

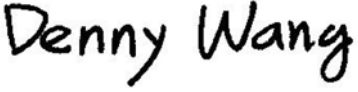
	Test Report issued under the responsibility of:	
TEST REPORT IEC 60950-1 Information technology equipment - Safety - Part 1: General requirements		
Report Reference No : ASL11120107 Date of issue : 2012-02-02 Total number of pages : 69		
CB Testing Laboratory : Universal Standard Service, Inc. Address : 8F-1, No. 266, Sec. 1, WenHua 2nd Road 244 Lin Kou Shiang Taipei County Chinese Taipei		
Applicant's name : COMPAL ELECTRONICS INC Address : NO581 RUIGUANG RD NEIHU DISTRICT TAIPEI CITY,114 TAIWAN		
Test specification: Standard : IEC 60950-1:2005 (2nd Edition); Am 1:2009 Test procedure : CB Scheme Non-standard test method : N/A		
Test Report Form No. : IEC60950_1B Test Report Form originator : SGS Fimko Ltd Master TRF : 2010-04		
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Test item description : Notebook PC Trade Mark : ASUSTeK Computer Inc. or ASUS Manufacturer : ASUSTEK COMPUTER INC 150 LI-TE RD PEITOU, TAIPEI 112 TAIWAN Model/Type reference : K75xxxx, X75xxxx, A75xxxx, R700xxxx (x can be 0-9, A-Z, a-z, - or blank for marketing purpose and no impact safety related construction and critical components) Rating : 19Vdc, 3.42A or 19Vdc, 4.74A or 19Vdc, 6.32A		

Testing procedure and testing location:	
<input checked="" type="checkbox"/> CB Testing Laboratory Testing location / address: Universal Standard Service, Inc. / 8F-1, No. 266, Sec. 1, WenHua 2nd Road 244 Lin Kou Shiang Taipei County Chinese Taipei <input type="checkbox"/> Associated CB Test Laboratory Testing location / address: Tested by (name + signature): Leo Chen Approved by (+ signature).....: Denny Wang	<div style="text-align: center; margin-top: 20px;">  <hr style="width: 100%;"/>  </div>
<input type="checkbox"/> Testing Procedure: TMP Tested by (name + signature): Approved by (+ signature).....: Testing location / address:	<hr/> <hr/> <hr/>
<input type="checkbox"/> Testing Procedure: WMT Tested by (name + signature): Witnessed by (+ signature): Approved by (+ signature).....: Testing location / address:	<hr/> <hr/> <hr/> <hr/>
<input type="checkbox"/> Testing Procedure: SMT Tested by (name + signature): Approved by (+ signature).....: Supervised by (+ signature): Testing location / address:	<hr/> <hr/> <hr/> <hr/>
<input type="checkbox"/> Testing Procedure: RMT Tested by (name + signature): Approved by (+ signature).....: Supervised by (+ signature): Testing location / address:	<hr/> <hr/> <hr/> <hr/>

<p>List of Attachments</p> <p>National Differences (29 pages)</p> <p>Enclosures (55 pages)</p>
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<p>Summary of Testing:</p> <p>Unless otherwise indicated, all tests were conducted at Universal Standard Service, Inc. / 8F-1, No. 266, Sec. 1, WenHua 2nd Road 244 Lin Kou Shiang Taipei County Chinese Taipei</p>
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Tests performed (name of test and test clause)	Testing location /
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Comments
<p>Input: Single-Phase (1.6.2) Durability (1.7.11) Limited Power Source Measurements (2.5) Steady Force (4.2.1 - 4.2.4) Drop Test (4.2.6, 4.2.1) Stress Relief (4.2.7, 4.2.1) Lithium Battery Reverse Current Measurement Test (4.3.8) Heating (4.5.1, 1.4.12, 1.4.13) Abnormal Operation (5.3.1 - 5.3.9) Overload of operator accessible connector test (5.3.7)</p>
<p>Summary of Compliance with National Differences: List of countries addressed: AT, AU, BE, BG, CH, CN, CY, CZ, DE, DK, EE, ES, EU, FI, FR, GB, GR, HU, IE, IS, IT, JP, KR, LT, LU, LV, MT, NL, NO, PL, PT, RO, SE, SG, SI, SK</p>

Copy of Marking Plate

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



Test item particulars :	
Equipment mobility	Transportable
Connection to the mains	No direct connection
Operating condition	continuous
Access location	operator accessible
Over voltage category (OVC)	OVC I
Mains supply tolerance (%) or absolute mains supply values	Not directly connected to the mains
Tested for IT power systems	N/A
IT testing, phase-phase voltage (V)	N/A
Class of equipment	Class III (supplied by SELV)
Considered current rating of protective device as part of the building installation (A)	--
Pollution degree (PD)	PD 2
IP protection class	IP X0
Altitude of operation (m)	Up to 2000m
Altitude of test laboratory (m)	Up to 2000m
Mass of equipment (kg)	3.26kg
Possible test case verdicts:	
- test case does not apply to the test object	N / A
- test object does meet the requirement	P(Pass)
- test object does not meet the requirement	F(Fail)
Testing:	
Date(s) of receipt of test item	2011-12-01
Date(s) of Performance of tests	2011-12-01 to 2011-12-12
General remarks:	
<p>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.</p> <p>"(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a point is used as the decimal separator.</p>	
<p>Manufacturer's Declaration per SubClause 6.25 of IEC 60950-1: The application for obtaining a CB Test Certificate includes more than one factory and a declaration form the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided</p> <p>When differences exist, they shall be identified in the General Product Information section.</p>	Yes
Name and address of Factory(ies):	
<p>(1) Compal Electronics Technology (Kunshan) Co., Ltd. No.25, Third Avenue, A Zone, Kunshan Comprehensive Free Trade Zone, Kunshan, Jiangsu, China</p> <p>(2) Compal Information (Kunshan) Co., Ltd. No.15, Third Avenue, A Zone, Kunshan Comprehensive Free Trade Zone, Kunshan, Jiangsu, China</p> <p>(3) Compal Information Technology (Kunshan) Co., Ltd. No.58, First Avenue, A Zone, Kunshan Comprehensive Free Trade Zone, Kunshan, Jiangsu, China</p>	

- (4) Compalead Eletrônica Do Brasil Indústria E Comércio Ltda
Rua Kanebo 175, Galpões C3 C4 C5 E C6 , Bairro Distrito Ind BUS Park, Jundiaí SP 13213-090 Brazil
- (5) Compal (Vietnam) Co., Ltd.
Ba Thien Industrial Zone, Ba Hien Commune, Binh Xuyen, Vinh Phuc, Vietnam
- (6) Compal Electronics (Chengdu) Co., Ltd.
No.88, Sec.1, ZongBao Ave. Chengdu, Hi-tech Comprehensive Bonded Zone, Shuangliu County, Chengdu Sichuan, China
- (7) Compal Electronics (Chongqing) Co., Ltd.
No.D01, Zone D Air Port Section of, LiangLu Cuntan Free Trade Port Area, YuBei District, Chongqing, China

GENERAL PRODUCT INFORMATION:

Report Summary

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

Product Description

The equipment is Notebook for use in information technology equipment.

For MB1:

Electric components were mounted on PWB in plastic enclosure and accompanied with one HDD, one DVD-ROM, two USB 3.0 ports and two USB2.0 ports, one VGA port, one RJ-45 port, one HDMI port, two audio port and one card reader.

MB1 have two constructions: UMA motherboard without VGA chip and DIS motherboard with VGA chip.

For MB2:

Electric components were mounted on PWB in plastic enclosure and accompanied with one HDD, one DVD-ROM, two USB 3.0 ports and two USB2.0 ports, one VGA port, one RJ-45 port, one HDMI port, two audio port and one card reader.

Mother board Different	MB1 (UMA)	MB2 (similar to MB1, DIS)	MB3 (DIS)
CPU1 (35W)	65W → system rating : 19Vdc, 3.42A or 19Vdc, 4.74A or 19Vdc, 6.32A	90W → system rating : 19Vdc, 4.74A or 19Vdc, 6.32A	120W → system rating :19Vdc, 6.32A
CPU2 (45W)	90W → system rating : 19Vdc, 4.74A or 19Vdc, 6.32A		

Model Differences

K75xxxx, X75xxxx, A75xxxx, R700xxxx (x can be 0-9, A-Z, a-z, - or blank for marketing purpose and no impact safety related construction and critical components)

Additional Information

The latest version of CB Bulletin on IECEE website has been taken into account and considered compliant.

The label is a draft of an artwork for marking plate pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.

Technical Considerations

The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 35 °C

The product was investigated to the following additional standards: EN 60950-1: 2006+A11: 2009+A1: 2010+A12: 2011. (which includes all European national differences, including those specified in this test report).

Abbreviations used in the report:

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

Indicate used abbreviations (if any)

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
1	GENERAL		No Verdict
1.5	Components		Pass
1.5.1	General		Pass
	Comply with IEC 60950-1 or relevant component standard	(see appended table 1.5.1)	Pass
1.5.2	Evaluation and testing of components	Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this standard. Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950-1 and the relevant component standard. Components, for which no relevant IEC-standard exists, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1.	Pass
1.5.3	Thermal controls	No thermal controls.	N/A
1.5.4	Transformers	No isolating transformer in the equipment.	N/A
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	Pass
1.5.6	Capacitors bridging insulation	Evaluated in power supply approval.	N/A
1.5.7	Resistors bridging insulation	Class III equipment.	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	Class III equipment.	N/A
1.5.9	Surge suppressors	Class III equipment.	N/A
1.5.9.1	General	Class III equipment.	N/A
1.5.9.2	Protection of VDRs		N/A
1.5.9.3	Bridging of functional insulation by a VDR		N/A
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
1.6	Power interface		Pass
1.6.1	AC power distribution systems	Evaluated in power supply approval.	N/A
1.6.2	Input current	(see appended table 1.6.2)	Pass
1.6.3	Voltage limit of hand-held equipment		N/A
1.6.4	Neutral conductor		N/A
1.7	Marking and instructions		Pass
1.7.1	Power rating and identification markings	The required marking is located on the outside surface of the equipment.	Pass
1.7.1.1	Power rating mark		Pass
	Multiple mains supply connections.....:	Class III equipment.	N/A
	Rated voltage(s) or voltage range(s) (V).....:	DC Source. 19Vdc (Optional)	Pass
	Symbol for nature of supply, for d.c. only.....:	IEC 60417 No. 5031 provided on marking label. (Optional)	Pass
	Rated frequency or rated frequency range (Hz)	DC Source.	N/A
	Rated current (mA or A)	3.42A or 4.74A or 6.32A(Optional)	Pass
1.7.1.2	Identification markings		Pass
	Manufacturer's name or trademark or identification mark	ASUSTeK Computer Inc. or ASUS	Pass
	Model identification or type reference	K75xxxx, X75xxxx, A75xxxx, R700xxxx (x can be 0-9, A-Z, a-z, - or blank for marketing purpose and no impact safety related construction and critical components)/ Notebook PC	Pass
	Symbol for Class II equipment only.....:	The equipment is regarded as Class III.	N/A
	Other markings and symbols	Additional symbols may be provided when submitted for National Approval.	Pass
1.7.2	Safety instructions and marking	See below	Pass
1.7.2.1	General	Safety instructions in English. Other languages will be provided when submitted for national approval.	Pass
1.7.2.2	Disconnect devices	Class III equipment.	N/A
1.7.2.3	Overcurrent protective device	No such device provided.	N/A
1.7.2.4	IT Power distribution systems	Class III equipment.	N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles	Equipment is designed for	N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
		continuous operation.	
1.7.4	Supply voltage adjustment		N/A
	Method and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment.....	No standard power outlets are provided.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference).....		N/A
1.7.7	Wiring terminals	Class III equipment, supplied by SELV.	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		Pass
1.7.8.1	Identification, location and marking.....	The function of controls affecting safety is obvious regardless of language.	Pass
1.7.8.2	Colours	For functional indication a LED lights when the equipment is operating.	Pass
1.7.8.3	Symbols according to IEC 60417.....	The stand-by switch is marked with the correct symbol (60417-1-IEC-5009).	Pass
1.7.8.4	Markings using figures		N/A
1.7.9	Isolation of multiple power sources		N/A
1.7.10	Thermostats and other regulating devices		N/A
1.7.11	Durability	All markings provided on UL Recognized Component labels suitable for surface they are applied upon and meet the durability test.	Pass
1.7.12	Removable parts	No marking is located on removable parts.	Pass
1.7.13	Replaceable batteries	1) The Li-ion battery cells in the battery pack are not regarded as replaceable. Warning text provided in user's manual. 2) The RTC battery is not replaceable. Warning text provided in user's manual.	Pass
	Language(s)	Only English language reviewed. May be provided in other languages upon request from the manufacturer	-

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
1.7.14	Equipment for restricted access locations.....:		N/A
2	PROTECTION FROM HAZARDS		Pass
2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in operator access areas	See below.	Pass
2.1.1.1	Access to energized parts	The operator cannot access to energized parts.	Pass
	Test by inspection	The operator has access to bare parts of SELV circuits.	Pass
	Test with test finger (Figure 2A)	The operator has access to bare parts of SELV circuits.	Pass
	Test with test pin (Figure 2B)	The operator has access to bare parts of SELV circuits.	Pass
	Test with test probe (Figure 2C).....:	No TNV.	N/A
2.1.1.2	Battery compartments	No TNV.	N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V _{peak} or V _{rms}); minimum distance through insulation (mm)		-
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage present.	N/A
2.1.1.5	Energy hazards	Class III unit intended to be supplied by an external adaptor with no energy hazard. No energy hazard operator access area.	Pass
2.1.1.6	Manual controls	The equipment does not contain any knobs, handles, levers, or the like.	N/A
2.1.1.7	Discharge of capacitors in equipment	Evaluated during separate certification of the power adapter.	N/A
	Measured voltage (V); time-constant (s)		-
2.1.1.8	Energy hazards - d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply:		N/A
	b) Internal battery connected to the mains supply ..:		N/A
2.1.1.9	Audio amplifiers.....:		N/A
2.1.2	Protection in service access areas	No maintained work in operation mode necessary.	N/A
2.1.3	Protection in restricted access locations		N/A
2.2	SELV circuits		Pass
2.2.1	General requirements	Class III unit intended to be supplied by an external non-energy hazardous SELV power adapter.	Pass

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
2.2.2	Voltages under normal conditions (V).....:	All accessible voltages are less than 42.4 Vp or 60 Vdc and are classified as SELV.	Pass
2.2.3	Voltages under fault conditions (V).....:	The unit is supplied by SELV and all critical fault conditions were considered in power adaptor evaluation.	N/A
2.2.4	Connection of SELV circuits to other circuits.....:	SELV circuits are only connected to other SELV circuits.	Pass

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

2.4	Limited current circuits		N/A
2.4.1	General requirements		N/A
2.4.2	Limit values		N/A
	Frequency (Hz).....:		-
	Measured current (mA).....:		-
	Measured voltage (V).....:		-
	Measured circuit capacitance (nF or uF).....:		-
2.4.3	Connection of limited current circuits to other circuits		N/A

2.5	Limited power sources		Pass
	a) Inherently limited output	Connectors are determined data pins only. See appended table 2.5 for details.	Pass
	b) Impedance limited output	USB and HDMI ports are limited by power distribution switch. Refer to CB test report.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
		See Table 1.5.1 for power distribution switch spec.	
	c) Regulating network limited output under normal operating and single fault condition	Card reader regulating network limited output under normal operating and single fault condition	Pass
	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 for details.	-
	Current rating of overcurrent protective device (A) :		-
	Use of integrated circuit (IC) current limiters.....:	Used power distribution switch comply with Annex CC.	-

2.6	Provisions for earthing and bonding		N/A
2.6.1	Protective earthing	Class III equipment.	N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG		-
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG		-
	Protective current rating (A), cross-sectional area (mm ²), AWG		-
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (ohm), voltage drop (V), test current (A), duration (min)		N/A
2.6.3.5	Colour of insulation.....:		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm)		-
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A

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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		N/A
2.7.1	Basic requirements		N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3.7		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices		N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel.....:		N/A

2.8	Safety interlocks		N/A
2.8.1	General principles		N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm).....:		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

2.9	Electrical insulation		Pass
2.9.1	Properties of insulating materials	Natural rubber, materials containing asbestos and hygroscopic materials are not used as insulation.	N/A
2.9.2	Humidity conditioning		N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
	Relative humidity (%), temperature (°C)		-
2.9.3	Grade of insulation	Functional insulation. Insulation in power adapter is evaluated in power adapter approval.	Pass
2.9.4	Separation from hazardous voltages	Evaluated in power adapter approval.	N/A
	Method(s) used		-

2.10	Clearances, creepage distances and distances through insulation		Pass
2.10.1	General	Insulation are considered evaluated in power adapter approval. For functional insulation see 5.3.4. Pollution degree 2 applicable.	Pass
2.10.1.1	Frequency	Evaluated during separate certification of the power adapter.	Pass
2.10.1.2	Pollution degrees.....	Pollution Degree 2.	Pass
2.10.1.3	Reduced values for functional insulation		N/A
2.10.1.4	Intervening unconnected conductive parts		N/A
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage	Evaluated during separate certification of the power adapter.	N/A
2.10.2.1	General		N/A
2.10.2.2	RMS working voltage		N/A
2.10.2.3	Peak working voltage		N/A
2.10.3	Clearances	See appended table 2.10.3 and 2.10.4 and clause 5.3.4.	Pass
2.10.3.1	General		Pass
2.10.3.2	Mains transient voltages		N/A
	a) AC mains supply		N/A
	b) Earthed d.c. mains supplies.....		N/A
	c) Unearthed d.c. mains supplies.....		N/A
	d) Battery operation.....		N/A
2.10.3.3	Clearances in primary circuits		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
2.10.3.4	Clearances in secondary circuits	See appended table 2.10.3 and 2.10.4 and clause 5.3.4.	Pass
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 and clause 5.3.4.	Pass
2.10.4.1	General	See below	Pass
2.10.4.2	Material group and comparative tracking index	See below	Pass
	CTI tests	Material group IIIb assumed; CTI < 175.	-
2.10.4.3	Minimum creepage distances		N/A
2.10.5	Solid insulation		N/A
2.10.5.1	General		N/A
2.10.5.2	Distances through insulation		N/A
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		N/A
2.10.5.5	Cemented joints		N/A
2.10.5.6	Thin sheet material - General		N/A
2.10.5.7	Separable thin sheet material		N/A
	Number of layers (pcs).....		-
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material - standard test procedure		N/A
	Electric strength test.....		-
2.10.5.10	Thin sheet material - alternative test procedure		N/A
	Electric strength test.....		-
2.10.5.11	Insulation in wound components		N/A
2.10.5.12	Wire in wound components		N/A
	Working voltage.....		N/A
	a) Basic insulation not under stress		N/A
	b) Basic, supplementary, reinforced insulation		N/A
	c) Compliance with Annex U		N/A
	Two wires in contact inside wound component;		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	angle between 45° and 90°		
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test.....		-
	Routine test		N/A
2.10.5.14	Additional insulation in wound components	Evaluated in power adapter approval.	N/A
	Working voltage.....		N/A
	- Basic insulation not under stress		N/A
	- Supplementary, reinforced insulation.....		N/A
2.10.6	Construction of printed boards		N/A
2.10.6.1	Uncoated printed boards		N/A
2.10.6.2	Coated printed boards	No coated printed boards.	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs).....		N/A
2.10.7	Component external terminations		N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection	No special coating in order reduce distances.	N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A
3	WIRING, CONNECTIONS AND SUPPLY		Pass
3.1	General		Pass
3.1.1	Current rating and overcurrent protection	Adequate cross sectional areas on internal wiring.	Pass
3.1.2	Protection against mechanical damage	Wire ways are smooth and free from edges. Wires are adequately fixed to prevent excessive strain on wire and terminals and avoiding	Pass

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Clause	Requirement + Test	Result – Remark	Verdict
		damage to the insulation of the conductor.	
3.1.3	Securing of internal wiring	Internal wiring is secured against excessive strain, loosening of terminals and damage to the conductor insulation.	Pass
3.1.4	Insulation of conductors	Insulation on internal conductors is considered to be of adequate quality and suitable for the application and the working voltage involved.	Pass
3.1.5	Beads and ceramic insulators	No beads or similar ceramic insulators on conductors.	N/A
3.1.6	Screws for electrical contact pressure	No electrical contact pressure.	N/A
3.1.7	Insulating materials in electrical connections	No contact pressure through insulating material	N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors	Terminations cannot become displaced so that clearances and creepage distance can be reduced.	Pass
	10 N pull test	All conductors are reliably secured.	Pass
3.1.10	Sleeving on wiring	No sleeving used as supplementary insulation.	N/A

3.2	Connection to mains supply		N/A
3.2.1	Means of connection	No direct connection to mains.	N/A
3.2.1.1	Connection to an a.c. mains supply		N/A
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm).....:		-
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type		-
	Rated current (A), cross-sectional area (mm ²), AWG		-
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	Mass of equipment (kg), pull (N).....:		-
	Longitudinal displacement (mm).....:		-
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	Diameter of minor dimension D (mm); test mass (g):		-
	Radius of curvature of cord (mm).....:		-
3.2.9	Supply wiring space		N/A
3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm ²).....:		-
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm).....:		-
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A
3.4	Disconnection from the mains supply		N/A
3.4.1	General requirement	No direct connection to mains.	N/A
3.4.2	Disconnect devices		N/A
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment		N/A
3.4.7	Number of poles - three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A
3.5	Interconnection of equipment		Pass
3.5.1	General requirements	Interconnection circuit selected to provided conformance to the requirements of 2.2 for SELV	Pass

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Clause	Requirement + Test	Result – Remark	Verdict
		CIRCUITS.	
3.5.2	Types of interconnection circuits.....:	Interconnection circuits are SELV	Pass
3.5.3	ELV circuits as interconnection circuits	No ELV interconnections.	N/A
3.5.4	Data ports for additional equipment	data ports was comply with LPS with clause 2.5.	Pass

4	PHYSICAL REQUIREMENTS		Pass
4.1	Stability		N/A
	Angle of 10°	Mass < 7kg.	N/A
	Test force (N)	The unit is not floor-standing equipment.	N/A

