Test Report issued under the responsibility of:

NCB TÜV SÜD PSB
1 Science Park Drive, 118221 Singapore
Singapore

TEST REPORT

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

Report Number. .....:	085-140461901-000
Date of issue .....:	2015-01-06
Total number of pages.....:	61 pages
Applicant's name.....:	Mass Power Electronic Limited
Address .....:	10/F, TOWER A, BILLION CENTRE 1 WANG KWONG ROAD, KOWLOON BAY, KOWLOON, HONG KONG
Test specification:	
Standard .....:	IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013
Test procedure.....:	CB Scheme
Non-standard test method.....:	N/A
Test Report Form No.....:	IEC60950_1F
Test Report Form(s) Originator.....:	SGS Fimko Ltd
Master TRF .....:	Dated 2014-02

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
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Test item description ..... :	AC ADAPTER
Trade Mark ..... :	N/A
Manufacturer ..... :	Same as applicant
Model/Type reference ..... :	NBS12ExxxyyyHz, NBS12ExxxyyyVz, NBS12ExxxyyyD5 (xxx, yyy, z are variables, for details see model list)
Ratings ..... :	Input: 100-120 V a.c. or 200-240 V a.c. or 100-240Va.c., 50/60Hz, 0.3A Output: see model list for details

Testing procedure and testing location:			
☒	**Testing Laboratory:**	TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch	
Testing location/ address ..... :		5F, Communication Building, 163 Pingyun Rd, Huangpu Ave. West Guangzhou 510656, PR China	
☐	**Associated Testing Laboratory:**		
Testing location/ address ..... :			
Tested by (name + signature) ..... :		Mr. Loga Lao	
Approved by (name + signature) ..... :		Mr. Snowman Zhao	
☐	**Testing procedure: Elsewhere:**		
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Approved by (name + signature) ..... :			

List of Attachments (including a total number of pages in each attachment):

Attachment No.1: 21 pages of European group differences and national differences for EN 60950-1: 2006/A11: 2009/A1: 2010/A12: 2011/A2: 2013;

Attachment No.2: 58 pages of national differences and group differences for IEC 60950-1 2nd Ed. +A1:2009+A2: 2013.

Attachment No. 3: 11 pages of EU plug, UK plug test report;

Attachment No. 4: 2 pages of circuit diagram and PCB layout;

Attachment No. 5: 13 pages of photo documentation.

Summary of testing:

Tests performed (name of test and test clause):

The submitted samples were found to comply with the requirements of:

- IEC 60950-1:2005+A1:2009+A2:2013
- EN 60950-1:2006+A11:2009+A1:2010+A12:2011 +A2:2013
- EU plug portion was tested according to EN 50075:1990;
- UK plug portion was tested according to BS 1363-3:1995 + Amd. No. 9543, 14225, 14540, 17437 & A4 and BS 1363-1:1995 + Amd. No. 9541, 14539, 17435 & A4.

The selected models for test are the most representative:

Model type	Performed test
NBS12E050210VE	Full test
NBS12E120100VE	Input test, Energy hazards test, SELV circuits test, Limited current circuits test, Limited power source test, Determination of working voltage, Normal heating test, Touch current test and Overload test.
NBS12E150080VE	
NBS12E120100HE	Normal heating test
NBS12E120100D5	

- Before the normal heating test, the folding plug and the detachable plug were operated for 6000 cycles with the unit de-energized, and then following performed the normal heating test.

- Before placing the products in the different countries, the manufacturer must ensure that: Operating Instructions, Ratings Labels and Warnings Labels are in an Accepted or Official Language of the country in question; The equipment complies with the National Standards and/or Electrical Codes of the country, province or city or in question.

Testing location:

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch

5F, Communication Building, 163 Pingyun Rd, Huangpu Ave. West Guangzhou 510656, PR China

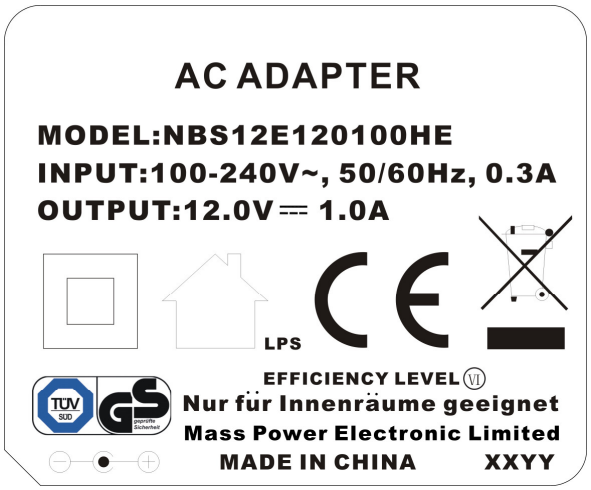
Summary of compliance with National Differences:

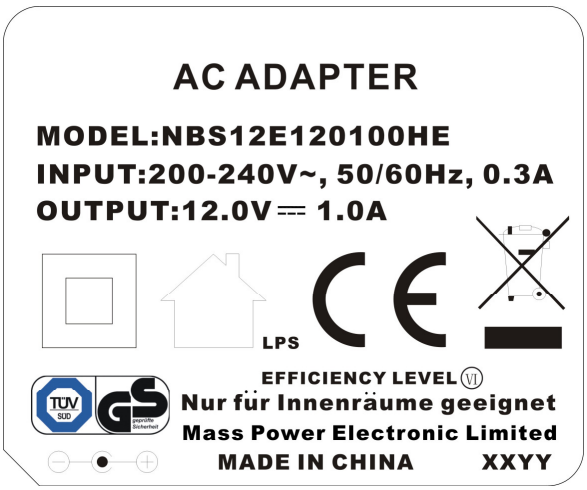
List of countries addressed**:**

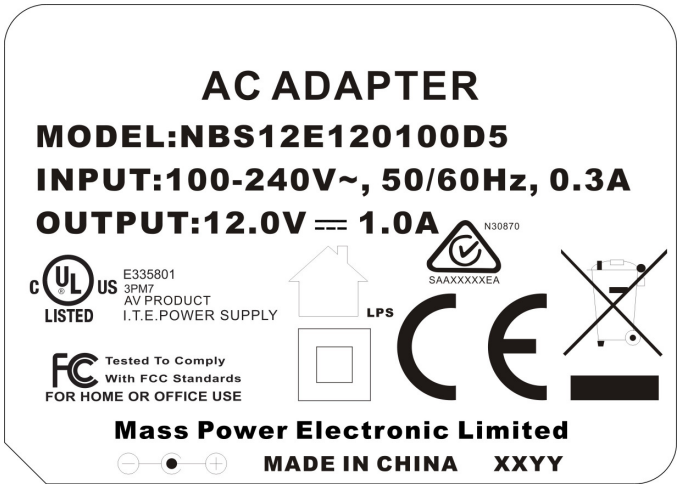
☒ The product fulfils the requirements of EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013

Copy of marking plates (representative):

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







Remark: Marking plates for other models are same as above except model number, output rating.

Test item particulars .....:	
Equipment mobility.....:	[] movable [] hand-held [] transportable [] stationary [] for building-in [√] direct plug-in
Connection to the mains.....:	[√] pluggable equipment [√] type A [] type B [] permanent connection [] detachable power supply cord [] non-detachable power supply cord [] not directly connected to the mains
Operating condition.....:	[√] continuous [] rated operating / resting time:
Access location .....:	[√] operator accessible [] restricted access location
Over voltage category (OVC) .....:	[] OVC I [√] OVC II [] OVC III [] OVC IV [] other:
Mains supply tolerance (%) or absolute mains supply values .....:	±10%
Tested for IT power systems .....:	[√] Yes [] No
IT testing, phase-phase voltage (V) .....:	230V (only for norway)
Class of equipment .....:	[] Class I [√] Class II [] Class III [] Not classified
Considered current rating of protective device as part of the building installation (A) .....:	16A except 13A for United Kingdom 20A for Canada and United States
Pollution degree (PD) .....:	[] PD 1 [√] PD 2 [] PD 3
IP protection class .....:	IP20
Altitude during operation (m) .....:	<5000 m
Altitude of test laboratory (m) .....:	< 500 m
Mass of equipment (kg) .....:	Approx. 0.11kg
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 of receipt of test item ..... :	2014-11-25
Date (s) of performance of tests..... :	2014-11-25 to 2014-12-25

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 ☐ comma / ☒ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 6.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location 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 .....:

☐ Yes
☒ Not applicable

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies).....: Shenzhen Mass Power Electronic Limited

437#, Hedong Village, Hengkeng Community, Guanlan Street, Bao'an District, 518110 Shenzhen, PEOPLE'S REPUBLIC OF CHINA

General product information:

Description of test samples:

1. This Power adaptor is designed to supply power for information technology equipment, for indoor use only.
2. The test samples are pre-production samples without serial numbers.
3. The maximum ambient temperature is 45°C.
4. The models are direct plug-in equipment with Class II construction.
5. The top enclosure is sealed with bottom enclosure by ultra sonic welding.
6. There are four versions for top enclosure, see photo documents for details.
7. The EU plug, UK plug have been evaluated in this report, the other mains plugs should be assessed to the national standard when national approval.
8. These components are optional: F1, MOV1, R3, C14, D8, D11, CY1, ZD3, U2, R11, LF2, C11 and LED1, see attachment circuit diagram for detail.
9. Model list:

Model No.	Rated output voltage (V d.c.)	Rated output current (mA)
NBS12E050yyyHz NBS12E050yyyVz NBS12E050yyyD5	5.0	50-2100
NBS12E051yyyHz NBS12E051yyyVz NBS12E051yyyD5	5.1	50-2060
NBS12E052yyyHz NBS12E052yyyVz NBS12E052yyyD5	5.2	50-2100
NBS12E053yyyHz NBS12E053yyyVz NBS12E053yyyD5	5.3	50-2060
NBS12E054yyyHz NBS12E054yyyVz NBS12E054yyyD5	5.4	50-2020
NBS12E055yyyHz NBS12E055yyyVz NBS12E055yyyD5	5.5	50-1980
NBS12E056yyyHz NBS12E056yyyVz	5.6	50-1950

	NBS12E056yyyD5			
	NBS12E057yyyHz NBS12E057yyyVz NBS12E057yyyD5	5.7	50-1910	
	NBS12E058yyyHz NBS12E058yyyVz NBS12E058yyyD5	5.8	50-1880	
	NBS12E059yyyHz NBS12E059yyyVz NBS12E059yyyD5	5.9	50-1850	
	NBS12E060yyyHz NBS12E060yyyVz NBS12E060yyyD5	6.0	50-1880	
	NBS12E061yyyHz NBS12E061yyyVz NBS12E061yyyD5	6.1	50-1850	
	NBS12E062yyyHz NBS12E062yyyVz NBS12E062yyyD5	6.2	50-1820	
	NBS12E063yyyHz NBS12E063yyyVz NBS12E063yyyD5	6.3	50-1790	
	NBS12E064yyyHz NBS12E064yyyVz NBS12E064yyyD5	6.4	50-1770	
	NBS12E065yyyHz NBS12E065yyyVz NBS12E065yyyD5	6.5	50-1740	
	NBS12E066yyyHz NBS12E066yyyVz NBS12E066yyyD5	6.6	50-1710	
	NBS12E067yyyHz NBS12E067yyyVz NBS12E067yyyD5	6.7	50-1690	
	NBS12E068yyyHz NBS12E068yyyVz NBS12E068yyyD5	6.8	50-1660	
	NBS12E069yyyHz NBS12E069yyyVz NBS12E069yyyD5	6.9	50-1640	
	NBS12E070yyyHz NBS12E070yyyVz NBS12E070yyyD5	7.0	50-1610	
	NBS12E071yyyHz NBS12E071yyyVz NBS12E071yyyD5	7.1	50-1590	
	NBS12E072yyyHz NBS12E072yyyVz NBS12E072yyyD5	7.2	50-1570	
	NBS12E073yyyHz NBS12E073yyyVz NBS12E073yyyD5	7.3	50-1550	
	NBS12E074yyyHz NBS12E074yyyVz NBS12E074yyyD5	7.4	50-1530	
	NBS12E075yyyHz NBS12E075yyyVz NBS12E075yyyD5	7.5	50-1510	

	NBS12E090yyyHz NBS12E090yyyVz NBS12E090yyyD5	9.0	50-1280	
	NBS12E091yyyHz NBS12E091yyyVz NBS12E091yyyD5	9.1	50-1260	
	NBS12E092yyyHz NBS12E092yyyVz NBS12E092yyyD5	9.2	50-1250	
	NBS12E093yyyHz NBS12E093yyyVz NBS12E093yyyD5	9.3	50-1240	
	NBS12E094yyyHz NBS12E094yyyVz NBS12E094yyyD5	9.4	50-1220	
	NBS12E095yyyHz NBS12E095yyyVz NBS12E095yyyD5	9.5	50-1210	
	NBS12E096yyyHz NBS12E096yyyVz NBS12E096yyyD5	9.6	50-1200	
	NBS12E097yyyHz NBS12E097yyyVz NBS12E097yyyD5	9.7	50-1190	
	NBS12E098yyyHz NBS12E098yyyVz NBS12E098yyyD5	9.8	50-1170	
	NBS12E099yyyHz NBS12E099yyyVz NBS12E099yyyD5	9.9	50-1160	
	NBS12E100yyyHz NBS12E100yyyVz NBS12E100yyyD5	10.0	50-1150	
	NBS12E101yyyHz NBS12E101yyyVz NBS12E101yyyD5	10.1	50-1140	
	NBS12E102yyyHz NBS12E102yyyVz NBS12E102yyyD5	10.2	50-1130	
	NBS12E103yyyHz NBS12E103yyyVz NBS12E103yyyD5	10.3	50-1120	
	NBS12E104yyyHz NBS12E104yyyVz NBS12E104yyyD5	10.4	50-1110	
	NBS12E105yyyHz NBS12E105yyyVz NBS12E105yyyD5	10.5	50-1100	
	NBS12E106yyyHz NBS12E106yyyVz NBS12E106yyyD5	10.6	50-1080	
	NBS12E107yyyHz NBS12E107yyyVz NBS12E107yyyD5	10.7	50-1070	
	NBS12E108yyyHz NBS12E108yyyVz NBS12E108yyyD5	10.8	50-1060	
	NBS12E109yyyHz NBS12E109yyyVz	10.9	50-1060	

	NBS12E109yyyD5			
	NBS12E110yyyHz NBS12E110yyyVz NBS12E110yyyD5	11.0	50-1050	
	NBS12E111yyyHz NBS12E111yyyVz NBS12E111yyyD5	11.1	50-1040	
	NBS12E112yyyHz NBS12E112yyyVz NBS12E112yyyD5	11.2	50-1030	
	NBS12E113yyyHz NBS12E113yyyVz NBS12E113yyyD5	11.3	50-1020	
	NBS12E114yyyHz NBS12E114yyyVz NBS12E114yyyD5	11.4	50-1010	
	NBS12E115yyyHz NBS12E115yyyVz NBS12E115yyyD5	11.5	50-1000	
	NBS12E116yyyHz NBS12E116yyyVz NBS12E116yyyD5	11.6	50-990	
	NBS12E117yyyHz NBS12E117yyyVz NBS12E117yyyD5	11.7	50-980	
	NBS12E118yyyHz NBS12E118yyyVz NBS12E118yyyD5	11.8	50-970	
	NBS12E119yyyHz NBS12E119yyyVz NBS12E119yyyD5	11.9	50-970	
	NBS12E120yyyHz NBS12E120yyyVz NBS12E120yyyD5	12.0	50-1000	
	NBS12E121yyyHz NBS12E121yyyVz NBS12E121yyyD5	12.1	50-990	
	NBS12E122yyyHz NBS12E122yyyVz NBS12E122yyyD5	12.2	50-980	
	NBS12E123yyyHz NBS12E123yyyVz NBS12E123yyyD5	12.3	50-980	
	NBS12E124yyyHz NBS12E124yyyVz NBS12E124yyyD5	12.4	50-970	
	NBS12E125yyyHz NBS12E125yyyVz NBS12E125yyyD5	12.5	50-960	
	NBS12E126yyyHz NBS12E126yyyVz NBS12E126yyyD5	12.6	50-950	
	NBS12E127yyyHz NBS12E127yyyVz NBS12E127yyyD5	12.7	50-940	
	NBS12E128yyyHz NBS12E128yyyVz NBS12E128yyyD5	12.8	50-940	

	NBS12E129yyyHz NBS12E129yyyVz NBS12E129yyyD5	12.9	50-930	
	NBS12E130yyyHz NBS12E130yyyVz NBS12E130yyyD5	13.0	50-920	
	NBS12E131yyyHz NBS12E131yyyVz NBS12E131yyyD5	13.1	50-920	
	NBS12E132yyyHz NBS12E132yyyVz NBS12E132yyyD5	13.2	50-910	
	NBS12E133yyyHz NBS12E133yyyVz NBS12E133yyyD5	13.3	50-900	
	NBS12E134yyyHz NBS12E134yyyVz NBS12E134yyyD5	13.4	50-900	
	NBS12E135yyyHz NBS12E135yyyVz NBS12E135yyyD5	13.5	50-890	
	NBS12E136yyyHz NBS12E136yyyVz NBS12E136yyyD5	13.6	50-880	
	NBS12E137yyyHz NBS12E137yyyVz NBS12E137yyyD5	13.7	50-870	
	NBS12E138yyyHz NBS12E138yyyVz NBS12E138yyyD5	13.8	50-870	
	NBS12E139yyyHz NBS12E139yyyVz NBS12E139yyyD5	13.9	50-860	
	NBS12E140yyyHz NBS12E140yyyVz NBS12E140yyyD5	14.0	50-860	
	NBS12E141yyyHz NBS12E141yyyVz NBS12E141yyyD5	14.1	50-850	
	NBS12E142yyyHz NBS12E142yyyVz NBS12E142yyyD5	14.2	50-850	
	NBS12E143yyyHz NBS12E143yyyVz NBS12E143yyyD5	14.3	50-840	
	NBS12E144yyyHz NBS12E144yyyVz NBS12E144yyyD5	14.4	50-830	
	NBS12E145yyyHz NBS12E145yyyVz NBS12E145yyyD5	14.5	50-830	
	NBS12E146yyyHz NBS12E146yyyVz NBS12E146yyyD5	14.6	50-820	
	NBS12E147yyyHz NBS12E147yyyVz NBS12E147yyyD5	14.7	50-820	
	NBS12E148yyyHz NBS12E148yyyVz	14.8	50-810	

NBS12E148yyyD5		
NBS12E149yyyHz NBS12E149yyyVz NBS12E149yyyD5	14.9	50-810
NBS12E150yyyHz NBS12E150yyyVz NBS12E150yyyD5	15.0	50-800

Note:
xxx=050-075, 090-150 indicates rated output voltage range 5.0-7.5V or 9.0-15.0V d.c. in step of 0.1V;
yyy=005-210 indicates rated output current range 50-2100 mA in step of 10mA;
z= A, B, C, E, I, K, O, R, S, T, U indicates type of the AC plug:
z = A, sample with Australia plug,
z = B, sample with Brazil plug,
z = C, sample with China plug,
z = E, sample with Europe plug,
z = I, sample with India plug,
z = K, sample with United Kingdom, Hongkong or Singapore plug,
z = O, sample with Korea plug,
z = R, sample with Agentina plug,
z = S, sample with South Africa,
z = T, sample with Tailand plug,
z = U, sample with America, Japan or Taiwan, Mexico plug

All models are identical to each other except for model name, plug portion, enclosure shape, output rating, no. of turns of secondary winding and secondary component.

Models NBS12ExxxyyyHz with PCB layout horizontal placement, models NBS12ExxxyyyVz with PCB layout vertical placement.
Models NBS12ExxxyyyD5 use detachable mains plug with PCB layout horizontal placement.

Two types of transformers were used:

Models output rating	Transformer type
5.0-7.5V	T012 Z 0001
9.0-15.0V	T012 Z 0002

Configuration for D8:

D8	Models Output
With D8	I>1.0A and P<11.5VA
Without D8	except for I>1.0A and P<11.5VA

Abbreviations used in the report:

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

Indicate used abbreviations (if any)

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	**GENERAL**		P
1.5	**Components**		P
1.5.1	General	Components which were found to affect safety aspects comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards.	P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
1.5.2	Evaluation and testing of components	Components which are certified to IEC and /or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	P
1.5.3	Thermal controls	No thermal controls provided.	N/A
1.5.4	Transformers	Transformer used are suitable for their intended application and comply with the relevant requirements of the standard and particularly Annex C.	P
1.5.5	Interconnecting cables	Interconnection o/p cable to other device is carrying only SELV on an energy level below 240 VA. → Except for the insulation material, there are no further requirements for the o/p interconnection cable.	P
1.5.6	Capacitors bridging insulation	Y1 capacitor (CY1) across primary and secondary circuit as reinforced insulation	P
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		P
1.5.9	Surge suppressors	Approved surge suppressors (MOV1, optional) used	P
1.5.9.1	General		P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9.2	Protection of VDRs	Current fuse F1 provided	P
1.5.9.3	Bridging of functional insulation by a VDR		P
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**		P
1.6.1	AC power distribution systems	IT power system for Norway only, TN power system for others	P
1.6.2	Input current	Highest load according to 1.2.2.1 for this equipment is the operation with the max. specified DC-load. (see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	Not hand-held equipment.	N/A
1.6.4	Neutral conductor	Double or reinforce insulation for rated voltage between enclosure and primary phases.	P
1.7	**Marking and instructions**		P
1.7.1	Power rating and identification markings		P
1.7.1.1	Power rating marking		P
	Multiple mains supply connections.....:		N/A
	Rated voltage(s) or voltage range(s) (V) ..... :	See page 1	P
	Symbol for nature of supply, for d.c. only ..... :	Supplied from AC source	N/A
	Rated frequency or rated frequency range (Hz) ... :	50/60Hz	P
	Rated current (mA or A) ..... :	0.3A max	P
1.7.1.2	Identification markings		P
	Manufacturer's name or trade-mark or identification mark ..... :	Manufacturer's name is shown	P
	Model identification or type reference ..... :	See page 1	P
	Symbol for Class II equipment only ..... :	Double square symbol used	P
	Other markings and symbols ..... :	Other marks do not give rise to misunderstanding	P
1.7.1.3	Use of graphical symbols		P
1.7.2	Safety instructions and marking		P
1.7.2.1	General		P
1.7.2.2	Disconnect devices		N/A
1.7.2.3	Overcurrent protective device	Pluggable equipment type A	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.4	IT power distribution systems	For Norway only	P
1.7.2.5	Operator access with a tool	No such area	N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles	Continuous.	N/A
1.7.4	Supply voltage adjustment .....:	Only one supply voltage range	N/A
	Methods and means of adjustment; reference to installation instructions .....:		N/A
1.7.5	Power outlets on the equipment .....:	No outlet used.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) .....:	"T6.3AL250V" marked on PCB near F1, "T2.0AL/250V OR 2.2R 2W OR 8.2R 2W" marked on PCB near F2	P
1.7.7	Wiring terminals	No such 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	No switch used.	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 .....:	Only one power source	N/A
1.7.10	Thermostats and other regulating devices .....:		N/A
1.7.11	Durability	Rubbing test for 15 s with water then for 15 s with petroleum spirit, no curling and legible after test	P
1.7.12	Removable parts	Rating label stick on enclosure and no removable part within equipment.	N/A
1.7.13	Replaceable batteries ..... :	No batteries used	N/A
	Language(s) ..... :		—
1.7.14	Equipment for restricted access locations.....:	No restricted access location	N/A

2	**PROTECTION FROM HAZARDS**		P
2.1	**Protection from electric shock and energy hazards**		P
2.1.1	Protection in operator access areas	See below	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.1	Access to energized parts	No access with test finger and test pin to any parts with only basic insulation to ELV or hazardous voltage.	P
	Test by inspection ..... :		P
	Test with test finger (Figure 2A) ..... :		P
	Test with test pin (Figure 2B) ..... :		P
	Test with test probe (Figure 2C) ..... :	No TNV circuit within equipment	N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards ..... :	(See appended table 2.1.1.5)	P
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment	No X capacitor used	N/A
	Measured voltage (V); time-constant (s) ..... :		—
2.1.1.8	Energy hazards – d.c. mains supply	Connected to a.c. mains supply only.	N/A
	a) Capacitor connected to the d.c. mains supply . :		N/A
	b) Internal battery connected to the d.c. mains supply :		N/A
2.1.1.9	Audio amplifiers ..... :	No such amplifier.	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**		P
2.2.1	General requirements	42.4V peak or 60VDC are not exceeded in outputs of power supply under normal operation or single fault condition. (see appended table 2.2)	P
2.2.2	Voltages under normal conditions (V) ..... :	Output of power supply is not exceeded 42.4V peak or 60VDC.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.2.3	Voltages under fault conditions (V) ..... :	Single fault did not cause excessive voltage in accessible outputs. Limits of 71V peak and 120V DC were not exceed and SELV limits not for longer than 0.2 seconds. (see appended table 2.2).	P
2.2.4	Connection of SELV circuits to other circuits .....:	No direct connection between SELV and any primary circuits.	P
2.3	**TNV circuits**		N/A
2.3.1	Limits	No TNV circuit within equipment	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**		P
2.4.1	General requirements		P
2.4.2	Limit values	Limit: 0.7mA peak (Annex D.1 used)	P
	Frequency (Hz) ..... :	60	—
	Measured current (mA)..... :	0.09 mA peak	—
	Measured voltage (V) ..... :	0.045 V peak	—
	Measured circuit capacitance (nF or µF)..... :	CY1: 470pF	—
2.4.3	Connection of limited current circuits to other circuits		N/A
2.5	**Limited power sources**		P
	a) Inherently limited output		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	b) Impedance limited output		N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition	(see appended table 2.5)	P
	Use of integrated circuit (IC) current limiters		N/A
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :	(see appended table 2.5)	—
	Current rating of overcurrent protective device (A) .:		—
2.6	**Provisions for earthing and bonding**		N/A
2.6.1	Protective earthing	Class II equipment	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 (Ω), 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

