



Test Report issued under
the responsibility of:



TEST REPORT
IEC 60950-1
Information technology equipment - Safety -
Part 1: General requirements

Report Reference No : E169910-A32-CB-1

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CB Testing Laboratory : UL San Jose

Address : 455 E. Trimble Rd., San Jose, CA, 95131-1230, USA

Applicant's name : TEXAS INSTRUMENTS INC
MS 8712

Address : 12500 TI BLVD
DALLAS TX 75243
UNITED STATES

Test specification:

Standard : IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013

Test procedure : CB Scheme

Non-standard test method : N/A

Test Report Form No. : IEC60950_1F

Test Report Form originator : SGS Fimko Ltd

Master TRF : Dated 2014-02

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Test item description	Component IC Current Limiter
Trade Mark	
Manufacturer	TEXAS INSTRUMENTS INC MS 8712 12500 TI BLVD DALLAS TX 75243 UNITED STATES
Model/Type reference	TPS2041, TPS2042, TPS2043, TPS2044, TPS2045, TPS2046, TPS2047, TPS2048, TPS2051, TPS2052, TPS2053, TPS2054, TPS2055, TPS2056, TPS2057, and TPS2058, followed by suffix "A" or "B". Additional suffixes after the model number designate the type of integrated circuit package, integrated circuit lead types, or other features that are considered not to affect the functionality of the device.
Ratings	Input Voltage: 2.7 Vdc to 5.5 Vdc Output Continuous Rating: 0.25 A to 0.5 A Output Current Limit: 5.0 A Ambient: -40 to 25°C

Testing procedure and testing location:	
<input checked="" type="checkbox"/> CB Testing Laboratory	Testing location / address: UL San Jose 455 E. Trimble Rd., San Jose, CA, 95131-1230, USA
<input type="checkbox"/> Associated CB Test Laboratory	Testing location / address:
	Tested by (name + signature): Manish Gupta 
	Approved by (name + signature).....: Elicia Sosa 
<input type="checkbox"/> Testing Procedure: TMP/CTF Stage 1	Testing location / address:
	Tested by (name + signature): _____
	Approved by (name + signature).....: _____
<input type="checkbox"/> Testing Procedure: WMT/CTF Stage 2	Testing location / address:
	Tested by (name + signature): _____
	Witnessed by (name + signature) ...: _____
	Approved by (name + signature).....: _____
<input type="checkbox"/> Testing Procedure: SMT/CTF Stage 3 or 4	Testing location / address:
	Tested by (name + signature): _____
	Approved by (name + signature).....: _____
	Supervised by (name + signature) ..: _____
<input type="checkbox"/> Testing Procedure: RMT	Testing location / address:
	Tested by (name + signature): _____
	Approved by (name + signature).....: _____
	Supervised by (name + signature) ..: _____

List of Attachments

National Differences (57 pages)

Enclosures (7 pages)

Summary Of Testing

Unless otherwise indicated, all tests were conducted at UL San Jose 455 E. Trimble Rd., San Jose, CA, 95131-1230, USA.

Tests performed (name of test and test clause)	Testing location / Comments
Limited Power Source Measurements (2.5)	

Heating (4.5.1, 1.4.12, 1.4.13)

Abnormal Operation (5.3.1 - 5.3.9)

Evaluation of Intergrated Circuit (IC) Current Limiters
(Annex CC)

Summary of Compliance with National Differences:

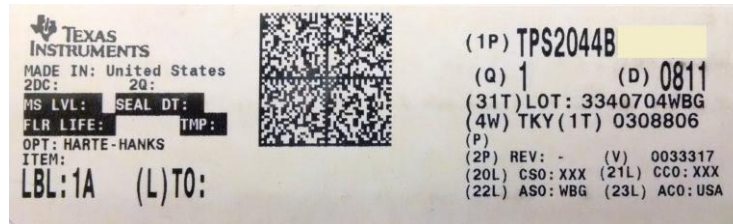
Countries outside the CB Scheme membership may also accept this report.

List of countries addressed: AR, AT, AU, BE, BG, BY, CA, CH, CN, CS, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IE, IL, IN, IT, JP, KR, MY, NL, NO, NZ, PL, PT, RO, SA, SE, SG, SI, SK, UA, US, ZA

The product fulfills the requirements of: IEC 60950-1:2005 + A1:2009 + A2:2013, EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011 + A2:2013

Copy of Marking Plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



Test item particulars :

Equipment mobility: component for building-in

Connection to the mains: not directly connected to the mains

Operating condition: continuous

Access location: operator accessible

Over voltage category (OVC): OVC I

Mains supply tolerance (%) or absolute mains supply values: not directly connected to the mains

Tested for IT power systems: No

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

Class of equipment: Class III (supplied by SELV)

Considered current rating of protective device as part of the building installation (A): N/A

Pollution degree (PD): PD 2

IP protection class: IP X0

Altitude of operation (m): maximum 2000 m

Altitude of test laboratory (m): less than 2000 m

Mass of equipment (kg): maximum 0.1 kg (component for building-in)

Possible test case verdicts:

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

Testing:

Date(s) of receipt of test item: 2015-06-15

Date(s) of Performance of tests: 2015-07-10 to 2015-07-15

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.

Manufacturer's Declaration per Sub Clause 4.2.5 of IEC 60950-1:

Yes

The application for obtaining a CB Test Certificate includes more than one factory and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided

When differences exist, they shall be identified in the General Product Information section.

Name and address of Factory(ies): TEXAS INSTRUMENTS DE MEXICO S DE R L DE C V
JESUS RIVERA FRANCO # 507
CD INDUSTRIAL
20290 AGUASCALIENTES
AGS MEXICO

TEXAS INSTRUMENTS SEMICONDUCTOR MANUFACTURING
(CHENGDU) CO., LTD.
NO. 8-8 & NO.8-10, KEXIN RD
WEST ZONE OF CHENGDU HI-TECH INDUSTRIAL
DEVELOPMEN
CHENGDU SICHUAN CHINA

TEXAS INSTRUMENTS TAIWAN LTD
142 HSIN NAN RD, SEC 1
CHUNG HO
TAIPEI HSIEN
235 TAIWAN

ASE ASSEMBLY & TEST (SHANGHAI) LTD
#669 GUOSHOUJING RD
ZHANGJIANG HI-TECH PARK
PUDONG NEW AREA
SHANGHAI
201203 CHINA

UTAC THAI LTD
WELGROW INDUSTRIAL ESTATE, 73 MOO5
BANGNA-TRAD (KM 38) RD
A BANGPAKONG, T BANGSAMAK
CHACHOENGSAO 24180 THAILAND

NANTONG FUJITSU MICROELECTRONICS CO LTD
NO 288 CHONGCHUAN RD
CHONGCHUAN DEVELOPMENT ZONE
NANTONG
JIANGSU 226006 CHINA

TEXAS INSTRUMENTS MALAYSIA SDN BHD
1 LORONG ENGGANG 33
AMPANG/ULU KLANG
54200 KUALA LUMPUR MALAYSIA

HANA MICROELECTRONICS CO LTD (JIA XING)
18 HANA RD
XINCHENG INDUSTRIAL PARK
XIUZHOU DISTRICT
JIAXING
ZHEJIANG 314000 CHINA

TI (PHILIPPINES) INC
CLARK TI SPECIAL ECONOMIC ZONE
CLARK FREEPORT ZONE
ANGELES PAMPANGA PHILIPPINES

HANA SEMICONDUCTOR (AYUTTHAYA) CO LTD
HI-TECH IND ESTATE AUTH OF THAILAND
100 MOO1, T BAAN-LEN, A BANG PA-IN
KM 59 ASIA RD
AYUTTHAYA 13160 THAILAND

CARSEM SEMICONDUCTOR CO LTD
NO 88 WEST SHEN HU ROAD IN DISTRICT 2
SUZHOU INDUSTRIAL PARK
JIANGSU
215021 CHINA

GENERAL PRODUCT INFORMATION:**Report Summary**

All applicable tests according to the referenced standard(s) have been carried out.

Product Description

The component power distribution switch (IC Current Limiter) limits the output current to within the specified output ratings. These devices provide current limiting and short-circuit protection when supplied by a power source (e.g., 250 VA) in accordance with those specified for LPS outputs in Table 2B. These devices are for use in SELV circuits only.

Enclosure Id. 3-01 IC Current Limiter (U1) on Evaluation Board.
Enclosure Id. 7-01 Annex CC (IC Current Limiter Testing Results).

Model Differences**Additional Information**

Manufacturer's Specification Sheet is available per request.

MARKING: The Recognized Company, trade name (Texas Instruments) or trademark, catalog number, and Recognized Component Mark on the smallest package or reel. Electrical ratings, including voltage range, maximum continuous current, protective current and operating temperatures shall be provided on the manufacturer's device specific datasheet. The datasheet may be web-based provided it is publicly accessible on the internet. Marking provided represents other models.

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 25°C
- The product was investigated to the following additional standards: EN 60950-1:2006 + A11:2009 + A12:2010 + A12:2011 + A2:2013 (which includes all European national differences, including those specified in this Test Report)

Engineering Conditions of Acceptability

When installed in an end-product, consideration must be given to the following:

- These devices are integrated circuit (packages) and the spacings within the device meet functional insulation. The ICs are intended for installation in SELV circuits only. 2. These devices are entirely electronic in nature and have no means for manual operation or reset. 3. The terminals of these devices are for factory wiring only and intended to be mounted on a printed wiring board. 4. These devices have only been evaluated for supplementary overcurrent protection of secondary circuits

supplied by the load side of a transformer or battery, and were not evaluated for branch-circuit protection. 5. These devices have been investigated as electronic overcurrent protective devices in accordance with the requirements contained in the Standard for Solid State Overcurrent Protectors, UL 2367. As a result, use is permitted only on the load-side of an isolating transformer, power supply or battery with maximum levels. 6. Use on secondary supply circuits with a higher power capability requires additional evaluation for reliability, such as are contained in the Standard for Safety-Related Controls Employing Solid-State Controls, UL 991. 7. These devices were not subjected tests to telecom applications and their suitability for connection to telecommunication networks with outside plant connections should be determined in the end-product. 8. These devices were evaluated with respect to continuous current operation at the current levels shown in the electrical ratings section of this Test Report. 9. These devices have been subjected to environmental conditionings with respect to the following conditions (UL 2367): Shipping and Storage: -30°C to 70°C Temperature Range: -40°C to 25°C Thermal Cycling Endurance Abnormal 10. These devices were evaluated for indoor and outdoor use. 11. These devices limit currents to values less than the overcurrent protection rating of 5 A. --

Abbreviations used in the report:

- normal condition	N.C.	- single fault condition	S.F.C
- operational insulation	OP	- basic insulation	BI
- basic insulation between parts of opposite polarity:	BOP	- supplementary insulation	SI
- double insulation	DI	- reinforced insulation	RI

Indicate used abbreviations (if any)

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1	GENERAL		Pass
1.5	Components		Pass
1.5.1	General		Pass
	Comply with IEC 60950-1 or relevant component standard		N/A
1.5.2	Evaluation and testing of components		N/A
1.5.3	Thermal controls		N/A
1.5.4	Transformers		N/A
1.5.5	Interconnecting cables		N/A
1.5.6	Capacitors bridging insulation		N/A
1.5.7	Resistors bridging insulation		N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors		N/A
1.5.9.1	General		N/A
1.5.9.2	Protection of VDRs		N/A
1.5.9.3	Bridging of functional insulation by a VDR		N/A
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A

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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7	Marking and instructions		Pass
1.7.1	Power rating and identification markings		Pass
1.7.1.1	Power rating mark		N/A
	Multiple mains supply connections		N/A
	Rated voltage(s) or voltage range(s) (V)		N/A
	Symbol for nature of supply, for d.c. only		N/A
	Rated frequency or rated frequency range (Hz)		N/A
	Rated current (mA or A)		N/A
1.7.1.2	Identification markings		Pass
	Manufacturer's name or trademark or identification mark.....	TEXAS INSTRUMENTS INC	Pass
	Model identification or type reference	TPS2041, TPS2042, TPS2043, TPS2044, TPS2045, TPS2046, TPS2047, TPS2048, TPS2051, TPS2052, TPS2053, TPS2054, TPS2055, TPS2056, TPS2057, and TPS2058, followed by suffix "A" or "B". Additional suffixes after the model number designate the type of integrated circuit package, integrated circuit lead types, or other features that are considered not to affect the functionality of the device.	Pass
	Symbol for Class II equipment only		N/A
	Other markings and symbols.....		N/A
1.7.1.3	Use of graphical symbols		N/A
1.7.2	Safety instructions and marking		N/A
1.7.2.1	General		N/A
1.7.2.2	Disconnect devices		N/A
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT Power distribution systems		N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