4.2	Mechanical strength		Pass
4.2.1	General	Complies with the requirement also after tests described below are applied.	Pass
	Rack-mounted equipment		N/A
4.2.2	Steady force test, 10 N		N/A
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N	No hazards as a result of the 250 N test.	Pass
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm)	- Transportable equipment. No damage after 1 m drop. - There was no possible of accessing hazardous parts.	Pass
4.2.7	Stress relief test	Test is carried out at 70 °C / 7h. No risk of shrinkage or distortion on enclosures due to release of internal stresses.	Pass
4.2.8	Cathode ray tubes	No such device within the equipment.	N/A
	Picture tube separately certified.....:		N/A
4.2.9	High pressure lamps	No high pressure lamp.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N).....:		N/A
4.2.11	Rotating solid media	<8000 rpm	N/A
	Test to cover on the door		N/A

4.3	Design and construction		Pass
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Clause	Requirement + Test	Result – Remark	Verdict
4.3.1	Edges and corners	All edges and corners are judged to be sufficiently well rounded so as not to constitute a hazard.	Pass
4.3.2	Handles and manual controls; force (N).....:	None that would cause hazard	N/A
4.3.3	Adjustable controls	No such device within the equipment	N/A
4.3.4	Securing of parts	Mechanical connections can be expected to withstand usual mechanical stress.	Pass
4.3.5	Connection by plugs and sockets	SELV and TNV connectors do not comply with IEC 60320-1 or IEC 60083	Pass
4.3.6	Direct plug-in equipment	Not a direct plug-in unit.	N/A
	Torque		N/A
	Compliance with the relevant mains plug standard:		N/A
4.3.7	Heating elements in earthed equipment	No such device within the equipment	N/A
4.3.8	Batteries	RTC battery is non-rechargeable. Abnormal charging protection is provided via series of blocking diode and 1 kohm resistor. (see appended table 5.3)	Pass
	- Overcharging of a rechargeable battery		Pass
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery	Reverse charging of rechargeable battery pack is not likely based on construction design.	Pass
	- Excessive discharging rate for any battery		Pass
4.3.9	Oil and grease		N/A
4.3.10	Dust, powders, liquids and gases		N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids		N/A
	Quantity of liquid (l)		N/A
	Flash point (°C)		N/A
4.3.13	Radiation		N/A
4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg).....:		-
	Measured high-voltage (kV).....:		-

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Clause	Requirement + Test	Result – Remark	Verdict
	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	See below	Pass
4.3.13.5.1	Lasers (including laser diodes)	The optical disk drive is certified component according to IEC/EN 60950-1 , also see appended table 1.5.1 for detail.	Pass
	Laser class	Laser class I	-
4.3.13.5.2	Light emitting diodes (LEDs)	LEDs in this equipment are used for indicating function with low optical power.	Pass
4.3.13.6	Other types		N/A
4.4	Protection against hazardous moving parts		Pass
4.4.1	General	Resetting of internal components during operation does not present a risk of personal injury.	Pass
4.4.2	Protection in operator access areas.....	Hazardous moving parts of equipment are adequately enclosed and guarded.	Pass
	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	Unintentional contact is not likely in service access areas.	Pass
4.4.5	Protection against moving fan blades	Unintentional contact is not possible.	N/A
4.4.5.1	General		N/A
	Not considered to cause pain or injury. a)		N/A
	Is considered to cause pain, not injury. b)		N/A
	Considered to cause injury. c).....		N/A
4.4.5.2	Protection for users		N/A
	Use of symbol or warning.....		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning.....		N/A
4.5	Thermal requirements		Pass
4.5.1	General		Pass

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Clause	Requirement + Test	Result – Remark	Verdict
4.5.2	Temperature tests	-The equipment and its components did not attain excessive temperature during normal operation. (See appended table 4.5)	Pass
	Normal load condition per Annex L	Operated in the most unfavorable way of operation given in the operating instructions until steady conditions established.	-
4.5.3	Temperature limits for materials	(See appended table 4.5)	Pass
4.5.4	Touch temperature limits	(See appended table 4.5)	Pass
4.5.5	Resistance to abnormal heat	Evaluated during separate certification of the power adapter.	N/A

4.6	Openings in enclosures		Pass
4.6.1	Top and side openings	Transportable equipment.	N/A
	Dimensions (mm)		-
4.6.2	Bottoms of fire enclosures	Transportable equipment.	N/A
	Construction of the bottom, dimensions (mm)		-
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment	Fire enclosure construction is considered to comply with the requirement. See appended miscellaneous of ID 7-04.	Pass
4.6.4.1	Constructional design measures	Openings do not exceed 1 mm in width regardless of length. (fan openings are achieved via internal heatsink construction)	Pass
	Dimensions (mm)	Fire enclosure construction is considered to comply with the requirement. See appended miscellaneous of ID 7-04	-
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		Pass
4.7.1	Reducing the risk of ignition and spread of flame	Method 1 - Selection and application of components, wiring and materials, which reduce the possibility of	Pass

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Clause	Requirement + Test	Result – Remark	Verdict
		ignition and spread of flame by the use of fire enclosure.	
	Method 1, selection and application of components wiring and materials		Pass
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	See 4.7.2.1.	Pass
4.7.2.1	Parts requiring a fire enclosure	Fire enclosure covers all parts.	Pass
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		Pass
4.7.3.1	General	The propagation of fire is minimized through satisfying the requirement of constructions and materials.	Pass
4.7.3.2	Materials for fire enclosures	(See appended table 1.5.1)	Pass
4.7.3.3	Materials for components and other parts outside fire enclosures	Decorative parts and parts outside of the fire enclosure are made of minimum HB material. Connectors are made of materials of Class V-2 minimum.	Pass
4.7.3.4	Materials for components and other parts inside fire enclosures	Other materials inside fire enclosure are minimum V-2 material	Pass
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		Pass
5.1	Touch current and protective conductor current		N/A
5.1.1	General	Evaluated as part of power supply investigation.	N/A
5.1.2	Configuration of equipment under test (EUT)		N/A
5.1.2.1	Single connection to an a.c. mains supply		N/A
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit		N/A
5.1.4	Application of measuring instrument		N/A
5.1.5	Test procedure		N/A
5.1.6	Test measurements		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	Supply voltage (V).....:		-
	Measured touch current (mA)		-
	Max. allowed touch current (mA)		-
	Measured protective conductor current (mA).....:		-
	Max. allowed protective conductor current (mA).....:		-
5.1.7	Equipment with touch current exceeding 3,5 mA		N/A
5.1.7.1	General.....:		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V).....:		-
	Measured touch current (mA)		-
	Max. allowed touch current (mA)		-
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A
5.2	Electric strength		N/A
5.2.1	General		N/A
5.2.2	Test procedure		N/A
5.3	Abnormal operating and fault conditions		Pass
5.3.1	Protection against overload and abnormal operation	(See appended table 5.3)	Pass
5.3.2	Motors	Approval dc fan used.	Pass
5.3.3	Transformers	No isolating transformer in the equipment.	N/A
5.3.4	Functional insulation.....:	Functional insulation complies with requirement (c). Considered due to all components are mounted on PCB of flammability V-1 min	Pass
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE		N/A
5.3.7	Simulation of faults	(See appended table 5.3)	Pass
5.3.8	Unattended equipment		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
5.3.9	Compliance criteria for abnormal operating and fault conditions	No fire occurred. No molten metal was emitted.	Pass
5.3.9.1	During the tests	No fire, emission of molten metal or deformation was noted during the tests.	Pass
5.3.9.2	After the tests		N/A
6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A
	Supply voltage (V)		-
	Current in the test circuit (mA)		-
6.1.2.2	Exclusions		N/A
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

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Clause	Requirement + Test	Result – Remark	Verdict
7.4.3	Impulse test		N/A
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples		-
	Wall thickness (mm).....		-
A.1.2	Conditioning of samples; temperature (°C).....		N/A
A.1.3	Mounting of samples		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D		N/A
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)		-
	Sample 2 burning time (s)		-
	Sample 3 burning time (s)		-
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material.....		-
	Wall thickness (mm).....		-
A.2.2	Conditioning of samples; temperature (°C).....		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C.....		-
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s)		-
	Sample 2 burning time (s)		-
	Sample 3 burning time (s)		-
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s)		-
	Sample 2 burning time (s)		-
	Sample 3 burning time (s)		-
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	5.3.2)		
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)		N/A
	Position.....:		-
	Manufacturer		-
	Type		-
	Rated values		-
	Method of protection		-
C.1	Overload test		N/A
C.2	Insulation		N/A
	Protection from displacement of windings		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		N/A
D.1	Measuring instrument		N/A
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		Pass
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	Earthed d.c. mains supply		N/A
G.2.3	Unearthed d.c. mains supply		N/A
G.2.4	Battery operation		N/A
G.3	Determination of telecommunication network transient voltage (V) :		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks		N/A
G.4.2	Transients from telecommunication networks		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	Determination of minimum clearances		N/A
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		N/A
	Metal(s) used		-

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Clause	Requirement + Test	Result – Remark	Verdict
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V)		N/A
K.3	Thermostat endurance test; operating voltage (V):		N/A
K.4	Temperature limiter endurance; operating voltage (V).....:		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		Pass
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		Pass
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz).....:		-
M.3.1.2	Voltage (V)		-
M.3.1.3	Cadence; time (s), voltage (V)		-
M.3.1.4	Single fault current (mA)		-
M.3.2	Tripping device and monitoring voltage		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V)		N/A
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		Pass

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		N/A
	a) Preferred climatic categories		N/A
	b) Maximum continuous voltage		N/A
	c) Pulse current		N/A
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
		-
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		N/A
		-
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		N/A
V.1	Introduction		N/A
V.2	TN power distribution systems		N/A
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus		N/A
Y.2	Mounting of test samples		N/A
Y.3	Carbon-arc light-exposure apparatus.....		N/A
Y.4	Xenon-arc light-exposure apparatus.....		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		N/A
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		N/A
CC	ANNEX CC, EVALUATION OF INTEGRATED CIRCUIT (IC) CURRENT LIMITERS		Pass
CC.1	General	Evaluated and complied with the requirement of EN 60950-1/A1:2010, Annex CC.	Pass
CC.2	Test program 1	See table 1.5.1 for detail.	Pass
CC.3	Test program 2	See table 1.5.1 for detail.	Pass
DD	ANNEX DD, REQUIREMENTS FOR THE MOUNTING MEANS OF RACK-MOUNTED EQUIPMENT		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N		N/A
DD.3	Mechanical strength test, 250 N, including end stops.....		N/A
DD.4	Compliance		N/A
EE	ANNEX EE, HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols		N/A

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

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (Edition or year)	mark(s) of conformity ¹⁾	
Enclosure (for LCD top cover)	Bayer Material Science Ltd	FR3021 GR + (z) ((z) - Material designation and color code may be followed by up to three letters and/or three numbers (does not include grades which are separately recognized with above material designation and suffix))	V-1, thickness 1.2 mm min., 60 °C	UL 94	UL	
Enclosure (for LCD front bezel)	BAYER MATERIALSCIE NCE AG	FR3002 + (z) ((z) - Material designation and color code may be followed by up to three letters and/or three numbers (does not include grades which are separately recognized with above material designation and suffix))	V-0, thickness 0.9 mm min., 70 °C	UL 94	UL	
	Mitsubishi Engineering- Plastics Corp	MB8600(+)	Rated V-0, thickness 1.2 mm min. 60 degree C	UL 94	UL	
Enclosure (for top side keyboard around)	BAYER MATERIALSCIE NCE AG	FR3021 GR + (z) ((z) - Material designation and color code may be followed by up to three letters and/or three numbers (does not include grades which are separately recognized with above material designation and suffix))	Rated V-1, thickness 1.2 mm min. 60 degree C	UL 94	UL	

	BAYER MATERIALSCIE NCE AG	FR3021 + (z) ((z) - Material designation and color code may be followed by up to three letters and/or three numbers (does not include grades which are separately recognized with above material designation and suffix))	V-0, thickness 1.5 mm min. 85 degree C	UL 94	UL
	Mitsubishi Engineering- Plastics Corp	TMB1615+	Rated V-0, thickness 1.0 mm min. 60 degree C	UL 94	UL
Enclosure (for bottom case)	BAYER MATERIALSCIE NCE AG	FR3021 + (z) ((z) - Material designation and color code may be followed by up to three letters and/or three numbers (does not include grades which are separately recognized with above material designation and suffix))	V-0, thickness 1.5 mm min. 85 degree C	UL 94	UL
	Mitsubishi Engineering- Plastics Corp	TMB1615+	Rated V-0, thickness 1.0 mm min. 60 degree C	UL 94	UL
LCD Panel	Various	Various	17.3 inch, TFT- LCD type (LED Backlight)	--	Tested in the equip.
Adapter	Delta Electronics Inc/ ASUS	ADP-65JH AB,	I/P:100-240Vac, 1.5A, 50-60Hz; O/P:19Vdc, 3.42A, Class II, ambient 40 °C	UL 60950-1 (ed.2); IEC 60950-1:2005; EN 60950- 1:2006+A11:200 9	UL, CB by TUVRh (JPTUV- 028167-M2)
	Delta Electronics Inc/ ASUS	ADP-65JH BB	I/P:100-240Vac, 1.5A, 50-60Hz; O/P:19Vdc, 3.42A, Class I, ambient 40 °C	UL 60950-1 (ed.2); IEC 60950-1:2005; EN 60950- 1:2006+A11:200	UL, CB by TUVRh (JPTUV- 033637-M1)
	Enertronix, Inc / ASUS	EXA0703YH	I/P:100-240Vac, 1.5A, 50-60Hz; O/P:19Vdc, 3.42A, Class I, ambient 40 °C	UL 60950-1 (ed.2); IEC 60950-1:2005; EN 60950- 1:2006+A11:200 9	UL, CB by TUVRh (JPTUV- 030351)

	Lite-On Technology / Trademark for ASUS	PA-1650-66XX (the X can be A-Z, 0-9, hyphen or blank)	I/P:100-240Vac, 1.5A, 50-60Hz; O/P:19Vdc, 3.42A, Class I, ambient 40 °C	UL 60950-1 (ed.2); IEC 60950-1:2005; EN 60950-1:2006+A11:2009	UL, CB by TUVRh (Cert. no.: JPTUV-030374)
	Delta Electronics Inc. /(trademark for ASUS)	ADP-90CD CB	I/P:100-240Vac, 50-60Hz, 1.5A O/P: 19Vdc, 4.74A (Class II) 40°C	UL 60950-1 (ed.2); IEC 60950-1:2005; EN 60950-1:2006+A11:2009	CB byTUV/RH (Certificate no. JPTUV-028021)
	Delta Electronics Inc. /(trademark for ASUS)	ADP-90CD DB	I/P:100-240Vac, 50-60Hz, 1.5A O/P: 19Vdc, 4.74A (Class I) 40°C	UL 60950-1 (ed.2); IEC 60950-1:2005; EN 60950-1:2006+A11:2009	UL, CB by TUV/Rh (Certificate no. JPTUV-028026-M3)
	Enertronix Inc.	EXA0904YH	I/P:100-240Vac, 50-60Hz, 1.5A O/P: 19Vdc, 4.74A (Class I) 40°C	UL 60950-1 (ed.2); IEC 60950-1:2005; EN 60950-1:2006+A11:2009	UL, CB by TUV/Rh (Certificate no. JPTUV-029752)
	Delta Electronics Inc/ ASUS	ADP-120ZB AB	I/P:100-240Vac, 2A, 50-60Hz; O/P:19Vdc, 6.32A, Class I, ambient 40 °C	UL 60950-1 (ed.2); IEC 60950-1:2005; EN 60950-1:2006+A11:2009	UL, CB by TUVRh (Cert. no.: JPTUV-029467)
	Delta Electronics Inc/ ASUS	ADP-120ZB BB	I/P:100-240Vac, 2A, 50-60Hz; O/P:19Vdc, 6.32A, Class I, ambient 40 °C	UL 60950-1 (ed.2); IEC 60950-1:2005; EN 60950-1:2006+A11:2009	UL, CB by TUVRh (Cert. no.: JPTUV-029467)
	Enertronix Inc.	EXA1106YH	I/P:100-240Vac, 2A, 50-60Hz; O/P:19Vdc, 6.32A, Class I, ambient 40 °C	UL 60950-1 (ed.2); IEC 60950-1:2005; EN 60950-1:2006+A11:2009	UL, CB by TUV (JPTUV-039012)
HDD (optional)	Seagate Technology, Inc (or equivalent)	ST9 (or equivalent)	5Vdc, 1.5A max.	UL 60950-1 (ed.2); IEC 60950-1:2005, EN 60950-1:2006+A11	UL, TUV, VDE, Nemko, CB
Solid State Disk (optional) (alternate)	Micron Technology Inc (or equivalent)	RealSSD X300 2.5 (X may be any letter A-Z) (or equivalent)	3.3Vdc/5Vdc, 2.0A max.	UL 60950-1 (ed.2); IEC 60950-1:2005, EN 60950-1:2006+A11	UL, TUV, VDE, Nemko, CB
Optical Drive Device (optional)	Sony Optiarc Inc (or equivalent)	BD-5730Sxxx (x=blank,-,A-Z or 0-9) (or equivalent)	5Vdc, 2.0A max. Laser Class 1 product	UL 60950-1 (ed.2); EN 60950-1:2006+A11; EN 60825-1:2007	UL, TUV, VDE, Nemko

Rechargeable Li-ion Battery (3S2P)	SANYO ENERGY (TAIWAN) CO LTD / Trademark for ASUS	A32-K55	11.1Vdc, 5100mAh, 56Wh	UL 60950-1, UL 2054, IEC60950-1: 2005	UL, CB by Demko (Certificate no.: DK-5181)
	SIMPLO TECHNOLOGY CO LTD / Trademark for ASUS	A32-K55	10.8 Vdc, 56 Wh/ 5200 mAh	UL 60950-1, UL 2054, IEC60950-1: 2005	UL, CB by TUV/SUD (Certificate no.: DK-3700-A2)
	LG Chemical Ltd / Trademark for ASUS	A32-K55	10.8 Vdc, 56 Wh / 5200 mAh	UL 60950-1, UL 2054, IEC60950-1: 2005	UL, CB by TUV/RH (Certificate no.: SG-OF-06765)
DC Fan	Delta Electronics Inc	KSB06105HA(Y) (where (Y) may be xxxxx, where x may be A through Z, 0 through 9, "-" or blank)	5Vdc, 0.4A max., 4.0 CFM min.	UL 60950-1 EN 60950-1:2006+A11	UL 507, TUVRh
	Various	Various	5Vdc, 0.4A max., 4.0 CFM min.	UL 60950-1 EN 60950-1:2006+A11	UL 507, TUV or VDE
MB1 (Can use system rating 19Vdc, 3.42A or 19Vdc, 4.74A or 19Vdc, 6.3A)					
MB2 (Can use system rating 19Vdc, 4.74A or 19Vdc, 6.3A)					
PCB	Various	Various	V-1 min., min. 105 °C	UL 796	UL
RTC Battery (Lithium type)	Hitachi Maxell Ltd	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH12568)
	Mitsubishi Electric Home Appliance Co Ltd	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH21249)
	Panasonic Corporation, Panasonic Corporation of North America	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH12210)
	Jhieh Hong Technology Co Ltd	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH45591)
	FDK CORP	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH13421)
	Vic Dawn Enterprise Co Ltd	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH20550)
	Varta Microbattery GmbH	CR2032	3Vdc, Max. Abnormal charging Current 5mA	UL 1642	UL (MH13654)

	DOUBLE BEST CO LTD	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH46388)
	Various	CR2032	3Vdc, maximum abnormal charging current 5mA	UL 1642	UL
Power Distribution Switch (for USB port protector)	Diodes Inc	AP21(The "x" in the model name can be any number from 4 to 9 (denoting active low or active high enable pin). "y" can be 1, 2, 5 or 6 (denoting channel switch type). "z" can be single or multiple alphanumeric characters, not affecting safety.)	2.7-5.5Vdc, 1.0 A, Cl.III	UL subject 2367, IEC 60950- 1(ed.2)	UL, CB by Nemko (Cert. no.: NO50519/A1)
	Diodes Inc	AP2... (The symbols "..." in the model Number represents alphanumeric characters (up to six alphanumeric characters) that may indicate device package options and minor non-safety critical variations of the device. Additional alphanumeric characters representing device package options may follow model number also representing minor non-safety critical variations in the device.)	Single channel: 2.0A, 2.7- 5.5Vdc, Cl. III, SELV	UL subject 2367, IEC 60950- 1(ed.2); am1	UL, CB by Nemko (Cert. no: NO62499)

	Anpec Electronics Corporation	APL3510..I-TRG (The first dot "." in the model name can be A, B, C or D to represent output current/enable function. The second dot can be K or X to represent package code)	1.0-2.0A, 2.7-5.5Vdc per output channel, Cl. III. SELV	IEC 60950-1(ed.2)	UL, CB by Nemko (Certificate No: NO52719)
	Global Mixed-mode Technology Inc.	G525A1, G525A2, G526-1, G526-2, G528, G528A, G545A1, G545A2, G545B1, G545B2, G545C1, G545C2, G545D1, G545D2, G546A1, G546A2, G546A3, G546A4, G546B1, G546B2, G546B3, G546B4, G546C1, G546C2, G546C3, G546C4, G546D1, G546D2, G546D3, G546D4, G546E1, G546E2, G546E3, G547F1, G547F2, G547G1, G547G2, G547H1, G547H2, G547I1, G547I2, G547J1, G547J2, G547K1, G547K2, G547L1, G547L2	0.7-2A, 3.0-5.5Vdc per output channel, SELV Cl. III.	IEC 60950-1: 2005	UL, CB by TUVRH (Certificate No: JPTUV-033220)

