical connections screwed two or more complete threads into metal. No screws of insulating material for electrical connection, or reinforced by a metal replacement.	Pass
3.1.9	Reliable electrical connections	All current carrying connection are metal to metal.	Pass
3.1.10	End of stranded conductor	No risk of stranded conductors coming loose.	Pass
3.1.11	Use of spaced thread screws/thread-cutting screws	No self tapping screws are used.	Pass

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

3.2	Connection to primary power		Pass
3.2.1	Type of connection	Appliance inlet on approved adapter.	N/A
	Design of product with more than one supply connection		N/A
3.2.2	Provision for permanent connection		N/A
	Size (mm) of cables and conduits		N/A
3.2.3	Appliance inlet	On approved adapter.	N/A
3.2.4	Type and cross-sectional area (mm ²) of power supply cord	H05VVH2-F, 3 x 0.75 mm certified power cord used.	Pass
3.2.5	Cord anchorage		N/A
	Test: 25 times; 1 s; pull (N)		—
	Longitudinal displacement ≤ 2 mm		N/A
3.2.6	Protection of power supply cord	No parts under this unit likely to damage the power supply cord. No sharp edges.	N/A
3.2.7	Cord guard		N/A
	D (mm)		—
	Test: mass (g)		—
	Radius of curvature of the cord ≤ 1.5 D		N/A
3.2.8	Supply wiring space		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

3.3	Wiring terminals for external power supply conductors		N/A
3.3.1	Terminals		N/A
3.3.2	Special non-detachable cord		N/A
	Type of connection		—
	Pull test at 5 N		N/A
3.3.3	Screws and nuts		N/A
3.3.4	Fixing of conductors		N/A
3.3.5	Connection of connectors		N/A
3.3.6	Size of terminals		N/A
	Nominal thread diameter (mm)		N/A
3.3.7	Protection against damage of conductors		N/A
3.3.8	Terminal location		N/A
3.3.9	Test with 8 mm stranded wire		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

4	PHYSICAL REQUIREMENTS		Pass
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4.1	Stability and mechanical hazards		N/A
4.1.1	Stability tests		N/A
	Angle of 10°	This appliance is of a stable mechanical construction and does not overbalance when tilted to an angle of 10° from its normal upright position.	N/A
	Test: force (N)	Equipment is not a floorstanding unit.	N/A
4.1.2	Protection against personal injury	No moving part.	Pass
4.1.3	Warning and means provided for stopping the moving part	No moving part.	N/A
4.1.4	Edges and corners	Edges and corners of the enclosure are rounded.	Pass
4.1.5	Enclosure of a high pressure lamp	No lamp with cold pressure of 0.2MPa or hot pressure 0.4MPa.	N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

4.2	Mechanical strength and stress relief		N/A
4.2.1	General		N/A
4.2.2	Internal enclosures 30 N \pm 3 N; 5 s	Unit only employs SELV and/or limited current circuits.	N/A
4.2.3	External enclosures 250 N \pm 10 N; 5 s		N/A
4.2.4	Steel ball tests		N/A
	Fall test		N/A
	Swing test		N/A
4.2.5	Drop test	Product is not intended to be handheld during use.	N/A
4.2.6	Heat test for enclosures of moulded or formed thermoplastic materials: 7 h; T (°C) :		N/A
4.2.7	Compliance criteria		N/A
4.2.8	Mechanical strength of cathode ray tubes		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

