



PSE TEST REPORT

On Behalf of

ShowTop (Shenzhen ShowTop Technology Co., Ltd)

Product Name:	Intelligent terminal-ShowTop splicing machine 3.5mm
Brand Name:	N/A
Model Number:	ST49V8-L1
Prepared For:	ShowTop (Shenzhen ShowTop Technology Co., Ltd)
Address:	506-8,Changhong Science and Technology Building, Science and Technology South 12th Road,Nanshan District, Shenzhen
Prepared By:	DL Certification & Testing Co.,Ltd.
Address:	4/F, Building B, NO.41, Guiping Road, Heao Community, Henggang Street, Longgang District, Shenzhen, China
Date of Receipt:	May. 31, 2019
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Date of Report	Jun. 04, 2019
Report No.:	DL-2019051462S

**TEST REPORT****J60950-1****Information technology equipment – Safety –****Part 1: General requirements**

Applicant's name **ShowTop (Shenzhen ShowTop Technology Co., Ltd)**
Address 506-8, Changhong Science and Technology Building, Science and Technology South 12th Road, Nanshan District, Shenzhen
Testing Laboratory **DL Certification & Testing Co., Ltd.**
Address 4/F, Building B, NO.41, Guiping Road, Heao Community, Henggang Street, Longgang District, Shenzhen, China

Test specification:

Standard J60950-1(H29)

Test procedure PSE

Non-standard test method N/A

Test Report Form No. IEC60950_1F

Test Report Form(s) originator.: SGS Fimko Ltd

Master TRF Dated 2014-02

Tested by (name) Lydia Yuan

Compiled by (name) Neo Wang

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Test item description : **Intelligent terminal-ShowTop splicing machine 3.5mm**

Brand Name : **N/A**

Manufacturer : **Shenzhen Hualinuo Display Technology Co., Ltd.**

No.3 Lingbei No.4 Road, Fenghuang No.1 Industrial Zone, Fuyong
Town, Baoan District, Shenzhen City

Model/Type reference : **ST49V8-L1**

Ratings : **See the following marking**

Artwork of marking plate(representation):

Intelligent terminal-ShowTop splicing machine 3.5mm

Model: ST49V8-L1

Rating: 100-240V~, 50/60Hz, 220W



Shenzhen Hualinuo Display Technology Co., Ltd.

No.3 Lingbei No.4 Road, Fenghuang No.1 Industrial Zone, Fuyong Town, Baoan District,
Shenzhen City

Made in China

Summary of testing:

The sample(s) tested complies with the requirements of J60950-1(H29).

**Test item particulars.....**

Equipment mobility ☐ movable ☐ hand-held ☐ transportable
☒ stationary ☐ for building-in ☐ direct plug-in

Connection to the mains..... ☒ pluggable equipment ☒ type A ☐ type B
☐ permanent connection
☒ detachable power supply cord
☐ non-detachable power supply cord
☐ not directly connected to the mains

Operating condition ☒ continuous
☐ rated operating / resting time:

Access location ☒ operator accessible
☐ restricted access location

Over voltage category (OVC) ☐ OVC I ☒ OVC II ☐ OVC III
☐ OVC IV ☐ other:

Mains supply tolerance (%) or absolute mains supply values Not connected to mains directly

Tested for IT power systems ☐ Yes ☒ No

IT testing, phase-phase voltage (V) N/A

Class of equipment ☒ Class I ☐ Class II ☐ Class III
☐ Not classified

Pollution degree (PD) ☐ PD 1 ☒ PD 2 ☐ PD 3

IP protection class IPX0

Mass of equipment (kg) Approx. 10Kg

Possible test case verdicts:

- test case does not apply to the test object..... N (N/A)
- test object does meet the requirement..... P (Pass)
- test object does not meet the requirement F (Fail)

**General remarks:**

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.

"(See Enclosure #)" refers to additional information appended to the report.

"(See appended table)" refers to a table appended to the report.

When determining for test conclusion, measurement uncertainty of tests has been considered.

The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.

The test sample(s) was(were) provided by client.

The clause which indicated with * is the subcontract test item. (if there is subcontracting test)

Note: This TRF includes Japan Group Differences together with National Differences and Special National Conditions, if any. All Differences are located in the Appendix to the main body of this TRF.

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

General product information:

The Intelligent terminal-ShowTop splicing machine 3.5mm belongs to class I of information technology



IEC 60950-1			
Clause	Requirement	Remark	Result
1	GENERAL		P

1.5	Components		P
1.5.1	General	Complies	P
	Comply with IEC 60950-1 or relevant component standard	(see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	Components 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
1.5.3	Thermal controls	No thermal controls.	N
1.5.4	Transformers		N
1.5.5	Interconnecting cables		N
1.5.6	Capacitors bridging insulation	Not used	N
1.5.7	Resistors bridging insulation	No such resistors	N
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	No resistors bridging double or reinforced insulation between a.c mains and other circuits.	N
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable	No resistors bridging double or reinforced insulation between a.c mains and antenna or coaxial cable.	N
1.5.8	Components in equipment for IT power systems	Not connected to mains directly	N
1.5.9	Surge suppressors	See below	N
1.5.9.1	General		N
1.5.9.2	Protection of VDRs		N



IEC 60950-1			
Clause	Requirement	Remark	Result
1.5.9.3	Bridging of functional insulation by a VDR		N
1.5.9.4	Bridging of basic insulation by a VDR		N
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N

1.6	Power interface		P
1.6.1	AC power distribution systems		N
1.6.2	Input current		P
1.6.3	Voltage limit of hand-held equipment		N
1.6.4	Neutral conductor		N

1.7	Marking and instructions		P
1.7.1	Power rating	Complies	P
	Rated voltage(s) or voltage range(s) (V)	See the marking label	P
	Symbol for nature of supply, for d.c. only	See the marking label	P
	Rated frequency or rated frequency range (Hz) ...		N
	Rated current (mA or A)	See the marking label	P
	Manufacturer's name or trade-mark or identification mark	See the marking label	P
	Model identification or type reference	Refer to cover page of test report	P
	Symbol for Class II equipment only		N
	Other markings and symbols	The additional marking does not give rise to misunderstandings.	P
1.7.2	Safety instructions and marking	Safety instructions in English. Other languages will be provided when submitted for national approval.	P
1.7.2.1	General	Instructions are available.	P
1.7.2.2	Disconnect devices		N



IEC 60950-1			
Clause	Requirement	Remark	Result
1.7.2.3	Overcurrent protective device	Not type B pluggable equipment or permanently connected equipment.	N
1.7.2.4	IT power distribution systems		N
1.7.2.5	Operator access with a tool	No such an area specifically defined by the client	N
1.7.2.6	Ozone	The equipment does not produce Ozone.	N
1.7.3	Short duty cycles	The equipment is intended for continuous operation.	N
1.7.4	Supply voltage adjustment	No voltage selector.	N
	Methods and means of adjustment; reference to installation instructions		N
1.7.5	Power outlets on the equipment	No standard power outlet.	N
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)		N
1.7.7	Wiring terminals	Refer below:	N
1.7.7.1	Protective earthing and bonding terminals	Class III equipment.	N
1.7.7.2	Terminals for a.c. mains supply conductors	The equipment is not permanently connected or provided with a non detachable power supply cord.	N
1.7.7.3	Terminals for d.c. mains supply conductors	The equipment is not supplied from d.c mains.	N
1.7.8	Controls and indicators	Refer below	N
1.7.8.1	Identification, location and marking		N
1.7.8.2	Colours		N
1.7.8.3	Symbols according to IEC 60417		N
1.7.8.4	Markings using figures		N
1.7.9	Isolation of multiple power sources	Only one connection supplying hazardous voltages and energy levels to the equipment.	N



IEC 60950-1			
Clause	Requirement	Remark	Result
1.7.10	Thermostats and other regulating devices	No thermostats or other regulating devices.	N
1.7.11	Durability	The marking withstands required tests.	P
1.7.12	Removable parts	No such removable parts	N
1.7.13	Replaceable batteries	No replaceable batteries in the equipment.	N
	Language(s)		—
1.7.14	Equipment for restricted access locations	Not for installation in restricted access locations	N

2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1.1	Access to energized parts	See below	P
	Test by inspection		P
	Test with test finger (Figure 2A)		P
	Test with test pin (Figure 2B)		P
	Test with test probe (Figure 2C)	No TNV circuit.	N
2.1.1.2	Battery compartments		N
2.1.1.3	Access to ELV wiring	No internal wiring at ELV accessible to the operator.	N
	Working voltage (V_{peak} or V_{rms}); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area	N
2.1.1.5	Energy hazards	The energy does not exceed 240VA between any two points in accessible connector of secondary circuit	P
2.1.1.6	Manual controls		N
2.1.1.7	Discharge of capacitors in equipment		N
	Measured voltage (V); time-constant (s)		—