	Monolithic Power	MP62160D. (The dot "." In the model name can be S, D or H to represent package code)	2.8A, 2.7-5.5V, CI.III	IEC 60950-1(ed.2)	UL, CB by Nemko (Certificate No: NO53640)
	Richtek Technology Corporation	RT9711... (The first dot "." can be A, B, C or D represent output current/EN function. The second dot can be P or G represent operation temperature Range and the third dot can be B, BG, J5, S or F represent package type)	0.6-1.5 A, 2.5-5.5Vdc per output channel, SELV CI. III	IEC 60950-1: (ed.1)	UL, CB by Nemko (Certificate No: NO46275)
	Richtek Technology corporation	RT9712.G. (The first dot "." can be A, B, C or D represent output current / enable function. The second dot "." can be S or F represent package type.	1.0A-1.5A, 2.7-5.5Vdc per output channel SELV, class III.	UL subject 2367, IEC 60950-1(ed.2)	UL, CB by Nemko (Cert. no.: NO62628)
	Silergy Corp	SY6288xyyy (x=A, B, C, D, E; yyy=0-9, A-Z or blank)	5.5Vdc max., 1.6A max. (x=A, B); 5.5Vdc max., 3.7A max. (x=C, D, E)	IEC 60950-1(ed.2)	UL, CB by Nemko (Certificate No: JPTUV-034818)
	Texas Instruments, Inc.	TPS206". The dot "." in the model represents a single digit numeric character 1, 2, 3, 5, 6, or 7. Additional alphabetic characters representing device package options may follow model number.	1A, 2.7-5.5Vdc, per output channel. SELV, Class III	IEC 60950-1(ed.2): am1	UL, CB by Nemko (Certificate No: NO59537)
	Texas Instruments, Inc.	TPS2062A	2A, 2.7-5.5Vdc, SELV, Class III	IEC 60950-1: 2005	UL, CB by Nemko (Certificate No: NO50433)

	Texas Instruments, Inc.	TPS2068	1.5A, 2.7-5.5Vdc, SELV, Class III	IEC 60950-1: 2005	UL, CB by Nemko (Certificate No: NO50859/A1)
	Texas Instruments, Inc	TPS2540RTE. (The "." indicated in the model designation represents any alphanumeric character identifying minor differences in non-safety affecting operation and configuration differences.)	2.7A maximum 4.5-5.5V DC Cl. III, SELV	UL subject 2367, IEC 60950-1(ed.2); am1	UL, CB by Nemko (Cert. no.: NO60218)
	Texas Instruments, Inc	TPS2541ARTE _x (The "x" indicated in the model designation represents any alphanumeric character identifying only the product packaging options, such as part quantity per reel.)	2.7A maximum 4.5 - 5.5V DC Cl. III, SELV	UL subject 2367, IEC 60950-1(ed.2); am1	UL, CB by Nemko (Cert. no.: NO64924)
	Texas Instruments, Inc	TPS2554DRCE _x (The "x" indicated in the model designation represents any alphanumeric character identifying only the product packaging options, such as part quantity per reel.)	2.7A maximum 4.5 - 5.5V DC Cl. III, SELV	UL subject 2367, IEC 60950-1(ed.2); am1	UL, CB by Nemko (Cert. no.: NO64926)

	Texas Instruments, Inc	TPS2555DRCx (The "x" indicated in the model designation represents any alphanumeric character indentifying only the product packaging options, such as part quantity per reel.)	2.7A maximum 4.5 - 5.5V DC Cl. III, SELV	UL subject 2367, IEC 60950-1(ed.2); am1	UL, CB by Nemko (Cert. no.: NO64926)
	uPI Semiconductor Corp.	uP7534yWYZ-XX (y=A, B, C or D; WYZ=RU8, RA8 or SA8; XX= 06, 10 or 15)	DC 2.7-5.5Vdc, 1.0A-1.5A max. for models uP7534yWYZ-06, 1.8A-2.7A max. for models uP7534yWYZ-10, 2.5A-3.8A max. for models uP7534yWYZ-15	IEC 60950-1	UL, CB by TUVRh (Certificate No: JPTUV-026740)
- Power Distribution Switch for (HDMI port protector)	Diodes, Inc.	AP21xyz (The "x" in the model name can be any number from 4 to 9 (denoting active low or active high enable pin). "y" can be 1, 2, 5 or 6 (denoting channel switch type). "z" can be single or multiple alphanumeric characters, not affecting safety.)	2.7 - 5.5Vdc, Cl. III	UL subject 2367, IEC 60950-1(ed.2)	UL, CB by Nemko (Cert. no.: NO50519/A1)

	Diodes, Inc.	AP2... (The symbols "... " in the model Number represents alphanumeric characters (up to six alphanumeric characters) that may indicate device package options and minor non-safety critical variations of the device. Additional alphanumeric characters representing device package options may follow model number also representing minor non-safety critical variations in the device.)	Single channel: 2.0A 2.7-5.5V DC Cl. III, SELV	UL subject 2367, IEC 60950-1(ed.2); am1	UL, CB by Nemko (Cert. no: NO62499)
	ANPEC Electronics Corporation	APL3517..I-TRG (The first dot "." in the models name can be A, B or blank, represent enable function. The second dot can be A or B, represent package code.)	0.1A 2.7-5.25Vdc per output channel Cl. III. SELV	UL subject 2367, IEC 60950-1(ed.2); am1	UL, CB by Nemko (Cert. no: NO65711)
MB 3 (Can use system rating 19Vdc, 6.3A)					
PCB	Various	Various	V-1 min., min. 105 °C	UL 796	UL
RTC Battery (Lithium type)	Hitachi Maxell Ltd	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH12568)
	Mitsubishi Electric Home Appliance Co Ltd	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH21249)
	Panasonic Corporation, Panasonic Corporation of North America	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH12210)
	Jhieh Hong Technology Co Ltd	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH45591)

	FDK CORP	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH13421)
	Vic Dawn Enterprise Co Ltd	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH20550)
	Varta Microbattery Gmbh	CR2032	3Vdc, Max. Abnormal charging Current 5mA	UL 1642	UL (MH13654)
	DOUBLE BEST CO LTD	CR2032	3Vdc, Max. Abnormal charging Current 10mA	UL 1642	UL (MH46388)
	Various	CR2032	3Vdc, maximum abnormal charging current 5mA	UL 1642	UL
Power Distribution Switch (for USB port protector)	Diodes Inc	AP21(The "x" in the model name can be any number from 4 to 9 (denoting active low or active high enable pin). "y" can be 1, 2, 5 or 6 (denoting channel switch type). "z" can be single or multiple alphanumeric characters, not affecting safety.)	2.7-5.5Vdc, 1.0 A, Cl.III	UL subject 2367, IEC 60950-1(ed.2)	UL, CB by Nemko (Cert. no.: NO50519/A1)

	Diodes Inc	AP2... (The symbols "... " in the model Number represents alphanumeric characters (up to six alphanumeric characters) that may indicate device package options and minor non-safety critical variations of the device. Additional alphanumeric characters representing device package options may follow model number also representing minor non-safety critical variations in the device.)	Single channel: 2.0A, 2.7-5.5Vdc, Cl. III, SELV	UL subject 2367, IEC 60950-1(ed.2); am1	UL, CB by Nemko (Cert. no: NO62499)
	Anpec Electronics Corporation	APL3510..I-TRG (The first dot "." in the model name can be A, B, C or D to represent output current/enable function. The second dot can be K or X to represent package code)	1.0-2.0A, 2.7-5.5Vdc per output channel, Cl. III. SELV	IEC 60950-1(ed.2)	UL, CB by Nemko (Certificate No: NO52719)

	Global Mixed-mode Technology Inc.	G525A1, G525A2, G526-1, G526-2, G528, G528A, G545A1, G545A2, G545B1, G545B2, G545C1, G545C2, G545D1, G545D2, G546A1, G546A2, G546A3, G546A4, G546B1, G546B2, G546B3, G546B4, G546C1, G546C2, G546C3, G546C4, G546D1, G546D2, G546D3, G546D4, G546E1, G546E2, G546E3, G547F1, G547F2, G547G1, G547G2, G547H1, G547H2, G547I1, G547I2, G547J1, G547J2, G547K1, G547K2, G547L1, G547L2	0.7-2A, 3.0-5.5Vdc per output channel, SELV Cl. III.	IEC 60950-1: 2005	UL, CB by TUVRH (Certificate No: JPTUV-033220)
	Monolithic Power	MP62160D. (The dot "." In the model name can be S, D or H to represent package code)	2.8A, 2.7-5.5V, Cl.III	IEC 60950-1(ed.2)	UL, CB by Nemko (Certificate No: NO53640)

	Richtek Technology Corporation	RT9711... (The first dot "." can be A, B, C or D represent output current/EN function. The second dot can be P or G represent operation temperature Range and the third dot can be B, BG, J5, S or F represent package type)	0.6-1.5 A, 2.5-5.5Vdc per output channel, SELV Cl. III	IEC 60950-1: (ed.1)	UL, CB by Nemko (Certificate No: NO46275)
	Richtek Technology corporation	RT9712.G. (The first dot "." can be A, B, C or D represent output current / enable function. The second dot "." can be S or F represent package type.	1.0A-1.5A, 2.7-5.5Vdc per output channel SELV, class III.	UL subject 2367, IEC 60950-1(ed.2)	UL, CB by Nemko (Cert. no.: NO62628)
	Silergy Corp	SY6288xyyy (x=A, B, C, D, E; yyy=0-9, A-Z or blank)	5.5Vdc max., 1.6A max. (x=A, B); 5.5Vdc max., 3.7A max. (x=C, D, E)	IEC 60950-1(ed.2)	UL, CB by Nemko (Certificate No: JPTUV-034818)
	Texas Instruments, Inc.	TPS206". The dot "." in the model represents a single digit numeric character 1, 2, 3, 5, 6, or 7. Additional alphabetic characters representing device package options may follow model number.	1A, 2.7-5.5Vdc, per output channel. SELV, Class III	IEC 60950-1(ed.2): am1	UL, CB by Nemko (Certificate No: NO59537)
	Texas Instruments, Inc.	TPS2062A	2A, 2.7-5.5Vdc, SELV, Class III	IEC 60950-1: 2005	UL, CB by Nemko (Certificate No: NO50433)
	Texas Instruments, Inc.	TPS2068	1.5A, 2.7-5.5Vdc, SELV, Class III	IEC 60950-1: 2005	UL, CB by Nemko (Certificate No: NO50859/A1)

	Texas Instruments, Inc	TPS2540RTE. (The "." indicated in the model designation represents any alphanumeric character identifying minor differences in non-safety affecting operation and configuration differences.)	2.7A maximum 4.5-5.5V DC Cl. III, SELV	UL subject 2367, IEC 60950-1(ed.2); am1	UL, CB by Nemko (Cert. no.: NO60218)
	Texas Instruments, Inc	TPS2541ARTE _x (The "x" indicated in the model designation represents any alphanumeric character identifying only the product packaging options, such as part quantity per reel.)	2.7A maximum 4.5 - 5.5V DC Cl. III, SELV	UL subject 2367, IEC 60950-1(ed.2); am1	UL, CB by Nemko (Cert. no.: NO64924)
	Texas Instruments, Inc	TPS2554DRC _x (The "x" indicated in the model designation represents any alphanumeric character identifying only the product packaging options, such as part quantity per reel.)	2.7A maximum 4.5 - 5.5V DC Cl. III, SELV	UL subject 2367, IEC 60950-1(ed.2); am1	UL, CB by Nemko (Cert. no.: NO64926)
	Texas Instruments, Inc	TPS2555DRC _x (The "x" indicated in the model designation represents any alphanumeric character identifying only the product packaging options, such as part quantity per reel.)	2.7A maximum 4.5 - 5.5V DC Cl. III, SELV	UL subject 2367, IEC 60950-1(ed.2); am1	UL, CB by Nemko (Cert. no.: NO64926)

	uPI Semiconductor Corp.	uP7534yWYZ-XX (y=A, B, C or D; WYZ=RU8, RA8 or SA8; XX= 06, 10 or 15)	DC 2.7-5.5Vdc, 1.0A-1.5A max. for models uP7534yWYZ-06, 1.8A-2.7A max. for models uP7534yWYZ-10, 2.5A-3.8A max. for models uP7534yWYZ-15	IEC 60950-1	UL, CB by TUVRh (Certificate No: JPTUV-026740)
- Power Distribution Switch for (HDMI port protector)	Diodes, Inc.	AP21xyz (The "x" in the model name can be any number from 4 to 9 (denoting active low or active high enable pin). "y" can be 1, 2, 5 or 6 (denoting channel switch type). "z" can be single or multiple alphanumeric characters, not affecting safety.)	2.7 - 5.5Vdc, Cl. III	UL subject 2367, IEC 60950-1(ed.2)	UL, CB by Nemko (Cert. no.: NO50519/A1)
	Diodes, Inc.	AP2... (The symbols "... " in the model Number represents alphanumeric characters (up to six alphanumeric characters) that may indicate device package options and minor non-safety critical variations of the device. Additional alphanumeric characters representing device package options may follow model number also representing minor non-safety critical variations in the device.)	Single channel: 2.0A 2.7-5.5V DC Cl. III, SELV	UL subject 2367, IEC 60950-1(ed.2); am1	UL, CB by Nemko (Cert. no: NO62499)

	ANPEC Electronics Corporation	APL3517..I-TRG (The first dot "." in the models name can be A, B or blank, represent enable function. The second dot can be A or B, represent package code.)	0.1A 2.7- 5.25Vdc per output channel Cl. III. SELV	UL subject 2367, IEC 60950- 1(ed.2); am1	UL, CB by Nemko (Cert. no: NO65711)
Supplementary information: 1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

1.5.1	TABLE: Opto Electronic Devices			N/A
Manufacturer.....:				
Type.....:				
Separately tested.....:				
Bridging insulation.....:				
External creepage distance.....:				
Internal creepage distance.....:				
Distance through insulation.....:				
Tested under following conditions.....:				
Input.....:				
Output.....:				
supplementary information:				
Additional types may be described in Enclosure - Miscellaneous				

1.6.2	TABLE: electrical data (in normal conditions)					Pass
U (V)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	condition/status
--	--	--	--	--	--	MB3 (DIS, with CPU2)
--	--	--	--	--	--	SIMPLO TECHNOLOGY CO LTD / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh/ 5200 mAh Max. charge current : 4.4A Max. discharge watt :60 W
19Vdc	4.35	6.32	82.65	--	--	Maximum normal load with full discharged battery pack
19Vdc	2.51	6.32	47.69	--	--	System off with full discharged battery pack charging mode
11.20V dc	2.51	--	28.11	--	--	System off with full discharged battery pack charging mode (Measure battery pack connector)
10.8Vdc	5.32	--	57.45	--	--	Maximum normal load supplied by battery pack discharge mode (Measure battery pack connector)
--	--	--	--	--	--	LG Chemical Ltd / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh / 5200 mAh Max. charge current : 4.9A Max. discharge current :9.0A

19Vdc	4.35	6.32	82.65	--	--	Maximum normal load with full discharged battery pack
19Vdc	2.73	6.32	51.87	--	--	System off with full discharged battery pack charging mode
11.20Vdc	2.52	--	28.22	--	--	System off with full discharged battery pack charging mode (Measure battery pack connector)
10.8Vdc	5.35	--	57.78	--	--	Maximum normal load supplied by battery pack discharge mode (Measure battery pack connector)
--	--	--	--	--	--	SANYO ENERGY (TAIWAN) CO LTD / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 11.1Vdc, 5100mAh, 56Wh Max. charge current : 4.85A Max. discharge watt :60 W
19Vdc	4.35	6.32	82.65	--	--	Maximum normal load with full discharged battery pack
19Vdc	2.51	6.32	47.69	--	--	System off with full discharged battery pack charging mode
11.20Vdc	2.79	--	31.25	--	--	System off with full discharged battery pack charging mode (Measure battery pack connector)
11.4Vdc	5.06	--	57.68	--	--	Maximum normal load supplied by battery pack discharge mode (Measure battery pack connector)
--	--	--	--	--	--	MB2 (DIS)(CPU2)
--	--	--	--	--	--	SIMPLO TECHNOLOGY CO LTD / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh/ 5200 mAh Max. charge current : 4.4A Max. discharge watt :60 W
19Vdc	4.12	4.74	78.28	--	--	Maximum normal load with full discharged battery pack
19Vdc	2.80	4.74	53.20	--	--	System off with full discharged battery pack charging mode
11.20Vdc	2.54	--	28.45	--	--	System off with full discharged battery pack charging mode (Measure battery pack connector)
10.84Vdc	4.61	--	49.97	--	--	Maximum normal load supplied by battery pack discharge mode (Measure battery pack connector)
--	--	--	--	--	--	LG Chemical Ltd / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh / 5200 mAh Max. charge current : 4.9A Max. discharge current :9.0A
19Vdc	4.12	4.74	78.28	--	--	Maximum normal load with full discharged battery pack
19Vdc	3.01	4.74	57.19	--	--	System off with full discharged

						battery pack charging mode
11.20V dc	2.53	--	28.34	--	--	System off with full discharged battery pack charging mode (Measure battery pack connector)
10.84V dc	4.96	--	53.76	--	--	Maximum normal load supplied by battery pack discharge mode (Measure battery pack connector)
--	--	--	--	--	--	SANYO ENERGY (TAIWAN) CO LTD / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 11.1Vdc, 5100mAh, 56Wh Max. charge current : 4.85A Max. discharge watt :60 W
19Vdc	4.12	4.74	78.28	--	--	Maximum normal load with full discharged battery pack
19Vdc	2.80	4.74	53.20	--	--	System off with full discharged battery pack charging mode
11.20V dc	2.77	--	31.02	--	--	System off with full discharged battery pack charging mode (Measure battery pack connector)
11.82V dc	4.53	--	53.54	--	--	Maximum normal load supplied by battery pack discharge mode (Measure battery pack connector)
--	--	--	--	--	--	MB1 (UMA) (CPU2)
--	--	--	--	--	--	SIMPLO TECHNOLOGY CO LTD / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh/ 5200 mAh Max. charge current : 4.4A Max. discharge watt :60 W
19Vdc	3.98	4.74	75.62	--	--	Maximum normal load with full discharged battery pack
19Vdc	1.82	4.74	34.58	--	--	System off with full discharged battery pack charging mode
11.20V dc	2.51	--	28.11	--	--	System off with full discharged battery pack charging mode (Measure battery pack connector)
11.1Vdc	4.46	--	49.50	--	--	Maximum normal load supplied by battery pack discharge mode (Measure battery pack connector)
--	--	--	--	--	--	LG Chemical Ltd / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh / 5200 mAh Max. charge current : 4.9A Max. discharge current :9.0A
19Vdc	3.98	4.74	75.62	--	--	Maximum normal load with full discharged battery pack
19Vdc	2.03	4.74	38.57	--	--	System off with full discharged battery pack charging mode
11.20V dc	2.51	--	28.11	--	--	System off with full discharged battery pack charging mode

						(Measure battery pack connector)
10.84V dc	4.96	--	53.76	--	--	Maximum normal load supplied by battery pack discharge mode (Measure battery pack connector)
--	--	--	--	--	--	SANYO ENERGY (TAIWAN) CO LTD / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 11.1Vdc, 5100mAh, 56Wh Max. charge current : 4.85A Max. discharge watt :60 W
19Vdc	3.98	4.74	75.62	--	--	Maximum normal load with full discharged battery pack
19Vdc	1.82	4.74	34.58	--	--	System off with full discharged battery pack charging mode
11.20V dc	2.72	--	30.46	--	--	System off with full discharged battery pack charging mode (Measure battery pack connector)
11.1Vdc	4.64	--	51.50	--	--	Maximum normal load supplied by battery pack discharge mode (Measure battery pack connector)
--	--	--	--	--	--	MB1 (UMA) (CPU1)
--	--	--	--	--	--	SIMPLO TECHNOLOGY CO LTD / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh/ 5200 mAh Max. charge current : 4.4A Max. discharge watt :60 W
19Vdc	2.98	3.42	56.62	--	--	Maximum normal load with full discharged battery pack
19Vdc	1.79	3.42	34.01	--	--	System off with full discharged battery pack charging mode
11.20V dc	2.50	--	28.00	--	--	System off with full discharged battery pack charging mode (Measure battery pack connector)
11.1Vdc	4.42	--	49.06	--	--	Maximum normal load supplied by battery pack discharge mode (Measure battery pack connector)
--	--	--	--	--	--	LG Chemical Ltd / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh / 5200 mAh Max. charge current : 4.9A Max. discharge current :9.0A
19Vdc	2.98	3.42	56.62	--	--	Maximum normal load with full discharged battery pack
19Vdc	2.01	3.42	38.19	--	--	System off with full discharged battery pack charging mode
11.20V dc	2.51	--	28.11	--	--	System off with full discharged battery pack charging mode (Measure battery pack connector)
10.84V dc	4.95	--	53.66	--	--	Maximum normal load supplied by battery pack discharge mode

--	--	--	--	--	--	(Measure battery pack connector) SANYO ENERGY (TAIWAN) CO LTD / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 11.1Vdc, 5100mAh, 56Wh Max. charge current : 4.85A Max. discharge watt :60 W
19Vdc	2.98	3.42	56.62	--	--	Maximum normal load with full discharged battery pack
19Vdc	1.80	3.42	34.20	--	--	System off with full discharged battery pack charging mode
11.20V dc	2.68	--	30.02	--	--	System off with full discharged battery pack charging mode (Measure battery pack connector)
11.1Vdc	4.61	--	51.18	--	--	Maximum normal load supplied by battery pack discharge mode (Measure battery pack connector)
supplementary information:						

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

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

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

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

2.5	TABLE: limited power sources			Pass
MB: LA-8222P(DIS)	--			
Circuit output tested:	USB(JUSB1) Pin1 to Earth			
Measured Uoc (V) with all load circuits disconnected:	5.07Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	3.1	8	12.68	100
Circuit output tested:	USB(JUSB1) Pin2-4to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	0	0	0
Circuit output tested:	USB(JUSB2) Pin1 to Earth			
Measured Uoc (V) with all load circuits disconnected:	5.07Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	3.1	8	12.46	100
Circuit output tested:	USB(JUSB2) Pin2-4 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	0	0	0
Circuit output tested:	HDMI Pin18 to Earth			
Measured Uoc (V) with all load circuits disconnected:	5.07Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit

Normal condition	0.3	8	1.47	100
Circuit output tested:	HDMI Pin1-17,19 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	8	0	100
Circuit output tested:	VGA Pin1-15 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	8	0	100
Circuit output tested:	RJ45 Pin18 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	8	0	100
MB: LA-8222P(UMA)	--			
Circuit output tested:	USB(JUSB1) Pin1 to Earth			
Measured Uoc (V) with all load circuits disconnected:	5.07Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	2.5	8	10.52	100
Circuit output tested:	USB(JUSB1) Pin2-4 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	0	0	0
Circuit output tested:	USB(JUSB2) Pin1 to Earth			
Measured Uoc (V) with all load circuits disconnected:	5.07Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit

Normal condition	2.3	8	9.84	100
Circuit output tested:	USB(JUSB2) Pin2-4 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	0	0	0
Circuit output tested:	HDMI Pin18 to Earth			
Measured Uoc (V) with all load circuits disconnected:	5.07Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0.3	8	1.47	100
Circuit output tested:	HDMI Pin1-17,19 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	8	0	100
Circuit output tested:	VGA Pin1-15 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	8	0	100
Circuit output tested:	RJ45 Pin18 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	8	0	100
MB: LA-8225P(DIS)	--			
Circuit output tested:	USB(JUSB1) Pin1 to Earth			
Measured Uoc (V) with all load circuits disconnected:	5.07Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit

Normal condition	2.9	8	10.53	100
Circuit output tested:	USB(JUSB1) Pin2-4 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	0	0	0
Circuit output tested:	USB(JUSB2) Pin1 to Earth			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	0	0	0
Measured Uoc (V) with all load circuits disconnected:	5.07Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	2.9	8	12.21	100
Circuit output tested:	USB(JUSB2) Pin2-4 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	8	0	100
Circuit output tested:	HDMI Pin18 to Earth			
Measured Uoc (V) with all load circuits disconnected:	5.07Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0.3	8	1.48	100
Circuit output tested:	HDMI Pin1-17,19 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	8	0	100
Circuit output tested:	VGA Pin1-15 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit

Normal condition	0	8	0	100
Circuit output tested:	RJ45 Pin18 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	8	0	100
small board : LA-8222P	--			
Circuit output tested:	USB(JUSB3) Pin1 to Earth			
Measured Uoc (V) with all load circuits disconnected:	5.07Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	2.4	8	10.15	100
Circuit output tested:	USB(JUSB3) Pin2-4 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	0	0	0
Circuit output tested:	USB(JUSB4) Pin1 to Earth			
Measured Uoc (V) with all load circuits disconnected:	5.07Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	2.4	8	10.18	100
Circuit output tested:	USB(JUSB4) Pin2-4 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	0	0	0
Circuit output tested:	AUDIO1,2 Pin1,2 to Earth			
Measured Uoc (V) with all load circuits disconnected:	0Vdc			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit

Normal condition	0	0	0	0
Circuit output tested:	--			
Measured Uoc (V) with all load circuits disconnected:	--			
Output is limited in compliance with Table 2B	Isc (A)		VA	
	Meas.	Limit	Meas.	Limit
Single fault: ____	--	--	--	--
supplementary information: Sc=Short circuit, Oc=Open circuit Note: MB1 and MB2 use same protection circuit.				

