



Ref. Certif. No.

JPTUV-070031

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product
Produit

LCD Monitor

Name and address of the applicant
Nom et adresse du demandeur

Top Victory Electronics (Taiwan) Co., Ltd.
10F., No. 230, Liancheng Rd.
Zhonghe Dist., New Taipei City, 23553 Taiwan

Name and address of the manufacturer
Nom et adresse du fabricant

NEC Display Solutions, Ltd.
4-28, Mita 1-chome, Minato-ku
Tokyo, 108-0073 JAPAN

Name and address of the factory
Nom et adresse de l'usine

See additional page(s)

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

AC 100-240V; 50/60Hz; 1) 3.8-1.6A; 2) 3.0-1.2A; 3) 2.6-1.1A
Class I

Trademark (if any)
Marque de fabrique (si elle existe)

NEC

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeur

N/A

Model / Type Ref.
Ref. de type

1) X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C)
X554UNV
2) X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C)
For models details, refer to the test report.
For model differences, refer to the test report.

Additional information (if necessary may also be
reported on page 2)
Les informations complémentaires (si nécessaire,
peuvent être indiqués sur la 2^{ème} page)

A sample of the product was tested and found
to be in conformity with
Un échantillon de ce produit a été essayé et a été
considéré conforme à la

IEC 60950-1:2005+A1+A2
National differences see test report

As shown in the Test Report Ref. No. which forms part
of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce Certificat

11045046 001

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification



TÜV Rheinland Japan Ltd.
Global Technology Assessment Center
4-25-2 Kita-Yamata, Tsuzuki-ku
Yokohama 224-0021 Japan
Phone + 81 45 914-3888
Fax + 81 45 914-3354
Mail: info@jpn.tuv.com
Web: www.tuv.com

Date: 03.03.2016

Signature:

Dipl.-Ing. R. Stoeizel

1. TPV Display Technology (Wuhan)
Co., Ltd.
Unique No. 11, Zhuankou Development
District of Economic Technological
Development Zone, Wuhan City 430056, P.R. China
2. TPV Electronics (Fujian) Co., Ltd.
Shangzheng, Yuan Hong Road
Fuqing City, Fujian Province
P.R. China
3. Envision Industry of Electronic
Products Ltd.
Rodovia Anhanguera S/N-KM 49
Tijuco Preto-Jundiá-SP-
13.205-700, Brazil
4. L&T Display Technology (Fujian) Ltd.
Optoelectronic Park, Rongqiao
Economic and Technological
Development Zone
Fuqing, Fujian 350301, P.R. China
5. Trend Smart CE Mexico S de RL de CV
Avenida Sor Juana Ines de la Cruz
de 19602 Nueva Tijuana,
22435 Tijuana Baja California
MEXICO
6. TPV Display Technology (Beihai)
Co., Ltd.
China Electronic Beihai Industry
Park, Northeast of the Crossing
Between Taiwan Road and Jilin Road, Beihai City, Guangxi, P.R. China
7. Envision Industry of Electronic
Products Ltd.
Av Torquato Tapajós 7503,
Galpão : Il Bloco B-Condomínio
de Galpões-Tarumã-Manaus, AM, Brazil
8. TPV Technology (Qingdao)
Co., Ltd.
No 99 Huoju Road, High-tech
Industrial Development Zone
Qingdao City, Shandong Province, P.R. China
9. TPV Display Technology (China)
Co., Ltd.
No. 106 Jinghai 3 Rd., BDA
Beijing City 100176
P.R. China

Additional information (if necessary)
Information complémentaire (si nécessaire)

Report Ref. No.: 11045046 001

Date:

03.03.2016

Signature:

Dipl.-Ing. F. Stoelzel

10. Hefei Huntkey Display Technology
Co., Ltd.
South Jinxiu Road, East Qingtan Road
Economic And Technological
Development Zone, Hefei, Anhui 230601, P.R. China

11. TPV Electronics (Fujian) Co., Ltd.
Optoelectronic Park,
Rongqiao Economic and
Technological Development Zone,
Fuqing City, Fujian Province 350301, P.R. China

12. Envision Indústria de Produtos
Eletrônicos Ltda.
Av. Torquato Tapajós, 2236,
Flores - CEP 69058-830 - Manaus/AM
Brazil

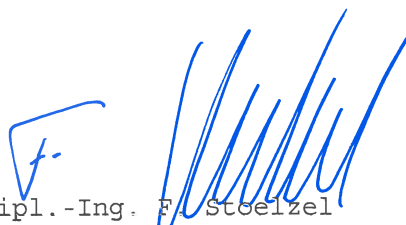
Additional information (if necessary)
Information complémentaire (si nécessaire)

Report Ref. No.: 11045046 001

Date:

03.03.2016

Signature:


Dipl.-Ing. F. Stoezel



Test Report issued under the responsibility of:



TEST REPORT

IEC 60950-1

Information technology equipment – Safety – Part 1: General requirements

Report Number.: 11045046 001

Date of issue: Feb14th, 2016

Total number of pages.....: 93

Applicant's name: Top Victory Electronics (Taiwan) Co., Ltd.

Address: 10F., No. 230, Liancheng Rd., Zhonghe Dist., New Taipei City,
23553 Taiwan

Test specification:

Standard: IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013

Test procedure.....: CB Scheme

Non-standard test method.....: N/A

Test Report Form No.....: IEC60950_1F

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

Master TRF: Dated 2014-02

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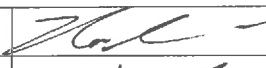
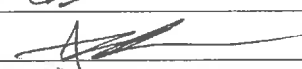
This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

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

This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description	LCD Monitor
Trade Mark	NEC
Manufacturer.....	NEC Display Solutions, Ltd. 4-28, Mita 1-chome, Minato-ku, Tokyo, Japan
Model/Type reference	1) X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV 2) X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C) 3) X464UNV, X464UNV(C)
Ratings	I/p: 100-240 Vac, 50/60 Hz, 1) 3.8-1.6 A ; 2) 3.0-1.2 A; 3) 2.6-1.1 A

Testing procedure and testing location:		
☒	CB Testing Laboratory:	
Testing location/ address		TÜV Rheinland Taiwan Ltd., Taichung Laboratory No. 9, Ln. 36, Sec. 3, Minsheng Rd., Daya District, Taichung City 428, Taiwan.
☐	Associated CB Testing Laboratory:	
Testing location/ address		
Tested by (name + signature)		Nai-Shiuan Yin 
Approved by (name + signature)		Jacky Chen 
☐	Testing procedure: TMP/CTF Stage 1:	
Testing location/ address		
Tested by (name + signature)		
Approved by (name + signature)		
☐	Testing procedure: WMT/CTF Stage 2:	
Testing location/ address		
Tested by (name + signature)		
Witnessed by (name + signature)		
Approved by (name + signature)		
☐	Testing procedure: SMT/CTF Stage 3 or 4:	
Testing location/ address		
Tested by (name + signature)		
Witnessed by (name + signature)		
Approved by (name + signature)		
Supervised by (name + signature)		

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

- Photo documentation
- National Differences
- Measurement Section

Total number of pages in each attachment is indicated in each individual attachment.

Summary of testing:**Tests performed (name of test and test clause):**

All applicable tests as described in Test Case and Measurement Sections were performed.

- The manufacturer specified the maximum ambient temperature as +40 °C.
- Highest load condition for this equipment is to operate at maximum backlight, brightness and contrast of LED backlight, and adjust to max. volume with 1KHz sine waveform of speakers, additional load of 5V/0.5A for USB port and dummy load 16V/4A (located at top side), dummy load 5V/1A (CN505) (located down side), and additional load of 3.3V/ 0.5A for Display port (CN501 and CN506).
- The product is to be operated at 5000 m above sea level, the minimum clearances were multiplied by the factor given in Table A.2 of IEC 60664-1: 1.48
- Test samples are pre-production samples without serial numbers.
- Except other noted, all tested were performed on model X554UN with all optional component and external speakers installed in place to simulate the worst condition and to represent other similar models.
- The Heating test and abnormal test were performed with all system fan locked.
- The LCD Monitor can be adjustmented monitor's height and operated in landscape (0 °) to portrait mode (90 °) when building-in power supply board downside. For heating test were considered all orientation during test conducting.

Testing location:

All tests as described in Test Case and Measurement Sections were performed at the laboratory described on cover page.

Summary of compliance with National Differences**List of countries addressed:**

EU Group Differences, EU Special National Conditions, US, CA

Explanation of used codes: US = United States of America, CA = Canada

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

For IEC 60950-1:2005 / EN 60950-1:2006+A11:2009+A1:2010 (per client request):

EU Group Differences, EU Special National Conditions, CA, DE, FI, IL, KR

Explanation of used codes: CA = Canada, DE = Germany, FI = Finland, IL = Israel, KR = Republic of Korea, US = United States of America.

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

For IEC 60950-1:2005 / EN 60950-1:2006+A11:2009 (per client request):

AU

Explanation of used codes: AU=Australia

For IEC 60950-1:2001 / EN 60950-1:2001+A11:2004 (per client request):

(All CB members countries listed in CB Bulletin No. 112A, dated December 2006)

AR, AT, BE, CN, CZ, FR, GR, HU, IN, IT, JP, KE, MY, NL, PL, SG, SI, SK.

Explanation of used codes: AR=Argentina, AT=Austria, BE=Belgium, CN=China, CZ=Czech Republic, FR=France, GR=Greece, HU=Hungary, IN=India, IT=Italy, JP=Japan, KE=Kenya, MY=Malaysia, NL=The Netherlands, PL=Poland, SG=Singapore, SI=Slovenia, SK=Slovakia.

For IEC 60950:1999 (3rd Edition) + Corr. Jan. 2000 (per client request):

BR, IE, PT, RU, TR, UA, ZA.

Explanation of used codes: BR=Brazil, IE=Ireland, PT=Portugal, RU=Russian Federation, TR=Turkey, UA=Ukraine, ZA=South Africa.

For National Differences see corresponding Attachment.

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.

NEC
MultiSync X554UNV

LCD MONITOR
(MODEL : X554UNV)

VOLTS 定格電圧:100-240V~, AMPERES 定格電流:3.8-1.6A (3.8-1.6A)
FREQUENCY 定格周波数:50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUES, NE PAS OUVRIR CE BOITIER. AUCUNE PIECE INTERNE NE PEUT-ETRE CHANGEE PAR L'UTILISATEUR.

ACHTUNG: ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN, ES SIND KEINE DURCH DEN BENUTZER AUSWECHSELBAREN TEILE IM GERÄT VORHANDEN.

PRECAUCIÓN: PARA PREVENIR DESCARGA ELÉCTRICA, NO QUITAR EL RECINTO. NINGUNAS PIEZAS DEL USUARIO SERVICABLES ADENTRO.

VAROITUS: LAITE ON LITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA VARUSTETTUUN PISTORASIAAN.

VARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTGÅTT.

ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT.

ADVARSEL: APPARATETS STIKPROP SKAL TILSLUTTES EN STIKKONTAKT MED JORD, SOM GIVER FORBINDELSE TIL STIKPROPPENS JORD.

CAN ICES-3(A) / NMB-3(A)

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 VCCI-A

THIS DEVICE COMPLIES WITH PART15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

Self Declaration - Conforming to IS 13252(Part 1): 2010, R-41005622

E135689
US I.T.E.
LISTED 1K81

SAFETY MARK
150428-11

CE EAC

TÜV Rheinland

MADE IN CHINA

NECディスプレイソリューションズ株式会社
NEC Display Solutions, Ltd.
4-28,Mita 1-chome, Minato-ku, Tokyo, Japan

Q40G055N-842-36B

NEC MultiSync X554UNV

LCD MONITOR
彩色顯示器 液晶显示器
모니터 (55인치 LCD 모니터)
(MODEL/型号/型號/모델명: X554UNV)

VOLTS 定格電圧 輸入電壓 :100-240V~, AMPERES 定格電流 電流 :3.8-1.6A (3.8-1.6A)
FREQUENCY 定格周波数 工作頻率 工作頻率 :50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUES, NE PAS OUVRIR CE BOITIER. AUCUNE PIECE INTERNE NE PEUT-ETRE CHANGEE PAR L'UTILISATEUR.

ACHTUNG: ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN, ES SIND KEINE DURCH DEN BENUTZER AUSWECHSELBAREN TEILE IM GERÄT VORHANDEN.

PRECAUCIÓN: PARA PREVENIR DESCARGA ELÉCTRICA, NO QUITAR EL RECINTO. NINGUNAS PIEZAS DEL USUARIO SERVICABLES ADENTRO.

VAROITUS: LAITE ON LITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA VARUSTETTUUN PISTORASIAAN.

VARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTGÅTT.

ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT.

ADVARSEL: APPARATETS STIKPROP SKAL TILSLUTTES EN STIKKONTAKT MED JORD, SOM GIVER FORBINDELSE TIL STIKPROPPENS JORD.

△注意: 請勿打開后蓋, 小心高壓電擊。機內並無用戶配件。

△注意: 請勿打開後蓋, 小心高壓電擊。機內並無用戶配件。

△警告: 使用過度恐傷視力。

CAN ICES-3(A) / NMB-3(A)

HDMI

Self Declaration - Conforming to IS 13252(Part 1): 2010, R-41005622

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 VCCI-A

警告使用者: 此為甲類資訊技術設備, 於居住環境中使用時, 可能會造成射頻干擾, 在此種情況下, 使用者會被要求採取某些適當的對策。

THIS DEVICE COMPLIES WITH PART15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

사용상 주의사항: 감전의 위험 및 제품의 손상이 발생할 수 있으므로 제품의 커버를 열지 마십시오.

인중 서비스 센터 전화 번호: 080-022-1155 (호성ITX주식회사)

*본 라벨과 전화번호는 국내 규정 내에서 적절한 목적으로만 사용되어야 합니다.

E135689
US I.T.E.
LISTED 1K81

SAFETY MARK
150428-11

CE EAC

TÜV Rheinland

MADE IN CHINA 中国制造 中國製造

Manufacturing factory: TPV Electronics (Fujian) Co., Ltd.
生产厂: 福建捷聯电子有限公司
NEC 디스플레이 솔루션즈 주식회사
NEC Display Solutions, Ltd.
生产地址: 福建省福州市鼓浪屿经济技术开发区
日本国東京都港区三田一丁目4番28号
日本国東京都港区三田一丁目4番28号

Q40G055N-842-37B

NEC
MultiSync X464UN

LCD MONITOR
液晶显示器
(Model/型号:X464UN(C))

VOLTS 输入电压:100-240V~, AMPERES 电流:3.0-1.2A
FREQUENCY 工作频率:50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
NO USER-SERVICEABLE PARTS INSIDE.

△注意: 請勿打開后蓋, 小心高壓電擊。機內並無用戶配件。

MADE IN CHINA 中国制造

生产厂: 福建捷聯电子有限公司
生产地址: 福建省福州市鼓浪屿经济技术开发区

NEC Display Solutions, Ltd.
日本国東京都港区三田一丁目4番28号

Q40G055N-842-37B

Notes:

The above labels are 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.

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.

Contact address for EMEA

NEC Display Solutions Europe GmbH
Landshuter Allee 12-14
80637 Munich, Germany

NEC MultiSync X554UNV LCD MONITOR
液晶显示器
(MODEL/型号: X554UNV)

VOLTS 定格電圧 輸入電圧: 100-240V~, AMPERES 定格電流 電流: 3.8-1.6A (3.8-1.6A)
FREQUENCY 定格周波数 工作頻率: 50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUES, NE PAS OUVRIR CE BOITIER. AUCUNE PIECE INTERNE NE PEUT-ETRE CHANGEÉ PAR L'UTILISATEUR.

ACHTUNG: ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN. ES SIND KEINE DURCH DEN BENUTZER AUSWECHSELBAREN TEILE IM GERÄT VORHANDEN.

PRECAUCIÓN: PARA PREVENIR DESCARGA ELÉCTRICA, NO quite EL RECINTO. NINGUNAS PIEZAS DEL USUARIO SERVICABLE ADENTRO.

VAROITUS: LAITE ON LITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA VARUSTETTUUN PISTORASIAAN.

WARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTTAG.

ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT.

ADVARSEL: APPARATETS STIKPROP SKAL TILSLUTTES EN STIKKONTAKT MED JORD, SOM GIVER FORBINDELSE TIL STIKPROPPENS JORD.

△注意: 请勿打开后盖, 小心高压电击。机内并无用户配件。

CAN ICES-3(A) / NMB-3(A)

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THIS DEVICE COMPLIES WITH PART15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

Self Declaration - Conforming to IS 13252(Part 1): 2010, R-41005622

UL LISTED E135689 US I.T.E. 1K81 SAFETY MARK 150428-11

CE EAC

MADE IN CHINA 中国製造

Manufacturing factory: TPV Electronics(Fujian)Co., Ltd.
Applicant: Top Victory Electronics(Fujian)Co., Ltd.

NECディスプレイソリューションズ株式会社
NEC Display Solutions, Ltd.
日本国東京都港区三田一丁目4番28号
4-28, Mita 1-chome, Minato-ku, Tokyo, Japan

生产厂: 福建捷联电子有限公司
生产地址: 福建省福州市经济技术开发区

Q40G055N-842-38B

NEC MultiSync X464UN LCD MONITOR
(Model :X464UN)

VOLTS 定格電圧: 100-240V~, AMPERES 定格電流: 3.0-1.2A (3.0-1.2A)
FREQUENCY 定格周波数: 50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUES, NE PAS OUVRIR CE BOITIER. AUCUNE PIECE INTERNE NE PEUT-ETRE CHANGEÉ PAR L'UTILISATEUR.

ACHTUNG: ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN. ES SIND KEINE DURCH DEN BENUTZER AUSWECHSELBAREN TEILE IM GERÄT VORHANDEN.

PRECAUCIÓN: PARA PREVENIR DESCARGA ELÉCTRICA, NO quite EL RECINTO. NINGUNAS PIEZAS DEL USUARIO SERVICABLE ADENTRO.

VAROITUS: LAITE ON LITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA VARUSTETTUUN PISTORASIAAN.

WARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTTAG.

ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT.

ADVARSEL: APPARATETS STIKPROP SKAL TILSLUTTES EN STIKKONTAKT MED JORD, SOM GIVER FORBINDELSE TIL STIKPROPPENS JORD.

CAN ICES-3(A) / NMB-3(A)

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 VCCI-A

THIS DEVICE COMPLIES WITH PART15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

Self declaration - Conforming to IS 13252(Part 1): 2010, R-41005622

UL LISTED E135689 US I.T.E. 1K81 SAFETY MARK 131846-11

CE EAC

MADE IN CHINA

NECディスプレイソリューションズ株式会社
NEC Display Solutions, Ltd.
4-28, Mita 1-chome, Minato-ku, Tokyo, Japan

Notes:

The above labels are 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.

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.

NEC MultiSync X464UN LCD MONITOR
 液晶显示器 (Model/型号: X464UN)

VOLTS 定格電圧 輸入電圧: 100-240V-
 AMPERES 定格電流 電流: 3.0-1.2A (3.0-1.2A)
 FREQUENCY 定格周波数 工作頻率: 50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
 NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUES, NE PAS OUVRIR CE BOITIER. AUCUNE PIECE INTERNE NE PEUT-ETRE CHANGEE PAR L'UTILISATEUR.

ACHTUNG: ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN, ES SIND KEINE DURCH DEN BENUTZER AUSWECHSELBAREN TEILE IM GERÄT VORHANDEN.

PRECAUCIÓN: PARA PREVENIR DESCARGA ELÉCTRICA, NO QUITAR EL RECINTO. NINGUNAS PIEZAS DEL USUARIO SERVICABLE ADENTRO.

VAROITUS: LAITE ON LITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA VARUSTETTUUN PISTORASIAAN.

VARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTGÅTT.

ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT.

ADVARSEL: APPARATETS STIKPROP SKAL TILSLUTTES EN STIKKONTAKT MED JORD, SOM GIVER FORBINDELSE TIL STIKPROPPENS JORD.

注意: 請勿打開後蓋, 小心高壓電擊, 機內並無用戶配件。

警告: 使用過度恐傷害視力。

CAN ICES-3(A) / NMB-3(A) HDMI

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警告使用者: 此為甲類資訊技術設備。於居住環境中使用時, 可能會造成射頻干擾。在此種情況下, 使用者會被要求採取某些適當的對策。

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사용상 주의사항: 감전의 위험 및 제품의 손상이 발생할 수 있으므로, 제품의 커버를 열지 마십시오.

인증 서비스 센터 전화 번호: 080-022-1195 (호성ITX주식회사)

*본 라벨과 전화번호는 국내 규정 내에서 적절한 목적으로만 사용되어야 합니다.

MADE IN CHINA 中国製造

Manufacturing factory: TPV Electronics(Fujian)Co., Ltd.

Applicant: Top Victory Electronics(Fujian)Co., Ltd.

生産廠: 福建捷成电子有限公司

生産厂: 福建捷成电子有限公司

生産地址: 福建省福清市融侨经济技术开发区

生産地址: 福建省福清市融侨经济技术开发区

NECディスプレイソリューションズ株式会社

NEC Display Solutions, Ltd.

日本国東京都港区三田一丁目4番28号

4-28, Mita 1-chome, Minato-ku, Tokyo, Japan

NEC MultiSync X464UNS LCD MONITOR
 液晶显示器 (Model/型号: X464UNS)

VOLTS 定格電圧 輸入電圧: 100-240V-
 AMPERES 定格電流 電流: 3.0-1.2A (3.0-1.2A)
 FREQUENCY 定格周波数 工作頻率: 50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
 NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUES, NE PAS OUVRIR CE BOITIER. AUCUNE PIECE INTERNE NE PEUT-ETRE CHANGEE PAR L'UTILISATEUR.

ACHTUNG: ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN, ES SIND KEINE DURCH DEN BENUTZER AUSWECHSELBAREN TEILE IM GERÄT VORHANDEN.

PRECAUCIÓN: PARA PREVENIR DESCARGA ELÉCTRICA, NO QUITAR EL RECINTO. NINGUNAS PIEZAS DEL USUARIO SERVICABLE ADENTRO.

VAROITUS: LAITE ON LITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA VARUSTETTUUN PISTORASIAAN.

VARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTGÅTT.

ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT.

ADVARSEL: APPARATETS STIKPROP SKAL TILSLUTTES EN STIKKONTAKT MED JORD, SOM GIVER FORBINDELSE TIL STIKPROPPENS JORD.

注意: 請勿打開後蓋, 小心高壓電擊, 機內並無用戶配件。

警告: 使用過度恐傷害視力。

CAN ICES-3(A) / NMB-3(A)

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인증 서비스 센터 전화 번호: 080-022-1195 (호성ITX주식회사)

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MADE IN CHINA 中国製造

Manufacturing factory: TPV Electronics(Fujian)Co., Ltd.

Applicant: Top Victory Electronics(Fujian)Co., Ltd.

生産廠: 福建捷成电子有限公司

生産厂: 福建捷成电子有限公司

生産地址: 福建省福清市融侨经济技术开发区

生産地址: 福建省福清市融侨经济技术开发区

NECディスプレイソリューションズ株式会社

NEC Display Solutions, Ltd.

日本国東京都港区三田一丁目4番28号

4-28, Mita 1-chome, Minato-ku, Tokyo, Japan

NEC MultiSync X464UNV LCD MONITOR
 液晶显示器 (Model/型号: X464UNV(C))

VOLTS 輸入電圧: 100-240V-
 FREQUENCY 工作頻率: 50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
 NO USER-SERVICEABLE PARTS INSIDE.

注意: 請勿打開後蓋, 小心高壓電擊, 機內並無用戶配件。

MADE IN CHINA 中国製造

生産厂: 福建捷成电子有限公司

生産地址: 福建省福清市融侨经济技术开发区

NEC Display Solutions, Ltd.

日本国東京都港区三田一丁目4番28号

Notes:

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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.

NEC MultiSync X464UNS LCD MONITOR
 彩色顯示器 液晶显示器
 모니터 (46인치 LCD 모니터)
 VOLTS 定格電圧 輸入電圧 輸入電壓 :100-240V~
 AMPERES 定格電流 電流 電流 :3.0-1.2A (3.0-1.2A) (MODEL/型号/型號/모델명: X464UNS)
 FREQUENCY 定格周波数 工作頻率 工作頻率 :50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
 NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUES, NE PAS OUVRIR CE BOITIER. AUCUNE PIECE INTERNE NE PEUT-ETRE CHANGE PAR L'UTILISATEUR.

ACHTUNG: ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN. ES SIND KEINE DURCH DEN BENUTZER AUSWECHSELBAREN TEILE IM GERÄT VORHANDEN.

PRECAUCIÓN: PARA PREVENIR DESCARGA ELÉCTRICA, NO QUITE EL RECINTO. NINGUNAS PIEZAS DEL USUARIO SERVICABLE ADENTRO.

VAROITUS: LAITE ON LITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA VARUSTETTUUN PISTORASIAAN.

VARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTGÅG.

ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT.

ADVARSEL: APPARATETS STIKPROP SKAL TILSLUTTES EN STIKKONTAKT MED JORD, SOM GIVER FORBINDELSE TIL STIKPROPPENS JORD.