IEC 60950-1			
Clause	Requirement	Remark	Result
2.1.1.8	Energy hazards – d.c. mains supply	Not connected to DC mains supply.	N
	a) Capacitor connected to the d.c. mains supply . :		N
	b) Internal battery connected to the d.c. mains supply :		N
2.1.1.9	Audio amplifiers :		P
2.1.2	Protection in service access areas	No service access area	N
2.1.3	Protection in restricted access locations	Equipment not intended for installation in RAL.	N

2.2	SELV circuits		P
2.2.1	General requirements		P
2.2.2	Voltages under normal conditions (V) :		P
2.2.3	Voltages under fault conditions (V) :		P
2.2.4	Connection of SELV circuits to other circuits :		N

2.3	TNV circuits		N
2.3.1	Limits		N
	Type of TNV circuits :		—
2.3.2	Separation from other circuits and from accessible parts		N
2.3.2.1	General requirements		N
2.3.2.2	Protection by basic insulation		N
2.3.2.3	Protection by earthing		N
2.3.2.4	Protection by other constructions :		N
2.3.3	Separation from hazardous voltages		N
	Insulation employed..... :		—
2.3.4	Connection of TNV circuits to other circuits		N
	Insulation employed..... :		—
2.3.5	Test for operating voltages generated externally		N



IEC 60950-1			
Clause	Requirement	Remark	Result
2.4	Limited current circuits		N
2.4.1	General requirements		N
2.4.2	Limit values		—
	Frequency (Hz)		—
	Measured current (mA)		—
	Measured voltage (V)		—
	Measured circuit capacitance (nF or μ F)		—
2.4.3	Connection of limited current circuits to other circuits		N

2.5	Limited power sources		N
	a) Inherently limited output		N
	b) Impedance limited output		N
	c) Regulating network limited output under normal operating and single fault condition		N
	d) Overcurrent protective device limited output		N
	Max. Output voltage (V), max. Output current (A), max. Apparent power (VA)		—
	Current rating of overcurrent protective device (A) .:		—

2.6	Provisions for earthing and bonding		N
2.6.1	Protective earthing	Class III equipment	N
2.6.2	Functional earthing		N
2.6.3	Protective earthing and protective bonding conductors		N
2.6.3.1	General		N
2.6.3.2	Size of protective earthing conductors		N
	Rated current (A), cross-sectional area (mm^2), AWG		—
2.6.3.3	Size of protective bonding conductors		N



IEC 60950-1			
Clause	Requirement	Remark	Result
	Rated current (A), cross-sectional area (mm ²), AWG		—
	Protective current rating (A), cross-sectional area (mm ²), AWG.....		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min).....		N
2.6.3.5	Colour of insulation		N
2.6.4	Terminals		N
2.6.4.1	General		N
2.6.4.2	Protective earthing and bonding terminals		N
	Rated current (A), type, nominal thread diameter (mm).....		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N
2.6.5	Integrity of protective earthing		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	None	N
2.6.5.5	Parts removed during servicing	No protective earth connection needs to be removed for servicing	N
2.6.5.6	Corrosion resistance		N
2.6.5.7	Screws for protective bonding		N
2.6.5.8	Reliance on telecommunication network or cable distribution system	No TNV	N
2.7	Overcurrent and earth fault protection in primary circuits		N
2.7.1	Basic requirements		N
	Instructions when protection relies on building installation		N



IEC 60950-1			
Clause	Requirement	Remark	Result
2.7.2	Faults not simulated in 5.3.7		N
2.7.3	Short-circuit backup protection		N
2.7.4	Number and location of protective devices :		N
2.7.5	Protection by several devices		N
2.7.6	Warning to service personnel :		N

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

2.9	Electrical insulation		N
2.9.1	Properties of insulating materials		N
2.9.2	Humidity conditioning		N
	Relative humidity (%), temperature (°C) :		—
2.9.3	Grade of insulation		N
2.9.4	Separation from hazardous voltages		N
	Method(s) used :		—

2.10	Clearances, creepage distances and distances through insulation		N
2.10.1	General		N



IEC 60950-1			
Clause	Requirement	Remark	Result
2.10.1.1	Frequency		N
2.10.1.2	Pollution degrees		N
2.10.1.3	Reduced values for functional insulation		N
2.10.1.4	Intervening unconnected conductive parts		N
2.10.1.5	Insulation with varying dimensions		N
2.10.1.6	Special separation requirements		N
2.10.1.7	Insulation in circuits generating starting pulses		N
2.10.2	Determination of working voltage		N
2.10.2.1	General		N
2.10.2.2	RMS working voltage		N
2.10.2.3	Peak working voltage		N
2.10.3	Clearances		N
2.10.3.1	General		N
2.10.3.2	Mains transient voltages		N
	a) AC mains supply		N
	b) Earthed d.c. mains supplies		N
	c) Unearthed d.c. mains supplies		N
	d) Battery operation		N
2.10.3.3	Clearances in primary circuits		N
2.10.3.4	Clearances in secondary circuits		N
2.10.3.5	Clearances in circuits having starting pulses		N
2.10.3.6	Transients from a.c. mains supply		N
2.10.3.7	Transients from d.c. mains supply		N
2.10.3.8	Transients from telecommunication networks and cable distribution systems		N
2.10.3.9	Measurement of transient voltage levels		N
	a) Transients from a mains supply		N
	For an a.c. mains supply		N
	For a d.c. mains supply		N



IEC 60950-1			
Clause	Requirement	Remark	Result
	b) Transients from a telecommunication network :		N
2.10.4	Creepage distances		N
2.10.4.1	General		N
2.10.4.2	Material group and comparative tracking index		N
	CTI tests..... :		—
2.10.4.3	Minimum creepage distances		N
2.10.5	Solid insulation		N
2.10.5.1	General		N
2.10.5.2	Distances through insulation		N
2.10.5.3	Insulating compound as solid insulation		N
2.10.5.4	Semiconductor devices		N
2.10.5.5	Cemented joints		N
2.10.5.6	Thin sheet material – General		N
2.10.5.7	Separable thin sheet material		N
	Number of layers (pcs) :		—
2.10.5.8	Non-separable thin sheet material		N
2.10.5.9	Thin sheet material – standard test procedure		N
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure		N
	Electric strength test		—
2.10.5.11	Insulation in wound components		N
2.10.5.12	Wire in wound components		N
	Working voltage :		N
	a) Basic insulation not under stress :		N
	b) Basic, supplementary, reinforced insulation :		N
	c) Compliance with Annex U :		N
	Two wires in contact inside wound component; angle between 45° and 90° :		N
2.10.5.13	Wire with solvent-based enamel in wound components		N



IEC 60950-1			
Clause	Requirement	Remark	Result
	Electric strength test		—
	Routine test		N
2.10.5.14	Additional insulation in wound components		N
	Working voltage		N
	- Basic insulation not under stress		N
	- Supplementary, reinforced insulation		N
2.10.6	Construction of printed boards		N
2.10.6.1	Uncoated printed boards		N
2.10.6.2	Coated printed boards		N
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N
2.10.6.4	Insulation between conductors on different layers of a printed board		N
	Distance through insulation		N
	Number of insulation layers (pcs)		N
2.10.7	Component external terminations		N
2.10.8	Tests on coated printed boards and coated components		N
2.10.8.1	Sample preparation and preliminary inspection		N
2.10.8.2	Thermal conditioning		N
2.10.8.3	Electric strength test		N
2.10.8.4	Abrasion resistance test		N
2.10.9	Thermal cycling		N
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N
2.10.11	Tests for semiconductor devices and cemented joints		N
2.10.12	Enclosed and sealed parts		N
3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P



IEC 60950-1			
Clause	Requirement	Remark	Result
3.1.1	Current rating and overcurrent protection		N
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 is suitable for the application and the working voltage.	P
3.1.5	Beads and ceramic insulators	No beads or similar ceramic insulators on conductors.	N
3.1.6	Screws for electrical contact pressure	No screw for electrical contact.	N
3.1.7	Insulating materials in electrical connections	Contact pressure is not transmitted through insulating material.	N
3.1.8	Self-tapping and spaced thread screws	Thread-cutting or space thread screws are not used for electrical connections.	N
3.1.9	Termination of conductors		N
	10 N pull test		N
3.1.10	Sleeving on wiring	No sleeving used on wirings for supplementary insulation.	N