	Method and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment		N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)		N/A
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals		N/A
1.7.7.2	Terminals for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators		N/A
1.7.8.1	Identification, location and marking		N/A
1.7.8.2	Colours		N/A
1.7.8.3	Symbols according to IEC 60417		N/A
1.7.8.4	Markings using figures		N/A
1.7.9	Isolation of multiple power sources		N/A
1.7.10	Thermostats and other regulating devices		N/A
1.7.11	Durability	Marking etched on IC.	Pass
1.7.12	Removable parts		N/A
1.7.13	Replaceable batteries		N/A
	Language(s)		-
1.7.14	Equipment for restricted access locations		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2	PROTECTION FROM HAZARDS		Pass
2.1	Protection from electric shock and energy hazards		N/A
2.1.1	Protection in operator access areas		N/A
2.1.1.1	Access to energized parts		N/A
	Test by inspection..... :		N/A
	Test with test finger (Figure 2A) :		N/A
	Test with test pin (Figure 2B)..... :		N/A
	Test with test probe (Figure 2C) :		N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V _{peak} or V _{rms}); minimum distance through insulation (mm) :		-
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards :		N/A
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment		N/A
	Measured voltage (V); time-constant (s) :		-
2.1.1.8	Energy hazards - d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply .. :		N/A
	b) Internal battery connected to the mains supply :		N/A
2.1.1.9	Audio amplifiers :		N/A
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A

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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

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

2.4	Limited current circuits		N/A
2.4.1	General requirements		N/A
2.4.2	Limit values		N/A
	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/A

2.5	Limited power sources		Pass
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition	See Annex CC for details.	Pass
	Use of integrated circuit (IC) current limiters	See Annex CC for details	-
	d) Overcurrent protective device limited output		Pass
	Max. output voltage (V), max. output current (A), max. apparent power (VA).....	2.7 Vdc to 5.5 Vdc, 0.25 A to 0.5 A	-
	Current rating of overcurrent protective device (A) :	5.0 A	-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6	Provisions for earthing and bonding		N/A
2.6.1	Protective earthing		N/A
2.6.2	Functional earthing		N/A
	Use of symbol for functional earthing :		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG :		-
2.6.3.3	Size of protective bonding conductors		N/A
	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 (ohm), voltage drop (V), test current (A), duration (min) :		N/A
2.6.3.5	Colour of insulation :		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm) :		-
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

IEC 60950-1			
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
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3.7		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 interlocks		N/A
2.8.1	General principles		N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm) :		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.10	Clearances, creepage distances and distances through insulation		N/A
2.10.1	General		N/A
2.10.1.1	Frequency..... :		N/A
2.10.1.2	Pollution degrees..... :		N/A
2.10.1.3	Reduced values for functional insulation		N/A
2.10.1.4	Intervening unconnected conductive parts		N/A
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage		N/A
2.10.2.1	General		N/A
2.10.2.2	RMS working voltage		N/A
2.10.2.3	Peak working voltage		N/A
2.10.3	Clearances		N/A
2.10.3.1	General		N/A
2.10.3.2	Mains transient voltages		N/A
	a) AC mains supply..... :		N/A
	b) Earthed d.c. mains supplies..... :		N/A
	c) Unearthed d.c. mains supplies..... :		N/A
	d) Battery operation..... :		N/A
2.10.3.3	Clearances in primary circuits		N/A
2.10.3.4	Clearances in secondary circuits		N/A
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply..... :		N/A
2.10.3.7	Transients from d.c. mains supply..... :		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems..... :		N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply..... :		N/A
	For a d.c. mains supply..... :		N/A
	b) Transients from a telecommunication network		N/A
2.10.4	Creepage distances		N/A
2.10.4.1	General		N/A
2.10.4.2	Material group and comparative tracking index		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	CTI tests		-
2.10.4.3	Minimum creepage distances		N/A
2.10.5	Solid insulation		N/A
2.10.5.1	General		N/A
2.10.5.2	Distances through insulation		N/A
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		N/A
2.10.5.5	Cemented joints		N/A
2.10.5.6	Thin sheet material - General		N/A
2.10.5.7	Separable thin sheet material		N/A
	Number of layers (pcs)		-
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material - standard test procedure		N/A
	Electric strength test		-
2.10.5.10	Thin sheet material - alternative test procedure		N/A
	Electric strength test		-
2.10.5.11	Insulation in wound components		N/A
2.10.5.12	Wire in wound components		N/A
	Working voltage		N/A
	a) Basic insulation not under stress		N/A
	b) Basic, supplementary, reinforced insulation.....		N/A
	c) Compliance with Annex U		N/A
	Two wires in contact inside wound component; angle between 45° and 90°		N/A
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test		-
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage		N/A
	- Basic insulation not under stress		N/A
	- Supplementary, reinforced insulation		N/A
2.10.6	Construction of printed boards		N/A
2.10.6.1	Uncoated printed boards		N/A
2.10.6.2	Coated printed boards		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs) :		N/A
2.10.7	Component external terminations		N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A
3	WIRING, CONNECTIONS AND SUPPLY		N/A
3.1	General		N/A
3.1.1	Current rating and overcurrent protection		N/A
3.1.2	Protection against mechanical damage		N/A
3.1.3	Securing of internal wiring		N/A
3.1.4	Insulation of conductors		N/A
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections		N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors		N/A
	10 N pull test		N/A
3.1.10	Sleeving on wiring		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.2	Connection to mains supply		N/A
3.2.1	Means of connection		N/A
3.2.1.1	Connection to an a.c. mains supply		N/A
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm)		-
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type		-
	Rated current (A), cross-sectional area (mm ²), AWG		-
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N)		-
	Longitudinal displacement (mm)		-
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	Diameter of minor dimension D (mm); test mass (g)		-
	Radius of curvature of cord (mm)		-
3.2.9	Supply wiring space		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm ²) :		-
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm) :		-
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

3.4	Disconnection from the mains supply		N/A
3.4.1	General requirement		N/A
3.4.2	Disconnect devices		N/A
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment		N/A
3.4.7	Number of poles - three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A

3.5	Interconnection of equipment		N/A
3.5.1	General requirements		N/A
3.5.2	Types of interconnection circuits :		N/A
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4	PHYSICAL REQUIREMENTS		Pass
4.1	Stability		N/A
	Angle of 10°		N/A
	Test force (N)..... :		N/A

4.2	Mechanical strength		N/A
4.2.1	General		N/A
	Rack-mounted equipment		N/A
4.2.2	Steady force test, 10 N		N/A
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N		N/A
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm)..... :		N/A
4.2.7	Stress relief test		N/A
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified :		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N) :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.3	Design and construction		N/A
4.3.1	Edges and corners		N/A
4.3.2	Handles and manual controls; force (N)..... :		N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts		N/A
4.3.5	Connection by plugs and sockets		N/A
4.3.6	Direct plug-in equipment		N/A
	Torque :		N/A
	Compliance with the relevant mains plug standard:		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease		N/A
4.3.10	Dust, powders, liquids and gases		N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids..... :		N/A
	Quantity of liquid (l)..... :		N/A
	Flash point (°C)..... :		N/A
4.3.13	Radiation		N/A
4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg) :		-
	Measured high-voltage (kV) :		-
	Measured focus voltage (kV) :		-
	CRT markings..... :		-
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification :		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation :		N/A
4.3.13.5	Lasers (including laser diodes) and LEDs		N/A
4.3.13.5.1	Lasers (including laser diodes)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Laser class		-
4.3.13.5.2	Light emitting diodes (LEDs)		N/A
4.3.13.6	Other types		N/A

4.4	Protection against hazardous moving parts		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas		N/A
	Household and home/office document/media shredders		N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades		N/A
4.4.5.1	General		N/A
	Not considered to cause pain or injury. a)		N/A
	Is considered to cause pain, not injury. b)		N/A
	Considered to cause injury. c)		N/A
4.4.5.2	Protection for users		N/A
	Use of symbol or warning		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning		N/A

4.5	Thermal requirements		Pass
4.5.1	General		Pass
4.5.2	Temperature tests		Pass
	Normal load condition per Annex L	Thermal Requirements Test complies with Normal Load.	-
4.5.3	Temperature limits for materials	(see appended table 4.5)	Pass
4.5.4	Touch temperature limits		N/A
4.5.5	Resistance to abnormal heat		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4.6	Openings in enclosures		N/A
4.6.1	Top and side openings		N/A
	Dimensions (mm) :		-
4.6.2	Bottoms of fire enclosures		N/A
	Construction of the bottom, dimensions (mm)..... :		-
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) :		-
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks) :		-

4.7	Resistance to fire		N/A
4.7.1	Reducing the risk of ignition and spread of flame		N/A
	Method 1, selection and application of components wiring and materials		N/A
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure		N/A
4.7.2.1	Parts requiring a fire enclosure		N/A
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		N/A
4.7.3.1	General		N/A
4.7.3.2	Materials for fire enclosures		N/A
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures		N/A
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		Pass
5.1	Touch current and protective conductor current		N/A
5.1.1	General		N/A
5.1.2	Configuration of equipment under test (EUT)		N/A
5.1.2.1	Single connection to an a.c. mains supply		N/A
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit		N/A
5.1.4	Application of measuring instrument		N/A
5.1.5	Test procedure		N/A
5.1.6	Test measurements		N/A
	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/A
5.1.7.1	General		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V)		-
	Measured touch current (mA)		-
	Max. allowed touch current (mA)		-
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5.2	Electric strength		N/A
5.2.1	General		N/A
5.2.2	Test procedure		N/A

5.3	Abnormal operating and fault conditions		Pass
5.3.1	Protection against overload and abnormal operation		N/A
5.3.2	Motors		N/A
5.3.3	Transformers		N/A
5.3.4	Functional insulation..... :	Intended to be mounted on Printed Wiring Board rated V-1.	Pass
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE..... :		N/A
5.3.7	Simulation of faults	IC Current Limiter was subjected to additional fault testing. Information is available from manufacturer by request. (see appended table 5.3)	Pass
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions		N/A
5.3.9.1	During the tests		N/A
5.3.9.2	After the tests		N/A

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

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Clause	Requirement + Test	Result - Remark	Verdict

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

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

7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N/A
7.1	General		N/A
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/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A
7.4.3	Impulse test		N/A

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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 movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples..... :		-
	Wall thickness (mm) :		-
A.1.2	Conditioning of samples; temperature (°C) :		N/A
A.1.3	Mounting of samples :		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D :		N/A
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s) :		-
	Sample 2 burning time (s) :		-
	Sample 3 burning time (s) :		-
A.2	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
A.2.1	Samples, material..... :		-
	Wall thickness (mm) :		-
A.2.2	Conditioning of samples; temperature (°C) :		N/A
A.2.3	Mounting of samples :		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C :		-
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s) :		-
	Sample 2 burning time (s) :		-
	Sample 3 burning time (s) :		-
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	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
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

A.3.3	Compliance criterion		N/A
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B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		N/A
B.1	General requirements		N/A
	Position		-
	Manufacturer		-
	Type		-
	Rated values		-
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days)		-
	Electric strength test: test voltage (V)		-
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V)		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V)		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V)		-

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Clause	Requirement + Test	Result - Remark	Verdict
C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		N/A
	Position		-
	Manufacturer		-
	Type		-
	Rated values		-
	Method of protection		-
C.1	Overload test		N/A
C.2	Insulation		N/A
	Protection from displacement of windings		N/A
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		N/A
D.1	Measuring instrument		N/A
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	Earthed d.c. mains supply		N/A
G.2.3	Unearthed d.c. mains supply		N/A
G.2.4	Battery operation		N/A
G.3	Determination of telecommunication network transient voltage (V) :		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks		N/A
G.4.2	Transients from telecommunication networks		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	Determination of minimum clearances		N/A
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		N/A
	Metal(s) used		-

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Clause	Requirement + Test	Result - Remark	Verdict