△注意: 請勿打開後蓋, 小心高壓電擊。機內並無用戶配件。

△警告: 使用過度恐傷害視力。

CAN ICES-3(A) / NMB-3(A)

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VCCI-A

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인증 서비스 센터 전화 번호: 080-022-1155 (호성ITX주식회사)

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MADE IN CHINA 中國製造 中國製造

Manufacturing factory :TPV Electronics(Fujian)Co.,Ltd.

生産廠: 福建捷聯電子有限公司

生产厂: 福建捷聯電子有限公司

生产地址: 福建省福清市融侨经济技术开发区

NECディスプレイソリューションズ株式会社
 NEC Display Solutions, Ltd.
 日本国東京都港区三田一丁目4番28号
 4-28,Mita 1-chome, Minato-ku, Tokyo, Japan

NEC MultiSync X464UNV LCD MONITOR
 (Model :X464UNV)

VOLTS 定格電圧:100-240V~, AMPERES 定格電流:2.6-1.1A (2.6-1.1A)
 FREQUENCY 定格周波数:50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
 NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUES, NE PAS OUVRIR CE BOITIER. AUCUNE PIECE INTERNE NE PEUT-ETRE CHANGE PAR L'UTILISATEUR.

ACHTUNG: ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN. ES SIND KEINE DURCH DEN BENUTZER AUSWECHSELBAREN TEILE IM GERÄT VORHANDEN.

PRECAUCIÓN: PARA PREVENIR DESCARGA ELÉCTRICA, NO QUITE EL RECINTO. NINGUNAS PIEZAS DEL USUARIO SERVICABLE ADENTRO.

VAROITUS: LAITE ON LITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA VARUSTETTUUN PISTORASIAAN.

VARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTGÅG.

ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT.

ADVARSEL: APPARATETS STIKPROP SKAL TILSLUTTES EN STIKKONTAKT MED JORD, SOM GIVER FORBINDELSE TIL STIKPROPPENS JORD.

CAN ICES-3(A) / NMB-3(A)

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VCCI-A

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Self declaration - Conforming to IS 13252(Part 1): 2010, R-41005622

UL LISTED E135689 US I.T.E. 1K81 SAFETY MARK 140008-11

CE EAC TÜV Rheinland PS E

NECディスプレイソリューションズ株式会社
 NEC Display Solutions, Ltd.
 4-28, Mita 1-chome, Minato-ku, Tokyo, Japan

Notes:

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Copy of marking plate

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NEC MultiSync X464UNV LCD MONITOR
彩色顯示器 液晶显示器
모니터 (46인치 LCD 모니터)
(Model/型号/型號/모델명: X464UNV)

VOLTS 定格電圧 輸入電圧 輸入電壓: 100-240V~
AMPERES 定格電流 電流: 2.6-1.1A (2.6-1.1A)
FREQUENCY 定格周波數 工作頻率 工作頻率: 50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUES, NE PAS OUVRI
CE BOITIER, AUCUNE PIECE INTERNE NE PEUT-ETRE CHANGEE PAR L'UTILISATEUR.

ACHTUNG: ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER
STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN, ES SIND KEINE DURCH DEN
BENUTZER AUSWECHSELBAREN TEILE IM GERÄT VORHANDEN.

PRECAUCIÓN: PARA PREVENIR DESCARGA ELÉCTRICA, NO quite el
RECINTO, NINGUNAS PIEZAS DEL USUARIO SERVICABLE ADENTRO.

VAROITUS: LAITE ON LIITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA
VARUSTETTUUN PISTORASIAAN.

WARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTTAG.

ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT.

ADVARSEL: APPARATETS STIKKPROP SKAL TILSLUTTES EN STIKKONTAKT
MED JORD, SOM GIVER FORBINDELSE TIL STIKKPROPPENS JORD.

△注意: 請勿打開后蓋, 小心高壓電擊, 機內並無用戶配件。
△注意: 請勿打開後蓋, 小心高壓電擊, 機內並無用戶配件。
△警告: 使用過度恐傷害視力。

CAN ICES-3(A) / NMB-3(A) HDMI

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講ずるよう要求されることがあります。 VCCI-A

警告使用者: 此為A類資訊技術設備, 於居住環境中使用時,
可能會造成射頻騷擾。在此種情況下, 使用者會被要求採取某些適當的對策。

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있으므로 제품의 커버를 열지 마십시오.
인증 서비스 센터 전화 번호: 080-022-1155 (호성ITX주식회사)

* 본 라벨과 전화번호는 국내 규정 내에서 적절한 목적으론만
사용되어야 합니다.

MADE IN CHINA 中国制造 中国製造
Manufacturing factory: TPV Electronics(Fujian)Co., Ltd.
Applicant: Top Victory Electronics(Fujian)Co., Ltd.
生産廠: 福建捷聯電子有限公司
生产厂: 福建捷聯電子有限公司
生产地址: 福建省福清市融侨经济技术开发区
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NECディスプレイソリューションズ株式会社
NEC Display Solutions, Ltd.
日本国東京都港区三田一丁目4番28号
4-28, Mita 1-chome, Minato-ku, Tokyo, Japan

NEC MultiSync X554UN LCD MONITOR
(Model :X554UN)

VOLTS 定格電圧: 100-240V~, AMPERES 定格電流: 3.8-1.6A (3.8-1.6A)
FREQUENCY 定格周波數: 50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUES, NE PAS OUVRI
CE BOITIER, AUCUNE PIECE INTERNE NE PEUT-ETRE CHANGEE PAR L'UTILISATEUR.

ACHTUNG: ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER
STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN, ES SIND KEINE DURCH DEN
BENUTZER AUSWECHSELBAREN TEILE IM GERÄT VORHANDEN.

PRECAUCIÓN: PARA PREVENIR DESCARGA ELÉCTRICA, NO quite el
RECINTO, NINGUNAS PIEZAS DEL USUARIO SERVICABLE ADENTRO.

WARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTTAG.

ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT.

ADVARSEL: APPARATETS STIKKPROP SKAL TILSLUTTES EN STIKKONTAKT
MED JORD, SOM GIVER FORBINDELSE TIL STIKKPROPPENS JORD.

CAN ICES-3(A) / NMB-3(A)

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Self declaration - Conforming to IS 13252(Part 1): 2010, R-41005622

UL LISTED E135689 US I.T.E. 1K61 SAFETY MARK 131635-11 TÜV Rheinland 140008-11

MADE IN CHINA 中国制造 中国製造
Manufacturing factory: TPV Electronics(Fujian)Co., Ltd.
Applicant: Top Victory Electronics(Fujian)Co., Ltd.
生産廠: 福建捷聯電子有限公司
生产厂: 福建捷聯電子有限公司
生产地址: 福建省福清市融侨经济技术开发区
生产地址: 福建省福清市融侨经济技术开发区

NECディスプレイソリューションズ株式会社
NEC Display Solutions, Ltd.
4-28, Mita 1-chome, Minato-ku, Tokyo, Japan

NEC MultiSync X554UNS LCD MONITOR
液晶显示器
(Model/型号: X554UNS(C))

VOLTS 輸入電圧: 100-240V~, AMPERES 電流: 3.8-1.6A
FREQUENCY 工作頻率: 50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
NO USER-SERVICEABLE PARTS INSIDE.

△注意: 請勿打開后蓋, 小心高壓電擊, 機內並無用戶配件。

MADE IN CHINA 中国制造
生产厂: 福建捷聯電子有限公司
生产地址: 福建省福清市融侨经济技术开发区

NEC Display Solutions, Ltd.
日本国東京都港区三田一丁目4番28号

Notes:

The above labels are 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.

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.



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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.

NEC
MultiSync X554UNS
LCD MONITOR (Model :X554UNS)

VOLTS 定格電圧:100-240V~, AMPERES 定格電流:3.8-1.6A (3.8-1.6A)
FREQUENCY 定格周波数:50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUES, NE PAS OUVRIRE
CE BOITIER, AUCUNE PIECE INTERNE NE PEUT-ETRE CHANGEE PAR L'UTILISATEUR.

ACHTUNG: ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER
STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN. ES SIND KEINE DURCH DEN
BENUTZER AUSWECHSELBAREN TEILE IM GERÄT VORHANDEN.

PRECAUCIÓN: PARA PREVENIR DESCARGA ELÉCTRICA, NO quite EL
RECINTO. NINGUNAS PIEZAS DEL USUARIO SERVICABLE ADENTRO.

VARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTGÅG.

VAROITUS: LAITE ON LIITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA
VARUSTETTUUN PISTORASIAAN.

ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT.

ADVARSEL: APPARATETS STIKKPROP SKAL TILSLUTTES EN STIKKONTAKT
MED JORD, SOM GIVER FORBINDELSE TIL STIKPROPPENS JORD.

CAN ICES-3(A) / NMB-3(A)

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると
電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を
講ずるよう要求されることがあります。 VCCI-A

THIS DEVICE COMPLIES WITH PART15 OF THE FCC RULES. OPERATION IS SUBJECT
TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL
INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED,
INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

 E135689
US I.T.E.
LISTED 1K81

 SAFETY
MARK
140007-11

 TÜV Rheinland

HDMI

 PS
E

NECディスプレイソリューションズ株式会社
NEC Display Solutions, Ltd.
4-28, Mita 1-chome, Minato-ku, Tokyo, Japan

MADE IN CHINA

NEC MultiSync X554UNS LCD MONITOR 彩色顯示器 液晶显示器
모니터 (55인치 LCD 모니터)
(MODEL/型号/型號/모델명: X554UNS)

VOLTS 定格電圧 輸入電壓 :100-240V~,
AMPERES 定格電流 電流 :3.8-1.6A (3.8-1.6A)
FREQUENCY 定格周波数 工作頻率 工作頻數 :50/60Hz

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUES, NE PAS OUVRIRE
CE BOITIER, AUCUNE PIECE INTERNE NE PEUT-ETRE CHANGEE PAR L'UTILISATEUR.

ACHTUNG: ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER
STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN. ES SIND KEINE DURCH DEN
BENUTZER AUSWECHSELBAREN TEILE IM GERÄT VORHANDEN.

PRECAUCIÓN: PARA PREVENIR DESCARGA ELÉCTRICA, NO quite EL
RECINTO. NINGUNAS PIEZAS DEL USUARIO SERVICABLE ADENTRO.

VAROITUS: LAITE ON LIITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA
VARUSTETTUUN PISTORASIAAN.

ADVARSEL: APPARATEN SKALL ANSLUTAS TILL JORDAT UTGÅG.

ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT.

ADVARSEL: APPARATETS STIKKPROP SKAL TILSLUTTES EN STIKKONTAKT
MED JORD, SOM GIVER FORBINDELSE TIL STIKPROPPENS JORD.

注意: 请勿打开后盖, 小心高压电击, 机内并无用户配件。

注意: 請勿打開後蓋, 小心高壓電擊, 機內並無用戶配件。

警告: 使用過度恐傷視力。

CAN ICES-3(A) / NMB-3(A) **HDMI**

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると
電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を
講ずるよう要求されることがあります。 VCCI-A

警告使用者: 此為甲類資訊技術設備, 於居住環境中使用時,
可能會造成射頻騷擾。在此種情況下, 使用者會被要求採取某些適當的對策。

THIS DEVICE COMPLIES WITH PART15 OF THE FCC RULES. OPERATION IS SUBJECT
TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL
INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED,
INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

사용상 주의사항: 감전의 위험 및 제품의 손상이 발생할 수
있으므로 제품의 커버를 열지 마십시오.

인종 서비스 센터 전화 번호: 080-022-1155 (호성ITX주식회사)

*본 라벨과 전화번호는 국내 규격 내에서 적절한 목록으로만
사용되어야 합니다.

E135689
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E

NECディスプレイソリューションズ株式会社
NEC Display Solutions, Ltd.
4-28, Mita 1-chome, Minato-ku, Tokyo, Japan

MADE IN CHINA 中国制造 中国製造

Manufacturing factory: TPV Electronics (Fujian) Co., Ltd.
Applicant: Top Victory Electronics (Fujian) Co., Ltd.

生産廠: 福建捷聯電子有限公司
NEC Display Solutions, Ltd.
生産地址: 福建省福州市融侨经济技术开发区

Notes:

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Test item particulars :	
Equipment mobility :	☐ movable ☐ hand-held ☐ transportable ☒ stationary ☒ for building-in (when installed within a wooden box which provided by the manufacture) ☐ direct plug-in
Connection to the mains :	☒ pluggable equipment ☒ type A ☐ type B ☐ permanent connection ☒ detachable power supply cord ☐ non-detachable power supply cord ☐ not directly connected to the mains
Operating condition :	☒ continuous ☐ rated operating / resting time:
Access location :	☒ operator accessible ☐ restricted access location
Over voltage category (OVC) :	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other:
Mains supply tolerance (%) or absolute mains supply values :	±10
Tested for IT power systems :	☒ Yes ☐ No
IT testing, phase-phase voltage (V) :	230 for Norway
Class of equipment :	☒ Class I ☐ Class II ☐ Class III ☐ Not classified
Considered current rating of protective device as part of the building installation (A) :	16 (20 for North America)
Pollution degree (PD) :	☐ PD 1 ☒ PD 2 ☐ PD 3
IP protection class :	IP20
Altitude during operation (m) :	Up to 5000
Altitude of test laboratory (m) :	Less than 2000
Mass of equipment (kg) :	1) approx. 29.01kg (Unit with handle); 4 handles: 0.4kg; one single base : 0.6kg (Base A), 1.09 kg (Base B); 1.97kg (external speaker)(for all 55 inch models) 2) approx. 22.44kg (Unit with handle); 4 handles: 0.4kg; one single base : 0.62 kg (Base C); 1.97kg (external speaker)(for all 46 inch models)
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing :	
Date of receipt of test item.....:	2016-01-03
Date(s) of performance of tests.....:	2016-01-04 to 2016-01-30
General remarks:	

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

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

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IEC60950-1:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided : ☒ **Yes**
☐ **Not applicable**

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

Name and address of factory (ies) :

1. TPV Electronics (Fujian) Co., Ltd.
Shangzheng, Yuan Hong Road, Fuqing City, Fujian Province, P.R. China
2. TPV Display Technology (Wuhan) Co., Ltd.
Unique No. 11, Zhuankou Development, District of Economic Technological Development Zone, Wuhan City 430056, P.R. China
3. TPV Technology (Qingdao) Co., Ltd.
No.99 Huoju Road, High-tech Industrial Development Zone, Qingdao City, Shandong Province, P.R. China
4. L&T Display Technology (Fujian) Ltd.
Optoelectronic Park, Rongqiao Economic and Technological, Development Zone, Fuqing, Fujian 350301, P.R. China
5. Envision Industry of Electronic Products Ltd.
Rodovia Anhanguera S/N-KM 49, Tijuco Preto-Jundiá-SP-13.205-700, Brazil
6. TPV Display Technology (Beihai) Co., Ltd.
China Electronic Beihai Industry Park, Northeast of the Crossing Between Taiwan Road and Jilin Road, Beihai City, Guangxi, P.R. China
7. TPV Display Technology (China) Co., Ltd.
No. 106 Jinghai 3 Rd., BDA, Beijing City 100176 P.R. China
8. Hefei Huntkey Display Technology Co., Ltd.
South Jinxiu Road, East Qingtan Road, Economic And Technological Development Zone, Hefei, Anhui 230601, P.R. China
9. Trend Smart CE Mexico S de RL de CV
Avenida Sor Juana Ines de la Cruz de 19602 Nueva Tijuana, 22435 Tijuana Baja California, MEXICO
10. TPV Electronics (Fujian) Co., Ltd.
Optoelectronic Park, Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, 350301 P.R. China
11. Envision Industry of Electronic Products Ltd.
Av Torquato Tapajós 7503, Galpão : II Bloco: B-Condomínio de Galpões-Tarumã-Manaus, AM, Brazil
12. Envision Indústria de Produtos Eletrônicos Ltda.
Av. Torquato Tapajós, 2236, Flores - CEP 69058-830 - Manaus/AM, Brazil

General product information:

The Equipment models as described on cover page are similar to each other except for panel size and enclosure and minor ventilation opening numbers (single circle opening dimensions are identical to each other, for detail refer to appended table 4.6.1, 4.6.2), other differences see photo documentation.

This equipment consists of the following critical constructions:

- LCD panel (LED backlight type)
- LED driver board
- Building-in type non-approved switching power supply board
- Main board (External Speaker terminal, Audio out x 1, USB port x 1, LAN port x 2, Audio in x 2, RS-232C x 1, Remote in x 1, VGA in x 1, Display port in x 1, Display port out x 1, HDMI x 1, DVI in x 1, CN505 for dummy load of 5V/1A)
- Secondary key control board
- Two External speakers provided (optional)
- Secondary board for dummy load of 16V/4A

The three sources of L9901, L9903 are similar to each other except for type designation and manufacturer.

The three sources of L9902 are similar to each other except for type designation, manufacturer, and material sources.

The three sources of L9801, L9802 are similar to each other except for type designation, manufacturer, and material sources.

All sources of T9101 and T9102 are similar to each other except for type designation, manufacturer, and material sources.

All sources of T9301 are similar to each other except for type designation, manufacturer, and material sources.

There are two stand base type (Type A and Type B) used for all 55 inch models (see photo documentation for detail)

All 46 inch models are identical to each other except for type designations and rated input ratings.

All 55 inch models are identical to each other except for type designations.

The 46 inch models are similar to 55 inch models except for below:

- Panel size
- LED driver board
- Metal enclosure size
- Base stand type C
- Rated input rating

The suitable power supply cord will be provided and evaluated during national approval.

Additional Information

- The Label in Copy of marking plate is a draft of an artwork pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.
- The speaker jack has also been tested and found in compliance with the requirements of EN 50332-2. Measured output power of the speaker jack: Right side: 12.4mV; Left side: 12.5mV.
- Special national conditions for J60950-1(H27)
Per client's request, supplement the special national conditions for J60950-1(H27) and J3000 (H25) to present test report. Described as following items:
a) Power cord set for Japanese market is consider as Class 0I or Class I equipment.
b) Considered further Japanese technical requirements J60950-1(H27)
- Power cord set is replaced and AC plug adaptor is optional used for Japanese market. The equipment is regarded to be Class 0I or Class I equipment. Unit also complies with touch current requirements for Class 0I equipment: < 1.0 mA.
- The EUT is considered to complied with IP20 requirement according to IEC 60529.

Markings and Instructions

- Fuse Identification (See subclause 1.7.6): F901, F902 T8AH / 250V
-  (IEC 60417-5019) for the wiring terminal of protective earthing conductor (See subclause 1.7.7.1)
-  (IEC 60417-5017 for the wiring terminal of protective bonding conductor. (See subclause 1.7.7.1)
-  (IEC 60417-5007) for "ON" of the switch.(See subclause 1.7.8.3)
-  IEC 60417-5008) for "OFF" of the switch (See subclause 1.7.8.3)
-  (IEC 60417-5009) for the stand-by condition. (See subclause 1.7.8.3)

Abbreviations used in the report:

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

Indicate used abbreviations (if any)

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	GENERAL		P
1.5	Components		P
1.5.1	General	See below.	P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
1.5.2	Evaluation and testing of components	Components certified to IEC standards and/or their harmonized standards, are used within their ratings and are checked for correct application. Non-certified components are checked for correct application, used within their ratings, tested as part of the equipment and subjected to applicable tests of the component standard. Components, which no relevant IEC-Standard exists, are used within their ratings and are tested under the conditions occurring in the equipment.	P
1.5.3	Thermal controls		N/A
1.5.4	Transformers	Transformers complied with the relevant requirements.	P
1.5.5	Interconnecting cables	Interconnection cable provided with the equipment is carrying signals on energy level below 240 VA. Besides for the insulation materials, there are no other requirements for the interconnection cables.	P
1.5.6	Capacitors bridging insulation	Between lines: sub class X1 or X2 capacitors according to IEC 60384-14 with 21 days damp heat test. Between Line/Neutral and earth: subclass Y1 or Y2 capacitors according to IEC 60384-14.	P
1.5.7	Resistors bridging insulation	See below.	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	Resistors bridging functional insulation only.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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	(see appended table 1.5.1.)	P
1.5.9	Surge suppressors	See below.	P
1.5.9.1	General	See Annex Q.	P
1.5.9.2	Protection of VDRs	A fuse (F902) is connected in series with the VDR(RV9901) A fuse (F901) is connected in series with the VDR(RV9902)	P
1.5.9.3	Bridging of functional insulation by a VDR	One Gas Tube (SG9903) is provided in series with the VDR (RV9901) from N to earth and with VDR (RV9902) from L to earth to provide basic insulation which complied with both 5.2 and 2.10.3, 2.10.4, therefore, the VDR (RV9902, RV9901) are only bridging of functional insulation only.	P
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A

1.6	Power interface		P
1.6.1	AC power distribution systems	Considered	P
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment		N/A
1.6.4	Neutral conductor	Neutral is insulated from earth and body throughout the equipment and components rated accordingly.	P

1.7	Marking and instructions		P
1.7.1	Power rating and identification markings	The power rating marking is provided and is readily visible in operator access area.	P
1.7.1.1	Power rating marking	See copy of marking plate	P
	Multiple mains supply connections.....:		N/A
	Rated voltage(s) or voltage range(s) (V)	See copy of marking plate	P
	Symbol for nature of supply, for d.c. only		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Rated frequency or rated frequency range (Hz):	See copy of marking plate	P
	Rated current (mA or A)	See copy of marking plate	P
1.7.1.2	Identification markings		P
	Manufacturer's name or trade-mark or identification mark	See copy of marking plate	P
	Model identification or type reference	See copy of marking plate	P
	Symbol for Class II equipment only	The equipment is Class I equipment.	N/A
	Other markings and symbols	Other markings and symbols do not give rise to misunderstanding.	P
1.7.1.3	Use of graphical symbols	See General product information "Markings and Instructions"	P
1.7.2	Safety instructions and marking	See below:	P
1.7.2.1	General	Instructions are available.	P
1.7.2.2	Disconnect devices	Appliance inlet provided as disconnect device.	N/A
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT power distribution systems	For Norway compliance has to be evaluated during the national approval.	N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment	Full range voltage design, no necessary adjustment.	N/A
	Methods and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment	No such device.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)	See General product information - Markings and Instructions.	P
1.7.7	Wiring terminals	See below.	P
1.7.7.1	Protective earthing and bonding terminals	See General product information - Markings and Instructions.	P
1.7.7.2	Terminals for a.c. mains supply conductors	The equipment is provided with appliance inlet, which is for connection of a detachable type power supply cord.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.8	Controls and indicators		N/A
1.7.8.1	Identification, location and marking	No safety involved used.	N/A
1.7.8.2	Colours	No safety involved used.	N/A
1.7.8.3	Symbols according to IEC 60417	See General product information - Markings and Instructions.	P
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	The marking plate has no curling and is not able to be removed easily.	P
1.7.12	Removable parts	No marking place in removable parts.	P
1.7.13	Replaceable batteries		N/A
	Language(s)		—
1.7.14	Equipment for restricted access locations	The equipment is not intended to be used in restricted access locations.	N/A

2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas	See below.	P
2.1.1.1	Access to energized parts		P
	Test by inspection	No access with test finger to any parts with only basic insulation to hazardous voltage. The test pin cannot touch hazardous voltage through any seams within the appliance.	P
	Test with test finger (Figure 2A)	See above.	P
	Test with test pin (Figure 2B)	See above.	P
	Test with test probe (Figure 2C)	No TNV circuit.	N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V_{peak} or V_{rms}); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage circuit in operator access area.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.5	Energy hazards	See appended table 2.1.1.5.	P
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment	Voltage decay measurement was conducted with an oscilloscope having an input impedance of 100 MΩ in parallel with an input capacitance of 25 pF or less.	P
	Measured voltage (V); time-constant (s)	See appended table 2.1.1.7.	—
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 d.c. mains supply		N/A
2.1.1.9	Audio amplifiers	Complied with 2.1.1	P
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A

2.2	SELV circuits		P
2.2.1	General requirements	See below.	P
2.2.2	Voltages under normal conditions (V)	(see appended table 2.2)	P
2.2.3	Voltages under fault conditions (V)	(see appended table 2.2)	P
2.2.4	Connection of SELV circuits to other circuits	Complied with sub-clauses, 1.5.6, 2.4.2, 2.2.2	P