2.10.2	TABLE: working voltage measurement			N/A
Location	RMS Voltage (V)	Peak voltage (V)	Comments	
supplementary information:				

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

2.10.5	TABLE: distance through insulation measurements					N/A
Distance through insulation (DTI) at/of:	U peak (V)	Urms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)	
supplementary information:						

4.3.8	TABLE: Batteries								Pass
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 operation	--	--	See table 5.3	--	--	--	--	--	
Max. current during fault operation	--	--	See table 5.3	--	--	--	--	--	
Test results:									
- Chemical leaks				--				Verdict	
- Explosion of the battery				--				N/A	
- Emission of flame or expulsion of molten metal				--				N/A	
- Electric strength tests of equipment after completion of tests				--				N/A	
supplementary information:									

4.3.8	TABLE: Batteries	Pass
Battery Category (Lithium, NiMh, NiCad, Lithium ion, etc.).....:	Lithium	
Manufacturer.....:	See appended table 1.5.1	
Type/Model.....:	See appended table 1.5.1	
Voltage.....:	See appended table 1.5.1	
Capacity (mAh).....:	See appended table 1.5.1	
Tested and Certified by (incl. Ref. No.).....:	See appended table 1.5.1	
Circuit protection diagram (Refer indicated supplement of Enclosure- Miscellaneous).....:	See appended Enclosure ID 5-01 and ID 5-04 for details.	
Maximum charge current (during fault conditions)	See appended table 5.3 for details	
MARKINGS AND INSTRUCTIONS (1.7.12, 1.7.15)		
Location of replaceable battery.....:	In service access areas.	
Language(s).....:	English	
Close to the battery.....:	No, see sub clause 1.7.13	
In the servicing instructions.....:	Yes, see sub clause 1.7.13	
In the operating instructions.....:	Yes, see sub clause 1.7.13	
supplementary information:		
Additional devices may be described in Enclosure - Miscellaneous		

4.5	TABLE: Thermal requirements	Pass				
Supply voltage (V)	See below	See below	See below	See below	--	--
Ambient Tmin (°C).....	See below	See below	See below	See below	--	--
Ambient Tmax (°C).....	See below	See below	See below	See below	--	--
Maximum measured temperature T of part/at:	T (°C)					allowed Tmax (°C)
MB3 LG Chemical Ltd / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh / 5200 mAh	Original	Shift to 35°C	Original	Shift to 35°C	--	--
1.Ambient	26.4	35.0	27.1	35.0	--	--
2.PWB near CPU	51.5	60.1	46.0	53.9	--	105
3.PWB near North Bridge Chip	53.3	61.9	47.0	54.9	--	105
4.PWB near VGA Chip	45.9	54.5	44.0	51.9	--	105
5.RTC battery body	37.0	45.6	37.0	44.9	--	100
6.Enclosure inside near CPU	47.8	56.4	44.0	51.9	--	60
7.Enclosure outside near CPU	39.7	48.3	40.0	47.9	--	75
8.Enclosure near battery connector	35.0	43.6	45.0	52.9	--	60
9.Battery Pack body	29.9	38.5	36.0	43.9	--	75

Test times		2hrs.25mins.		1hrs.37mins.		--	--
MB1 (UMA) LG Chemical Ltd / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh / 5200 mAh		Origina l	Shift to 35°C	Origina l	Shift to 35°C	--	--
1.Ambient		26.1	35.0	26.7	35.0	--	--
2.PWB near CPU		48.2	57.1	47.0	55.3	--	105
3.PWB near North Bridge Chip		34.7	43.6	38.0	46.3	--	105
4.RTC battery body		33.3	42.2	34.0	42.3	--	100
5.Enclosure inside near CPU		42.4	51.3	42.0	50.3	--	60
6.Enclosure outside near CPU		37.9	46.8	38.0	46.3	--	75
7.Enclosure near battery connector		34.6	43.5	45.0	53.3	--	60
8.Battery Pack body		32.5	41.4	40.0	48.3	--	75
Test times		2hrs.35mins.		1hrs.57mins.		--	--
MB2 (DIS) LG Chemical Ltd / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh / 5200 mAh		Origina l	Shift to 35°C	Origina l	Shift to 35°C	--	--
1.Ambient		27.3	35.0	27.5	35.0	--	--
2.PWB near CPU		49.5	57.2	42.0	49.5	--	105
3.PWB near North Bridge Chip		48.5	56.2	45.0	52.5	--	105
4.PWB near VGA Chip		41.0	48.7	39.0	46.5	--	105
5.RTC battery body		36.9	44.6	36.0	43.5	--	100
6.Enclosure inside near CPU		49.7	57.4	44.0	51.5	--	60
7.Enclosure outside near CPU		39.0	46.7	37.0	44.5	--	75
8.Enclosure near battery connector		34.9	42.6	45.0	52.5	--	60
9.Battery Pack body		27.8	35.5	40.0	47.5	--	75
Test times		2hrs.33mins.		1hrs.49mins.		--	--
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:							
The temperatures were measured by thermal couple (type K) method under worst case normal mode as described in 1.6.2 at voltage described in 1.4.5. The worst case normal mode is defined with max load of the equipment.							
With max. ambient temperature specified as 35 °C, therefore, the maximum temperature rise is calculated as follows:							
Components with:							
- max. absolute temp. of 105 °C (PWB,)							
- max. absolute temp. of 100 °C (RTC)							
- max. absolute temp. of 85 °C (PTC)							
- max. absolute temp. of 60 °C (Enclosure)							
User accessible area:							
- material is plastic (75 °C)							

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

supplementary information:

4.7	TABLE: resistance to fire					Pass
part	manufacturer of material	type of material	thickness (mm)	flammability class	Evidence	
--	--	--	--	--	--	
supplementary information:						
See appended table 1.5.1 for details.						

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

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

supplementary information:

5.3	TABLE: fault condition tests					Pass
	ambient temperature (° C)..... :				See appended table 1.5.1.	—
	Power source for EUT: Manufacturer, model/type, output rating :				See appended table 1.5.1.	—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
--	--	--	--	--	4.3.8	Lithium battery reverse current measurement test
--	--	--	--	--	--	MB3 (DIS)
RTC battery reverse current test	Normal	19Vdc	--	--	--	Charging current is 0.1mA
RTC battery reverse current test R136	Short	19Vdc	--	--	--	Charging current is 0.1mA
RTC battery reverse current test D1 (pin1-2)	Short	19Vdc	--	--	--	Charging current is 3.30mA
RTC battery reverse current test D1(pin2-3)	Short	19Vdc	--	--	--	Charging current is 2.57 mA
--	--	--	--	--	--	MB1 (UMA)
RTC battery reverse current test	Normal	19Vdc	--	--	--	Charging current is 0.1mA
RTC battery reverse current test R136	Short	19Vdc	--	--	--	Charging current is 0.1mA
RTC battery reverse current test D1 (pin1-2)	Short	19Vdc	--	--	--	Charging current is 3.37mA
RTC battery reverse current test D1(pin2-3)	Short	19Vdc	--	--	--	Charging current is 2.61 mA
--	--	--	--	--	--	MB2 (DIS)
RTC battery reverse	Normal	19Vdc	--	--	--	Charging current is 0.1mA

current test						
RTC battery reverse current test R136	Short	19Vdc	--	--	--	Charging current is 0.1mA
RTC battery reverse current test D1 (pin1-2)	Short	19Vdc	--	--	--	Charging current is 3.30mA
RTC battery reverse current test D1(pin2-3)	Short	19Vdc	--	--	--	Charging current is 2.68 mA
RTC Battery Vic-Dawn / CR2032	Short	3Vdc	7hr	--	--	Maximum discharge current 3.37 mA. No hazard.
RTC Battery Jhieh Hong / CR2032	Short	3Vdc	7hr	--	--	Maximum discharge current 3.37mA. No hazard.
RTC Battery Hitachi/ CR2032	Short	3Vdc	7hr	--	--	Maximum discharge current 3.37mA. No hazard.
RTC Battery Mitsubishi / CR2032	Short	3Vdc	7hr	--	--	Maximum discharge current 3.37mA. No hazard.
RTC Battery Panasonic / CR2032	Short	3Vdc	7hr	--	--	Maximum discharge current 3.37mA. No hazard.
RTC Battery FDK / CR2032	Short	3Vdc	7hr	--	--	Maximum discharge current 3.37mA. No hazard.
RTC Battery Varta Microbattery CR2032	Short	3Vdc	7hr	--	--	Maximum discharge current 3.37mA. No hazard.
RTC Battery Double Best/ CR2032	Short	3Vdc	7hr	--	--	Maximum discharge current 3.37mA. No hazard.
--	--	--	--	--	--	5.3.1 - 5.3.9 - ABNORMAL OPERATION TESTS
						MB3 (DIS) LG Chemical Ltd / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh / 5200 mAh
1.Ventilation openings(except CPU Fan)	Blocked	19Vdc	3hrs.47min s.	--	--	NT.NC.CT. unit Normal operation. No hazard. Maximum Temp: PWB near North Bridge Chip =49.0 degree C, Ambient=28.5degree C.

2.Ventilation openings(except bottom side)	Blocked	19Vdc	3hrs.00min s.	--	--	NT.NC.CT. unit Normal operation. No hazard. Maximum Temp: PWB near VGA Chip =78.2 degree C, Ambient=29.7 degree C.
3.CPU fan	Stalled	19Vdc	2hr 52mins.	--	--	NT.NC. unit shutdown. No hazard. Maximum Temp: PWB near VGA Chip =76.9 degree C, Ambient=30.4 degree C.
						MB1 (UMA) LG Chemical Ltd / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh / 5200 mAh
4.Ventilation openings(except CPU Fan)	Blocked	19Vdc	3hrs.27min s.	--	--	NT.NC.CT. unit Normal operation. No hazard. Maximum Temp: PWB near CPU =48.6 degree C, Ambient=27.5 degree C.
5.Ventilation openings(CPU fan)	Blocked	19Vdc	2hrs.38min s.	--	--	NT.NC.CT. unit Normal operation. No hazard. Maximum Temp: PWB near VGA Chip =62.9 degree C, Ambient=28.3 degree C.
6.CPU fan	Stalled	19Vdc	2hr 31mins.	--	--	NT.NC. unit shutdown. No hazard. Maximum Temp: PWB near VGA Chip =63.4 degree C, Ambient=28.9 degree C.
--	--	--	--	--	--	MB2 (DIS) LG Chemical Ltd / Trademark for ASUS/Battery pack Model : A32-K55 Rating: 10.8 Vdc, 56 Wh / 5200 mAh
7.Ventilation openings(except CPU fan)	Blocked	19Vdc	3hrs.31min s.	--	--	NT.NC.CT. unit Normal operation. No hazard. Maximum Temp: PWB near CPU =54.1 degree C, Ambient=27.2 degree C.
8.Ventilation openings(CPU fan)	Blocked	19Vdc	2hrs.29min s.	--	--	NT.NC.CT. unit Normal operation. No hazard. Maximum Temp: Enclosure inside near CPU =81.0 degree C, Ambient=27.8 degree C.
9.CPU fan	Stalled	19Vdc	0hr 52mins.	--	--	NT.NC. unit shutdown. No hazard. Maximum Temp: PWB near North chip=74.0 degree C, Ambient=27.8 degree C.
--	--	--	--	--	--	5.3.7 - OVERLOAD OF OPERATOR ACCESSIBLE

--	--	--	--	--	--	CONNECTOR TEST MB3
Card Reader (JSD1)	Overload	19Vdc	--	--	--	B
Card Reader (JSD1)	Overload	19Vdc	1hr	--	--	NC,NT
--	--	--	--	--	--	MB2 (DIS)
Card Reader (JSD1)	Overload	19Vdc	--	--	--	B
Card Reader (JSD1)	Overload	19Vdc	1hr	--	--	NC,NT
--	--	--	--	--	--	MB1 (UMA)
Card Reader (JSD1)	Overload	19Vdc	--	--	--	B
Card Reader (JSD1)	Overload	19Vdc	1hr	--	--	NC,NT

supplementary information:

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

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

Enclosure

National Differences

Australia
Austria**
Belgium**
Bulgaria**
China*
Cyprus**
Czech Republic**
Denmark
Estonia**
Finland
France**
Germany
Greece**
Group
Hungary**
Iceland
Ireland
Israel
Italy**
Japan*
Korea
Latvia**
Lithuania**
Luxembourg**
Malta
Netherlands**
Norway
Poland**
Portugal**
Romania**
Singapore*
Slovakia**
Slovenia**
Spain
Sweden
Switzerland

United Kingdom

- * No National Differences Declared
- ** Only Group Differences

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

Australia / New Zealand - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009

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		N/A													
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.		N/A													
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'		N/A													
1.5.2	Add the following to the end of the first and third dash items: 'or the relevant Australian/New Zealand Standard'		N/A													
3.2.5.1	Modify Table 3B as follows: 1. Delete the first four rows and replace with the following:		N/A													
	<table border="1"> <thead> <tr> <th rowspan="3">RATED CURRENT of equipment A</th> <th colspan="2">Minimum conductor size</th> </tr> <tr> <th>Nominal cross-sectional area</th> <th>AWG or kcmil [cross-sectional area in mm²]</th> </tr> <tr> <th>mm²</th> <th>see Note 2</th> </tr> </thead> <tbody> <tr> <td>Over 0.2 up to and including 3</td> <td>0.5</td> <td>18 [0.8]</td> </tr> <tr> <td>Over 3 up to and including</td> <td>0.75</td> <td>16 [1.3]</td> </tr> </tbody> </table>	RATED CURRENT of equipment A	Minimum conductor size		Nominal cross-sectional area	AWG or kcmil [cross-sectional area in mm ²]	mm ²	see Note 2	Over 0.2 up to and including 3	0.5	18 [0.8]	Over 3 up to and including	0.75	16 [1.3]		
RATED CURRENT of equipment A	Minimum conductor size															
	Nominal cross-sectional area		AWG or kcmil [cross-sectional area in mm ²]													
	mm ²	see Note 2														
Over 0.2 up to and including 3	0.5	18 [0.8]														
Over 3 up to and including	0.75	16 [1.3]														

IEC 60950-1												
Clause	Requirement + Test	Result – Remark	Verdict									
	<table border="1"> <tr> <td>7.5</td> <td></td> <td></td> </tr> <tr> <td>Over 7.5 up to and including 10</td> <td>(0.75)^b 1.00</td> <td>16 [1.3]</td> </tr> <tr> <td>Over 10 up to and including 16</td> <td>(1.0)^c 1.5</td> <td>14 [2]</td> </tr> </table> <p>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 AN/NZS 3191)</p>	7.5			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]		
7.5												
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]										
4.1.201	<p>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.</p>		N/A									
4.3.6	<p>Delete the third paragraph and replace with the following: Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flatpin 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.</p>		N/A									
4.3.13.5	<p>Add the following new paragraph to the end of the clause: 'For alternate tests refer to Clause 4.7.201.'</p>		N/A									
4.7.201	<p>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.</p> <p>This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames from inside the apparatus, or the following:</p> <p>(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 1mm</p>		N/A									

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Clause	Requirement + Test	Result – Remark	Verdict
	<p>in width regardless of length.</p> <p>(b) The following parts which would contribute negligible fuel to a fire:</p> <ul style="list-style-type: none"> - small mechanical parts, the mass of which does not exceed 4g, 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. <p>NOTE In considering how to minimize propagation of fire and what 'small parts' are, account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating the fire from one part to another.</p> <p>Compliance shall be checked by the tests of 4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5.</p> <p>For the base material of printed boards, compliance shall be checked by the test of 4.7.201.5.</p> <p>The tests shall be carried out on parts of non metallic material which have been removed from the apparatus. When the glow-wire test is carried out, the parts shall be placed in the same orientation as they would be in normal use.</p> <p>These tests are not carried out on internal wiring.</p> <p>4.7.201.2 Testing of non-metallic materials</p> <p>Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550°C.</p> <p>Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glow-wire test shall be not carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part.</p> <p>4.7.201.3 Testing of insulating materials</p> <p>Parts of insulating material supporting POTENTIAL IGNITION SOURCES shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750°C.</p> <p>The test shall be also carried out on other parts of</p>		

IEC 60950-1													
Clause	Requirement + Test	Result – Remark	Verdict										
	<p>insulating material which are within a distance of 3 mm of the connection.</p> <p>NOTE Contacts in components such as switch contacts are considered to be connections.</p> <p>For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a 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.</p> <p>The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications:</p> <table border="1"> <thead> <tr> <th>Clause of AS/NZS 60695.11.5</th> <th>Change</th> </tr> </thead> <tbody> <tr> <td colspan="2">9 Test procedure</td> </tr> <tr> <td>9.2 Application of needle-flame</td> <td> <p>Replace the first paragraph with:</p> <p>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</p> <p>Replace the second paragraph with:</p> <p>The duration of application of the test flame shall be 30 s ±1 s.</p> </td> </tr> <tr> <td>9.3 Number of test specimens</td> <td> <p>Replace with:</p> <p>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 withstand the test.</p> </td> </tr> <tr> <td>11 Evaluation of test results</td> <td> <p>Replace with:</p> <p>The duration of burning (tb) shall not</p> </td> </tr> </tbody> </table>	Clause of AS/NZS 60695.11.5	Change	9 Test procedure		9.2 Application of needle-flame	<p>Replace the first paragraph with:</p> <p>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</p> <p>Replace the second paragraph with:</p> <p>The duration of application of the test flame shall be 30 s ±1 s.</p>	9.3 Number of test specimens	<p>Replace with:</p> <p>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 withstand the test.</p>	11 Evaluation of test results	<p>Replace with:</p> <p>The duration of burning (tb) shall not</p>		
Clause of AS/NZS 60695.11.5	Change												
9 Test procedure													
9.2 Application of needle-flame	<p>Replace the first paragraph with:</p> <p>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</p> <p>Replace the second paragraph with:</p> <p>The duration of application of the test flame shall be 30 s ±1 s.</p>												
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11 Evaluation of test results	<p>Replace with:</p> <p>The duration of burning (tb) shall not</p>												

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Clause	Requirement + Test	Result – Remark	Verdict
	<p>exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.</p> <p>The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10, provided that the sample tested was not thicker than the relevant part.</p> <p>4.7.201.4 Testing in the event of non-extinguishing material</p> <p>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 glowwire 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.</p> <p>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.</p> <p>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.</p> <p>NOTE 3 Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting, in contact with, or in close proximity to, connections.</p> <p>4.7.201.5 Testing of printed boards</p> <p>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.</p> <p>The test is not carried out if the —</p> <ul style="list-style-type: none"> - Printed board does not carry any POTENTIAL IGNITION SOURCE; - Base material of printed boards, on which the available apparent power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. 		