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

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

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

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Clause	Requirement + Test	Result - Remark	Verdict
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/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	ANNEX P, NORMATIVE REFERENCES		N/A
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		N/A
	- Preferred climatic categories..... :		N/A
	- Maximum continuous voltage..... :		N/A
	- Combination Pulse current..... :		N/A
	Body of the VDR Test according to IEC60695-11-5 :		N/A
	Body of the VDR. Flammability class of material (min V-1) :		N/A
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
 :		-
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		N/A
 :		-
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		N/A
V.1	Introduction		N/A
V.2	TN power distribution systems		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus..... :		N/A
Y.2	Mounting of test samples..... :		N/A
Y.3	Carbon-arc light-exposure apparatus..... :		N/A
Y.4	Xenon-arc light-exposure apparatus :		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		N/A
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		Pass
CC	ANNEX CC, EVALUATION OF INTEGRATED CIRCUIT (IC) CURRENT LIMITERS		Pass
CC.1	General		Pass
CC.2	Test program 1 :		N/A
CC.3	Test program 2 :	See Enclosure Id. 7-01 (Annex CC (IC Current Limiter Testing Results)) for details.	Pass
CC.4	Test program 3 :		N/A
CC.5	Compliance..... :	See Enclosure Id. 7-01 (Annex CC (IC Current Limiter Testing Results)) for details.	Pass

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Clause	Requirement + Test	Result - Remark	Verdict

DD	ANNEX DD, REQUIREMENTS FOR THE MOUNTING MEANS OF RACK-MOUNTED EQUIPMENT		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N		N/A
DD.3	Mechanical strength test, 250 N, including end stops		N/A
DD.4	Compliance.....		N/A

EE	ANNEX EE, HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols		N/A
	Information of user instructions, maintenance and/or servicing instructions		N/A
EE.3	Inadvertent reactivation test		N/A
EE.4	Disconnection of power to hazardous moving parts		N/A
	Use of markings or symbols		N/A
EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A)		N/A
	Test with wedge probe (Figure EE1 and EE2)		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (Edition or year)	mark(s) of conformity ¹⁾	
TPS2540, TPS2540A, TPS2541, TPS2541A, TPS2554, and TPS2555 TPS2041, TPS2042, TPS2043, TPS2044, TPS2045, TPS2046, TPS2047, TPS2048, TPS2051, TPS2052, TPS2053, TPS2054, TPS2055, TPS2056, TPS2057, and TPS2058	Interchangeable	Interchangeable	130°C	UL746C	UL, --	
Supplementary information:						
¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.						
The CBTL has verified the component information.						

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: Opto Electronic Devices			N/A
Manufacturer				
Type				
Separately tested				
Bridging insulation				
External creepage distance				
Internal creepage distance				
Distance through insulation				
Tested under the following conditions				
Input				
Output				
supplementary information:				
--				

1.6.2	TABLE: Electrical data (in normal conditions)						N/A
U (V)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	condition/status	
supplementary information:							

2.1.1.5 c) 1)	TABLE: Max. V, A, VA test					N/A
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)		
supplementary information:						

2.1.1.5 c) 2)	TABLE: Stored energy			N/A
Capacitance C (μF)		Voltage U (V)	Energy E (J)	
supplementary information:				

2.2	TABLE: Evaluation of voltage limiting components in SELV circuits				N/A
Component (measured between)		max. voltage (V) (normal operation)		Voltage limiting components	
		V peak	V d.c.		

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)
supplementary information:	

2.5	TABLE: Limited power sources					Pass
Circuit output tested:		--				
Note: Measured Uoc (V) with all load circuits disconnected:		--				
Components	Sample No.	Uoc (V)	Isc (A)		VA	
			Meas.	Limit	Meas.	Limit
--			--	--	--	--
supplementary information:						
See Annex CC for details.						

2.10.2	TABLE: Working voltage measurements				N/A
Location		RMS voltage (V)	Peak voltage (V)	Comments	
supplementary information:					

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						N/A
Clearance (cl) and creepage distance (cr) at/of/between:		U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Functional:							
Clearance (cl) and creepage distance (cr) at/of/between:		U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Basic/supplementary:							
Clearance (cl) and creepage distance (cr) at/of/between:		U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Reinforced:							
Clearance (cl) and creepage distance (cr) at/of/between:		U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
supplementary information:							

2.10.5	TABLE: Distance through insulation measurements					N/A
Distance through insulation (DTI) at/of:		Upeak (V)	Urms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)

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Clause	Requirement + Test	Result - Remark	Verdict

supplementary information:

4.3.8	TABLE: Batteries							N/A	
The tests of 4.3.8 are applicable only when appropriate battery data is not available.									
Is it possible to install the battery in a reverse polarity position?									
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. specs.		Meas. current	Manuf. specs.	Meas. current	Manuf. specs.	Meas. current	Manuf. specs.
Test results:								Verdict	
- Chemical leaks								N/A	
- Explosion of the battery								N/A	
- Emission of flame or expulsion of molten metal								N/A	
- Electric strength tests of equipment after completion of tests								N/A	
supplementary information:									

4.3.8	TABLE: Batteries			N/A
Battery category (lithium, NiMh, NiCad, lithium ion, etc.)				
Manufacturer				
Type / model				
Voltage				
Capacity (mAh)				
Tested and Certified by (incl. Ref. No.)				
Circuit protection diagram (refer to indicated supplement of Enclosure - Miscellaneous)				
MARKINGS AND INSTRUCTIONS (1.7.12, 1.7.15)				
Location of replaceable battery				
Language(s)				
Close to the battery				
In the servicing instructions				
In the operating instructions				
supplementary information:				
--				

4.5	TABLE: Thermal requirements							Pass
	Supply voltage (V) :	2.7 Vdc	5.5 Vdc	--	--	--	---	

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Clause	Requirement + Test	Result - Remark	Verdict

Ambient Tmin (°C) :		25°C	25°C	--	--	--	---
Ambient Tmax (°C) :				--	--	--	---
Maximum measured temperature T of part/at:		T (°C) #1	T (°C) #2	T (°C) #3	T (°C) #4	T (°C) #5	Allowed Tmax (°C)
Model TPS2044B - Top of Unit (25°C)		24.5° C	24.8° C	--	--	--	130°C
Ambient		20.7° C	20.7° C				
Temperature T of winding:	t1 (°C)	R1 (ohm)	t2 (°C)	R2 (ohm)	T (°C)	Allowed Tmax (°C)	Insulation class
--	--	--	--	--	--	--	--
supplementary information:							
--							

4.5.5	TABLE: Ball pressure test of thermoplastic parts			N/A
	allowed impression diameter (mm) :	less than or equal to 2.0		---
part		test temperature (°C)	impression diameter (mm)	
supplementary information:				

4.7	TABLE: Resistance to fire					N/A
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence	
supplementary information:						

5.1	TABLE: Touch current measurement				N/A
Measured between		Measured (mA)	Limit (mA)	Comments/conditions	
supplementary information:					

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			N/A
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Functional:				
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

Basic/supplementary:			
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Reinforced:			
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
supplementary information:			

5.3	TABLE: Fault condition tests		Pass
	Ambient temperature (°C) :	25°C	---

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Model TPS2044B	Output Short	2.7 -5.5 Vdc	3 cycles	N/A	N/A	There was no fire or shock hazard.
Model TPS2044B – Output Pins Shorted Together	Power On with Output Open Circuited – Short / Open Output	5.5 Vdc	50 cycles	N/A	N/A	There was no fire or shock hazard.
Model TPS2044B – Output Pins Shorted Together	Output Short Circuited, Power to Circuit Off - Power On / Power Off	5.5 Vdc	50 cycles	N/A	N/A	There was no fire or shock hazard.
Model TPS2044B – Output Pins Shorted Together	Power On, Circuit loaded to Maximum Rated Load - Short Output / Remove Short	5.5 Vdc	50 cycles	N/A	N/A	There was no fire or shock hazard.
Model TPS2044B – Output Pins Shorted Together	Power Off, Output Open -Circuited - Power On / Short Output, Power Off / Power On, Remove Short / Power Off	5.5 Vdc	50 cycles	N/A	N/A	There was no fire or shock hazard.
Model TPS2044B	Long Term Abnormal Test	5.5 Vdc	7 days	N/A	N/A	Current did not display any significant change after 7 days. There was no fire or shock hazard.

supplementary information:

Results Key: IP = Internal protection operated (component indicated) CT = Constant temperatures were obtained TW = Transformer winding opened CD = Components damaged (damaged components indicated) NB = No indication of dielectric breakdown YB = Dielectric breakdown (time and location indicated) NC = Cheesecloth remained intact YC = Cheesecloth charred or flamed NT = Tissue paper remained intact YT = Tissue paper charred or flamed

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Clause	Requirement + Test	Result - Remark	Verdict

C.2	TABLE: Transformers							N/A
Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)		Required distance thr. insul. (2.10.5)
Loc.	Tested insulation				Test voltage / V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
Transformer type number			Enclosure - Miscellaneous ID					
supplementary information:								

Enclosure

National Differences

Argentina
Australia / New Zealand
Austria**
Belarus*
Belgium**
Bulgaria**
China
Czech Republic**
Denmark
Finland
France**
Germany
Greece**
Group
Hungary**
India*
Ireland
Israel
Italy**
Japan
Korea
Malaysia*
Netherlands**
Norway
Poland**
Portugal**
Romania**
Saudi Arabia*
Serbia**
Singapore*
Slovakia**
Slovenia**
South Africa*
Spain
Sweden
Switzerland
USA / Canada
Ukraine*
United Kingdom

* No National Differences Declared

** Only Group Differences

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

Argentina - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
General	Argentina has national differences declared to 60950-1:2005 + A1:2009.		Pass
1.5.2	Certified plug according to IRAM 2063 (two prong) or IRAM 2073 (three prong) are used in accordance with their ratings		N/A
1.7.2	Operating/safety instructions made available to the user in Spanish. Product information appears on the product.		N/A
3.2	Plugs shall be in conformity with IRAM 2063 Standard for Class II and IRAM 2073 Standard for Class I appliances (Resolution 524/98)		N/A
4.3.6	Adapters/Transformers provided with integrated plugs shall be provided with blades which shall meet the geometry of IRAM 2063 standard for Class II appliances or IRAM 2073 standard for Class I appliances (Resolution 524/98)		N/A
General	Household power supply sources are 220 V a.c., 50 Hz		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

Australia / New Zealand - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013													
General	Australia has national differences declared for 60950-1:2005 (below).		Pass										
1.2.12.201	Addition: POTENTIAL IGNITION SOURCE Possible fault which can starts a fire if the open-circuit voltage measured across an interruption or faulty contact exceeds a value of 50 V (peak) a.c. or d.c. and the product of the peak value of this voltage and the measured r.m.s. current under normal operating conditions exceeds 15VA. Such a faulty contact or interruption in an electrical connection includes those which may occur in conductive patterns on printed boards. Note 201: An electronic protection circuit may be used to prevent such a fault from becoming a POTENTIAL IGNITION SOURCE. Note 202: This definition is from AS/NZS 60065:2003		N/A										
1.5.1	Add to the end of the first paragraph and in note 1 after the word "standard"; "or the relevant Australian / New Zealand Standard".		N/A										
1.5.2	Add the following to the end of the first and third dash items: 'or the relevant Australian/New Zealand Standard'.		N/A										
3.2.5.1	Replace the first four rows for Table 3B with the following: Sizes of Conductors <table><tr><td>Rated Current of Equipment (A)</td><td>Nominal cross-sectional area (mm²)</td></tr><tr><td>0.2 ≤ 3</td><td>0.5 1)</td></tr><tr><td>3 ≤ 7.5</td><td>0.75</td></tr><tr><td>7.5 ≤ 10</td><td>(0.75) 2) 1.00</td></tr><tr><td>10 ≤ 16</td><td>(1,0) 3) 1.5</td></tr></table> Replace footnote 1) with the following: 1) This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord or cord guard, enters the appliance, and the entry to the plug, does not exceed 2 m (0.5 mm² three-core supply flexible cords are not	Rated Current of Equipment (A)	Nominal cross-sectional area (mm²)	0.2 ≤ 3	0.5 1)	3 ≤ 7.5	0.75	7.5 ≤ 10	(0.75) 2) 1.00	10 ≤ 16	(1,0) 3) 1.5		N/A
Rated Current of Equipment (A)	Nominal cross-sectional area (mm²)												
0.2 ≤ 3	0.5 1)												
3 ≤ 7.5	0.75												
7.5 ≤ 10	(0.75) 2) 1.00												
10 ≤ 16	(1,0) 3) 1.5												