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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.4	Limited current circuits		P
2.4.1	General requirements	The limits of 2.4.2 were not exceeded under normal operating conditions.	P
2.4.2	Limit values	See below.	P
	Frequency (Hz)	See appended table 2.4.	—
	Measured current (mA).....	See appended table 2.4.	—
	Measured voltage (V)	See appended table 2.4.	—
	Measured circuit capacitance (nF or μ F)	See table 1.5.1 and 2.4.	—
2.4.3	Connection of limited current circuits to other circuits	The limits of 2.4.2 were not exceeded under normal operating conditions.	P
2.5	Limited power sources		P
	a) Inherently limited output	(see appended table 2.5)	P
	b) Impedance limited output		N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition	(see appended table 2.5)	P
	Use of integrated circuit (IC) current limiters		N/A
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA).....	(see appended table 2.5)	—
	Current rating of overcurrent protective device (A):		—
2.6	Provisions for earthing and bonding		P
2.6.1	Protective earthing	The relevant parts connected to the main protective earthing terminal reliably. Complied with 2.6.3. See General product information - Markings and Instructions	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.2	Functional earthing	Secondary functional earthing is separated to primary by double or reinforced insulation or by basic insulation and protective earthing. Green-and-yellow color combination was not used for functional earthing conductors.	P
	Use of symbol for functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors	See below.	P
2.6.3.1	General	See below.	P
2.6.3.2	Size of protective earthing conductors	No power cord provided.	N/A
	Rated current (A), cross-sectional area (mm ²), AWG		—
2.6.3.3	Size of protective bonding conductors	Evaluation by test. See sub-clause 2.6.3.4.	P
	Rated current (A), cross-sectional area (mm ²), AWG	See above.	—
	Protective current rating (A), cross-sectional area (mm ²), AWG	See above.	—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min)	(Refer to appended table 2.6.3.4).	P
2.6.3.5	Colour of insulation		N/A
2.6.4	Terminals	See below.	P
2.6.4.1	General	See below.	P
2.6.4.2	Protective earthing and bonding terminals	The earthing terminal in the appliance inlet is regarded as the main protective earthing terminal.	P
	Rated current (A), type, nominal thread diameter (mm)	Evaluation by test.	—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	Only protective bonding conductor used in this equipment.	P
2.6.5	Integrity of protective earthing	See below.	P
2.6.5.1	Interconnection of equipment	This unit has its own earthing connection. Any other units connected via the output shall be provided SELV only.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switch or overcurrent protective device in bonding conductor.	P
2.6.5.3	Disconnection of protective earth	Appliance inlet provided as disconnection device.	P
2.6.5.4	Parts that can be removed by an operator	Appliance inlet provided, the earth connection is made before and broken after the hazardous voltage. No other operator removable parts.	P
2.6.5.5	Parts removed during servicing	It is not necessary to disconnect the earth connection except for the removing of the earthed part itself.	P
2.6.5.6	Corrosion resistance	All safety earthing connections in compliance with Annex J.	P
2.6.5.7	Screws for protective bonding	Self-tapping and spaced thread screws are not used to provide protective bonding. The protective bonding screw is threaded into the metal part at least twice the pitch of the screw thread.	P
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

2.7	Overcurrent and earth fault protection in primary circuits		P
2.7.1	Basic requirements	Protection against overcurrents and short-circuits is provided as an integral part of the equipment. Protection against earth faults is provided as part of the building installation.	P
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7	Considered.	P
2.7.3	Short-circuit backup protection	The building installation is considered as providing short-circuit backup protection.	P
2.7.4	Number and location of protective devices :	The protective device is located adequately therefore able to interrupt the overcurrent flowing in any possible fault current path.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.7.5	Protection by several devices	Two fuses provided (one for L and the other for N) which were located near each other.	P
2.7.6	Warning to service personnel :	A non-reversible power plug used.	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		P
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic materials are not used. After the humidity treatment of 2.9.2, the insulation is then subjected to the relevant electric strength test of 5.2.2	P
2.9.2	Humidity conditioning	Tested for 120 hrs.	P
	Relative humidity (%), temperature (°C) :	95% R.H., 40°C	—
2.9.3	Grade of insulation	Basic, supplementary, double insulation, reinforced or functional insulation.	P
2.9.4	Separation from hazardous voltages	See below.	P
	Method(s) used :	Method 1.	—

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

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.1.1	Frequency	30 kHz	P
2.10.1.2	Pollution degrees	2	P
2.10.1.3	Reduced values for functional insulation	See 5.3.4	P
2.10.1.4	Intervening unconnected conductive parts	Complied.	P
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	See below	P
2.10.2.1	General	Considered.	P
2.10.2.2	RMS working voltage	See appended table 2.10.2	P
2.10.2.3	Peak working voltage	See appended table 2.10.2	P
2.10.3	Clearances	See below	P
2.10.3.1	General	Annex F is considered.	P
2.10.3.2	Mains transient voltages	See below.	P
	a) AC mains supply	2500 Vpk considered.	P
	b) Earthed d.c. mains supplies		N/A
	c) Unearthed d.c. mains supplies		N/A
	d) Battery operation		N/A
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.4	Clearances in secondary circuits	Refer to sub-clause 5.3.4	N/A
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply		N/A
2.10.3.7	Transients from d.c. mains supply		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems		N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network :		N/A
2.10.4	Creepage distances	See below.	P
2.10.4.1	General	Considered.	P
2.10.4.2	Material group and comparative tracking index	Material group IIIb assumed.	P
	CTI tests	See above.	—
2.10.4.3	Minimum creepage distances	(see appened table 2.10.3 and 2.10.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5	Solid insulation	Complied with 2.10.5.2 to 2.10.5.14 and 5.2	P
2.10.5.1	General	See below.	P
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation	Approved sources of optocoupler provide min. 0.4 mm distance through insulation for reinforced insulation. See appended table 1.5.1 for internal distance.	P
2.10.5.4	Semiconductor devices	See 2.10.5.3.	P
2.10.5.5.	Cemented joints	See appended table 1.5.1 for optocoupler distances.	P
2.10.5.6	Thin sheet material – General	Considered.	P
2.10.5.7	Separable thin sheet material	Reinforced insulation.	P
	Number of layers (pcs)	See appended table 5.2.	—
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	See below.	P
	Electric strength test	(see appended table 5.2)	—
2.10.5.11	Insulation in wound components	See 2.10.5.14	P
2.10.5.12	Wire in wound components		N/A
	Working voltage		N/A
	a) Basic insulation not under stress		N/A
	b) Basic, supplementary, reinforced insulation		N/A
	c) Compliance with Annex U		N/A
	Two wires in contact inside wound component; angle between 45° and 90°		N/A
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components	See below.	P
	Working voltage	See appended table 2.10.2.	P
	- Basic insulation not under stress		N/A
	- Supplementary, reinforced insulation	Complied 2.10.5.6.	P
2.10.6	Construction of printed boards		P
2.10.6.1	Uncoated printed boards		P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.6.2	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	(see appended table 2.10.3 and 2.10.4)	P
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A

3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1, routed away from primary uninsulated conducted parts and unless insulated for the highest voltage involved, from insulated primary circuit wiring. No internal wire for primary power distribution.	P
3.1.2	Protection against mechanical damage	The wireways including holes are smooth and free from sharp edges.	P
3.1.3	Securing of internal wiring	Internal wires are secured by soldering and quick connector or other mechanical fixing means so that a loosening of the terminal connection is unlikely.	P

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Clause	Requirement + Test	Result - Remark	Verdict
3.1.4	Insulation of conductors	The insulation of the individual conductors is suitable for the application and the working voltage. For the insulation material see 3.1.1.	P
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections	All current carrying connections made by metal to metal.	P
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors	All conductors are reliably secured by solder-pin or glued or other mechanical fixing means.	P
	10 N pull test	Complied.	P
3.1.10	Sleeving on wiring		N/A

3.2	Connection to a mains supply		P
3.2.1	Means of connection	See below.	P
3.2.1.1	Connection to an a.c. mains supply	Appliance inlet provided.	P
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	The appliance inlet complied with IEC 60320-1; the connector inserted without difficulty and not supporting the equipment on a flat surface.	P
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type		—
	Rated current (A), cross-sectional area (mm ²), AWG		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N)		—
	Longitudinal displacement (mm)		—

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Clause	Requirement + Test	Result - Remark	Verdict
3.2.7	Protection against mechanical damage	No parts under this unit likely to damage the power supply cords. Enclosure without sharp edges.	P
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g) :		—
	Radius of curvature of cord (mm) :		—
3.2.9	Supply wiring space		N/A
3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm ²) :		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm) :		—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A
3.4	Disconnection from the mains supply		P
3.4.1	General requirement	See below.	P
3.4.2	Disconnect devices	Appliance inlet is considered as disconnect device.	P
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized	When the power cord is removed from the inlet no remaining parts with hazardous voltage in the equipment.	P
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment	The disconnect device disconnects both poles simultaneously.	P
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

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Clause	Requirement + Test	Result - Remark	Verdict
3.4.10	Interconnected equipment	Interconnection to other equipment via secondary output connectors at SELV.	N/A
3.4.11	Multiple power sources	Single mains supply provided.	N/A

3.5	Interconnection of equipment		P
3.5.1	General requirements	See below.	P
3.5.2	Types of interconnection circuits	SELV, LCC	P
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment	See appended table 2.5.	P

4	PHYSICAL REQUIREMENTS		P
4.1	Stability		P
	Angle of 10°	The equipment does not fall over.	P
	Test force (N)	A force of 250N was applied to the Top, Side and Rear of the equipment for all models.	P

4.2	Mechanical strength		P
4.2.1	General	See below. After the tests, the equipment complies with the requirements of sub-clauses 2.1.1, 2.6.1 and 2.10.	P
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N	10 N applied to all components other than the parts serving as an enclosure.	P
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N	After subjected 250 N to the external enclosure, no energy or other hazards.	P
4.2.5	Impact test	No hazard as result from the steel ball impact test to the external enclosure.	P
	Fall test	See above.	P
	Swing test	See above.	P
4.2.6	Drop test; height (mm)		N/A
4.2.7	Stress relief test		N/A
4.2.8	Cathode ray tubes		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Picture tube separately certified :		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N) :	For unit an additional force of 92.94kg (higher value used upon client request) was applied to the unit with the VESA adaptor kit (for 55 inch models) For unit an additional force of 72.03kg (3 times the mass of the unit and the mass is 24.01kg without base, with external speaker, without handles) and was applied to the unit with the VESA adaptor kit. (for 46 inch models) The unit withstood the load test without damages or breaks from the VESA adaptor kit.	P
4.3	Design and construction		P
4.3.1	Edges and corners	The edges and corners are rounded and smoothed.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.2	Handles and manual controls; force (N) :	50N. Following test for customer's request. Four handles provided, each handles provide additional force 296.1N (total additional force 1184.3N) = 4 times the mass of the unit with base type A of 1.2kg and without external speaker. and each handles provide additional force 305.7N (total additional force 1222.65N) = 4 times the mass of the unit with base B of 2.18kg and without external speaker. No loosen and no hazard results. (for 55 inch models) Following test for customer's request. Four handles provided, each handles provide additional force 232.1N (total additional force 928.26N) = 4 times the mass of the unit with base of 1.24kg and without external speaker.(for 46 inch models); No loosen and no hazard results.	P
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress. No loosening of clearance or creepage impairing distances likely to occur.	P
4.3.5	Connection by plugs and sockets	No mismatch of connectors, plugs or socket possible.	P
4.3.6	Direct plug-in equipment		N/A
	Torque :		—
	Compliance with the relevant mains plug standard :		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries		N/A
	- Overcharging of a rechargeable battery		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease	Insulation in intended use not considered to be exposed to oil or grease.	N/A
4.3.10	Dust, powders, liquids and gases	Equipment in intended use not considered to be exposed to these.	N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids	No flammable liquids provided.	N/A
	Quantity of liquid (l)		N/A
	Flash point (°C)		N/A
4.3.13	Radiation	See below.	P
4.3.13.1	General	See below.	P
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg)		—
	Measured high-voltage (kV)		—
	Measured focus voltage (kV)		—
	CRT markings		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation		N/A
4.3.13.5	Lasers (including laser diodes) and LEDs	See below.	P
4.3.13.5.1	Lasers (including laser diodes)		N/A
	Laser class		—
4.3.13.5.2	Light emitting diodes (LEDs)	The following parts are considered complied without tests: Indicating lights. Optocouplers. For LED backlight, the luminance is far less than 10000 cd/m ² . With reference to sub clause 4.1 of IEC 62471:2006 no further test is necessary.	P
4.3.13.6	Other types		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4.4	Protection against hazardous moving parts		P
4.4.1	General	DC fan is protected by enclosure. Other motors are used in the certified HDD and all optional optical drives.	P
4.4.2	Protection in operator access areas	Moving parts are not accessible by test finger.	P
	Household and home/office document/media shredders		N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades	See below.	P
4.4.5.1	General	See below.	P
	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	For DC Fan, not located in an operator access area.	P
	Use of symbol or warning		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning		N/A

4.5	Thermal requirements		P
4.5.1	General	No exceeding temperature.	P
4.5.2	Temperature tests	See appended table 4.5.	P
	Normal load condition per Annex L	(See Annex L)	—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat	Phenolic material used without further test. Others refer to table 4.5.5.	P

4.6	Openings in enclosures		P
4.6.1	Top and side openings	See below.	P
	Dimensions (mm)	(see appended table 4.6.1 and 4.6.2)	—
4.6.2	Bottoms of fire enclosures	See below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Construction of the bottommm, dimensions (mm) .. :	(see appended table 4.6.1 and 4.6.2)	—
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) :		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks) :		—
4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame	See below.	P
	Method 1, selection and application of components wiring and materials	Materials with the required flammability classes are used.	P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	See below.	P
4.7.2.1	Parts requiring a fire enclosure	Following parts require a fire enclosure: ▪ Components in primary circuits ▪ Components in secondary circuits not supplied by limited power source ▪ Insulating wiring	P
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General	The PCBs have material of flammability class V-1 or better.	P
4.7.3.2	Materials for fire enclosures	See table 1.5.1	P
4.7.3.3	Materials for components and other parts outside fire enclosures	HB min.	P
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are flammability class V-2 or better.	P
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current		P
5.1.1	General	See appended table 5.1. See sub-clauses 5.1.2 to 5.1.6.	P
5.1.2	Configuration of equipment under test (EUT)	See below.	P
5.1.2.1	Single connection to an a.c. mains supply	The EUT has only one mains connection.	P
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit	Test circuit in Figure 5A used.	P
5.1.4	Application of measuring instrument	Measuring instruments as in annex D used.	P
5.1.5	Test procedure	The touch current was measured from mains to metal enclosure, plastic enclosure with metal foil, and output connectors.	P
5.1.6	Test measurements	See appended table 5.1.	P
	Supply voltage (V)	See appended table 5.1.	—
	Measured touch current (mA)	See appended table 5.1.	—
	Max. allowed touch current (mA)	See appended table 5.1.	—
	Measured protective conductor current (mA)		—
	Max. allowed protective conductor current (mA) ...		—
5.1.7	Equipment with touch current exceeding 3,5 mA	The touch current not exceeded 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

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Clause	Requirement + Test	Result - Remark	Verdict

	b) EUT whose telecommunication ports have no reference to protective earth		N/A
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5.2	Electric strength		P
5.2.1	General	See appended table 5.2.	P
5.2.2	Test procedure	Table 5B used.	P

5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	See appended table 5.3.	P
5.3.2	Motors		N/A
5.3.3	Transformers	With short-circuited and overloaded of the output of transformer, no high temperature of the transformer was recorded. The test results of short-circuited and overload. (see appended table 5.3 and Annex C)	P
5.3.4	Functional insulation	Functional insulation complied with the requirements c).	P
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE	See appended table.	P
5.3.7	Simulation of faults	Complied.	P
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	See appended table.	P
5.3.9.1	During the tests	Neither fire burns the equipment nor molten metal.	P
5.3.9.2	After the tests	Electric strength test made.	P

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)		—

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Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.2	Exclusions		N/A
6.2	Protection of equipment users from overvoltages on telecommunication networks		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A
6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. output current (A)		—
	Current limiting method		—
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N/A
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A
7.4.3	Impulse test		N/A
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples.....		—
	Wall thickness (mm)		—
A.1.2	Conditioning of samples; temperature (°C)		N/A
A.1.3	Mounting of samples		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D		—
A.1.5	Test procedure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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 5.3.2)		N/A
B.1	General requirements	Approved DC fan used.	N/A
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days)		—
	Electric strength test: test voltage (V)		—
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V)		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V)		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V)		—
C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		P
	Position	Refer to appended table 1.5.1	—
	Manufacturer	See above.	—
	Type	See above.	—
	Rated values	See above.	—
	Method of protection	Overcurrent protection by circuit design.	—
C.1	Overload test	(see appended table 5.3)	P
C.2	Insulation	(see appended table 5.2)	P
	Protection from displacement of windings	See appended table C.2.	P
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		P
D.1	Measuring instrument	Figure D.1 used	P
D.2	Alternative measuring instrument		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		P
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	Earthed d.c. mains supplies		N/A
G.2.3	Unearthed d.c. mains supplies		N/A
G.2.4	Battery operation		N/A
G.3	Determination of telecommunication network transient voltage (V)		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks		N/A
G.4.2	Transients from telecommunication networks		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	Determination of minimum clearances		N/A
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		P
	Metal(s) used	Complied.	—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N/A
K.1	Making and breaking capacity		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
K.2	Thermostat reliability; operating voltage (V)		N/A
K.3	Thermostat endurance test; operating voltage (V)		N/A
K.4	Temperature limiter endurance; operating voltage (V)		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A

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

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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
P	ANNEX P, NORMATIVE REFERENCES		—
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		P
	- Preferred climatic categories	See appended table 1.5.1.	P
	- Maximum continuous voltage	See appended table 1.5.1.	P
	- Combination pulse current	See appended table 1.5.1.	P
	Body of the VDR Test according to IEC60695-11-5		N/A
	Body of the VDR. Flammability class of material (min V-1)	Min. V-1	P
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
			—
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		N/A
			—
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		P
V.1	Introduction	Considered.	P
V.2	TN power distribution systems	Considered.	P
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus		N/A
Y.2	Mounting of test samples		N/A
Y.3	Carbon-arc light-exposure apparatus		N/A
Y.4	Xenon-arc light exposure apparatus		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		P
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—
CC	ANNEX CC, Evaluation of integrated circuit (IC) current limiters		N/A
CC.1	General		N/A
CC.2	Test program 1		N/A
CC.3	Test program 2		N/A
CC.4	Test program 3		N/A
CC.5	Compliance		N/A
DD	ANNEX DD, Requirements for the mounting means of rack-mounted equipment		N/A
DD.1	General		N/A
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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
EE	ANNEX EE, Household and home/office document/media shredders		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols.....:		N/A
	Information of user instructions, maintenance and/or servicing instructions.....:		N/A
EE.3	Inadvertent reactivation test.....:		N/A
EE.4	Disconnection of power to hazardous moving parts:		N/A
	Use of markings or symbols.....:		N/A
EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A)		N/A
	Test with wedge probe (Figure EE1 and EE2)		N/A

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
1.5.1	TABLE: List of critical components				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹
For all 46 inch models only					
LCD Panel	SAMSUNG DISPLAY CO LTD	LTx460rz (x, r = A~Z Z=0~9, A~Z)	46.0" TFT type, with LED backlight	IEC 60950- 1:2005; EN 60950- 1:2006+A11:20 09	TÜV SUD, UL
Metal enclosure (Bottom)	Interchangeable	Interchangeable	Metal, thickness: 0.81 mm min.	--	--
Metal enclosure	Interchangeable	Interchangeable	Metal, thickness: 0.45 mm min.	--	--
Stand base C (2 sets) (Optional)	Interchangeable	Interchangeable	HB or batter and metal, total weight: 1.24 kg; one set weight: 0.62 kg	UL 94	UL
For all 55 inch models only					
LCD Panel	SAMSUNG DISPLAY CO LTD	LTx550rz (x, r = A~Z Z=0~9, A~Z)	55.0" TFT type, with LED backlight	IEC 60950- 1:2005; EN 60950- 1:2006+A11:20 09	TÜV SUD, UL
Metal enclosure	Interchangeable	Interchangeable	Metal, thickness: 0.81 mm min.	--	--
Stand base A (2 sets) (Optional)	Interchangeable	Interchangeable	HB or batter and metal, total weight: 1.2 kg; one set weight: 0.6 kg	UL 94	UL
Stand base B (2 sets) (Optional)	Interchangeable	Interchangeable	HB or batter and metal, total weight: 2.18kg; one set weight: 1.09 kg	UL 94	UL
For all models					
DC Fan	Sunonwealth Electric Machine Industry Co., Ltd.	MB60101V1	12Vdc, 16.0 CFM	IEC 60950- 1:2005+A1; EN 60950- 1:2006+A11+A1 UL507	TÜV, UL
DC Fan	Sunonwealth Electric Machine	EE80151S3	12Vdc, 30.0 CFM	IEC 60950- 1:2005+A1; EN	TÜV, UL

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
	Industry Co., Ltd.			60950-1:2006+A11+A1 UL507	
P.C.B	Interchangeable	Interchangeable	V-1 or better Min. 105°C	UL 796	UL
External speaker (two provided) (Optional)	Interchangeable	Interchangeable	Each rated 8 ohm max., Max. 40W	--	--
Insulation Mylar sheet (between rear enclosure and power component side)	CHENGDU KANGLONGXIN PLASTICS CO LTD	FRPC-1860B, FRPC-1870B	V-0 or VTM-0, dimension 235.6mm by 151.3mm, min.0.4mm thickness	UL	UL
	SUZHOU OMA Y OPTICAL MATERIAL CO LTD	SE42B, SE42B-F	V-0, dimension 235.6mm by 151.3mm, min.0.4mm thickness	UL	UL
	SICHUAN DONGFANG INSULATING MATERIAL CO LTD	DFR117ECOB	V-0 or VTM-0, dimension 235.6mm by 151.3mm, min.0.4mm thickness	UL	UL
-Adhesive	3M CHINA CO LTD	55236@\$	80 °C	--	--
	TESA SE	68646	80 °C	--	--
	Symbio Inc	DS50-A	100 °C	--	--
	NITTO DENKO CORP	GA606	80 °C	--	--
Battery for remote controller used (Optional)	Interchangeable	Interchangeable	1.5Vdc, Two AA or two AAA consumer type batteries provide.	--	--
AC inlet	Solteam	ST-01	10A, 250Vac; 15A, 250Vac	EN/IEC 60320-1, ANSI/UL498	UL, VDE
	Zhang Jia Gang-Hua Jie	SA-4S	10A, 250Vac; 15A, 250Vac	EN/IEC 60320-1, ANSI/UL498	UL, VDE
	Rong Feng	SS-120, SS-7B	10A, 250Vac; 15A, 250Vac	EN/IEC 60320-1, ANSI/UL498	UL, VDE
	Shenzhen Delikang /	CDJ-3, CDJ-3-1	10A, 250Vac;	EN/IEC 60320-1, ANSI/UL498	VDE, UL

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
	Douling				
	Inalways	0707-1, 0711-2	10/15A, 250Vac;	EN/IEC 60320-1, ANSI/UL498	UL, VDE
	Inalways	0714	10A, 250Vac	IEC/EN 60320-1, ANSI/UL 498	TÜV, UL
	TECX	TU-301 series	10A, 250Vac; 15A, 250Vac	EN/IEC 60320-1, ANSI/UL498	UL, VDE
	Yueqing Hongchang	DB-14	10A/250Vac; 15A, 250Vac	EN/IEC 60320-1, ANSI/UL498	UL, VDE
	Solteam	SC04	10A/250Vac; UL:10A / 250Vac, 12A / 250Vac	EN/IEC 60320-1, ANSI/UL498	UL, VDE
	Zhang Jia Gang-Hua Jie	SA-4D	10A/250Vac; 15A, 250Vac	EN/IEC 60320-1, ANSI/UL498	UL, TUV
	Interchangeable	Interchangeable	15A max., 250Vac	EN/IEC 60320-1, ANSI/UL498	UL, VDE, TUV, ENEC
Power Switch	CHILY	3024 series	16(4)A, 250Vac 15A/250Vac	IEC/EN 61058-1, ANSI/UL 1054	VDE, UL
	Rong Feng	RF-1003	10A, 250Vac	IEC/EN 61058-1, ANSI/UL 1054	VDE, UL
	Solteam Electronics Co Ltd	MR-21 series	10A, 250Vac	IEC/EN 61058-1, ANSI/UL 1054	ENEC, UL
	Solteam Electronics Co Ltd	MR-21	10A, 250Vac	IEC/EN 61058-1, ANSI/UL 1054	VDE, UL
	Solteam Electronics Co Ltd	MR-21S	ENEC: 6A,250V UL: 10A,125/250Vac	IEC/EN 61058-1, ANSI/UL 1054	ENEC, UL
	Solteam Electronics Co Ltd	MR-22 series	ENEC: 12(4)A,250V UL: 12A,125/250Vac 8A,125/250Vac	IEC/EN 61058-1, ANSI/UL 1054	ENEC, UL
	Solteam Electronics Co Ltd	OR-L, OR-P	6A, 250Vac, 10A, 125Vac	IEC/EN 61058-1, ANSI/UL 1054	ENEC, UL
	Zhangjiagang	PS8-338	8A, 250Vac;	IEC/EN 61058-	TUV, UL