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Clause	Requirement + Test	Result – Remark	Verdict
	<p>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</p> <p>- 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.</p> <p>Compliance shall be determined using the smallest thickness of the material.</p> <p>NOTE Available apparent power is the maximum apparent power which can be drawn from the supplying circuit through a resistive load whose value is chosen to maximise the apparent power for more than 2 min when the circuit supplied is disconnected</p>		
6.2.2	<p>For Australia only, delete the first paragraph and Note, and replace with the following:</p> <p>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.</p>		N/A
6.2.2.1	<p>For Australia only, delete the first paragraph including the Notes, and replace with the following:</p> <p>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, U_c, is:</p> <p>(i) for 6.2.1 a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and (ii) for 6.2.1 b) and 6.2.1 c): 1.5 kV.</p> <p>NOTE 201 The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines.</p> <p>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.</p>		N/A
6.2.2.2	<p>For Australia only, delete the second paragraph including the Note, and replace with the following:</p> <p>In Australia only, the a.c. test voltage is:</p>		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	(i) for 6.2.1 a): 3 kV; and (ii) 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.		
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
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 2211.1.....4.3.13.5 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 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

Canada - Differences to IEC 60950-1:2005 (2 nd Edition); Am 1:2009			
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		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.		
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.		N/A
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
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
2.7.1	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

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Clause	Requirement + Test	Result – Remark	Verdict
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. Flexible power supply cords are required to be compatible with Tables 11 and 12 of the CEC and Article 400 of the NEC.		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
3.4.2	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 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		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	1040, as applicable.		
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.		N/A
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

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Clause	Requirement + Test	Result – Remark	Verdict
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 V _{peak} or 60 V _{d.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
2.6.3.3	The current rating of the circuit shall be taken as 20 A not 16 A		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
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

Denmark - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.2.4.1	In Denmark, certain types of Class I appliances		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	(see sub-clause 3.2.1.1) may be provided with plug not establishing earthing continuity when inserted into Danish socket-outlets.		
1.7.5	In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For stationary equipment, the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.		N/A
1.7.5	For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a. (Heavy Current Regulations, Section 107-2-D1)		N/A
3.2.1.1	<p>Supply cord of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1.</p> <p>Class I equipment provided with socket-outlets with earth contact or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</p> <p>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.</p>		N/A

Finland - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
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 by this annex, 6.1.2.2		N/A
1.7.2.1	<p>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.</p> <p>The marking text in the applicable countries shall be as follows:</p>		N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
	“Laite on liitettävä suojakosketinpistorasiaan”		
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	<p>TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment:</p> <ul style="list-style-type: none"> • STATIONARY PLUGGABLE EQUIPMENT TYPE A that <ul style="list-style-type: none"> ○ 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	<p>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</p> <p>-two layers of thin sheet material, each of which shall pass the electric strength test below, or</p> <p>-one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.</p> <p>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</p> <p>-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</p>		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	<p>-is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.</p> <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions:</p> <p>-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;</p> <p>-the additional testing shall be performed on all the test specimens as described in EN 132400;</p> <p>-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.</p>		
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

Group - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.3.Z1	<p>Add the following subclause:</p> <p>1.3.Z1 Exposure to excessive sound pressure</p> <p>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.</p> <p>NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment:</p> <p>Headphones and earphones associated with portable audio equipment - Maximum sound pressure level</p>	See appended Miscellaneous of ID 7-05 for details.	Pass

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Clause	Requirement + Test	Result – Remark	Verdict
	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.		
1.5.1	Add the following NOTE Z1: The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC		N/A
1.7.2.1	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a a warning that excessive sound pressure from earphones and headphones can cause hearing loss.		N/A
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in primary circuits, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for pluggable equipment type B or permanently connected equipment, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for pluggable equipment type A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		N/A
2.7.2	Void		N/A
3.2.3	Delete the NOTE and conduit sizes in parentheses in Table 3A		N/A
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-F" In table 3B, replace the first four lines by the following: Up to and including 6 0.75 a)		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	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 Table 3B, to delete the second sentence.		
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 by 4” Delete the fifth line: conductor sizes for 13 to 16A.		N/A
4.3.13.6	Add 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 (artificial optical radiation). Standards taking into account this Recommendation which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
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 μ Sv/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

Germany - Differences to IEC 60950-1:2005 (2 nd Edition); Am 1:2009			
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.		N/A

Ireland - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
3.2.1.1	Apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 National Standards Authority of Ireland		N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
	(section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.		
4.3.6	DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.		N/A

Korea - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.5.101	Plugs for the connection of the apparatus to the mains supply shall comply with the Korean requirement (KSC 8305)		N/A
8	EMC - The apparatus shall comply with the relevant CISPR standards		N/A

Norway - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.8	Due to the IT power system used (see annex V, figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A
1.5.9.4	The third dashed sentence is applicable only to equipment as defined by this annex, 6.1.2.2		N/A
1.7.2.1	Class I Pluggable Equipment Type A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: "Apparatet må tilkoples jordet stikkontakt"		N/A
2.2.4	For requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		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
2.3.4	For requirements see 1.7.2.1, 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

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
5.1.7.1	<p>TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment:</p> <ul style="list-style-type: none"> • STATIONARY PLUGGABLE EQUIPMENT TYPE A that 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; <p>STATIONARY PERMANENTLY CONNECTED EQUIPMENT.</p>		N/A
6.1.2.1	<p>Add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <p>-two layers of thin sheet material, each of which shall pass the electric strength test below, or</p> <p>-one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.</p> <p>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</p> <p>-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</p> <p>-is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.</p> <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2.</p>		N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
	<p>A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> -the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, 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. 		
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
7.3	There are many buildings where the screen of the coaxial cable is normally not connected to the earth in the building installation.		N/A
7.3	For installation conditions see EN 60728-11:2005.		N/A

Spain - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
3.2.1.1	<p>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.</p> <p>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.</p> <p>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.</p> <p>If poly-phase equipment is provided with a supply</p>		N/A

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

	cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.		
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Sweden - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.5.1	(Ordinance (1990:944)) Add NOTE: Switches containing mercury are not permitted.		N/A
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2.		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	<p>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.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>“Apparaten skall anslutas till jordat uttag”</p>		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	<p>TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment:</p> <ul style="list-style-type: none"> • STATIONARY PLUGGABLE EQUIPMENT TYPE A that 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; <p>STATIONARY PERMANENTLY CONNECTED EQUIPMENT.</p>		N/A
6.1.2.1	Add the following text between the first and second paragraph of the compliance clause:		N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
	<p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> -two layers of thin sheet material, each of which shall pass the electric strength test below, or -one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>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</p> <ul style="list-style-type: none"> -passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and -is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> -the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, 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. 		
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		N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
	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.		
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
7.3	There are many buildings where the screen of the coaxial cable is normally not connected to the earth in the building installation.		N/A

Switzerland - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.5.1	Ordinance on environmentally hazardous substances SR 814.081, Annex 1.7, Mercury - Annex 1.7 of SR 814.81 applies for mercury. Switches containing mercury such as thermostats, relays and level controllers are not allowed.		N/A
1.7.13	Ordinance on chemical hazardous risk reduction SR 814.81, Annex 2.15 Batteries Annex 2.15 of SR 814.81 applies for batteries containing cadmium and mercury. Note: Ordinance relating to environmentally hazardous substances, SR 814.013 of 1986-06-09 is not longer in force and superseded by SR 814.81 of 2009-02-01 (ChemRRV).		N/A
3.2	Supply cords of portable electrical appliances having a rated current not exceeding 10 A shall be provided with a plug complying with IEC 60884-1(3.ed.) + am1, SEV 1011 and one of the following dimension sheets: - SEV 6533-2:2009 Plug type 11, L + N, 250V 10A - SEV 6534-2:2009 Plug type 12, L + N + PE, 250V 10A - SEV 6532-2:2009 Plug type 15, 3L + N + PE, 250/400V 10A Supply cords of portable electrical appliances having a rated current not exceeding 16 A shall be provided with a plug complying with IEC 60884-1(3.ed.) + am1, SEV 1011 and one of the following dimension sheets: - SEV 5933-2:2009 Plug type 21 L + N, 250 V, 16A - SEV 5934-2:2009 Plug type 23 L + N + PE, 250 V, 16A - SEV 5932-2:2009 Plug type 25 3L + N + PE,		N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
	<p>250/400V 16A</p> <p>NOTE 16 A plugs are not often used in Swiss domestic installation system.</p> <p>See TRF template regulatory requirements Switzerland on IECEE Website R.R. TRF templates.</p>		

United Kingdom - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
2.6.3.3	the current rating of the circuit shall be taken as 13 A, not 16 A.		N/A
2.7.1	To protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.		N/A
3.2.1.1	<p>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.</p> <p>NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>		N/A
3.2.5.1	A power supply cord with conductor of 1,25 mm ² is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	<p>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:</p> <ul style="list-style-type: none"> • 1,25 mm² to 1,5 mm² nominal cross-sectional area. 		N/A
4.3.6	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		N/A

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

	(ISOD), the requirements of clauses 22.2 and 23 also apply.		
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USA - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
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, 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.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.		N/A
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type 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.		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
2.7.1	Suitable NEC 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.		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		N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
	with special earthing, wiring, marking and installation instruction requirements.		
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 and minimum length shall be 1.5 m. Flexible power supply cords are required to be compatible with Article 400 of the NEC.		N/A
3.2.9	Permanently connected equipment must have a suitable wiring compartment and wire bending space.		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, must be suitable for U.S wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).		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 NFPA 30.		N/A
4.3.13.5	Equipment with lasers is required to meet the Code of Federal Regulations 21 CFR 1040.		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		N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
	dimensions require a flame spread rating of 200 or less.		
Annex H	Equipment that produces ionizing radiation must comply with Federal Regulations, 21 CFR 1020		N/A
OTHER NATIONAL DIFFERENCES			
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, 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.		N/A
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 it to 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 V _{peak} or 60 V _{d.c.} , the max. 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

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
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
4.2.11	For equipment intended for mounting on racks and provided with slide/rails allowing the equipment to slide away from the rack for installation, service and maintenance, additional construction, performance and marking requirements are applicable to determine the adequacy of the slide/rails.		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
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
Annex NAF	Document (paper) shredders likely to be used in a home or home office (Pluggable Equipment Type A plug configuration) are required to comply with additional requirements, including markings/instructions, protection against inadvertent reactivation of a safety interlock, disconnection from the mains supply (via provision of an isolating switch), and protection against operator access (accessibility determined via new accessibility probe & probe/wedge).		N/A

Enclosure

Photographs

Supplement Id	Description
3-01	Top view
3-02	Bottom view
3-03	Side view
3-04	Rear view
3-05	Open view
3-06	Inside view
3-07	SELV board top and bottom view
3-08	Top and bottom view of Mother board (MB1/ UMA) with fan
3-09	Top and bottom view of Mother board (MB1/ UMA) without fan
3-10	Top and bottom view of Mother board (MB1/ DIS) with fan
3-11	Top and bottom view of Mother board (MB1/ DIS) without fan
3-12	Top and bottom view of Mother board (MB2/ DIS) with fan
3-13	Top and bottom view of Mother board (MB2/ DIS) without fan

Photographs ID 3-01



Photographs ID 3-02



Photographs ID 3-03



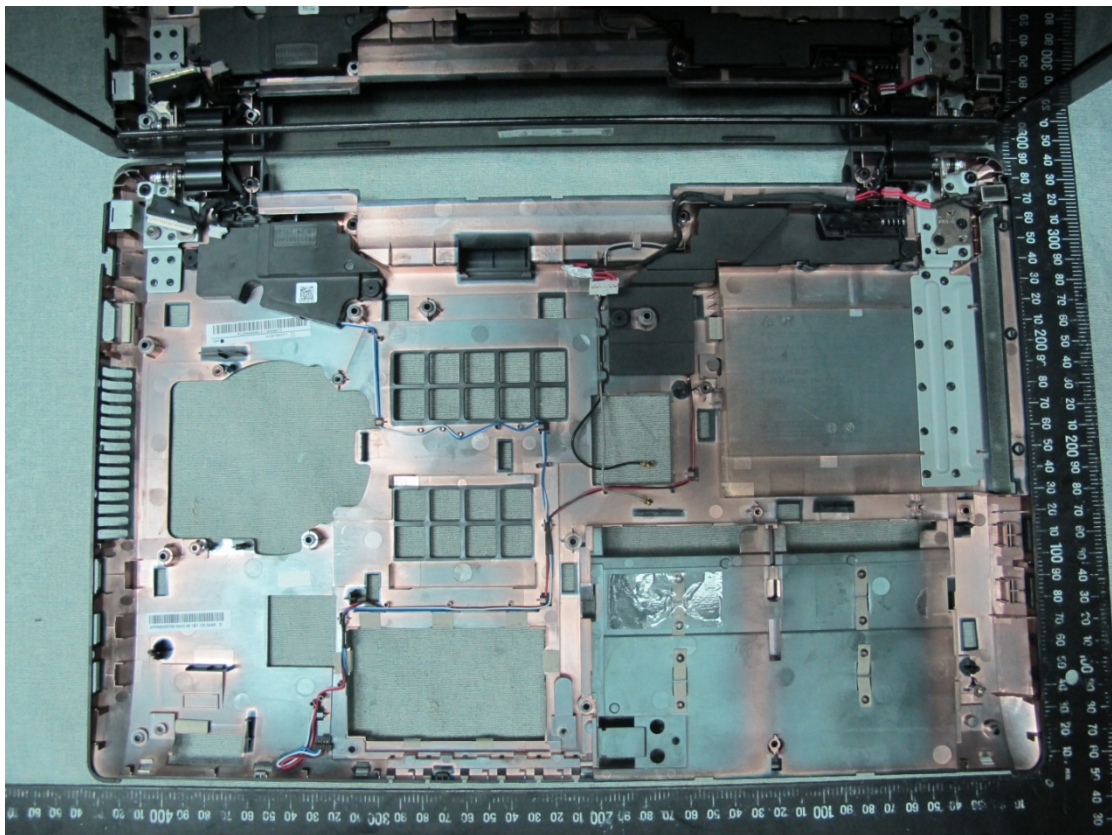
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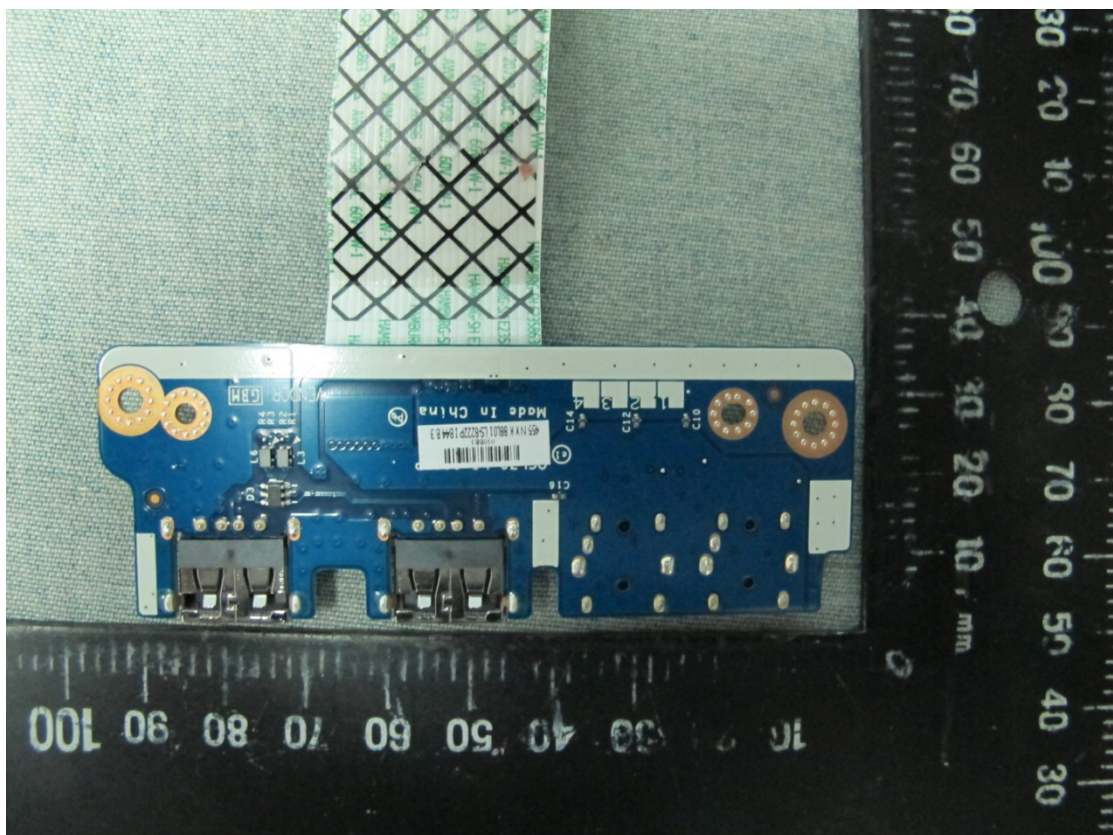
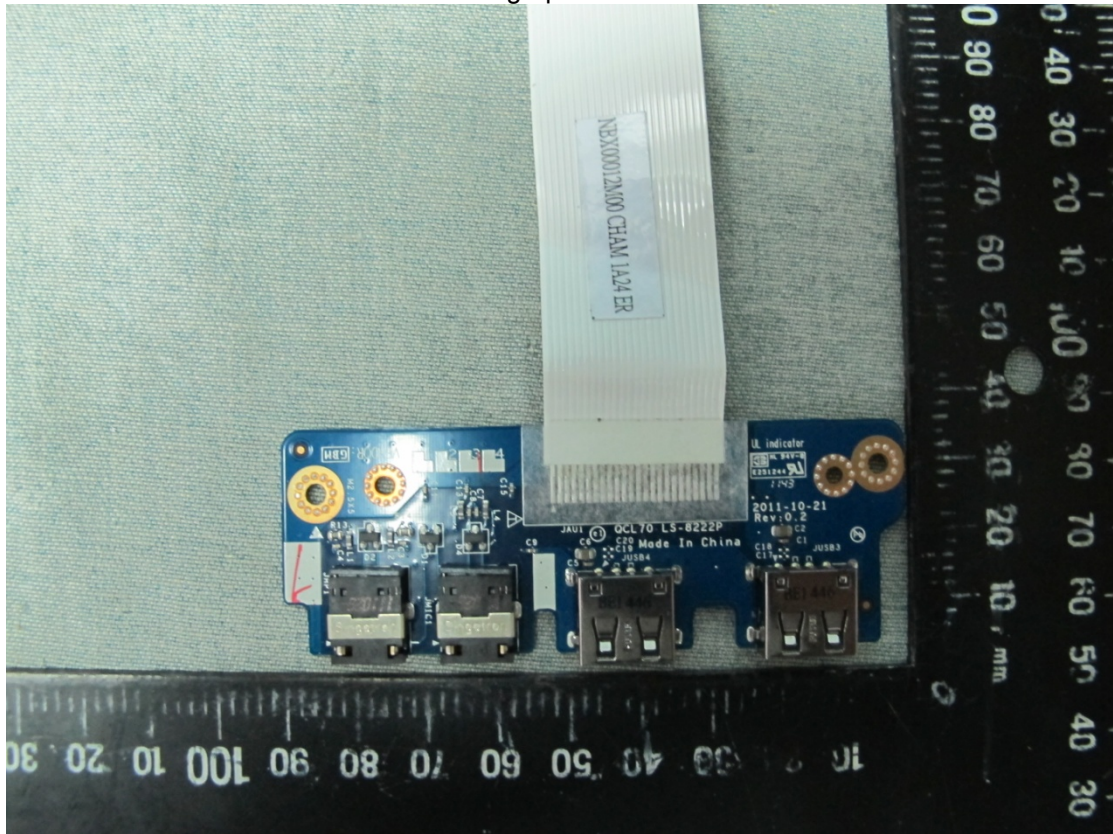
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Photographs ID 3-06



Photographs ID 3-07



Photographs ID 3-08



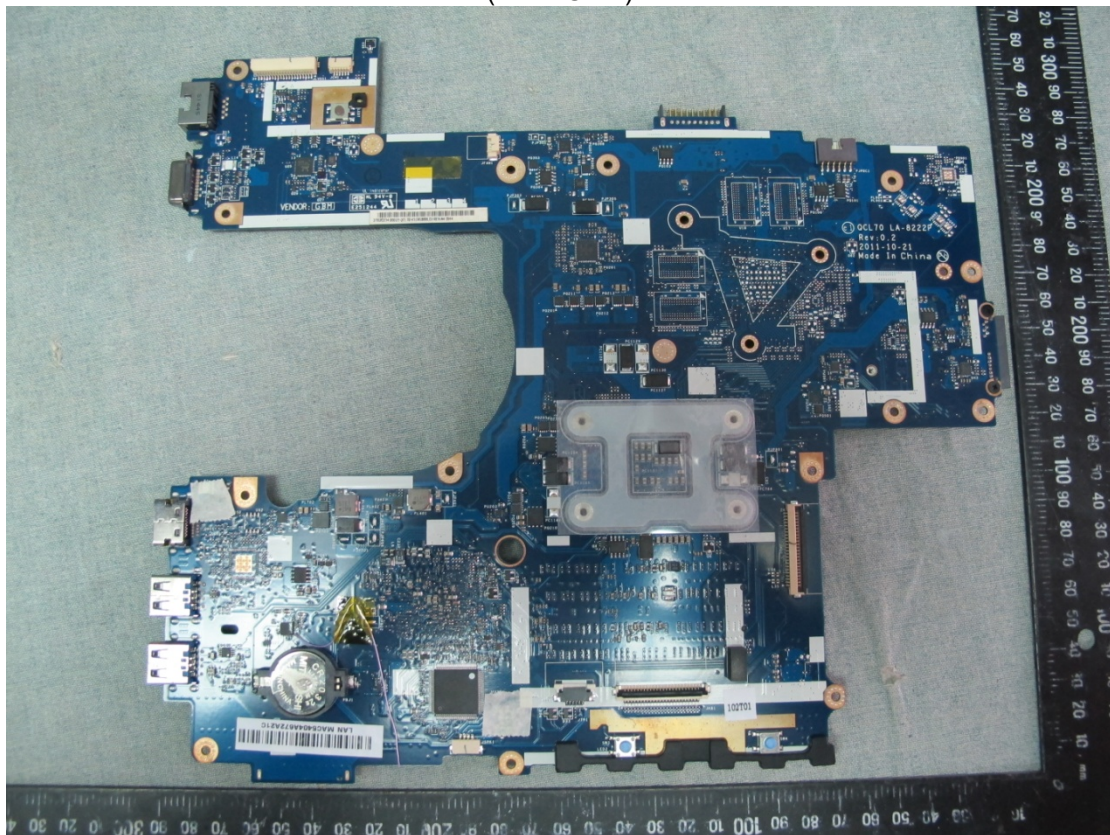
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Photographs ID 3-09