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	permitted; see S/NZS 3191).		
	Delete Note 1.		
4.1.201	Addition: Display devices used for television purposes Display devices which may be used for television purposes, with a mass of 7 kg or more, shall comply with the requirements for stability and mechanical hazards, including the additional stability requirements for television received, specified in AS/NZS 60065.		N/A
4.3.6	Replace the third paragraph: Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flat-pin socket-outlet complying with AS/NZS 3112, shall comply with the requirements in AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets.		N/A
4.3.13.5	Add the following to the end of the first paragraph: "or AS/NZS 2211.1"		N/A
4.7	Add after the clause: For alternative resistance to fire tests, refer to Clause 4.7.201		N/A
4.7.201.1	Addition: Resistance to fire - Alternative tests General Parts of non-metallic material shall be resistant to ignition and spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames originating from inside the apparatus, or the following: (a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1 mm in width regardless of length. (b) The following parts which would contribute negligible fuel to a fire: - small mechanical parts, the mass of which does not exceed 4 g, such as mounting parts, gears, cams, belts and bearings; - small electrical components, such as capacitors with a volume not exceeding 1,750 mm ³ , integrated circuits, transistors and optocoupler packages, if these components are mounted on		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	<p>material of flammability category V-1, or better, according to AS/NZS 60695.11.10.</p> <p>NOTE In considering how to minimize propagation of fire and what 'small parts' are, account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating fire from one part to another.</p> <p>Compliance shall be checked by the tests of 4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5. For the base material of printed boards, compliance shall be checked by the test of 4.7.201.5.</p> <p>The tests shall be carried out on parts of non-metallic material which have been removed from the apparatus. When the glow-wire test is carried out, the parts shall be placed in the same orientation as they would be in normal use.</p> <p>These tests are not carried out on internal wiring.</p>		
4.7.201.2	<p>Addition: Testing of non-metallic materials</p> <p>Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550°C. Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glow-wire test shall be not carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part.</p>		N/A
4.7.201.3	<p>Addition: Testing of insulating materials</p> <p>Parts of insulating material supporting POTENTIAL IGNITION SOURCES shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750°C. The test shall be also carried out on other parts of insulating material which are within a distance of 3mm of the connection.</p> <p>NOTE Contacts in components such as switch contacts are considered to be connections.</p> <p>For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a</p>		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	<p>diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test. However, parts shielded by a barrier which meets the needle-flame test shall not be tested. The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications:</p> <p>Clause of AS/NZS 60695.11.5 Change</p> <p>9 Test procedure</p> <p>9.2 Replace the first paragraph with: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. Replace the second paragraph with: The duration of application of the test flame shall be 30s + 1s.</p> <p>9.3 Replace with: The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall then withstand the test.</p> <p>11 Evaluation of test results Replace with: The duration of burning (tb) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.</p> <p>The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10, provided that the sample tested was not thicker than the relevant part.</p>		
4.7.201.4	<p>Addition: Testing in the event of non-extinguishing material - If parts, other than enclosures, do not withstand the glow wire tests of 4.7.201.3, by failure to extinguish within 30 s after the removal of the glow-wire tip, the needle-flame test detailed in 4.7.201.3 shall be made on all parts of non-metallic material which are within a distance of 50 mm or which are likely to be impinged upon by flame during the tests of 4.7.201.3. Parts shielded by a separate barrier which meets the needle-flame test need not be tested. NOTE 1 - If the enclosure does not withstand the glow-wire test the equipment is considered to have failed to meet the</p>		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	<p>requirements of Clause 4.7.201 without the need for consequential testing. NOTE 2 - If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the equipment, the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing. NOTE 3 - Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting, in contact with, or in close proximity to, connections.</p>		
4.7.201.5	<p>Addition: Testing of printed boards - The base material of printed boards shall be subjected to the needle-flame test of Clause 4.7.201.3. The flame shall be applied to the edge of the board where the heat sink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge, consisting of broken perforations, unless the edge is less than 3 mm from a POTENTIAL IGNITION SOURCE. The test is not carried out if the</p> <ul style="list-style-type: none"> - Printed board does not carry any POTENTIAL IGNITION SOURCE; - Base material of printed boards, on which the available apparent power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category V-1 or better according to AS/NZS 60695.11.10, or the printed boards are protected by an enclosure meeting the flammability category V-0 according to AS/NZS 60695.11.10, or made of metal, having openings only for connecting wires which fill the openings completely; or - Base material of printed boards, on which the available apparatus power at a connection exceeds 15 VA operating at a voltage exceeding 400 V (peak) a.c. or d.c. under normal operating conditions, and base material of printed boards supporting spark gaps which provides protection against overvoltages, is of flammability category V-0 according to AS/NZS 60695.11.10 or the printed boards are contained in a metal enclosure, having 		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	<p>openings only for connecting wires which fill the openings completely.</p> <p>Compliance shall be determined using the smallest thickness of the material.</p> <p>NOTE – Available apparent power is the maximum apparent power which can be drawn from the supplying circuit through a resistive load whose value is chosen to maximise the apparent power for more than 2 min when the circuit supplied is disconnected.</p>		
6.2.2	For Australia only, delete the first paragraph and Note, and replace with the following: In Australia (not in New Zealand) only, compliance with 6.2.2 is checked by the tests of both 6.2.2.1 and 6.2.2.2.		N/A
6.2.2.1	<p>For Australia only, delete the first paragraph including the note and replace with the following: In Australia only(not in New Zealand), the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator of Annex N for 10/700µs impulses. The interval between successive impulses is 60 s and the initial voltage, U_c is:</p> <p>(i) for 6.2.1a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment and</p> <p>(ii) for 6.2.1b) and 6.2.1c): 1.5 kV.</p> <p>NOTE 201 - The 7 kV impulse is to simulate lightning surges on typical rural and semi-rural network lines.</p> <p>NOTE 202 - The value of 2.5 kV for 6.2.1a) was chosen to ensure adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.</p>		N/A
6.2.2.2	<p>For Australia only, delete the second paragraph including the Note and replace with the following: In Australia (not New Zealand), the a.c. test voltage is:</p> <p>(i) for 6.2.1a) 3 kV; and</p> <p>(ii) for 6.2.1b) and 6.2.1c) 1.5 kV</p> <p>NOTE 201 - Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used.</p> <p>NOTE 202 - The 3 kV and 1.5 kV values have been determined considering the low frequency induced voltages from the power supply distribution system.</p>		N/A
7.3	Add the following before the first		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	paragraph:Equipment providing functions that fall only within the scope of AS/NZS 60065 and that incorporate a PSTN interface, are not required to comply with this Clause where the only ports provided on the equipment, in addition to a coaxial cable connection and a PSTN interface, are audio or video ports and analogue or data ports not intended to be used for telecommunication purposes.		
P	Add the following Normative References: AS/NZS 3191, Electric flexible cords AS/NZS 3112, Approval and test specification— Plugs and socket-outlets		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

China - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
General	China has national differences declared for 60950-1:2005 (below).		Pass
1.1.2	Revised third dashed paragraph to read: equipment intended to be used in vehicles, on board ships or aircraft, in tropical countries, or at altitudes greater than 5000m;		N/A
1.4.5	Amend the second paragraph and the two following dash paragraphs as: If the equipment is intended for direct connection to an AC mains supply, the tolerances on RATED VOLTAGE shall be taken as +10%,-10% unless a wider tolerance is declared by the manufacturer, in which case the tolerance shall be taken as the wider value.		N/A
1.4.12.1	Tma in clause 1.4.12.1 amended as: Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 35 °C, whichever is greater. Add note 1: for equipment not to be operated at tropical climatic conditions, Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 25 °C, whichever is greater. Add note 2: for equipment is to be operated at 2000m-5000m above sea level, its temperature test conditions and temperature limits are considered.		N/A
1.5.2	Add a note behind the first dashed paragraph. Note: A component used shall comply with related requirements corresponding altitude of 5000m.		N/A
1.7	Add a paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.		N/A
1.7.1	Amend dashed paragraph at the fifth paragraph : The RATED VOLTAGE should be 220V (single phase) or 380V (three-phases) for single rated voltage, for RATED VOLTAGE RANGE, it should cover 220V or 380V (three-phases), for multiple RATED VOLTAGES, one of them should be 220V		N/A

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	or 380V (three-phases) and set on 220V or 380V (three-phases) when manufactured. And the RATED FREQUENCY or RATED FREQUENCY RANGE should be 50Hz or include 50Hz		
1.7.2.1	<p>Add requirements of warning for equipment intended to be used at altitude not exceeding 2000m or at non-tropical climate regions: For equipment intended to be used at altitude not exceeding 2000m, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place. "Only used at altitude not exceeding 2000m."</p> <p>For equipment intended to be used in not-tropical climate regions, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place. "Only used in not-tropical climate regions." If only the symbol used, the explanation of the symbol shall be contained in the instruction manual. The above statements shall be given in a language acceptable to the regions where the apparatus is intended to be used.</p>		N/A
2.7.1	Amended the first paragraph as: Protection in PRIMARY CIRCUITS against overcurrent short-circuits and earth faults shall be provided as an integral part of the equipment except special provisions. And the protective device shall meet the requirement of Clause 5.3.		N/A
2.9	<p>Humidity conditioning This section applies for equipment to be operated at tropical climatic conditions, humidity conditioning dealt with tropical climatic conditions. For equipment not to be operated at tropical climatic conditions, its humidity conditioning complies with rules of CTL 624/07.</p>		N/A
2.9.2	<p>First section of Clause 2.9.2 amended as two sections: Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 120 h in a cabinet or room containing air with ambient temperature 40±2°C and a relative humidity of</p>		N/A

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	<p>(93±3)%. During this conditioning the component or subassembly is not energized.</p> <p>For equipment not to be operated at tropical climatic conditions, Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of (93±3) %.</p> <p>The temperature of the air, at all places where samples can be located, is maintained within 2 °C of any convenient value between 20 °C and 30 °C such that condensation does not occur.</p> <p>Due to pretreatment of equipment operated at high altitude area is humidity conditioning withstand hot shock, specific requirements are to be considered.</p> <p>Add note: For equipment to be operated at 2000m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered.</p>		
2.10.3.1	<p>Amend the third paragraph of Clause 2.10.3.1 to be:</p> <p>These requirements apply for equipment to be operated up to 2000m above sea level. For equipment to be operated at more than 2000m above sea level and up to 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.</p>		N/A
2.10.3.3	Add "(applicable for altitude up to 2000m)" in header of Table 2K, 2L and 2M.		N/A
2.10.3.4	Add "(applicable for altitude up to 2000m)" in header of Table 2K, 2L and 2M.		N/A
2.10.3.4	<p>Add a new section above Table 2K and in Clause 2.10.3.4:</p> <p>Minimum CLEARANCES determined by above rules apply for equipment to be operated up to 2000m above sea level. For equipment operated at 2000m - 5000m above sea level, the minimum</p>		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1 (IEC 60664-1). For equipment to be operated at more than 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of GB/T16935.1.		
3.2.1.1	Add a paragraph before the last paragraph: Plugs connected to AC mains supply shall comply with GB 1002 or GB 1003 or GB/T 11918 as applicable.		N/A
4.2.8	Clause 4.2.8 cathode ray tubes quoted Clause 18 of GB8898-2011. Delete note of Clause 4.2.8.		N/A
E	Amend last section: For comparison of winding temperatures determined by the resistance method of this annex with the temperature limits of Table 4B, 35 °C shall be added to the calculated temperature rise. Add note: for equipment not to be operated at tropical climatic conditions, 25 °C shall be added to the calculated temperature rise to compare with the temperature of Table 4B.		N/A
G.6	Change the second section of Clause G.6 to be: For equipment to be operated at 2000m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1. For equipment to be operated at more than 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.		N/A
BB	Amended as: The differences between Chinese national standards GB 4943.1-2011 and GB 4943-2001.		N/A
DD	Added annex DD: Instructions for the new safety warning labels. DD.1 Altitude warning label Meaning of the label: Evaluation for apparatus only based on altitude not exceeding 2000m, therefor it's the only operating condition applied for the equipment .There may be some potential safety		N/A

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	hazard if the equipment is used at altitude above 2000m. DD.2 Climate warning label Meaning of the label: Evaluation for apparatus only based on temperate climate condition, therefor it's the only operating condition applied for the equipment .There may be some potential safety hazard if the equipment is used in tropical climate region.		
EE	Illustration relative to safety explanation in normative Chinese, Tibetan, Mongolian, Zhuang Language and Uighu.		N/A
Other	In accordance with the relevant CTL decisions and the amendments of IEC 60950-1, the specific requirements or mistakes in IEC standard are corrected or editorially modified in this part, Including clause 1.7, 2.1.1.7, 2.9.2, Table 2H, Figure 2H, F.8, F.9, M.3 and Annex U		N/A
Other	The principles of quoting and referring to other standards in Annex P and reference documents of IEC 60950-1 are as follows: If the date of the reference document is given, only that edition applies, excluding any subsequent corrigenda and amendments. However, parties to agreements based on this part are encouraged to investigate the possibility of applying the most recent editions of the reference documents. For undated references, the latest edition of the referenced document applies, including any corrigenda and amendments. For the usage of international standards in Chinese national standards and industry standards is various, in the aim of achieving easy operation and based on the requirements of GB/T 1.1 and GB/T 20000.2, when quoting an entire international standard in the normative quoting files and reference documents of Annex P of this part, the principles of quotation are as follows: - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted; - If the date of the national standard or industry standard is not given, the latest edition of the standard applies;		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	<p>- The national standard or industry standard number, corresponding international standard number and the consistency level code should be identified in parentheses behind the listed national standard or industry standard.</p> <p>When quoting several chapters or clauses of the international standard, the principles of quotation are as follows:</p> <ul style="list-style-type: none">- If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted;- If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted. <p>Meanwhile, in order to retain the relevant information on international standards, informative annex CC is increased, which gives the table about the comparison of the normative quoting files and reference documents in IEC 60950-1:2005.</p>		

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SubClause	Difference + Test	Result - Remark	Verdict

Denmark - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
1.2.4.1	In Denmark, certain types of Class I appliances (see sub-clause 3.2.1.1) may be provided with plug not establishing earthing continuity when inserted into Danish socket-outlets.		N/A
1.7.2.1	CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: : "Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord."		N/A
1.7.5	In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For stationary equipment, the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.		N/A
1.7.5	For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a. (Heavy Current Regulations, Section 107-2-D1)		N/A
3.2.1.1	Supply cord of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contact or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	Regulations, Section 107-2-D1 or EN 60309-2.		