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Clause	Requirement + Test	Result - Remark	Verdict
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
2.7	**Overcurrent and earth fault protection in primary circuits**		P
2.7.1	Basic requirements	Equipment relies on 16A rated fuse or circuit breaker of the wall outlet installation protection of the building installation in regard to L to N short circuit. Over-current protection is provided by the fuse or fusible resistor F2.	P
	Instructions when protection relies on building installation	Not applicable for pluggable equipment type A.	N/A
2.7.2	Faults not simulated in 5.3.7	The protection device is well dimensioned and mounted.	P
2.7.3	Short-circuit backup protection	Pluggable equipment type A. Building installation is considered as providing short-circuit backup protection.	P
2.7.4	Number and location of protective devices ..... :	Case A, one protective device is located in either of the two conductors	P
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	No safety interlock	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

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Clause	Requirement + Test	Result - Remark	Verdict
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**		P
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic material are not used.	P
2.9.2	Humidity conditioning	120hr	P
	Relative humidity (%), temperature (℃) ..... :	93% R.H., 40℃	—
2.9.3	Grade of insulation	Insulation complies with sub-clauses 2.10, 4.5.1 and 5.2.	P
2.9.4	Separation from hazardous voltages	The secondary circuit is seperated from hazardaous voltages by reinforce insulation.	P
	Method(s) used ..... :	Method 1 used.	—
2.10	**Clearances, creepage distances and distances through insulation**		P
2.10.1	General	See 2.10.3, 2.10.4 and 2.10.5.	P
2.10.1.1	Frequency .....:	Considered.	P
2.10.1.2	Pollution degrees .....:	2	P
2.10.1.3	Reduced values for functional insulation		N/A
2.10.1.4	Intervening unconnected conductive parts		P
2.10.1.5	Insulation with varying dimensions	No such transformer used.	N/A
2.10.1.6	Special separation requirements	No TNV	N/A
2.10.1.7	Insulation in circuits generating starting pulses	No such circuit.	N/A
2.10.2	Determination of working voltage	The rms and the peak voltage were measured on the switching power supply. The unit was connected to a 240V TN power system and secondary ground was maintained during measurement. Results see appended table 2.10.2.	P
2.10.2.1	General		P
2.10.2.2	RMS working voltage	(Results see appended table 2.10.2)	P
2.10.2.3	Peak working voltage	(Results see appended table 2.10.2)	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.3	Clearances		P
2.10.3.1	General		P
2.10.3.2	Mains transient voltages		P
	a) AC mains supply .....:	2500V	P
	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	(see appended table 2.10.3 and 2.10.4)	P
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	(see appended table 2.10.3 and 2.10.4)	P
2.10.4.1	General		P
2.10.4.2	Material group and comparative tracking index		P
	CTI tests .....:	Material group IIIb is assumed to be used.	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	P
2.10.5	Solid insulation	See below	P
2.10.5.1	General		P
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		P
2.10.5.5.	Cemented joints		N/A
2.10.5.6	Thin sheet material – General	Insulation tape wrapped on core of T1 is used as reinforced insulation Additional insulation tape wrapped Between core of T1 and CY1	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.7	Separable thin sheet material		P
	Number of layers (pcs) .....:	2 layers	—
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		P
	Electric strength test	See clause 5.2.	—
2.10.5.11	Insulation in wound components	Approved source of triple insulated wire used in T1 secondary winding for reinforced insulation.	P
2.10.5.12	Wire in wound components	See above	P
	Working voltage .....:	Max: 512Vp, 261Vrms	P
	a) Basic insulation not under stress .....:		N/A
	b) Basic, supplementary, reinforced insulation .....:		N/A
	c) Compliance with Annex U .....:	Approved source of triple insulated wire used in T1 secondary winding for reinforced insulation.	P
	Two wires in contact inside wound component; angle between 45° and 90° .....:	By tube.	P
2.10.5.13	Wire with solvent-based enamel in wound components	No such construction.	N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components	No such construction.	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	See below.	P
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	P
2.10.6.2	Coated printed boards	No coated printed boards.	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	No multi-layer PCBs provided.	N/A
2.10.6.4	Insulation between conductors on different layers of a printed board	No multi-layer PCBs provided.	N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs).....:	Single layer PCB	N/A
2.10.7	Component external terminations	No such components	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.8	Tests on coated printed boards and coated components	No such boards and componets	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	No hermetically sealed component.	N/A
3	**WIRING, CONNECTIONS AND SUPPLY**		P
3.1	**General**		P
3.1.1	Current rating and overcurrent protection	All internal wires are UL recognized wiring that is PVC insulated. Internal wiring gauge is suitable for current intended to be carried.	P
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges which could damage the insulation and cause hazard.	P
3.1.3	Securing of internal wiring	The wires are secured by soldering and glue so that a loosening of the terminal connection is unlikely	P
3.1.4	Insulation of conductors		P
3.1.5	Beads and ceramic insulators	No used	N/A
3.1.6	Screws for electrical contact pressure	No used	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		P
	10 N pull test	Not loosening	P
3.1.10	Sleeving on wiring		N/A
3.2	**Connection to a mains supply**		P
3.2.1	Means of connection		P
3.2.1.1	Connection to an a.c. mains supply	Mains plug	P

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Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections	Single mains supply	N/A
3.2.3	Permanently connected equipment	Not 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	AC Source	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 or minor dimension D (mm); test mass (g) ..... :		—
	Radius of curvature of cord (mm)..... :		—
3.2.9	Supply wiring space		N/A

3.3	**Wiring terminals for connection of external conductors**		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm^2) ..... :		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm) ..... :		—
3.3.6	Wiring terminal 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**	P

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Clause	Requirement + Test	Result - Remark	Verdict
3.4.1	General requirement		P
3.4.2	Disconnect devices	Mains plug	P
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	Single – phase equipment	P
3.4.7	Number of poles - three-phase equipment	Single – 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	Only one power source	N/A
3.5	**Interconnection of equipment**		P
3.5.1	General requirements		P
3.5.2	Types of interconnection circuits ..... :	SELV circuit	P
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment		N/A
4	**PHYSICAL REQUIREMENTS**		P
4.1	**Stability**		N/A
	Angle of 10°	Approx 0.11kg <7kg	N/A
	Test force (N) ..... :		N/A
4.2	**Mechanical strength**		P
4.2.1	General		P
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N	Applied to component when measuring creepage distances and clearances	P
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N		P
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm) ..... :	No hazard as result from drop test	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.2.7	Stress relief test	After 7 hours at temperature of 93℃ and cooling down to room temperature, no shrinkage, distortion or loosening any enclosure part was noticeable on the adapter. All types of enclosure were considered.	P
4.2.8	Cathode ray tubes	No such device	N/A
	Picture tube separately certified ..... :		N/A
4.2.9	High pressure lamps	No such device	N/A
4.2.10	Wall or ceiling mounted equipment; force (N) ..... :		N/A
4.3	**Design and construction**		P
4.3.1	Edges and corners	All edges and corners are rounded and /or smoothed	P
4.3.2	Handles and manual controls; force (N)..... :	No such component	N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress	P
4.3.5	Connection by plugs and sockets	No mismating of connectors, plugs or sockets possible	P
4.3.6	Direct plug-in equipment		P
	Torque .....:	0.05Nm max.	—
	Compliance with the relevant mains plug standard .....:	See appended plug test report	P
4.3.7	Heating elements in earthed equipment	No heating element	N/A
4.3.8	Batteries	No battery	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	No insulation exposed to oil and grease	N/A
4.3.10	Dust, powders, liquids and gases	Equipment do not produce dust, not use powder, liquid and gas	N/A
4.3.11	Containers for liquids or gases	No containers for liquids or gases	N/A
4.3.12	Flammable liquids .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Quantity of liquid (l) .....:		N/A
	Flash point (°C) .....:		N/A
4.3.13	Radiation		P
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	LED indictor used (optional)	P
4.3.13.5.1	Lasers (including laser diodes)		N/A
	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	No moving part within equipment	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**	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.5.1	General		P
4.5.2	Temperature tests	(see appended table 4.5)	P
	Normal load condition per Annex L ..... :	Maximum normal load which specified by manufacturer	—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat ..... :	(see appended table 4.5.5)	P
4.6	**Openings in enclosures**		N/A
4.6.1	Top and side openings	No opening	N/A
	Dimensions (mm) ..... :		—
4.6.2	Bottoms of fire enclosures	No opening	N/A
	Construction of the bottomm, 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**		P
4.7.1	Reducing the risk of ignition and spread of flame	Method 1 used	P
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	P
	Method 2, application of all of simulated fault condition tests	(see appended table 5.3)	N/A
4.7.2	Conditions for a fire enclosure	See below	P
4.7.2.1	Parts requiring a fire enclosure	With having the following parts: ▪ Components in primary ▪ Components in secondary ▪ Insulated wiring The fire enclosure is required.	P
4.7.2.2	Parts not requiring a fire enclosure	See clause 4.7.2.1	N/A
4.7.3	Materials		P
4.7.3.1	General	Parts mounted on PCB of flammability class V-0 or better.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.2	Materials for fire enclosures	The fire enclosure is V-0 or better material.	P
4.7.3.3	Materials for components and other parts outside fire enclosures	See clause 4.7.2	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	PCB rated min. V-0, bobbin material rated V-0, approved by UL	P
4.7.3.5	Materials for air filter assemblies	No such devices	N/A
4.7.3.6	Materials used in high-voltage components	No such components	N/A
5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		P
5.1	**Touch current and protective conductor current**		P
5.1.1	General	(see appended Table 5.1)	P
5.1.2	Configuration of equipment under test (EUT)	EUT has only one mains connection.	P
5.1.2.1	Single connection to an a.c. mains supply		P
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	Equipment of figure 5A used.	P
5.1.4	Application of measuring instrument	Figure 4 of IEC 60990 used	P
5.1.5	Test procedure	Measured between each pole of live parts and output terminal, between each pole of live parts and enclosure	P
5.1.6	Test measurements		P
	Supply voltage (V) .....:	264V, 60Hz	—
	Measured touch current (mA) .....:	(See appended table 5.1)	—
	Max. allowed touch current (mA) .....:	0.25	—
	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	No telecommunication network connection ports on equipment	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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
5.2	**Electric strength**		P
5.2.1	General	(see appended table 5.2)	P
5.2.2	Test procedure		P
5.3	**Abnormal operating and fault conditions**		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors	No motors	N/A
5.3.3	Transformers	With the shorted o/p of the transformer, no high temperature of the transformer was recorded. Results of the short-circuit tests see appended table 5.3 and Annex C.	P
5.3.4	Functional insulation.....:	Method c). Test results see appended table 5.3.	P
5.3.5	Electromechanical components	No electromechanical component provided.	N/A
5.3.6	Audio amplifiers in ITE .....:	No such component.	N/A
5.3.7	Simulation of faults	Results see appended table.	P
5.3.8	Unattended equipment	None of the listed components was provided.	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions		P
5.3.9.1	During the tests	No fire propagated beyond equipment; not emit molten metal and enclosure did not deform	P
5.3.9.2	After the tests	No any insulation damaged and withstand dielectric strength test AC 3000V between live parts and accessible part	P

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Clause	Requirement + Test	Result - Remark	Verdict
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	No TNV.	N/A
	Supply voltage (V) .....:		—
	Current in the test circuit (mA) .....:		—
6.1.2.2	Exclusions .....:		N/A
6.2	**Protection of equipment users from overvoltages on telecommunication networks**		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A
6.3	**Protection of the telecommunication wiring system from overheating**		N/A
	Max. output current (A) .....:		—
	Current limiting method .....:		—
7	**CONNECTION TO CABLE DISTRIBUTION SYSTEMS**		N/A
7.1	**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 .....:		—
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
A.3.3	Compliance criterion		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

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) .....:		—

C	**ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		P
	Position .....:	T1	—
	Manufacturer .....:	See appended tabel 1.5.1	—
	Type .....:	See appended tabel 1.5.1	—
	Rated values .....:	See appended tabel 1.5.1	—
	Method of protection..... :		—
C.1	**Overload test**	(see appended table 5.3)	P

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Clause	Requirement + Test	Result - Remark	Verdict
C.2	**Insulation**	(see appended tables 5.2 and C2)	P
	Protection from displacement of windings..... :	By insulation tape	P
D	**ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)**		P
D.1	**Measuring instrument**		P
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)**		P
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 supplies .....:		N/A
G.2.3	Unearthed d.c. mains supplies .....:		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

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Clause	Requirement + Test	Result - Remark	Verdict
H	**ANNEX H, IONIZING RADIATION (see 4.3.13)**		N/A
J	**ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)**		P
	Metal(s) used .....:		—
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)**		P
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		P
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

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Clause	Requirement + Test	Result - Remark	Verdict
M.3.2.3	Monitoring voltage (V) .....:		N/A
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**		—
Q	**ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)**		P
	- Preferred climatic categories .....:		P
	- Maximum continuous voltage .....:		P
	- Combination pulse current .....:		P
	Body of the VDR Test according to IEC60695-11-5.....:		N/A
	Body of the VDR. Flammability class of material (min V-1).....:		P
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)**		P
		Approved TIW used	—
V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)**		P
V.1	Introduction		P

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Clause	Requirement + Test	Result - Remark	Verdict
V.2	TN power distribution systems		P
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)**		P
X.1	Determination of maximum input current		P
X.2	Overload test procedure		P
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)**		P
AA	**ANNEX AA, MANDREL TEST (see 2.10.5.8)**		N/A
BB	**ANNEX BB, CHANGES IN THE SECOND EDITION**		—
CC	**ANNEX CC, Evaluation of integrated circuit (IC) current limiters**		N/A
CC.1	General		N/A
CC.2	Test program 1.....:		N/A
CC.3	Test program 2.....:		N/A
CC.4	Test program 3.....:		N/A
CC.5	Compliance.....:		N/A
DD	**ANNEX DD, Requirements for the mounting means of rack-mounted equipment**		N/A
DD.1	General		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
DD.2	Mechanical strength test, variable N……..:		N/A
DD.3	Mechanical strength test, 250N, 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

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity1)
Plastic enclosure	Sabic Innovative Plastics B V	945(GG)	PC, 94V-0, 120℃, Min thickness: 1.5mm	UL 94	UL
Pin holder	Sabic Innovative Plastics B V	945(GG)	PC, 94V-0, 120℃	UL 94	UL
AC wire used between AC Pin and PCB	XINYA ELECTRONIC CO LTD	1430 or 1015	Min. 22AWG, Min. 105℃, Min. 300VAC, VW-1	UL 758	UL
(Alternative)	Interchangeable	Interchangeable	Min. 22AWG, Min. 105℃, Min. 300VAC, VW-1	UL 758	UL
PCB	Cheng Ho Power Corp	24B-7	94V-0, 130℃,	UL 94	UL
(Alternative)	Guang Zhou Shengxin Electric Co., Ltd.	SX-1 or SX-2	94V-0, 130℃	UL 94	UL
(Alternative)	Dong Guan New Energy Printed Circuit Board Co Ltd	NE5000 or NE5000A	94V-0, 130℃	UL 94	UL
(Alternative)	Interchangeable	Interchangeable	94V-0, 130℃	UL 94	UL
Fuse (F1) (optional) (F1 should be used with MOV1simultaneously)	Conquer	MST	AC 250V, T6.3A, Low Capacity	IEC/EN 60127-1 IEC/EN 60127-3	VDE, UL
(Alternative)	Bluelight	6ET	AC 250V, T6.3A, Low Capacity	IEC/EN 60127-1 IEC/EN 60127-3	VDE, UL
(Alternative)	Walter	2010	AC 250V, T6.3A, Low Capacity	IEC/EN 60127-1 IEC/EN 60127-3	VDE, UL
Current fuse (F2)	Hong hu bluelight electronic co.,ltd	L3CT	AC 250V, T2.0A, Low Capacity	IEC/EN 60127-1 IEC/EN 60127-3	VDE, UL

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity1)
(Alternative)	Conquer	PTU	AC 250V, T2.0A, Low Capacity	IEC/EN 60127-1 IEC/EN 60127-3	VDE, UL
(Alternative)	Walter electronic co.,ltd	ICP	AC 250V, T2.0A, Low Capacity	IEC/EN 60127-1 IEC/EN 60127-3	VDE, UL
Fusible resistor (F2)	Shenzhen Kayocota Electronics Co., Ltd.	FRKNP-2WS	2.2Ω or 8.2Ω, 2W	IEC/EN 60950-1	Tested with appliance
(Alternative)	Shenzhen Great Electronics Co., Ltd.	RXF-2W	2.2Ω or 8.2Ω, 2W	IEC/EN 60950-1	Tested with appliance
Varistor (MOV1) (optional) (MOV1+F1 should be used simultaneously)	Thinking Electronic Industrial Co Ltd	For 100-120V input voltage: TVR10331-V, TVR10391-V, TVR14331-V, TVR14391-V, For 100-240V, 200-240V input voltage: TVR10431-V, TVR10471-V, TVR10561-V, TVR14471-V, TVR14561-V,	AC 300V, 40/85/56	UL 1449; IEC/EN 61051-1; IEC/EN 61051-2+A1	VDE
(Alternative)	JOYIN CO LTD	For 100-120V input voltage: 10S331K 10S391K 14S331K 14S391K For 100-240V, 200-240V input voltage: 10S431K 10S471K 10S561K 14S471K 14S561K	AC 300V, -40/85/56	UL 1449; IEC/EN 61051-1; IEC/EN 61051-2+A1	VDE

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity1)
Bridge Diodes (D1-D4)	Interchangeable	Interchangeable	Min.1.0A, Min. 1000V	IEC/EN 60950-1	Tested with appliance
Transistor (Q1)	Interchangeable	Interchangeable	Min. 2A, Min. 600V	IEC/EN 60950-1	Tested with appliance
Storage capacitor (C1)	Interchangeable	Interchangeable	2.2-6.8uF, 105℃, minimum 250 V(for 100-120V rated input voltage) Minimum 400V (for 100-240V or 200-240V rated input voltage)	IEC/EN 60950-1	Tested with appliance
Storage capacitor (C2)	Interchangeable	Interchangeable	8.2-15uF, 105℃, minimum 250 V(for 100-120V rated input voltage) Minimum 400V (for 100-240V or 200-240V rated input voltage)	IEC/EN 60950-1	Tested with appliance
Inductor (LF1)	Interchangeable	Interchangeable	15mH±20%, rated 130℃	IEC/EN 60950-1	Tested with appliance
Y1 Capacitor (CY1) (optional)	Success Electronics Co., Ltd.	SB	AC 400V, Y1, Max. 470pF, 30/125/56/C	IEC/EN 60384-14	VDE
(Alternative)	Haohua Electronic Co	CT7	AC 250V, Y1, Max. 470pF, 30/125/56	IEC/EN 60384-14	VDE
(Alternative)	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	CD	AC 400V, Y1, Max. 470pF, 25/125/21	IEC/EN 60384-14	VDE
(Alternative)	Guangdong South Hongming Electronic Science & Technology Co., Ltd.	F	AC 400V, Y1, Max. 470pF, 25/125/21	IEC/EN 60384-14	VDE
(Alternative)	Xiangtai Electronic (shenzhen) Co., Ltd.	YO-series	AC 400V, Y1, Max. 470pF, 25/125/21/C	IEC/EN 60384-14	VDE

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

1.5.1	TABLE: List of critical				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity1)
Output cord	Herwell Electric Wire Co Ltd	2468, 2464, 1185	AWG26-18, Min. 80℃, 300VAC, VW-1	UL 758	UL
(Alternative)	Shenzhen MD Electric Co Ltd	2468, 2464, 1185	AWG26-18, Min. 80℃, 300VAC, VW-1	UL 758	UL
(Alternative)	Yong Hao Electrical Industry Co Ltd	2468, 2464, 1185	AWG26-18, Min. 80℃, 300VAC, VW-1	UL 758	UL
(Alternative)	Huizhou Guangfeng Plastic Produce Co Ltd	2468, 2464, 1185	AWG26-18, Min. 80℃, 300VAC, VW-1	UL 758	UL
(Alternative)	Shenzhen goodlinking cable Technology co., Ltd.	2468, 2464	AWG26-18, Min. 80℃, 300VAC, VW-1	UL 758	UL
(Alternative)	Xinya Electronic Co Ltd	2468, 2464, 1185	AWG26-18, Min. 80℃, 300VAC, VW-1	UL 758	UL
(Alternative)	Interchangeable	Interchangeable	AWG26-18, Min. 80℃, min. 300VAC, VW-1	UL 758	UL
Mylar sheet used between plug holder and PCB	SABIC INNOVATIVE PLASTICS US L L C	FR700(GG)	PC, 130℃, 94V-0, min. thickness 0.4mm	UL 94	UL E121562
Optocoupler (PC1)	Everlight electronics co ltd	EL 817	AC 250V, Dti = 0.5mm; Int./Ext. Cr.: 6,0/7,7 mm	IEC 60747-5-2	UL VDE FI
(Alternative)	LITE-ON	LTV-817	AC250V, Dti = 0.6mm; Int./Ext. Cr.: 5.2/8.0 mm - *), (thermal cycle passed)	IEC/EN 60747-5-2; IEC 60950-1	UL VDE FI
(Alternative)	COSMO	KP1010	Ext. Cr>8.0mm, ext. Cl>8.0mm, Int. Cr&Cl: - *), thr. Distance> 0.5mm, Max. 100℃ (thermal cycle passed)	UL 1577 IEC/EN 60747-5-2; IEC/EN 60950-1	UL VDE FI

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

1.5.1	TABLE: List of critical				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity1)
Heat shrinkable tube (for F2)	Shenzhen Woer Heat-Shrinkable Material Co Ltd	RSFR or RSFR-H	600V, 125℃, VW-1	UL 224	UL
(Alternative)	Interchangeable	Interchangeable	600V, 125℃, VW-1	UL 224	UL
Transformer (T1)	Shenzhen Mass Power Electronic Limited	T012 Z 0001 for output voltage 5.0-7.5V; T012 Z 0002 for output voltage 9.0-15.0V	Core: EF1713, Class B	IEC/EN 60950-1	Tested with appliance
Material used in transformer T1:					
- Bobbin	Sumitomo Chemical Co., Ltd	PM-9820	Phenolic, 94V-0, 150℃	UL 94	UL
-Magnet wire	Shantou Shengang Electrical Industrial Co., Ltd.	UEW/130	MW75, 130℃	UL 1446	UL
(Alternative)	Tai-I Electric Wire & Cable Co., Ltd.	UEW	MW75, 130℃	UL 1446	UL
(Alternative)	Pacific Electric Wire & Cable Co., Ltd.	DD-NYU	MW28C, 130℃	UL 1446	UL
(Alternative)	Feng Ching Metal Corp	*UEW	MW75-C, 130℃	UL 1446	UL
(Alternative)	Huizhou Golden Ocean Magnet Wire Factory	XUEW	MW75C, 130℃	UL 1446	UL
(Alternative)	Interchangeable	Interchangeable	130℃	UL 1446	UL
- Insulation tape	Symbio Inc	35660Y*(%)	130℃	UL 510	UL
(Alternative)	Jingjiang Yahua Pressure Sensitive Glue Co., Ltd.	CT	130℃	UL 510	UL
(Alternative)	3M Company Electrical Markets Div (EMD)	1350F-1	130℃	UL 510	UL
-Triple insulation wire	Totoku Electric Co., Ltd.	TIW-2	Reinforced insulation, Class B	IEC/EN 60950-1	VDE

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

1.5.1	TABLE: List of critical				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity1)
(Alternative)	Furukawa Electric Co., Ltd.	TEX-E	Reinforced insulation, Class B	IEC/EN 60950-1	VDE
(Alternative)	Young Chang Silicone Co., Ltd.	STW-B	Reinforced insulation, Class B	IEC/EN 60950-1	VDE
(Alternative)	Hoi Luen Electrical Mfr Co., Ltd.	THL-B	Reinforced insulation, Class B	IEC/EN 60950-1	VDE
(Alternative)	Feng Ching Metal Corp	FTIW	Reinforced insulation, Class B	IEC/EN 60950-1	TUV PS
(Alternative)	Dah Jin Technology Co., Ltd.	TLW-B	Reinforced insulation, Class B	IEC/EN 60950-1	VDE

Supplementary information:

1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.

2) - *) There is no any internal creepage distance, due to these had been assessed in components certification. Test according to IEC60950-1:2005, cl. 2.10.9) has been carried out ten times for the components at 100℃ /25℃ /0℃ /25℃. Humidity treatment of 48 h as well as electric strength tests at 4800 V/1 minute were carried out to the component after thermal cycling test.