(MB1/UMA)



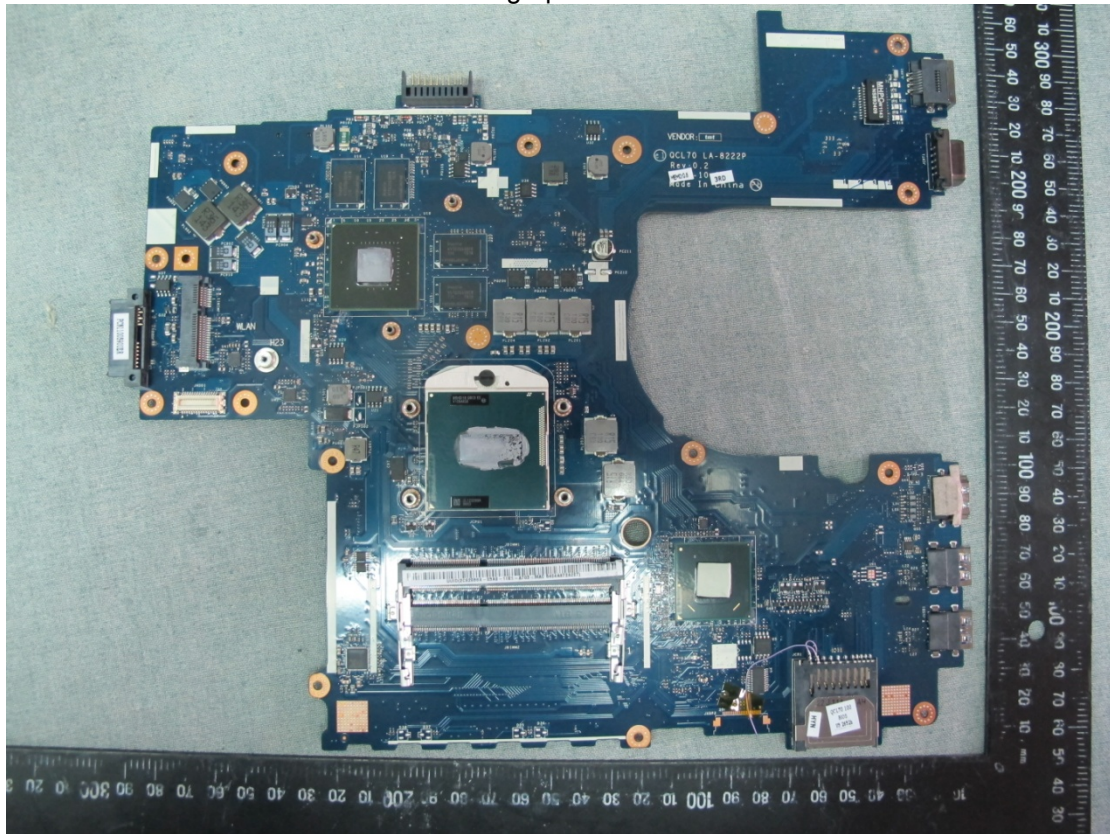
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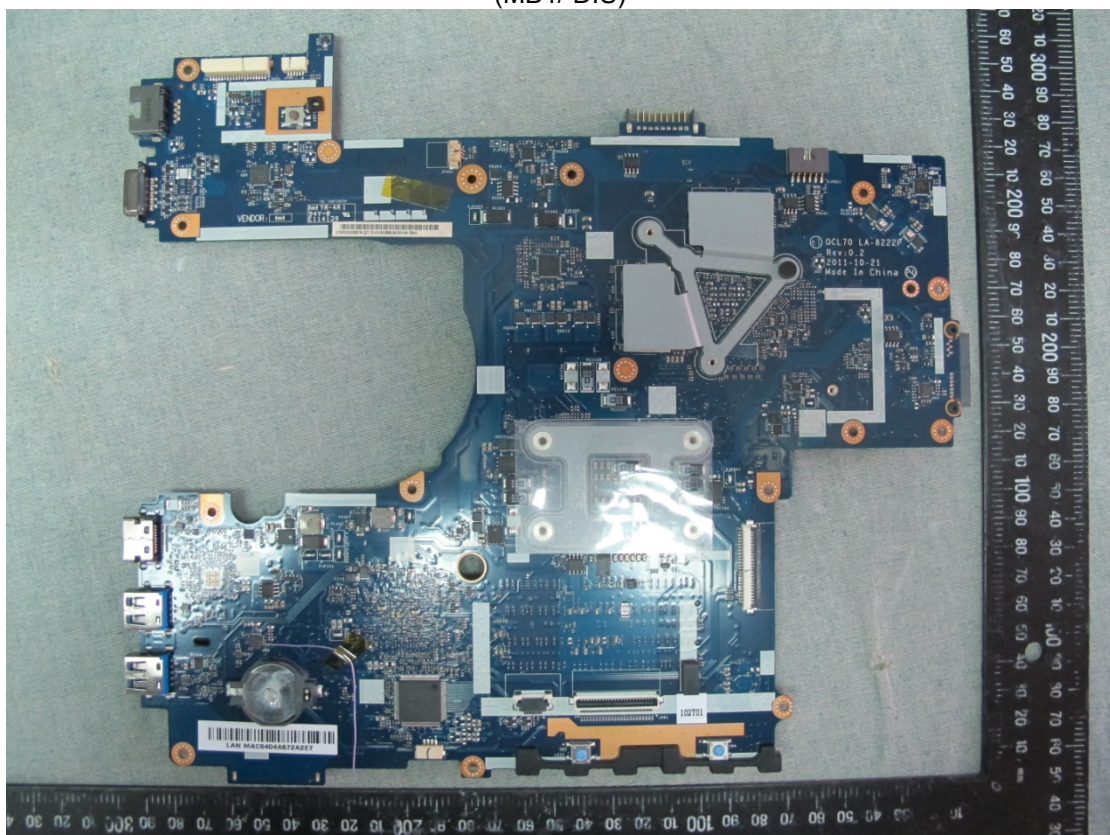
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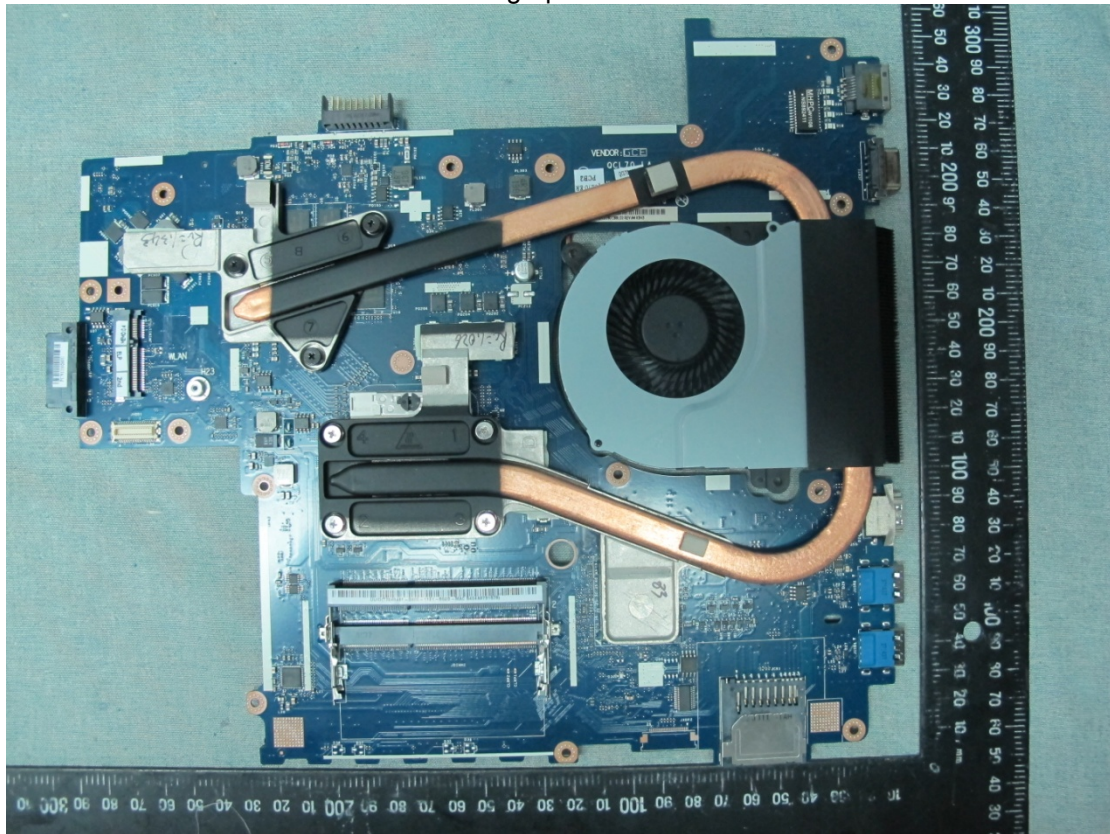
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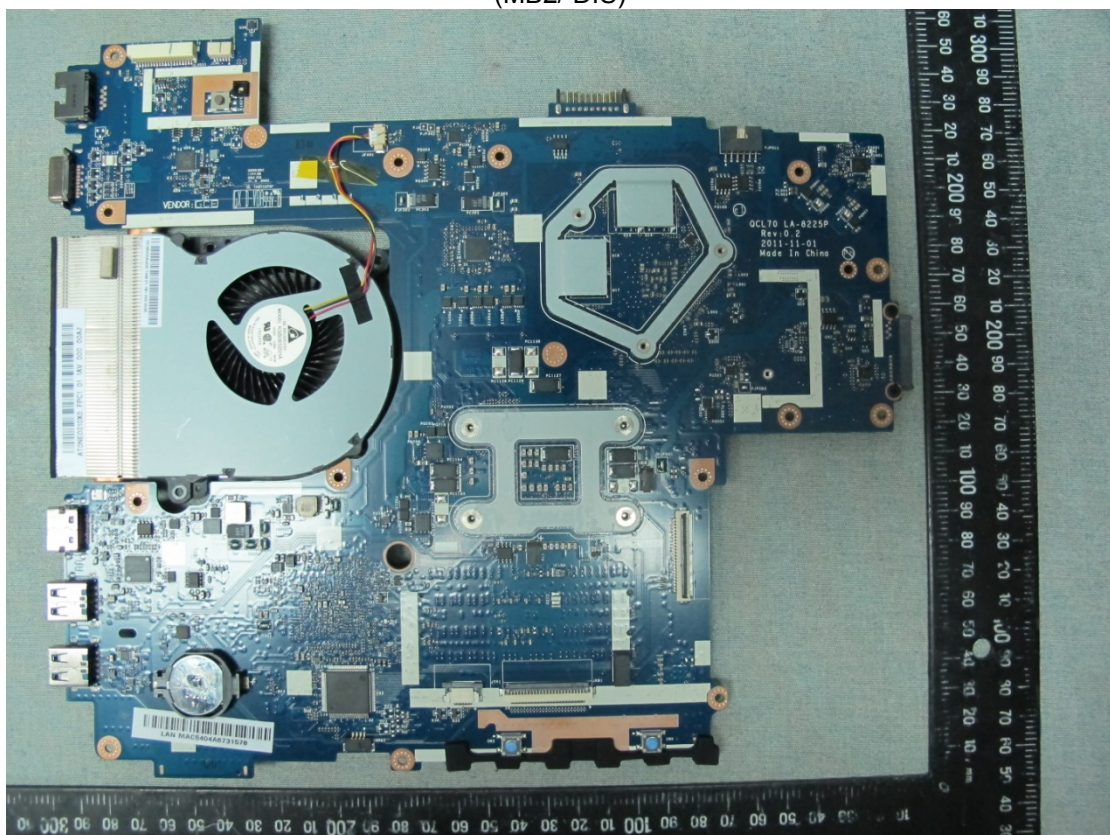
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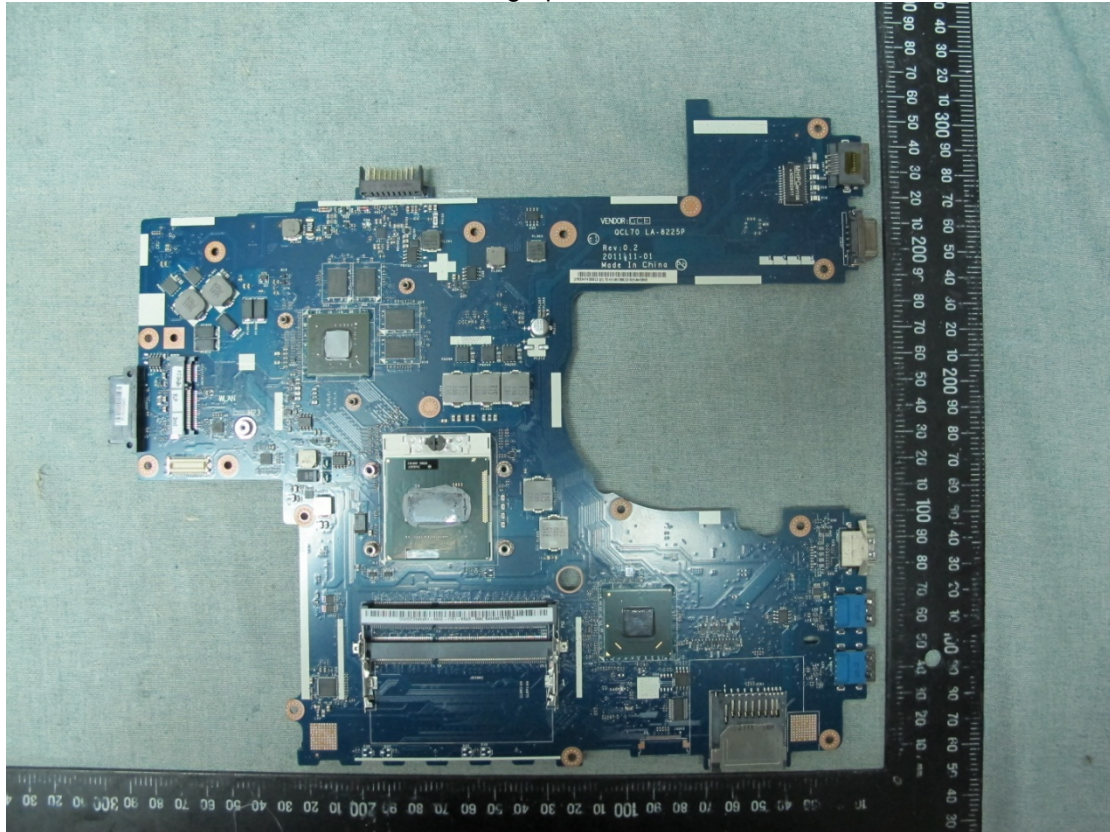
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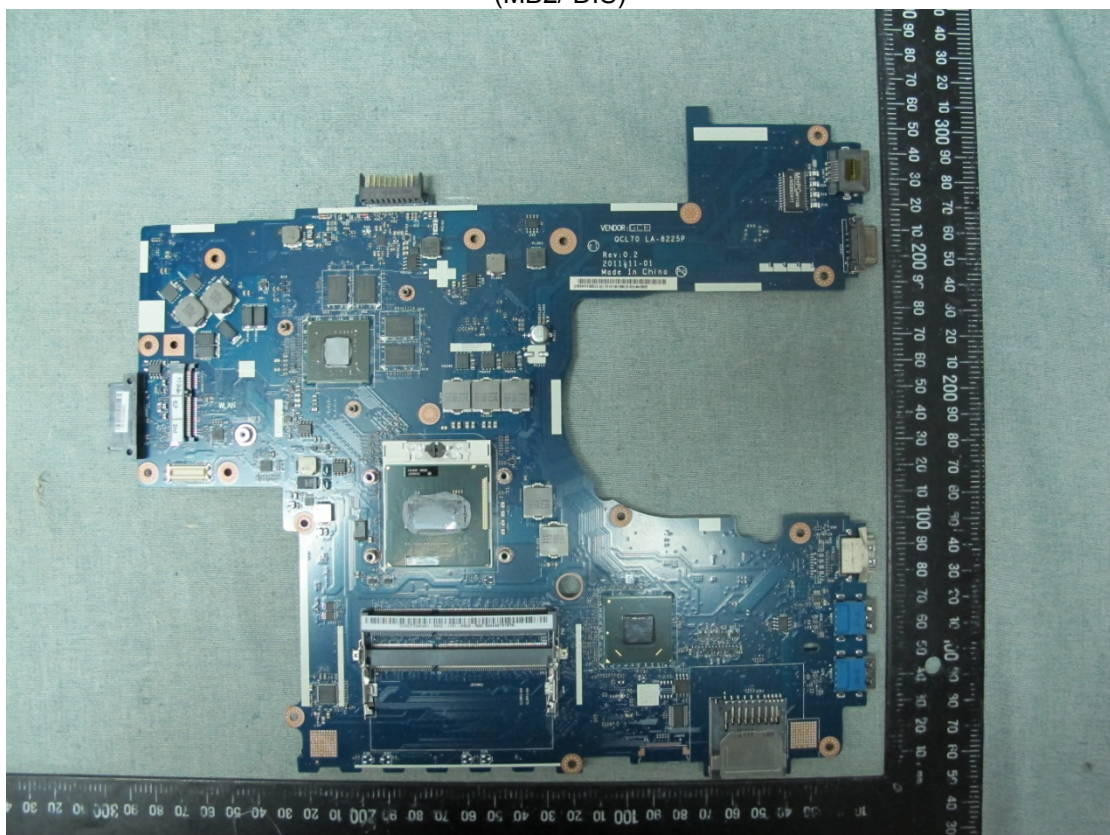
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Photographs ID 3-13



(MB2/ DIS)

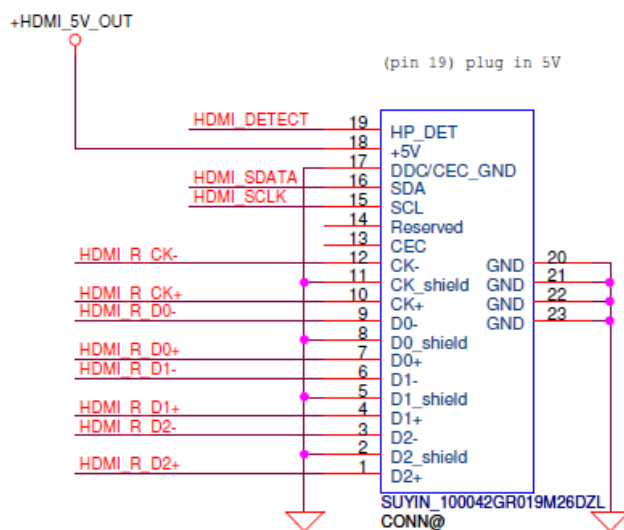
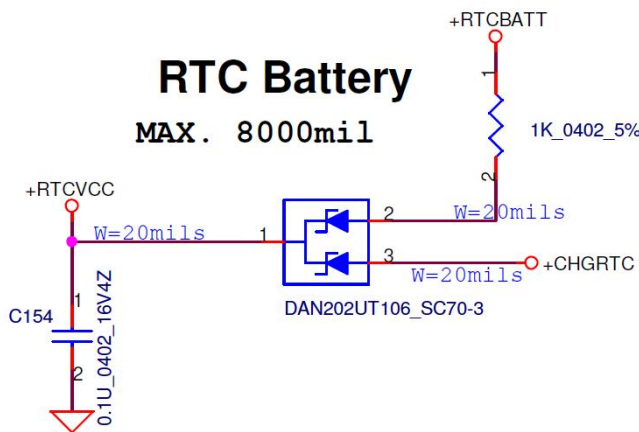
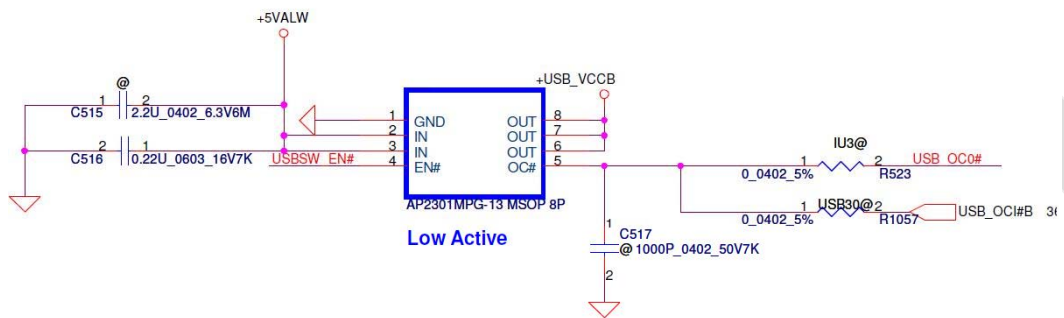
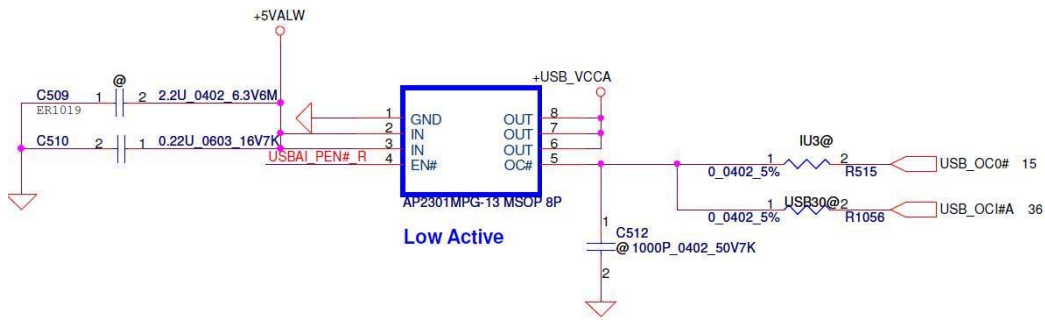


Enclosure**Schematics + PWB**

Supplement Id	Description
5-01	Circuit

DRAFT

Schematics + PWB ID 5-01



Enclosure**Manuals**

Supplement Id	Description
6-01	User manual

Manuals ID 6-01

E6943

Notebook PC User Manual



November 2011

Manuals ID 6-01

Safety Precautions

The following safety precautions will increase the life of the Notebook PC. Follow all precautions and instructions. Except as described in this manual, refer all servicing to qualified personnel.