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Finland - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.9.4	The third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text shall be: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"		N/A
2.3.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
2.10.5.3	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
5.1.7.1	Touch current measurement results exceeding 3,5 mA r.m.s are permitted only for the following equipment: - STATIONARY PLUGGABLE EQUIPMENT TYPE A that: (1) is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and (2) has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and (3) is provided with instructions for the installation of that conductor by a SERVICE PERSON; - STATIONARY PLUGGABLE EQUIPMENT TYPE B - STATIONARY PERMANENTLY CONNECTED EQUIPMENT		N/A
6.1.2.1	Add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist		N/A

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	<p>of either</p> <ul style="list-style-type: none"> - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>Alternatively for components, there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. <p>It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b).</p> <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994 (EN 60384-14:2005), subclass Y2.</p> <p>A capacitor classified Y3 according to EN 132400 [EN 60384-14:2005], may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400 [EN 60384-14], which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 132400 [EN 60384-14]; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400 [EN 60384-14], in the sequence of tests as described in EN 132400 [EN 60384-14]. 		
6.1.2.2	The exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to		N/A

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	be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication center, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		
7.2	Requirements according to this annex 6.1.2.1 and 6.1.2.2 apply with the term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A

Germany - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
1.7.2.1	If for the assurance of safety and health certain rules during use, amending or maintenance of a technical labour equipment or readymade consumer product are to be followed, a manual in German language has to be delivered when placing the product on the market. Of this requirement, rules for use even only by SERVICE PERSONS are not exempted.		N/A

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SubClause	Difference + Test	Result - Remark	Verdict

Group - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
General	Group Differences also includes the requirements in A11:2009 and A12:2011		Pass
1.3	A12:2011 - In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010		N/A
1.5.1	Add the following NOTE Z1: The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC		N/A
1.7.2.1	Delete NOTE Z1 and the addition for Portable Sound System Add the following Zx clauses and annex to the existing standard and amendments		N/A
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		N/A
2.7.2	Void		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
Zx.1	<p>General - This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players.</p> <p>A personal music player is a portable equipment for personal use, that:</p> <ul style="list-style-type: none">- is designed to allow the user to listen to recorded or broadcast sound or video; and- primarily uses headphones or earphones that can be worn in or on or around the ears; and- allows the user to walk around while in use. <p>NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment.</p> <p>A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause.</p> <p>The requirements in this sub-clause are valid for music or video mode only.</p> <p>The requirements do not apply:</p> <ul style="list-style-type: none">- while the personal music player is connected to an external amplifier; or- while the headphones or earphones are not used. <p>NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player.</p> <p>The requirements do not apply to:</p> <ul style="list-style-type: none">- hearing aid equipment and professional equipment; <p>NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.</p> <ul style="list-style-type: none">- analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before		N/A

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	<p>the end of 2015.</p> <p>NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies.</p> <p>For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.</p>		
Zx.2	<p>Equipment Requirements - No safety provision is required for equipment that complies with the following:</p> <ul style="list-style-type: none"> - equipment provided as a package (personal music player with its listening device), where the acoustic output LAeq,T is ≤ 85 dBA measured while playing the fixed "programme simulation noise" as described in EN 50332-1; and - a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" as described in EN 50332-1. <p>NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level LAeq,T is meant. See also Zx.5 and Annex Zx.</p> <p>All other equipment shall:</p> <ul style="list-style-type: none"> a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated 		N/A

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	<p>more than once every 20 h of cumulative listening time; and</p> <p>NOTE 2 Examples of means include visual or audible signals. Action from the user is always required.</p> <p>NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off.</p> <p>d) have a warning as specified in Zx.3; and</p> <p>e) not exceed the following:</p> <p>1) equipment provided as a package (player with its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and</p> <p>2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1. For music where the average sound pressure (long term LAeq,T) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song.</p> <p>NOTE 4 Classical music typically has an average sound pressure (long term LAeq,T) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.</p>		
Zx.3	Warning - The warning shall be placed on the		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	<p>equipment, or on the packaging, or in the instruction manual and shall consist of the following:</p> <ul style="list-style-type: none"> - the symbol of Figure 1 (IEC 60417-6044) with a minimum height of 5 mm; and - the following wording, or similar: "To prevent possible hearing damage, do not listen at high volume levels for long periods." Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level 		
Zx.4	Requirements for Listening devices (headphones and earphones)		N/A
Zx.4.1	<p>Wired listening devices with analogue input With 94 dBA sound pressure output LAeq,T, the input voltage of the fixed "programme simulation noise" described in EN 50332-2 shall be ≥ 75 mV.</p> <p>This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control).</p> <p>NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.</p>		N/A
Zx.4.2	<p>Wired listening devices with digital input With any playing device playing the fixed "programme simulation noise" described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output LAeq,T of the listening device shall be ≤ 100 dBA.</p> <p>This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.).</p> <p>NOTE An example of a wired listening device with digital input is a USB headphone.</p>		N/A
Zx.4.3	<p>Wireless listening devices In wireless mode:</p> <ul style="list-style-type: none"> - with any playing and transmitting device playing the fixed programme simulation noise described in 		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	<p>EN 50332-1; and</p> <ul style="list-style-type: none"> - respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and - with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output LAeq,T of the listening device shall be ≤ 100 dBA. <p>NOTE An example of a wireless listening device is a Bluetooth headphone.</p>		
Zx.5	<p>Measurement Methods</p> <p>Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s.</p> <p>NOTE Test method for wireless equipment provided without listening device should be defined.</p>		N/A

Ireland - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
General	Ireland has national differences declared for 60950-1:2005, Am 1:2009 (below).		Pass
3.2.1.1	Apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.		N/A
4.3.6	DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.		N/A

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SubClause	Difference + Test	Result - Remark	Verdict

Israel - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
General	Israel has national differences declared for 60950-1:2005, Am 1:2009 (below).		Pass
1.6.1	Add Note: This clause is applicable subject to the Electricity Law, 1954, its regulations and revisions.		N/A
1.7	Add: Sub-clause 1.7.201 shall be added at the beginning of the clause.		N/A
1.7.2.1	Add: All the instructions and warnings related to safety shall also be written in the Hebrew language.		N/A
1.7.201	The marking in the Hebrew language shall be in accordance with the Consumer Protection Order (Marking of goods), 1983. In addition, the marking required by clause 1.7.1, the following details shall be marked in the Hebrew language. The details shall be marked on the apparatus or on its package, or on a label properly attached to the apparatus or on the package, by bonding or sewing, in a manner that the label cannot be easily removed. 1) name of the apparatus and its commercial designation; 2) Manufacturer's name and address. If the apparatus is imported, the importer's name and address; 3) Manufacturer's registered trademark, if any; 4) Name of the model and serial number, if any; 5) country of manufacturer		N/A
2.9.4	Add: Seven means of protection against electrocution are permitted according to the Electricity Law, 1954, and the Electricity Regulations (Earthing and means of protection against electricity of voltages up to 1,000V) 1991. The seven are 1) TN-S or TN-C-S 2) TT 3) IT 4) Isolated Transformer 5) Safety extra low voltage (SELV or ELV) 6) Residual current circuit breaker (30 ma = 1delta) 7) reinforced insulation; double insulation (Class II)		N/A
2.201	Add: Prior to carrying out the tests in accordance with the clauses of this Standard, the compliance of		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	the apparatus with the relevant requirements specified in the appropriate part of the standard series SI 961, shall be checked. The apparatus shall meet the requirements in the appropriate part of the standard series SI 961. If there are components of the apparatus for the prevention of electromagnetic interference, these components shall not reduce the safety level of the apparatus as required by this standard.		
3.2.1.1	Add after the note: The feed plug shall comply with the requirements of Israel Standard SI 32 Part 1.1.		N/A
3.2.1.2	Add: At the end of the first paragraph add the following note: At the time of issue of the standard, there is no Israel Standard for connection accessories to d.c.		N/A

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SubClause	Difference + Test	Result - Remark	Verdict

Japan - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
General	NCBs are issuing and recognizing to 60950-1:2005, Am 1:2009. Japan has declared differences to 60950-1:2001 (see below.)		Pass
1.2.4.1	Addition of the following note: Note: Even if the equipment is designed as Class I, the equipment is regarded as Class 0I equipment when 2-pin adaptor with earthing lead wire or cord set having 2-pin plug with earthing lead wire is provided or recommended.		N/A
1.2.4.3A	Addition of new clause Class 0I Equipment: Equipment having attachment plug without earthing blade, where protection against electric shock is achieved by: - using BASIC INSULATION, and - providing externally an earth terminal or a lead wire for earthing 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. NOTE – Class 0I equipment may have a part constructed with Double Insulation or Reinforced Insulation.		N/A
1.3.2	Add after the first paragraph: 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. 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.		N/A
1.5.1	Replace the first paragraph with: 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 in case there is no applicable JIS component standard is available. However, a component that falls within		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	the scope of METI Ministerial ordinance No. 85 is properly used in accordance with its marked ratings, requirements of 1.5.4, 2.8.7 and 3.2.5 apply, and in addition, a cord connector of power supply cord set mating with appliance inlet complying with the standard sheet of IEC 60320-1, shall comply with relevant standard sheet of IEC 60320-1.		
1.5.1	Replace note 1 with: Note 1 A JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope.		N/A
1.5.2	Replace the first sentence in the first dashed paragraph with the following: A component that has been demonstrated to comply with a JIS component standard harmonized with the relevant IEC component standard, or where such JIS component standard is not available, a component that has been demonstrated to comply with the relevant IEC component standard shall be checked for correct application and use in accordance with its rating.		N/A
1.5.2	Add the following note after the first dashed paragraph: Note 1 See 1.7.5A when Type C.14 appliance coupler rated 10 A per IEC 60320-1 is used with an equipment rated not more than 125 V and rated more than 10 A.		N/A
1.5.2	Replace first sentence in the third dashed paragraph with the following: Where no relevant IEC component standard or JIS component standard harmonized with the relevant IEC component standard exists, or where components are used in circuits not in accordance with their specified rating, the components shall be tested under the conditions occurring in the equipment.		N/A
1.5.6	In this sub-clause, add "JIS C 5101-14:1998 or" before the reference number, IEC 60384-14:1993.		N/A
1.5.7.2	In this sub-clause, add "JIS C 5101-14:1998 or" before the reference number, IEC 60384-14:1993.		N/A
1.5.8	In the first paragraph, add "JIS C 5101-14:1998 or" before the reference number, IEC 60384-14:1993.		N/A
1.7.1	Replace fifth dashed paragraph with the following:		N/A