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
	Huajie		12(4), 250Vac	1, ANSI/UL 1054	
	CHILY	3024	16(8)A, 250Vac 8A, 250Vac 5A, 125Vac	IEC/EN 61058-1, ANSI/UL 1054	ENEC, UL
	Interchangeable	Interchangeable	16(8A) max., 250Vac	IEC/EN 61058-1, ANSI/UL 1054	ENEC, UL, VDE, TUV
For Switching Power supply board					
Primary Connectors (CN901)	Pontronics	3962 series	7 A, 250 Vac	IEC/EN 61984, UL1977	TÜV , UL
	Jowle	A3963 series	7 A, 250 Vac	IEC/EN 61984 , UL1977	TÜV ,UL
	J.S.T	VH series	7 A, 250 Vac	IEC/EN 61984, UL1977	TÜV ,UL
	J.S.T	VT series	7 A, 250 Vac	IEC/EN 61984, UL1977	TÜV ,UL
	Xinya	TÜV: M3962 series UL: 3962 series	TÜV: 6 A, 250 Vac UL: 7 A, 250 Vac	IEC/EN 61984 UL 1977	TÜV NORD UL
	Xinya	W7913 series	7 A, 250 Vac	IEC/EN 61984, UL1977	TÜV ,UL
	Interchangeable	Interchangeable	7 A max., 250 Vac	IEC/EN 61984, UL1977	TÜV ,UL
Fuse (F901, F902)	Cooper Bussmann LLC	S505-xxx-R, S505-V-xxx-R	T8A, 250 Vac,	IEC/EN 60127-1, IEC/EN 60127-2 ANSI/UL 248-1, ANSI/ UL 248-14	VDE, UL
	Littelfuse Inc	215-Series	T8A, 250 Vac,	IEC/EN 60127-1, IEC/EN 60127-2 ANSI/UL 248-1, ANSI/ UL 248-14	VDE, UL
	Conquer	UDA, UDA-A+	T8A, 250Vac	IEC/EN 60127-1, IEC/EN 60127-2 ANSI/UL 248-1, ANSI/ UL 248-14	VDE, UL
	Walter Electronic Co., Ltd.	TSD	T8A, 250Vac	IEC/EN 60127-1, IEC/EN 60127-2 ANSI/UL 248-1,	VDE, UL

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
				ANSI/ UL 248-14	
Varistor (RV9901, RV9902)	Thinking	TVR14681	Rated 420 Vac, 560Vdc, 40/85/56, 6KV/3KA, pluse test passed V-0 coating	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd	VDE, UL
	Panasonic	V14681U	Rated 420 Vac, 560Vdc, 40/85/56, 6KV/3KA, pluse test passed V-0 coating	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd	VDE, UL, CQC
	EPCOS	SIOV-S14KV681 SIOV-SNF14K420	Rated 420 Vac, 560Vdc, 40/85/56, 6KV/3KA, pluse test passed V-0 coating	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd	VDE, UL
	Panasonic	ERZV14681U	Rated 420 Vac, 560Vdc, 40/85/56, 6KV/3KA, pluse test passed V-0 coating	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd	VDE, UL, CQC
Relay (SW9901)	Panasonic	LKP1aF-12V	10A ,250Vac	EN/IEC 61810, UL 508	TÜV, Semko, UL
	TYCO	SDT-S-112DMR	10A ,250Vac	EN/IEC 61810, UL 508	TÜV Semko, UL
	HONGFA	HF162F	VDE: 8A/250Vac; UL: 8A/277Vac, 10A/125Vac	EN/IEC 61810, UL 508	TÜV , UL
PWM IC (U9301)	Interchangeable	Interchangeable	Min. 700V	--	--
Y- Capacitors (C9901, C9902, C9904, C9905, C9324, C9323) (Y1 or Y2 type) (Optional)	Walsin	AC, AH	Max. 4700 pF, min. 250 Vac, min. 85°C	IEC / EN 60384-14: 2005, UL 1414	VDE, FI, UL
	TDK	CS, CD	Max. 4700 pF, min. 250 Vac, min. 85°C	IEC / EN 60384-14: 2005, UL 1414	VDE, FI, UL
	Murata	KH, KX	Max. 4700 pF, min. 250 Vac, min. 85°C	IEC / EN 60384-14: 2005, UL 1414	VDE, FI, UL

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
	JYA-NAY	JN, JY	Max. 4700 pF, min. 250 Vac, min. 85°C	IEC / EN 60384-14: 2005, UL 1414	VDE, UL
	YINAN DON'S ELECTRONIC COMPONENT CO.,LTD	CT81	Max. 4700 pF, min. 250 Vac, min. 85°C	IEC / EN 60384-14: 2005, UL 1414	VDE, UL
	Kunshan Wansheng	CT7	Max. 4700pF, min. 250Vac, min. 85°C	EN/IEC 60384-14: 2005	VDE, UL
	SUCCESS	SE	Max. 4700pF, min. 250Vac	EN/IEC 60384-14: 2005	VDE, UL
	Interchangeable	Interchangeable	Max. 4700pF, min. 250Vac, min. 85°C	EN/IEC 60384-14: 2005	VDE, UL
Y - Capacitor (C9322) (Y1 or Y2 type) (Optional)	Walsin	AC, AH	Max. 4700 pF, min. 250 Vac, min. 85°C	IEC / EN 60384-14: 2005, UL 1414	VDE, FI, UL
	TDK	CS, CD	Max. 4700 pF, min. 250 Vac, min. 85°C	IEC / EN 60384-14: 2005, UL 1414	VDE, FI, UL
	Murata	KH, KX	Max. 4700 pF, min. 250 Vac, min. 85°C	IEC / EN 60384-14: 2005, UL 1414	VDE, UL
	JYA-NAY	JN, JY	Max. 4700 pF, min. 250 Vac, min. 85°C	IEC / EN 60384-14: 2005, UL 1414	VDE, UL
	YINAN DON'S ELECTRONIC COMPONENT CO.,LTD	CT81	Max. 4700 pF, min. 250 Vac, min. 85°C	IEC / EN 60384-14: 2005, UL 1414	VDE, UL
	Kunshan Wansheng	CT7	Max. 4700pF, min. 250Vac	EN/IEC 60384-14: 2005	VDE, UL
	SUCCESS	SE	Max. 4700pF, min. 250Vac	EN/IEC 60384-14: 2005	VDE, UL
	Interchangeable	Interchangeable	Max. 4700pF, min. 250Vac, min. 85°C	EN/IEC 60384-14: 2005	VDE, UL
X- Capacitor (C9903, C9906) (X1 or X2 type) (Optional)	Ultra Tech Xiphi Enterprise Co., Ltd.	HQX	Max. 0.47 μ F, min. 250 Vac, min. 100°C	IEC / EN 60384-14: 2005, UL 1414	VDE, FI, UL
	Hua Jung Components Co., Ltd.	MKP	Max. 0.47 μ F, min. 250 Vac, min. 100°C	IEC / EN 60384-14: 2005, UL 1414	VDE, FI, UL

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
	Euoptronic (Taiwan) Industrial Corp.	MPX	Max. 0.47 μ F, min. 250 Vac, min. 100 °C	IEC / EN 60384-14: 2005, UL 1414	VDE, FI, UL
	Liow Gu Electronics Industry Co., Ltd.	GS-L	Max. 0.47 μ F, min. 250 Vac, min. 100 °C	IEC / EN 60384-14: 2005, UL 1414	VDE, FI, UL
	Kemet	R.46	Max. 0.47 μ F, min. 250 Vac, min. 100 °C	IEC / EN 60384-14: 2005, UL 1414	VDE, UL
	Epcos Electronic Components S A	B3292#	Max. 0.47 μ F, min. 250 Vac, min. 100 °C	IEC / EN 60384-14: 2005, UL 1414	VDE, UL
	NANJING TENGGEN RONG GUANG DA	MKP	Max. 0.47 μ F, min. 250 Vac, min. 100 °C	IEC / EN 60384-14: 2005, UL 1414	VDE, UL
	Interchangeable	Interchangeable	Max. 0.47 μ F, min. 250 Vac, min. 100 °C	IEC / EN 60384-14: 2005, UL 1414	VDE, UL
Line Choke (L9901, L9903) (Optional)	LI TAI	373G0174305L	105 °C	--	--
	CHANNELON	373G0174305H	105 °C	--	--
	TPV	S73G0174305V	105 °C	--	--
Line Choke (L9902) (Optional)	CHANNELON	73G174-517-H	105 °C	--	--
	LI TAI	73G174-517-L	105 °C	--	--
	TPV	73G174-517-V	105 °C	--	--
Line Chokes (L9801, L9802) (Optional)	LI TAI	373G0174524L	105 °C	--	--
	CHANNELON	373G0174524H	105 °C	--	--
	TPV	S73G0174524V	105 °C	--	--
Bridging Diode (BD901, BD902)	Interchangeable	Interchangeable	Min. 15A, min. 600Vac	--	--
Ripple Capacitor (C9814, C9815)	Interchangeable	Interchangeable	150 μ F, min. 450 V, min. 105 °C	--	--
Transistors (Q9803, Q9806)	Interchangeable	Interchangeable	Min. 600 V, min. 15 A	--	--
Transistors (Q9101,	Interchangeable	Interchangeable	Min. 600 V, min.	--	--

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Q9102)			18 A		
Thermistor (TH9901) (Optional)	Interchangeable	Interchangeable	Min. 10 Ω , min. 5 A at 25 °C	--	--
Bleeder Resistors (R9901, R9902)	Interchangeable	SMD type	390 K ohm, 1/4W (located after fuse, two provided)	--	--
Discharge IC (U9901)	Power Integrations	CAP014DG	825V min.	IEC 60950-1:2005+A1	CB by Nemko (NO77404)
Transformer (T9101, T9102)	LITAI	380GL52P507L	Class 130 material (B)	Applicable parts of IEC 60950-1 and according to IEC 60085	Accepted by TÜV Rheinland
-Bobbin	SUMITOMO	PM-9820	V-0, phenolic, 150 °C	UL 94	UL
-Insulation tape	Symbio	35660Y	130 °C	UL 510	UL
	Jingjiang Yahua Pressure Sensitive Co Ltd	CT	130 °C	UL 510	UL
Transformer (T9101, T9102) (Alternate)	TPV	S80GL52P507V	Class 130 material (B)	Applicable parts of IEC 60950-1 and according to IEC 60085	Accepted by TÜV Rheinland
-Bobbin	SUMITOMO	PM-9820	V-0, phenolic, 150 °C	UL 94	UL
-Insulation tape	Symbio	35660Y	130 °C	UL 510	UL
	Jingjiang Yahua Pressure Sensitive Co Ltd	CT	130 °C	UL 510	UL
Transformer (T9101, T9102) (Alternate)	YUVA	380GL52P507N	Class 130 material (B)	Applicable parts of IEC 60950-1 and according to IEC 60085	Accepted by TÜV Rheinland
-Bobbin	SUMITOMO	PM-9820	V-0, phenolic, 150 °C	UL 94	UL
-Insulation tape	Symbio	35660Y	130 °C	UL 510	UL
	Jingjiang Yahua Pressure	CT	130 °C	UL 510	UL

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
	Sensitive Co Ltd				
Transformer (T9301)	YUVA	380GL32P531N	Class 130 material (B)	Applicable parts of IEC 60950-1 and according to IEC 60085	Accepted by TÜV Rheinland
-Bobbin	SUMITOMO	PM-9820	V-0, phenolic, 150 °C	UL 94	UL
-Insulation tape	Symbio	35660Y, 35661	130 °C	UL 510	UL
	Jingjiang Yahua Pressure Sensitive Co Ltd	CT	130 °C	UL 510	UL
	3M	44	130 °C	UL 510	UL
Transformer (T9301) (Alternate)	LI TAI	380GL32P531L	Class 130 material (B)	Applicable parts of IEC 60950-1 and according to IEC 60085	Accepted by TÜV Rheinland
-Bobbin	SUMITOMO	PM-9820	V-0, phenolic, 150 °C	UL 94	UL
-Insulation tape	SYMBIO	35661, 35660Y	130 °C	UL 510	UL
	3M	44	130 °C	UL 510	UL
	Jingjiang Yahua Pressure Sensitive Co Ltd	CT	130 °C	UL 510	UL
Transformer (T9301) (Alternate)	TPV	S80GL32P531V	Class 130 material (B)	Applicable parts of IEC 60950-1 and according to IEC 60085	Accepted by TÜV Rheinland
-Bobbin	SUMITOMO	PM-9820	V-0, phenolic, 150 °C	UL 94	UL
-Insulation tape	Jingjiang Yahua Pressure Sensitive Co Ltd	CT	130 °C	UL 510	UL
	Jingjiang Yahua Pressure Sensitive Co Ltd	WF	130 °C	UL 510	UL
	SYMBIO	35660Y, 35661	130 °C	UL 510	UL
Optocouplers (U9302, U9304, U9102)	Sharp	PC123	Di more than 0.4mm, int = thermal cycling test, ext. more than 8.0mm, 5000 Vac,	DIN EN 60747-5-2:2003 IEC/EN 60950-1 UL 1577	VDE, UL, Semko, Nemko, Fimko

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
			100 °C		
	Vishay Semiconductor	TCET1103	Di more than 0.5mm, int. cr more than 6.0mm, ext. cr more than 7.7mm, 3000Vac, 100 °C	DIN EN 60747-5-2:2003 IEC/EN 60950-1 UL 1577	VDE, UL Semko, Fimko
	Everlight Electronics Co., Ltd.	EL817, EL817M UL : EL8X7 (X=1 or 2)	Di more than 0.5mm, int. cr = thermal cycling test, ext. cr more than 7.7mm, 3000Vac, 100 °C	DIN EN 60747-5-2:2003 IEC/EN 60950-1 UL 1577	VDE,UL, Nemko, Semko, Fimko
	TOSHIBA	TLP781F , TLP781	Di more than 0.5mm, int. cr =thermal cycling test, ext. cr more than 8.0mm, 4800 Vac, 100 °C	DIN EN 60747-5-2:2003 IEC/EN 60950-1 UL 1577	VDE,UL, Semko, Fimko
	TOSHIBA	TLP421F	Di more than 0.4mm, int.cr=thermal cycling test, ext. cr more than 8.0mm, 5000 Vac, 100 °C	DIN EN 60747-5-2:2003 IEC/EN 60950-1 UL 1577	VDE,UL, Semko, Fimko
	RENESAS ELECTRONICS CORPORATION	PS2561-1, PS2561L-1, PS2561L1-1, PS2561L2-1. PS2561DL1-1	Di more than 0.4mm, int.cr=thermal cycling test, ext. cr more than 8.0mm, 5000Vac, 100 °C	DIN EN 60747-5-2:2003, IEC/EN 60950-1, UL 1577	VDE,UL, Nemko, Fimko
	Everlight Electronics Co., Ltd.	EL1013	Di more than 0.4mm, int.cr=thermal cycling test, ext. cr more than 8.1mm, 3000Vac, 100 °C	DIN EN 60747-5-2:2003, IEC/EN 60950-1, UL 1577	VDE,UL, Semko, Fimko, Nemko
	Lite-On	LTV817	Di more than 0.6mm, int.cr=thermal cycling test, ext. cr more than 8.0mm, 4800Vac,	DIN EN 60747-5-2:2003, IEC/EN 60950-1, UL 1577	VDE,UL, Semko, Fimko, Nemko

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
			100 °C		
Gas Tube (SG9903)	MITSUBISHI MATERIALS CORP	DA38-362MBy (y=0 to 9 or A to X), DA38-452MTy (y=0 to 9 or A to X)	250Vac, basic insulation	UL 1414 3 rd , IEC 60950-1	UL (E89615), TUV
Supplementary information: 1. Provided evidence ensures the agreed level of compliance. See OD-CB2039. 2. In Optocoupler technical data column, where "Di" means distance through insulation. 3. Refer to below table remark 1)					

1.5.1	TABLE: Opto Electronic Devices	P
Manufacturer : Sharp / Vishay / Everlight / TOSHIBA / TOSHIBA / RENESAS / Everlight/Lite-On		
Type..... : PC123 / TCET1103 / EL817, EL817M / TLP781F, TLP781 / TLP421F / PS2561-1, PS2561L-1, PS2561L1-1, PS2561L2-1, PS2561DL1-1 / EL1013/LTV817		
Separately tested..... : Tested by FIMKO		
Bridging insulation : Reinforced insulation.		
External creepage distance : >8.0 / >7.7 / >7.7 / >8.0 / >8.0 / >8.0 / >8.1/>8.0		
Internal creepage distance : ¹⁾ / >6.0 / ¹⁾ / ¹⁾ / ¹⁾ / ¹⁾		
Distance through insulation : >0.4 / >0.5 / >0.5 / >0.5 / >0.4 / >0.4 / >0.4/>0.6		
Tested under the following conditions : --		
Input..... : --		
Output..... : --		
Supplementary information:		
1) There is not any internal creepage distance. Test according to IEC 60950-1: 2001, cl. 2.10.8 (same as requirement in IEC 60950-1: 2005, cl. 2.10.9) has been carried out ten times for components at 100 °C / 25 °C / 0 °C / 25 °C. Humidity treatment of 48 hours as well as electric strength tests at 3000V / 1 minute and 5000V / 1 minute were carried out to the component after thermal cycling test.		

1.6.2	TABLE: Electrical data (in normal conditions)					P
U(V)/f(Hz)	I (A)	I _{rated} (A)	P (W)	Fuse #	I _{fuse} (A)	Condition/status
For 55 inch model						
Test performed with Internal speaker						

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
VGA mode						
90/50	3.36	--	298.9	F901,F902	3.36	Maximum normal load
90/60	3.36	--	298.9	F901,F902	3.36	Maximum normal load
100/50	3.00	3.8	296.8	F901,F902	3.00	Maximum normal load
100/60	3.00	3.8	296.8	F901,F902	3.00	Maximum normal load
240/50	1.27	1.6	290.9	F901,F902	1.27	Maximum normal load
240/60	1.27	1.6	290.9	F901,F902	1.27	Maximum normal load
264/50	1.16	--	290.8	F901,F902	1.16	Maximum normal load
264/60	1.16	--	290.8	F901,F902	1.16	Maximum normal load
DVI mode						
90/50	3.36	--	298.6	F901,F902	3.36	Maximum normal load
90/60	3.36	--	298.6	F901,F902	3.36	Maximum normal load
100/50	3.00	3.8	296.6	F901,F902	3.00	Maximum normal load
100/60	3.00	3.8	296.6	F901,F902	3.00	Maximum normal load
240/50	1.27	1.6	290.6	F901,F902	1.27	Maximum normal load
240/60	1.27	1.6	290.6	F901,F902	1.27	Maximum normal load
264/50	1.16	--	290.3	F901,F902	1.16	Maximum normal load
264/60	1.16	--	290.3	F901,F902	1.16	Maximum normal load
HDMI mode						
90/50	3.36	--	298.7	F901,F902	3.36	Maximum normal load
90/60	3.36	--	298.7	F901,F902	3.36	Maximum normal load
100/50	3.00	3.8	296.7	F901,F902	3.00	Maximum normal load
100/60	3.00	3.8	296.7	F901,F902	3.00	Maximum normal load
240/50	1.27	1.6	290.8	F901,F902	1.27	Maximum normal load
240/60	1.27	1.6	290.8	F901,F902	1.27	Maximum normal load
264/50	1.16	--	290.5	F901,F902	1.16	Maximum normal load
264/60	1.16	--	290.5	F901,F902	1.16	Maximum normal load
Display mode						
90/50	3.36	--	3.36	F901,F902	3.36	Maximum normal load
90/60	3.36	--	3.36	F901,F902	3.36	Maximum normal load
100/50	3.00	3.8	3.00	F901,F902	3.00	Maximum normal load
100/60	3.00	3.8	3.00	F901,F902	3.00	Maximum normal load
240/50	1.27	1.6	1.27	F901,F902	1.27	Maximum normal load
240/60	1.27	1.6	1.27	F901,F902	1.27	Maximum normal load

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
264/50	1.16	--	1.16	F901,F902	1.16	Maximum normal load
264/60	1.16	--	1.16	F901,F902	1.16	Maximum normal load
For 46 inch model						
Test performed with Internal speaker						
VGA mode						
90/50	3.05	--	273	F901, F902	3.05	Maximum normal load.
90/60	3.05	--	273	F901, F902	3.05	Maximum normal load.
100/50	2.75	3.0 /2.6	271	F901, F902	2.75	Maximum normal load.
100/60	2.75	3.0/2.6	271	F901, F902	2.75	Maximum normal load.
240/50	1.18	1.2/1.1	269	F901, F902	1.18	Maximum normal load.
240/60	1.18	1.2/1.1	269	F901, F902	1.18	Maximum normal load.
264/50	1.08	--	268	F901, F902	1.08	Maximum normal load.
264/60	1.08	--	268	F901, F902	1.08	Maximum normal load.
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)	
+5V	--	4.95	4.9	22.10	
+16V ¹⁾	--	16.3	23.1	311.85	
+24V ¹⁾	--	24.6	16.1	367.08	
supplementary information:					
Supply voltage: 240Vac, 60Hz					
1) User's not accessible					

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

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	

IEC 60950-1				
Clause	Requirement + Test	Result - Remark		Verdict
T9101 pin 8 to pin14,15	12.3	--	--	
T9101 pin 9 to pin14,15	24.6	--	--	
T9101 pin10,11 to pin14,15	11.6	--	--	
T9101 pin12,13 to pin 14,15	25.6	--	--	
T9102 pin 8 to pin 14,15	13.4	--	--	
T9102 pin 9 to pin 14,15	24.4	--	--	
T9102 pin 10,11 to pin 14,15	11.6	--	--	
T9102 pin 12,13 to pin 14,15	23.4	--	--	
T9301 pin 6,7 to pin 9,10	33.0	--	--	
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
supplementary information:				
Input Voltage is 240 Vac, 60 Hz				
Note: The LED driver circuit output is considered to be Hazardous Voltage.				