Disconnect the AC power and remove the battery pack(s) before cleaning. Wipe the Notebook PC using a clean cellulose sponge or chamois cloth dampened with a solution of nonabrasive detergent and a few drops of warm water and remove any extra moisture with a dry cloth.



DO NOT place on uneven or unstable work surfaces. Seek servicing if the casing has been damaged.



DO NOT place or drop objects on top and do not shove any foreign objects into the Notebook PC.



DO NOT expose to dirty or dusty environments. DO NOT operate during a gas leak.



DO NOT expose to strong magnetic or electrical fields.



DO NOT press or touch the display panel. Do not place together with small items that may scratch or enter the Notebook PC.



DO NOT expose to or use near liquids, rain, or moisture. DO NOT use the modem during electrical storms.



DO NOT leave the Notebook PC on your lap or any part of the body to prevent discomfort or injury from heat exposure.



Battery safety warning: DO NOT throw the battery in fire. DO NOT short circuit the contacts. DO NOT disassemble the battery.

Manuals ID 6-01



SAFE TEMP: This Notebook PC should only be used in environments with ambient temperatures between 5°C (41°F) and 35°C (95°F).



INPUT RATING: Refer to the rating label on the bottom of the Notebook PC and be sure that your power adapter complies with the rating.



DO NOT carry or cover a Notebook PC that is powered ON with any materials that will reduce air circulation such as a carrying bag.



DO NOT use strong solvents such as thinners, benzene, or other chemicals on or near the surface.



DO NOT use damaged power cords, accessories, or other peripherals.



Incorrect installation of battery may cause explosion and damage the Notebook PC.



DO NOT throw the Notebook PC in municipal waste. This product has been designed to enable proper reuse of parts and recycling. The symbol of the crossed out wheeled bin indicates that the product (electrical, electronic equipment and mercury-containing button cell battery) should not be placed in municipal waste. Check local regulations for disposal of electronic products.



DO NOT throw the battery in municipal waste. The symbol of the crossed out wheeled bin indicates that the battery should not be placed in municipal waste.

Manuals ID 6-01

Sound Pressure warning

Excessive sound pressure from earphones or headphones can cause hearing damage or loss. Adjustment of the volume control as well as the equalizer to settings other than the center position may increase the earphones or headphones output voltage and the sound pressure level.

DC Fan warning

Please note that the DC fan is a moving part that may cause DANGER. Ensure to keep your body from the moving fan blades.

Adapter Information

Input voltage: 100-240Vac

Input frequency: 50-60Hz

Rating output current: 3.42A(65W); 4.74A(90W); 6.3A(120W)

Rating output voltage: 19Vdc

Transportation Precautions

To prepare the Notebook PC for transport, you should turn it OFF and **disconnect all external peripherals to prevent damage to the connectors**. The hard disk drive's head retracts when the power is turned OFF to prevent scratching of the hard disk surface during transport. Therefore, you should not transport the Notebook PC while the power is still ON. Close the display panel and check that it is latched securely in the closed position to protect the keyboard and display panel.



CAUTION! The Notebook PC's surface is easily dulled if not properly cared for. Be careful not to rub or scrape the Notebook PC surfaces.

Manuals ID 6-01

Cover Your Notebook PC

Purchase a carrying bag to protect the Notebook PC from dirt, water, shock, and scratches.

Charge Your Batteries

If you intend to use battery power, be sure to fully charge your battery pack and any optional battery packs before going on long trips. Remember that the power adapter charges the battery pack as long as it is plugged into the computer and an AC power source. Be aware that it takes much longer to charge the battery pack when the Notebook PC is in use.

Airplane Precautions

Contact your airline if you want to use the Notebook PC on the airplane. Most airlines will have restrictions for using electronic devices. Most airlines will allow electronic use only between and not during takeoffs and landings.



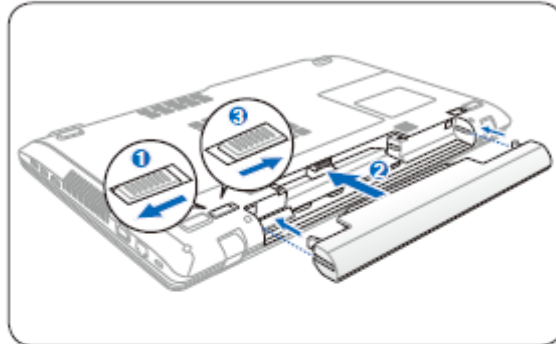
CAUTION! There are three main types of airport security devices: X-ray machines (used on items placed on conveyor belts), magnetic detectors (used on people walking through security checks), and magnetic wands (hand-held devices used on people or individual items). You can send your Notebook PC and diskettes through airport X-ray machines. However, it is recommended that you do not send your Notebook PC or diskettes through airport magnetic detectors or expose them to magnetic wands.

Manuals ID 6-01

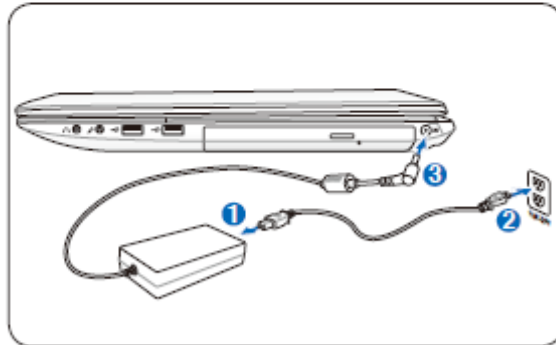
Preparing your Notebook PC

These are only quick instructions for using your Notebook PC.

Installing the Battery Pack



Connecting the Power Adapter



Manuals ID 6-01

UL Safety Notices

Required for UL 1459 covering telecommunications (telephone) equipment intended to be electrically connected to a telecommunication network that has an operating voltage to ground that does not exceed 200V peak, 300V peak-to-peak, and 105V rms, and installed or used in accordance with the National Electrical Code (NFPA 70).

When using the Notebook PC modem, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

- DO NOT use the Notebook PC near water, for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
- DO NOT use the Notebook PC during an electrical storm. There may be a remote risk of electric shock from lightning.
- DO NOT use the Notebook PC in the vicinity of a gas leak.

Required for UL 1642 covering primary (nonrechargeable) and secondary (rechargeable) lithium batteries for use as power sources in products. These batteries contain metallic lithium, or a lithium alloy, or a lithium ion, and may consist of a single electrochemical cell or two or more cells connected in series, parallel, or both, that convert chemical energy into electrical energy by an irreversible or reversible chemical reaction.

- Do not dispose the Notebook PC battery pack in a fire, as they may explode. Check with local codes for possible special disposal instructions to reduce the risk of injury to persons due to fire or explosion.
- Do not use power adapters or batteries from other devices to reduce the risk of injury to persons due to fire or explosion. Use only UL certified power adapters or batteries supplied by the manufacturer or authorized retailers.

Manuals ID 6-01

Nordic Lithium Cautions (for lithium-ion batteries)

CAUTION! Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. (English)

ATTENZIONE! Rischio di esplosione della batteria se sostituita in modo errato. Sostituire la batteria con una di tipo uguale o equivalente consigliata dalla fabbrica. Non disperdere le batterie nell'ambiente. (Italian)

VORSICHT! Explosionsgefahr bei unsachgemäßen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers. (German)

ADVARSEL! Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren. (Danish)

VARNING! Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparatillverkaren. Kassera använt batteri enligt fabrikantens instruktion. (Swedish)

VAROITUS! Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suositteluun tyypin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti. (Finnish)

ATTENTION! Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant. (French)

ADVARSEL! Eksplosjonsfare ved feilaktig skifte av batteri. Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten. Brukte batterier kasseres i henhold til fabrikantens instruksjoner. (Norwegian)

標準品以外の使用は、危険の元になります。交換品を使用する場合、製造者に指定されるものを使って下さい。製造者の指示に従って処理して下さい。(Japanese)

ВНИМАНИЕ! При замене аккумулятора на аккумулятор иного типа возможно его возгорание. Утилизируйте аккумулятор в соответствии с инструкциями производителя. (Russian)

Enclosure**Miscellaneous**

Supplement Id	Description
7-01	Form Table
7-02	Israel – Differences to IEC 60950-1:2005 (2 nd Edition); Am 1:2009
7-03	Attachment to Test Report IEC 60950-1 European Group Differences and National Differences (EN 60950-1:2006/A11:2009/A1:2010/A12:2011)
7-04	Mechanical drawing
7-05	EN 50332-2 sound pressure test table
7-06	DRAFT CB TEST CERTIFICATE INFORMATION

Miscellaneous ID 7-01

Table 2.4.2		Limited Current Circuit Measurements				N/A
Fault		Volts Peak	Volts dc	mA _p	mA _{dc}	Frequency kHz
Result Part I						
User Accessible Live Part: _____		to Pole 1: _____				
User Accessible Live Part: _____		to Pole 2: _____				
User Accessible Live Part: _____		to Earth				
Note(s):						
Result Part II						
Location		Fault	Voltage	μF	μC	mJ
User Part	To					
Note(s):						

Table 2.6.3.4		Earthing Test			N/A
Accessible Conductive Part		Current (Amps)	Voltage Drop (Volts)	Resistance (Ω)	
Note(s):					


Miscellaneous ID 7-02

Israel – Differences to IEC 60950-1:2005 (2 nd Edition); Am 1:2009			N/A
The referenced International Standard	The substituted Israel Standard	Comments	
IEC 61058-1: 2000	SI 61058 Part 1 – Switches for appliances: General requirements	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 61058-1 (2001)	
ISO 3864 (all parts)	SI 3864 Part 1 – Graphical symbols – Safety colours and safety signs: Design principles for safety signs in workplaces and public areas	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission IEC 3864-1 (2002)	
<p>Notes</p> <p>(A) This Standard will be replaced by SI 60065 - Audio, video and similar electronic apparatus – safety requirements - that excluding the national deviations indicated is identical to the Standard of the International Electrotechnical Commission IEC 60065 (2005).</p> <p>(B) Not relevant to the translation.</p> <p>B. Add the following to the clause:</p> <p>Israel Standards</p> <p>SI 32 Part 1.1 - Plugs and socket-outlets for household and similar purposes: Plugs and socket-outlets for single phase up to 16 A – General Requirements</p> <p>SI 961, all parts - Electromagnetic compatibility</p> <p>Israel documents</p> <p>Electricity Law, 1654, its regulations and revisions</p> <p>Kovetz Takanot 4465 dated 1983-02-24, Consumer Protection Order (Marking of goods), 1983</p>			

The referenced International Standard	The substituted Israel Standard	Comments
IEC 60320 (all parts)	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 deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 60320-2.2 (1998)
	SI 60320 Part 2.3 –Appliance couplers for household and similar general purposes: Interconnection couplers for household and similar equipment Appliance coupler for household and similar general purposes: Appliance coupler with a degree of protection higher than IPX0	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 60320-2.3 (1998)
IEC 60730-1: 1999	SI 60730 Part 1 – Automatic electrical controls for household and similar use: General requirements	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 60730-1 (1999)
IEC 60825-1	SI 60825 Part 1 – Safety of laser products: Equipment classification, requirements and user's guide	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 60825-1 (2001).
IEC 60947-1: 2004	SI 60947 Part 1 –Low-voltage switchgear and controlgear: General rules	The Israel Standard, excluding national deviations in it, is identical to Standard of the International Electrotechnical Commission, IEC 60947-1 (1999)

(Table continued on next page)

The referenced International Standard	The substituted Israel Standard	Comments													
IEC 60317 (all parts)	SI 1067 Part 1 – Self-fluxing enamelled ^(B) round copper wires with high mechanical properties	The Israel Standard is identical to the Standard of the International Electrotechnical Commission IEC 317-1 (1980)													
	SI 1067 Part 2 – Self-fluxing enamelled ^(B) round copper wires	The Israel Standard is identical to the Standard of the International Electrotechnical Commission IEC 317-4 (1980)													
	SI 1067 Part 3 – Self-fluxing enamelled ^(B) round copper wires with a temperature index of 180°	The Israel Standard is identical to the Standard of the International Electrotechnical Commission IEC 317-8 (1980)													
IEC 60320 (all parts)	SI 60320 Part 1 – Appliance couplers for household and similar general purposes: General requirements	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 60320-1 (2001)													
	SI 60320 Part 2.1 – Appliance couplers for household and similar general purposes: Sewing machine couplers	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 60320-2.1 (2000)													
(Table continued on next page)															
Annex P	<p data-bbox="395 1142 699 1176">Normative Reference</p> <p data-bbox="395 1176 1268 1209">The annex is applicable with the following national deviations:</p> <ul data-bbox="395 1243 1364 1355" style="list-style-type: none"> - The following Israel Standards have been inserted in place of some of the International Standards specified in this annex of the Standard, as follows: <table border="1" data-bbox="402 1361 1369 1960"> <thead> <tr> <th data-bbox="402 1366 601 1482">The referenced International Standard</th> <th data-bbox="601 1366 976 1482">The substituted Israel Standard</th> <th data-bbox="976 1366 1369 1482">Comments</th> </tr> </thead> <tbody> <tr> <td data-bbox="402 1482 601 1646">IEC 60065: 2001</td> <td data-bbox="601 1482 976 1646">SI 250^(A) – Safety requirements for mains operated electronic and related apparatus for household and similar general use</td> <td data-bbox="976 1482 1369 1646">The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 65:1985, including its amendments</td> </tr> <tr> <td data-bbox="402 1646 601 1758">IEC 60227 (all parts)</td> <td data-bbox="601 1646 976 1758">SI 473, all parts – Cables, cords and insulated conductors for nominal voltage up to 1000 volt</td> <td data-bbox="976 1646 1369 1758" style="text-align: center;">-</td> </tr> <tr> <td data-bbox="402 1758 601 1960">IEC 60309 (all parts)</td> <td data-bbox="601 1758 976 1960">SI 1109, all parts – Plugs, socket-outlets and couplers for industrial purposes</td> <td data-bbox="976 1758 1369 1960">SI 1109, part 1 and part 2, excluding national deviations in them, are identical to the Standards of the International Electrotechnical Commission IEC 60309-1-1999 and IEC 60309-2-1999, respectively.</td> </tr> </tbody> </table> <p data-bbox="1013 1960 1380 1993" style="text-align: right;">(Table continued on next page)</p> <p data-bbox="395 1982 965 2016">6) Residual current circuit breaker (30 ma = I Δ);</p>		The referenced International Standard	The substituted Israel Standard	Comments	IEC 60065: 2001	SI 250 ^(A) – Safety requirements for mains operated electronic and related apparatus for household and similar general use	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 65:1985, including its amendments	IEC 60227 (all parts)	SI 473, all parts – Cables, cords and insulated conductors for nominal voltage up to 1000 volt	-	IEC 60309 (all parts)	SI 1109, all parts – Plugs, socket-outlets and couplers for industrial purposes	SI 1109, part 1 and part 2, excluding national deviations in them, are identical to the Standards of the International Electrotechnical Commission IEC 60309-1-1999 and IEC 60309-2-1999, respectively.	N/A
The referenced International Standard	The substituted Israel Standard	Comments													
IEC 60065: 2001	SI 250 ^(A) – Safety requirements for mains operated electronic and related apparatus for household and similar general use	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 65:1985, including its amendments													
IEC 60227 (all parts)	SI 473, all parts – Cables, cords and insulated conductors for nominal voltage up to 1000 volt	-													
IEC 60309 (all parts)	SI 1109, all parts – Plugs, socket-outlets and couplers for industrial purposes	SI 1109, part 1 and part 2, excluding national deviations in them, are identical to the Standards of the International Electrotechnical Commission IEC 60309-1-1999 and IEC 60309-2-1999, respectively.													

	7) Reinforced insulation; Double insulation (class II) 		
2.201	<p>- Clause 2.201 shall be added at the end of the clause, as follows:</p> <p>2.201 Prevention of electromagnetic interference</p> <p>- Prior to carrying out the tests in accordance with the clauses of the Standard, the compliance of the apparatus with the relevant requirements specified in the appropriate part of the Standard series, SI 961, shall be checked.</p> <p>The apparatus shall meet the requirements in the appropriate part of the Standard series SI 961.</p> <p>- If there are components in the apparatus for the prevention of electromagnetic interference these components shall not reduce the safety level of the apparatus as required by this Standard.</p>		N/A
3	<p>Wiring, connections and supply</p> <p>The clause is applicable with the following additions:</p>		N/A
3.2	Connection to a mains supply	Not considered.	N/A
3.2.1	Means of connection		N/A
3.2.1.1	<p>Connection to an a.c. mains supply</p> <p>After the note, the following note shall be added:</p> <p>Note:</p> <p>In Israel, the feed plus shall comply with the requirements of Israel Standard SI 32 Part1.1</p>		N/A
3.2.1.2	<p>Connection to a d.c. mains supply</p> <p>At the end of the first paragraph, the following note shall be added:</p> <p>Note:</p> <p>At the time of issue of this Standard, there is no Israel Standard for connection accessories to d.c.</p> <p>Note:</p> <p>In Israel, this clause is applicable subject to the Electricity Law, 1954, its regulations and revisions.</p>		N/A
1.7	<p>Marking and instructions</p> <p>The clause is applicable with the following additions:</p>		N/A
1.7.201	<p>Subclause 1.7.201 shall be added at the beginning of the clause as follows:</p> <p>Marking in the Hebrew language</p> <p>The marking in the Hebrew language shall be in accordance with the Consumer Protection Order (Marking of goods), 1983.</p> <p>In addition to the marking required by clause 1.7.1, the following details shall be marked in the Hebrew language.</p> <p>The details shall be marked on the apparatus or on its package, or on a label properly attached to the apparatus or on the package, by bonding or sewing, in a manner that the label cannot be easily removed.</p> <p>1. Name of the apparatus and its commercial designation;</p> <p>2. Manufacturer's name and address. If the apparatus is imported, the importer's name</p>	Not considered.	N/A

	and address; 3. Manufacturer's registered trademark, if any; 4. Name of model and serial number, if any; 5. Country of manufacture.		
1.7.2	Safety instructions and marking		N/A
1.7.2.1	General The following shall be added to the clause: All the instructions and warnings related to safety shall be written in the Hebrew language.		N/A
2	Protection from hazards The clause is applicable with the following additions:		N/A
2.9.4	Separation from hazardous voltages The following shall be added at the beginning of the clause: In Israel, according to the Electricity Law, 1954, and the Electricity Regulations (Earthing and means of protection against electricity of voltages up to 1,000V) 1991, seven means of protection against electrocution are permitted, as follows: 1) TN-S — Network system earthing; TN-C-S — Network system earthing; 2) TT — Network system earthing; 3) IT— Network Insulation Terre; 4) Isolated transformer; 5) Safety extra low voltage (SELV or ELV); Note 3: The requirements of Israel Standard SI 60065 ^(c) may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. The list if equipment (brought in the above table) is not intended to be comprehensive and exhaustive and equipment that is not listed is not necessarily excluded from the Scope. Equipment complying with the relevant requirements in the Standard is considered suitable for use with process control equipment; automatic test equipment and similar systems requiring information processing facilities. However, this Standard does not include requirements for performance or functional characteristics of equipment. ^(c) In preparation	Not considered.	N/A
1.1.2	Additional requirements Requirements additional to those specified in this Standard may be necessary for: - Equipment intended for operation in special environments (for example, extremes of temperature; very high concentration of dust, moisture or vibration; flammable gases; and corrosive or explosive atmospheres); - Electromedical applications with physical connections to the patients; - Equipment intended to be used in vehicles, on board ships or aircraft, in tropical countries, or at altitudes greater than 2,000m.	Ditto.	N/A

	<p>- Equipment intended for use where ingress of water may be possible. For guidance on such requirements and on relevant testing, see Annex T.</p> <p>Note: Attention is drawn to the fact that government authorities of some countries impose additional requirements.</p>		
1.1.3	<p>Exclusions This Standard does not apply to the following:</p> <ul style="list-style-type: none"> - Power supply systems which are not an integral part of the requirement, such as motor-generator sets, battery backup systems and transformers; - Building installation wiring; - Devices requiring no electric power. 	Ditto.	N/A
National deviations to the clauses of the International Standard			
1.6	<p>Power interface The clause is applicable with the following addition:</p>		N/A
1.6.1	<p>AC Power distribution systems A note shall be added to the clause as follows: Note 1 : Examples of aspects with which uninstalled components and subassemblies may not comply include the marking of the power rating and access to hazardous parts. Note 2: This Standard may be applied to the electronic parts of equipment even if that equipment does not wholly fall within its Scope, such as large-scale air conditioning systems, fire detection systems and fire extinguishing systems. Different requirements may be necessary for some applications. This Standard specifies requirements intended-to reduce risks of fire ignition, electric shock or bodily injury for the operator and layman who may come into contact with the equipment and, where specifically stated, for a service person. This Standard is intended to reduce such risks with respect to installed equipment, whether it consists of a system or interconnected units or independent units, subject to installing, operating and maintaining the equipment in the manner prescribed by the manufacturer. Examples of equipment that is in the scope of this Standard are the following:</p>		N/A

Generic product type	Specific examples of generic type
Banking equipment	Monetary processing machines (counting, dispensing, etc.) for bills and coins, including automated teller machines (ATM)
Data and text processing machines and associated equipment	Data preparation equipment, data processing equipment, data storage equipment, personal computers, plotters, printers, scanners, text processing equipment and visual display units
Data network equipment	Bridges, data circuit terminating equipment, data terminal equipment and routers
Electrical and electronic retail equipment	Cash registers, point of sale terminals including associated electronic scales
Electrical and electronic office machines	Calculators, copying machines ^(A) , dictation equipment, document shredding machines, duplicators, erasers, micrographic office equipment, motor-operated files, paper trimmers (punchers, cutting machines, separators), paper jogging machines, pencil sharpeners, staplers and typewriters
Other information technology equipment	Photoprinting equipment, public information terminals and multimedia equipment
Postage equipment	Mail processing machines and postage machines
Telecommunication network infrastructure equipment	Billing equipment, multiplexers, network powering equipment, network terminating equipment, radio base stations, repeaters, transmission equipment and telecommunication switching equipment
Telecommunication terminal equipment	Facsimile equipment, key telephone systems, modems, PABXs ^(B) , pagers, telephone answering machines and telephone sets (wired and wireless)

^(A) Commonly known as “copiers”.