4.3	Construction details		Pass
4.3.1	Changing of setting for different power supply voltages	The equipment does not have a voltage selector	N/A
4.3.2	Adjustment of accessible control devices	None that would cause hazard.	Pass
4.3.4	Prevention of dangerous concentration of dust, powder, liquid and gas	Equipment in intended use not considered to exposed to these.	N/A
4.3.5	Fixing of knobs, grips, handles, levers		N/A
	Test: force (N)		N/A
4.3.6	Driving belts/couplings shall not ensure electrical insulation	No used for insulation.	N/A
4.3.7	Retaining of sleeves	Sleeving on wiring reliable kept in position by the use of heatshrunk sleeving.	Pass
4.3.9	Protection of loosening parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress.for the protection, solder pins, cable ties and heatshrunk tubing are used.	Pass
4.3.11	Resistance to oil and grease	Insulation not in contact with oil or grease.	N/A
4.3.12	Protection against harmful concentration of ionizing radiation, ultraviolet light, laser or flammable gases (for laser see IEC 60825-1)	No ionizing radiation or laser or flammable liquids presents.The power emitted from the LED is far below laser class 1 limit.	Pass
4.3.13	Securing of screwed connections	No connection likely to be exposed to mechanical stress are provided in unit.	Pass
4.3.15	Openings in the top of enclosure	No eletric and fire enclosure required.	N/A
	Dimensions (mm)		—
4.3.16	Openings in the sides of enclosure	No electric and fire enclosure required.	N/A
	Dimensions (mm)		—
4.3.17	Interchangeable plugs and sockets	In operator and service area, mismatch of connectors were prevented by incompatible form or location.	Pass
4.3.18	Torque test for direct plug-in equipment		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict
	Additional torque (Nm) :		N/A
4.3.19	Protection against excessive pressure		N/A
4.3.20	Protection of heating elements in Class I equipment		N/A
4.3.21	Protection of lithium batteries		Pass
	Construction of protection circuit :	For battery : Li-Ion battery used as RTC battery. There is no reverse polarity installation could be happen due to designation. Battery Pack, Li-Ion battery cells used. See appended table 1.5.1. The battery pack has been investigated and complies with the requirement for over charge and discharge. See enclosed test record.	Pass
4.3.22	Ageing of barrier/screen secured with adhesive		N/A
	Day 1: temperature (°C); time (weeks) :		N/A
	Day 8/22/57: a) temperature (°C) for 1 h b) temperature (°C) for 4 h c) temperature (°C) over 8 h :		N/A
	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 8 h :		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

4.4	Resistance to fire		Pass
4.4.1	Methods of achieving resistance to fire	Use of materials with the required flammability classes.	Pass
4.4.2	Minimizing the risk of ignition	Electrical parts are not likely to ignite nearby materials. Parts not protected against overheating under fault conditions. Temperature see 5.1	Pass
	Printed board: manufacturer; type; flammability ... :	See 1.5.1 appended table.	Pass
4.4.3	Flammability of materials and components		Pass
4.4.3.2	Material and component: manufacturer; type; flammability	Internal components except small parts are V-2, HF-2 or better.	Pass
4.4.3.3	Exemptions	considered.	Pass
4.4.3.4	Wiring harnesses: manufacturer; flammability	Insulating material consists of PVC.	Pass
4.4.3.5	Cord anchorage bushings: manufacturer; flammability	No cord anchorage.	N/A
4.4.3.6	Air filter assemblies: manufacturer; flammability ..	No air filter assemblies.	N/A
4.4.4	Enclosures and decorative parts: manufacturer; flammability	As for the appliance no fire enclosure required (refer to 2.11 limited power source), the enclosure material of V-1 or better (min. HB) was acceptable.	Pass
4.4.5	Conditions for fire enclosures	See 4.4.5.2	Pass
4.4.5.1	Components which require fire enclosure: manufacturer; flammability	See 4.4.5.2	N/A
4.4.5.2	Components not requiring fire enclosure	The appliance with: -supply of components in the secondary circuit by a limited power source.Details refer 2.11, and the components are mounted on PCB material of flammability rating V-1 min., the fire enclosure construction is not required.	Pass
4.4.6	Fire enclosure construction	See 4.4.5.2.	N/A
4.4.7	Doors and covers in fire enclosures	No doors and covers.	N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict
4.4.8	Flammable liquids	No flammable liquids in this unit.	N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

5	THERMAL AND ELECTRICAL REQUIREMENTS		Pass
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5.1	Heating		Pass
	Heating tests	(see appended table)	Pass

5.2	Earth leakage current		N/A
5.2.1	General		N/A
5.2.2	Leakage current	Power supply separately evaluated, see Table 1.5.1.	N/A
	Test voltage (V)		—
	Measured current (mA)		—
	Max. allowed current (mA)		—
5.2.3	Single-phase equipment		N/A
	Test voltage (V)		—
	Measured current (mA)		—
	Max. allowed current (mA)		—
5.2.4	Three-phase equipment		N/A
	Test voltage (V)		—
	Measured current (mA)		—
	Max. allowed current (mA)		—
5.2.5	Equipment with earth leakage current exceeding 3.5 mA		N/A
	Test voltage (V)		—
	Measured current (mA)		—
	Max. allowed current (mA)		—
	Cross-sectional area (mm ²) of internal protective earthing conductor		—
	Warning label		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