2.5	TABLE: limited power sources					P
Circuit output tested:						
Note: Measured Uoc (V) with all load circuits disconnected: See below						
Components	Sample No.	U oc (V)	I _{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
DVI connector (CN504) pin 1, 2, 9, 10, 17, 18, 23, 24 to earth according to table 2B						
Normal	1	3.29	0	8	0	100
DVI connector (CN504) Pin 6, 7 to earth according to table 2B						
Normal	1	4.54	0	8	0	100
DVI connector (CN504) Pin15 to earth according to table 2B						
Normal	1	1.40	0	8	0	100
DVI connector (CN504) all other pins to earth according to table 2B						
Normal	1	0	0	8	0	100
HDMI connector (CN503) pin 2 to earth according to table 2B						
Normal	1	1.98	0	8	0	100
HDMI connector (CN503) pin 3 to earth according to table 2B						
Normal	1	4.51	0	8	0	100
HDMI connector (CN503) pin 4 to earth according to table 2B						
Normal	1	2.43	0	8	0	100

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
HDMI connector (CN503) pin 6, 7, 9, 10, 14, 15, 17, 18 to earth according to table 2B						
Normal	1	3.29	0	8	0	100
HDMI connector (CN503) pin 12 to earth according to table 2B						
Normal	1	4.56	0	8	0	100
HDMI connector (CN503) all other pins to earth according to table 2B						
Normal	1	0	0	8	0	100
Display out connector (CN501) pin 1, 2, 4, 5, 12, 13, 15, 16 to earth according to table 2B						
Normal	1	1.21	0	8	0	100
Display out connector (CN501) pin19 to earth according to table 2B						
Normal	1	3.3	0.8	8	2.01	100
Single fault : U526 pin 5 to 1 short	1	0	0	8	0	100
Display out connector (CN501) all other pin to earth according to table 2B						
Normal	1	0	0	8	0	100
Display in connector (CN506) pin 1, 2, 4, 5, 12, 13, 15, 16 to earth according to table 2B						
Normal	1	1.21	0	8	0	100
Display in connector (CN506) pin 8, 18 to earth according to table 2B						
Normal	1	0.4	0	8	0	100
Display in connector (CN506) pin 19 to earth according to table 2B						
Normal	1	3.3	0.8	8	2.01	100
Single fault : U527 pin 5 to 1 short	1	0	0	8	0	100
Display in connector (CN506) all other pin to earth according to table 2B						
Normal	1	0	0	8	0	100
VGA connector (CN101) pin5 to earth according to table 2B						
Normal	1	1.6	0	8	0	100
VGA connector (CN101) pin9 to earth according to table 2B						
Normal	1	4.23	0	8	0	100
VGA connector (CN101) all other pin to earth according to table 2B						
Normal	1	0	0	8	0	100
RS232 (CN706) connector all pin to earth according to table 2B						
Normal	1	0	0	8	0	100
USB connector (CN713) pin1 to earth according to table 2B						
Normal	1	4.91	1.4	8	5.68	100

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
USB connector (CN713) pin1 to earth according to table 2B						
Single fault : U716 pin 1 to 5 short	1	0	0	8	0	100
Single fault : R7171 short	1	0	0	8	0	100
USB connector (CN713) all other pin to earth according to table 2B						
Normal	1	0	0	8	0	100
Audio in 1 connector (CN601) all pin to earth according to table 2B						
Normal	1	0	0	8	0	100
Audio in 2 connector (CN602) all pin to earth according to table 2B						
Normal	1	0	0	8	0	100
Audio out connector (CN605) all pin to earth according to table 2B						
Normal	1	0	0	8	0	100
Remote in (CN705) all pin to earth according to table 2B						
Normal	1	3.38	1.6	8	4.03	100
Single fault : U418 pin 1 to 6 short	1	0	0	8	0	100
Single fault : U418 pin 2 to 6 short	1	0	0	8	0	100
Single fault : U418 pin 1 to 2 short	1	0	0	8	0	100
Single fault : U419 pin 1 to 6 short	1	0	0	8	0	100
Single fault : U419 pin 2 to 6 short	1	0	0	8	0	100
Single fault : U419 pin 1 to 2 short	1	0	0	8	0	100
LAN connector 1 (CN710) all pin to earth according to table 2B						
Normal	1	0	0	8	0	100

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
LAN connector 2 (CN711) all pin to earth according to table 2B						
Normal	1	0	0	8	0	100
Speaker (CN604) pin 1 , 2 to earth according to table 2B						
Normal	1	0	0	8	0	100
Key control board input connector (CN702) pin 1 to earth according to table 2B						
Normal	1	3.0	0	8	0	100
Key control board input connector (CN702) pin 2, 3 to earth according to table 2B						
Normal	1	3.27	0	8	0	100
Key control board input connector (CN702) pin 5 to earth according to table 2B						
Normal	1	1.94	0	8	0	100
Key control board input connector (CN702) pin 6, 7 to earth according to table 2B						
Normal	1	3.16	0	8	0	100
Key control board input connector (CN702) pin 8 to earth according to table 2B						
Normal	1	3.4	1.5	8	3.96	100
Single fault , U729 pin 1 to 8 short (with TH702 additionally by passed)	1	0	0	8	0	100
Single fault , R7102 pin 1 to 8 short	1	3.38	1.5	8	3.92	100
Key control board input connector (CN702) pin 9 to earth according to table 2B						
Normal	1	3.15	0	8	0	100
Key control board input connector (CN702) pin 4, 10, 11 to earth according to table 2B						
Normal	1	0	0	8	0	100
supplementary information:						
1. Input condition: 240 Vac, 60 Hz						

2.10.2	Table: working voltage measurement				P
Location		RMS voltage (V)	Peak voltage (V)	Comments	
Supply Voltage: 100Vac/60Hz					
T9101 pin2-8		172	308		
T9101 pin2-9		163	290		
T9101 pin2-10,11		170	300		
T9101 pin2-12,13		162	288		

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
T9101 pin2-14,15	166	284	
T9101 pin6-8	171	312	
T9101 pin6-9	192	356	Highest Vp and Vrms of T9101
T9101 pin6-10,11	173	320	
T9101 pin6-12,13	187	348	
T9101 pin6-14,15	180	332	
T9102 pin2-8	163	296	
T9102 pin2-9	180	332	
T9102 pin2-10,11	162	296	
T9102 pin2-12,13	175	326	
T9102 pin6-8	215	380	
T9102 pin6-9	254	420	Highest Vp and Vrms of T9102
T9102 pin6-10,11	221	380	
T9102 pin6-12,13	247	412	
T9102 pin6-14,15	235	396	
T9301 pin1-6,7	352	412	
T9301 pin1-9,10	353	440	
T9301 pin3-6,7	394	540	Highest Vp and Vrms of T9301
T9301 pin3-9,10	389	536	
T9301 pin4-6,7	84	234	
T9301 pin4-9,10	50	132	
T9301 pin5-6,7	79	164	
T9301 pin5-9,10	80	168	
U9302 pin3-1	82	168	
U9302 pin3-2	82	168	
U9302 pin4-1	81	166	
U9302 pin4-2	81	166	
U9304 pin3-1	70	148	
U9304 pin3-2	70	148	
U9304 pin4-1	70	152	
U9304 pin4-2	69	150	
U9102 pin3-1	95	182	
U9102 pin3-2	94	182	
U9102 pin4-1	93	180	

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Clause	Requirement + Test	Result - Remark	Verdict
U9102 pin4-2	92	180	
C9322 primary-secondary	79	164	
Supply Voltage: 240Vac/60Hz			
T9101 pin2-8	163	296	
T9101 pin2-9	160	292	
T9101 pin2-10,11	167	312	
T9101 pin2-12,13	161	292	
T9101 pin2-14,15	163	292	
T9101 pin6-8	165	316	
T9101 pin6-9	188	360	Highest Vp and Vrms of T9101
T9101 pin6-10,11	168	324	
T9101 pin6-12,13	183	348	
T9101 pin6-14,15	175	336	
T9102 pin2-8	155	296	
T9102 pin2-9	177	340	
T9102 pin2-10,11	157	304	
T9102 pin2-12,13	173	332	
T9102 pin6-8	225	396	
T9102 pin6-9	266	432	Highest Vp and Vrms of T9102
T9102 pin6-10,11	234	404	
T9102 pin6-12,13	260	420	
T9102 pin6-14,15	245	404	
T9301 pin1-6,7	309	420	
T9301 pin1-9,10	309	448	
T9301 pin3-6,7	358	548	Highest Vp and Vrms of T9301
T9301 pin3-9,10	350	540	
T9301 pin4-6,7	183	436	
T9301 pin4-9,10	182	416	
T9301 pin5-6,7	177	360	
T9301 pin5-9,10	178	360	
U9302 pin3-1	180	360	
U9302 pin3-2	180	360	
U9302 pin4-1	179	360	
U9302 pin4-2	179	360	

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Clause	Requirement + Test	Result - Remark	Verdict
U9304 pin3-1	169	344	
U9304 pin3-2	168	344	
U9304 pin4-1	168	344	
U9304 pin4-2	167	344	
U9102 pin3-1	191	372	
U9102 pin3-2	191	372	
U9102 pin4-1	189	372	
U9102 pin4-2	188	368	
C9322 primary-secondary	177	360	
supplementary information:			

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm) ³	cl (mm)	Required cr (mm)	cr (mm)	
Functional:							
Line to Neutral before fuse	420	250	2.3 (1.5*1.48)	8.2	2.5	8.2	
Traces under fuse(F902)	420	250	2.3 (1.5*1.48)	5.3	2.5	5.3	
Traces under fuse(F901)	420	250	2.3 (1.5*1.48)	6.0	2.5	6.0	
Basic/supplementary:							
Primary to earthed trace	420	250	3.0 (2.0*1.48)	See below	3.0	See below	
Under SG9903				8.1		8.1	
Under C9901/C9904				7.6		7.6	
Under C9902				7.6		7.6	
Under C9905				7.6		7.6	
Under C9324				7.4		7.4	
Under C9323				7.6		7.6	
Primary to earthed components or metal chassis	420	250	3.0 (2.0*1.48)	See below	3.0	See below	
Between terminals of SG9903 (inside component glass enclosure)				3.3		3.3	

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Clause	Requirement + Test			Result - Remark		Verdict
Primary component solder point to metal chassis				6.4		6.4
FB9304 to metal chassis				10.0		10.0
Primary/Secondary to floating components	420	250	3.0 (2.0*1.48)	See below	3.0	See below
C9132 to T9101 core				8.0		8.0
HS3 to T9102 core				6.0		6.0
D9302 to T9301 core				5.0		5.0
Reinforced:						
Primary traces to secondary traces	420	250	6.0 (4.0*1.48)	See below	6.0	See below
Under C9322				7.4		7.4
Under U9304				8.0		8.0
Under U9302				8.0		8.0
Under U9102				7.8		7.8
Under T9301	548	394	6.6 (4.4*1.48)	9.3	7.9	9.3
Under T9101	360	192	6.0 (4.0*1.48)	11.0	6.0	11.0
Under T9102	432	266	6.3 (4.2*1.48)	11.0	6.3	11.0
Basic/supplementary:						
For 55 inch models						
Primary heatsink HS6 to metal chassis	420	250	2.3 (2.0*1.48)	8.0	2.5	28.4
Panel (HV) to operator accessible part	420	250	6.0 (4.0*1.48)	Over 10mm	6.0	Over 10mm
Primary conductor of power switch to user accessible area (evaluated for all sources of power switch)				More than 10		More than 10
Panel (HV) to operator accessible part	420	250	6.0 (4.0*1.48)	8.7	6.0	8.7
For 46 inch models						
Primary heatsink HS6 to metal chassis	420	250	2.3 (2.0*1.48)	8.0	2.5	28.4
Panel (HV) to operator accessible part	420	250	6.0 (4.0*1.48)	Over 10mm	6.0	Over 10mm

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

1. Functional insulation shorted, see 5.3.4 c).
2. Working voltages of primary circuits to secondary circuits/user accessible parts considered as 420 V pk and 250 V r.m.s. minimum (according to applicable rows of tables 2H and 2L).
3. The required clearances multiplied by 1.48 considering that EUT operates up to 5000m.
4. For clearance and creepage did not describe above are far larger than limit above.
5. All internal wires are located by mechanical fixings to keep distance.
6. There is one mylar sheet between Power supply board component side and metal chassis
7. The working voltage were measured under both Input = 100V and 240V, the Vp and Vrms value being recoded above were the highest among the two.

2.10.5	TABLE: Distance through insulation measurements					P
Distance through insulation (DTI) at/of:		U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Optocouplers (Reinforced insulation)		420	250	AC 3000	0.4	¹⁾
Supplementary information:						
1) See appended table 1.5.1 for the source details.						

4.3.8	TABLE: Batteries								N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available									
Is it possible to install the battery in a reverse polarity position?									
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition									
Max. current during fault condition									
Test results:								Verdict	
- Chemical leaks									
- Explosion of the battery									

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
- Emission of flame or expulsion of molten metal			
- Electric strength tests of equipment after completion of tests			
Supplementary information:			

4.3.8	TABLE: Batteries	N/A
Battery category..... : Manufacturer : Type / model..... : Voltage : Capacity..... : Tested and Certified by (incl. Ref. No.) : Circuit protection diagram:		

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

4.5	TABLE: Thermal requirements		P
	Supply voltage (V) :	See below	—
	Ambient T _{min} (°C) :	See below	—
	Ambient T _{max} (°C) :	See below	—
Maximum measured temperature T of part/at::		T (°C)	Allowed T _{max} (°C)
For 55 inch model			
Test voltage and orientation	90V/60Hz Vertical	90V/60Hz Horizotal	--
AC inlet	48.7	46.3	70
Switch body	48.5	46.8	95
CN901 body	52.4	48.1	70
PCB near TH9901	66.9	55.3	105
SW9901 body	63.2	54.0	85
C9906 body	71.1	63.1	85
L9901 coil	68.7	65.4	105

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Clause	Requirement + Test	Result - Remark	Verdict
L9902 coil	66.7	63.6	105
L9903 coil	62.2	59.4	105
L9801 coil	75.1	74.9	105
L9802 coil	76.5	76.4	105
PCB near BD901	63.1	60.8	105
C9814 body	53.5	64.6	105
U9302 body	67.6	67.3	100
U9102 body	55.2	76.9	100
C9322 body	63.1	63.5	85
T9301 coil	74.6	77.7	110
T9301 core	70.1	75.7	110
T9102 coil	73.3	85.2	110
T9102 core	70.3	77.7	110
T9101 core	70.2	82.7	110
T9101 coil	69.2	82.9	110
PCB near D9109	64.0	83.1	105
PCB near HS401(Main board)	72.2	57.6	105
PCB near U9 (converter board)	64.7	68.1	105
T1 coil (converter board)	68.4	67.1	105
T1 core (converter board)	64.8	63.0	105
Metal enclosure near T9102	45.5	49.9	70
Panel body	54.5	51.9	95
Tamb.	26.1	25.1	--
Tma.	40.0	40.0	--
Test voltage and orientation	264V/60Hz Horizontal	--	--
AC inlet	45.3	--	70
Swich body	45.3	--	95
CN901 body	45.3	--	70
PCB near TH9901	49.2	--	105
SW9901 body	49.1	--	85
C9906 body	47.7	--	85
L9901 coil	49.4	--	105
L9902 coil	50.6	--	105
L9903 coil	50.1	--	105

IEC 60950-1				
Clause	Requirement + Test		Result - Remark	Verdict
L9801 coil	62.7	--		105
L9802 coil	64.9	--		105
PCB near BD901	51.6	--		105
C9814 body	61.0	--		105
U9302 body	61.0	--		100
U9102 body	75.0	--		100
C9322 body	58.9	--		85
T9301 coil	72.7	--		110
T9301 core	67.5	--		110
T9102 coil	77.3	--		110
T9102 core	72.7	--		110
T9101 core	81.0	--		110
T9101 coil	76.8	--		110
PCB near D9109	81.2	--		105
PCB near HS401(Main board)	58.3	--		105
PCB near U9	68.3	--		105
T1 coil(Inverter board)	66.1	--		105
T1 core(Inverter board)	61.6	--		105
Metal enclosure near T9102	49.3	--		70
Panel body	51.6	--		95
Tamb.	25.7	--		--
Tma.	40.0	--		--
For 46 inch models				
Test voltage and oriantation	90/60 (horizontal)	90/60 (vertical)	264/60 (horizontal)	--
AC inlet	44.7	45.4	42.7	70
Switch body	43.7	45.2	42.2	95
CN901 body	46.6	51.3	43.7	70
PCB near TH9901	53.7	61.1	49.0	105
SW9901 body	64.8	67.2	63.0	85
C9906 body	55.3	57.5	46.9	85
L9901 coil	62.1	67.2	48.7	105
L9902 coil	60.1	63.3	48.7	105
L9903 coil	59.3	65.5	46.1	105
L9801 coil	76.4	76.4	67.8	105

IEC 60950-1							
Clause	Requirement + Test				Result - Remark		Verdict
L9802 coil		77.0	75.6	68.8			105
PCB near BD901		51.8	52.1	47.6			105
C9814 body		62.4	48.6	59.9			105
U9302 body		64.0	64.2	59.6			100
U9102 body		74.0	48.8	72.9			100
C9322 body		62.1	64.0	58.6			85
T9301 coil		78.8	76.7	76.3			110
T9301 core		77.6	75.1	75.3			110
T9102 coil		79.1	72.5	77.5			110
T9102 core		82.0	74.4	80.4			110
T9101 coil		82.5	69.0	80.7			110
T9101 core		81.6	64.4	80.2			110
PCB near D9109		80.5	63.8	79.6			105
PCB near HS401 (Main board)		59.8	44.2	60.0			105
PCB near U9 (converter board)		42.3	58.5	42.2			105
T1 coil (converter board)		77.2	79.5	77.1			105
T1 core (converter board)		73.4	75.6	73.2			105
Metal enclosure near T9102		52.2	48.1	51.5			70
Panel body		51.4	52.4	51.5			95
Tamb.		22.9	22.5	23.5			--
Tma.		40.0	40.0	40.0			--
Supplementary information: The temperatures were measured under worst normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above. The maximum ambient temperature specified by manufacturer is 40 °C (Tma). All values for T(°C) are re-calculated from Tamb respectively. <u>Winding components (with safety isolation):</u> - Class B $T_{max} = 120\text{ °C} - 10\text{ °C} = 110\text{ °C}$							
Temperature T of winding:	$t_1\text{ (°C)}$	$R_1\text{ (}\Omega\text{)}$	$t_2\text{ (°C)}$	$R_2\text{ (}\Omega\text{)}$	$T\text{ (°C)}$	Allowed $T_{max}\text{ (°C)}$	Insulation class
Supplementary information:							
4.5.5	TABLE: Ball pressure test of thermoplastic parts						P
	Allowed impression diameter (mm): $\leq 2\text{ mm}$						—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
Part	Test temperature (°C)	Impression diameter (mm)	
Plastic enclosure, Kingfa : HIPS-5197, 2.5mm	90	1.59	
Plastic enclosure, Kingfa : GAR-011(L85), 2.5mm	85	1.31	
Plastic enclosure, Kingfa : GAR-011(L65), 2.5mm	85	1.29	
Plastic enclosure, Kingfa : HIPS-510(H), 2.5mm	80	1.29	
Plastic enclosure, Kingfa : FRHIPS-960, 2.5mm	85	1.88	
Plastic enclosure, Cheil : GC-0750(+), 2.5mm	80	1.61	
Plastic enclosure, Cheil : GC-0700(+), 2.5mm	80	1.94	
Plastic enclosure, Cheil : HG-0760(+), 2.5mm	85	1.73	
Plastic enclosure, Cheil : LX-0951(+), 2.5mm	85	1.83	
Plastic enclosure, Cheil : SD-0150, 2.5mm	85	1.48	
Plastic enclosure, Cheil : HR-1360, 2.5mm	85	1.71	
Plastic enclosure, Cheil : BF-0670F, 2.5mm	80	1.59	
Plastic enclosure, LG : HF380, 2.5mm	85	1.48	
Plastic enclosure, LG : LUPOY GP-1000(#), 2.5mm	95	1.21	
Plastic enclosure, LG : XG568, 2.5mm	80	1.81	
Plastic enclosure, LG : XG569C, 2.5mm	80	1.85	
Plastic enclosure, LG : HF388H, 2.5mm	85	1.39	
Plastic enclosure, LG : SE885, 2.5mm	80	1.42	
Plastic enclosure, LG : SE750, 2.5mm	80	1.50	
Plastic material, Kingfa : GAR-011C, 2.5mm	90	1.91	
Plastic material, Kingfa : GAR-011C, 3.0mm	90	1.59	
Plastic material, Kingfa : CK-61006, 3.0mm	85	1.67	
Plastic material, Kingfa : CK-61506, 3.0mm	85	1.43	
Plastic material, YOUHO-1302B, 3.3mm	85	1.04	
Plastic material, YOUHO-1303B, 3.3mm	85	1.42	
Supplementary information: Tested by client's request.			

4.7	TABLE: Resistance to fire					P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence	
Metal enclosure	--	--	1)	--	--	
PCB	--	--	--	1)	1)	
Supplementary information: 1) See table 1.5.1 for details.						

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Clause	Requirement + Test	Result - Remark	Verdict

5.1	TABLE: touch current measurement			P
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions	
Line / Neutral and output connectors	0.01	0.25	Power switch ON and switch “e” close/264Vac	
Line / Neutral and output connectors	0.01	0.25	Power switch OFF and switch “e” close/264Vac	
Line / Neutral and metal enclosure	1.80	3.5	Power switch ON and switch “e” open/264Vac	
Line / Neutral and metal enclosure	1.80	3.5	Power switch OFF and switch “e” open/264Vac	
Line / Neutral and plastic part outside of metal enclosure with metal foil	0.01	0.25	Power switch ON and switch “e” close/264Vac	
Line / Neutral and plastic part outside of metal enclosure with metal foil	0.01	0.25	Power switch OFF and switch “e” close/264Vac	
Line / Neutral and output connectors	0.01	0.25	Power switch ON and switch “e” close/100Vac	
Line / Neutral and output connectors	0.01	0.25	Power switch OFF and switch “e” close/100Vac	
Line / Neutral and metal enclosure	0.89	3.5	Power switch ON and switch “e” open/100Vac	
Line / Neutral and metal enclosure	0.89	3.5	Power switch OFF and switch “e” open/100Vac	
Line / Neutral and plastic part outside of metal enclosure with metal foil	0.01	0.25	Power switch ON and switch “e” close/100Vac	
Line / Neutral and plastic part outside of metal enclosure with metal foil	0.01	0.25	Power switch OFF and switch “e” close/100Vac	
supplementary information:				
1. Overall capacity: See table 1.5.1				

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Transformer:				
T9101 primary to secondary		AC	3000	No

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Clause	Requirement + Test	Result - Remark	Verdict	
T9101	Primary to core	AC	1494	No
T9101	secondary to core	AC	1494	No
T9102	primary to secondary	AC	3000	No
T9102	Primary to core	AC	1626	No
T9102	secondary to core	AC	1626	No
T9301	primary to secondary	AC	3000	No
T9301	Primary to core	AC	1816	No
T9301	secondary to core	AC	1816	No
Unit:				
	Primary to secondary	DC	4242	No
	Primary to earth	DC	2568	No
	Primary to plastic enclosure with metal foil	DC	4242	No
	Gas Tube	AC	1500	No
	Mylar (higher test value used upon client's request)	AC	3000	No
Supplementary information:				
1. Test was performed on all sources of transformer and tape.				

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C)		25, if no otherwise specified		—	
	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
All ventilation Openings for 55 inch model	Blocked	240	2hr 40min	F901,F902	1.27	Normal Operation, no hazards, no damage. T9301 coil=72.0°C T9102 coil=78.8°C T9101 coil=81.0°C Ambient=25.1°C
All ventilation Openings for 46 inch model	blocked	240	2 hr 52 min.	F901, F902	1.18	Maximum temperature: T9101 coil =78.0°C, T9102 coil =77.8°C, T9301 coil =73.2°C, Unit normal working under thermal equilibrium was reached. No hazards.
BD901 pin+ to ~	Short	240	1sec	F901,F902	--	F901,F902 opened, no hazards.
BD902 pin+ to ~	Short	240	1sec	F901,F902	--	F901,F902 opened, no hazards.

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Clause	Requirement + Test			Result - Remark		Verdict
U9101 pin3-16	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
U9101 pin10-16	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
U9801 pin9-16	Short	240	10min	F901,F902	0.09	U9801 damaged, no hazards. Test repeated twice, all came out with same results.
U9301 pin4-5	Short	240	1sec	F901,F902	0.08	Unit shutdown, no hazards, no damage
C9815	Short	240	1sec	F901,F902	--	F901,F902 opened, no hazards.
Q9803 pin G-S	Short	240	10min	F901,F902	1.25	Normal operation, no hazards, no damage, no excessive temp. or input current raised being observed.
Q9803 pin G-D	Short	240	1sec	F901,F902	0	U9801,Q9803 damaged, no hazards. Test repeated twice, all came out with same results.
Q9803 pin D-S	Short	240	1sec	F901,F902	0	U9801,Q9803 damaged, no hazards. Test repeated twice, all came out with same results.
Q9806 pin G-S	Short	240	10min	F901,F902	1.25	Normal operation, no hazards, no damage, no excessive temp. or input current raised being observed.
Q9806 pin G-D	Short	240	1sec	F901,F902	0	U9801,Q9803,Q9806 damaged, no hazards. Test repeated twice, all came out with same results
Q9806 pin D-S	Short	240	1sec	F901,F902	0	U9801,Q9803,Q9806 damaged, no hazards. Test repeated twice, all came out with same results
Q9101 pin G-S	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
Q9101 pin G-D	Short	240	1sec	F901,F902	0	U9101,Q9101 damaged, no hazards. Test repeated twice, all came out with same results
Q9101 pin D-S	Short	240	1sec	F901,F902	0	U9101,Q9101 damaged, no hazards. Test repeated twice, all came out with same results
Q9102 pin G-S	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
Q9102 pin G-D	Short	240	1sec	F901,F902	0	U9101,Q9101,Q9102 damaged, no hazards. Test repeated twice, all came out with same results
Q9102 pin D-S	Short	240	1sec	F901,F902	0	U9101,Q9101,Q9102 damaged, no hazards. Test repeated twice, all came out with same results

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Clause	Requirement + Test			Result - Remark		Verdict
T9102 pin2-6	Short	240	1sec	F901,F902	1.25	Normal operation, no hazards, no damage, no excessive temp. or input current raised being observed.
T9102 pin8-10,11	Short	240	10min	F901,F902	1.25	Normal operation, no hazards, no damage, no excessive temp. or input current raised being observed.
T9102 pin10,11-14,15	Short	240	10min	F901,F902	1.25	Normal operation, no hazards, no damage, no excessive temp. or input current raised being observed.
T9102 pin9-12,13	Short	240	10min	F901,F902	1.25	Normal operation, no hazards, no damage, no excessive temp. or input current raised being observed.
T9102 pin12,13-14,15	Short	240	10min	F901,F902	1.25	Normal operation, no hazards, no damage, no excessive temp. or input current raised being observed.
T9101 pin2-6	Short	240	10min	F901,F902	1.25	Normal operation, no hazards, no damage, no excessive temp. or input current raised being observed.
T9101 pin8-10,11	Short	240	10min	F901,F902	1.25	Normal operation, no hazards, no damage, no excessive temp. or input current raised being observed.
T9101 pin10,11-14,15	Short	240	10min	F901,F902	1.25	Normal operation, no hazards, no damage, no excessive temp. or input current raised being observed.
T9101 pin9-12,13	Short	240	10min	F901,F902	1.25	Normal operation, no hazards, no damage, no excessive temp. or input current raised being observed.
T9101 pin12,13-14,15	Short	240	10min	F901,F902	1.25	Normal operation, no hazards, no damage, no excessive temp. or input current raised being observed.
T9301 pin1-3	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
T9301 pin4-5	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
T9301 pin6,7-9,10	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
U9102 pin1	open	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
U9102 pin 1-2	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
U9102 pin 3-4	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
U9302 pin1	open	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
U9302 pin 1-2	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
U9302 pin 3-4	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
U9304 pin1	open	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
U9304 pin 1-2	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
U9304 pin 3-4	Short	240	10min	F901,F902	1.25	Normal operation, no hazards, no damage, no excessive temp. or input current raised being observed.
D9105	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
D9106	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
D9107	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
D9108	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
D9109	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
D9110	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
D9306	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
+5V-earth	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
+16V-earth	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
+24V-earth	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
Speaker pin 1-2	Short	240	10min	F901,F902	1.23	Normal operation, Speaker shutdown ,no hazards, no damage, no excessive temp. or input current raised being observed.,
T9301 after D9306(5V)	Overload	240	4hr 27min	F901, F902	1.34	CT at 3.0A, increase to 3.2A unit shutdown, No hazard,T9301 coil=77.0℃, T9102 coil=74.7℃, T9101 coil=75.5℃, Ambient=24.2℃
T9102 after D9109,D9110 (16V)	Overload	240	3hr 36min	F901, F902	1.87	CT at 8.0A, increase to 8.3A unit shutdown ,No hazard,T9301 coil=62.4℃, T9102 coil=91.9℃, T9101 coil=99.0℃, Ambient=25.7℃
T9101,T9102 after D9105,D9106,D9107, D9108(24V)	Overload	240	4hr 46min	F901, F902	2.43	CT at 10.0A, increase to 10.5A unit shutdown, No hazard,T9301 coil=65.6℃, T9102 coil=106.0℃, T9101 coil=118.2℃, Ambient=27.7℃
LED output (+) short to metal chassis	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
LED output (+) short to secondary output connector (-)	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
U9301 pin 1-8	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
U9301 pin 1-3	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
U9301 pin 8-3	Short	240	10min	F901,F902	0.08	Unit shutdown, no hazards, no damage
USB port (CN713)						
Pin1	Overload	240V	1hrs	F901,F902	--	Open circuit voltage: 4.91V max. available current = 1400mA Normal operation, no hazards, no damage.
All other pin	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0V. Unit operated normally, no damage, no hazards.
DVI (CN504)						
Pin 1, 2, 6, 7, 9, 10, 15, 17, 18, 23, 24	Overload	240V	10min	F901,F902	--	Open circuit voltage: 3.29V. Unit operated normally, no damage, no hazards.