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SubClause	Difference + Test	Result - Remark	Verdict

	manufacturer's or responsible company's name or trade-mark or identification mark		
1.7.5	In the second paragraph, add "or JIS C 8303:2007" after the reference number, IEC/TR 60083:1997".		N/A
1.7.5A	Add the following new clause after 1.7.5: Appliance Coupler 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 user instruction. " Use only designated cord set attached in this equipment"		N/A
1.7.12	Replace first sentence with the following: Instructions and equipment marking related to safety shall be in Japanese.		N/A
1.7.17A	Add the following new clause. after 1.7.17: Marking for CLASS 0I EQUIPMENT For CLASS 0I EQUIPMENT, the following instruction shall be marked on the visible place of the mains plug or the main body: "Provide an earthing connection" Moreover, for CLASS 0I EQUIPMENT, the following or equivalent instruction shall be indicated on the visible place of the main body or written in the operating instructions: "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."		N/A
2.1.1.1	In item b) of this sub-clause, replace "IEC 60083" with "JIS C 8303:2007 or Article 1 of the Ministerial Ordinance (No. 85:1962)"		N/A
2.6.3.2	Add the following after 1st paragraph: This also applies to the conductor of lead wire for protective earthing of CLASS 0I EQUIPMENT.		N/A
2.6.4.2	Replace 1st paragraph with the following: Equipment required to have protective earthing shall have a main protective earthing terminal.		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	For equipment with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal except for CLASS 0I EQUIPMENT providing separate main protective earthing terminal other than appliance inlet.		
2.6.5.4	Replace 1st sentence with the following: Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:		N/A
2.6.5.8A	Add the following new clause. after 2.6.5.8A: Earthing of CLASS 0I EQUIPMENT Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V. For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip. CLASS 0I EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external location where easily visible.		N/A
2.10.3.1	In this sub-clause, replace IEC 60664-1 with JIS C 0664:2003.		N/A
2.10.3.2	In the second paragraph, replace IEC 60664-1 with JIS C 0664:2003.		N/A
3.2.3	Add the following after Table 3A: Table 3A applies when cables complying JIS C 3662 or JIS C 3663 are used. In case of other cables, cable entries shall be so designed that a conduit suitable for the cable used can be fitted.		N/A
3.2.5.1	Add the following to the last of first dashed paragraph. Or mains cords shall be of the sheathed type complying with Appendix 1 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance.		N/A
3.2.5.1	Add the following to the last of second dashed paragraph. Or mains cords shall be of the sheathed type complying with Appendix 1 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance.		N/A
3.2.5.1	Delete 1) in Table 3B.		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
3.3.4	Add the following note to Table 3D: Note For cables other than those complying with JIS C 3662 or JIS C 3663, terminals shall be suitable for the size of the intended cables.		N/A
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/A
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/A
4.3.13.5	Replace the first paragraph with the following: Except as permitted below, equipment shall be classified and labelled according to JIS C 6802:2005, and JIS C 6803:2006 or IEC 60825-2:2000, as applicable. Replace IEC 60825-1 in the second and the last paragraph with JIS C 6802:2005.		N/A
4.5	Add the following NOTE to Table 4B, 3): 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 (Commerce and Distribution Policy Group No. 3:2008/06/19) may apply.		N/A
5.1.3	Add a note after the first paragraph as follows: 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.		N/A
5.1.6	Replace Table 5A as shown in J60950-1.		N/A
6	Replace IEC 60664-1 in NOTE 4 with JIS C 0664.		N/A
7	Replace IEC 60664-1 in NOTE 3 with JIS C 0664:2003.		N/A
7.2	Add the following after the paragraph: However, the separation requirements and tests of 6.2.1 a), b) and c) do not apply to a CABLE DISTRIBUTION SYSTEM if all of the following		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	<p>apply:</p> <ul style="list-style-type: none"> – the circuit under consideration is a TNV-1 CIRCUIT; and – the common or earthed side of the circuit is connected to the screen of the coaxial cable and to all accessible parts and circuits (SELV, accessible metal parts and LIMITED CURRENT CIRCUITS, if any); and – the screen of the coaxial cable is intended to be connected to earth in the building installation. 		
JA	<p>Add new Annex JA:</p> <p>Document shredding machines shall also comply with the requirements of this annex except those of STATIONARY EQUIPMENT used by connecting directly to an AC MAINS SUPPLY of three-phase 200V or more.</p>		N/A
JA.1	<p>Add: Markings and instructions</p> <p>The symbol (JIS S 0101:2000, 6.2.4) (exclamation point in yellow triangle) 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> <ul style="list-style-type: none"> - that use by an infants/children may cause a hazard of injury etc.; - that a hand can be drawn into the mechanical section for shredding when touching the document-slot; - that clothing can be drawn into the mechanical section for shredding when touching the document-slot; - that hairs can be drawn into the mechanical section for shredding when touching the document-slot; - in case of equipment incorporating a commutator motor, that equipment may catch fire or explode by spraying of flammable gas. 		N/A
JA.2	<p>Add: Inadvertent Reactivation</p> <p>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>		N/A

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SubClause	Difference + Test	Result - Remark	Verdict

JA.3	<p>Add: 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.</p>		N/A
JA.3	<p>Add: If two-position switch, the positions for "ON" and "OFF" shall be indicated in accordance with sub-clause 1.7.8. If multi-position 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>		N/A
JA.4	<p>Add: Protection against hazardous moving parts: 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> <p>Note 1 - The thickness of the probe varies linearly, with slope changes at the respective points shown in the table.</p>		N/A

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SubClause	Difference + Test	Result - Remark	Verdict

	Note 2 –The allowable dimensional tolerance of the probe is +/- 0.127 mm.		
W.1	Replace second and third sentence in the first paragraph with the following: This distinction between earthed and unearthed (floating) circuit is not the same as between CLASS I EQUIPMENT, CLASS 0I EQUIPMENT and CLASS II EQUIPMENT. Floating circuits can exist in CLASS I EQUIPMENT or CLASS 0I EQUIPMENT and earthed circuits in CLASS II EQUIPMENT.		N/A

Korea - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
General	Korea has national differences declared for 60950-1:2005, Am 1:2009 (below).		Pass
1.5.101	Plugs for the connection of the apparatus to the mains supply shall comply with the Korean requirement (KSC 8305)		N/A
8	EMC - The apparatus shall comply with the relevant CISPR standards		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

Norway - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
General	Norway has national differences declared for 60950-1:2005, Am 1:2009 (below).		Pass
1.2.13.14	For requirements see 1.7.2.1 and 7.3.		N/A
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.8	Due to the IT power system used (see annex V, figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A
1.5.9.4	The third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text shall be: "Apparatet må tilkoples jordet stikkontakt"		N/A
1.7.2.1	In Norway, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: "Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing - and to a cable distribution system using coaxial cable, may in		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	<p>some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)."</p> <p>NOTE: In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.</p> <p>Translation to Norwegian (the Swedish text will also be accepted in Norway): "Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr - og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel-TV nettet."</p>		
2.2.4	Requirements according to this annex, 1.7.2.1, 6.1.2.1 and 6.1.2.2 apply.		N/A
2.3.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
2.3.4	Requirements according to this annex, 1.7.2.1, 6.1.2.1 and 6.1.2.2 apply.		N/A
2.10.5.13	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
5.1.7.1	<p>TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s are permitted only for the following equipment:</p> <ul style="list-style-type: none"> - STATIONARY PLUGGABLE EQUIPMENT TYPE A that: <ul style="list-style-type: none"> (1) is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and (2) has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and (3) is provided with instructions for the installation of that conductor by a SERVICE PERSON; - STATIONARY PLUGGABLE EQUIPMENT TYPE B - STATIONARY PERMANENTLY CONNECTED EQUIPMENT 		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
6.1.2.1	<p>Add the following text between the first and second paragraph of the compliance clause:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>Alternatively for components, there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. <p>It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b).</p> <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 123400 [EN 60384-14:2005], may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400 [EN 60384-14], which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 132400 [EN 60384-14]; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400 [EN 60384-14], in the sequence of tests as described in EN 132400 [EN 60384-14.] 		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
6.1.2.2	The exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply with the term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
7.3	Refer to EN 60728-11:2005 for installation conditions		N/A
7.3	Requirements according to this annex 1.2.13.14 and 1.7.2.1 apply.		N/A

Spain - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
General	Spain has national differences declared for 60950-1:2005, Am 1:2009 (below).		Pass
3.2.1.1	Supply cords of single-phase equipment having a rated current not exceeding 10A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2.5A shall be provided with a plug according to UNE-EN 50075:1993. CLASS 1 EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

Sweden - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
1.2.13.14	For requirements see 1.7.2.1 and 7.3.		N/A
1.5.1	(Ordinance (1990:944)) Add NOTE: Switches containing mercury are not permitted.		N/A
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.9.4	The third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text shall be: "Apparaten skall anslutas till jordat uttag"		N/A
1.7.2.1	In Sweden, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: "Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing - and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	<p>(galvanic isolator, see EN 60728-11)."</p> <p>NOTE: In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.</p> <p>Translation to Swedish: "Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet."</p>		
2.3.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
2.10.5.13	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
5.1.7.1	<p>TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s are permitted only for the following equipment:</p> <p>STATIONARY PLUGGABLE EQUIPMENT TYPE A that:</p> <p>(1) is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and</p> <p>(2) has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and</p> <p>(3) is provided with instructions for the installation of that conductor by a SERVICE PERSON;</p> <p>- STATIONARY PLUGGABLE TYPE B</p> <p>- STATIONARY PERMANENTLY CONNECTED EQUIPMENT</p>		N/A
6.1.2.1	<p>Add the following text between the first and second paragraph of the compliance clause:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>Alternatively for components, there is no distance</p>		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	<p>through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. <p>It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b).</p> <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 132400 [EN 60384-14:2005], may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400 [EN 60384-14], which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 132400 [EN 60384-14]; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400 [EN 60384-14], in the sequence of tests as described in EN 132400 [EN 60384-14]. 		
6.1.2.2	<p>The exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.</p>		N/A
7.2	Requirements according to this annex, 6.1.2.1 and		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

	6.1.2.2 apply with the term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		
7.3	Requirements according to this annex 1.2.13.14 and 1.7.2.1 apply.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

Switzerland - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
General	Includes update from 60950-1:2005, AC:2011		Pass
1.5.1	Ordinance on environmentally hazardous substances SR 814.81, Annex 1.7, Mercury - Annex 1.7 of SR 814.81 applies for mercury. Switches containing mercury such as thermostats, relays and level controllers are not allowed.		N/A
1.7.13	Ordinance on chemical hazardous risk reduction SR 814.81, Annex 2.15, Batteries - Annex 2.15 of SR 814.81 applies for batteries containing cadmium and mercury. Note: Ordinance relating to environmentally hazardous substances, SR 814.013 of 1986-06-09 is no longer in force and superseded by SR 814.81 of 2009-02-01 (ChemRRV).		N/A
3.2.1.1	<p>Supply cords of portable electrical appliances having a rated current not exceeding 10 A shall be provided with a plug complying with IEC 60884-1 (3rd Ed.) + Amd. 1, SEV 1011 and one of the following dimension sheets:</p> <ul style="list-style-type: none"> - SEV 6533-2:2009, Plug type 11, L+N, 250 V, 10 A - SEV 6534-2:2009, Plug type 12, L+N+PE, 250 V, 10 A - SEV 6532-2:2009, Plug type 15, 3P+N+PE, 250/400 V, 10 A <p>Supply cords of portable electrical appliances having a rated current not exceeding 16 A shall be provided with a plug complying with IEC 60884-1 (3rd Ed.) + Amd. 1, SEV 1011 and one of the following dimension sheets:</p> <ul style="list-style-type: none"> - SEV 5933-2:2009, Plug type 21, L+N, 250 V, 16 A - SEV 5934-2:2009, Plug type 23, L+N+PE, 250 V, 16 A - SEV 5932-2:2009, Plug type 25, 3P+N+PE, 230/400 V, 16 A <p>NOTE: 16 A plugs are not often used in Swiss domestic installation systems.</p>		N/A
3.2.4	Requirements according to this annex 3.2.1.1		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	apply.		