5.3	Electric strength		N/A
5.3.1	General		N/A
5.3.2	Test procedure	(see appended table)	N/A

5.4	Abnormal operating and fault conditions		Pass
5.4.2	Motors		N/A
5.4.3	Transformers	No safety isolation transformer except in approved adapter.	N/A
5.4.4	Compliance of operational insulation		N/A
	Method used		N/A
5.4.5	Electromechanical components in secondary circuits	No electromechanical components.	N/A
5.4.6	Other components and circuits	Evaluated as part of approval power supply.	N/A
5.4.7	Test in any expected condition and foreseeable misuse	There is no foreseeable misuse likely to happen.	N/A
5.4.8	Unattended use of equipment having thermostats, temperature limiters etc.	None of them are used.	N/A
5.4.9	Compliance		N/A
5.4.10	Ball-pressure test of thermoplastic parts; impression shall not exceed 2 mm		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
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6.1	General		N/A
6.2	TNV circuits		N/A
6.2.1.1	Limits of the TNV circuits		N/A
6.2.1.1 a)	TNV-1 circuits		N/A
6.2.1.1 b)	TNV-2 and TNV-3 circuits		N/A
6.2.1.2	Separation from other circuits and from accessible parts	(see appended table 2.9.2, 2.9.3 and 2.9.4)	N/A
	Voltage (V) in SELV circuits, TNV-1 circuits and accessible conductive parts in event of single insulation fault or component failure		N/A
6.2.1.3	Operating voltages generated externally		N/A
	Voltage (V) in SELV circuit, TNV-1 circuit or accessible conductive part		N/A
6.2.1.4	Separation from hazardous voltages		N/A
	Insulation between TNV circuit and circuit at hazardous voltage		N/A
	Method used		N/A
6.2.1.5	Connection of TNV circuits to other circuits	(see appended table 5.4)	N/A
	Insulation (mm) between TNV circuit supplied conductively from secondary circuit and hazardous voltage circuit		N/A
6.2.2.1	Protection against contact with bare conductive parts of TNV-2 and TNV-3 circuits		N/A
	Test with test finger		N/A
	Test with test probe		N/A
6.2.2.2	Battery compartments		N/A
	Marking next to door/on door		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

6.3	Protection of telecommunication network service personnel, and users of other equipment connected to the telecommunication network, from hazards in the equipment		N/A
6.3.1	Protection from hazardous voltages		N/A
6.3.2	Use of protective earthing		N/A
	Language of installation instructions		N/A
6.3.3.1	Insulation between TNV circuit and parts or circuitry that may be earthed	(see appended table 5.3)	N/A
6.3.3.2	Exclusions		N/A
6.3.4.1	Limitation of leakage current (mA) to telecommunication network		N/A
6.3.4.2	Summation of leakage currents from telecommunication network		N/A

6.4	Protection of the equipment user from voltages on the telecommunication network		N/A
6.4.1	Separation requirements		N/A
6.4.2	Test procedure		N/A
6.4.2.1	Impulse test: separation between TNV-1 circuits/TNV-3 circuits and:		N/A
6.4.2.1 a)	unearthed conductive parts/non-conductive parts of the equipment which are held or touched during normal use; test at 2.5 kV		N/A
6.4.2.1 b)	parts and circuitry that can be touched by the test finger except contacts of connectors that cannot be touched by test probe; test at 1.5 kV		N/A
6.4.2.1 c)	circuitry which is provided for connection of other equipment; test at 1.5 kV		N/A
6.4.2.2	Electric strength test: separation between TNV-1 circuits/TNV-3 circuits and:		N/A
6.4.2.2 a)	unearthed conductive parts/non-conductive parts of the equipment which are held or touched during normal use; test at 1.5 kV		N/A
6.4.2.2 b)	parts and circuitry that can be touched by the test finger except contacts of connectors that cannot be touched by test probe; test at 1.0 kV		N/A
6.4.2.2 c)	circuitry which is provided for connection of other equipment; test at 1.0 kV		N/A
6.4.2.3	Compliance criteria		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict
6.5	Protection of telecommunication wiring system from overheating		N/A
	Maximum continuous output current (A) :		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
A.1	Flammability test for fire enclosures of moveable equipment having a total mass exceeding 18 kg, and of stationary equipment		N/A
A.2	Flammability test for fire enclosures of moveable equipment having a total mass not exceeding 18 kg, and for materials located within fire enclosures		N/A
A.3	High current arcing ignition test		N/A
A.3.6	Number of arcs		N/A
A.4	Hot wire ignition test		N/A
A.4.6	Ignition time (s)		N/A
A.5	Hot flaming oil test		N/A
A.6	Flammability test for classifying materials V-0, V-1 or V-2		N/A
A.7	Flammability test for classifying foamed materials HF-1, HF-2 or HBF		N/A
A.8	Flammability test for classifying materials HB		N/A
A.9	Flammability test for classifying materials 5V		N/A
A	Tested material		N/A
	Preconditioning: 7 days (168 h); temperature (°C) :		—
	Mounting of samples during test		—
	Wall thickness		—
	Sample 1 burning time		N/A
	Sample 2 burning time		N/A
	Sample 3 burning time		N/A
	Material: compliance with the requirements		N/A
	Manufacturer of tested material		—
	Type of tested material		—
	Additional information		—