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
Pin 6,7	Overload	240V	10min	F901,F902	--	Open circuit voltage: 4.54V. Unit operated normally, no damage, no hazards.
Pin15	Overload	240V	10min	F901,F902	--	Open circuit voltage: 1.40V. Unit operated normally, no damage, no hazards.
All other Pin	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0V. Unit operated normally, no damage, no hazards.
HDMI (CN503)						
Pin 2	Overload	240V	10min	F901,F902	--	Open circuit voltage: 1.98V. Unit operated normally, no damage, no hazards.
Pin 3	Overload	240V	10min	F901,F902	--	Open circuit voltage: 4.51V. Unit operated normally, no damage, no hazards.
Pin 4	Overload	240V	10min	F901,F902	--	Open circuit voltage: 2.43V. Unit operated normally, no damage, no hazards.
Pin 6, 7, 9, 10, 14, 15, 17, 18	Overload	240V	10min	F901,F902	--	Open circuit voltage: 2.29V. Unit operated normally, no damage, no hazards.
Pin 12	Overload	240V	10min	F901,F902	--	Open circuit voltage: 4.56V. Unit operated normally, no damage, no hazards.
All other Pins	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0V. Unit operated normally, no damage, no hazards.
Display out (CN501)						
Pin 1, 2, 4, 5, 12, 13, 15, 16	Overload	240V	10min	F901,F902	--	Open circuit voltage: 1.21V. Unit operated normally, no damage, no hazards.
Pin 19	Overload	240V	1 hr	F901,F902	--	Open circuit voltage: 3.3V. Unit operated normally, max. available current = 0.8A, no damage, no hazards.
All other pin	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0V. Unit operated normally, no damage, no hazards.
Display in (CN506)						
Pin 1, 2, 4, 5, 12, 13, 15, 16	Overload	240V	10min	F901,F902	--	Open circuit voltage: 1.21V. Unit operated normally, no damage, no hazards.

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
Pin 8, 18	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0.4V. Unit operated normally, no damage, no hazards.
Pin 19	Overload	240V	1 hr	F901,F902	--	Open circuit voltage: 3.3V.Max. available current = 500mA Unit operated normally, no damage, no hazards.
All other pin	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0V. Unit operated normally, no damage, no hazards.
VGA(CN101)						
Pin 5	Overload	240V	10min	F901,F902	--	Open circuit voltage: 1.6V. Unit operated normally, no damage, no hazards.
Pin 9	Overload	240V	10min	F901,F902	--	Open circuit voltage: 4.23V. Unit operated normally, no damage, no hazards.
All other pin	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0V. Unit operated normally, no damage, no hazards.
RS232 all pins	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0V. Unit operated normally, no damage, no hazards.
Audio in 1 (CN601) all pins	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0V. Unit operated normally, no damage, no hazards.
Audio in 2 (CN602) all pins	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0V. Unit operated normally, no damage, no hazards.
Audio out (CN605) all pins	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0V. Unit operated normally, no damage, no hazards.
Remote in (CN705) all pins	Overload	240V	1 hour	F901,F902	--	Open circuit voltage: 3.38V. Unit operated normally, Max. available current = 1000mA no damage, no hazards.
LAN 1 (CN710) all pins	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0V. Unit operated normally, no damage, no hazards.
LAN 2 (CN711) all pins	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0V. Unit operated normally, no damage, no hazards.
Speaker pin 1 to 2	Overload	240V	10min	F901,F902	--	Open circuit voltage: 0V. Unit operated normally, no damage, no hazards.
For Key control board						

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Clause	Requirement + Test			Result - Remark		Verdict
R3	Short	240V	1sec	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R4	Short	240V	1sec	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R5	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R8	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R9	Short	240V	1sec	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R10	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R	Short	240V	1sec	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R3	open	240V	1sec	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R4	open	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R5	open	240V	1sec	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R8	open	240V	1sec	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R9	open	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R10	open	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R	open	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
C2	Short	240V	10min	F901,F902	0.07	Unit normal operation, no hazards, no damage.
LED1 (1-2)	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
LED1 (2-3.4)	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
LED1 (3.4-1)	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R5	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R6	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
C5	Short	240V	10min	F901,F902	0.07	Unit normal operation, no hazards, no damage.

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
C6	Short	240V	10min	F901,F902	0.07	Unit normal operation, no hazards, no damage.
U2 (1-2)	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U2 (2-3.4)	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U2 (3.4-1)	Short	240V	10min	F901,F902	0.07	Unit normal operation, no hazards, no damage.
R1	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R2	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R4	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
C4	Short	240V	10min	F901,F902	0.07	Unit normal operation, no hazards, no damage.
U1 (1-2)	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U1 (2-3)	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U1 (3-4)	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U1 (4-5)	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U1 (5-6)	Short	240V	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U1 (6-1)	Short	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
C1	Short	240	10min	F901,F902	0.07	Unit normal operation, no hazards, no damage.
C2	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
LED1 (1)	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
LED1 (2)	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
LED1 (3.4)	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R5	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R6	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.

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Clause	Requirement + Test				Result - Remark	Verdict
C5	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
C6	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U2 (1)	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U2 (2)	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U2 (3.4)	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R1	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R2	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
R4	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
C4	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U1 (1)	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U1 (2)	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U1 (3)	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U1 (4)	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U1 (5)	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
U1 (6)	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
C1	open	240	10min	F901,F902	0.55	Unit normal operation, no hazards, no damage.
For LED driver board /LED driver board output (After D4) = 63.6Vdc, (After D5) = 56.7Vdc (normal condition)						
LED driver Vout to metal part	shorted	240	10 min.	F901, F902	0.15	Unit shutdown, no hazards, no damage
LED driver Vout to output connector	shorted	240	10 min.	F901, F902	0.15	Unit shutdown, no hazards, no damage

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Clause	Requirement + Test	Result - Remark	Verdict
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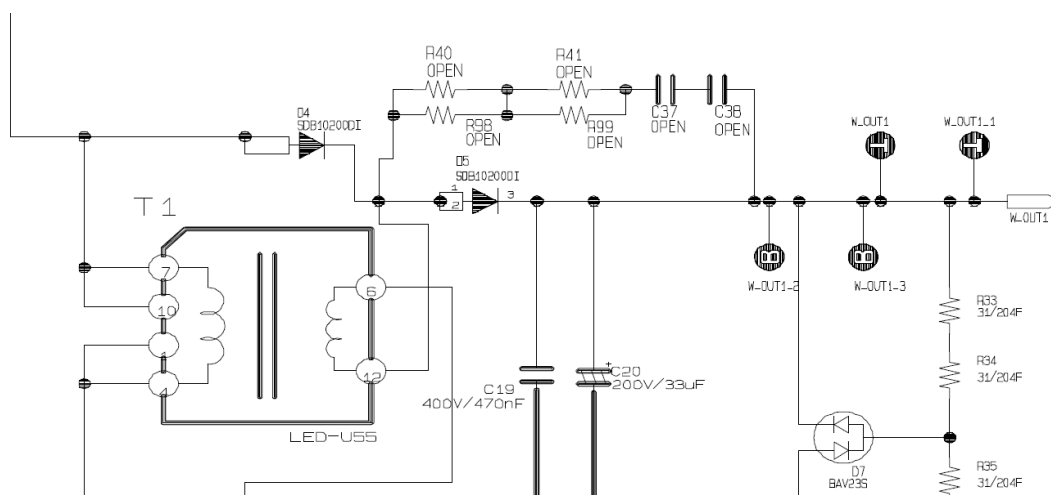
Supplementary Information:

- The electric strength test performed after fault condition test and see appended table 5.2 for detailed test conditions.

Maximum permitted temperature of T801 based on a test temperature of 40 °C:

- Class B $T_{max} = 175\text{ °C} - (40-25)\text{ °C} = 160\text{ °C}$.

- For D4 and D5 in LED driver circuit refer to below:



C.2	TABLE: transformers						P
Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)
T9101, T9102	Primary / input winding and secondary / output winding (internal) (DI)	432	266	AC 3000V	6.3 (4.2*1.48)	6.3	2 layers or 3 layers insulation tape
T9101, T9102	Primary / input winding and core (internal) (BI)	432	266	AC 1626V	3.2 (2.1*1.48)	3.2	--
T9101, T9102	Secondary / output winding and core (internal) (BI)	432	266	AC 1626V	3.2 (2.1*1.48)	3.2	--
T9101, T9102	Primary / input part and secondary / output part (external) (DI)	432	266	AC 3000V	6.3 (4.2*1.48)	6.3	--
T9101, T9102	Primary / input part and secondary / output winding (external) (DI)	432	266	AC 3000V	6.3 (4.2*1.48)	6.3	--
T9101, T9102	Primary / input part and core (external) (BI)	432	266	AC 1626V	3.2 (2.1*1.48)	3.2	--

IEC 60950-1							
Clause	Requirement + Test			Result - Remark			Verdict
T9101, T9102	Secondary / output part and core (external) (BI)	432	266	AC 1626V	3.2 (2.1*1.48)	3.2	--
T9101, T9102	Secondary / output part and primary / input winding (external) (DI)	432	266	AC 3000V	6.3 (4.2*1.48)	6.3	--
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
T9101, T9102	Primary / input winding and secondary / output winding (internal) (DI)			AC 3000V	6.5	6.5	3 layers insulation tape
T9101, T9102	Primary / input winding and core (internal) (BI)			AC 1626V	8.0	8.0	--
T9101, T9102	Secondary / output winding and core (internal) (BI)			AC 1626V	8.0	8.0	--
T9101, T9102	Primary / input part and secondary / output part (external) (DI)			AC 3000V	37.6	37.6	--
T9101, T9102	Primary / input part and secondary / output winding (external) (DI)			AC 3000V	12.0	12.0	--
T9101, T9102	Primary / input part and core (external) (BI)			AC 1626V	21.0	21.0	--
T9101, T9102	Secondary / output part and core (external) (BI)			AC 1626V	7.8	7.8	--
T9101, T9102	Secondary / output part and primary / input winding (external) (DI)			AC 3000V	23.3	23.3	--
supplementary information:							
1. The required clearances multiplied by 1.48 considering that EUT operates up to 5000m. 2. Same construction for all source							

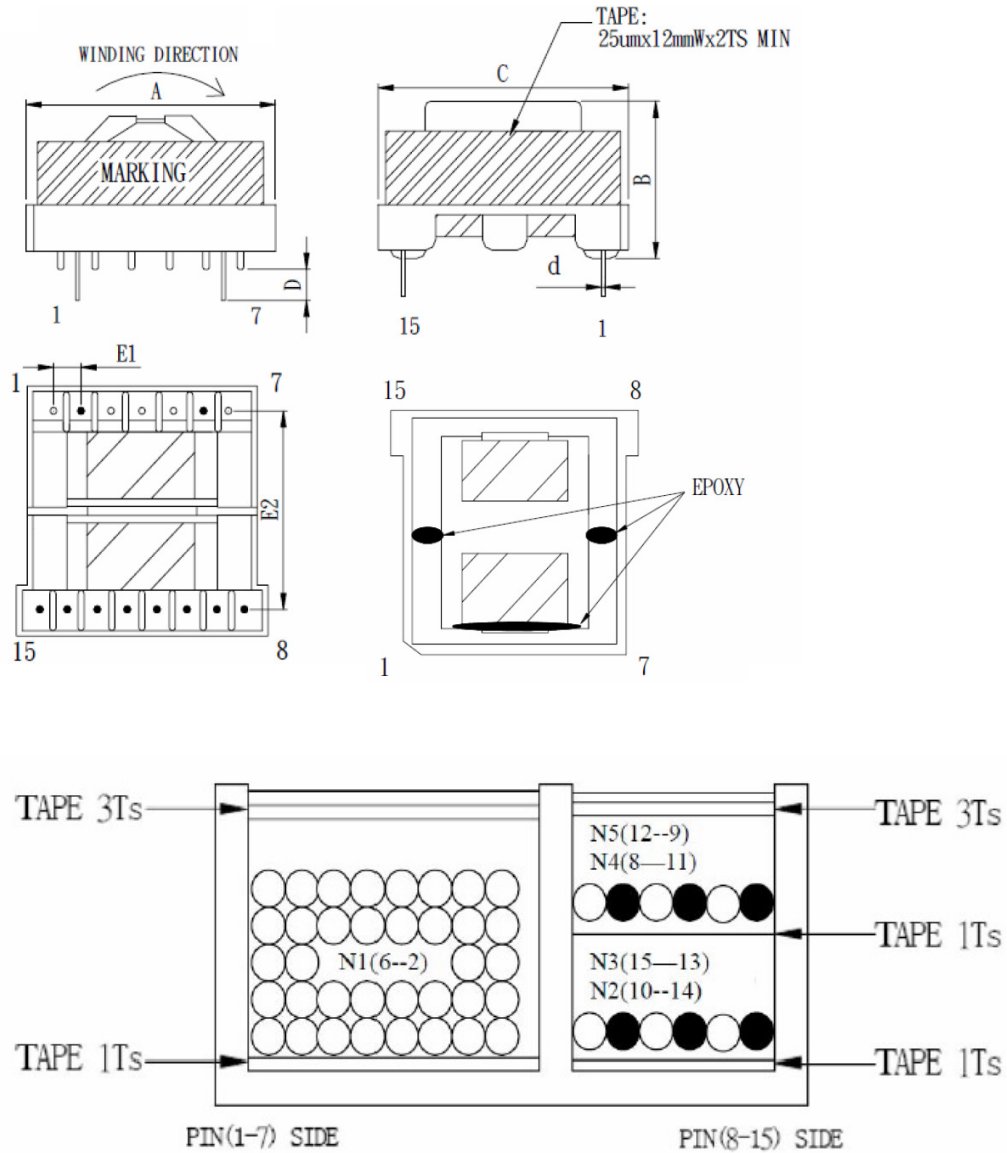
C.2	TABLE: transformers	P
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Clause	Requirement + Test	Result - Remark	Verdict
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Transformer T9101/T9102:

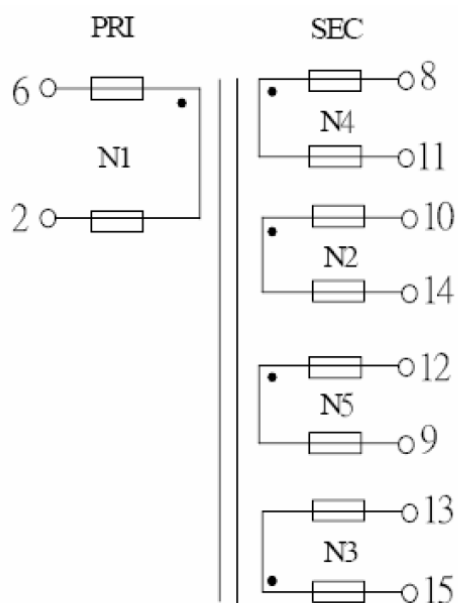
The transformer primary and secondary windng are seperated completely by bobbin design and top cover, all winding exit provide tubes, for construction details, refer to below illustrations from manufactuer spec.



Mylar tape: PIN1~7 側 t0.025mm*12.0mmW, PIN8~15 側 t 0.025mm*11.0mmW
 1. Pin 1,2,4,5,6,11 add tube

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Clause	Requirement + Test	Result - Remark	Verdict
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"●" WINDING START TEFLON TUBE

Description of design:

(a) Bobbin

Primary/input pins	6-2
Secondary/output pins	8-11, 10-14, 12-9, 15-13
Material (manufacturer, type, ratings)	Bobbin: Type PM-9820 of Sumitomo Bakelite or phenolic, 150°C, V-0 Case: Type FR530 of EI Dupont, phenolic, 150°C, V-0
Thickness (mm)	Min. 0.45 mm

C.2	TABLE: transformers						P
Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)
T9301	Primary / input winding and secondary / output winding (internal) (DI)	548	394	AC 3000V	6.6 (4.4*1.48)	7.9	2 layers or 3 layers insulation tape
T9301	Primary / input winding and core (internal) (BI)	548	394	AC 1816V	3.3 (2.2*1.48)	4.0	--

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Clause	Requirement + Test			Result - Remark			Verdict
T9301	Secondary / output winding and core (internal) (BI)	548	394	AC 1816V	3.3 (2.2*1.48)	4.0	--
T9301	Primary / input part and secondary / output part (external) (DI)	548	394	AC 3000V	6.6 (4.4*1.48)	7.9	--
T9301	Primary / input part and secondary / output winding (external) (DI)	548	394	AC 3000V	6.6 (4.4*1.48)	7.9	--
T9301	Primary / input part and core (external) (BI)	548	394	AC 1816V	3.3 (2.2*1.48)	4.0	--
T9301	Secondary / output part and core (external) (BI)	548	394	AC 1816V	3.3 (2.2*1.48)	4.0	--
T9301	Secondary / output part and primary / input winding (external) (DI)	548	394	AC 3000V	6.6 (4.4*1.48)	7.9	--
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
T9301	Primary / input winding and secondary / output winding (internal) (DI)			AC 3000V	8.4	8.4	3 layers insulation tape
T9301	Primary / input winding and core (internal) (BI)			AC 1816V	4.2	4.2	--
T9301	Secondary / output winding and core (internal) (BI)			AC 1816V	4.2	4.2	--
T9301	Primary / input part and secondary / output part (external) (DI)			AC 3000V	22.0	22.0	--
T9301	Primary / input part and secondary / output winding (external) (DI)			AC 3000V	8.0	8.0	--
T9301	Primary / input part and core (external) (BI)			AC 1816V	4.3	4.3	--
T9301	Secondary / output part and core (external) (BI)			AC 1816V	4.1	4.1	--
T9301	Secondary / output part and primary / input winding (external) (DI)			AC 3000V	8.0	8.0	--
supplementary information:							
1. The required clearances multiplied by 1.48 considering that EUT operates up to 5000m.							
2. Same construction for all source							

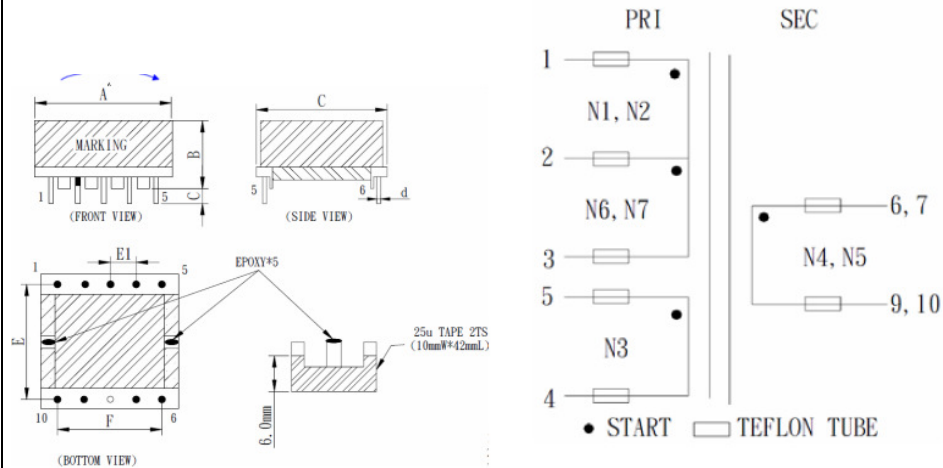
IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict
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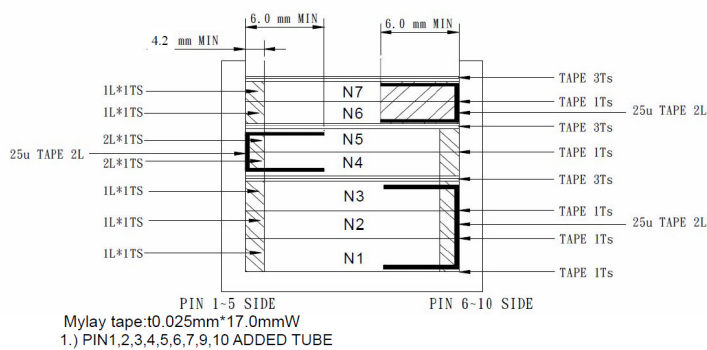
C.2

TABLE: transformers

Concentric windings on bobbin (horizontal type core). Outer winding is Primary. Min. three layers of insulation tape provided between primary winding and secondary winding. The margin tape of 4.2mm min. were provided at both top and bottom side of the transformer for primary winding and secondary winding. An additional insulation tape of 6.0mm was provided near primary pin side to cover secondary winding and as well as near secondary side to cover primary windings. The core is considered as floating part. For other details, refer to below illustration.



3.5 Winding construction



Description of design:

(a) Bobbin

Primary/input pins	1-2-3, 5-4
Secondary/output pins	6, 7-9, 10
Material (manufacturer, type, ratings)	Bobbin: Type PM-9820 of Sumitomo Bakelite, phenolic, 150°C, V-0
Thickness (mm)	Min. 0.6 mm

A completed list of used test equipment shall be provided in the Test Reports when a Manufacturer Testing Laboratory according to TMP/CTF stage 1 or WMT/CTF stage 2 procedure has been used.

No listing of test equipment used necessary for chosen test procedure.

Clause	Requirement + Test	Result - Remark	Verdict
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2.1.1.7	TABLE: Discharge test			P
Condition	τ calculated (ms)	τ measured (ms)	t u→ 0V (s)	Comments
Line to Neutral	733	750	--	V _O = 371V _{peak} , 37 % of V _O = 138, V _{peak} , voltage drop to 91.7 V _{peak} after 1 s
Supplementary information: Supply voltage: 264 Vac, 60 Hz Overall capacity and bleeder resistor: see appended table 1.5.1				

2.4.2	TABLE: Limited current circuit measurement				P
Location	Voltage (mV)	Current (mA)	Freq. (Hz)	Limit (mA)	Comments
C9322 sec. pin to earth	130	0.26	--	0.7	Annex D. used.
Supplementary information:					

2.6.3.4	TABLE: Resistance of earthing measurement		P
Location		Resistance measured (mΩ)	Comments
AC inlet earth pin to Metal enclosure		12	Test current : 32A, duration: 2 min., Voltage drop: 0.38V
AC inlet earth pin to Metal enclosure		12	Test current : 40A, duration: 2 min., Voltage drop: 0.48V
AC inlet earth pin to C9322 trace		24	Test current : 40A, duration: 2 min., Voltage drop: 0.96V
AC inlet earth pin to C9901/C9902/C9904 trace		9	Test current : 40A, duration: 2 min., Voltage drop: 0.36V
AC inlet earth pin to C9905/C9321 trace		7	Test current : 40A, duration: 2 min., Voltage drop: 0.28V
AC inlet earth pin to C9323 trace		6	Test current : 40A, duration: 2 min., Voltage drop: 0.24V
Supplementary information:			

4.6.1, 4.6.2	Table: Enclosure opening measurements		P
Location	Size (mm)	Comments	
For model X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV,			
Horizontal			
Top	Ø 4.0	Numerous circular openings provided.	
Rear	Ø 4.0	Numerous circular openings provided. There is no portion of the side of fire enclosure falls within the area traced out by the 5° angle.	