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: Opto Electronic Devices	P

Manufacturer ..... :	See TABLE 1.5.1: list of critical components
Type ..... :	--
Separately tested ..... :	N/A (approved component)
Bridging insulation ..... :	Reinforced insulation
External creepage distance ..... :	--
Internal creepage distance ..... :	--
Distance through insulation ..... :	--
Tested under the following conditions ..... :	N/A
Input ..... :	--
Output ..... :	--
supplementary information	
See above table 1.5.1 for details	

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Model: NBS12E050210VE						
90V/50Hz	0.245	--	13.5	F1, F2	0.245	DC5.0V, 2.1A
90V/60Hz	0.247	--	13.5	F1, F2	0.247	DC5.0V, 2.1A
100V/50Hz	0.222	0.3	13.4	F1, F2	0.222	DC5.0V, 2.1A
100V/60Hz	0.224	0.3	13.4	F1, F2	0.224	DC5.0V, 2.1A
120V/50Hz	0.195	0.3	13.2	F1, F2	0.195	DC5.0V, 2.1A
120V/60Hz	0.197	0.3	13.2	F1, F2	0.197	DC5.0V, 2.1A
200V/50Hz	0.125	0.3	13.0	F1, F2	0.125	DC5.0V, 2.1A
200V/60Hz	0.122	0.3	13.0	F1, F2	0.122	DC5.0V, 2.1A
240V/50Hz	0.113	0.3	13.0	F1, F2	0.113	DC5.0V, 2.1A
240V/60Hz	0.110	0.3	13.0	F1, F2	0.110	DC5.0V, 2.1A
264V/50Hz	0.099	--	13.0	F1, F2	0.099	DC5.0V, 2.1A
264V/60Hz	0.098	--	13.0	F1, F2	0.098	DC5.0V, 2.1A
Model: NBS12E120100VE						
90V/50Hz	0.267	--	14.9	F1, F2	0.267	DC12.0V, 1.0A
90V/60Hz	0.268	--	14.9	F1, F2	0.268	DC12.0V, 1.0A

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

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
100V/50Hz	0.242	0.3	14.7	F1, F2	0.242	DC12.0V, 1.0A
100V/60Hz	0.244	0.3	14.7	F1, F2	0.244	DC12.0V, 1.0A
120V/50Hz	0.206	0.3	14.2	F1, F2	0.206	DC12.0V, 1.0A
120V/60Hz	0.209	0.3	14.2	F1, F2	0.209	DC12.0V, 1.0A
200V/50Hz	0.141	0.3	14.1	F1, F2	0.141	DC12.0V, 1.0A
200V/60Hz	0.137	0.3	14.1	F1, F2	0.137	DC12.0V, 1.0A
240V/50Hz	0.121	0.3	14.3	F1, F2	0.121	DC12.0V, 1.0A
240V/60Hz	0.118	0.3	14.3	F1, F2	0.118	DC12.0V, 1.0A
264V/50Hz	0.111	--	14.4	F1, F2	0.111	DC12.0V, 1.0A
264V/60Hz	0.109	--	14.4	F1, F2	0.109	DC12.0V, 1.0A
Model: NBS12E150080VE						
90V/50Hz	0.262	--	14.6	F1, F2	0.262	DC15.0V, 0.8A
90V/60Hz	0.264	--	14.6	F1, F2	0.264	DC15.0V, 0.8A
100V/50Hz	0.237	0.3	14.4	F1, F2	0.237	DC15.0V, 0.8A
100V/60Hz	0.240	0.3	14.4	F1, F2	0.240	DC15.0V, 0.8A
120V/50Hz	0.203	0.3	13.9	F1, F2	0.203	DC15.0V, 0.8A
120V/60Hz	0.206	0.3	13.9	F1, F2	0.206	DC15.0V, 0.8A
200V/50Hz	0.141	0.3	13.9	F1, F2	0.141	DC15.0V, 0.8A
200V/60Hz	0.136	0.3	13.9	F1, F2	0.136	DC15.0V, 0.8A
240V/50Hz	0.120	0.3	14.4	F1, F2	0.120	DC15.0V, 0.8A
240V/60Hz	0.117	0.3	14.4	F1, F2	0.117	DC15.0V, 0.8A
264V/50Hz	0.111	--	14.5	F1, F2	0.111	DC15.0V, 0.8A
264V/60Hz	0.109	--	14.5	F1, F2	0.109	DC15.0V, 0.8A
Supplementary information:--						

2.1.1.5 c) 1)	TABLE: max. V, A, VA test			P
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)
Model: NBS12E050210VE				
5.0	2.1	5.16	2.52	11.74
Model: NBS12E120100VE				
12.0	1.0	12.18	1.26	14.87
Model: NBS12E150080VE				

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15.0	0.8	15.09	0.96	14.30
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	P

Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V peak	V d.c.	
Model: NBS12E050210VE			
Transformer T1 PinTA-PinTB	31.2	--	--
C10	--	5.18	D7
Model: NBS12E120100VE			
Transformer T1 PinTA-PinTB	82.0	--	--
C10	--	12.21	D7
Model: NBS12E150080VE			
Transformer T1 PinTA-PinTB	88.0	--	--
C10	--	15.4	D7

Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)
Short circuit D7 for model NBS12E050210VE	0V (unit shut down, no damaged, no hazard.)
Short circuit D7 for model NBS12E120100VE	0V (unit shut down, no damaged, no hazard.)
Short circuit D7 for model NBS12E150080VE	0V (unit shut down, no damaged, no hazard.)
supplementary information:	
--	

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Clause	Requirement + Test	Result - Remark	Verdict

2.5	TABLE: Limited power sources	P

Circuit output tested:

Note: Measured Uoc (V) with all load circuits disconnected:

Components	Sample No.	Uoc (V)	I_{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
Model: NBS12E050210VE						
Normal condition	--	5.16	2.53	8	11.76	100
PC1 1-2 Sc	--	0	0#	8	0#	100
PC1 3-4 Sc	--	0	0#	8	0#	100
PC1 pin 1 Oc	--	0	0#	8	0#	100
PC1 pin 3 Oc	--	0	0#	8	0#	100
R13 Sc	--	0	0*	8	0*	100
Model: NBS12E120100VE						
Normal condition	--	12.18	1.18	8	13.98	100
PC1 1-2 Sc	--	0	0#	8	0#	100
PC1 3-4 Sc	--	0	0#	8	0#	100
PC1 pin 1 Oc	--	0	0#	8	0#	100
PC1 pin 3 Oc	--	0	0#	8	0#	100
R13 Sc	--	0	0*	8	0*	100
Model: NBS12E150080VE						
Normal condition	--	15.09	0.97	8	14.45	100
PC1 1-2 Sc	--	0	0#	8	0#	100
PC1 3-4 Sc	--	0	0#	8	0#	100
PC1 pin 1 Oc	--	0	0#	8	0#	100
PC1 pin 3 Oc	--	0	0#	8	0#	100
R13 Sc	--	0	0*	8	0*	100

supplementary information:

Sc=Short circuit, Oc=Open circuit

means unit shutdown immediately, recoverable.

* means F2 opened immediately. The F2 can use fusible resistor or current fuse, when the F2 use fusible resistor operated fault tests were repeated 10 times.

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Clause	Requirement + Test	Result - Remark	Verdict

2.10.2	**Table: working voltage measurement**	P

Location	RMS voltage (V)	Peak voltage (V)	Comments
Model: NBS12E050210VE			
T1 pin 1-TA	368	210	
T1 pin 1-TB	348	211	
T1 pin 3-TA	508	255	
T1 pin 3-TB	**512**	**261**	Max. working voltage
T1 pin 2-TA	360	217	
T1 pin 2-TB	352	216	
T1 pin 4-TA	388	217	
T1 pin 4-TB	412	217	
CY1	352	215	
PC1 pin 1-3	356	220	
PC1 pin 1-4	356	217	
PC1 pin 2-3	356	218	
PC1 pin 2-4	356	218	
Model: NBS12E120100VE			
T1 pin 1-TA	416	211	
T1 pin 1-TB	348	212	
T1 pin 3-TA	468	248	
T1 pin 3-TB	**488**	**261**	Max. working voltage
T1 pin 2-TA	364	214	
T1 pin 2-TB	348	211	
T1 pin 4-TA	460	211	
T1 pin 4-TB	412	214	
CY1	348	211	
PC1 pin 1-3	356	222	
PC1 pin 1-4	348	211	
PC1 pin 2-3	352	219	
PC1 pin 2-4	344	212	
Model: NBS12E150080VE			
T1 pin 1-TA	408	209	
T1 pin 1-TB	352	208	
T1 pin 3-TA	472	246	

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Clause	Requirement + Test	Result - Remark	Verdict

T1 pin 3-TB	**496**	**261**	Max. working voltage
T1 pin 2-TA	368	216	
T1 pin 2-TB	352	214	
T1 pin 4-TA	376	215	
T1 pin 4-TB	412	216	
CY1	352	214	
PC1 pin 1-3	360	223	
PC1 pin 1-4	352	220	
PC1 pin 2-3	348	214	
PC1 pin 2-4	344	212	
supplementary information:			
Tested under 240Vac, 50Hz			

2.10.3 and 2.10.4	**TABLE: Clearance and creepage distance measurements**					P
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/Basic:						
Line and Neutral before F1	420	240	2.3	3.1	2.5	3.1
L to circuit after F1	420	240	2.3	3.1	2.5	3.1
Two terminals of F1 (Basic insulation)	420	240	3.0	3.1	3.0	3.1
Two terminals of F2 (Basic insulation)	420	240	3.0	3.1	3.0	3.1
Reinforced:						
Live parts and accessible enclosure	420	240	6.0	6.5	6.0	6.5
PCB trace under CY1 pri. Pin and sec. pin	420	240	6.0	8.1	6.0	8.1
PCB trace under PC1 pri. Pins and sec. pins	420	240	6.0	8.1	6.0	8.1
PCB trace under T1 pri. pins and sec. pins	512	261	6.4	8.1	6.4	8.1
T1 core and sec. components LF2	512	261	6.4	6.6	6.4	6.6
T1 core and CY1 sec. pin	512	261	6.4	8.7	6.4	9.9
Primary winding of T1 and secondary pin of T1	512	261	6.4	8.1	6.4	8.1
Iron core of T1 and secondary pin of T1	512	261	6.4	8.1	6.4	8.1

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:
1. BI: Basic insulation; RI: Reinforced insulation; SI: Supplementary insulation; FI: Functional insulation
2. The core of T1 is considered as primary live part.
3. If no specified, the worst condition was considered.
4. These equipments are intended to be operated under altitude up to 5,000m, so the clearance is multiplied by the altitude correction factors(1.48, linear interpolation used), specified in table A.2 of IEC 60664-1: 2007.

2.10.5	TABLE: Distance through insulation measurements				P
Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Thickness of enclosure	340	240	AC 3000	≥ 0.4	Min.1.5
Opto-coupler (PC1)	340	240	AC 3000	≥ 0.4	1)

Supplementary information:
1) see appended table 1.5.1.
RI: Reinforced insulation.

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Clause	Requirement + Test	Result - Remark	Verdict

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.
Max. current during normal condition									
Max. current during fault condition									

Test results:		Verdict
- Chemical leaks		
- Explosion of the battery		
- Emission of flame or expulsion of molten metal		
- Electric strength tests of equipment after completion of tests		
Supplementary information:		

4.3.8	TABLE: Batteries	N/A
Battery category ..... :	(Lithium, NiMh, NiCad, Lithium Ion …)	
Manufacturer ..... :		
Type / model ..... :		
Voltage ..... :		
Capacity ..... :	mAh	
Tested and Certified by (incl. Ref. No.) ..... :		
Circuit protection diagram:		

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MARKINGS AND INSTRUCTIONS (1.7.13)	
Location of replaceable battery	
Language(s) ……:	
Close to the battery ……:	
In the servicing instructions ……:	
In the operating instructions ……:	

4.5	TABLE: Thermal requirements					P
	Supply voltage (V) ……:	A: 90V/60Hz, Horizontal; B: 90V/60Hz, Vertical; C: 264V/50Hz, Horizontal; D: 264V/50Hz, Vertical				—
	Ambient T_{min} (°C) ……:	45.0				—
	Ambient T_{max} (°C) ……:	45.0				—
Maximum measured temperature T of part/at……:		T (°C)				Allowed T_{max} (°C)
Model: NBS12E050210VE		A	B	C	D	--
Plug holder		59.9	63.0	58.2	59.8	--
Input lead wire		63.0	66.0	59.9	61.4	105
C1 body		86.1	87.6	75.0	75.8	105
MOV1		77.3	80.5	67.4	69.4	85
Winding LF1		97.0	95.0	73.8	72.1	120
PCB near D3/D4		76.1	79.3	65.9	67.4	130
PCB near Q1		95.4	97.8	85.2	86.9	130
T1 winding		101.0	102.8	99.6	101.3	110
T1 core		100.2	100.9	99.4	100.4	Ref.
CY1 body		88.7	88.3	87.6	87.2	125
PC1 body		80.3	85.6	78.4	84.3	100
C10 body		87.9	89.5	87.2	89.7	105
PCB near D7		102.0	102.0	101.9	102.6	130
Winding LF2 (near output cord)		75.7	78.7	75.3	78.7	80
Output cord		62.3	65.4	62.3	65.1	80
Enclosure inside near top of T1		72.4	75.1	71.8	75.5	Ref 4.2.7
Enclosure inside near bottom of T1		72.9	77.0	71.8	76.2	Ref 4.2.7
Enclosure outside near top of T1		66.7	70.3	66.2	71.1	95

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Clause	Requirement + Test		Result - Remark			Verdict

Enclosure outside near bottom of T1	68.8	73.6	67.3	71.9	95
Enclosure inside near side of T1	79.3	77.6	77.9	76.1	Ref 4.2.7
Enclosure outside near side of T1	72.8	70.4	72.0	69.3	95

4.5	**TABLE: Thermal requirements**					P
	Supply voltage (V) .....:	A: 90V/60Hz, Horizontal; B: 90V/60Hz, Vertical; C: 264V/50Hz, Horizontal; D: 264V/50Hz, Vertical				—
	Ambient T_{min} (°C) .....:	45.0				—
	Ambient T_{max} (°C) .....:	45.0				—
Maximum measured temperature T of part/at.....:		T (°C)				Allowed T_{max} (°C)
Model: NBS12E120100VE		A	B	C	D	--
Plug holder		54.7	61.2	54.4	58.1	--
Input lead wire		67.6	71.9	59.0	62.5	105
C1 body		88.2	91.5	73.1	74.6	105
MOV1		80.4	81.9	67.3	69.1	85
Winding LF1		107.7	106.7	75.4	74.9	120
PCB near D3/D4		81.2	84.7	65.7	67.5	130
PCB near Q1		104.8	108.6	90.5	92.4	130
T1 winding		103.4	106.4	98.8	99.6	110
T1 core		100.8	103.0	98.7	99.4	Ref.
CY1 body		89.3	89.2	86.0	85.1	125
PC1 body		80.2	87.3	76.3	81.5	100
C10 body		81.4	84.6	82.8	84.9	105
PCB near D7		80.1	83.1	81.5	83.7	130
Winding LF2 (near output cord)		71.3	74.9	71.8	74.8	80
Output cord		62.6	66.1	63.0	66.3	80
Enclosure inside near top of T1		76.5	81.2	75.6	78.0	Ref 4.2.7
Enclosure inside near bottom of T1		79.0	82.8	74.2	77.2	Ref 4.2.7
Enclosure outside near top of T1		68.3	73.5	68.4	71.3	95
Enclosure outside near bottom of T1		67.2	71.1	65.5	69.7	95
Enclosure inside near side of T1		77.0	75.5	73.7	72.4	Ref 4.2.7
Enclosure outside near side of T1		69.9	67.0	67.7	65.2	95

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Thermal requirements					P
	Supply voltage (V) .....:	A: 90V/60Hz, Horizontal; B: 90V/60Hz, Vertical; C: 264V/50Hz, Horizontal; D: 264V/50Hz, Vertical				—
	Ambient T_{min} (°C) .....:	45.0				—
	Ambient T_{max} (°C) .....:	45.0				—
Maximum measured temperature T of part/at.....:		T (°C)				Allowed T_{max} (°C)
Model: NBS12E150080VE		A	B	C	D	--
Plug holder		55.1	57.8	54.8	55.4	--
Input lead wire		68.8	72.2	62.5	66.0	105
C1 body		90.1	91.7	78.9	79.0	105
MOV1		81.7	82.5	70.9	72.5	85
Winding LF1		107.7	105.7	79.0	77.8	120
PCB near D3/D4		82.5	86.4	69.7	71.3	130
PCB near Q1		105.8	110.0	101.7	103.1	130
T1 winding		99.5	102.3	102.4	101.7	110
T1 core		99.2	100.7	101.5	101.1	Ref.
CY1 body		86.4	87.2	88.1	85.9	125
PC1 body		78.3	83.4	79.3	83.6	100
C10 body		78.3	80.6	83.2	83.9	105
PCB near D7		92.0	92.6	98.0	98.4	130
Winding LF2 (near output cord)		69.8	71.4	73.0	75.3	80
Output cord		60.4	63.3	62.6	65.4	80
Enclosure inside near top of T1		73.6	79.7	76.5	77.7	Ref 4.2.7
Enclosure inside near bottom of T1		72.0	75.0	74.4	76.5	Ref 4.2.7
Enclosure outside near top of T1		66.9	73.8	69.2	70.7	95
Enclosure outside near bottom of T1		66.8	70.3	68.4	70.9	95
Enclosure inside near side of T1		76.9	73.9	77.8	74.0	Ref 4.2.7
Enclosure outside near side of T1		69.2	65.7	71.6	67.5	95

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Thermal requirements					P
	Supply voltage (V) .....:	A: 90V/60Hz, Horizontal; B: 90V/60Hz, Vertical; C: 264V/50Hz, Horizontal; D: 264V/50Hz, Vertical				—
	Ambient T_{min} (°C) .....:	45.0				—
	Ambient T_{max} (°C) .....:	45.0				—
Maximum measured temperature T of part/at.....:		T (°C)				Allowed T_{max} (°C)
Model: NBS12E120100HE		A	B	C	D	--
Plug holder		62.9	63.3	--	--	--
C1 body		90.8	91.4	--	--	105
MOV1		80.1	80.6	--	--	85
Winding LF1		104.5	106.4	--	--	120
PCB near D3/D4		78.2	80.9	--	--	130
PCB near Q1		106.4	108.1	--	--	130
T1 winding		103.9	102.0	--	--	110
T1 core		102.2	99.8	--	--	Ref.
CY1 body		86.9	86.7	--	--	125
PC1 body		83.7	83.2	--	--	100
C10 body		83.5	83.0	--	--	105
PCB near D7		81.8	82.5	--	--	130
Winding LF2 (near output cord)		72.6	70.0	--	--	80
Output cord		64.2	62.7	--	--	80
Enclosure inside near top of T1		75.3	70.9	--	--	Ref 4.2.7
Enclosure inside near bottom of T1		80.5	77.1	--	--	Ref 4.2.7
Enclosure outside near top of T1		69.0	64.2	--	--	95
Enclosure outside near bottom of T1		73.2	68.6	--	--	95
Enclosure inside near side of T1		70.5	69.9	--	--	Ref 4.2.7
Enclosure outside near side of T1		64.1	61.8	--	--	95

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	**TABLE: Thermal requirements**						P
	Supply voltage (V) .....:	A: 90V/60Hz, Horizontal; Before 6000 cycles B: 90V/60Hz, Horizontal; After 6000 cycles					—
	Ambient T_{min} (°C) .....:	45.0					—
	Ambient T_{max} (°C) .....:	45.0					—
Maximum measured temperature T of part/at.....:		T (°C)					Allowed T_{max} (°C)
Model: NBS12E120100D5		A	B	C	D		--
Left contact /terminal		49.2	50.8	--	--		Ref 4.2.7
Right contact/ terminal		50.1	51.6	--	--		Ref 4.2.7
Supplementary information:							

Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class
--	--	--	--	--	--	--	--

Supplementary information:
1. Thermocouple method used.
2. Tma is 45℃ Max., all the tests were performed in chamber.

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Clause	Requirement + Test	Result - Remark	Verdict

4.5.5	TABLE: Ball pressure test of thermoplastic parts		P
	Allowed impression diameter (mm) .....:	≤ 2 mm	—

Part	Test temperature (°C)	Impression diameter (mm)
Enclosure (support the AC plug)/pin holder(SABIC, Type 945 (GG))	125	0.76
Supplementary information: T1 bobbin is phenolic, no test is needed.		

4.7	TABLE: Resistance to fire (See table 1.5.1)				P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
Enclosure	SABIC INNOVATIVE PLASTICS B V	945(GG)	Min thickness: 1.5mm	V-0	UL
Supplementary information: --					

5.1	TABLE: touch current measurement		P
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions
Between live parts and output terminal	0.045	0.25	264Va.c./60Hz, Figure 5A used
Between live parts and enclosure with metal foil	0.005	0.25	264Va.c./60Hz, Figure 5A used
supplementary information:			
--			

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No	
Functional:				
L/N pole(fuse disconnected)	AC	1500	No	
Insulation sheet	AC	1500	No	
Basic/supplementary:				
Two terminals of fuse or fusing resistor F2 (F2 opened) (BI)	AC	1500	No	
Two terminals of fuse F1(F1 opened) (BI)	AC	1500	No	

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Clause	Requirement + Test	Result - Remark	Verdict

Reinforced:			
L/N pole and output terminals (RI)	AC	3000	No
Primary and secondary of T1 (RI)	AC	3000	No
Secondary and core of T1 (RI)	AC	3000	No
Primary and enclosure with foil (RI)	AC	3000	No
Each layer insulating tape(RI)	AC	3000	No
Opto-coupler primary circuit and secondary circuit (RI)	AC	3000	No
Supplementary information: T1 iron core is considered as primary circuit.			

5.3	**TABLE: Fault condition tests**						P
	Ambient temperature (°C) .....:			45 °C			—
	Power source for EUT: Manufacturer, model/type, output rating .....:			--			—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation	
Model: NBS12E150080VE							
D1	S-C	264	1s	F1, F2	--	Fuse F2 opened immediately. D1, D2, D3, D4 damaged. No hazard.	
C1	S-C	264	1s	F1, F2	--	Fuse F2 open immediately. D2 damaged. No hazard.	
R13	S-C	264	1s	F1, F2	--	Fuse F2 opened immediately. D1, D2, D3, D4, Q1, U1 damaged. No hazard.	
D6	S-C	264	1s	F1, F2	0.002	Unit shutdown immediately, No damage, no hazard.	
U1 2-5	S-C	264	10min	F1, F2	--	U1 damaged immediately, no hazard. Test was repeated three times with new samples and results were same.	
T1 pin 1-3	S-C	264	10min	F1, F2	0.002	Unit shutdown immediately, no hazard.	
T1 pin 2-4	S-C	264	10min	F1, F2	0.018	Unit shutdown immediately, no hazard.	
T1 pin A-B	S-C	264	10min	F1, F2	0.002	Unit shutdown immediately, no hazard.	
PC1 pin1-pin2	S-C	264	10 min	F1, F2	0.002	Unit shutdown immediately, no hazard.	
PC1 pin3-pin4	S-C	264	10 min	F1, F2	0.002	Unit shutdown immediately, no hazard.	
PC1 pin1	O-C	264	10 min	F1, F2	0.002	Unit shutdown immediately, no hazard.	
PC1 pin3	O-C	264	10 min	F1, F2	0.002	Unit shutdown immediately, no hazard.	

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Clause	Requirement + Test				Result - Remark	Verdict

Q1 G-D	S-C	264	1 s	F1, F2	--	F2 opened immediately, R13, R13A, Q1 and U1 damaged, no hazard.
Q1 G-S	S-C	264	10 min	F1, F2	0.002	Unit shut down immediately, no damaged, no hazards.
Q1 S-D	S-C	264	1 s	F1, F2	--	F2 opened immediately, R13, R13A and Q1 damaged, no hazard.
D7	S-C	264	10 min	F1, F2	0.002	Unit shut down immediately, no damaged, no hazards.
C10	S-C	264	10 min	F1, F2	0.020	Unit shut down immediately, no damaged, no hazards.
Output “+” to “-”	S-C	264	10 min	F1, F2	0.008	Unit shut down immediately, no damaged, no hazards.
Output “+” to “-”	O-L	264	7 h 40 min	F1, F2	0.111→ 0.116→ 0.121→ 0.123→ (0↔ 0.095)	Temperature was stable at 0.93A, increase to 0.95A, unit shut down Immediately, Maximum temperature was: T1 winding: 109.9℃ T1 core: 108.4℃
For model: NBS12E050210VE						
Output “+” to “-”	S-C	264	10 min	F1, F2	0.008	Unit shut down immediately, no damaged, no hazards.
D7	S-C	264	10 min	F1, F2	0.002	Unit shut down immediately, no damaged, no hazards.
PC1 1-2	S-C	264	10 min	F1, F2	0.002	Unit shut down immediately, no damaged, no hazards.
PC1 3-4	S-C	264	10 min	F1, F2	0.002	Unit shut down immediately, no damaged, no hazards.
Output “+” to “-”	O-L	264	7 h 38 min	F1, F2	0.099→ 0.108→ 0.112→ 0.135(0 ↔ 0.135)→ (0↔ 0.003)	Temperature was stable at 2.7A, increase to 2.9A, unit shut down after 5 mins, Maximum temperature was: T1 winding: 137.0℃ T1 core: 132.4℃
Model: NBS12E120100VE						
Output “+” to “-”	S-C	264	10 min	F1, F2	0.009	Unit shut down immediately, no damaged, no hazards.
D7	S-C	264	10 min	F1, F2	0.002	Unit shut down immediately, no damaged, no hazards.
PC1 1-2	S-C	264	10 min	F1, F2	0.002	Unit shut down immediately, no damaged, no hazards.
PC1 3-4	S-C	264	10 min	F1, F2	0.002	Unit shut down immediately, no damaged, no hazards.