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS		N/A
B.1	General requirements		N/A
	Position		—
	Manufacturer		—
	Type		—
	Rated voltage (V) or current (A)		—
B.2	Test conditions		N/A
B.3	Maximum temperatures	(see appended table 5.4)	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 DC motor in secondary circuits		N/A
B.7	Locked-rotor overload test for DC motor in secondary circuits		N/A
B.7.2	Test time (h)		N/A
B.7.3	Test time (h)		N/A
B.8	Test for motors with capacitor		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Test voltage (V)		—

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

C	ANNEX C, TRANSFORMERS		N/A
	Position	Power supply not evaluated as part of this investigation.	—
	Manufacturer		—
	Type		—
	Rated values		—
	Temperatures		N/A
	Thermal cut-out	(see appended table 5.1)	N/A
C.1	Overload test		N/A
	Conventional transformer		N/A
C.2	Insulation		N/A
	Precautions		N/A
	Retaining of end turns of all windings		N/A
	Earthing test at 25 A		N/A
C.3	Electric strength test		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

H	ANNEX H, IONIZING RADIATION		N/A
	Ionizing radiation		N/A
	Measured radiation	:	—
	Measured high-voltage (kV)	:	—
	Measured focus voltage (kV)	:	—
	CRT markings	:	—
	Certified by	:	—
	Standard used	:	—

U	ANNEX U, INSULATED WINDING WIRES FOR USE AS MULTIPLE LAYER INSULATION		N/A
	See separate test report		N/A

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

2.9.2 and 2.9.3	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)
Primary to ground						
Primary to secondary						
supplementary information:						

2.9.4.1	TABLE: distance through insulation measurements				N/A
distance through insulation di at/of:	U r.m.s. (V)	test voltage (V)	required di (mm)	di (mm)	
supplementary information:					

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

5.1	TABLE: temperature rise measurements				Pass	
	test voltage (V)	:			—	
	t1 (°C)	:	--		—	
	t2 (°C)	:	--		—	
temperature rise dT of part/at:			dT (K)	required dT (K)		
temperature rise dT of winding:		R ₁ (Ω)	R ₂ (Ω)	dT (K)	required dT (K)	insulation class
supplementary information:						

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

5.3	TABLE: electric strength measurements		N/A
test voltage applied between:		test voltage (V)	breakdown
			Yes / No
supplementary information:			

5.4		TABLE: fault condition tests					Pass
		ambient temperature (°C)					—
		model/type of power supply					—
		manufacturer of power supply					—
		rated markings of power supply					—
No.	component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result
supplementary information:							

IEC 950			
Clause	Requirement + Test	Result - Remark	Verdict

5.4.10	TABLE: ball pressure test of thermoplastics		N/A
	required impression diameter (mm) :	<= 2 mm	—
part		test temperature (°C)	impression diameter (mm)
supplementary information:			