3.2	Connection to a mains supply		N
3.2.1	Means of connection		N
3.2.1.1	Connection to an a.c. mains supply		N
3.2.1.2	Connection to a d.c. mains supply		N
3.2.2	Multiple supply connections		N
3.2.3	Permanently connected equipment		N
	Number of conductors, diameter of cable and conduits (mm)		—
3.2.4	Appliance inlets		N
3.2.5	Power supply cords		N
3.2.5.1	AC power supply cords		N
	Type		—



IEC 60950-1			
Clause	Requirement	Remark	Result
	Rated current (A), cross-sectional area (mm ²), AWG :		—
3.2.5.2	DC power supply cords		N
3.2.6	Cord anchorages and strain relief		N
	Mass of equipment (kg), pull (N) :		—
	Longitudinal displacement (mm) :		—
3.2.7	Protection against mechanical damage		N
3.2.8	Cord guards		N
	Diameter or minor dimension D (mm); test mass (g) :		—
	Radius of curvature of cord (mm) :		—
3.2.9	Supply wiring space		N

3.3	Wiring terminals for connection of external conductors		N
3.3.1	Wiring terminals		N
3.3.2	Connection of non-detachable power supply cords		N
3.3.3	Screw terminals		N
3.3.4	Conductor sizes to be connected		N
	Rated current (A), cord/cable type, cross-sectional area (mm ²) :		—
3.3.5	Wiring terminal sizes		N
	Rated current (A), type, nominal thread diameter (mm) :		—
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 mains supply		N
3.4.1	General requirement		N
3.4.2	Disconnect devices		N
3.4.3	Permanently connected equipment		N



IEC 60950-1			
Clause	Requirement	Remark	Result
3.4.4	Parts which remain energized		N
3.4.5	Switches in flexible cords		N
3.4.6	Number of poles – single-phase and d.c. equipment		N
3.4.7	Number of poles – three-phase equipment		N
3.4.8	Switches as disconnect devices		N
3.4.9	Plugs as disconnect devices		N
3.4.10	Interconnected equipment		N
3.4.11	Multiple power sources	Only one supply connection provided.	N

3.5	Interconnection of equipment		P
3.5.1	General requirements	Considered	P
3.5.2	Types of interconnection circuits	Interconnection circuits of SELV through the connector. No ELV interconnection circuits.	P
3.5.3	ELV circuits as interconnection circuits	No ELV	N
3.5.4	Data ports for additional equipment		P

4	PHYSICAL REQUIREMENTS		P
4.1	Stability		P
	Angle of 10°		P
	Test force (N)	The unit is not floor-standing.	N

4.2	Mechanical strength		P
4.2.1	General	Complies with the requirement also after tests described below are applied.	P
4.2.2	Steady force test, 10 N		N
4.2.3	Steady force test, 30 N	No internal enclosure.	N
4.2.4	Steady force test, 250 N	No hazard. Enclosure withstands 250N	P



IEC 60950-1			
Clause	Requirement	Remark	Result
4.2.5	Impact test		P
	Fall test	No hazard as result from the steel sphere fall test	P
	Swing test	No hazard as result from the steel sphere swing test.	P
4.2.6	Drop test; height (mm)	No hazard	P
4.2.7	Stress relief test	Test is carried out at 70°C / 7hrs. No risk of shrinkage or distortion on enclosures due to release of internal stresses.	P
4.2.8	Cathode ray tubes	None provided	N
	Picture tube separately certified		N
4.2.9	High pressure lamps	No high pressure lamps in the equipment.	N
4.2.10	Wall or ceiling mounted equipment; force (N)	Not intended to be mounted on a wall or ceiling.	N

4.3	Design and construction		P
4.3.1	Edges and corners	All edges and corners are rounded and/or smoothed.	P
4.3.2	Handles and manual controls; force (N)	No knobs, grips, handles, lever etc.	N
4.3.3	Adjustable controls	No hazardous adjustable controls.	N
4.3.4	Securing of parts		N
4.3.5	Connection by plugs and sockets		N
4.3.6	Direct plug-in equipment		N
	Torque		—
	Compliance with the relevant mains plug standard		N
4.3.7	Heating elements in earthed equipment	No heating elements provided.	N
4.3.8	Batteries	Refer to below:	P



IEC 60950-1			
Clause	Requirement	Remark	Result
	- Overcharging of a rechargeable battery		P
	- Unintentional charging of a non-rechargeable battery		N
	- Reverse charging of a rechargeable battery		P
	- Excessive discharging rate for any battery		P
4.3.9	Oil and grease	Insulation is not exposed to oil, grease etc.	N
4.3.10	Dust, powders, liquids and gases	The equipment does not generate ionizing radiation or use a laser, and does not contain flammable liquids or gases.	N
4.3.11	Containers for liquids or gases	No containers for liquids or gases in the equipment.	N
4.3.12	Flammable liquids	The equipment does not contain flammable liquid.	N
	Quantity of liquid (l)		N
	Flash point (°C)		N
4.3.13	Radiation	Refer below:	N
4.3.13.1	General	Refer below:	N
4.3.13.2	Ionizing radiation	The equipment does not generate ionizing radiation.	N
	Measured radiation (pA/kg)		—
	Measured high-voltage (kV)		—
	Measured focus voltage (kV)		—
	CRT markings		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	The equipment does not produce significant UV radiation.	N
	Part, property, retention after test, flammability classification		N



IEC 60950-1			
Clause	Requirement	Remark	Result
4.3.13.4	Human exposure to ultraviolet (UV) radiation	The equipment does not produce significant UV radiation.	N
4.3.13.5	Laser (including LEDs)		P
	Laser class		—
4.3.13.6	Other types	The equipment does not generate other types of radiation.	N

4.4	Protection against hazardous moving parts		N
4.4.1	General	No moving parts.	N
4.4.2	Protection in operator access areas	No moving parts.	N
4.4.3	Protection in restricted access locations	Not evaluated for restricted access locations	N
4.4.4	Protection in service access areas	Unintentional contact is not likely in service access areas.	N
4.4.5	Protection against moving fan blades		N
4.4.5.1	General		N
	Not considered to cause pain or injury. a).....:		N
	Is considered to cause pain, not injury. b)		N
	Considered to cause injury. c)		N
4.4.5.2	Protection for users		N
	Use of symbol or warning		N
4.4.5.3	Protection for service persons		N
	Use of symbol or warning		N

4.5	Thermal requirements		P
4.5.1	General	See below	P
4.5.2	Temperature tests		P
	Normal load condition per Annex L		—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P



IEC 60950-1			
Clause	Requirement	Remark	Result
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat		N

4.6	Openings in enclosures		N
4.6.1	Top and side openings		N
	Dimensions (mm)		—
4.6.2	Bottoms of fire enclosures	No openings.	N
	Construction of the bottom, dimensions (mm) . :		—
4.6.3	Doors or covers in fire enclosures	No doors or covers.	N
4.6.4	Openings in transportable equipment		N
4.6.4.1	Constructional design measures		N
	Dimensions (mm)		—
4.6.4.2	Evaluation measures for larger openings		N
4.6.4.3	Use of metallized parts		N
4.6.5	Adhesives for constructional purposes	No adhesives for constructional purposes used	N
	Conditioning temperature (°C), time (weeks)		—

4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame	No excessive temperatures, no easily burning materials employed	P
	Method 1, selection and application of components wiring and materials		P
	Method 2, application of all of simulated fault condition tests		N
4.7.2	Conditions for a fire enclosure		P
4.7.2.1	Parts requiring a fire enclosure		N
4.7.2.2	Parts not requiring a fire enclosure	With having the following part: - secondary circuits supplied by LPS. The fire enclosure is not required.	P



IEC 60950-1			
Clause	Requirement	Remark	Result
4.7.3	Materials		P
4.7.3.1	General	Components and materials have adequate flammability classification.	P
4.7.3.2	Materials for fire enclosures	See clause 4.7.2.2	N
4.7.3.3	Materials for components and other parts outside fire enclosures	Parts mounted on V-0 PCB inside photo frame	P
4.7.3.4	Materials for components and other parts inside fire enclosures		N
4.7.3.5	Materials for air filter assemblies	No air filters in the equipment.	N
4.7.3.6	Materials used in high-voltage components	No such components	N