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Clause	Requirement + Test	Result - Remark	Verdict

Output "+" to "-"	O-L	264	7 h 38 min	F1, F2	0.099→ 0.108→ 0.112→ 0.135(0 ↔ 0.135)→ (0↔ 0.003)	Temperature was stable at 1.2A, increase to 1.3A, unit shut down Immediately, Maximum temperature was: T1 winding: 132.7℃ T1 core: 129.8℃

Supplementary information:

1. "S-C" means short-circuited test, "O-L" means overload test, "O-C" means open-circuited test; Uo means output voltage at normal load, Uoc means output voltage without load. (Unit: V d.c.)
2. Thermocouple method was used, the above data are corrected to ambient temperature is 35℃.
3. Limited temperature for winding is 165℃ (Class B) under 35℃ ambient.
4. All types of fuse were considered.
5. F2 can be fuse link or fusible resistor. All fault condition tests were repeated with Fusible resistor F2 and the test result is passed. The fusible resistor F2 operated fault tests were repeated 10 times, the test results are same, the fusible resistor F2 body no explode and no hazards.
6. All tests were considered in AC 90V also, same result generated.

C.2	TABLE: transformers						P
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)
Pri. Winding to Sec. winding	Reinforced insulation	512	261	3000Vac	6.4	6.4	Yes
Iron core to Sec. winding	Reinforced insulation	512	261	3000Vac	6.4	6.4	Yes

Loc.	Tested insulation	Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
Pri. Winding to Sec. winding	Reinforced insulation	AC 3000V	8.1	8.1	Triple insulation wire used
Iron core to Sec. winding	Reinforced insulation	AC 3000V	8.1	8.1	Triple insulation wire used

supplementary information:

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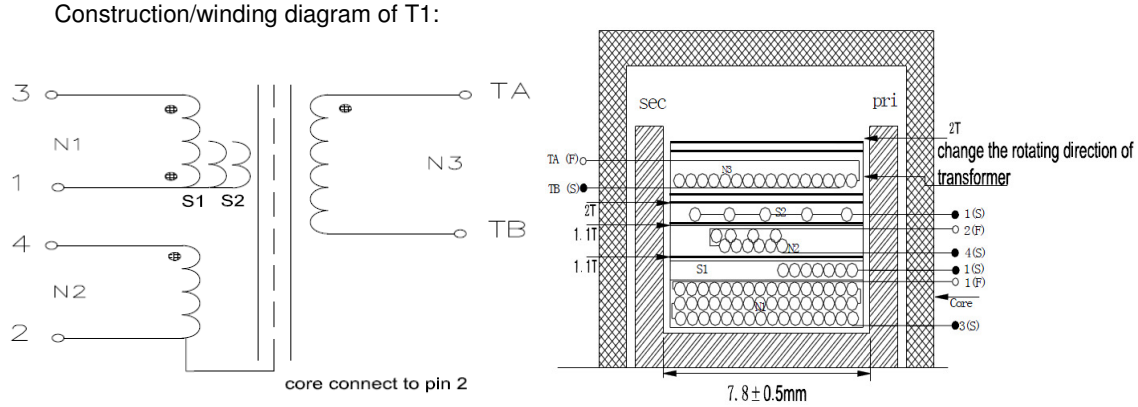
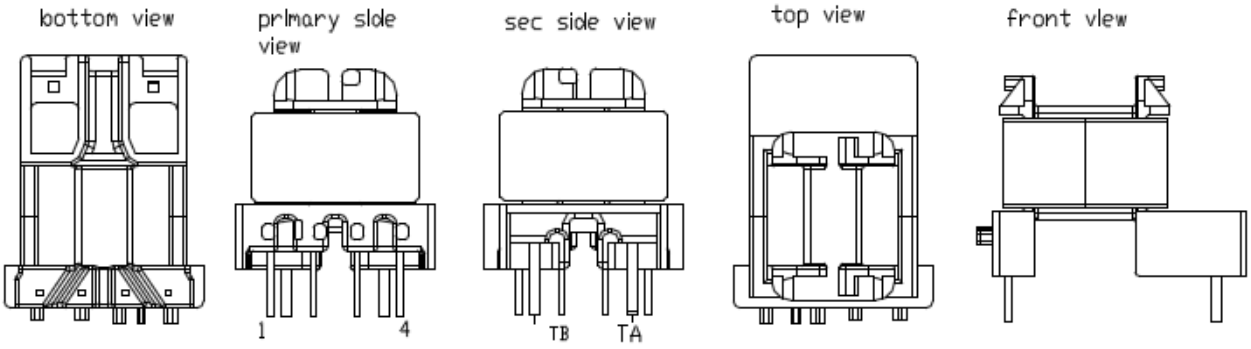
Clause	Requirement + Test	Result - Remark	Verdict

C.2	TABLE: transformers	P

Construction/winding diagram of T1:



External view of T1:



Winding Specification of T1:
(T012 Z 0001)

Item	Terminal		Wire	Turns
	Start	Final		
N1	3	1	Magnet Wire Φ0.22mm	100ts
S1	1	/	Magnet Wire Φ0.22mm	1.5 - 30.5ts
N2	4	2	Magnet Wire Φ0.22mm	19 ts
S2	1	/	Magnet Wire Φ0.22mm	0 - 30.5ts
N3	TB	TA	Triple Wire Φ0.7mm*1Ts	7ts

(T012 Z 0002)

Item	Terminal		Wire	Turns
	Start	Final		
N1	3	1	Magnet Wire Φ0.22mm	100ts
S1	1	/	Magnet Wire Φ0.22mm	1.5 - 30.5ts
N2	4	2	Magnet Wire Φ0.22mm	19ts
S2	1	/	Magnet Wire Φ0.22mm	0 - 30.5ts
N3	TB	TA	Triple Wire Φ0.4mm*1Ts	16ts

END OF REPORT

Attachment No. 1

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....:	EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013
Attachment Form No.....:	EU_GD_IEC60950_1F
Attachment Originator .....:	SGS Fimko Ltd
Master Attachment.....:	Date 2014-02

EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 – CENELEC COMMON MODIFICATIONS

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Clauses, subclauses, notes, tables and figures which are additional to those in IEC60950-1 and it´s amendmets are prefixed “Z”		
Contents (A2:2013)	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZD (informative) IEC and CENELEC code designations for flexible cords		P
General	Delete all the “country” notes in the reference document (IEC 60950-1:2005) according to the following list: 1.4.8 Note 2; 1.5.1 Note 2 & 3; 1.5.7.1 Note 1.5.8 Note 2; 1.5.9.4 Note; 1.7.2.1 Note 4, 5 & 6 2.2.3 Note; 2.2.4 Note; 2.3.2 Note 2.3.2.1 Note 2; 2.3.4 Note 2; 2.6.3.3 Note 2 & 3 2.7.1 Note; 2.10.3.2 Note 2; 2.10.5.13 Note 3 3.2.1.1 Note; 3.2.4 Note 3.; 2.5.1 Note 2 4.3.6 Note 1 & 2; 4.7 Note 4; 4.7.2.2 Note 4.7.3.1Note 2; 5.1.7.1 Note 3 & 4; 5.3.7 Note 1 6 Note 2 & 5; 6.1.2.1 Note 2; 6.1.2.2 Note 6.2.2 Note; 6.2.2.1 Note 2; 6.2.2.2 Note 7.1 Note 3; 7.2 Note; 7.3 Note 1 & 2 G.2.1 Note 2; Annex H Note 2		P
General (A1:2010)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1 Note; 6.1.2.1 Note 2 6.2.2.1 Note 2; EE.3 Note		P

Attachment No. 1

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
General (A2:2013)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A2:2013) according to the following list: 2.7.1 Note * 2.10.3.1 Note 2 6.2.2. Note * Note of secretary: Text of Common Modification remains unchanged.		P
1.1.1 (A1:2010)	**Replace** the text of NOTE 3 by the following. NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.		N/A
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.		N/A
(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 (Added info*)	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC. New Directive 2011/65/11 *		P
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1 (A12.2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.		N/A
	Zx Protection against excessive sound pressure from personal music players		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.1 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. A personal music player is a portable equipment for personal use, that: – 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. 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. 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. The requirements in this sub-clause are valid for music or video mode only. The requirements do not apply: – while the personal music player is connected to an external amplifier; or – while the headphones or earphones are not used. 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. The requirements do not apply to: – hearing aid equipment and professional equipment; 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.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	– analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015. 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. For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.		N/A
	Zx.2 Equipment requirements No safety provision is required for equipment that complies with the following: – equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ 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. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx. All other equipment shall: 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		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	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 more than once every 20 h of cumulative listening time; and NOTE 2 Examples of means include visual or audible signals. Action from the user is always required. 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. d) have a warning as specified in Zx.3; and e) not exceed the following: 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 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 $L_{Aeq,T}$) 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. NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) 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.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.3 Warning The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: – the symbol of Figure 1 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."  **Figure 1 – Warning label (IEC 60417-6044)** 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.		N/A
	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed "programme simulation noise" described in EN 50332-2 shall be ≥ 75 mV. 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). NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.4.2 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 $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. 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.). NOTE An example of a wired listening device with digital input is a USB headphone.		N/A
	Zx.4.3 Wireless listening devices In wireless mode: – with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and – 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 $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.		N/A
	Zx.5 Measurement methods 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. NOTE Test method for wireless equipment provided without listening device should be defined.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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;		N/A
	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	This subclause has been declared ‘void’.		N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N/A

Attachment No. 1

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.5.1	Replace “60245 IEC 53” by “H05 RR-F”; “60227 IEC 52” by “H03 VV-F or H03 VVH2-F”; “60227 IEC 53” by “H05 VV-F or H05 VVH2-F2”. In Table 3B, replace the first four lines by the following: Up to and including 6 | 0,75 [a] | Over 6 up to and including 10| (0,75) [b] 1,0 | Over 10 up to and including 16| (1,0) [c] 1,5 | In the conditions applicable to Table 3B delete the words “in some countries” in condition [a]. In NOTE 1, applicable to Table 3B, delete the second sentence.		N/A
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		N/A
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 | 1,5 to 2,5 | 1,5 to 4 | Delete the fifth line: conductor sizes for 13 to 16 A		N/A
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to: 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artifical optical radiation).		N/A
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.		N/A
Bibliography	Additional EN standards.		—

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IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
ZA	**NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS**		—

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In **Denmark**, certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		N/A
1.2.13.14 (A11:2009)	In **Norway** and **Sweden**, for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1 (A11:2009)	In **Finland, Norway** and **Sweden**, 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
1.5.8	In **Norway**, 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	In **Finland**, **Norway** and **Sweden**, the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A

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IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	In **Finland**, **Norway** and **Sweden**, 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: In **Finland**: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In **Norway**: “Apparatet må tilkoples jordet stikkontakt” In **Sweden**: “Apparaten skall anslutas till jordat uttag”		N/A
1.7.2.1 (A11:2009)	In **Norway** and **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 (galvanic isolator, see EN 60728-11).”		

Attachment No. 1

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	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. 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.” 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.”		N/A
1.7.2.1 (A2:2013)	In **Denmark**, 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 **Denmark** shall be as follows: In **Denmark**: “Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.”		N/A

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IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5 1.7.5 (A11:2009)	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. For **CLASS II EQUIPMENT** the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.		N/A
1.7.5 (A2:2013)	In **Denmark**, socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011. For class I equipment the following Standard Sheets are applicable: DK 1-3a, DK 1-1c, DK 1-1d, DK 1-5a or DK 1-7a, with the exception for STATIONARY EQUIPMENT where the socket-outlets shall be in accordance with Standard Sheet DK 1-1b, DK 1-1c, DK 1-1d or DK 1-5a. Socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance with DS 60884-2-D1 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with by DS 60884-2-D1 Standard Sheet DKA 1-3a or DKA 1-3b. Justification the Heavy Current Regulations, 6c		N/A
2.2.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.2	In **Finland**, **Norway** and **Sweden** there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.6.3.3	In the **United Kingdom**, the current rating of the circuit shall be taken as 13 A, not 16 A.		N/A

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IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	In the **United Kingdom**, 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.		P
2.10.5.13	In **Finland**, **Norway** and **Sweden**, there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A
3.2.1.1	In **Switzerland**, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998: SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998:Plug Type 21, L+N, 250 V, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A		N/A

Attachment No. 1

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding13 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 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 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 Regulations, Section 107-2-D1 or EN 60309-2.		N/A
3.2.1.1 (A2:2013)	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1. CLASS I 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 sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Justification the Heavy Current Regulations, 6c		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In **Spain**, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. CLASS I 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
3.2.1.1	In the **United Kingdom**, 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 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.1.1	In **Ireland**, 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
3.2.4	In **Switzerland**, for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the **United Kingdom**, a power supply cord with conductor of 1,25 mm2 is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.4	In the **United Kingdom**, 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	In the **United Kingdom**, the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 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, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		P
4.3.6	In **Ireland**, 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
5.1.7.1	In **Finland**, **Norway** and **Sweden** TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and 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

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IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.1 (A1:2010)	In **Finland**, **Norway** and **Sweden**, 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 of either - 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. Alternatively for components, there is no distance through insulation requirements 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 - 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.		N/A

Attachment No. 1

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by 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 60384-14: - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		N/A
6.1.2.2	In **Finland**, **Norway** and **Sweden**, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, 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	In **Finland**, **Norway** and **Sweden**, for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
7.3 (A11:2009)	In **Norway** and **Sweden**, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A

Attachment No. 1

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Annex ZD
(informative)

IEC and CENELEC code designations for flexible cords

Type of flexible cord	Code designations	
	IEC	CENELEC
PVC insulated cords		
Flat twin tinsel cord	60227 IEC 41	H03VH-Y
Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F H03VVH2-F
Ordinary polyvinyl chloride sheathed flexible cord	60277 IEC 53	H05VV-F H05VVH2-F
Rubber insulated cords		
Braided cord	60245 IEC 51	H03RT-F
Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F
Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F
Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F
Cords having high flexibility		
Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H
Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	H03RV4-H
Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H

Attachment No. 2

National and Group Differences for IEC 60950-1 2nd Ed. +A1:2009+A2:2013 as per CB Bulletin

National Differences covered by this report					
Country	CENELEC Group differ. (see separate attachment)	National differ.	Base standard	National standard	Tested
AT Austria	Yes	-	IEC 60950-1 ed2 + A1+ A2	EN 60950-1/A2:2013	Yes
AU Australia	-	Yes	IEC 60950-1 ed2+ A1	AS/NZS 60950.1:2011/Amdt 1:2012	Yes
Argentina	-	-	IEC 60950-1 ed2+ A1	-	Yes
Belarus	-	-	IEC 60950-1 ed2 + A1	-	Yes
BE Belgium	Yes	-	IEC 60950-1 ed2 + A1+ A2	EN 60950-1/A2:2013	Yes
Brazil	-	-	IEC 60950-1 ed2 + A1	-	Yes
CA Canada	-	Yes	IEC 60950-1 ed2 + A1	CAN/CSA-C22.2 No. 60950-1/A1:2011	Yes
CH Switzerland	Yes	-	IEC 60950-1 ed2+ A1	SN EN 60950-1/A1:2010	Yes
CN China	-	Yes	IEC 60950-1(ed.2)	GB4943.1-2011	Yes
CZ Czech Republic	Yes	-	IEC 60950-1 ed2 + A1	EN 60950-1/A1:2010	Yes
DE Germany	Yes	Yes	IEC 60950-1 ed2 + A1+ A2	EN 60950-1/A2:2013; VDE 0805-1:2011-01	Yes
DK Denmark	Yes	Yes	IEC 60950-1 ed2 + A1+A2	DS/EN 60950-1/A2:2013	Yes
ES Spain	Yes	Yes	IEC 60950-1 ed2	UNE EN 60950-1	Yes
FI Finland	Yes	Yes	IEC 60950-1 ed2 + A1	EN 60950-1/A1:2010	Yes
FR France	Yes	-	IEC 60950-1 ed2 + A1+ A2	EN 60950-1/A2:2013	Yes
GB United Kingdom	Yes	Yes	IEC 60950-1 ed2 + A1+ A2	BS EN 60950-1/A2:2013	Yes
HU Hungary	Yes	-	IEC 60950-1 ed2 + A1+ A2	EN 60950-1/A1:2010	Yes
IE Ireland	Yes	Yes	IEC 60950-1 ed2	EN 60950-1	Yes
IL Israel	-	Yes	IEC 60950-1 ed2 + A1	SI 60950-1:2012	Yes
IN India	-	-	IEC 60950-1 ed2 + A1	-	Yes
IT Italy	Yes	-	IEC 60950-1 ed2 + A1+A2	EN 60950-1/A2:2013	Yes
JP Japan	-	Yes	IEC 60950-1 ed1	J60950-1(H22); J3000 (H25)	Yes
KR Korea	-	Yes	IEC 60950-1 ed2 + A1	K 60950-1	Yes
MY Malaysia	-	-	IEC 60950-1 ed2 + A1	-	-
NO Norway	Yes	-	IEC 60950-1 ed2 + A1+A2	EN 60950-1/A2:2013	Yes
NL Netherlands	Yes	-	IEC 60950-1 ed2 + A1+A2	EN 60950-1/A2:2013	Yes
PL Poland	Yes	-	IEC 60950-1 ed2 + A1	EN 60950-1/A1:2010	Yes
Russian Republic	-	-	IEC 60950-1 ed1	-	Yes
Saudi Arabia	-	-	IEC 60950-1 ed2 + A1	-	Yes
SE Sweden	Yes	Yes	IEC 60950-1 ed2 + A1+A2	SS-EN60950-1/A2:2013	Yes

Attachment No. 2

National Differences covered by this report					
Country	CENELEC Group differ. (see separate attachment)	National differ.	Base standard	National standard	Tested
SG Singapore	-	-	IEC 60950-1 ed2 + A1+A2	-	-
SI Slovenia	Yes	-	IEC 60950-1 ed2 + A1	SIST EN 60950/A1:2010	Yes
Slovakia	-	-	IEC 60950-1 ed2 + A1+A2	-	Yes
SERBIA	-	-	IEC 60950-1 ed2 + A1+A2	-	Yes
UA Ukraine	-	Yes	IEC 60950 ed3	DSTU 4113-2001	Yes
US United States of America	-	Yes	IEC 60950-1 ed2 + A1+A2	UL 60950-1 Am.1; Am.2	Yes

Attachment No. 2

General remarks:

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

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

See attachment 1 for European Group Differences and National Differences.

Note: Before placing the products in the different countries, the manufacturer must ensure that:

1. Operating Instructions, Ratings Labels and Warnings Labels written in an Accepted or Official Language of the county in question.
2. The equipment complies with the National Standards and/or Electrical Codes of the country in question.
3. Mains plugs and internal wirings should be assessed to the national standard.

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)

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

AU Australia			**AU**
	APPENDIX ZZ **VARIATIONS TO IEC 60950-1, ED.2.0 (2005)+A1(2009) FOR APPLICATION IN AUSTRALIA AND NEW ZEALAND** **(Normative)**		—
	ZZ1 INTRODUCTION This Appendix sets out variations and additional requirements to cover issues which have not been addressed by the International Standard. These variations indicate national variations for purposes of the IECEE CB System and will be published in the IECEE CB Bulletin. **ZZ2 VARIATIONS** The following variations apply to the source text.		—
1.2	Insert the following between 'person, service' and 'range, rated frequency': POTENTIAL IGNITION SOURCE….. …..1.2.12		P
1.2.12.201	Insert a new Clause 1.2.12.201 after Clause 1.2.12.15 as follows: 1.2.12.201 POTENTIAL IGNITION SOURCE Possible fault which can start 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 15 VA. 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.		P
1.5.1	1. Add the following to the end of the first paragraph: 'or the relevant Australian/New Zealand Standard'. 2. In NOTE 1, add the following after the word 'standard': 'or an Australian/New Zealand Standard'		P
1.5.2.	Add the following to the end of the first and third dash items: 'or the relevant Australian/New Zealand Standard'.		P
3.2.5.1	Modify Table 3B as follows: 1. Delete the first four rows and replace with the following:		N/A

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AU Australia **AU**

N/A

RATED CURRENT of equipment A			Minimum conductor sizes			
			Nominal cross-sectional area mm^2		AWG or kcmil [cross-sectional area in mm^2] see Note 2	
Over 0.2	up to and including	3		0,5 [a]	18	[0,8]
Over 3	up to and including	7.5		0,75	16	[1,3]
Over 7.5	up to and including	10	(0,75) [b]	1,00	16	[1,3]
Over 10	up to and including	16	1,0) [c]	1,5	14	[2]

2. Delete NOTE 1.

3. Delete Footnote [a] and replace with the following:

[a] 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 permitted; see AS/NZS 3191).

4.1.201	Insert a new Clause 4.1.201 after Clause 4.1 as follows: 4.1.201 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 receivers, specified in AS/NZS 60065.		N/A
4.3.6	Delete the third paragraph and replace with the following: 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	Clause 4.3.13.5 and replace with the following: 1.Add the following after each reference to 'IEC 60825-1' : or 'AS/NZS 60825.1' 2. Add the following after 'IEC 60825-2' in line two of the first paragraph: 'or AS/NZS 60825.2'		N/A
4.7	Add the following new paragraph to the end of the clause: 'For alternate tests refer to Clause 4.7.201.'		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

AU Australia			**AU**
4.7.201	Insert a new Clause 4.7.201 after Clause 4.7.3.6 as follows: 4.7.201 Resistance to fire – Alternative tests 4.7.201.1 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.		N/A

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AU Australia			**AU**
	(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 mm3, integrated circuits, transistors and optocoupler packages, if these components are mounted on material of flammability category V-1, or better, according to AS/NZS 60695.11.10. 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. 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. 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. These tests are not carried out on internal wiring. 4.7.201.2 Testing of non-metallic materials 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℃. 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. 4.7.201.3 Testing of insulating materials. 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℃.		N/A

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AU Australia			**AU**
	The test shall be also carried out on other parts of insulating material which are within a distance of 3mm of the connection. NOTE Contacts in components such as switch contacts are considered to be connections. 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 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:		N/A
	Clause of AS/NZS 60695.11.5	Change	N/A
	9 Test procedure		
	9.2 Application of needle-flame	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. If possible the flame shall be applied at least 10 mm from a corner Replace the second paragraph with: The duration of application of the test flame shall be 30 s±1 s.	
	9.3 Number of test specimens	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.	
	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.	