Clause	Requirement + Test	Result - Remark	Verdict
Left side (near building-in power supply board)	--	No opening	
Right side	1) Ø 4.7 2) Ø 4.7	1) Numerous circular openings provided. There is no portion of the side of fire enclosure falls within the area traced out by the 5° angle. 2) Numerous circular openings provided. There is no portion of the side of fire enclosure falls within the area traced out by the 5° angle.	
Bottom	Ø 1.6 centre to centre= 3.4 min., metal thickness= 0.81	Numerous circle openings provided. Compliance with 4.6.2 table 4D.	
Vertical			
Top	1) Ø 4.7 2) Ø 4.7	1) Numerous circular openings provided. There is no portion of the side of fire enclosure falls within the area traced out by the 5° angle. 2) Numerous circular openings provided. There is no portion of the side of fire enclosure falls within the area traced out by the 5° angle.	
Rear	Ø 4.0	Numerous circular openings provided. There is no portion of the side of fire enclosure falls within the area traced out by the 5° angle.	
Left	Ø 4.0	Numerous circular openings provided.	
Right side (near building-in power supply board)	Ø 1.6 centre to centre= 3.4 min., metal thickness= 0.81	Numerous circular openings provided.	
Bottom	--	No opening	
For model X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)			
Horizontal			
Top	Ø 3.9	Numerous circular openings provided.	
Rear	Ø 4.0	Numerous circular openings provided. There is no portion of the side of fire enclosure falls within the area traced out by the 5° angle.	
Left side (near building-in power supply board)	--	No openings	

Clause	Requirement + Test	Result - Remark	Verdict
Right side	1) Ø 4.7 2) Ø 4.7	1) Numerous circular openings provided. There is no portion of the side of fire enclosure falls within the area traced out by the 5° angle. 2) Numerous circular openings provided. There is no portion of the side of fire enclosure falls within the area traced out by the 5° angle.	
Bottom	Ø 1.7 centre to centre= 3.1 min., metal thickness= 0.81	Numerous circle openings provided. Compliance with 4.6.2 table 4D.	
Vertical			
Top	1) Ø 4.7 2) Ø 4.7	1) Numerous circular openings provided. There is no portion of the side of fire enclosure falls within the area traced out by the 5° angle. 2) Numerous circular openings provided. There is no portion of the side of fire enclosure falls within the area traced out by the 5° angle.	
Rear	Ø 4.0	Numerous circular openings provided. There is no portion of the side of fire enclosure falls within the area traced out by the 5° angle.	
Left	Ø 3.9	Numerous circular openings provided.	
Right side (near building-in power supply board)	Ø 1.7 centre to centre= 3.1 min., metal thickness= 0.81	Numerous circular openings provided.	
Bottom	--	No opening	
Supplementary information:			

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to: EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013			
Attachment Form No.: EU_GD_IEC60950_1F			
Attachment Originator: SGS Fimko Ltd			
Master Attachment: Date 2014-02			
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EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 – CENELEC COMMON MODIFICATIONS

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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
General (A2:2013)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A2:2013) according to the following list: 2.7.1 Note * 2.10.3.1 Note 2 6.2.2. Note * Note of secretary: Text of Common Modification remains unchanged.		P
1.1.1 (A1:2010)	Replace the text of NOTE 3 by the following. NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.		P
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.	Added.	N/A
(A12:2011)	In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010	Deleted.	N/A
1.5.1 (Added info*)	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC. New Directive 2011/65/11 *	Added.	P
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.	Added.	N/A
1.7.2.1 (A12:2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.	Equipment is not a personal music player.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx Protection against excessive sound pressure from personal music players		N/A
	Zx.1 General This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players. A personal music player is a portable equipment for personal use, that: - is designed to allow the user to listen to recorded or broadcast sound or video; and - primarily uses headphones or earphones that can be worn in or on or around the ears; and - allows the user to walk around while in use. NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment. A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause. The requirements in this sub-clause are valid for music or video mode only. The requirements do not apply: - while the personal music player is connected to an external amplifier; or - while the headphones or earphones are not used. NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player. The requirements do not apply to: - hearing aid equipment and professional equipment; NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.	Not personal music players.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015. NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies. For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.		
	Zx.2 Equipment requirements No safety provision is required for equipment that complies with the following: equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed "programme simulation noise" as described in EN 50332-1; and a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" as described in EN 50332-1. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx. All other equipment shall: a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and	Not personal music players.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and NOTE 2 Examples of means include visual or audible signals. Action from the user is always required. NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off. d) have a warning as specified in Zx.3; and e) not exceed the following: 1) equipment provided as a package (player with its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and 2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1. For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song. NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.3 Warning The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: the symbol of Figure 1 with a minimum height of 5 mm; and the following wording, or similar: “To prevent possible hearing damage, do not listen at high volume levels for long periods.”  Figure 1 – Warning label (IEC 60417-6044) Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.	Not personal music players.	N/A
	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be ≥ 75 mV. This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control). NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.	Not personal music players.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.4.2 Wired listening devices with digital input With any playing device playing the fixed “programme simulation noise” described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.). NOTE An example of a wired listening device with digital input is a USB headphone.	Not personal music players.	N/A
	Zx.4.3 Wireless listening devices In wireless mode: - with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and - respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and - with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.	Not personal music players.	N/A
	Zx.5 Measurement methods Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s. NOTE Test method for wireless equipment provided without listening device should be defined.	Not personal music players.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;	Replaced.	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. 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
2.7.2	This subclause has been declared 'void'.	Void.	N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Deleted.	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-F2". In Table 3B, replace the first four lines by the following: Up to and including 6 0,75 ^{a)} Over 6 up to and including 10 (0,75) ^{b)} 1,0 Over 10 up to and including 16 (1,0) ^{c)} 1,5 In the conditions applicable to Table 3B delete the words "in some countries" in condition ^{a)} . In NOTE 1, applicable to Table 3B, delete the second sentence.	No power cord provided	N/A
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 1,5 to 2,5 1,5 to 4 Delete the fifth line: conductor sizes for 13 to 16 A	Deleted.	N/A
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to: 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation).	Replaced.	N/A
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.	Replaced.	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)			
1.2.4.1	In Denmark , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		N/A
1.2.13.14 (A11:2009)	In Norway and Sweden , for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1 (A11:2009)	In Finland , Norway and Sweden , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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).	Complied.	P
1.5.9.4	In Finland, Norway and Sweden , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	In Finland, Norway and Sweden, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Finland: "Laitte on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway: "Apparatet må tilkoples jordet stikkontakt" In Sweden: "Apparaten skall anslutas till jordat uttag"		P
1.7.2.1 (A11:2009)	In Norway and Sweden, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: "Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)."		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel-TV nettet.” Translation to Swedish: ”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”		
1.7.2.1 (A2:2013)	In Denmark, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in Denmark shall be as follows: In Denmark: “Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.”		P
1.7.5 1.7.5 (A11:2009)	In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5 (A2:2013)	In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011. For class I equipment the following Standard Sheets are applicable: DK 1-3a, DK 1-1c, DK 1-1d, DK 1-5a or DK 1-7a, with the exception for STATIONARY EQUIPMENT where the socket-outlets shall be in accordance with Standard Sheet DK 1-1b, DK 1-1c, DK 1-1d or DK 1-5a. Socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance with DS 60884-2-D1 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with by DS 60884-2-D1 Standard Sheet DKA 1-3a or DKA 1-3b. Justification the Heavy Current Regulations, 6c	No socket-outlets.	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.	No TNV.	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.	No TNV.	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.	No TNV.	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.		P
2.7.1	In the United Kingdom , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.	Not direct plug-in equipment.	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
3.2.1.1	In Switzerland, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A	No power supply cord provided.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998: SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998: Plug Type 21, L+N, 250 V, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A		
3.2.1.1	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. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.		N/A
3.2.1.1 (A2:2013)	In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Justification the Heavy Current Regulations, 6c		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In Spain, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.		N/A
3.2.1.1	In the United Kingdom, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.1.1	In Ireland, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.		N/A
3.2.4	In Switzerland , for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the United Kingdom , a power supply cord with conductor of 1,25 mm ² is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the United Kingdom, the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm² to 1,5 mm² nominal cross-sectional area.		N/A

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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.	No socket outlet.	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.	Not direct plug-in equipment.	N/A
5.1.7.1	In Finland, Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.		N/A
6.1.2.1 (A1:2010)	In Finland, Norway and Sweden , add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirements for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in	No TNV.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.		
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14: - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		N/A
6.1.2.2	In Finland, Norway and Sweden, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.	No TNV.	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.	No Cable distribution system.	N/A
7.3 (A11:2009)	In Norway and Sweden, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.	No Cable distribution system.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

Annex ZD
(informative)

IEC and CENELEC code designations for flexible cords

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

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Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 with A1: 2009 and A2:2013 U.S.A. NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements	
Differences according to	UL 60950-1-07(Second Edition) + A1: 2011 + A2: 2014
Attachment Form No.....	US_ND_IEC60950_1F
Attachment Originator	UL
Master Attachment	Date 2014-07
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	<i>Special national conditions</i>		
1.1.1	All equipment is designed as to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and if applicable, the National Electrical Safety Code, IEEE C2	In accordance with the National Electrical Code (NEC) and the Canadian Electrical Code (CEC) part 1 CAN/CSA C22.1, ANSI/NFPA 70, and unless marked or otherwise identified, the Standard for Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	P
	Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75	Considered.	P
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A	Considered.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the /NEC	No power cord provided.	N/A
	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	Single-phase equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
	- if it is part of a range that extends into the Table 2 "Normal Operating Conditions"		N/A
	Likewise, a voltage rating is not to 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 NEC or CEC Part 1 or NEC are marked with the voltage rating and "Class 2" or equivalent		N/A
	- Marking is located adjacent to the terminals		N/A
	- Marking is visible during wiring		N/A
2.5	Fuse providing Class 2, Limited Power Source, or TNV current limiting is not operator-accessible unless it is not interchangeable	No such components provided.	N/A
2.6	Equipment with isolated ground (earthing) receptacles is in compliance with NEC 250.146(D) and CEC 10-112 and 10-906(8)		P
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is provided for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.	No such components provided.	N/A
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, provided with special transformer overcurrent protection		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains is in accordance with the NEC/CEC	No power cord provided.	N/A
3.2.1	Attachment plugs of power supply cords are 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 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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.5	Power supply cords are no longer than 4.5 m in length		N/A
	Minimum cord length is 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement		N/A
	Flexible power supply cords are compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC		N/A
3.2.9	Permanently connected equipment has a suitable wiring compartment and wire bending space		N/A
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0	No wire binding screws.	N/A
3.3.3	Wire binding screws are not attached with conductors larger than 10 AWG (5.3 mm ²)		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are suitable for Canadian/US wire gauge sizes, are		N/A
	- rated 125 per cent of the equipment rating, and		N/A
	- are specially marked when specified (1.7.7)		N/A
3.3.5	Revise first column of Table 3E to "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration"		N/A
3.4.2	Motor control devices are provided for cord-connected equipment with a motor if the equipment is rated more than 12 A,		N/A
	- or if the motor has a nominal voltage rating greater than 120 V		N/A
	- 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 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 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 complies with NFPA 30		N/A
4.3.13.5.1	Equipment with lasers meets the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No Laser.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) 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 0.9m ² (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less		N/A
	For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less		N/A
4.7.3.1	Non-metallic enclosures of equipment for use in spaces used for environmental air (plenums) are required to comply with UL 2043		N/A
Annex H	Equipment that produces ionizing radiation complies with U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370)	No ionizing radiation.	N/A
	Other National Differences		P
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury 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 backup systems, battery packs, cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultracapacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cut-offs, thermostats, (multi-layer) transformer winding wire, surge protective devices, tubing, vehicle battery adapters, wire connectors, and wire and cables	Approved components provided, see appended table 1.5.1 of IEC 60950-1 test report.	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	This maximum operating voltage includes 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 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions	No TNV.	N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts		N/A
2.6.2	Equipment with functional earthing marked with the functional earthing symbol (IEC 60417-6092)		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified	Green and Yellow wire used.	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more reduce the risk of injury due to the implosion of the CRT		N/A
4.3.2	Equipment with handles complies with special loading tests		N/A
4.3.8	Battery packs for both portable and stationary applications comply with special component requirements		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals 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 overloaded	See IEC 60950-1 test report.	P
	During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test is repeated twice (three tests total) using new components as necessary	See IEC 60950-1 test report.	P
6.4	Equipment intended for connection to telecommunication network outside plant cable is protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC		N/A
Annex EE	Articulated accessibility probe (Fig EE.3) is used for assessing accessibility to document/media shredders instead of the Figure 2A test finger		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions		N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear comply with special acoustic pressure requirements		N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 with A1:2009 and A2:2013 CANADA NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to: CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014			
Attachment Form No.: CA_ND_IEC60950_1F			
Attachment Originator: CSA			
Master Attachment: Date (2015-05)			
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1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	In accordance with the National Electrical Code (NEC) and the Canadian Electrical Code (CEC) part 1 CAN/CSA C22.1, ANSI/NFPA 70, and unless marked or otherwise identified, the Standard for Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	P
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A:	Considered.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the CEC/NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC/NEC are required to have special construction features and identification markings.		N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
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
2.6	Equipment with isolated ground (earthing) receptacles are required to comply with NEC 250.146(D) and CEC 10-112 and 10-906(8).	Considered.	P
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable. Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.		N/A
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.		N/A
3.2.3	Permanent connection of equipment to the mains		N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
	supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		
3.2.5	Power supply cords are required to be no longer than 4.5 m in length. Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.		N/A
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm ²).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for US/Canadian wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).		N/A
3.3.5	First column of Table 3E revised to require "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		N/A
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.		N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.		N/A
4.3.13.5.1	Equipment with lasers is required to meet the U.S.		P

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
	Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		
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
	Non-metallic enclosures of equipment for use in spaces used for environmental air (plenums) are required to comply with UL 2043.		N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
OTHER 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	Approved components provided, see appended table 1.5.1 of IEC 60950-1 report.	P

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
	switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, transient voltage surge suppressors, tubing, wire connectors, and wire and cables.		
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply. This maximum operating voltage shall include consideration of the battery charging "float voltage" associated with the intended supply system, regardless of the marked power rating of the equipment.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 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
2.6.2	Equipment with functional earthing is required to be marked with the functional earthing symbol (IEC 60417-6092).		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.	Green and Yellow wire used.	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
4.3.8	Battery packs for both portable and stationary applications are required to comply with special component requirements.		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	See IEC 60950-1 test report.	P

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
	test shall be repeated twice (three tests total) using new components as necessary.		
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.		N/A
Annex EE	UL articulated accessibility probe (Fig EE.3) required for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
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

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to: EN 60950-1:2006/A11:2009/A1:2010/A12:2011			
Attachment Form No.: EU_GD_IEC60950_1C_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)					
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions				P
General	Delete all the “country” notes in the reference document (IEC 60950-1:2005) according to the following list: 1.4.8 Note 2 1.5.1 Note 2 & 3 1.5.7.1 Note 1.5.8 Note 2 1.5.9.4 Note 1.7.2.1 Note 4, 5 & 6 2.2.3 Note 2.2.4 Note 2.3.2 Note 2.3.2.1 Note 2 2.3.4 Note 2 2.6.3.3 Note 2 & 3 2.7.1 Note 2.10.3.2 Note 2 2.10.5.13 Note 3 3.2.1.1 Note 3.2.4 Note 3. 2.5.1 Note 2 4.3.6 Note 1 & 2 4.7 Note 4 4.7.2.2 Note 4.7.3.1 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				P
General (A1:2010)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1 Note 6.1.2.1 Note 2 6.2.2.1 Note 2 EE.3 Note				P

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.	Added.	N/A
(A12:2011)	In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010	Deleted.	N/A
1.5.1	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC	Added.	P
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.		N/A
1.7.2.1 (A12:2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.	Deleted.	N/A
	Zx Protection against excessive sound pressure from personal music players		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.1 General This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players. A personal music player is a portable equipment for personal use, that: - is designed to allow the user to listen to recorded or broadcast sound or video; and - primarily uses headphones or earphones that can be worn in or on or around the ears; and - allows the user to walk around while in use. NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment. A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause. The requirements in this sub-clause are valid for music or video mode only. The requirements do not apply: - while the personal music player is connected to an external amplifier; or - while the headphones or earphones are not used. NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player. The requirements do not apply to: - hearing aid equipment and professional equipment; NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.	Not personal music players.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015. NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies. For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.		
	Zx.2 Equipment requirements No safety provision is required for equipment that complies with the following: equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed "programme simulation noise" as described in EN 50332-1; and a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" as described in EN 50332-1. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx. All other equipment shall: a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and	Not personal music players.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and NOTE 2 Examples of means include visual or audible signals. Action from the user is always required. NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off. d) have a warning as specified in Zx.3; and e) not exceed the following: 1) equipment provided as a package (player with its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and 2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1. For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song. NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.		

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.3 Warning The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: the symbol of Figure 1 with a minimum height of 5 mm; and the following wording, or similar: “To prevent possible hearing damage, do not listen at high volume levels for long periods.”  Figure 1 – Warning label (IEC 60417-6044) Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.	Not personal music players.	N/A
	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be ≥ 75 mV. This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control). NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.4.2 Wired listening devices with digital input With any playing device playing the fixed “programme simulation noise” described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.). NOTE An example of a wired listening device with digital input is a USB headphone.	Not personal music players.	N/A
	Zx.4.3 Wireless listening devices In wireless mode: with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.	Not personal music players.	N/A
	Zx.5 Measurement methods Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s. NOTE Test method for wireless equipment provided without listening device should be defined.	Not personal music players.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;	Replaced.	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. 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
2.7.2	This subclause has been declared 'void'.	Void.	N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Deleted.	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-F2". In Table 3B, replace the first four lines by the following: Up to and including 6 0,75 ^{a)} Over 6 up to and including 10 (0,75) ^{b)} 1,0 Over 10 up to and including 16 (1,0) ^{c)} 1,5 In the conditions applicable to Table 3B delete the words "in some countries" in condition ^{a)} . In NOTE 1, applicable to Table 3B, delete the second sentence.	No power cord provided.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 1,5 to 2,5 1,5 to 4 Delete the fifth line: conductor sizes for 13 to 16 A	No power cord provided.	N/A
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to: 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation).	Replaced.	N/A
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.	Replaced.	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

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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).	Complied.	P
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

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	In Finland, Norway and Sweden, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway: "Apparatet må tilkoples jordet stikkontakt" In Sweden: "Apparaten skall anslutas till jordat uttag" In Norway and Sweden, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: "Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)."		P

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.” Translation to Swedish: ”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”		N/A
1.7.5	In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.	No socket-outlets.	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.	No TNV.	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.	No TNV.	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.	No TNV.	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.	Considered.	P

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	In the United Kingdom , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.	Not direct plug-in equipment.	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
3.2.1.1	In Switzerland, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998: SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998: Plug Type 21, L+N, 250 V, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V,	No approved power cord provided.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	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. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.		N/A
3.2.1.1	In Spain, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.		N/A
3.2.1.1	In the United Kingdom, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In Ireland , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.		N/A
3.2.4	In Switzerland , for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the United Kingdom , a power supply cord with conductor of 1,25 mm ² is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the United Kingdom , the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm ² to 1,5 mm ² nominal cross-sectional area.		N/A
4.3.6	In the United Kingdom , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		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.	Not direct plug-in equipment.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	In Finland, Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.		N/A
6.1.2.1 (A1:2010)	In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirements for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.	No TNV.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		N/A
6.1.2.2	In Finland, Norway and Sweden , the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.	No TNV.	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.	No 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.	No Cable distribution system.	N/A
7.3	In Norway , for installation conditions see EN 60728-11:2005.	No Cable distribution system.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 CANADA NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to: CAN/CSA-C22.2 NO. 60950-1A-07			
Attachment Form No.: CA_ND_IEC60950_1C			
Attachment Originator: TÜV SÜD Product Service GmbH			
Master Attachment: Date (2012-08)			
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	Special national conditions		P
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.	In accordance with the National Electrical Code (NEC) and the Canadian Electrical Code (CEC) part 1 CAN/CSA C22.1, ANSI/NFPA 70, and unless marked or otherwise identified, the Standard for Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	P
	Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	Considered.	P
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the CEC/NEC.		N/A
	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.	Not for used in more than one phase power supply system.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
	- if it is part of a range that extends into the Table 2 "Normal Operating Conditions."		N/A
	A voltage rating is 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 are marked with the voltage rating and "Class 2" or equivalent.		N/A
	- Marking is located adjacent to the terminals		N/A
	- Marking is visible during wiring		N/A
2.5	Fuse providing Class 2, Limited Power Source, or TNV current limiting is not operator-accessible unless it is not interchangeable.	No such components provided.	N/A
2.6.3.3	Modify first column on Table 2D to "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		P
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is provided for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.	No such components provided.	N/A
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, provided with special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains is in accordance with the NEC/CEC.	No power cord provided.	N/A
3.2.1	Attachment plugs of power supply cords are 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 comply with special earthing, wiring, marking and installation instruction requirements.	No for DC mains.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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 no longer than 4.5 m in length.		N/A
	Minimum cord length is 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement.		N/A
	Flexible power supply cords are compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
3.2.9	Permanently connected equipment have a suitable wiring compartment and wire bending space.	Not permanent connection equipment.	N/A
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0.	No wire binding screws.	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 suitable for Canadian/US wire gauge sizes, are		N/A
	- rated 125 percent of the equipment rating, and		N/A
	- are specially marked when specified (1.7.7).		N/A
3.3.5	Revise first column of Table 3E to "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		N/A
3.4.2	Motor control devices are provided for cord-connected equipment with a motor if the equipment is rated more than 12 A,		N/A
	- or if the motor has a nominal voltage rating greater than 120 V		N/A
	- 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 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 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 complies with NFPA 30.	No flammable liquid.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.13.5	Equipment with lasers meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.	No Laser.	N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) 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) have a flame spread rating of 50 or less.		N/A
	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 comply with the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations, 21 CFR 1020, as applicable.	No ionizing radiation.	N/A
	Other National Differences		P
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements.	Approved components provided, see appended table 1.5.1 of IEC 60950-1 test report.	P
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.		N/A
	This maximum operating voltage includes 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 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

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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.	Green and Yellow wire used.	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more reduce the risk of injury due to the implosion of the CRT.		N/A
4.3.2	Equipment with handles complies with special loading tests.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals 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 overloaded.	See IEC 60950-1 test report.	P
	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	See IEC 60950-1 test report.	P
6.4	Equipment intended for connection to telecommunication network outside plant cable is protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.		N/A
Annex EE	Articulated accessibility probe (Fig EE.3) is used for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
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 comply with special acoustic pressure requirements.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 FINLAND NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to: EN 60950-1:2006/A11:2009/A1:2010			
Attachment Form No.: FI_ND_IEC60950_1C			
Attachment Originator: SGS Fimko Ltd			
Master Attachment: Date (2010-04)			
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	National Differences		P
General	See also Group Differences (EN 60950-1:2006/A11/A1)		P
1.5.7.1	In Finland 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.	No such resistor.	N/A
1.5.9.4	In Finland , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	In Finland , 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 in Finland shall be as follows: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"		P
2.3.2	In Finland , there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.10.5.13	In Finland , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	In Finland, TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that - is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and - has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and - is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.		N/A
6.1.2.1 (A1:2010)	In Finland, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.	No TNV.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14:2005 which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14:2005; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14:2005, in the sequence of tests as described in EN 60384-14:2005.		N/A
6.1.2.2	In Finland, 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, 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.	No cable distribution system.	N/A

National Differences to IEC 60950-1:2005 + A1:2009			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
GERMANY NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: VDE 0805-1:2011-01

Annex ZC, 1.7.2.1	According to GPSG, section 2, clause 4: If certain rules on the use, supplementation or maintenance of an item of technical work equipment or ready-to-use commodity must be observed in order to guarantee safety and health, instructions for use in German must be supplied when it is brought into circulation.		P
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National Differences to IEC 60950-1:2005 + A1:2009			
Clause	Requirement + Test	Result - Remark	Verdict

**ATTACHMENT TO TEST REPORT IEC 60950-1
ISRAEL NATIONAL DIFFERENCES**

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: SI 60950 Part 1

1.1.1	Replace the the text of Note 3 as follows: The requirements of Israel Standard SI 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment.	Replaced.	P
1.6	The clause is applicable with the following addition:		P
1.6.1	Add following note: In Israel, this clause is applicable subject to the Electricity Law, 1954, its regulations and revisions.	Added.	P
1.7	The clause is applicable with the following additions: Subclause 1.7.201 shall be added at the beginning of the clause as follows:		N/A
1.7.201	Marking in the Hebrew language The marking in the Hebrew language shall be in accordance with the Consumer Protection Order (Marking of goods), 1983. In addition to the marking required by clause 1.7.1, the following details shall be marked in the Hebrew language. The details shall be marked on the apparatus or on its package, or on a label properly attached to the apparatus or on the package, by bonding or sewing, in a manner that the label cannot be easily removed. 1. Name of the apparatus and its commercial designation; 2. Manufacturer's name and address. If the apparatus is imported, the importer's name and address; 3. Manufacturer's registered trademark, if any; 4. Name of the model and serial number, if any; 5. Country of manufacture.		N/A
1.7.2.1	The following shall be added to the clause: All the instructions and warnings related to safety shall also be written in the Hebrew language.		N/A