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current		N
5.1.1	General		N
5.1.2	Configuration of equipment under test (EUT)		N
5.1.2.1	Single connection to an a.c. mains supply		N
5.1.2.2	Redundant multiple connections to an a.c. mains supply	No multiple power sources.	N
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply	No multiple power sources.	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		—
	Supply voltage (V)		—
	Measured touch current (mA)		—
	Max. Allowed touch current (mA)		—
	Measured protective conductor current (mA)		—
	Max. Allowed protective conductor current (mA)....		—
5.1.7	Equipment with touch current exceeding 3,5 mA		N



IEC 60950-1			
Clause	Requirement	Remark	Result
5.1.7.1	General		N
5.1.7.2	Simultaneous multiple connections to the supply		N
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	Not connected to a telecommunication network nor a cable distribution system.	N
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system	Not connected to a telecommunication network.	N
	Supply voltage (V)		—
	Measured touch current (mA)		—
	Max. Allowed touch current (mA)		—
5.1.8.2	Summation of touch currents from telecommunication networks	Not connected to a telecommunication network.	N
	a) EUT with earthed telecommunication ports		N
	b) EUT whose telecommunication ports have no reference to protective earth		N

5.2	Electric strength		N
5.2.1	General		N
5.2.2	Test procedure		N

5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation		P
5.3.2	Motors		P
5.3.3	Transformers		N
5.3.4	Functional insulation		P
5.3.5	Electromechanical components	No electromechanical components	N
5.3.6	Audio amplifiers in ITE		N
5.3.7	Simulation of faults		P



IEC 60950-1			
Clause	Requirement	Remark	Result
5.3.8	Unattended equipment	No such equipment.	N
5.3.9	Compliance criteria for abnormal operating and fault conditions	See below.	P
5.3.9.1	During the tests	No fire or molten metal occurred and no deformation of enclosure during the tests.	P
5.3.9.2	After the tests	No hazard.	P

6	CONNECTION TO TELECOMMUNICATION NETWORKS		N
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N
6.1.1	Protection from hazardous voltages		N
6.1.2	Separation of the telecommunication network from earth		N
6.1.2.1	Requirements		N
	Supply voltage (V)		—
	Current in the test circuit (mA)		—
6.1.2.2	Exclusions		N

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

6.3	Protection of the telecommunication wiring system from overheating		N
	Max. Output current (A)		—
	Current limiting method		—

7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N
7.1	General		N



IEC 60950-1			
Clause	Requirement	Remark	Result
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N
7.3	Protection of equipment users from overvoltages on the cable distribution system		N
7.4	Insulation between primary circuits and cable distribution systems		N
7.4.1	General		N
7.4.2	Voltage surge test		N
7.4.3	Impulse test		N

A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N
A.1.1	Samples		—
	Wall thickness (mm)		—
A.1.2	Conditioning of samples; temperature (°C)		N
A.1.3	Mounting of samples		N
A.1.4	Test flame (see IEC 60695-11-3)		N
	Flame A, B, C or D		—
A.1.5	Test procedure		N
A.1.6	Compliance criteria		N
	Sample 1 burning time (s).....		—
	Sample 2 burning time (s).....		—
	Sample 3 burning time (s).....		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N
A.2.1	Samples, material		—
	Wall thickness (mm)		—



IEC 60950-1			
Clause	Requirement	Remark	Result
A.2.2	Conditioning of samples; temperature (°C)		N
A.2.3	Mounting of samples		N
A.2.4	Test flame (see IEC 60695-11-4)		N
	Flame A, B or C		—
A.2.5	Test procedure		N
A.2.6	Compliance criteria		N
	Sample 1 burning time (s).....		—
	Sample 2 burning time (s).....		—
	Sample 3 burning time (s).....		—
A.2.7	Alternative test acc. To IEC 60695-11-5, cl. 5 and 9		N
	Sample 1 burning time (s).....		—
	Sample 2 burning time (s).....		—
	Sample 3 burning time (s).....		—
A.3	Hot flaming oil test (see 4.6.2)		N
A.3.1	Mounting of samples		N
A.3.2	Test procedure		N
A.3.3	Compliance criterion		N

B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		N
B.1	General requirements		N
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
B.2	Test conditions		N
B.3	Maximum temperatures		N
B.4	Running overload test		N
B.5	Locked-rotor overload test		N
	Test duration (days)		—



IEC 60950-1			
Clause	Requirement	Remark	Result
	Electric strength test: test voltage (V)		—
B.6	Running overload test for d.c. motors in secondary circuits		N
B.6.1	General		N
B.6.2	Test procedure		N
B.6.3	Alternative test procedure		N
B.6.4	Electric strength test; test voltage (V)		N
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N
B.7.1	General		N
B.7.2	Test procedure		N
B.7.3	Alternative test procedure		N
B.7.4	Electric strength test; test voltage (V)		N
B.8	Test for motors with capacitors		N
B.9	Test for three-phase motors		N
B.10	Test for series motors		N
	Operating voltage (V)		—

C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		N
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
	Method of protection		—
C.1	Overload test		N
C.2	Insulation		N
	Protection from displacement of windings		N

D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		N
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IEC 60950-1			
Clause	Requirement	Remark	Result
D.1	Measuring instrument		N
D.2	Alternative measuring instrument		N

E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N
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F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		N
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G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N
G.1	Clearances		N
G.1.1	General		N
G.1.2	Summary of the procedure for determining minimum clearances		N
G.2	Determination of mains transient voltage (V)		N
G.2.1	AC mains supply		N
G.2.2	Earthed d.c. mains supplies		N
G.2.3	Unearthed d.c. mains supplies		N
G.2.4	Battery operation		N
G.3	Determination of telecommunication network transient voltage (V)		N
G.4	Determination of required withstand voltage (V)		N
G.4.1	Mains transients and internal repetitive peaks ...		N
G.4.2	Transients from telecommunication networks		N
G.4.3	Combination of transients		N
G.4.4	Transients from cable distribution systems		N
G.5	Measurement of transient voltages (V)		N
	a) Transients from a mains supply		N
	For an a.c. mains supply		N
	For a d.c. mains supply		N
	b) Transients from a telecommunication network		N



IEC 60950-1			
Clause	Requirement	Remark	Result
G.6	Determination of minimum clearances		N

H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N
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J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		N
	Metal(s) used		—

K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N
K.1	Making and breaking capacity		N
K.2	Thermostat reliability; operating voltage (V)		N
K.3	Thermostat endurance test; operating voltage (V)		N
K.4	Temperature limiter endurance; operating voltage (V)		N
K.5	Thermal cut-out reliability		N
K.6	Stability of operation		N

L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		P
L.1	Typewriters		N
L.2	Adding machines and cash registers		N
L.3	Erasers		N
L.4	Pencil sharpeners		N
L.5	Duplicators and copy machines		N
L.6	Motor-operated files		N
L.7	Other business equipment		P

M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N
M.1	Introduction		N
M.2	Method A		N
M.3	Method B		N



IEC 60950-1			
Clause	Requirement	Remark	Result
M.3.1	Ringing signal		N
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
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N
M.3.2.2	Tripping device		N
M.3.2.3	Monitoring voltage (V)		N
N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)		N
N.1	ITU-T impulse test generators		N
N.2	IEC 60065 impulse test generator		N
P	ANNEX P, NORMATIVE REFERENCES		—
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		N
	a) Preferred climatic categories		N
	b) Maximum continuous voltage		N
	c) Pulse current		N
R	Annex R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N
R.2	Reduced clearances (see 2.10.3)		N
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N
S.1	Test equipment		N



IEC 60950-1			
Clause	Requirement	Remark	Result
S.2	Test procedure		N
S.3	Examples of waveforms during impulse testing		N

T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N
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U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		N
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V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		N
V.1	Introduction		N
V.2	TN power distribution systems		N

W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N
W.1	Touch current from electronic circuits		N
W.1.1	Floating circuits		N
W.1.2	Earthed circuits		N
W.2	Interconnection of several equipments		N
W.2.1	Isolation		N
W.2.2	Common return, isolated from earth		N
W.2.3	Common return, connected to protective earth		N

X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N
X.1	Determination of maximum input current		N
X.2	Overload test procedure		N

Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N
Y.1	Test apparatus		N
Y.2	Mounting of test samples		N
Y.3	Carbon-arc light-exposure apparatus		N