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

USA / Canada - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
1.1.1	Equipment able to be installed in accordance with the National Electrical Code ANSI/NFPA 70 and the Canadian Electrical Code, Part1, and when applicable, the National Electrical Safety Code, IEEE C2.		N/A
1.1.1	Equipment able to be installed in accordance with ANSI/NFPA 75 and NEC Art. 645 unless intended for use outside of computer room and provided with such instructions.		N/A
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
1.1.2	Equipment in wire-line communication facilities serving high-voltage electric power stations operating at greater than 1kV are excluded.		N/A
1.1.2	Special requirements apply to equipment intended for use outdoors.		N/A
1.4.14	For PLUGGABLE EQUIPMENT TYPE A, the protection in the installation is assumed to be 20 A.		N/A
1.5.1	All IEC standards for components identified in Annex P.1 replaced by the relevant requirements of CSA and UL component standards in Annex P.1.		N/A
1.5.1	All IEC standards for components identified in Annex P.2 alternatively satisfied by the relevant requirements of CSA and UL component standards in Annex P.2.		N/A
1.5.5	Interconnecting cables acceptable for the application regarding voltage, current, temperature, flammability, mechanical serviceability and the like.		N/A
1.5.5	For other than limited power and TNV circuits, the type of output circuit identified for output connector.		N/A
1.5.5	External cable assemblies that exceed 3.05 m in length to be types specified in the NEC and CEC.		N/A
1.5.5	Detachable external interconnecting cables 3.05 m or less in length and provided with equipment marked to identify the responsible organization and the designation for the cable.		N/A
1.5.5	Building wiring and cable for use in ducts, plenums and other air handling space subject to special requirements and excluded from scope.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
1.5.5	Telephone line and extension cords and the like comply with UL 1863 and CSA C22.2 No. 233.		N/A
1.6.1.2	Equipment intended for connection to a d.c. power (mains) distribution system is subject to special circuit classification requirements (e.g., TNV-2)		N/A
1.6.1.2	Earthing of d.c. powered equipment provided.		N/A
1.7	Lamp replacement information indicated on lampholder in operator access area.		N/A
1.7.1	Special marking format for equipment intended for use on a supply system with an earthed neutral and more than one phase conductor.		N/A
1.7.1	Equipment voltage rating not higher than rating of the plug except under special conditions.		N/A
1.7.6	Special fuse replacement marking for operator accessible fuses.		N/A
1.7.7	Identification of terminal connection of the equipment earthing conductor.		N/A
1.7.7	Connectors and field wiring terminals for external Class 2 or Class 3 circuits provided with marking indicating minimum Class of wiring to be used.		N/A
1.7.7	Marking located adjacent to terminals and visible during wiring.		N/A
2.1.1.1	Bare TNV conductive parts in the interior of equipment normally protected against contact by a cover intended for occasional removal are exempt provided instructions include directions for disconnection of TNV prior to removal of the cover.		N/A
2.3.1.b	Other telecommunication signaling systems (e.g., message waiting) than described in 2.3.1(b) are subject to M.4.		N/A
2.3.1.b	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vp or 60 V d.c., the maximum current limit through a 2000 Ohm or greater resistor with loads disconnected is 7.1 mA peak or 30 mA d.c. under normal conditions.		N/A
2.3.1.b	Limits for measurements across 5000 ohm resistor in the event of a single fault are replaced after 200 ms with the limits of M.3.1.4.		N/A
2.3.2.1	In the event of a single fault, the limits of 2.2.3 apply to SELV circuits and accessible conductive parts.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
2.5	Overcurrent protection device required for Class 2 and Class 3 limiting in accordance with the NEC, or for a Limited Power Source, not interchangeable with devices of higher ratings if operator replaceable.		N/A
2.6	Equipment having receptacles for output a.c. power connectors generated from an internal separately derived source have the earthed (grounded) circuit conductor suitably bonded to earth.		N/A
2.6.2	Equipment with functional earthing is required to be marked with the functional earthing symbol (IEC 60417-6092).		N/A
2.6.3.3	For PLUGGABLE EQUIPMENT TYPE A, if a) b) or c) are not applicable, the current rating of the circuit is taken as 20 A		N/A
2.6.3.3	The first column on Table 2D requirement: "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		N/A
2.6.3.4	Capacity of connection between earthing terminal and parts required to be earthed subject to special conditions based on the current rating of the circuit.		N/A
2.6.3.4	Protective bonding conductors and their terminals of non-standard constructions (e.g. PWB traces) evaluated to limited short-circuit test of CSA C22.2 No.0.4.		N/A
2.6.4.1	Field wiring terminals for earthing conductors suitable for wire sizes (gauge) used in US and Canada.		N/A
2.7.1	Data for selection of special external branch circuit overcurrent devices marked on the equipment.		N/A
2.7.1	Standard supply outlets protected by overcurrent device in accordance with the NEC, and CEC, Part 1.		N/A
2.7.1	Overcurrent protection for individual transformers that distribute power to other units over branch circuit wiring.		N/A
2.7.1	Additional requirements for overcurrent protection apply to equipment provided with panelboards.		N/A
2.7.1	Non-motor-operated equipment requiring special overcurrent protective device marked with device rating.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
2.10.5.12	Multi-layer winding wire subject to UL component wire requirements in addition to 2.10.5.12 and Annex U.		N/A
3.1.1	Permissible combinations of internal wiring/external cable sizes for overcurrent and short circuit protection.		N/A
3.1.1	All interconnecting cables protected against overcurrent and short circuit.		N/A
3.2	Wiring methods permit connection of equipment to primary power supply in accordance with the NEC and CEC, Part 1.		N/A
3.2.1	Permitted use for flexible cords and plugs.		N/A
3.2.1	Flexible cords provided with attachment plug rated 125% of equipment current rating.		N/A
3.2.1	Any Class II equipment provided with 15 or 20 A standard supply outlets, Edison-base lampholders or single pole disconnect device provided with a polarized type attachment plug.		N/A
3.2.1.2	Equipment intended for connection to DC mains supply power systems complies with special wiring requirements (e.g., no permanent connection to supply by flexible cord).		N/A
3.2.1.2	Equipment with one pole of the DC mains supply connected to both the equipment mains input terminal and the main protective earthing terminal provided with special instructions and construction provisions for earthing.		N/A
3.2.1.2	Equipment with means for connecting supply to earthing electrode conductor has no switches or protective devices between supply connection and earthing electrode connection.		N/A
3.2.1.2	Special markings and instructions for equipment with provisions to connect earthed conductor of a DC supply circuit to earthing conductor at the equipment.		N/A
3.2.1.2	Special markings and instructions for equipment with earthed conductor of a DC supply circuit connected to the earthing conductor at the equipment.		N/A
3.2.1.2	Terminals and leads provided for permanent connection of DC powered equipment to supply marked to indicate polarity if reverse polarity may		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

	result in a hazard.		
3.2.3	Permanently connected equipment has provision for connecting and securing a field wiring system (i.e. conduit, or leads etc.) per the NEC and CEC, Part 1.		N/A
3.2.3	Permanently connected equipment may have terminals or leads not smaller than No. 18 AWG (0.82 mm ²) and not less than 150 mm in length for connection of field installed wiring.		N/A
3.2.3	If supply wires exceed 60 °C, marking indicates use of 75 °C or 90 °C wiring for supply connection as appropriate.		N/A
3.2.3	Equipment compatible with suitable trade sizes of conduits and cables.		N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length. Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
3.2.5	Conductors in power supply cords sized according to NEC and CEC, Part I.		N/A
3.2.5	Power supply cords and cord sets incorporate flexible cords suitable for the particular application.		N/A
3.2.6	Strain relief provided for non-detachable interconnecting cables not supplied by a limited power source.		N/A
3.2.9	Adequate wire bending space and volume of field wiring compartment required to properly make the field connections.		N/A
3.2.9	Equipment intended solely for installation in Restricted Access Locations using low voltage d.c. systems may not need provision for connecting and securing a field wiring system. A method of securing wiring or instructions provided to ensure the wiring is protected from abuse.		N/A
3.3	Field wiring terminals provided for interconnection of units for other than LPS or Class 2 circuits also		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	comply with 3.3.		
3.3	Interconnection of units by LPS or Class 2 conductors may have field wiring connectors other than those specified in 3.3 if wiring is reliably separated.		N/A
3.3.1	Terminals for the connection of neutral conductor identified by a distinctive white marking or other equally effective means.		N/A
3.3.3	Wire binding screw terminal permitted for connection of No. 10 AWG (5.3 mm ²) or smaller conductor if provided with upturned lugs, cupped washer or equivalent retention.		N/A
3.3.4	Terminals accept wire sizes (gauge) used in the U.S. and Canada.		N/A
3.3.4	Terminals accept current-carrying conductors rated 125% of the equipment current rating.		N/A
3.3.5	First column of Table 3E revised to require "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		N/A
3.3.6	Field wiring terminals marked to indicate the material(s) of the conductor appropriate for the terminals used.		N/A
3.3.6	Connection of an aluminum conductor not permitted to terminal for equipment earthing conductor.		N/A
3.3.6	Field wiring connections made through the use of suitable pressure connectors (including set screw type), solder lugs or splices to flexible leads.		N/A
3.4.2	Separate motor control device(s) required for cord-connected equipment rated more than 12 A, or with motor rated more than 1/3 hp or more than 120 V.		N/A
3.4.8	Vertically mounted disconnect devices oriented so up position of handle is "on".		N/A
3.4.11	For computer-room applications, equipment with battery systems capable of supplying 750 VA for 5 min require battery disconnect means.		N/A
4.2.8.1	Special opening restrictions for enclosures around CRTs with face dimension of 160 mm or more.		N/A
4.2.9	Compartment housing high-pressure lamp marked to indicate risk of explosion.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
4.3.2	Loading test for equipment with handle(s) used to support more than 9 kg tested at four times the weight of the unit.		N/A
4.3.6	In addition to the IEC requirements, Direct Plug-in Equipment complies with UL 1310 or CSA 223 mechanical assembly requirements.		N/A
4.3.8	Battery packs for both portable and stationary applications are required to comply with special component requirements.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with ANSI/NFPA 30(Table NAE.6).		N/A
4.3.12	Equipment using replenishable liquids marked to indicate type of liquid to be used.		N/A
4.3.13.2	Equipment that produces x-radiation and does not comply with 4.3.12 under all conditions of servicing marked to indicate the presence of radiation where readily visible.		N/A
4.3.13.5.1	Requirements contained in the applicable national codes and regulations apply to lasers (21 CFR 1040 and REDR C1370).		N/A
4.7	Automated information storage equipment intended to contain more than 0.76 m ³ of combustible media requires provision for automatic sprinklers or a gaseous agent extinguishing system.		N/A
4.7.3.1	Equipment for use in environmental air space other than ducts or plenums provided with metal enclosure or with non-metallic enclosure having adequate fire-resistance and low smoke producing characteristics. Low smoke-producing characteristics evaluated according to UL 2043. Equipment for installation in space used for environmental air as described in Sec. 300-22(c) of the NEC provided with instructions indicating suitability for installation in such locations.		N/A
4.7.3.1	Flame spread rating for external surface of combustible material with exposed area greater than 0.9 m ² or a single dimension greater than 1.8 m; 50 or less for computer room applications or 200 or less for other applications.		N/A
4.7.3.4	Wire marked "VW-1" or "FT-1" considered equivalent.		N/A
5.1.8.2	Special earthing provisions and instructions for		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	equipment with high touch current due to telecommunication network connections.		
5.1.8.3	Touch current due to ringing voltage for equipment containing telecommunication network leads.		N/A
5.3.7	Overloading of SELV connectors and printed wiring board receptacles accessible to the operator.		N/A
5.3.7	Tests interrupted by opening of a component repeated two additional times.		N/A
5.3.9.1	Test interrupted by opening of wire or trace subject to certain conditions.		N/A
6	Specialized instructions provided for telephones that may be connected to a telecommunications network.		N/A
6	Marking identifying function of telecommunication type connectors not used for connection to a telecommunication network.		N/A
6.3	Equipment remotely powered over telecommunication wiring systems provided with specialized markings adjacent to the connection.		N/A
6.3	Overcurrent protection incorporated into equipment to provide power over telecommunication wiring system not interchangeable with devices of higher ratings if operator replaceable.		N/A
6.4	Additional requirements for equipment intended for connection to a telecommunication network using cable subject to overvoltage from power line failures (Fig. 6C).		N/A
6.4	Where 26 AWG line cord required by Fig. 6C, either the cord is provided with the equipment or described in the safety instructions.		N/A
7	Equipment associated with the cable distribution system may need to be subjected to applicable parts of Chapter 8 of the NEC.		N/A
H	Ionizing radiation measurements made under single fault conditions in accordance with the requirements of the Code of Federal Regulations 21 CFR 1020 and the Canadian Radiation Emitting Devices Act, REDR C1370.		N/A
M.2	Continuous ringing signals evaluated to Method A subjected to special accessibility considerations.		N/A
M.4	Special requirements for message waiting and similar telecommunications signals.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
NAC	Equipment intended for use with a generic secondary protector marked with suitable instructions.		N/A
NAC	Equipment intended for use with a specific primary or secondary protector marked with suitable instructions.		N/A
NAD	Acoustic pressure from an ear piece less than 140 dBA for short duration disturbances, and less than 125 dBA for handsets, 118 dBA for headsets and insert earphones, for long duration disturbances.		N/A
NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.		N/A
EE.5	UL articulated accessibility probe (Fig. EE.3) required for assessing accessibility to document/media shredders, instead of Figure 2A test finger.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