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Clause	Requirement + Test	Result - Remark	Verdict

AU Australia		**AU**
	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. 4.7.201.4 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 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. 4.7.201.5 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 — -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 openings only for connecting wires which fill the openings completely. Compliance shall be determined using the smallest thickness of the material. 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.	N/A

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
AU Australia			**AU**
6.2.2	For Australia only, delete the first paragraph and Note, and replace with the following: In Australia only, compliance with 6.2.2 shall be checked by the tests of both 6.2.2.1 and 6.2.2.2.		N/A
6.2.2.1	For Australia only, delete the first paragraph including the Note, and replace with the following: In Australia only, the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator reference 1 of Table N.1. The Interval between successive impulses is 60 s and the initial voltage, Uc, is: for 6.2.1 a):7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and for 6.2.1 b) and 6.2.1 c):1.5 kV. NOTE 201 – The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines. NOTE 202 – The value of 2.5 kV for 6.2.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.		N/A
6.2.2.2	For Australia only, delete the first paragraph including the Note, and replace with the following: In Australia only, the a.c. test voltage is: for 6.2.1 a):3 kV; and for 6.2.1 b) and 6.2.1 c):1.5 kV. NOTE 201 – Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used. 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.		N/A
7.3	Add the following before the first 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 telecommunications purposes.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

AU Australia			**AU**
Annex 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
Index	1.Insert the following between 'asbestos, not to be used as insulation' and 'attitude see orientation': AS/NZS 3112……..4.3.6 AS/NZS 3191……..3.2.5.1(Table 3B) AS/NZS 60064……4.1.201 AS/NZS 60695.2.11……4.7.201.2, 4.7.201.3 AS/NZS 60695.11.10……..4.7.201.1, 4.7.201.5 AS/NZS 60695.11.5……4.7.201.3 AS/NZS 60825.1…….4.3.13.5.1 AS/NZS 60825.2…….4.3.13.5.1 2. Insert the following between 'positive temperature coefficient(PTC) device' and 'Powder': Potential ignition source……1.2.201, 4.7.201.3, 4.7.201.5		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

CA Canada			**CA**
	Canada and the United States of America have adopted a single, bi-national standard, CAN/CSA C22.2 No. 60950-1/UL60950-1, Second Edition, Amendment 1 which is based on IEC 60950-1, Second Edition, Amendment 1. This bi-national standard should be consulted for further details on the national conditions and differences summarized below.		—
SPECIAL NATIONAL CONDITIONS			—
	The following is a summary of the key national differences based on national regulatory requirements, such as the Canadian Electrical Code (CEC) Part and the Canadian Building Code, which are referenced in legislation and which form the basis for the rules and practices followed in electrical and building installations.		—
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.		P
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.		P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the CEC/NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC are required to have special construction features and identification markings.		N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

CA Canada			**CA**
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with CEC Part 1 or NEC shall be marked with the voltage rating and "Class 2" or equivalent. Marking shall be located adjacent to the terminals and shall be visible during wiring.		N/A
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.		N/A
2.6.3.3	The first column on Table 2D modified to require, "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable. Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.		N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

CA Canada			**CA**
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.		N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		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
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.		N/A
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0.		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for Canadian/US wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).		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
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.		N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

CA Canada			**CA**
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.		N/A
4.3.13.5	Equipment with lasers is required to meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.		N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m^2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.		N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations, 21 CFR 1020, as applicable.		N/A
OTHER DIFFERENCES The following key national differences are based on requirements other than national regulatory requirements.			—
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include: attachment plugs, battery packs (rechargeable type, used with transportable equipment), cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, transient voltage surge suppressors, tubing, wire connectors, and wire and cables.	(see appended table 1.5.1)	P

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

CA Canada			**CA**
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply. This maximum operating voltage shall include consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.		N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.		N/A
4.3.2	Equipment with handles is required to comply with special loading tests.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.		N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are to be overloaded. During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary.		N/A
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.		N/A
Annex EE	Articulated accessibility probe (Fig EE.3) required for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

CA Canada			**CA**
Annex 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

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

CN China			**CN**
1.1.2	GB 4943.1-2011 applies to equipment for use at altitudes not exceeding 5000m above sea level, primarily in regions with moderate or tropical climates. Amend the third dashed paragraph of 1.1.2 as: ——equipment intended to be used in vehicles, on board ships or aircraft, at altitudes greater than 5000m;		P
1.4.5	After the third paragraph, add a paragraph: 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. The first dash paragraph "-the RATED VOLTAGE is 230V single -phase or 400V three-phase, in which case the tolerance shall be taken as +10% and -10%" of IEC 60950-1:2005 is deleted in GB 4943.1-2011		P
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 ℃, 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 ℃, whichever is greater. Add note 2: For equipment is to be operated at 2000m-5000m above sea leave, its temperature test conditions and temperature limits are under consideration.		P
1.5. 2	Add a note behind the first break off section in Clause 1.5.2: A component used shall comply with related requirements corresponding altitude of 5000m.		P
1.7	Add one paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.		N/A
1.7.1	Based on the AC mains supply of China, 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 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.	Rated voltage: 100-240Vac; Rated frequency: 50/60Hz	P

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Clause	Requirement + Test	Result - Remark	Verdict

CN China			**CN**
1.7.2.1	Add requirements of warning for equipment intended to be used at altitudes 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."  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.		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. Delete note of Clause 2.7.1.		P

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Clause	Requirement + Test	Result - Remark	Verdict

CN China			**CN**
2.9.2	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℃ and a relative humidity of (93±3)%. During this conditioning the component or subassembly is not energized. 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) %. The temperature of the air, at all places where samples can be located, is maintained within 2 ℃ of any convenient value between 20 ℃ and 30 ℃ such that condensation does not occur. Due to pretreatment of equipment operated at high altitude area is humidity conditioning withstand hot shock, specific requirements are to be considered. Add note: For equipment to be operated at 2000 m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered.		P
2.10.3.1	Amend the third paragraph of Clause 2.10.3.1 to be: These requirements apply for equipment to be operated up to 2000 m above sea level. For equipment to be operated at more than 2000 m 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 5000 m 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.	(See Table 2.10.3 and 2.10.4)	P
2.10.3.3& 2.10.3.4	Add "(applicable for altitude up to 2000m)" in header of Table 2K, 2L and 2M.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

CN China			**CN**
2.10.3.4	Add a new section above Table 2K and in Clause 2.10.3.4: Minimum CLEARANCES determined by above rules apply for equipment to be operated up to 2000m above sea level. For equipment to be operated at 2000 m - 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（ IEC 60664-1）. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of GB/T16935.1.	(See Table 2.10.3 and 2.10.4)	P
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
Annex E	Last section of Annex E amended as: For comparison of winding temperatures determined by the resistance method of this annex with the temperature limits of Table 4B, 35 ℃ shall be added to the calculated temperature rise. And add note: for equipment not to be operated at tropical climatic conditions, 25 ℃ shall be added to the calculated temperature rise to compare with the temperature of Table 4B.		N/A
Annex G.6	Change the second section of Clause G.6 to be: For equipment to be operated at 2000 m - 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 5000 m 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
Annex BB (informative)	Amended as : The differences between Chinese national standards GB 4943.1-2011 and GB 4943-2001.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

CN China			**CN**
Annex DD (normative)	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 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.		N/A
Annex EE (informative)	Added annex EE: Illustration relative to safety explanation in normative Chinese, Tibetan, Mongolian, Zhuang Language and Uighu.		N/A
Other amendments	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

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

CN China		**CN**
Quoting standards and reference documents	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; - 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. When quoting several chapters or clauses of the international standard, 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. 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 and GB 4943.1-2011.	N/A

DE Germany			**DE**
1.5	The moulded plug of plug-in power supplies will be considered as component and will be generally evaluated in Germany according to DIN VDE 0620-1:2010 respectively DIN VDE 0620-1:2013 and DIN VDE 0620-2-1:2013. After the test according to DIN VDE 0620-2-1:2013, sub-clause 24.2, the plug be shall still pass the test according to DIN VDE 0620-101:1992 clause 7, figure 2 “Gauge for interchangeability”. It should be possible to insert the plug without applying an excessive force such that the end surface touches the surface of the gauge.		P

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

DE Germany			**DE**
Annex ZC, cl. 1.7.2.1	According to GPSG, section 2, clause 4: If certain rules on the use, supplementation or maintenance of an item of technical work equipment or ready-to-use commodity must be observed in order to guarantee safety and health, instructions for use in German must be supplied when it is brought into circulation.		P

DK Denmark			**DK**
1.2.4.1	In Denmark, certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		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. For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.		N/A
3.2.1.1	In Denmark, supply cords of single-phase equipment having a rated current not exceeding13 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 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 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 Regulations, Section 107-2-D1 or EN 60309-2.		N/A

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

ES Spain			**ES**
3.2.1.1	In Spain, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. CLASS I 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

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

FI Finland			**FI**
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 as follows: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"		N/A
2.3.2	There are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.10.5.13	There are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		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
	  ○ is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in telecommunication centre; and
	  ○ has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and
	  ○ 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

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
FI Finland			**FI**
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 of either - 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. 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 - 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. It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14:2005, 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 60384-14:2005 - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14:2005, in the sequence of tests as described in EN 60384-14:2005.		N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

FI Finland			**FI**
6.1.2.2	The exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, 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	For requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
GB United Kingdom			**GB**
2.6.3.3	In the **United Kingdom**, the current rating of the circuit shall be taken as 13 A, not 16 A.		P
2.7.1	In the **United Kingdom**, 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.		P
3.2.1.1	In the **United Kingdom**, 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 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.5.1	In the **United Kingdom**, a power supply cord with conductor of 1,25 mm^2 is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the **United Kingdom**, 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	In the **United Kingdom**, the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1: 1997 and Amendment 2:2003 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, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		P

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Clause	Requirement + Test	Result - Remark	Verdict

IE Ireland			**IE**
3.2.1.1	In Ireland, 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	In Ireland, 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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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

IL Israel			**IL**
1.6.1	Note: In Israel, the clause is subject to Electricity Law, 1954, its regulations and updates.		N/A
1.7.201	**Marking in the Hebrew language** The marking in the Hebrew language shall be in accordance with the Consumer Protection Order (Marking of goods), 1983. In addition to the marking required by clause 1.7.1, the following shall be marked in Hebrew language. 1. Name of the apparatus and its commercial designation; 2. Manufacturer's name and address; if the equipment 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 manufacture. The details shall be marked on the apparatus or on its packaging, or on a label well attached to the apparatus or on the packaging, by bonding or sewing, such that the label cannot be easily removed.		N/A
1.7.2.1	All the instructions and warnings related to safety shall also be written in the Hebrew language.		N/A
1.201	Power consumption in standby mode The equipment shall comply with the requirements of the Energy Sources Regulations (Maximum electrical power in standby mode for domestic and office electrical appliances), 20011, with a permitted deviation of up to 10%	Shall be considered during national approved	N/A
2.9.4	**Separation from hazardous voltages** -The following shall be added at the beginning of the clause: According to the Electricity Law, 1954, and the Electricity Regulations (Earthing and means of protection against electricity of voltages up to 1000V) , 1991, in Israel, seven means of protection from electrocution are permitted, as follows: 1) Network system earthing - (TN-C-S, TN –S); 2) Network system earthing - (TT); 3) Network Insulation Terre – (IT); 4) Isolated transformer; 5) Safety extra low voltage; 6) Residual current circuit breaker; 7) Reinforced insulation; Double insulation.		N/A

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

IL Israel			**IL**
2.201	**Prevention of electromagnetic interference** The device shall meet the requirements in the relevant part of the Israeli Standard series, SI 961. If the device contains components for the prevention of electromagnetic interference, the devices shall not lower the safety level of the device, as required by this standard.		N/A
3.2.1.1	Note: In Israel, the feed plug shall comply with thee requirements of Israel Standard SI 32 Part1.1.		N/A
3.2.1.2	Note: As of the date of publication of this standard, there is no Israel Standard for connection accessories to d.c.		N/A
Annex P	Normative references		P

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

IL Israel **IL**

P

The referenced International Standard	The substituted Israel Standard	Comments
IEC 60065: 2001	SI 60065 [(a)] - Audio, video and similar electronic apparatus – Safety requirements	The Israel Standard, excluding national modifications and additions noted, is identical to the International Standard, IEC 60065 – Edition 7.1:2005-12
IEC 60083	Si 32 Part 1.1[(a)] - Plugs and socket-outlets for household and similar purposes: plugs and socket-outlets for single phase up tp 16A-General REuse standardized	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Standard, IEC 60884-1 – Third edition:2002-06
IEC 60227 (all parts)	SI 60227 (all parts)- Polyvinyl chloride insulated cables of rated voltage up to and including 450/750V	The Israeli Standard series, excluding national modifications and additions noted, is identical to the Standard series, IEC 60227 (all parts)
IEC 60245 (all parts)	SI 60245 Part 1 – Rubber insulated cables - Rated voltage up to and including 450/750V: General requirements	The Israeli Standard series, excluding national modifications and additions noted, is identical to the Standard series, IEC 60245 (all parts)
IEC 60309 (all parts)(b)	SI 1109 Part 1 -Plugs, socket- outlets and couplers for industrial purposes: General requirements	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Standard, IEC 60309-1 – Fourth edition: 1999-2.
	SI 1109 Part 2 -Plugs, socket- outlets and couplers for industrial purposes: Dimensional interchangeability requirements for pin and contact-tube accessories	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Standard, IEC 60309-1 – Fourth edition: 1999-4.
IEC 60317 (all parts)(b)	SI 1067 Part 1 – Enameled(e) round copper wires with high mechanical properties	The Israeli Standard is identical to the International Electrotechnical Commission Standard IEC 3l7-1: 1980-02
	SI 1067 Part 2 - Self-fluxing enamelled(e) round copper wires	The Israel Standard is identical to the International Electrotechnical Commission Standard IEC 307-4: 1980-02
	SI 1067 Part 3 - Enameled(e) round copper wires with a temperature index of 180ºC	The Israel Standard is identical to the International Electrotechnical Commission IEC 317-8: 1980-02

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Clause	Requirement + Test	Result - Remark	Verdict

IL Israel **IL**

P

The referenced International Standard	The substituted Israel Standard	Comments
IEC 60320 (all parts)(b)	SI 60320 Part 1 - Appliance couplers for household and similar general purposes: General requirements	The Israel Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60320-1: Second edition: 2001-06
	SI 60320 Part 2.1 - Appliance couplers for household and similar general purposes: Sewing machine couplers	The Israel Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60320-2-1: Second edition: 2000-07
	SI 60320 Part 2.2 - Appliance couplers for household and similar general purposes: Interconnection couplers for household and similar equipment	The Israel Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60320-2-2: Second edition: 1998-08
	SI 60320 Part 2.3 - Appliance couplers for household and similar general purposes: appliance coupler with a degree of protection higher than IPXO	The Israel Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60320-2-3: First edition: 1998-09.
IEC 60364-1: 2001	Electricity Law, 1954, with its Regulations and updates	-
IEC 60730-1: 1999 Amendment 1 (2003)	SI 60730 Part 1 - Automatic electrical controls for household and similar use: General requirements	The Israel Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60730-1: Edition 3.2: 2007-03.
IEC 60825-1	SI 60825 Part 1 - Safety of products: Equipment classification and requirements	The Israel Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60825-1: Second edition 3.2: 2007-03.

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Clause	Requirement + Test	Result - Remark	Verdict

IL Israel **IL**

P

The referenced International Standard	The substituted Israel Standard	Comments
IEC 60947-1: 2004	SI 60947 Part 1 -Low-voltage switchgear and controlgear: General rules	The Israel Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60947-1: Edition 5.0: 2007-06.
IEC 61058-1: 2000	SI 61058 Part 1 - Switches for appliances: General requirements	The Israel Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 61058-1: Edition 3.1: 2001.
ISO 3864 (all parts)(b)	SI 3864 Part 1(a) - Graphical symbols	The Israel Standard, excluding national modifications and additions noted, is identical to the International Organization for Standardization Standard, ISO 3864-1: First edition 2002-05-15.

Notes:
(a) This Standard is being revised.

(b) In the International Standard series, there are parts not yet adopted as Israeli Standards. This table notes the relevant Israeli Standards, and in the Comments column, the corresponding parts of the International Standard series.

(c) Not relevant to the translation.

N/A

-The following shall be added to the annex:

Israel Standards

SI 961 (all parts) – Electromagnetic compatibility

Israeli Laws, Regulations and documents

Electricity Law, 1954, with its Regulations and updates

Cosumer Protection Order (Marking of goods), 1983, Kovetz Hatakanot 4465 daed 1983-02-24

Energy Sources Regulations (Maximum electrical power in standby mode for domestic and office electrical appliances), 2011

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

JP Japan (H22)			JP
1.2.4.1	Add the following new NOTE. NOTE Even if the equipment is designed as Class I, the equipment is regarded as Class 0I equipment when a 2-pin adaptor with an earthing lead wire or a cord set having a 2-pin plug with an earthing lead wire is provided or recommended.		N/A
1.2.4.3A	Add the following new clause. 1.2.4.3A CLASS 0I EQUIPMENT Equipment having attachment plug without earthing blade, where protection against electric shock is achieved by: - using BASIC INSULATION, and - providing 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. circuit.		N/A
1.3.2	Add the following notes after the first paragraph: NOTE 1 Transportable or similar equipment that is 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 earthling 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

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

JP Japan (H22)			JP
1.5.1	Replace the first paragraph with the following: Where safety is involved, components shall comply either with the requirements of this standard or 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, in case a component that falls within the scope of the METI Ministerial ordinance (No. 85:1962) is properly used in accordance with its marked ratings, the requirements of 1.5.4, 2.8.7 and 3.2.5 apply, and in addition, a cord connector of power supply cord set matching with an appliance inlet specified in the standard sheets of IEC 60320-1, shall comply with relevant standard sheet of IEC 60320-1. Replace NOTE 1 with the following: NOTE 1 A JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope.	(see appended table 1.5.1)	P

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
JP Japan (H22)			JP
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. Add a NOTE after the first dashed paragraph as follows: 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. Replace the first sentence in the third dashed paragraph as follows: - 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.	(see appended table 1.5.1)	P
1.5.6	In this sub-clause, add “JIS C 5101-14:1998 or” before the reference number, IEC 60384-14:1993.		P
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.		P
1.7.1	Replace the fifth dashed paragraph with the following: - manufacturer’s or responsible company’s name or trade-mark or identification mark;		N/A
1.7.5	In the second paragraph, add “or JIS C 8303:2007” after the reference number, IEC/TR 60083:1997”.		N/A

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

JP Japan (H22)			JP
1.7.5A	Add the following new clause after 1.7.5 1.7.5A Appliance Couplers If an appliance coupler according to IEC 60320-1, C.14(rated current: 10 A) is used in equipment whose rated voltage is less than 125 V and the rated current is over 10 A, 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 1.7.17A 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: 必ず接地接続を行って下さい “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: 接地接続は必ず、電源プラグを電源につなぐ前に行って下さい。又、接地接続を外す場合は、必ず電源プラグを電源から切り離してから行って下さい。 “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 the first paragraph. This also applies to the conductor of lead wire for protective earthing of CLASS 0I EQUIPMENT.		N/A

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IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

JP Japan (H22)			JP
2.6.4.2	Replace the first paragraph with the following. Equipment required to have protective earthing shall have a main protective earthing terminal. 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.		N/A
2.6.5.4	Replace the first 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 2.6.5.8 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 150 V. 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 a 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.		P
2.10.3.2	In the second paragraph, replace IEC 60664-1 with JIS C 0664:2003.		P
3.2.3	Add the following after Table 3A: Table 3A applies when cables complying with JIS C 3662 or JIS C 3663 are used. In case of other cables, the cable entries shall be so designed that a conduit suitable for the cable used can be fitted.		N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
JP Japan (H22)			JP
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 (No. 85:1962) on stipulating technical requirements for the Electrical Appliance**.** 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 (No. 85:1962) on stipulating technical requirements for the Electrical Appliance**.** Delete 1) in Table 3B.		N/A
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 earting 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, 4. (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.		P

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

JP Japan (H22) JP

5.1.3 — Add a note after the first paragraph as follows: — N/A

NOTE Attention should be drawn to that majority of three-phase power system in Japan is of delta connection, and therefore, in that case, the test is conducted using the test circuit from IEC 60990, figure 13.

5.1.6 — Replace Table 5A as follows: — P

Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. [1)]	Maximum PROTECTIVE CONDUCTOR CURRENT
All equipment	Accessible parts and circuits not connected to protective earth	0,25	-
HAND-HELD	Equipment main protective earthing terminal (if any) CLASS I EQUIPMENT	0,75	-
MOVABLE (other than HAND-HELD, but including TRANSPORTABLE EQUIPMENT		3,5	-
STATIONARY, PLUGGABLE TYPE A		3,5	-
All other STATIONARY EQUIPMENT - not subject to the conditions of 5.1.7 - subject to the conditions of 5.1.7		3,5 -	- 5 % of input current
HAND-HELD	Equipment main protective earthing terminal (if any) CLASS 0I EQUIPMENT	0,5	-
Others		1,0	-

[1)] If peak values of TOUCH-CURRENT are measured, the maximum values obtained by multiplying the r.m.s. values by 1,414.

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: — N/A

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 apply:

- 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.

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

JP Japan (H22)			JP
W.1	Replace the second and the 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 EQUIMENT, 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

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

JP Japan (H22)			JP
Annex JA	Add a new annex JA with the following contents. Annex JA (normative) Document shredding machines 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. **JA.1 Markings and instructions** The symbol  (JIS S 0101:2000, 6.2.4) 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; - 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. **JA.2 Inadvertent reactivation** Any safety interlock that can be operated by means of the test finger, Figure JA.1, is considered to be likely to cause inadvertent reactivation of the hazard. Compliance is checked by inspection and, where necessary, by a test with the test finger, Figure JA.1		N/A

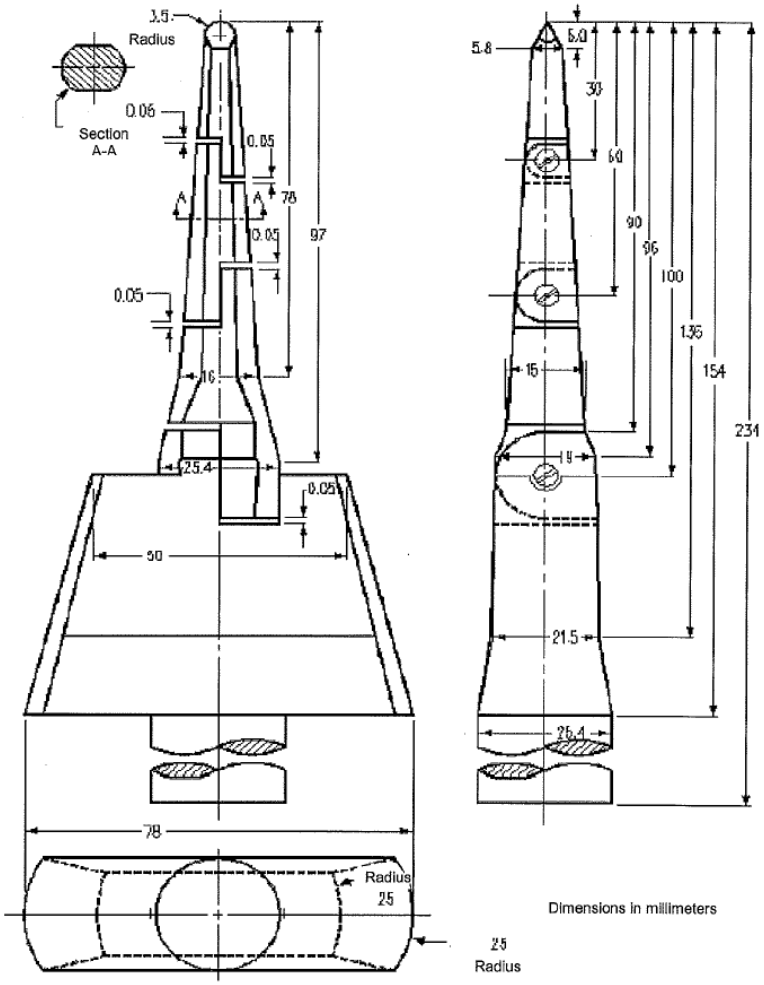
Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

JP Japan (H22)			JP
Annex JA	**JA.3 Disconnection from the mains supply** Document shredding machines shall incorporate an isolating switch complying with sub-clause 3.4.2 as the device disconnecting the power of hazardous moving parts. For this switch, two-position (single-use) switch or multi-position (multifunction) switch (e.g., slide switch) may be used. If two-position switch, the positions for "ON" and "OFF" shall be indicated in accordance with sub-clause 1.7.8. If multi-position 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. Compliance is checked by inspection **JA.4 Protection against hazardous moving parts** Any warning shall not be used instead of the structure for preventing access to hazardous moving parts. Document shredding machines shall comply with the following requirements. 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. 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.		N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

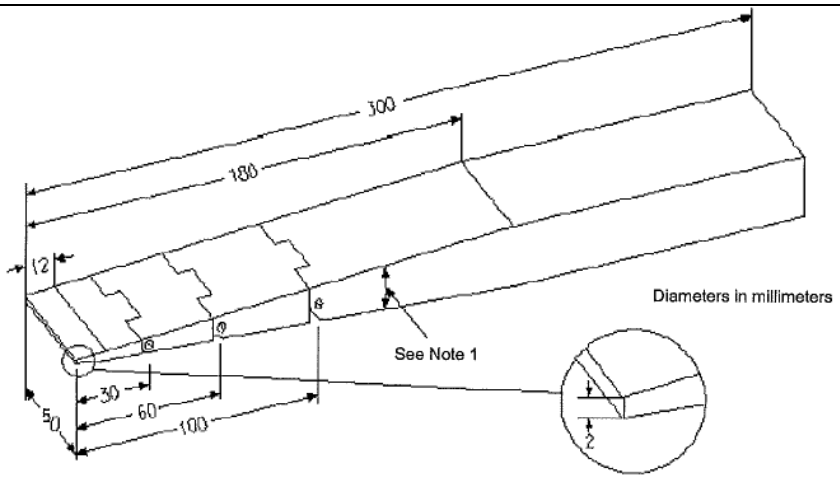
JP Japan (H22)		JP
Annex JA	 Figure JA.1 Test finger	N/A

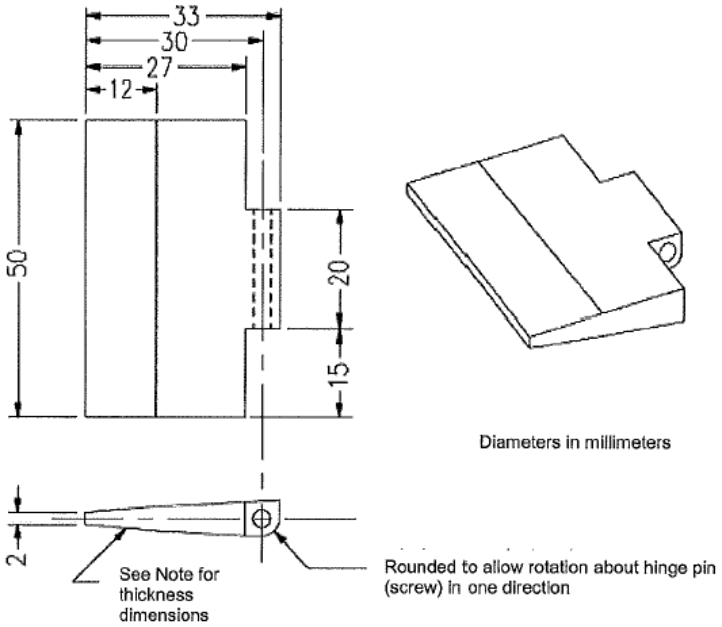
Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

JP Japan (H22) JP

Annex JA





Details of the tip of wedge

Distance from the tip (mm)	Thickness of probe (mm)
0	2
12	4
180	24

NOTE 1 The thickness of the probe varies linearly, with slope changes at the respective points shown in the table.
NOTE2 The allowable dimensional tolerance of the probe is +/- 0.127 mm.