IEC 60950-1			
Clause	Requirement	Remark	Result
Y.4	Xenon-arc light exposure apparatus		N
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		N
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—
CC	Annex CC, Evaluation of integrated circuit (IC) current limiters		N
CC.1	General		N
CC.2	Test program 1.....		N
CC.3	Test program 2.....		N
DD	Annex DD, Requirements for the mounting means of rack-mounted equipment		N
DD.1	General		N
DD.2	Mechanical strength test, variable N.....		N
DD.3	Mechanical strength test, 250N, including end stops.....		N
DD.4	Compliance.....		N
EE	Annex EE, Household and home/office document/media shredders		N
EE.1	General		N
EE.2	Markings and instructions		N
	Use of markings or symbols.....		N
	Information of user instructions, maintenance and/or servicing instructions.....		N
EE.3	Inadvertent reactivation test.....		N
EE.4	Disconnection of power to hazardous moving parts:		N
	Use of markings or symbols.....		N
EE.5	Protection against hazardous moving parts		N
	Test with test finger (Figure 2A)		N
	Test with wedge probe (Figure EE1 and EE2)		N



IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 60950-1 with A1: 2009 and A2:2013 JAPAN NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to.....: J60950-1 (H29)			
Attachment Form No.: JP_ND_IEC60950_1F			
Attachment Originator JQA			
Master Attachment 2017-11			
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	National Differences		P
1.2.4.1	Add the following new notes. Note: Even if the equipment is designed as Class I, the equipment is regarded as CLASS 0I EQUIPMENT (see 1.2.4.3A) when 2-pin adaptor with earthing lead wire or cord set having 2-pin plug with earthing lead wire is provided or recommended.		N
1.2.4.3A	Add the following new clause. 1.2.4.3A CLASS 0I EQUIPMENT Equipment having attachment plug without earthing blade, where protection against electric shock is achieved by: - using BASIC INSULATION, and - providing either of the following a) or b) in order to connect those conductive parts that might assume a HAZARDOUS VOLTAGES in the event of BASIC INSULATION fault to the PROTECTIVE EARTHING CONDUCTOR in the building wiring. a) Provision of 2-pin plug with earthing lead including the condition of that 2-pin adaptor with earthing lead wire is provided or recommended.		N




IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>b) Provision of an independent earthing terminal, when 2-core mains cord (without earthing conductor) is used.</p> <p>Note – CLASS 0I EQUIPMENT may have a part constructed with Double Insulation or Reinforced Insulation.</p>		
1.3.2	<p>Add the following notes after the first paragraph:</p> <p>Note 1 Transportable or similar equipment that are relocated frequently for intended usage should not be designed as Class I or CLASS 0I EQUIPMENT unless it is intended to be installed by service personnel.</p> <p>Note 2 Considering wiring circumstance in Japan, equipment intended to be installed where the provision for earthing connection is unlikely should not be designed as Class I or CLASS 0I EQUIPMENT unless it is intended to be installed by service personnel.</p>		N



IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.1	<p>Replace the first paragraph with the follows:</p> <p>Where safety is involved, components shall comply either with the requirements of this standard, with the safety aspects of the relevant JIS component standard, or IEC component standards, or components shall have equivalent to or better properties than these.</p> <p>Replace Note 1 with the following:</p> <p>Note 1 Components complying with the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.</p> <p>Note 2 JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope.</p> <p>Add the following after the last paragraph:</p> <p>For an appliance connector that is able to fit with appliance inlet compatible with the standard sheet of IEC 60320-1 or JIS C 8283-1, the size of the connector shall comply with relevant standard sheet of IEC 60320-1 or JIS C 8283-1. A power supply cord set complying with JIS C 8286 is regarded to comply with this requirement.</p> <p>Note 3 A power supply cord set provided with appliance connector that is able to fit with appliance inlet compatible with the standard sheet of IEC 60320-1 or JIS C 8283-1 should comply with JIS C 8286.</p>		P
1.5.2	<p>Add the following Note 2 after the 4th dashed paragraph:</p> <p>Note 2 See 1.7.5A when Type C.14 appliance coupler rated 10 A per JIS C 8283-1 is used with an equipment rated not more than 125 V and rated more than 10 A.</p>		P
1.5.5	<p>Add the following Note after the last paragraph:</p> <p>NOTE An interconnection cord sets provided with interconnecting coupler for mains supply complying with JIS C 8283-2-2 should comply with JIS C 8286.</p>		N



IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9.1	Add the following in the last of NOTE 1. Gas discharge tube connected in series with VDR may be used.		N
1.7	Replace EE.2 and EE.4 with the following: JA.1 Shredder warning JA.3 Shredder power disconnection		P
1.7.1.2	Replace first and second dashed paragraphs with the followings: - manufacturer's or responsible company's name or trade-mark or identification mark; - manufacturer's or responsible company's model identification or type reference;		P
1.7.2.1	Add the following after the second paragraph. Instruction or equipment marking regarding safety shall be written in Japanese unless otherwise permitted in this standard.		P
1.7.2.5	Replace the last sentence with the following: An acceptable marking for an electric shock hazard is  (6.2.4 of JIS S 0101).		P
1.7.5	Replace the second paragraph with the following. Socket-outlets conforming to JISC8282-1 are examples of standard power supply outlets.		N




IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5A	<p>Add the following new clause after 1.7.5.</p> <p>1.7.5A Power supply cord set</p> <p>If appliance coupler according to IEC60320-1, C.14(rated current: 10A) is used in equipment whose rated voltage is less than 125V and rated current is over 10A, the following instruction or equivalent shall be described in the operating instruction.</p> <p>“ Use only designated cord set attached in this equipment”</p> <p><i>Example in Japanese:</i></p> <p>“この機器に同こん(梱)した指定の電源コードセットだけを使用して下さい。”</p> <p>If appliance coupler is used for connection to the mains and if the cord set is not provided within the package for the equipment, suitable information regarding to the cord set shall be described in the operating instruction</p> <p>Note Since the combination of appliance inlet with earthing pin and two-core cord set (without earthing conductor) is special, the cord set should be attached in the equipment and the operating <i>instruction should provide the information that the cord set is exclusively used with the equipment and not allowed to use with other equipment.</i></p>		P



IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.14A	<p>Add the following new clause after 1.7.14.</p> <p>1.7.14A Marking for CLASS 0I EQUIPMENT</p> <p>For CLASS 0I EQUIPMENT, the following or equivalent instructions shall be marked.</p> <p>- the following instruction shall be marked on the mains plug or on the visible place of the main body</p> <p>“Provide an earthing connection”</p> <p><i>Example in Japanese:</i></p> <p>“必ず接地接続を行ってください。”</p> <p>- the following instruction shall be marked on the visible place of the main body or written in the operating instructions:</p> <p>“Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains.”</p> <p><i>Example in Japanese:</i></p> <p>接地接続は必ず、電源プラグを電源につなぐ前に行ってください。 また、接地接続を外す場合は、必ず電源プラグを電源から切り離してから行ってください。</p>		P
1.7.14B	<p>Add the following new clause after 1.7.14A</p> <p>1.7.14B Protective earthing conductor used for CLASS 0I EQUIPMENT</p> <p>For CLASS 0I EQUIPMENT provided with independent main protective earthing terminal, where the cord for the protective earthing connection is not provided within the package for the equipment, the suitable information for the protective earthing connection shall be provided in the operating instruction. (See 2.6.3.2)</p>		N



IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.1	<p>Replace item b) of 2.1.1.1 with the following.</p> <p>b) A test with the test finger, Figure 2A, which shall not contact parts described above when applied to openings in the ENCLOSURES after removal of parts that can be detached by an OPERATOR, including fuseholders, and with OPERATOR access doors and covers open. It is permitted to leave lamps in place for this test. Connectors that can be separated by an OPERATOR, other than those complying with JIS C 8303 or JIS C 8285 or IEC 60309 series or JIS C 8283 series or IEC 60320 series, shall also be tested during disconnection. But even if the connector does not comply with these standards, the one having equivalent to or better performance need not be tested during disconnection.</p> <p>Note 4 Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.</p>		P
2.5	Replace "IEC 60730-1" with "JIS C 9730-1" (in item b)).		P
2.6.2	<p>Delete the following line.</p> <p>• the symbol , IEC 60417-5018 (2011-07);</p>		P
2.6.3.2	<p>Add the following after the first paragraph.</p> <p>However where the single core conductor is used for protective earthing lead or earthing cord for CLASS 0I EQUIPMENT, either of the following condition shall be met.</p> <ul style="list-style-type: none">- Use of annealed copper wire with 1.6 mm diameter or corrosion-inhibiting metal wire having equivalent to or more strength and thickness.- Single core cord or single core cable with 1.25 mm² or more cross-sectional area		N
2.6.3.5	<p>Add the following after the first paragraph.</p> <p>However this requirement does not apply to internal conductor of the cord set that is covered by the sheath of mains cord and is formed together with mains plug and appliance connector.</p>		N



IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.4.2	<p>Replace the first paragraph with the following.</p> <p>Equipment required to have protective earthing shall have a main protective earthing terminal.</p> <p>For equipment with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal. However, for CLASS 0I EQUIPMENT provided with the separate main protective earthing terminal other than appliance inlet, the separate main protective earthing terminal may be treated as mains protective earthing terminal.</p>		P
2.6.5.4	<p>Replace the first sentence with the following.</p> <p>Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:</p> <p>Add the following after last paragraph:</p> <p>Note For CLASS 0I EQUIPMENT, 1.7.14A is applied instead of this requirement.</p>		P
2.6.5.8A	<p>Add the following new clause after 2.6.5.8</p> <p>2.6.5.8A Earthing of CLASS 0I EQUIPMENT</p> <p>Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V.</p> <p>For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip.</p> <p>CLASS 0I EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external location where easily visible.</p>		N
2.7.6	<p>Replace "ISO 3864, No. 5036" with "6.2.4 of JIS S 0101".</p>		P



IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.1	<p>Replace the 8th paragraph with the following</p> <p>The above minimum CLEARANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, or even if it does not comply with the above standards but the one having equivalent to or better performance and dimension which comply with JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2.</p> <p>Note Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.</p>		P
2.10.3.2 Table 2J	<p>In Japan, the value of the main power supply transient voltage for the nominal ac main power supply voltage of 100 V is determined by applying the row of AC main power supply voltage 150 V.</p>		P
2.10.4.3	<p>Replace the 6th paragraph with the following</p> <p>The above minimum CREEPAGE DISTANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, or even if it does not comply with the above standards but the one having equivalent to or better performance and dimension which comply with JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2.</p> <p>Note Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.</p>		P
2.10.9	<p>Replace "1.4.5" in the third paragraph with "1.4.12".</p>		P
3.2.3	<p>Add the following after the third paragraph.</p> <p>Table 3A applies when cables complying JIS C 3662 series of standards or JIS C 3663 series of standards are used. In case of other cables, cable entries shall be so designed that the cable could be fitted in a conduit.</p>		N



IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.4	Add the following as 4th dashed paragraph. - be so constructed that mechanical stress shall not transmit to the soldering part of inlet terminal during insertion or removal of the connector except that the body of the inlet is secured and is secured not only soldering.		N
3.2.5.1	Add the following after Note 3: Note 4 In Japan, mains cords having equivalent to or better electro-mechanical and fire safety performance as above and complying with Appendix 1 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance can be used. Replace the paragraph after Note 3 with the following. For equipment required to have protective earthing, a PROTECTIVE EARTHING CONDUCTOR shall be included in the MAINS SUPPLY cord except for CLASS 0I EQUIPMENT having separate protective earthing conductor from mains cord. Add the following after the second paragraph after Note 3: Note 5 For the cross-sectional area of mains cord described in Note 4, relevant Japanese wiring regulation can be applied.		P
3.2.5A	Add the following new clause after 3.2.5 3.2.5A AC mains plug Mains plug for PLUGGABLE EQUIPMENT TYPE A shall comply with JIS C 8282-1 or equivalent to or better performance. Power supply cord set complying with JIS C 8286 is regarded to meet the requirements. Mains plug with fuse link for PLUGGABLE EQUIPMENT TYPE A shall comply with JIS C 8282-2-1 or equivalent to or better performance. Note Mains plug complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.		P
3.3.4 Table 3D	Add the following note to Table 3D: Note For cables other than those complying with JIS C 3662 series of standards or JIS C 3663 series of standards, the terminals shall be suitable for the size of the intended cables.		N



IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.7	Add the following after the first sentence: This requirement is not applicable to the external earthing terminal of CLASS 0I EQUIPMENT.		N
4.2.8	Add the following after the first paragraph: Note Intrinsically protected picture tube is required to comply with JIS C 6965 in clause 18 of JIS C 6065. No intrinsically protected picture tube which is out of scope of JIS C 6965 is required to test according to sub-clause 18.2 of JIS C 6065.		N
4.3.4	Add the following after the first sentence: This requirement also applies to those connections in CLASS 0I EQUIPMENT, where CLEARANCE or CREEPAGE DISTANCES over BASIC INSULATION would be reduced to less than the values specified in 2.10.		N
4.3.5	Replace the first dashed paragraph with the following. Within a manufacturer's unit or system, plugs and sockets likely to be used by the OPERATOR or by a SERVICE PERSON shall not be employed in a manner likely to create a hazard due to misconnection. In particular, connectors complying with IEC 60320/JIS C 8283 series of standards or JIS C 8303 or JIS C 8358 shall not be used for SELV CIRCUITS or TNV CIRCUITS. Keying, location or, in the case of connectors accessible only to a SERVICE PERSON, clear markings are permitted to meet the requirement.		N
4.3.6	Replace the 1st paragraph with the following DIRECT PLUG-IN EQUIPMENT shall not impose undue stress on the socket-outlet. The mains plug part shall comply with the standard for the relevant mains plug. (see 3.2.5A)		N
4.4.2	Replace the paragraph with the following: HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall also comply with Annex JA.		P
4.5.3	Add the following note to footnote b) of Table 4B: NOTE In case no data for the material is available, Appendix 4, 1. (1). b. 3 of the Interpretation on the Ministerial Ordinance stipulating Technical Specifications for Electrical Appliances is regarded as maximum temperature limit of the material.		P




IEC 60950_1F ATTACHMENT																																								
Clause	Requirement + Test	Result - Remark	Verdict																																					
5.1.3	<p>Add a note after the first paragraph as follows:</p> <p>Note – Attention should be drawn to that majority of three-phase power system in Japan is of delta connection, and therefore, in that case, test is conducted using the test circuit from IEC 60990, figure 13.</p>		P																																					
5.1.6	<p>Replace Table 5A. as follows</p> <table> <tr> <th>Type of equipment</th><th>Terminal A of measuring instrument connected to:</th><th>Maximum TOUCH CURRENT mA r.m.s. ^a</th><th>Maximum PROTECTIVE CONDUCTOR CURRENT</th></tr> <tr> <td>ALL equipment</td><td>Accessible parts and circuits not connected to protective earth ^b</td><td>0,25</td><td>-</td></tr> <tr> <td rowspan="2">HAND-HELD</td><td>Main protective earthing terminal of CLASS I EQUIPMENT</td><td>0,75</td><td>-</td></tr> <tr> <td>Main protective earthing terminal of CLASS 0 I EQUIPMENT</td><td>0,5</td><td>-</td></tr> <tr> <td rowspan="2">MOVABLE (other than HAND_HELD, but including TRANSPORTABLE EQUIPMENT)</td><td>Main protective earthing terminal of CLASS I EQUIPMENT</td><td>3,5</td><td>-</td></tr> <tr> <td>Main protective earthing terminal of CLASS 0 I EQUIPMENT</td><td>1.0</td><td>-</td></tr> <tr> <td rowspan="2">STATIONARY, PLUGGABLE TYPE A</td><td>Main protective earthing terminal of CLASS I EQUIPMENT</td><td>3,5</td><td>-</td></tr> <tr> <td>Main protective earthing terminal of CLASS 0 I EQUIPMENT</td><td>1,0</td><td>-</td></tr> <tr> <td>ALL other</td><td>Main protective earthing terminal of CLASS I EQUIPMENT</td><td>3.5 -</td><td>- 5 % of input current</td></tr> <tr> <td>STATIONARY EQUIPMENT</td><td>Main protective earthing terminal of CLASS 0 I EQUIPMENT</td><td>1.0 -</td><td>- -</td></tr> </table> <p>- not subject to the conditions of 5.1.7 - subject to the conditions of 5.1.7</p> <p>a If peak values of TOUCH CURRENT are measured, the maximum values are obtained by multiplying the r.m.s.values in the table by 1,414. b Some unearthed accessible parts are covered in 1.5.6 and 1.5.7 and the requirements of 2.4 apply. These may be different from those in 5.1.6.</p>	Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. ^a	Maximum PROTECTIVE CONDUCTOR CURRENT	ALL equipment	Accessible parts and circuits not connected to protective earth ^b	0,25	-	HAND-HELD	Main protective earthing terminal of CLASS I EQUIPMENT	0,75	-	Main protective earthing terminal of CLASS 0 I EQUIPMENT	0,5	-	MOVABLE (other than HAND_HELD, but including TRANSPORTABLE EQUIPMENT)	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	-	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1.0	-	STATIONARY, PLUGGABLE TYPE A	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	-	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1,0	-	ALL other	Main protective earthing terminal of CLASS I EQUIPMENT	3.5 -	- 5 % of input current	STATIONARY EQUIPMENT	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1.0 -	- -		P
Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. ^a	Maximum PROTECTIVE CONDUCTOR CURRENT																																					
ALL equipment	Accessible parts and circuits not connected to protective earth ^b	0,25	-																																					
HAND-HELD	Main protective earthing terminal of CLASS I EQUIPMENT	0,75	-																																					
	Main protective earthing terminal of CLASS 0 I EQUIPMENT	0,5	-																																					
MOVABLE (other than HAND_HELD, but including TRANSPORTABLE EQUIPMENT)	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	-																																					
	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1.0	-																																					
STATIONARY, PLUGGABLE TYPE A	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	-																																					
	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1,0	-																																					
ALL other	Main protective earthing terminal of CLASS I EQUIPMENT	3.5 -	- 5 % of input current																																					
STATIONARY EQUIPMENT	Main protective earthing terminal of CLASS 0 I EQUIPMENT	1.0 -	- -																																					



IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex G	Replace the paragraph before Table G.2 with the following The above minimum CLEARANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, and 1.5.1 of this standard in which dimension is comply with JIS C 8283 series, JIS C 8303 or IEC 60309-2.		N
Annex V V.1	Replace "3.1.2" in the first line of V.1 with "312" in the first line.		N
Annex W W.1	Replace the third sentence in the first paragraph with the following: Floating circuits can exist in CLASS I EQUIPMENT, CLASS 0I EQUIPMENT and earthed circuits can exist in CLASS II EQUIPMENT.		N
Annex BB	This annex is not applicable.		N
Annex CC CC.2	Replace the third dashed paragraph with the following: - 10 000 cycles of turning enable on and off with the input connected to a capacitor rated 425 uF \pm 10 uF and shorting the output;		N
CC.3	Add note at end of CC.3: Note: The fast blow fuse should be the one complying with JIS C 6575-2.		N
CC.4	Replace the 2nd dashed paragraph with the following: - 10 000 cycles of turning enable on and off with a 100 $\Omega \pm 5 \Omega$ resistor and a 425 uF \pm 10 uF capacitor in parallel with the output; Replace the 4th dashed paragraph with the following: - 10 000 cycles of turning enable on and off with the input connected to a capacitor rated 425 uF \pm 10 uF and shorting the output; Replace the 5th dashed paragraph with the following: -10 000 cycles of turning the input pin on and off with a capacitor rated 425 uF \pm 10 uF connected to the input supply while keeping enable active and shorting the output; Replace the 6th dashed paragraph with the following:		N



IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>–10 000 cycles of turning the input pin on and off with an ferrite-core inductor having 350 mH \pm 10 mH inductance at 1 kHz and less than 1 Ω d.c. resistance connected to the input supply and return while keeping enable active and shorting the output; Replace the 10th dashed paragraph with the following: –3 cycles of exposing the device (not energized) to 70 °C \pm 2 °C for 24 h; followed by at least 1 h at room ambient; followed by at least 3 h at -30 °C \pm 2 °C; followed by 3 h at room ambient; Replace the 11th dashed paragraph with the following: –10 cycles of exposing the device (while energized) to 50 °C \pm 2 °C for 10 min; followed by 10 min at 0 °C \pm 2 °C with a 5 min period of transition from one state to the other;</p>		
Annex EE	<p>Replace Annex EE with the following Annex JA.</p> <p style="text-align: center;">Annex JA (normative)</p> <p style="text-align: center;">Document shredding machines</p> <p style="text-align: center;">HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall additionally comply with the requirements of this annex.</p> <p>JA.1 Markings and instructions</p> <p>The symbol  (JIS S 0101:2000, 6.2.1) and the following precautions for use shall be marked on readily visible part adjacent to document feed opening. The marking shall be clearly legible, permanent, and easily discernible;</p> <p>子供が使用することによって、傷害などの危害が発生するおそれがある。; (that use by infants/children may cause a hazard of injury etc.)</p>		P

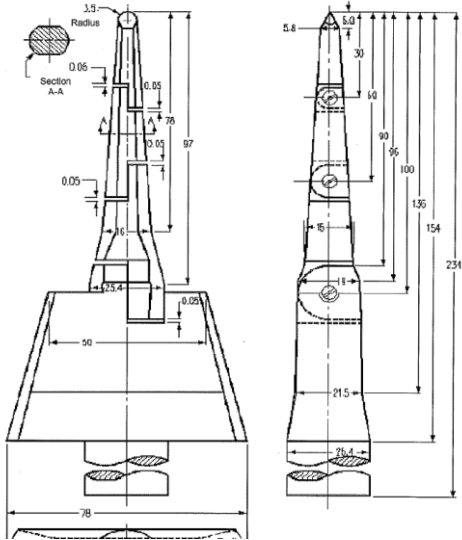


IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>文書投入口に手を触れることによって、細断機構に引き込まれるおそれがある。 ;(that a hand can be drawn into the mechanical section for shredding when touching the document-slot)</p> <p>文書投入口に衣類が触れることによって、細断機構に引き込まれるおそれがある。 ;(that clothing can be drawn into the mechanical section for shredding when touching the document-slot)</p> <p>文書投入口に髪の毛が触れることによって、細断機構に引き込まれるおそれがある。 ;(that hairs can be drawn into the mechanical section for shredding when touching the document-slot)</p> <p>- in case of equipment incorporating a commutator motor, 可燃性ガスを噴射することによって引火又は爆発するおそれがある。 (that equipment may catch fire or explode by spraying of flammable gas.)</p> <p>JA.2 Inadvertent reactivation Any safety interlock that can be operated by means of the test finger, Figure JA.1, is considered to be likely to cause inadvertent reactivation of the hazard.</p> <p>Compliance is checked by inspection and, where necessary, by a test with the test finger, Figure JA.1.</p> <p>JA.3 Disconnection from the mains supply Document shredding machines shall incorporate an isolating switch complying with sub-clause 3.4.2 as the device disconnecting the power of hazardous moving parts. For this switch, two-position (single-use) switch or multi-position (multifunction) switch (e.g., slide switch) may be used. If two-position switch, the positions for "ON" and "OFF" shall be indicated in accordance with sub-clause 1.7.8. If multi-position</p>		



IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>switch, the position for "OFF" shall be indicated in accordance with sub-clause 1.7.8 and other positions shall be indicated with proper terms or symbols.</p> <p>Compliance is checked by inspection.</p> <p>JA.4 Protection against hazardous moving parts</p> <p>Any warning shall not be used instead of the structure for preventing access to hazardous moving parts.</p> <p>Document shredding machines shall comply with the following requirements.</p> <p>Insert the test finger, Figure JA.1, into all openings in MECHANICAL ENCLOSURES without applying appreciable force. It shall not be possible to touch hazardous moving parts with the test finger. This consideration applies to all sides of MECHANICAL ENCLOSURES when the equipment is mounted as intended. Before testing with the test finger, remove the parts detachable without a tool.</p> <p>Insert the wedge-probe, Figure JA.2, into the document-slot. And, against all directions of openings, if straight-cutting type, a force of 45 N shall apply to the probe, and 90 N if cross-cutting type. In this case, the weight of the probe is to be factored into the overall applied force. Before testing with the wedge-probe, remove the parts detachable without a tool. It shall not be possible to touch any hazardous moving parts, including the shredding roller or the mechanical section for shedding, with the probe.</p>		N



IEC 60950_1F ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	 <p>Figure JA.1 Test finger</p>		P



IEC 60950_1F ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict								
	<div><p>Technical drawing of a wedge-probe. The main view shows a wedge with dimensions: length 300, width 180, height 12, and a circular hole with diameter 10. A cross-section view shows a wedge with a circular hole of diameter 10. A detail view shows a wedge with a circular hole of diameter 10. A table shows the relationship between distance from the tip and thickness of the probe. Notes 1 and 2 provide additional information. The drawing is labeled 'Figure JA.2 Wedge-probe'.</p><table><tr><th>Distance from the tip (mm)</th><th>Thickness of probe (mm)</th></tr><tr><td>0</td><td>2</td></tr><tr><td>12</td><td>4</td></tr><tr><td>180</td><td>24</td></tr></table><p>Note 1 - The thickness of the probe varies linearly, with slope changes at the respective points shown in the table. Note 2 - The allowable dimensional tolerance of the probe is; for ≤ 25 mm: ± 0.13 mm for > 25 mm: ± 0.3 mm. Figure JA.2 Wedge-probe</p></div>	Distance from the tip (mm)	Thickness of probe (mm)	0	2	12	4	180	24		P
Distance from the tip (mm)	Thickness of probe (mm)										
0	2										
12	4										
180	24										