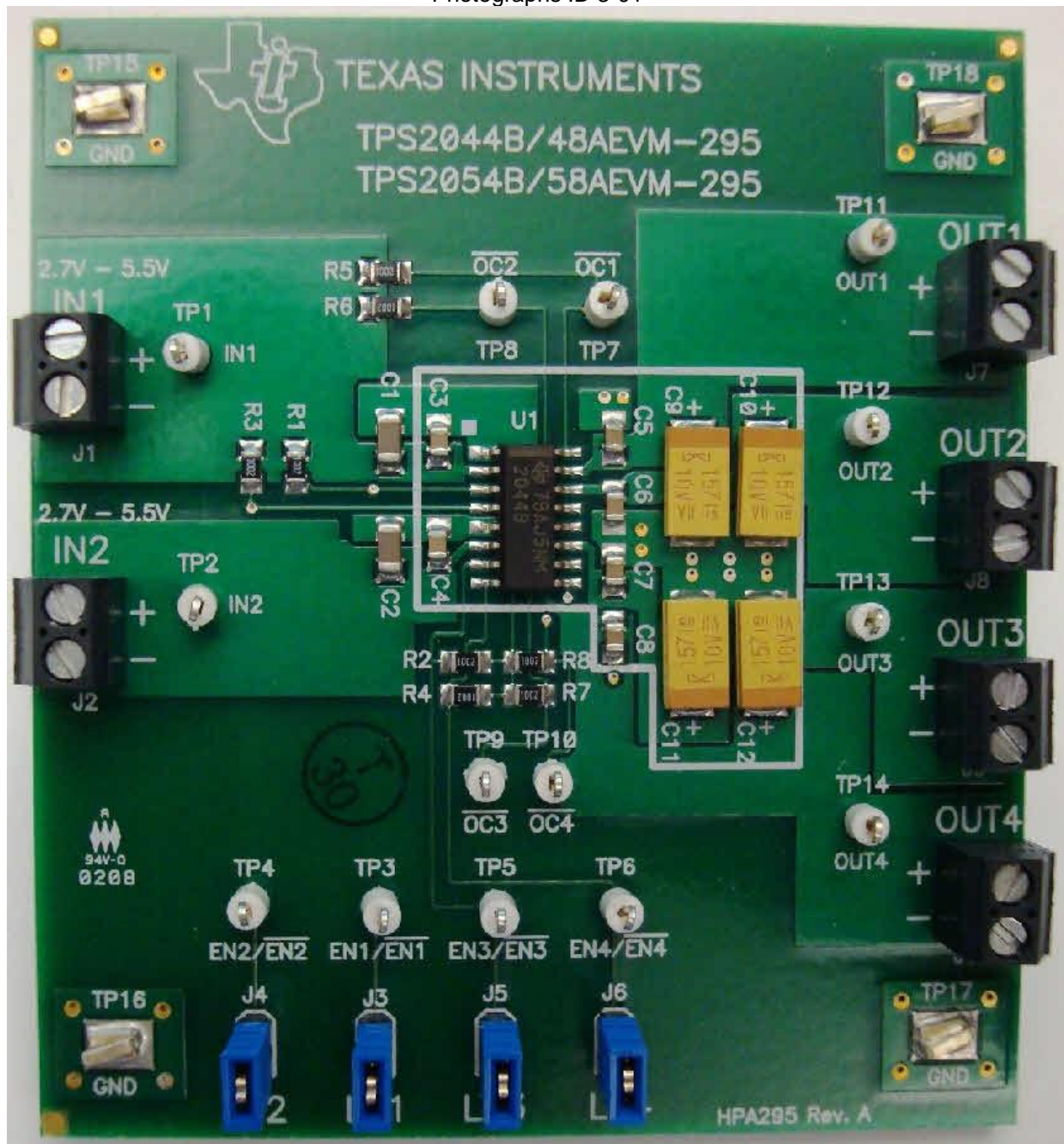
United Kingdom - Differences to IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013			
2.6.3.3	The current rating of the circuit shall be taken as 13 A, not 16 A.		N/A
2.7.1	To protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.		N/A
3.2.1.1	Apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a "standard plug" in accordance with Statutory Instrument 1786: 1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE: "Standard plug" is defined in SI 1786: 1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.5.1	A power supply cord with conductor of 1.25 mm ² is allowed for equipment with a rated current over 10A and up to and including 13A.		N/A
3.3.4	The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current of over 10 A up to and including 13 A is 1.25 mm ² to 1.5 mm ² nominal cross-sectional area.		N/A
4.3.6	The torque test is performed using a socket outlet complying with BS 1363 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125°C.		N/A
4.3.6	Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A

Enclosures

Enclosures

<u>Type</u>	<u>Supplement Id</u>	<u>Description</u>
Photographs	3-01	Model TPS2044B IC Current Limiter (U1) on Evaluation Board
Miscellaneous	7-01	Annex CC – IC Current Limiter Testing Results
Miscellaneous	7-02	Draft CB Test Certificate Information

Photographs ID 3-01



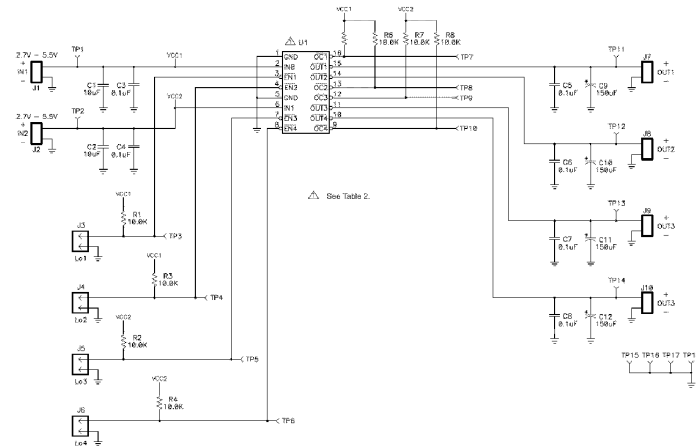
Enclosures

Misc ID 7-01

Annex CC – IC Current Limiter Testing Results	
Condition Description	Result (State Pass or Fail)
50 cycles with the enable pin held active with the output open-circuited; each cycle consisting of shorting the output and then opening the output	Pass
50 cycles with the enable pin held active while applying a short to the output; each cycle consisting of turning the power on and off	Pass
50 cycles with the enable pin held active with the output loaded to maximum power, each cycle consisting of turning the power on and off	Pass
50 cycles with the enable pin held active while power is applied, each cycle consisting of shorting the output, removing power, reapplying power, removing the short, followed by removal of power	Pass
3 cycles of exposing the device (not energized) to 70 °C ± 2 °C for 24 hours; followed by at least 1 hours at room ambient; followed by at least 3 h at -30 °C ± 2 °C; followed by 3 hours at room ambient	Pass
10 cycles of exposing the device (while energized) to 50 °C ± 2 °C for 10 min; followed by 10 minutes at 0 °C ± 2 °C with a 5 minute period of transition from one state to the other	Pass
7 days with the output short-circuited and the device wrapped in a double layer of cheesecloth. A fast blow 5 A fuse kept in series with the output shall not open and a current meter shall not show a current lower of more than 5 A	Pass

Misc ID 7-01

These devices were tested in the circuit shown below. If different bypass capacitors are used in the end product, then the end product engineer shall determine suitability of different values or re-testing shall be conducted.



Misc ID 7-02

DRAFT CB TEST CERTIFICATE INFORMATION

Generated by ULtraLink on: 2015/06/25

Product	Component IC Current Limiter
Name and address of the Applicant	TEXAS INSTRUMENTS INC MS 8712 12500 TI BLVD DALLAS TX 75243 UNITED STATES
Name and address of the Manufacturer	TEXAS INSTRUMENTS INC MS 8712 12500 TI BLVD DALLAS TX 75243 UNITED STATES
Name and address of the Factory(ies)	TEXAS INSTRUMENTS DE MEXICO S DE RL DE C V CALLE DE LA INDUSTRIA # 507 CD INDUSTRIAL 20290 AGUASCALIENTES AGS MEXICO TEXAS INSTRUMENTS SEMICONDUCTOR MANUFACTURING (CHENGDU) CO. LTD. NO. 8-8 & NO.8-10, KEXIN RD WEST ZONE OF CHENGDU HI-TECH INDUSTRIAL DEVELOPMENT CHENGDU SICHUAN CHINA TEXAS INSTRUMENTS TAIWAN LTD 142 HSN NAN RD, SEC 1 TAINAN TAIPEI HSEN 235 TAIWAN ASE ASSEMBLY & TEST (SHANGHAI) LTD #696 GUOSHOUJING RD ZHANGJIANG HI-TECH PARK PUDONG NEW AREA SHANGHAI 201203 CHINA UTAC THAI LTD WELGROW INDUSTRIAL ESTATE, 73 MOOS KARNSUWAN RD, WATTHANATHAN A BANGKOKKONG T BANGSAWAK CHACHOENGSAO 24180 THAILAND NANTONG FUJITSU MICROELECTRONICS CO LTD NO 288 CHONGCHUAN RD CHONGCHUAN DEVELOPMENT ZONE

Misc ID 7-02

<p> NATIONS JIANGSU 226006 CHINA TEXAS INSTRUMENTS MALAYSIA SDN BHD 11 LORONG ENGANG 33 47000 KUALA LUMPUR 54200 KUALA LUMPUR MALAYSIA HANA MICROELECTRONICS CO LTD (JIA XING) 1818 JIA XING ROAD XUZHONG INDUSTRIAL PARK XUZHONG DISTRICT JIAXING ZHEJIANG 314000 CHINA TI (PHILIPPINES) INC CLARK T1 SPECIAL ECONOMIC ZONE CLARK FREEPORT ZONE ANGELES PAMPANGA PHILIPPINES HANA SEMICONDUCTOR (AYUTTHAYA) CO LTD HI-TECH IND ESTATE AUTH OF THAILAND 100 MOOT, T. BANG PAEN, A BANG PAEN WUWU SHI ROAD AYUTTHAYA 13160 THAILAND CARSEM SEMICONDUCTOR CO LTD NO 88 WEST SHEN HU ROAD IN DISTRICT 2 INDUSTRIAL PARK JIANGSU 215021 CHINA </p>	<p> Rating and principal characteristics </p>	<p> Model Type ref. </p>
<p> Input Voltage: 27 Vdc to 5.3 Vdc Output Continuous Rating: 0.25 A to 0.5 A Output Current Limit: 5.0 A Ambient: -40 to 25 °C </p>	<p> Trademarks (if any) </p>	<p> Model Type ref. </p>
		<p> Additional suffixes after the model number designating the type of </p>
	<p>  TEXAS INSTRUMENTS </p>	<p> TPS2041, TPS2042, TPS2043, TPS2044, TPS2045, TPS2046, TPS2047, TPS2048, TPS2049, TPS2050, TPS2051, TPS2052, TPS2053, TPS2054, TPS2055, TPS2056, TPS2057, and TPS2058, followed by suffix 'A' or 'B'. </p>

Enclosures

Misc ID 7-02

Features that are considered not to affect the functionality of the device.	
Additional information (if necessary)	
A sample of the product was tested and found to be in conformity with:	IEC 60950-1:2005 (2nd Edition), Am 1:2009 + A12:2013, EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A12:2013, See Test Report for National Differences.
As shown in the Test Report Ref. No. which forms part of this Certificate	E-65910-A32
Client Representative	
Mr. MILO ZHU	
Client email (or fax)	peisheng_zhu@ul.com

This form is to acknowledge that the above information has been reviewed and the material has been found to be accurate as stated. This is also to record client's confirmation that above factories manufacture product(s) that are equal to those submitted for testing and certification. (Refer to IECIEE 02, Sub-clause 4.2.6: "When the application covers more than one factory, the address of each factory shall be stated in the CB Test Certificate and the NCBS shall take steps to ensure that the products from all the factories are equal. That shall be confirmed in this Test Report.")

Signed: Milo Zhu Dated: 2015/6/29

*Definitions per IECIEE 02 (<http://www.iecee.com/documents/pdf/IECEE02.pdf>):
Applicant: A firm or a person who applies to an NCBS for obtaining a CB Test Certificate.
Factory: The location(s) at which the product is produced or assembled and follow-up service is established by the NCBS.
Compliance: The location(s) at which the product is produced or assembled and follow-up service is established by the NCBS.
Manufacture, assessment, handling and storage of a product that enables it to accept responsibility for continued compliance of the product with the relevant requirements and undertakes all obligations in that connection.