Figure JA.2 Wedge-probe

N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

KR Republic of Korea			**KR**
1.5.101	Addition Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305).		N/A
8 EMC	Addition The apparatus shall comply with the relevant CISPR standards		N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

SE Sweden			**SE**
1.2.13.14	In **Norway** and **Sweden**, for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.1	Sweden (Ordinance 1990:944) Add the following: NOTE In Sweden, switches containing mercury are not permitted.		N/A
1.5.7.1	In **Finland, Norway** and **Sweden**, 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	In Finland, Norway and Sweden, 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	In Finland, Norway and Sweden, 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.		N/A
	The marking text in the applicable countries shall be as follows: In Finland: "Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan" In Norway: “Apparatet må tilkoples jordet stikkontakt” In Sweden: “Apparaten skall anslutas till jordat uttag”		N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
SE Sweden			**SE**
1.7.2	In **Norway** and **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 (galvanic isolator, see EN 60728-11)." 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. 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." 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."		N/A
2.3.2	In Finland, Norway and Sweden there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.10.5.13	In Finland, Norway and Sweden, there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
SE Sweden			**SE**
5.1.7.1	In Finland, Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: STATIONARY PLUGGABLE EQUIPMENT TYPE A that is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and 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	In Finland, Norway and Sweden, 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 of either - 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. If this insulation forms part of a semiconductor component (e.g. an optocoupler), 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 - 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. It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2.		N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

SE Sweden			**SE**
	A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, 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; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400.		N/A
6.1.2.2	In Finland, Norway and Sweden, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, 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	In Finland, Norway and Sweden, for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
7.3	In Norway and Sweden, there are many buildings where the screen of the coaxial cable is normally not connected to the earth in the building installation.		N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

UA Ukraine			**UA**
1.4.5	In Ukraine the NOMINAL VOLTAGE is 220 V for monophase or 380 V for three-phase supply.	Rated voltage: 100-240Vac	P
1.5.8	In Ukraine the components connected between phase and earthing or between phase and neutral terminal shall be calculated for the voltage between phases.		N/A
1.7.2	In Ukraine for the APPARATUS of I CLASS the necessity of its obligatory earthing shall be indicated in the manuals.		N/A
2.3.3	In Ukraine the method b) is not used.		N/A
6.2.2	In Ukraine the both tests in 6.2.2.1 and 6.2.2.2 are applied.		N/A
6.2.2.1	In Ukraine in 6.2.1 a) is used Uc = 3,5 kV.		N/A
6.2.2.2	In Ukraine in 6.2.1 a) is used 3,0 kV for telephones and headsets and 2,5 kV - for other equipment and in 6.2.1 b) and c) is used 1,5 kV.		N/A
Annex N	In Ukraine in 6.2.1 a) is used 3,0 kV for telephones and headsets and 2,5 kV - for other equipment, and in 6.2.1 b) and c) is used 1,5 kV.		N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
US United States of America			**US**
SPECIAL NATIONAL CONDITIONS BASED ON FEDERAL REGULATIONS			—
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.		P
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.		P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC are required to have special construction features and identification markings.		N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."		N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with the NEC or CEC Part 1 shall be marked with the voltage rating and “Class 2” or equivalent. The marking shall be located adjacent to the terminals and shall be visible during wiring.		N/A
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.		N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
US United States of America			**US**
2.6	Equipment with isolated ground (earthing) receptacles are required to comply with NEC 250.146(D) and CEC 10-112 and 10-906(8).		N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable. Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.		N/A
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.		N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		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
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.		N/A
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0.		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).		N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
US United States of America			**US**
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
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.		N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA30.		N/A
4.3.13.5.1	Equipment with lasers is required to meet the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m^2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.		N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
OTHER NATIONAL DIFFERENCES			—

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
US United States of America			**US**
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material requirements. These components include: attachment plugs, battery packs (rechargeable type, used with transportable equipment), cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultracapacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, surge protective devices, tubing, vehicle battery adapters, wire connectors, and wire and cables.	(see appended table 1.5.1)	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as a SELV Circuit, a TNV-2 Circuit or a Hazardous Voltage Circuit depending on the maximum operating voltage of the supply. This maximum operating voltage shall include consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.		N/A
2.6.2	Equipment with functional earthing is required to be marked with the functional earthing symbol (IEC 60417-6092).		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.		N/A

Attachment No. 2

IEC60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
US United States of America			**US**
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.		N/A
4.3.2	Equipment with handles is required to comply with special loading tests.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.		N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are to be overloaded. During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary.		P
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.		N/A
Annex EE	UL articulated accessibility probe (Fig EE.3) required for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex 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

Attachment No. 3

Contains

Cover page	1 page
EU Plug portion test report	2 pages
UK Plug portion test report	8 pages
Total:	11 pages

"EU plug portion test" according to EN50075:1990

Clause	Requirement- Test	Result- Remark	Verdict
7	Dimension of plug shall comply with Standard Sheet 1	(See appended table)	Pass

8	Protection against electric shock		--
8.1	Live parts of the plugs, with the exception of the bare metal pins, should not be accessible. (75N, 60 second in 35^{0}C ambient)		Pass
8.2	It should not be possible to make connection between a pin of a plug and live socket contact of a socket while the other pin is accessible.		Pass
8.3	External parts of the plugs made of insulating material.		Pass

9	Construction		--
9.3	Plugs shall have adequate mechanical strength to withstand the stresses imposed during use.		Pass
9.4	Pins of plugs shall be locked against rotation and adequately fixed into body of the plug.		Pass
9.6	Plug shall be shaped in such a way and made of such material that they can easily be withdrawn by hand from the socket outlet		Pass

13	Mechanical Strength		--
13.1	Compression test, 150N		Pass
13.3	Abrasion test on the insulating sleeves	20000 movements: no damage	Pass
13.4	Pin shall not have displaced in body of the plug more than 1mm; force (N)	Displacement:0.3mm	Pass

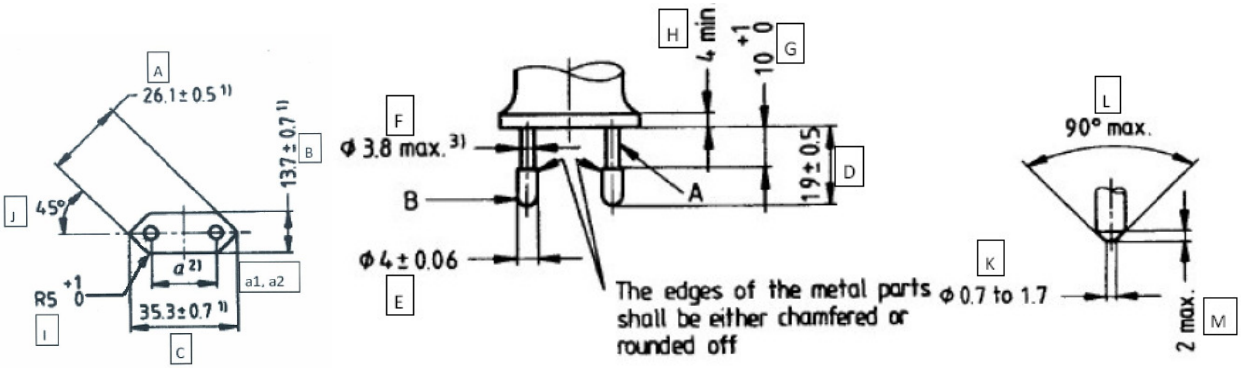
15	Current-carrying parts and connection		--
15.2	Electric connection shall be so designed that contact pressure is not transmitted through insulation.		Pass
15.3	Current-carrying parts		Pass
	Copper		Pass
	Alloy containing at least 58% of copper or equivalent	59%-63% copper	Pass

Clause	Requirement- Test	Result- Remark	Verdict
17	Resistance of insulating material to abnormal heat and fire		--
	Glow-wire test		Pass
	Parts of insulating material to retain current-carrying parts:750℃		Pass
	Other parts: 650^{0}C		Pass

7	Table: Dimension of plug			
Location	1st Sample	2nd Sample	3rd sample	Limit (mm)
A	26.30	26.40	26.40	26.1 ± 0.5*1
B	14.10	14.10	14.10	13.7 ± 0.7*1
C	35.60	35.70	35.70	35.3 ± 0.7*1
(see note *1)	18.30	18.30	18.20	≥18
D	19.20	19.10	19.20	19 ± 0.5
E	3.98	3.98	3.99	Ø4.0 ± 0.06
F	3.50	3.60	3.60	Ø3.8 Max.
F	3.89	3.86	3.89	Ø4.0 Max.*3
F	3.77	3.76	3.81	4.0 Max.*3
G	10.29	10.33	10.27	10-11
a1	18.30	18.40	18.30	18-19.2*2
a2	17.20	17.30	17.20	17-18*2
H	N/A	N/A	N/A	4 Min.
I	5.10	5.10	5.10	R5-R6
J	45.0º	44.5º	44.6º	---
Alternative for end of pins				
K	N/A	N/A	N/A	Ø0.7- Ø1.7
L	N/A	N/A	N/A	90° Max.
M	N/A	N/A	N/A	2 Max.

Note
****1: These dimension shall not exceeded within a distance of 18mm from the engagement face of plug.***
****2: a1: in the plane of the engagement face, a2: at the ends of pins.***
****3: This dimension maybe increased to 4mm within a distance of 4mm from engagement face of plug.***

Remark: see standard sheet 1 for details of location of measurement.



Standard sheet 1
PRODUCT INCORPORATING PINS FOR INSERTION INTO UK SOCKET OUTLET TEST ACCORDING TO APPLICABLE REQUIREMENTS FROM BS1363-3 AND ASTA BEAB REQUIREMENT 4 (ABR4)

BS 1363-3:1995 + Amd. No. 9543, 14225, 14540, 17437 & A4			
Clause	**Requirement – Test**	**Result – Remarks**	**Verdict**
12.1	Disposition of pins		Pass
12.2	Dimensions	(See appended table)	Pass
12.2.1	Gauging test according to finger 5,the plug portion shall enter the gauge fully with a force less than 10N	Applied force: 6N	Pass
	In the case of adaptors with ISODs, the test given in 13.8 of BS 1363-2:1995 shall be applied and the maximum withdrawal force from a socket-outlet conforming to BS 1363-2 shall not exceed 36N	Applied force: 20N	Pass
12.3	Distance of pins from periphery	Measured distance: 9.82mm	Pass
12.7	Fixing of cover		N/A
12.9	Deformation immediately following the temperature rise test specified in the appropriate (base) standard		Pass
12.11	Construction of pins		Pass
12.11.1	All exposed surfaces of the adaptor plug pins shall be smooth and free from burrs or sharp edges and other irregularities.		Pass
12.11.4.1	For solid pins, applying a force 1100N on the pin according to figure 32.		Pass
12.11.4.2	For non-solid pins, conformity shall be checked by the following test. 1) Applying a force 800N on the pin according to Figure 32. 50 times without impact. 2) Separate specimens applying a force 1100N on the pin according to Figure 32.		N/A
12.11.4.3	For ISOD, applying a force 400N on the pin according to figure 32.		Pass
12.11.5.1	Adaptors with non-solid pins shall not cause excessive wear to socket contacts or shutters of sockets-outlets		Pass

BS 1363-3:1995 + Amd. No. 9543, 14225, 14540, 17437 & A4			
Clause	**Requirement – Test**	**Result – Remarks**	**Verdict**
12.11.5.2	Adaptors with ISOD shall not cause excessive wear to socket contacts or shutters of sockets-outlets. One type of socket-outlet shall preferably have a shutter-operating ramp of metal.		Pass
12.11.6.1	1 Nm torque test on the opposite two directions according to figure 33		Pass
12.13	Retention of pins		Pass
12.14	Flexibility of pins		Pass
12.18	Insulating sleeves on pins		Pass
12.19.3	Abrasion resistance of insulating sleeve		Pass
13.10	The total mass of the equipment with all specified connectors shall not exceed 800g. The torque exerted on socket shall not exceed 0.7 Nm	Measured torque: 0.05Nm	Pass

BS 1363-1:1995 + Amd. No. 9541, 14539, 17435 & A4 Additional requirements For plug portion with Insulated Shutter Opening Device (ISOD)			
Clause	**Requirement – Test**	**Result – Remarks**	**Verdict**
12.9.1	All exposed surfaces of plug pins shall be smooth and free from burrs or sharp edges and other irregularities which could cause damage or excessive wear to corresponding socket contacts or shutters		Pass

Additional test for adaptor with UK plug need to comply with IEC60950-1 (CB bulletin, IEC60950-1:2005+A1:2009, clause 4.3.6)			
Clause	**Requirement – Test**	**Result – Remarks**	**Verdict**
12.17.4	Placed in a heating cabinet at 125(-8, 0)℃ for a period of 120(-5, 0)min, after which the specimen is removed and immediately cooled by immersion in water at approximately room temperature. The thickness of the insulation remaining at the point of impression is measured and shall not have been reduced by more than 50 %.		Pass
22.2	75C ball pressure test to ISOD.		Pass
23	750C GWT to ISOD.		Pass

For model NBS12ExxxyyyHK

Clause 12.2: Dimensions measurement				
Dimensions(mm)	Sample A	Sample B	Sample C	Limit
A	24.51	24.58	24.55	25.37 max
B	31.25	31.27	31.29	34.6 max
C	N/A	N/A	N/A	15 min.
D	9.82	9.86	9.83	9.5 min.
E (L-E)	11.09	11.13	11.10	11.05-11.18
E (N-E)	11.14	11.12	11.13	11.05-11.18
F (L-E)	22.23	22.21	22.27	22.10-22.36
F (N-E)	22.29	22.23	22.24	22.10-22.36
G1	6.32	6.34	6.30	6.22-6.48
G2	6.30	6.35	6.34	6.22-6.48
H	3.95	3.97	3.94	3.90-4.05
I	22.66	22.64	22.68	22.23-23.23
J	1.68	1.62	1.66	1.35-1.85
K(earth)	N/A	N/A	N/A	7.80-8.05
K (ISOD)	7.99	7.98	7.93	7.75-8.05
L (line)	9.31	9.28	9.24	9.5 max
L (neutral)	9.29	9.35	9.30	9.5 max
M (line)	8.60	8.65	8.71	9.2 max
M (neutral)	8.61	8.56	8.69	9.2 max
N (line)	3.99	4.00	3.98	3.90-4.05
N (neutral)	4.01	4.05	3.96	3.90-4.05
O (line)	17.91	17.93	17.95	17.20-18.20
O (neutral)	17.90	17.91	17.99	17.20-18.20
P (line)	1.47	1.51	1.65	1.35-1.85
P (neutral)	1.62	1.57	1.67	1.35-1.85
Q	6.98	7.04	7.00	6.35 min.
R (line)	1.43	1.37	1.40	1.2-2.0
R (neutral)	1.45	1.39	1.43	1.2-2.0
W	0.72	0.54	0.64	R 0.1-1.0
θ 1	61.5º	61.1º	59.4º	58º-62º
θ 2 (line)	74.3º	73.2º	67.7º	60º-80º
θ 2 (neutral)	69.4º	69.6º	72.3º	60º-80º
X1 (for ISOD only)	0.07	0.10	0.12	0.15 max
X2 (for ISOD only)	0.06	0.09	0.11	0.15 max
Alternative chamfers on L and N pin				
S (line)	N/A	N/A	N/A	1.35-1.85
S (neutral)	N/A	N/A	N/A	1.35-1.85
θ 3 (line)	N/A	N/A	N/A	58º-62º
θ 3 (neutral)	N/A	N/A	N/A	58º-62º
θ 4 (line)	59.9º	60.3º	60.7º	58º-62º
θ 4 (neutral)	60.2º	59.8º	60.1º	58º-62º
T (line)	1.47	1.53	1.49	1.35-1.85
T(neutral)	1.52	1.59	1.60	1.35-1.85
U (line)	N/A	N/A	N/A	0.2 Max.

U(neutral)	N/A	N/A	N/A	0.2 Max.
V (line)	N/A	N/A	N/A	1.35-1.85
V(neutral)	N/A	N/A	N/A	1.35-1.85

For model NBS12ExxxyyyVK

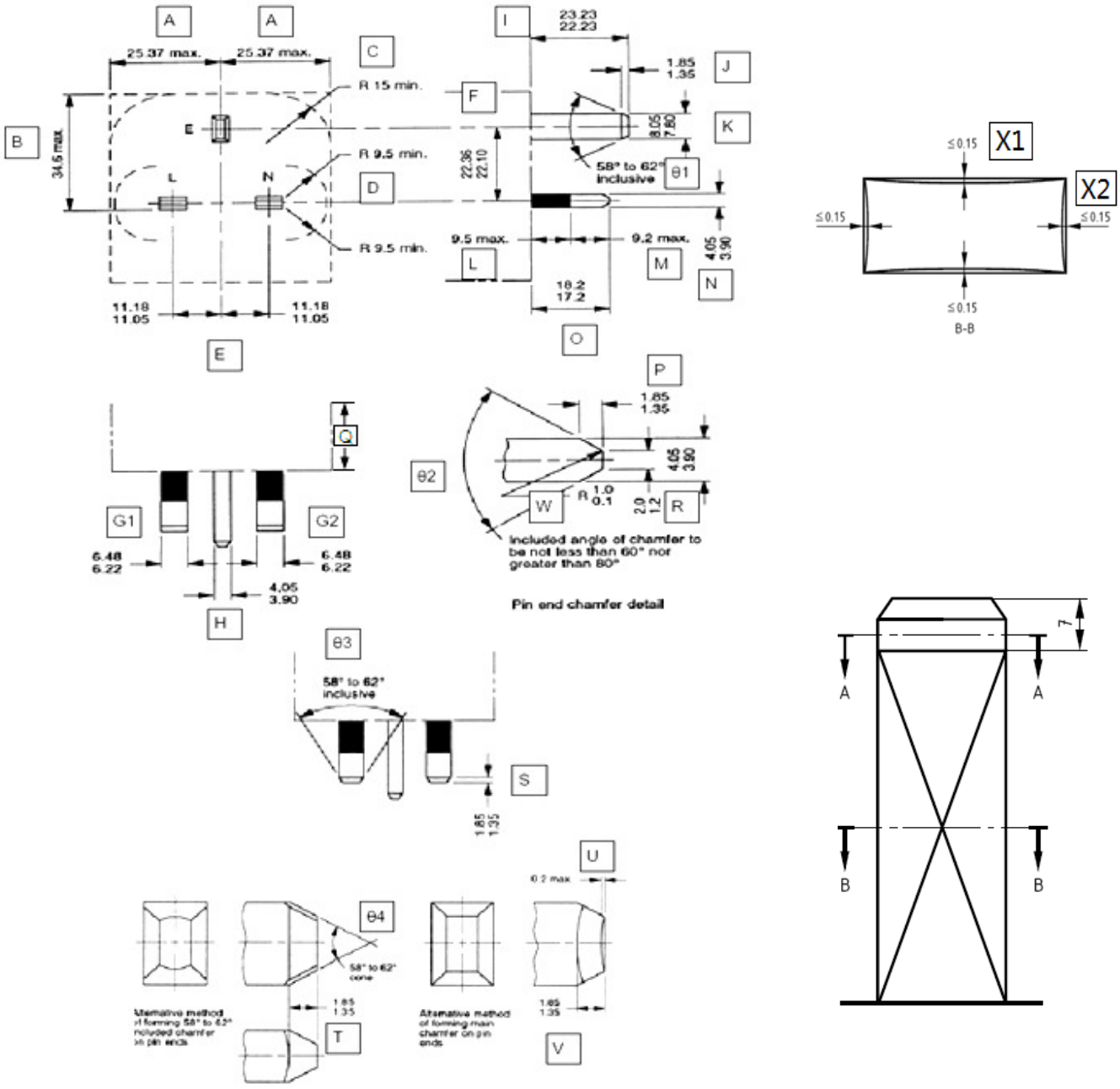
Clause 12.2: Dimensions measurement				
Dimensions(mm)	Sample A	Sample B	Sample C	Limit
A	23.81	23.81	23.82	25.37 max
B	32.85	32.85	32.84	34.6 max
C	N/A	N/A	N/A	15 min.
D	9.55	9.55	9.55	9.5 min.
E (L-E)	11.09	11.08	11.05	11.05-11.18
E (N-E)	11.08	11.06	11.07	11.05-11.18
F (L-E)	22.14	22.15	22.16	22.10-22.36
F (N-E)	22.13	22.13	22.12	22.10-22.36
G1	6.46	6.40	6.38	6.22-6.48
G2	6.44	6.37	6.41	6.22-6.48
H	4.05	4.05	4.05	3.90-4.05
I	22.38	22.37	22.42	22.23-23.23
J	1.41	1.40	1.42	1.35-1.85
K(earth)	N/A	N/A	N/A	7.80-8.05
K (ISOD)	7.99	7.98	8.01	7.75-8.05
L (line)	8.72	9.01	9.17	9.5 max
L (neutral)	8.82	9.01	9.17	9.5 max
M (line)	9.10	8.82	8.81	9.2 max
M (neutral)	8.96	8.76	8.76	9.2 max
N (line)	4.04	4.04	4.03	3.90-4.05
N (neutral)	4.00	4.00	4.02	3.90-4.05
O (line)	17.82	17.83	17.98	17.20-18.20
O (neutral)	17.78	17.77	17.93	17.20-18.20
P (line)	1.77	1.78	1.78	1.35-1.85
P (neutral)	1.78	1.76	1.79	1.35-1.85
Q	6.91	7.02	7.03	6.35 min.
R (line)	1.93	1.81	1.88	1.2-2.0
R (neutral)	1.88	1.86	1.87	1.2-2.0
W	0.27	0.27	0.30	R 0.1-1.0
θ 1	59.3º	59.0º	59.8º	58º-62º
θ 2 (line)	69.5º	68.6º	68.3º	60º-80º
θ 2 (neutral)	70.0º	69.3º	69.0º	60º-80º
X1 (for ISOD only)	0.09	0.11	0.12	0.15 max
X2 (for ISOD only)	0.09	0.08	0.11	0.15 max
Alternative chamfers on L and N pin				
S (line)	N/A	N/A	N/A	1.35-1.85
S (neutral)	N/A	N/A	N/A	1.35-1.85
θ 3 (line)	N/A	N/A	N/A	58º-62º
θ 3 (neutral)	N/A	N/A	N/A	58º-62º
θ 4 (line)	61.0º	60.9º	61.4º	58º-62º
θ 4 (neutral)	61.1º	61.8º	61.5º	58º-62º
T (line)	1.48	1.48	1.48	1.35-1.85
T(neutral)	1.48	1.48	1.48	1.35-1.85
U (line)	N/A	N/A	N/A	0.2 Max.
U(neutral)	N/A	N/A	N/A	0.2 Max.

V (line)	N/A	N/A	N/A	1.35-1.85
V(neutral)	N/A	N/A	N/A	1.35-1.85

For model NBS12ExxxyyyD5 equipped with UK plug portion

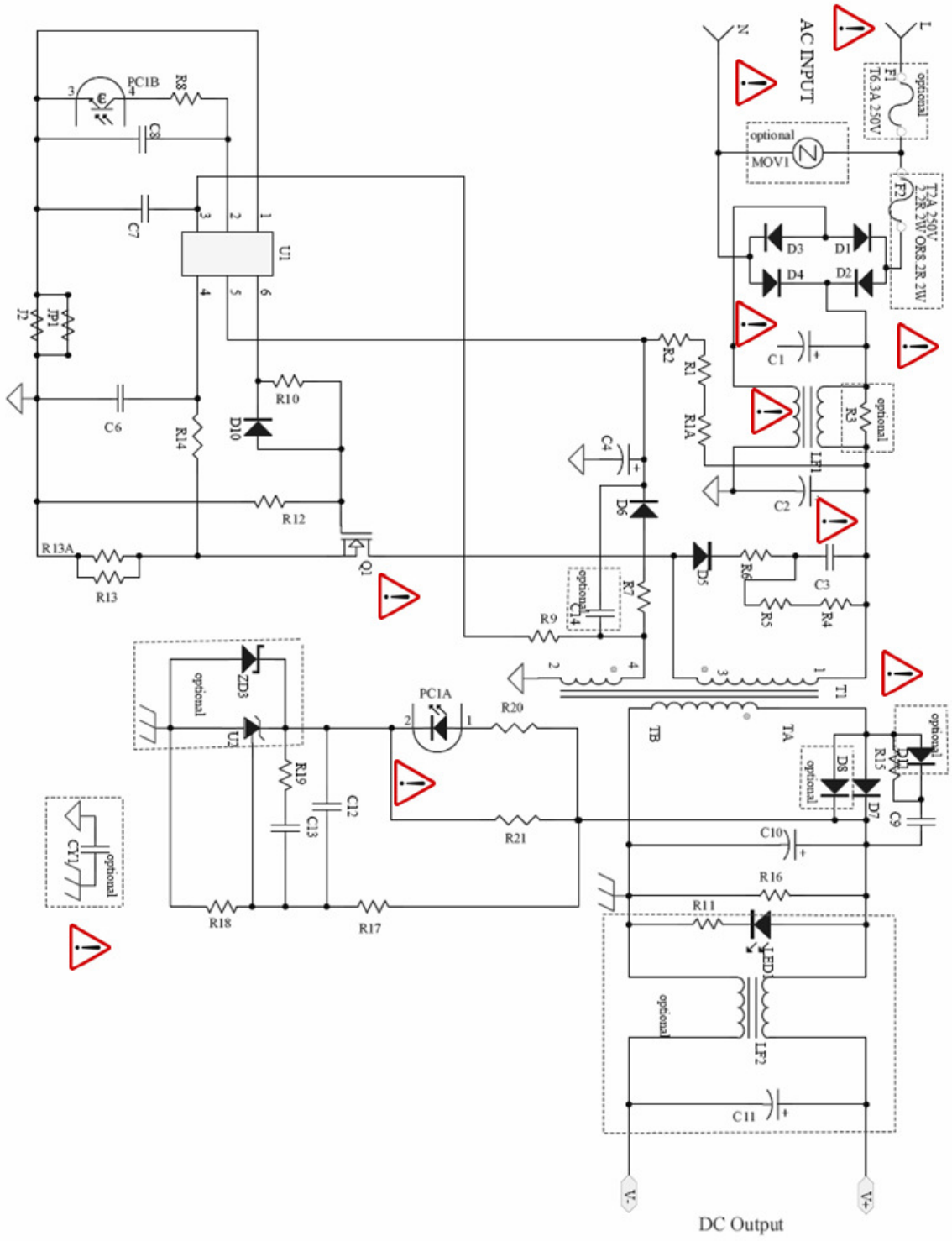
Clause 12.2: Dimensions measurement				
Dimensions(mm)	Sample A	Sample B	Sample C	Limit
A	23.96	23.97	23.96	25.37 max
B	33.12	33.14	33.13	34.6 max
C	N/A	N/A	N/A	15 min.
D	9.62	9.61	9.63	9.5 min.
E (L-E)	11.07	11.08	11.08	11.05-11.18
E (N-E)	11.08	11.09	11.07	11.05-11.18
F (L-E)	22.21	22.24	22.22	22.10-22.36
F (N-E)	22.20	22.23	22.21	22.10-22.36
G1	6.34	6.32	6.33	6.22-6.48
G2	6.33	6.33	6.32	6.22-6.48
H	3.93	3.94	3.93	3.90-4.05
I	22.66	22.67	22.68	22.23-23.23
J	1.63	1.62	1.64	1.35-1.85
K(earth)	N/A	N/A	N/A	7.80-8.05
K (ISOD)	7.93	7.92	7.94	7.75-8.05
L (line)	9.18	9.19	9.17	9.5 max
L (neutral)	9.17	9.18	9.18	9.5 max
M (line)	8.78	8.79	8.79	9.2 max
M (neutral)	8.76	8.77	8.76	9.2 max
N (line)	4.02	4.01	4.02	3.90-4.05
N (neutral)	4.03	4.03	4.04	3.90-4.05
O (line)	17.96	17.98	17.96	17.20-18.20
O (neutral)	17.93	17.95	17.94	17.20-18.20
P (line)	1.65	1.66	1.65	1.35-1.85
P (neutral)	1.67	1.65	1.64	1.35-1.85
Q	10.79	10.76	10.78	6.35 min.
R (line)	1.80	1.82	1.81	1.2-2.0
R (neutral)	1.81	1.81	1.83	1.2-2.0
W	0.56	0.54	0.55	R 0.1-1.0
θ 1	61.16	61.18	61.21	58º-62º
θ 2 (line)	70.42	70.43	70.42	60º-80º
θ 2 (neutral)	60.44	60.41	60.45	60º-80º
X1 (for ISOD only)	0.01	0.02	0.01	0.15 max
X2 (for ISOD only)	0.02	0.02	0.01	0.15 max
Alternative chamfers on L and N pin				
S (line)	N/A	N/A	N/A	1.35-1.85
S (neutral)	N/A	N/A	N/A	1.35-1.85
θ 3 (line)	N/A	N/A	N/A	58º-62º
θ 3 (neutral)	N/A	N/A	N/A	58º-62º
θ 4 (line)	61.11	61.09	61.12	58º-62º
θ 4 (neutral)	61.13	61.12	61.13	58º-62º
T (line)	1.65	1.66	1.65	1.35-1.85
T(neutral)	1.67	1.65	1.64	1.35-1.85
U (line)	N/A	N/A	N/A	0.2 Max.
U(neutral)	N/A	N/A	N/A	0.2 Max.