^(B) PABX – Private Automatic Branch Exchange

Miscellaneous ID 7-03

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
Attachment Form No.	EU_GD_IEC60950_1B_II
Attachment Originator	SGS Fimko Ltd
Master Attachment	Date 2011-08
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EN 60950-1:2006/A11:2009/A1:2010/A12:2011 – CENELEC COMMON MODIFICATIONS


IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions		Pass
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 4.7.3.1 Note 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		Pass
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		N/A

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.3.Z1	<p>Add the following subclause:</p> <p>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.</p> <p>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.</p>	See attachment ID 7-05 for detail.	Pass
(A12:2011)	<p>In EN 60950-1:2006/A12:2011</p> <p>Delete the addition of 1.3.Z1 / EN 60950-1:2006</p> <p>Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010</p>		N/A
1.5.1	<p>Add the following NOTE:</p> <p>NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC</p>		N/A
1.7.2.1 (A1:2010)	<p>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.</p>		N/A
1.7.2.1 (A12.2011)	<p>In EN 60950-1:2006/A12:2011</p> <p>Delete NOTE Z1 and the addition for Portable Sound System.</p> <p>Add the following clause and annex to the existing standard and amendments.</p>		N/A
	Zx Protection against excessive sound pressure from personal music players		

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>Zx.1 General</p> <p>This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players.</p> <p>A personal music player is a portable equipment for personal use, that:</p> <ul style="list-style-type: none"> – is designed to allow the user to listen to recorded or broadcast sound or video; and – primarily uses headphones or earphones that can be worn in or on or around the ears; and – allows the user to walk around while in use. <p>NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment.</p> <p>A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause.</p> <p>The requirements in this sub-clause are valid for music or video mode only.</p> <p>The requirements do not apply:</p> <ul style="list-style-type: none"> – while the personal music player is connected to an external amplifier; or – while the headphones or earphones are not used. <p>NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player.</p> <p>The requirements do not apply to:</p> <ul style="list-style-type: none"> – hearing aid equipment and professional equipment; <p>NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.</p>		N/A
	<ul style="list-style-type: none"> – analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015. <p>NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies.</p> <p>For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.</p>		N/A

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>Zx.2 Equipment requirements</p> <p>No safety provision is required for equipment that complies with the following:</p> <ul style="list-style-type: none"> – equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ 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. <p>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.</p> <p>All other equipment shall:</p> <ul style="list-style-type: none"> a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and 		N/A

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>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</p> <p>NOTE 2 Examples of means include visual or audible signals. Action from the user is always required.</p> <p>NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off.</p> <p>d) have a warning as specified in Zx.3; and</p> <p>e) not exceed the following:</p> <ol style="list-style-type: none"> 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. <p>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.</p> <p>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.</p> <p>For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.</p>		N/A

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>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:</p> <ul style="list-style-type: none"> – the symbol of Figure 1 with a minimum height of 5 mm; and – the following wording, or similar: <p>“To prevent possible hearing damage, do not listen at high volume levels for long periods.”</p> <div style="text-align: center;">  </div> <p>Figure 1 – Warning label (IEC 60417-6044)</p> <p>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.</p>		N/A
	Zx.4 Requirements for listening devices (headphones and earphones)		
	<p>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.</p> <p>This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control).</p> <p>NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.</p>		N/A
	<p>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.</p> <p>This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.).</p> <p>NOTE An example of a wired listening device with digital input is a USB headphone.</p>		N/A

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>Zx.4.3 Wireless listening devices In wireless mode:</p> <ul style="list-style-type: none"> – with any playing and transmitting device playing the fixed programme simulation noise described in 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. <p>NOTE An example of a wireless listening device is a Bluetooth headphone.</p>		N/A
	<p>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.</p> <p>NOTE Test method for wireless equipment provided without listening device should be defined.</p>		N/A
2.7.1	<p>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):</p> <ul style="list-style-type: none"> 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

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)									
Clause	Requirement + Test	Result - Remark	Verdict						
	<p>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.</p> <p>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.</p>		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						
3.2.5.1	<p>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".</p> <p>In Table 3B, replace the first four lines by the following:</p> <table border="0"> <tr> <td>Up to and including 6 </td> <td>0,75^{a)} </td> </tr> <tr> <td>Over 6 up to and including 10 (0,75)^{b)}</td> <td>1,0 </td> </tr> <tr> <td>Over 10 up to and including 16 (1,0)^{c)}</td> <td>1,5 </td> </tr> </table> <p>In the conditions applicable to Table 3B delete the words "in some countries" in condition^{a)}.</p> <p>In NOTE 1, applicable to Table 3B, delete the second sentence.</p>	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		N/A
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								
3.3.4	<p>In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following:</p> <table border="0"> <tr> <td>Over 10 up to and including 16 </td> <td>1,5 to 2,5 </td> <td>1,5 to 4 </td> </tr> </table> <p>Delete the fifth line: conductor sizes for 13 to 16 A</p>	Over 10 up to and including 16	1,5 to 2,5	1,5 to 4		N/A			
Over 10 up to and including 16	1,5 to 2,5	1,5 to 4							
4.3.13.6 (A1:2010)	<p>Replace the existing NOTE by the following:</p> <p>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 (artificial optical radiation).</p>		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						

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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 μ Sv/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.		—

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	—
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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	In Norway and Sweden , for requirements see 1.7.2.1 and 7.3 of this annex.		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
1.5.8	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

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	<p>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:</p> <p>In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"</p> <p>In Norway: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In Sweden: "Apparaten skall anslutas till jordat uttag"</p> <p>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.</p> <p>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.</p> <p>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:</p> <p>"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)."</p>		N/A

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.</p> <p>Translation to Norwegian (the Swedish text will also be accepted in Norway):</p> <p>“Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.”</p> <p>Translation to Swedish:</p> <p>”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”</p>		N/A
1.7.5	<p>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.</p> <p>For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.</p>		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
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.		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

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)																					
Clause	Requirement + Test	Result - Remark	Verdict																		
3.2.1.1	<p>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:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">SEV 6532-2.1991</td> <td style="width: 30%;">Plug Type 15</td> <td style="width: 40%;"></td> </tr> <tr> <td style="padding-left: 20px;">3P+N+PE</td> <td>250/400 V, 10 A</td> <td></td> </tr> <tr> <td>SEV 6533-2.1991</td> <td>Plug Type 11</td> <td>L+N</td> </tr> <tr> <td style="padding-left: 20px;">250 V, 10 A</td> <td></td> <td></td> </tr> <tr> <td>SEV 6534-2.1991</td> <td>Plug Type 12</td> <td>L+N+PE</td> </tr> <tr> <td style="padding-left: 20px;">250 V, 10 A</td> <td></td> <td></td> </tr> </table> <p>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:</p> <p>SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A</p> <p>SEV 5933-2.1998: Plug Type 21, L+N, 250 V, 16A</p> <p>SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A</p>	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				N/A
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																					
3.2.1.1	<p>In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1.</p> <p>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.</p> <p>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.</p>		N/A																		

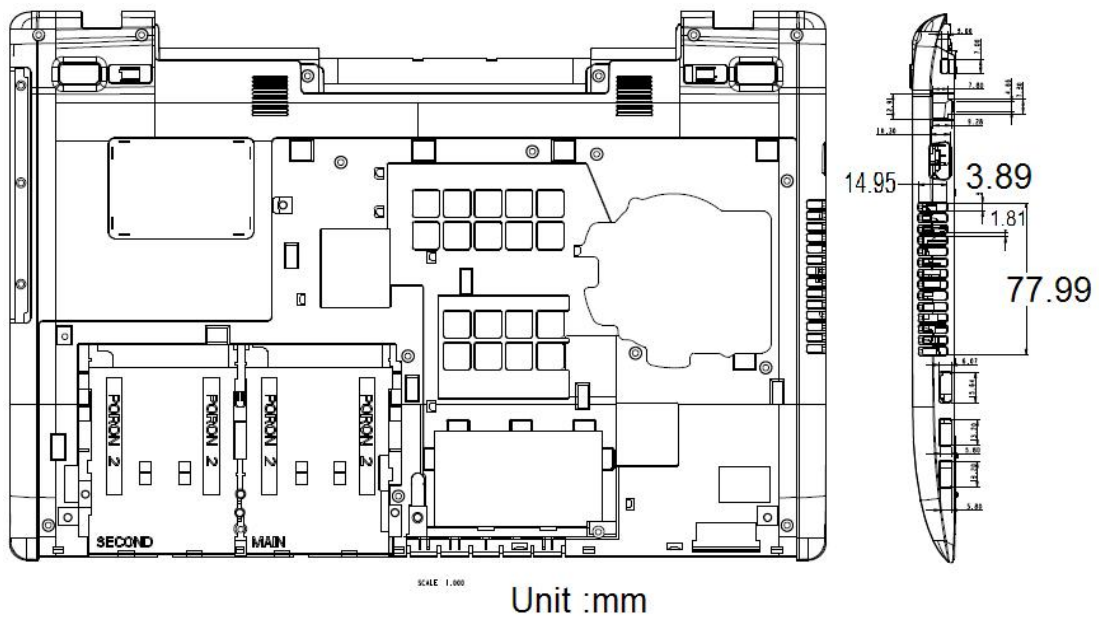
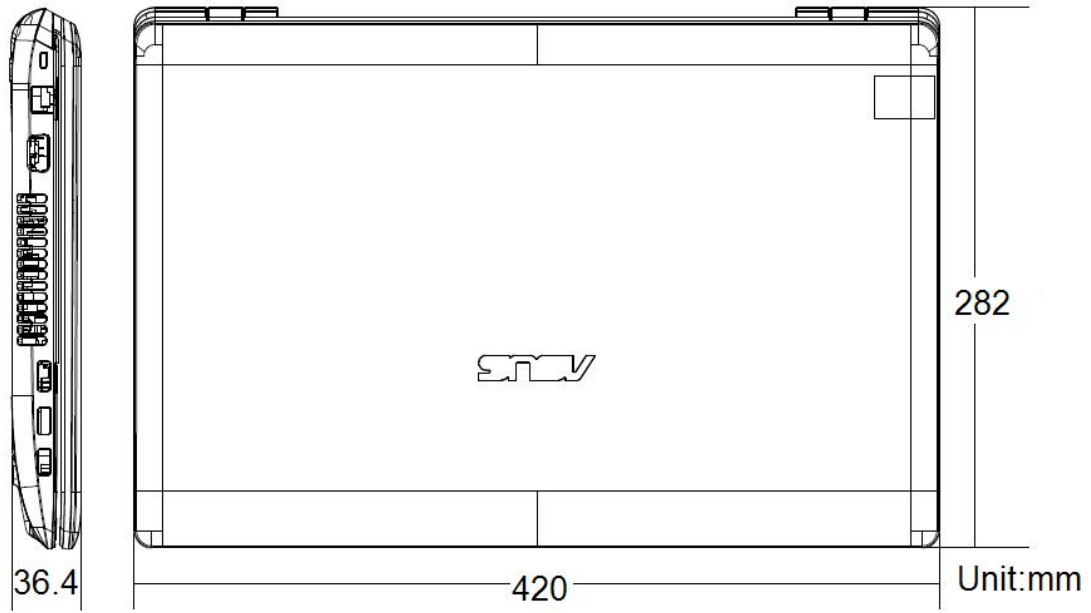
ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	<p>In Spain, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994.</p> <p>Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993.</p> <p>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.</p> <p>If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.</p>		N/A
3.2.1.1	<p>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.</p> <p>NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>		N/A
3.2.1.1	<p>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.</p>		N/A
3.2.4	<p>In Switzerland, for requirements see 3.2.1.1 of this annex.</p>		N/A
3.2.5.1	<p>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.</p>		N/A
3.3.4	<p>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:</p> <ul style="list-style-type: none"> • 1,25 mm² to 1,5 mm² nominal cross-sectional area. 		N/A

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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.		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
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: <ul style="list-style-type: none"> • STATIONARY PLUGGABLE EQUIPMENT TYPE A that <ul style="list-style-type: none"> 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

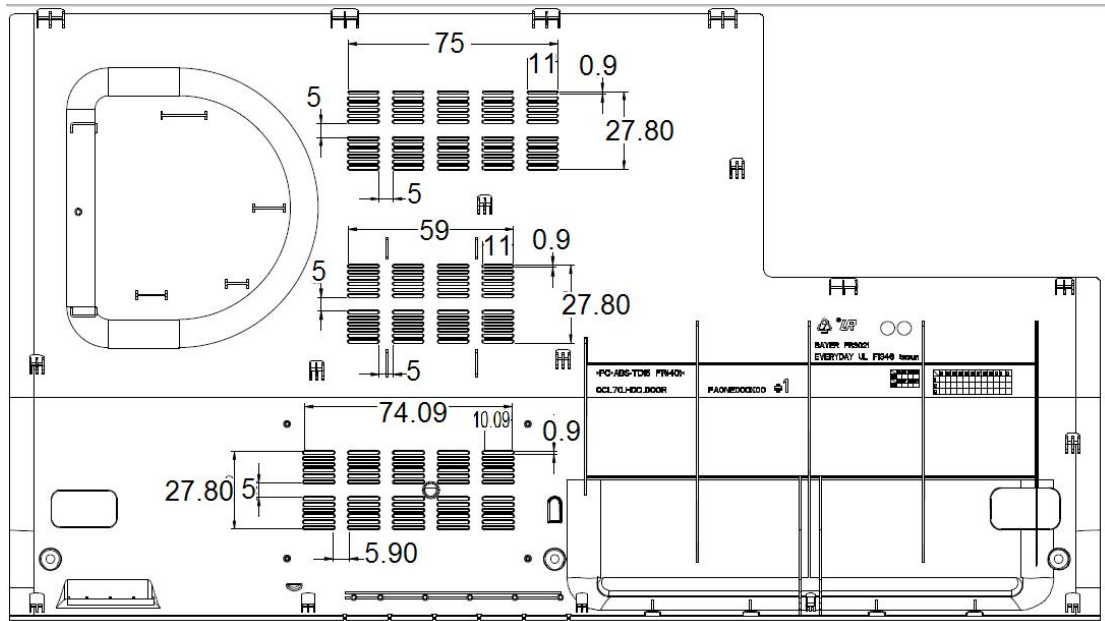
ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.1 (A1:2010)	<p>In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>Alternatively for components, there is no distance through insulation 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</p> <ul style="list-style-type: none"> - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. 		N/A
	<p>It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b).</p> <p>It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 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

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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 , for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A
7.3	In Norway , for installation conditions see EN 60728-11:2005.		N/A

Miscellaneous ID 7-04



Miscellaneous ID 7-04

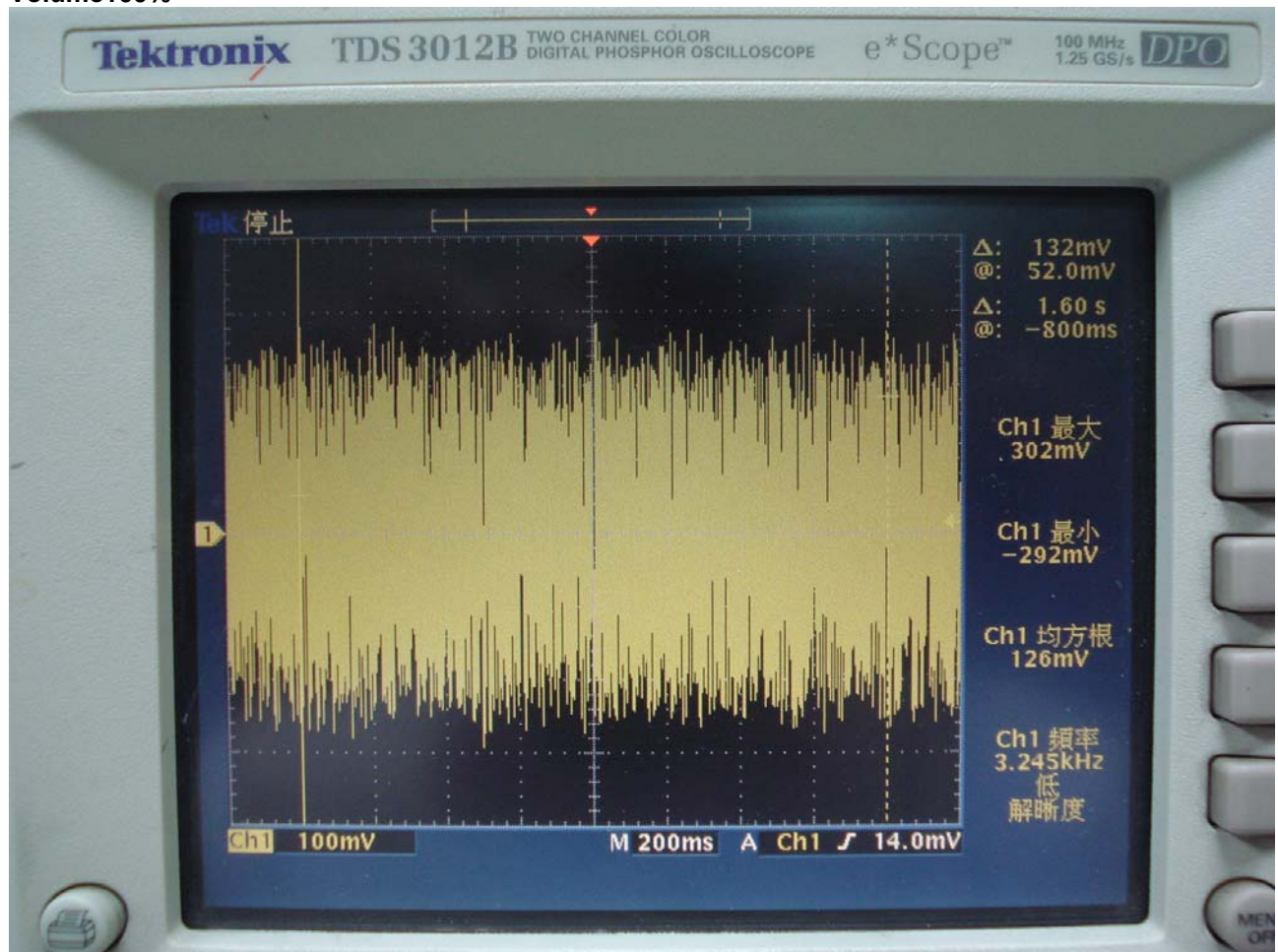


Miscellaneous ID 7-05

EN50332-2 (mV)			
	Left ear	Right ear	Verdict
1	126	122	Pass
2	122	124	Pass
3	124	125	Pass
4	125	124	Pass
5	126	124	Pass

Results shall not deliver more than 150mV

Ear:
Volume100%



NOTES TO LAB:

For the maximum output voltage measurement, the V_m shall be defined as unweighted true r.m.s. voltage at the load, using an averaging time of 30 s or more. Player output shall be loaded with a resistive load of 32 Ω . Results shall not deliver more than 150mV.

EN 50332-2 operating condition and procedure

Ambient temperature: 15°C to 35°C, preferably at 20°C

Relative humidity: 25% to 75%

Air pressure: 86 kPa to 106 kPa (860 mbar to 1060 mbar)

Noise reduction system must be "OFF"

Volume control must be setting on "Maximum"

Tone control must be on adjusted in order to maximize "Sound pressure level"

Test source signal used to measure the maximum sound pressure level is a programme simulation noise,

as defined IEC 60268-1, and its crest factor range is between 1.8 ~ 2.2

Tests repeats 5 times for each Ear.

A-weighted equivalent continuous sound pressure level (Averaging time of 30s or more)

EN 50332-2: Limitation Value, Player output shall be loaded with a resistive load of 32Ω
 ≤ 150 mV (Maximum output voltage)

Miscellaneous ID 7-06

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Procurement Dept. Fax: 886-2-894-3482
Sales Dept. Fax: 886-2-896-7761
Tech. Support Dept. Fax: 886-2-895-9254
R & D Fax: 886-2-895-0113
Financial Dept. Fax: 886-2-894-3324



Date: 2012/01/06

Declaration Letter

We, (ASUSTEK COMPUTER INC. / 150, LI-TE RD., PEITOU, TAIPEI, 112 TAIWAN.), confirm that the samples submitted for evaluation are representative of products from each factories as listed below.

Name and address of the all Factories on CB Test Report:

- (1) Compal Electronics Technology (Kunshan) Co., Ltd.
No.25, Third Avenue, A Zone, Kunshan Comprehensive Free Trade Zone, Kunshan, Jiangsu, China
- (2) Compal Information (Kunshan) Co., Ltd.
No.15, Third Avenue, A Zone, Kunshan Comprehensive Free Trade Zone, Kunshan, Jiangsu, China
- (3) Compal Information Technology (Kunshan) Co., Ltd.
No.58, First Avenue, A Zone, Kunshan Comprehensive Free Trade Zone, Kunshan, Jiangsu, China
- (4) Compalead Eletrônica Do Brasil Indústria E Comércio Ltda
Rua Kanebo 175, Galpões C3 C4 C5 E C6 , Bairro Distrito Ind BUS Park, Jundiai SP 13213-090 Brazil
- (5) Compal (Vietnam) Co., Ltd.
Ba Thien Industrial Zone, Ba Hien Commune, Binh Xuyen, Vinh Phuc, Vietnam
- (6) Compal Electronics (Chengdu) Co., Ltd.
No.88, Sec.1, ZongBao Ave. Chengdu, Hi-tech Comprehensive Bonded Zone, Shuangliu County, Chengdu Sichuan, China
- (7) Compal Electronics (Chongqing) Co., Ltd.
No.D01, Zone D Air Port Section of, LiangLu Cuntan Free Trade Port Area, YuBei District, Chongqing, China

Jeff Lu /


Printed Name / Signature

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