ENCLOSURE No. 1

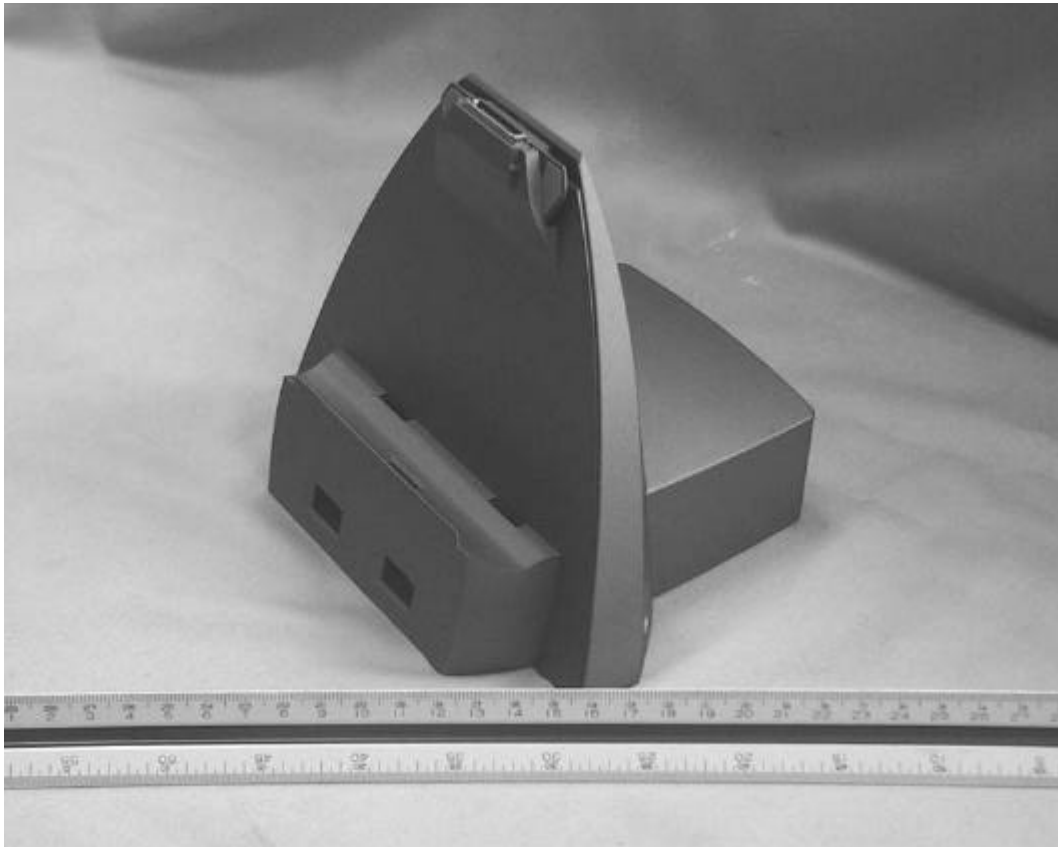
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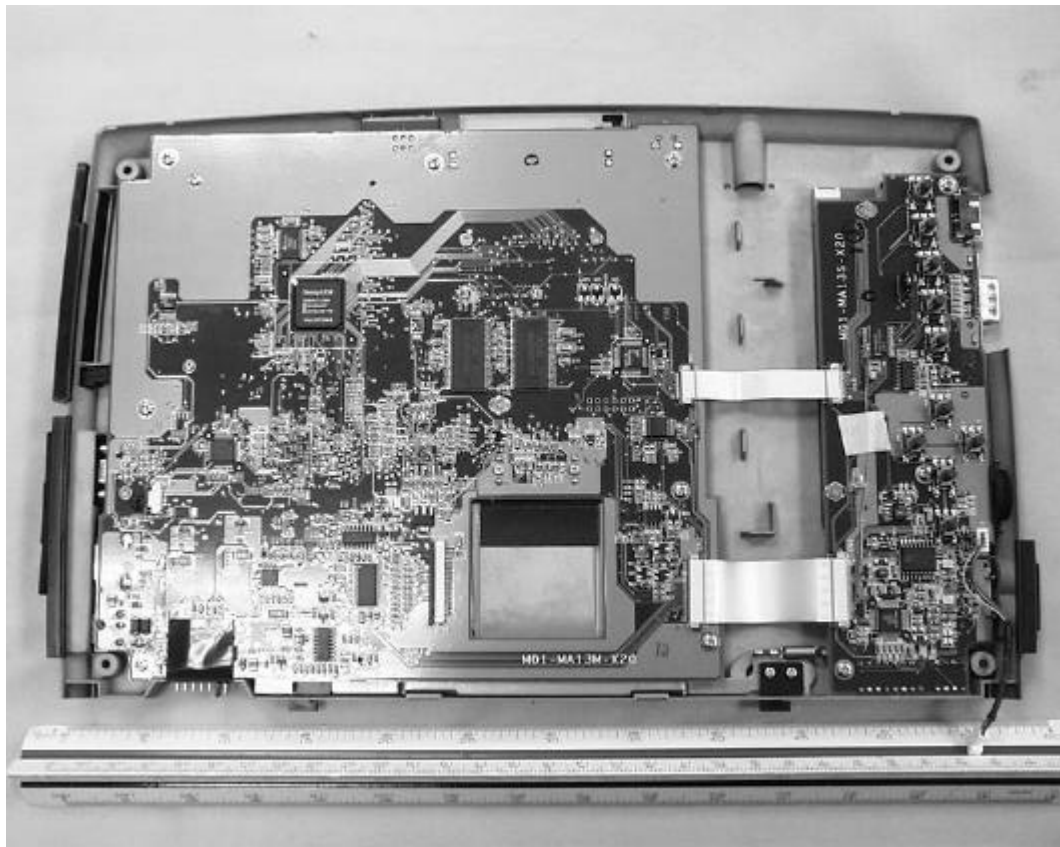
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Model:MPC-100T



Model:MPC-100T



Model:MPC-100T



Model:MPC-100T