V (line)	N/A	N/A	N/A	1.35-1.85
V(neutral)	N/A	N/A	N/A	1.35-1.85



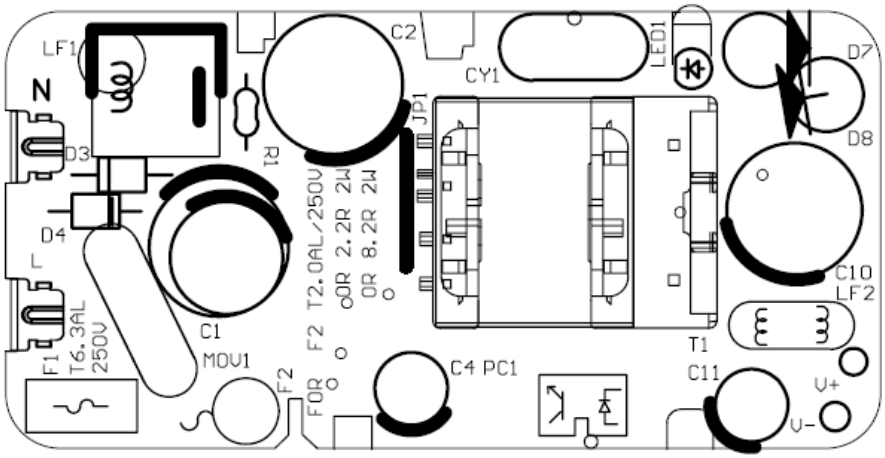
Attachment No. 4

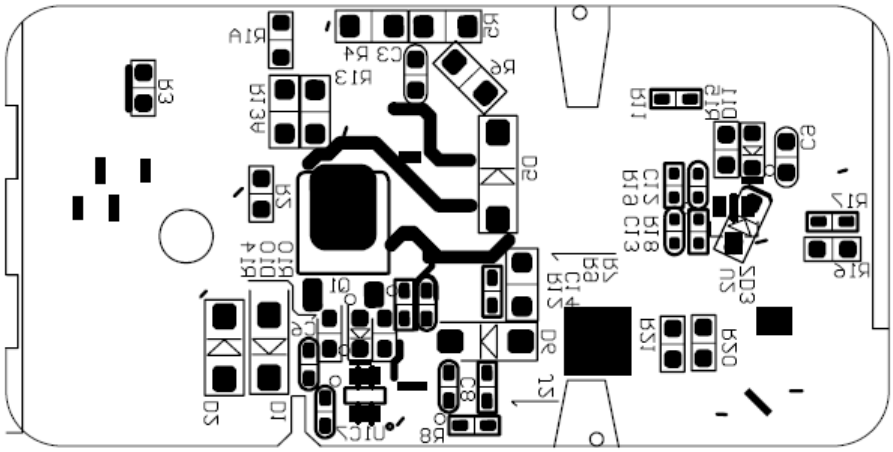
Circuit diagram:

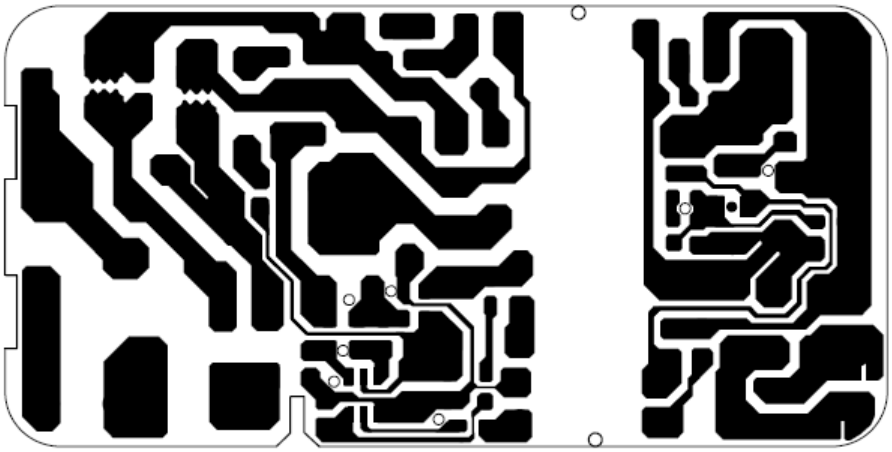


Attachment No. 4

PCB layout drawing:

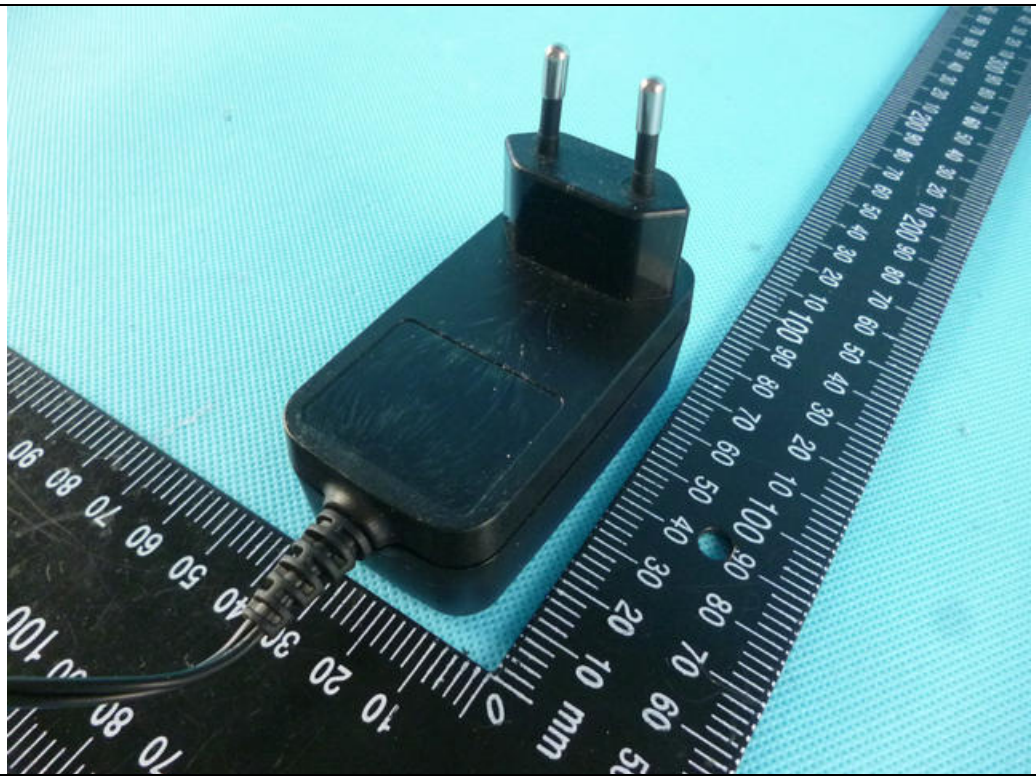






Attachment No. 5

Details of: General view (for models NBS12ExxxyyyHE)



Details of: General view (for models NBS12ExxxyyyHE)

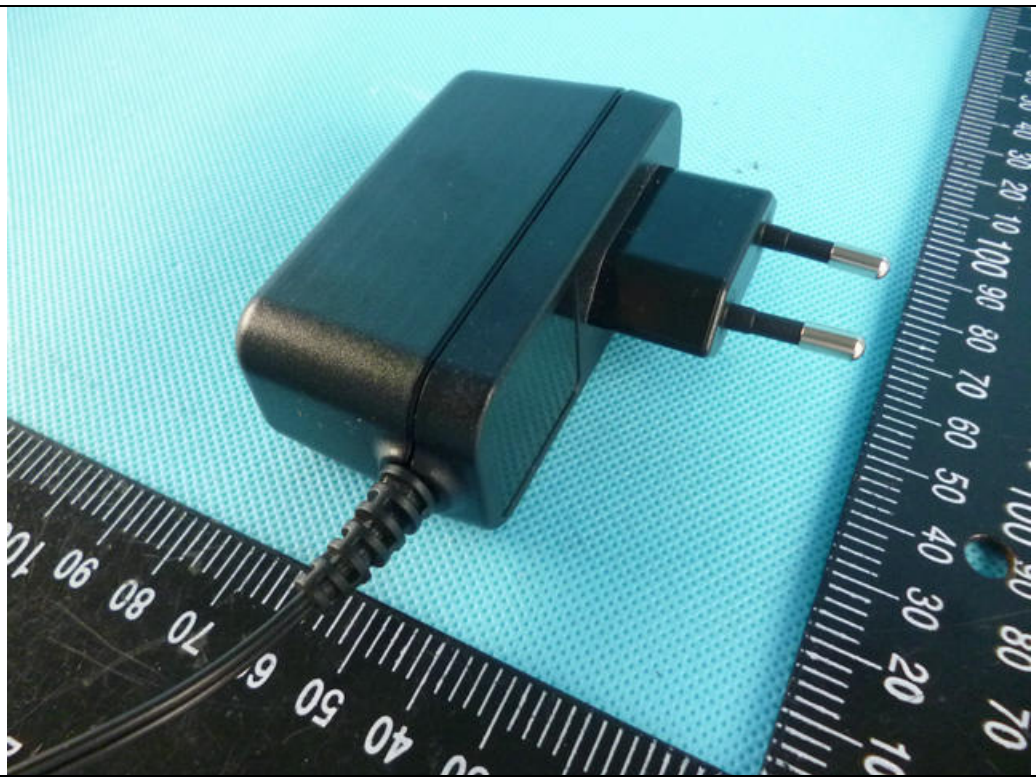
Attachment No. 5

Details of: Internal view (for models NBS12ExxxyyyHE)

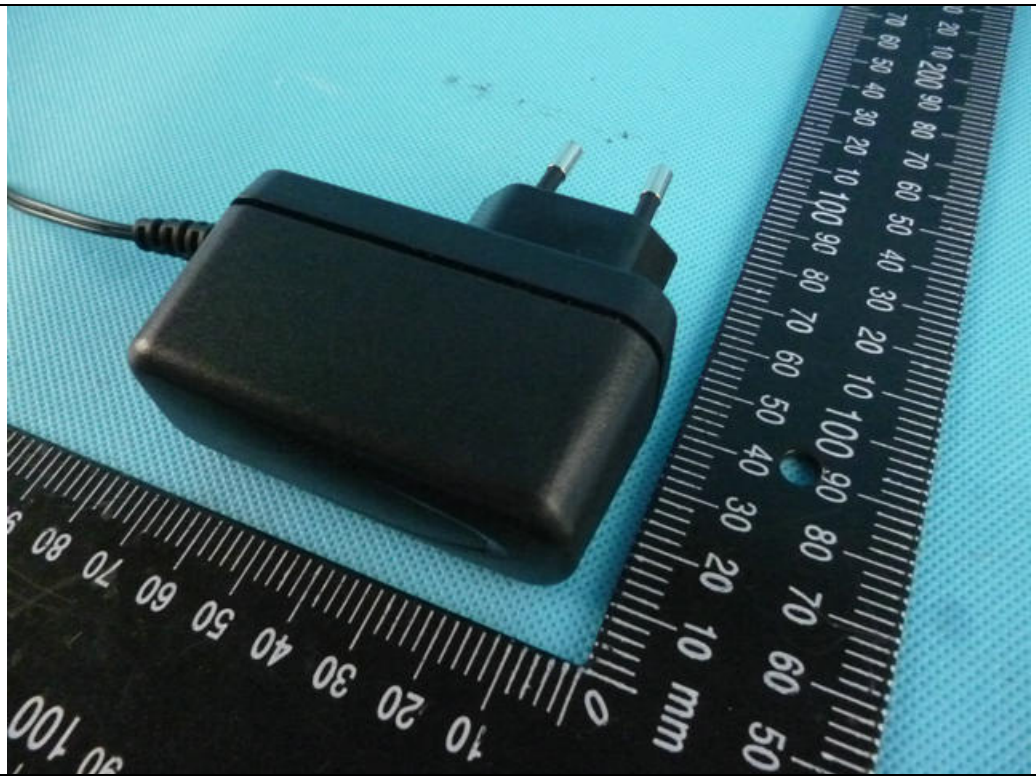
Details of: Internal view (for models NBS12ExxxyyyHE)

Attachment No. 5

Details of: General view (for models NBS12ExxxyyyVE)

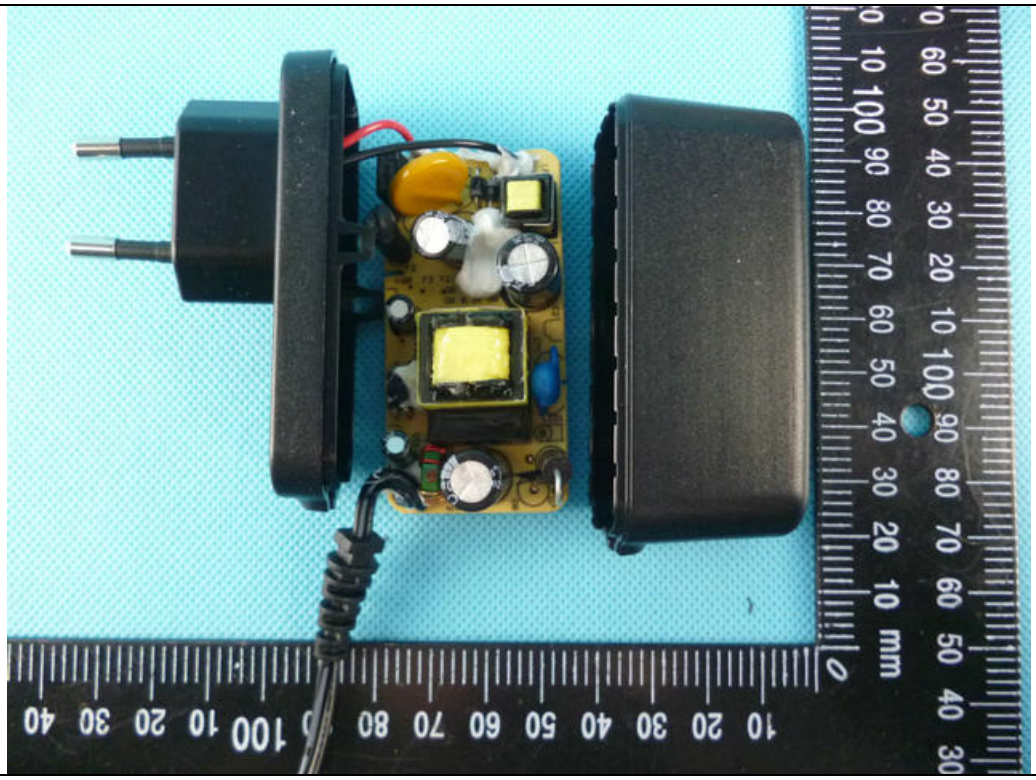


Details of: General view (for models NBS12ExxxyyyVE)

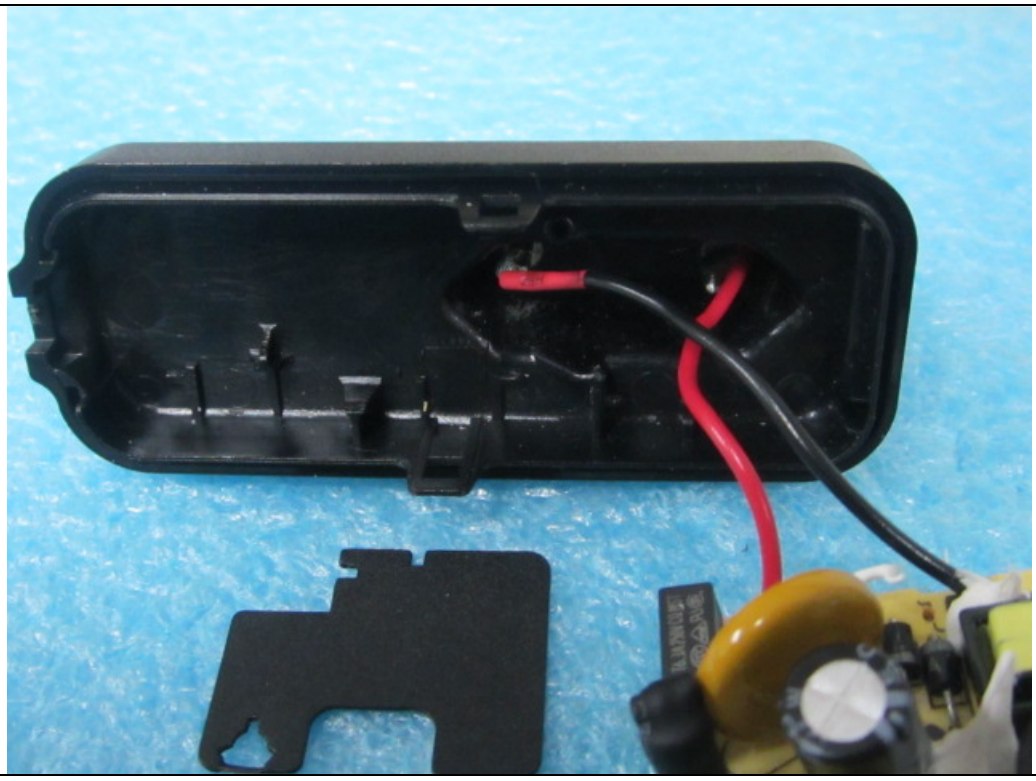


Attachment No. 5

Details of: Internal overall view (for models NBS12ExxxyyyVE)



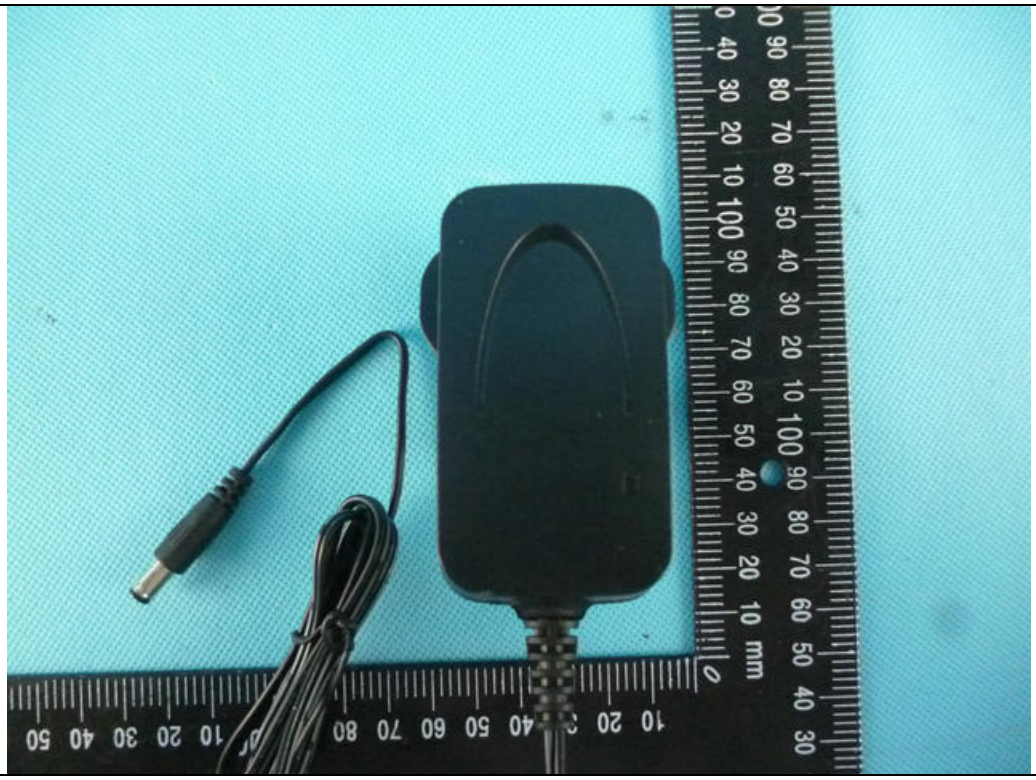
Details of: Internal overall view (for models NBS12ExxxyyyVE)
The primary wires were double fixed by soldering and Hooked in before soldering.