1.5.1	TABLE: List of critical components					P
Object/part no.	Manufacturer/ Brand Name	Type/model	Value/rating	Standard	Mark(s) of conformity ¹⁾	
Metal Shell	Chi mei	PA-765A+	V-0, 80°C	UL94	UL	
PCB	Various	Various	94V-0, 130°C	UL94	UL	
Internal wire	Various	Various	Min.80°C, 300 V, VW-1	UL94	UL	
1) An asterisk indicates a mark which assures the agreed level of surveillance						
Supplementary information:						

4.5	TABLE: Thermal requirements						P
	Supply voltage (V)	Charge	Discharge -	-	-	-	—
	Ambient T _{min} (°C)	24.6	24.2	-	-	-	—
	Ambient T _{max} (°C)	24.5	24.8	-	-	-	—
Maximum measured temperature T of part/at::		T (°C)					Allowed T _{max} (°C)
Enclosure		37.5	37.8	-	-	-	95
Body of lithium battery		42.4	41.9	-	-	-	Ref.
PCB near U1		52.2	50.4	-	-	-	130
Internal wire		38.1	37.5				80
Supplementary information:-							
Temperature T of winding:		t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)
--							
Supplementary information: T _{mra} = 25°C. If no limit is stated, temperature is for reference only.							

5.3	TABLE: Fault condition tests						P
	Ambient temperature (°C)		24.6				—
	Power source for EUT: Manufacturer, model/type, output rating		-				—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation	

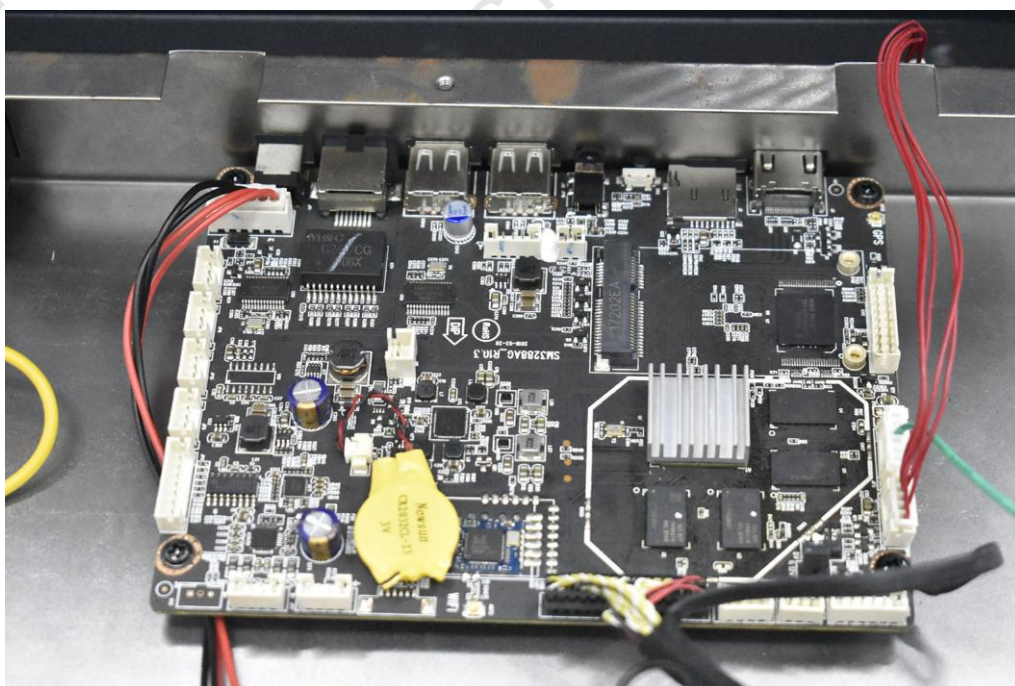
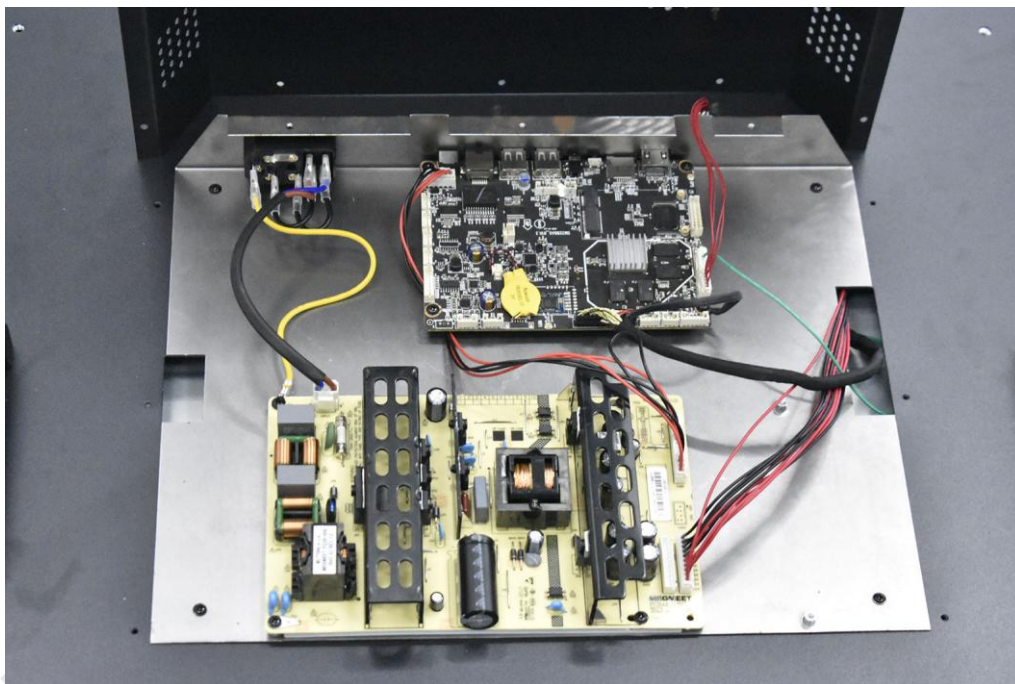


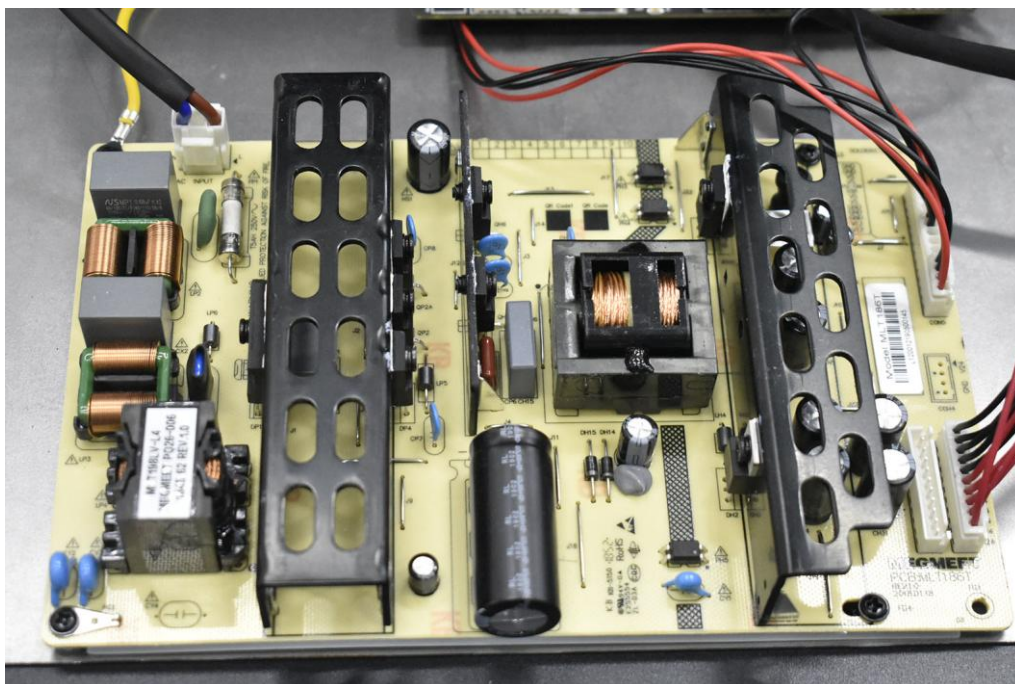
Supplementary information:S-C=short circuit, O-C=open circuit, O-L=over load.						



ANNEX A: EUT PHOTOGRAPHS







***** END OF REPORT *****