Attachment No. 5

Details of: General view (for models NBS12ExxxyyyHK)

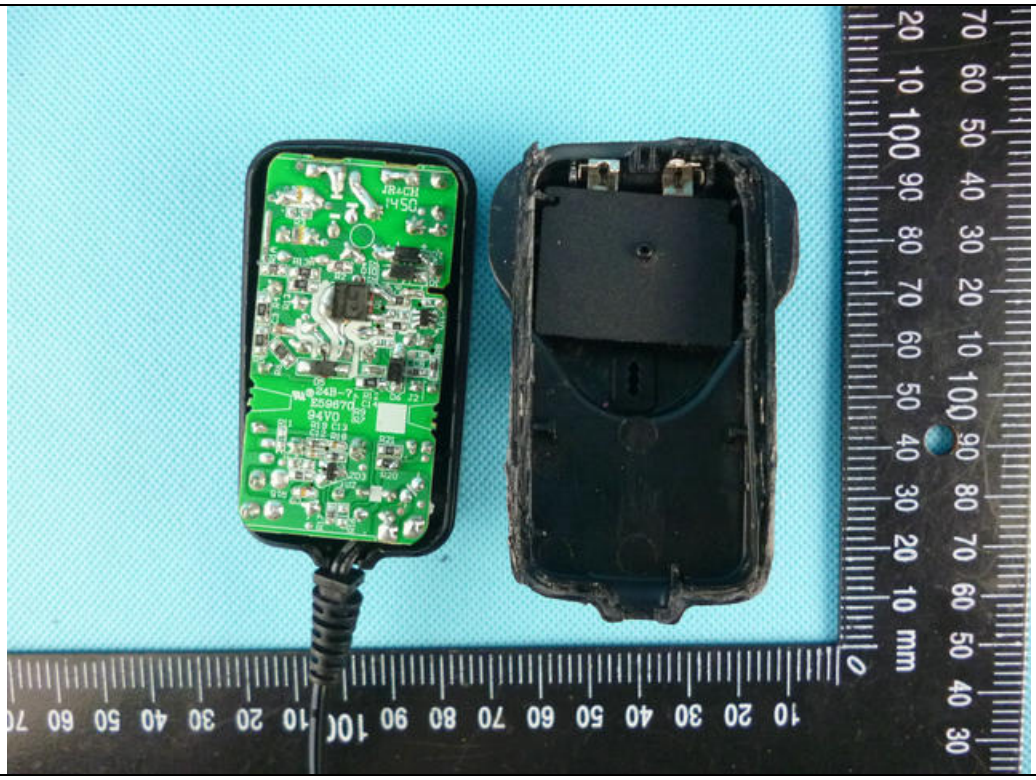
Details of: General view (for models NBS12ExxxyyyHK)



Attachment No. 5

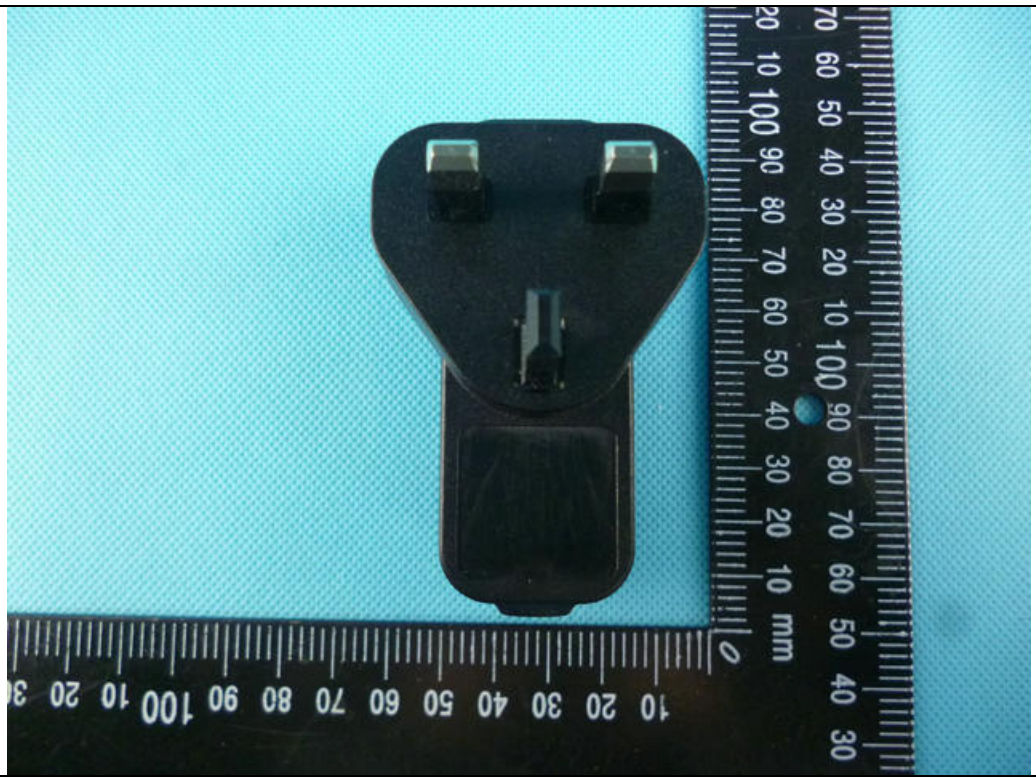
Details of: Internal overall view (for models NBS12ExxxyyyHK)

Details of: Internal overall view (for models NBS12ExxxyyyHK)



Attachment No. 5

Details of: General view (for models NBS12ExxxyyyVK)

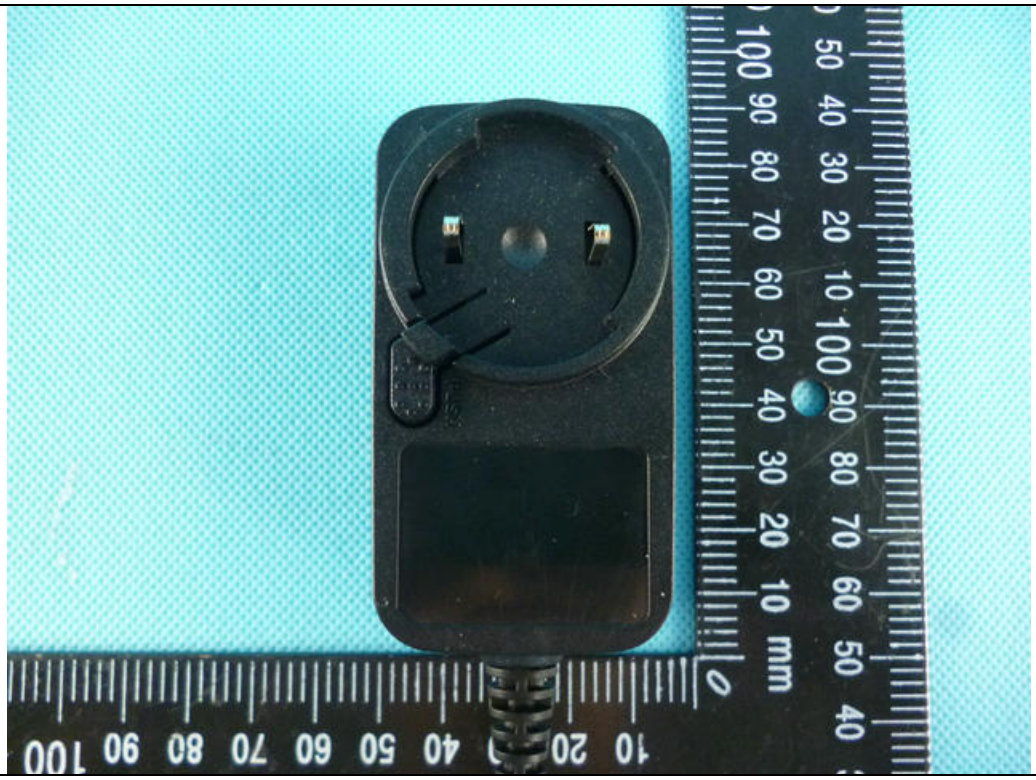


Details of: General view (for models NBS12ExxxyyyD5)

Attachment No. 5

Details of: General view (for models NBS12ExxxyyyD5)

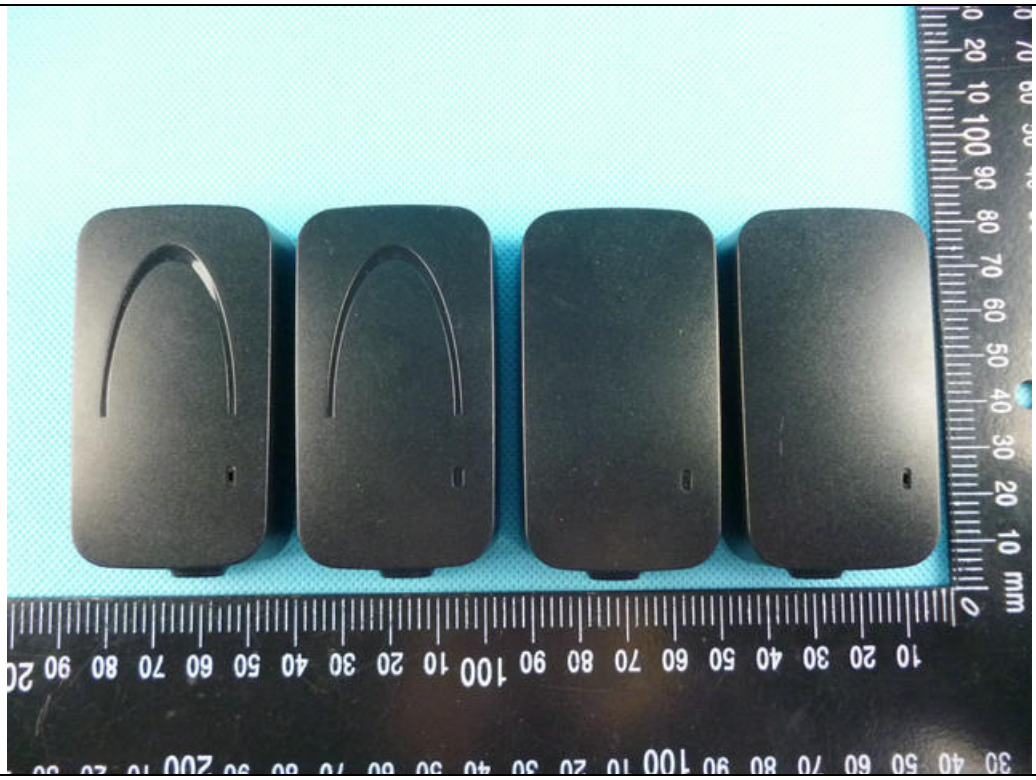
Details of: Detachable plug portion overall view (for models NBS12ExxxyyyD5)



Attachment No. 5

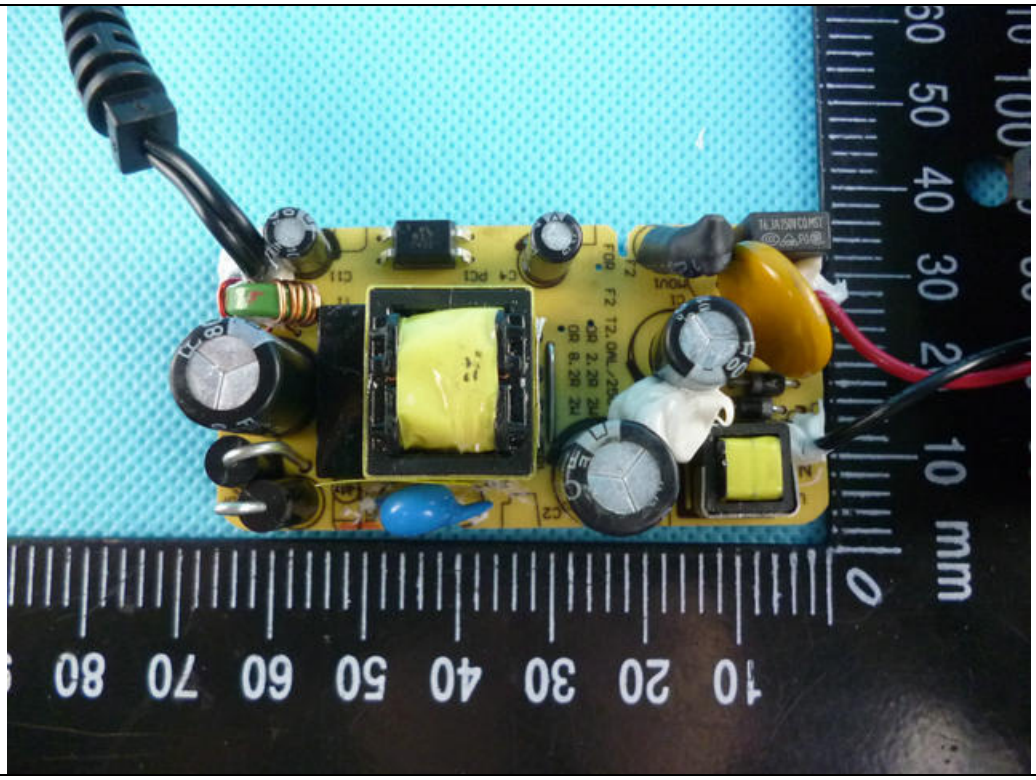
Details of: Internal overall view (for models NBS12ExxxyyyD5)

Details of: Construction for four top enclosure (with or without pattern “V”, LED hole)

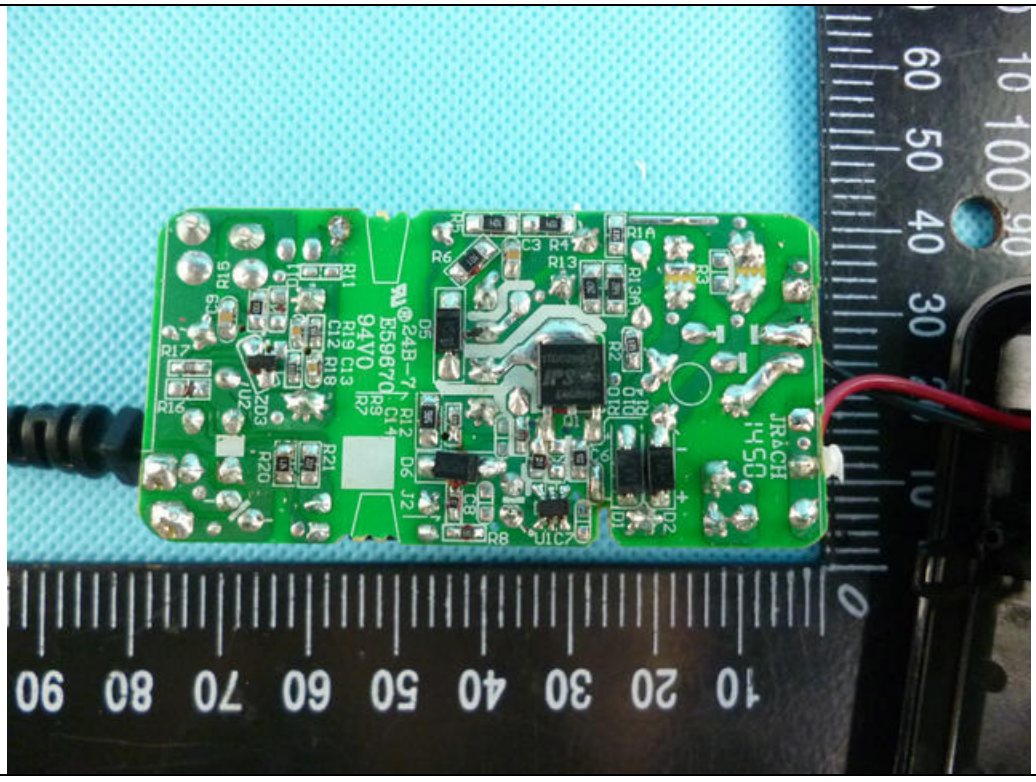


Attachment No. 5

Details of: PCB (when Iout >1A and P<11.5VA, D8 is used)

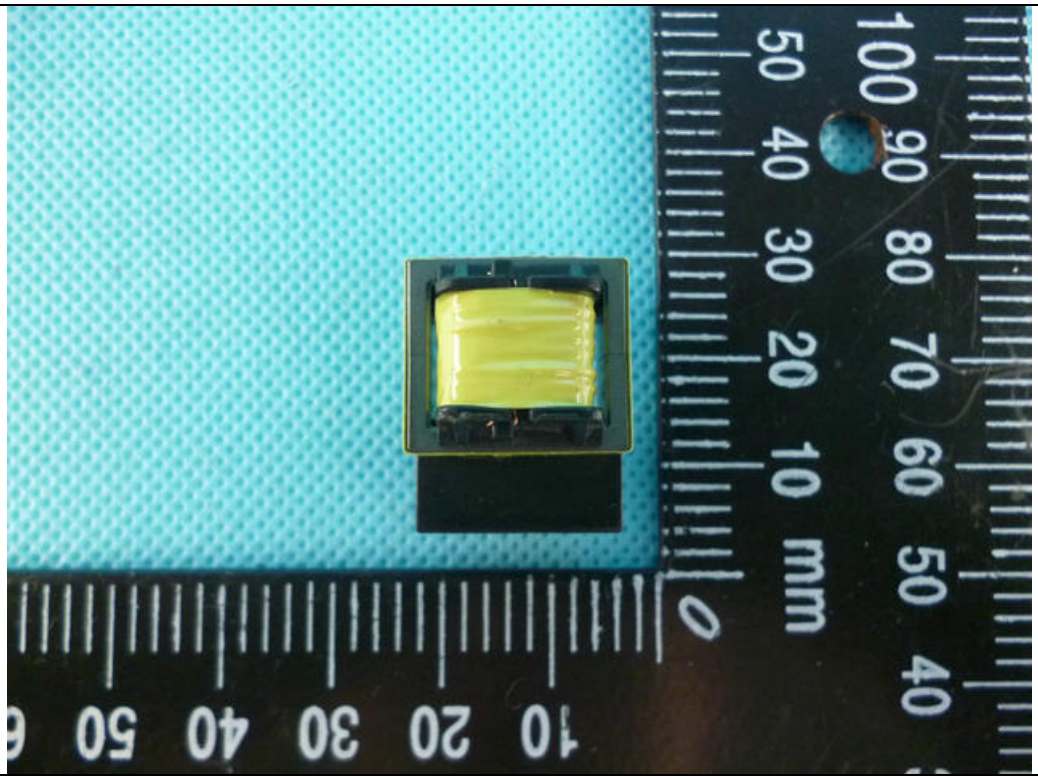


Details of: PCB

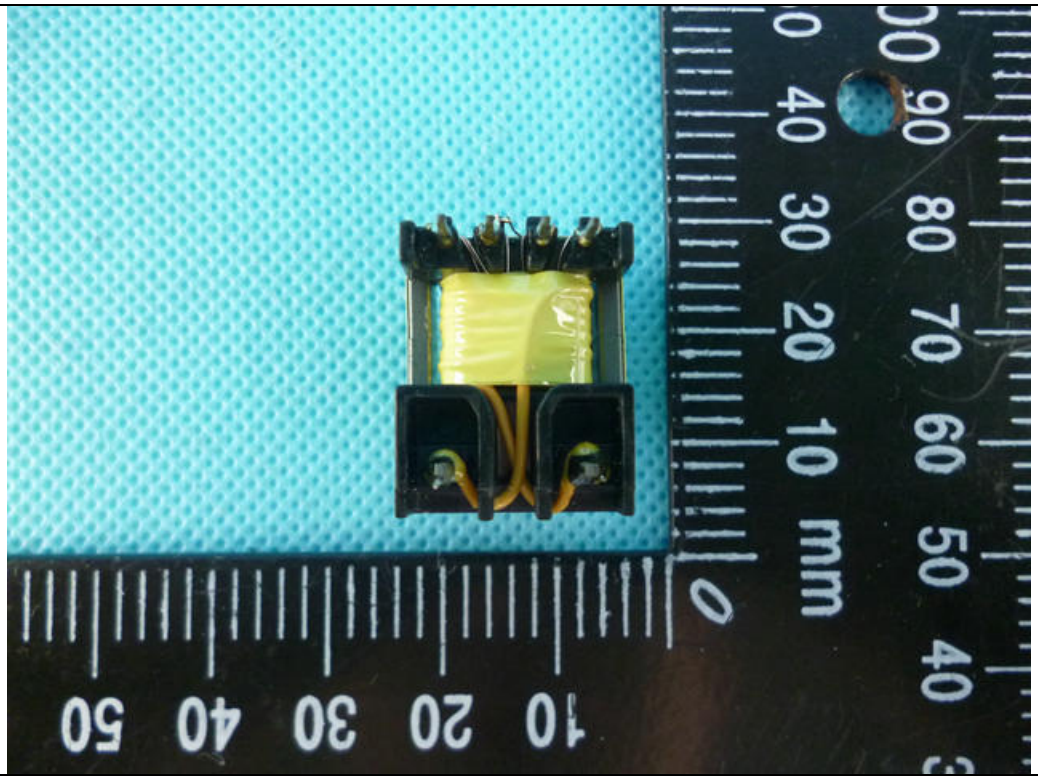


Attachment No. 5

Details of: T1 general view

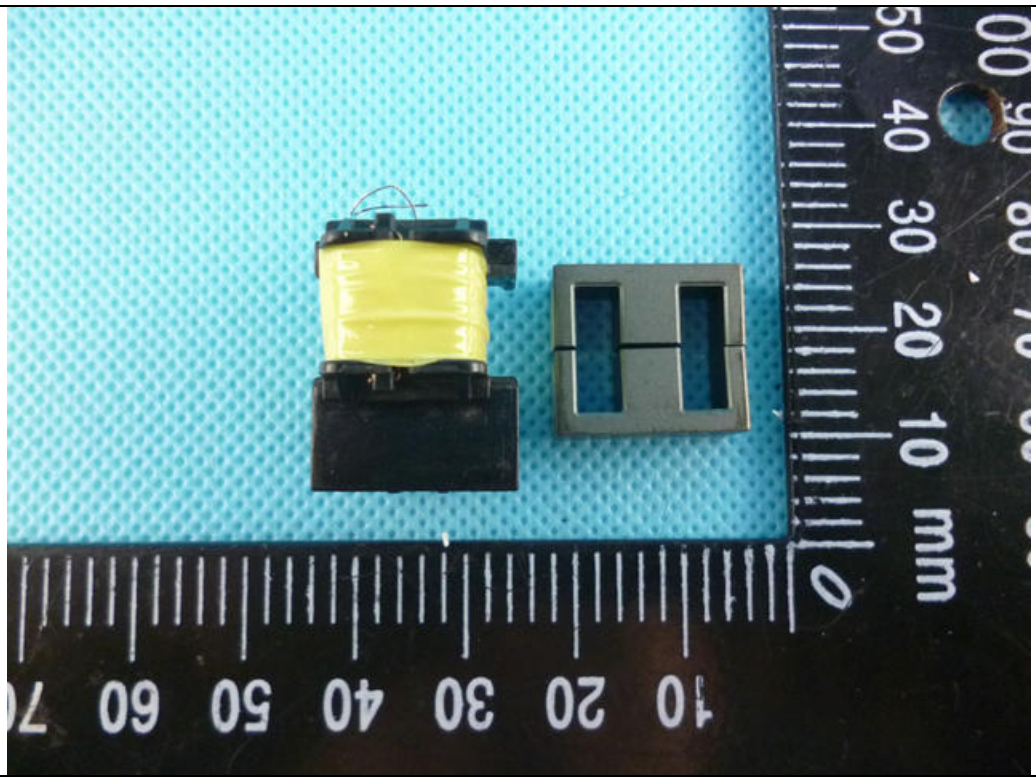


Details of: T1 general view

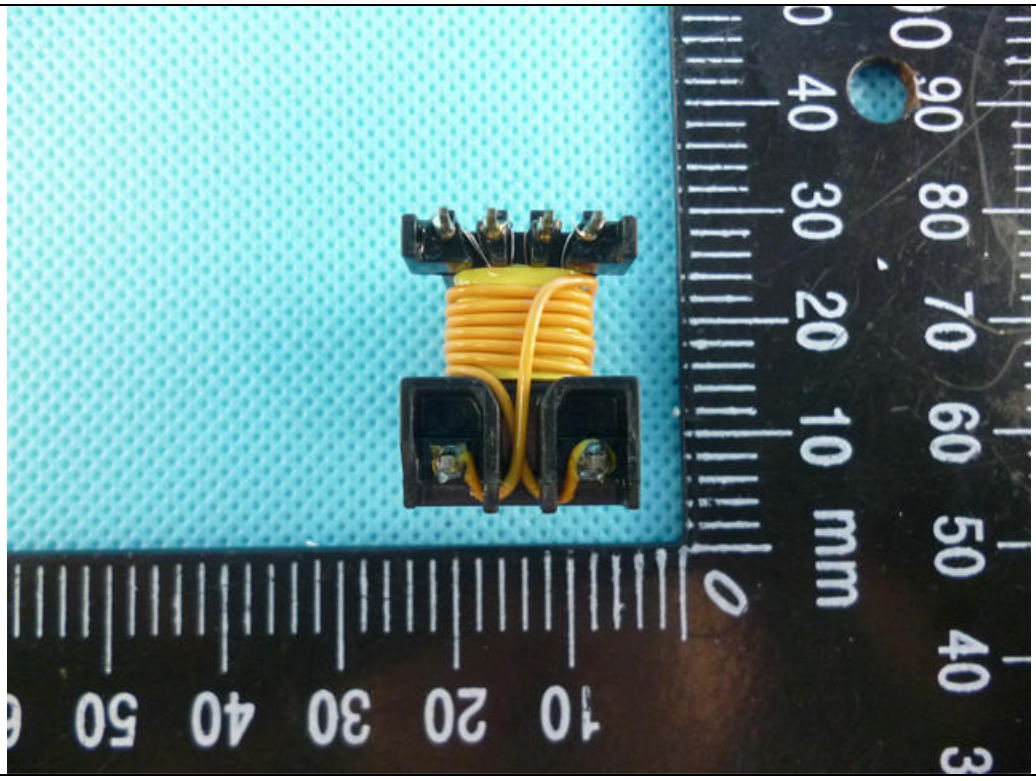


Attachment No. 5

Details of: T1 (Winding and iron core)

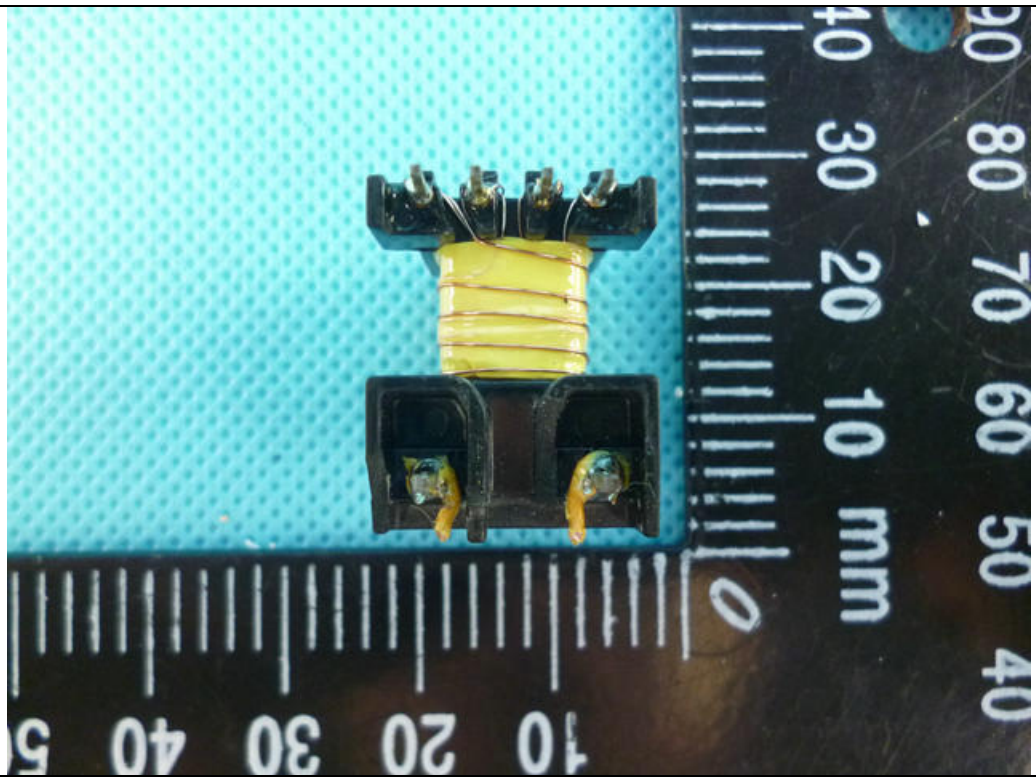


Details of: T1 internal view



Attachment No. 5

Details of: T1 internal view



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