National Differences to IEC 60950-1:2005 + A1:2009			
Clause	Requirement + Test	Result - Remark	Verdict
2	The clause is applicable with the following additions:		P
2.9.4	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); 6) Residual current circuit breaker (30 mA = IΔ); 7) Reinforced insulation; Double insulation (class II)		P
2.201	Prevention of electromagnetic interference - Prior to carrying out the tests in accordance with the clauses of this Standard, the compliance of the apparatus with the relevant requirements specified in the appropriate part of the Standard series, SI 961, shall be checked. <u>The apparatus shall meet the requirements in the appropriate part of the Standard series, SI 961.</u> - 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.		N/A
3	The clause is applicable with the following additions:		N/A
3.2.1.1	Connection to an a.c. mains supply After the note, the following note shall be added: Note: In Israel, the feed plug shall comply with the requirements of Israel Standard SI 32 Part 1.1.		N/A
3.2.1.2	Connection to a d.c. mains supply At the end of the first paragraph, the following note shall be added: Note: At the time of issue of this Standard, there is no Israel Standard for connection accessories to d.c.		N/A

National Differences to IEC 60950-1:2005 + A1:2009			
Clause	Requirement + Test	Result - Remark	Verdict
Annex P	Normative references (List of relevant Israel Standards that have been inserted in place of some of the International Standards)		P

National Differences to IEC 60950-1:2005 + A1:2009			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
KOREA NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: K 60950-1

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

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 U.S.A. NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to.....: UL 60950-1-07			
Attachment Form No.: US_ND_IEC60950_1C			
Attachment Originator.....: TÜV SÜD Product Service GmbH			
Master Attachment.....: Date (2012-08)			
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	Special national conditions		P
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.	In accordance with the National Electrical Code (NEC) and the Canadian Electrical Code (CEC) part 1 CAN/CSA C22.1, ANSI/NFPA 70, and unless marked or otherwise identified, the Standard for Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	P
	Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	Considered.	P
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the CEC/NEC.	No power cord provided.	N/A
	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.	Single-phase equipment.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
	- if it is part of a range that extends into the Table 2 "Normal Operating Conditions."		N/A
	A voltage rating is not to 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 are marked with the voltage rating and "Class 2" or equivalent.		N/A
	- Marking is located adjacent to the terminals		N/A
	- Marking is visible during wiring		N/A
2.5	Fuse providing Class 2, Limited Power Source, or TNV current limiting is not operator-accessible unless it is not interchangeable.	No such components provided.	N/A
2.6.3.3	Modify first column on Table 2D to "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		P
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is provided for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.	No such components provided.	N/A
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, provided with special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains is in accordance with the NEC/CEC.	No power cord provided.	N/A
3.2.1	Attachment plugs of power supply cords are rated not less than 125 per cent 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 comply with special earthing, wiring, marking and installation instruction requirements.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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 no longer than 4.5 m in length.		N/A
	Minimum cord length is 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement.		N/A
	Flexible power supply cords are compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
3.2.9	Permanently connected equipment have a suitable wiring compartment and wire bending space.		N/A
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0.	No wire binding screws.	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 suitable for Canadian/US wire gauge sizes, are		N/A
	- rated 125 per cent of the equipment rating, and		N/A
	- are specially marked when specified (1.7.7).		N/A
3.3.5	Revise first column of Table 3E to "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		N/A
3.4.2	Motor control devices are provided for cord-connected equipment with a motor if the equipment is rated more than 12 A,		N/A
	- or if the motor has a nominal voltage rating greater than 120 V		N/A
	- 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 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 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 complies with NFPA 30.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.13.5	Equipment with lasers meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.	No Laser.	N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) 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) have a flame spread rating of 50 or less.		N/A
	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 complies with U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No ionizing radiation.	N/A
	Other National Differences		P
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements.	Approved components provided, see appended table 1.5.1 of IEC 60950-1 test report.	P
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.		N/A
	This maximum operating voltage includes 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 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.	No TNV.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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.	Green and Yellow wire used.	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more reduce the risk of injury due to the implosion of the CRT.		N/A
4.3.2	Equipment with handles complies with special loading tests.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals 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 overloaded.	See IEC 60950-1 test report.	P
	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	See IEC 60950-1 test report.	P
6.4	Equipment intended for connection to telecommunication network outside plant cable is protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.		N/A
Annex EE	Articulated accessibility probe (Fig EE.3) is used for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear comply with special acoustic pressure requirements.		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
AUSTRALIA and NEW ZEALAND NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: AS/NZS 60950.1:2011

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'	Added.	P
1.5.2	Add the following to the end of the first and third dash items: 'or the relevant Australian/New Zealand Standard'	Added.	P

National Differences																				
Clause	Requirement + Test	Result - Remark	Verdict																	
3.2.5.1	Modify Table 3B as follows: 1. Delete the first four rows and replace with the following: <table><tr><th rowspan="2">RATED CURRENT of equipment A</th><th colspan="2">Minimum conductor sizes</th></tr><tr><th>Nominal cross-sectional area mm²</th><th>AWG or kcmil [cross-sectional area in mm²] see Note 2</th></tr><tr><td>Over 0.2 up to and including 3</td><td>0,5 ^a</td><td>18 [0,8]</td></tr><tr><td>Over 3 up to and including 7.5</td><td>0,75</td><td>16 [1,3]</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> 2. Delete NOTE 1. 3. Delete Footnote ^a and replace with the following: ^a This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the entry to the plug does not exceed 2 m (0,5 mm² three-core supply flexible cords are not permitted; see AS/NZS 3191).	RATED CURRENT of equipment A	Minimum conductor sizes		Nominal cross-sectional area mm²	AWG or kcmil [cross-sectional area in mm²] see Note 2	Over 0.2 up to and including 3	0,5 ^a	18 [0,8]	Over 3 up to and including 7.5	0,75	16 [1,3]	Over 7.5 up to and including 10	(0,75) ^b 1,00	16 [1,3]	Over 10 up to and including 16	(1,0) ^c 1,5	14 [2]	Modified.	N/A
RATED CURRENT of equipment A	Minimum conductor sizes																			
	Nominal cross-sectional area mm²	AWG or kcmil [cross-sectional area in mm²] see Note 2																		
Over 0.2 up to and including 3	0,5 ^a	18 [0,8]																		
Over 3 up to and including 7.5	0,75	16 [1,3]																		
Over 7.5 up to and including 10	(0,75) ^b 1,00	16 [1,3]																		
Over 10 up to and including 16	(1,0) ^c 1,5	14 [2]																		
4.1.201	Insert a new Clause 4.1.201 after Clause 4.1 as follows: 4.1.201 Display devices used for television purposes Display devices which may be used for television purposes, with a mass of 7 kg or more, shall comply with the requirements for stability and mechanical hazards, including the additional stability requirements for television receivers, specified in AS/NZS 60065.		N/A																	
4.3.6	Delete the third paragraph and replace with the following: <i>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.</i>	Deleted.	N/A																	
4.3.16.5	Add the following to the end of the first paragraph: 'or AS/NZS 2211.1'	Added.	N/A																	

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
4.7	Add the following new paragraph to the end of the clause: 'For alternate tests refer to Clause 4.7.201.'	Added.	N/A
4.7.201	Insert a new Clause 4.7.201 after Clause 4.7.3.6 as follows: 4.7.201 Resistance to fire – Alternative tests		N/A
4.7.201.1	4.7.201.1 General Parts of non-metallic material shall be resistant to ignition and spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames from inside the apparatus, or the following: (a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1mm in width regardless of length. (b) The following parts which would contribute negligible fuel to a fire: - small mechanical parts, the mass of which does not exceed 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. 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. Compliance shall be checked by the tests of 4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5. For the base material of printed boards, compliance shall be checked by the test of 4.7.201.5. The tests shall be carried out on parts of non-metallic material which have been removed from the apparatus. When the glow-wire test is carried out, the parts shall be placed in the same orientation as they would be in normal use. These tests are not carried out on internal wiring.		N/A

National Differences									
Clause	Requirement + Test	Result - Remark	Verdict						
4.7.201.2	4.7.201.2 Testing of non-metallic materials Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550 °C. Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glow-wire test shall be not carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part.		N/A						
4.7.201.3	4.7.201.3 Testing of insulating materials Parts of insulating material supporting POTENTIAL IGNITION SOURCES shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750 °C. The test shall be also carried out on other parts of insulating material which are within a distance of 3 mm of the connection. NOTE Contacts in components such as switch contacts are considered to be connections. For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test. However, parts shielded by a barrier which meets the needle-flame test shall not be tested. The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications: <table><tr><td>Clause of AS/NZS 60695.11.5</td><td>Change</td></tr><tr><td colspan="2">9 Test procedure</td></tr><tr><td>9.2 Application of needleflame</td><td> Replace the first paragraph with: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. If possible the flame shall be applied at least 10 mm from a corner Replace the second paragraph with: The duration of </td></tr></table>	Clause of AS/NZS 60695.11.5	Change	9 Test procedure		9.2 Application of needleflame	Replace the first paragraph with: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. If possible the flame shall be applied at least 10 mm from a corner Replace the second paragraph with: The duration of		N/A
Clause of AS/NZS 60695.11.5	Change								
9 Test procedure									
9.2 Application of needleflame	Replace the first paragraph with: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. If possible the flame shall be applied at least 10 mm from a corner Replace the second paragraph with: The duration of								

National Differences			
Clause	Requirement + Test		Verdict
		application of the test flame shall be 30 s $\pm$ 1 s.	
	9.3 Number of test specimens	Replace with: The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.	
	11 Evaluation of test results	Replace with: The duration of burning (t_b) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.	
	The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10, provided that the sample tested was not thicker than the relevant part.		
4.7.201.4	4.7.201.4 Testing in the event of non-extinguishing material If parts, other than enclosures, do not withstand the glow wire tests of 4.7.201.3, by failure to extinguish within 30 s after the removal of the 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. NOTE 1 If the enclosure does not withstand the glow-wire test the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing. NOTE 2 If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the equipment, the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing. NOTE 3 Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting, in contact with, or in close proximity to, connections.		N/A
4.7.201.5	4.7.201.5 Testing of printed boards		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
	The base material of printed boards shall be subjected to the needle-flame test of Clause 4.7.201.3. The flame shall be applied to the edge of the board where the heat sink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge, consisting of broken perforations, unless the edge is less than 3 mm from a POTENTIAL IGNITION SOURCE. The test is not carried out if the — - Printed board does not carry any POTENTIAL IGNITION SOURCE; - Base material of printed boards, on which the available apparent power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category V-1 or better according to AS/NZS 60695.11.10, or the printed boards are protected by an enclosure meeting the flammability category V-0 according to AS/NZS 60695.11.10, or made of metal, having openings only for connecting wires which fill the openings completely; or - Base material of printed boards, on which the available apparatus power at a connection exceeds 15 VA operating at a voltage exceeding 400 V (peak) a.c. or d.c. under normal operating conditions, and base material of printed boards supporting spark gaps which provides protection against overvoltages, is of flammability category V-0 according to AS/NZS 60695.11.10 or the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely. Compliance shall be determined using the smallest thickness of the material. NOTE Available apparent power is the maximum apparent power which can be drawn from the supplying circuit through a resistive load whose value is chosen to maximise the apparent power for more than 2 min when the circuit supplied is disconnected.		
6.2.2	For Australia only, delete the first paragraph and Note, and replace with the following: In Australia only, compliance with 6.2.2 shall be checked by the tests of both 6.2.2.1 and 6.2.2.2.		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
6.2.2.1	For Australia only, delete the first paragraph including the Notes, and replace with the following: <i>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:</i> <i>(i) for 6.2.1 a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and</i> <i>(ii) for 6.2.1 b) and 6.2.1 c): 1.5 kV.</i> NOTE 201 The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines. NOTE 202 The value of 2.5 kV for 6.2.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.		N/A
6.2.2.2	For Australia only, delete the second paragraph including the Note, and replace with the following: <i>In Australia only, the a.c. test voltage is:</i> <i>(i) for 6.2.1 a): 3 kV; and</i> <i>(ii) for 6.2.1 b) and 6.2.1 c): 1.5 kV.</i> NOTE 201 Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used. NOTE 202 The 3 kV and 1.5 kV values have been determined considering the low frequency induced voltages from the power supply distribution system.		N/A
7.3	Add the following before the first paragraph: Equipment providing functions that fall only within the scope of AS/NZS 60065 and that incorporate a PSTN interface, are not required to comply with this Clause where the only ports provided on the equipment, in addition to a coaxial cable connection and a PSTN interface, are audio or video ports and analogue or data ports not intended to be used for telecommunications purposes.		N/A
Annex P	Normative references (List of relevant Australia/New Zealand Standards that have been inserted in place of some of the International Standards)		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
CHINA NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: GB4943.1-2011

1.1.2	GB 4943.1-2011 applies to equipment for use at altitudes not exceeding 5000m above sea level, primarily in regions with moderate or tropical climates. Amend the third dashed paragraph of 1.1.2 as: — — equipment intended to be used in vehicles, on board ships or aircraft, at altitudes greater than 5000m;		N/A
1.4.5	After the third paragraph, add a paragraph: If the equipment is intended for direct connection to an AC mains supply, the tolerances on RATED VOLTAGE shall be taken as +10%,-10% unless a wider tolerance is declared by the manufacturer. The first dash paragraph "-the RATED VOLTAGE is 230V single -phase or 400V three-phase, in which case the tolerance shall be taken as +10% and - 10%" of IEC 60950-1:2005 is deleted in GB 4943.1-2011	Added.	N/A
1.4.12.1	Tma in clause 1.4.12.1 amended as: Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 35 °C, whichever is greater. Add note 1: For equipment not to be operated at tropical climatic conditions, Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 25 °C, whichever is greater. Add note 2: For equipment is to be operated at 2000m-5000m above sea leave, its temperature test conditions and temperature limits are under consideration.		P
1.5. 2	Add a note behind the first break off section in Clause 1.5.2: A component used shall comply with related requirements corresponding altitude of 5000m.	Added.	P
1.7	Add one paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.	Added.	N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	Based on the AC mains supply of China, the RATED VOLTAGE should be 220V (single phase) or 380V (three-phases) for single rated voltage, for RATED VOLTAGE RANGE, it should cover 220V or 380V (three-phases), for multiple RATED VOLTAGES, one of them should be 220V or 380V (three-phases) and set on 220V or 380V (three-phases) when manufactured. And the RATED FREQUENCY or RATED FREQUENCY RANGE should be 50Hz or include 50Hz.		N/A
1.7.2.1	Add requirements of warning for equipment intended to be used at altitudes not exceeding 2000m or at non-tropical climate regions: For equipment intended to be used at altitude not exceeding 2000m, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place. "Only used at altitude not exceeding 2000m."  For equipment intended to be used in not-tropical climate regions, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place. "Only used in not-tropical climate regions."  If only the symbol used, the explanation of the symbol shall be contained in the instruction manual. The above statements shall be given in a language acceptable to the regions where the apparatus is intended to be used.		N/A
2.7.1	Amended the first paragraph as: Protection in PRIMARY CIRCUITS against overcurrent short-circuits and earth faults shall be provided as an integral part of the equipment except special provisions. And the protective device shall meet the requirement of Clause 5.3. Delete note of Clause 2.7.1.		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
2.9.2	First section of Clause 2.9.2 amended as two sections: Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 120 h in a cabinet or room containing air with ambient temperature $40\pm 2^{\circ}\text{C}$ and a relative humidity of $(93\pm 3)\%$. During this conditioning the component or subassembly is not energized. For equipment not to be operated at tropical climatic conditions, Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of $(93\pm 3)\%$. The temperature of the air, at all places where samples can be located, is maintained within 2°C of any convenient value between 20°C and 30°C such that condensation does not occur. Due to pretreatment of equipment operated at high altitude area is humidity conditioning withstand hot shock, specific requirements are to be considered. Add note: For equipment to be operated at 2000 m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered.		N/A
2.10.3.1	Amend the third paragraph of Clause 2.10.3.1 to be: These requirements apply for equipment to be operated up to 2000 m above sea level. For equipment to be operated at more than 2000 m above sea level and up to 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.		N/A
2.10.3.3& 2.10.3.4	Add "(applicable for altitude up to 2000m)" in header of Table 2K、2L and 2M.		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.4	Add a new section above Table 2K and in Clause 2.10.3.4: Minimum CLEARANCES determined by above rules apply for equipment to be operated up to 2000m above sea level. For equipment to be operated at 2000 m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1 (IEC 60664-1). For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of GB/T16935.1.		N/A
3.2.1.1	Add a paragraph before the last paragraph: Plugs connected to AC mains supply shall comply with GB 1002 or GB 1003 or GB/T 11918 as applicable.		N/A
4.2.8	Clause 4.2.8 cathode ray tubes quoted Clause 18 of GB8898-2011. Delete note of Clause 4.2.8.		N/A
Annex E	Last section of Annex E amended as: For comparison of winding temperatures determined by the resistance method of this annex with the temperature limits of Table 4B, 35 °C shall be added to the calculated temperature rise. And add note: for equipment not to be operated at tropical climatic conditions, 25 °C shall be added to the calculated temperature rise to compare with the temperature of Table 4B.		N/A
Annex G.6	Change the second section of Clause G.6 to be: For equipment to be operated at 2000 m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.		N/A
Annex BB (informative)	Amended as : The differences between Chinese national standards GB 4943.1-2011 and GB 4943-2001.		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DD (normative)	Added annex DD: Instructions for the new safety warning labels. DD.1 Altitude warning label  Meaning of the label: Evaluation for apparatus only based on altitude not exceeding 2000m, therefore it's the only operating condition applied for the equipment. There may be some potential safety hazard if the equipment is used at altitude above 2000m. DD.2 Climate warning label  Meaning of the label: Evaluation for apparatus only based on temperate climate condition, therefore it's the only operating condition applied for the equipment. There may be some potential safety hazard if the equipment is used in tropical climate region.		N/A
Annex EE (informative)	Added annex EE: Illustration relative to safety explanation in normative Chinese, Tibetan, Mongolian, Zhuang Language and Uighu.		N/A
Other amend-ments	In accordance with the relevant CTL decisions and the amendments of IEC 60950-1, the specific requirements or mistakes in IEC standard are corrected or editorially modified in this part, Including clause 1.7, 2.1.1.7, 2.9.2, Table 2H, Figure 2H, F.8, F.9, M.3 and Annex U.		N/A
Quoting standards and reference documents	The principles of quoting and referring to other standards in Annex P and reference documents of IEC 60950-1 are as follows: If the date of the reference document is given, only that edition applies, excluding any subsequent corrigenda and amendments. However, parties to agreements based on this part are encouraged to investigate the possibility of applying the most recent editions of the reference documents. For undated references, the latest edition of the referenced document applies, including any corrigenda and amendments. For the usage of international standards in Chinese national standards and industry standards is various, in the aim of achieving easy operation and		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
	based on the requirements of GB/T 1.1 and GB/T 20000.2, when quoting an entire international standard in the normative quoting files and reference documents of Annex P of this part, the principles of quotation are as follows: - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted; - If the date of the national standard or industry standard is not given, the latest edition of the standard applies; - The national standard or industry standard number, corresponding international standard number and the consistency level code should be identified in parentheses behind the listed national standard or industry standard. When quoting several chapters or clauses of the international standard, the principles of quotation are as follows: - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted. Meanwhile, in order to retain the relevant information on international standards, informative annex CC is increased, which gives the table about the comparison of the normative quoting files and reference documents in IEC 60950-1: 2005 and GB 4943.1-2011.		

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
APPENDIX	Ukrainian National Differences according to CB Bulletin No. 110A, June 2006 (IEC Publication 60950:1999)		P
EXPLANATION FOR ABBREVIATIONS			
P=Pass, F=Fail, N/A=Not applicable. Placed in the column to the right.			
1.4.5	In Ukraine the NOMINAL VOLTAGE is 220 V for monophase or 380 V for three-phase supply.		N/A
1.5.8	In Ukraine components connected between phase and earthing or between phase and neutral terminal shall be calculated for the voltage between phases.		N/A
1.7.2	In Ukraine for the APPARATUS of CLASS I the necessity of its obligatory earthing shall be indicated in the manuals.		N/A
2.3.3	In Ukraine method b) is not used.		N/A
6.2.2	In Ukraine the both tests in 6.2.2.1 and 6.2.2.2 are applied.		N/A
6.2.2.1	In Ukraine in 6.2.1 a) is used Uc=3.5 kV.		N/A
6.2.2.2	In Ukraine in 6.2.1 a) is used 3.0 kV for telephones and headsets and 2.5 kV for other equipment and in 6.2.1 b) and c) is used 1.5 kV.		N/A
Annex N	In Ukraine in 6.2.1 a) is used 3.0 kV for telephones and headsets and 2.5 kV for other equipment and in 6.2.1 b) and c) is used 1.5 kV.		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
Appendix	Appendix 12 J3000 (H25) Special National conditions, National deviation and other information according to MITI Ordinance No. 85.		—
1	General requirement When equipment provides with appliance inlet complying with JIS C 8283-1(2008), soldered parts of appliance inlet is not applied by force during insert or removal of connector. This is not applied when inlet body is fixed itself and not fixed by solder.	Inlet is cover by adequate mechanical construction, not rely on soldering.	P
2	Requirement for equipment		—
2.1	Heater Appliances When diode is used in parallel at the power sources for adjustment of power consumption, the equipment shall remain safe for operation under open condition of one diode.		N/A
	The current rating of one diode shall be more than main current. The diodes connected in parallel are same type.		N/A
	The heating test specified by clause 11 of JIS C 9335-1(2003) and a specified in applicable individual requirements under open condition of one diode of parallel shall comply with the requirements.		N/A
2.2	Electric heater with glowing heating elements	Not electric stove.	N/A
	Surface treatment by paint or adhesive on protective frame or protective mesh shall not be used.		N/A
	Caution marking like below shall be on - easily visible place of the equipment or - Instruction manual 「注意 当該機器から、使用初期段階で揮発性有機化合物及びカルボニル化合物が最も放散するおそれがあるため、その際には十分換気を行うこと。」		N/A
3	Components used in equipment	No relevant equipment or component.	N/A
3.1	Motor capacitors used in ventilating fan, electric fan, air conditioner, electric washing machine, refrigerator or electric freezer shall be comply with - capacitors with protective elements or protective mechanism complying with JIS C 4908(2007) - P2 capacitor complying with IEC 60252-1(2001) Capacitor complying with below is acceptable		N/A
	Enclosed by metal or ceramic		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
	No non-metallic materials within 50 mm from capacitor surface		N/A
	Non-metallic material within 50mm from capacitor surface comply with needle frame test of JIS C 9335-1(2003), Annex E		N/A
	Non-metallic material within 50 mm from capacitor surface comply with V-1 test of JIS C 60965-11-10(2006).		N/A
3.2	Plug directly inserted to outlet used refrigerator or electric freezer. Shall comply with - Face contact with outlet shall have CTI with more than 400 according to JIS C 2134(2007) or - Supporting material of blades shall comply with glow wire test by temperature of 750°C according to JIS C 60695-2-11(2004) or JIS C 60695-2-12(2004). Materials having glow wire frame temperature of 775 °C are acceptable.		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict

J 60950-1(H27) TEST REPORT

(Deviations from IEC 60950-1:2005+A1:2009)

Special National conditions, National deviation and other information according to MITI Ordinance No. 85.
Japanese unique deviations in J60950-1(H27) (=JIS C 6950-1:2014)

1.2.4.1	Replace the existing NOTE as NOTE 1, and add NOTE 2 as following: NOTE 2: Even if the equipment is designed as CLASS I EQUIPMENT, if a 2-pin plug adaptor with a protective earthing lead wire (adaptor which converts a plug for CLASS I EQUIPMENT to a 2-pin plug with no earthing contact) or a cord set having a 2-pin plug with a protective earthing lead wire is packed as accessory together with the equipment or if use of those is recommended to the users, the equipment is considered as CLASS 0I EQUIPMENT.	Added.	P
1.2.4.3A	Add 1.2.4.3A as following: 1.2.4.3A CLASS 0I EQUIPMENT Equipment having a mains plug without earthing contact, which protection against electric shock is achieved by: - using BASIC INSULATION; and - for the measures to connect conductive part(s) regarded as part at HAZARDIOUS VOLTAGE in the event of fault of BASIC INSULATION to PROTECTIVE EARTHING CONDUCTOR, equipping any one of the following: a) mains plug with a protective earthing lead wire, this includes the following cases: - where a 2-pin plug adaptor with a protective earthing lead wire is packed as accessory together with the equipment; or - where use of it is recommended. b) independent protective earthing terminal (see 2.6.5.8A) if the equipment uses a power supply cord of two conductors (exclude earthing conductor) NOTE - CLASS 0I EQUIPMENT may have a part constructed with DOUBLE INSULATION or REINFORCED INSULATION.	Added.	P

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
1.3.2	Add the following NOTES after first paragraph: NOTE 1 TRANSPORTABLE or similar equipment that are relocated frequently for intended usage it is recommended not to design as CLASS I or CLASS 0I EQUIPMENT unless it is intended to be installed by a SERVICE PERSON or installation personnel. NOTE 2 Considering wiring circumstance in Japan, equipment intended to be installed where the provision for earthing connection is unlikely should not be designed as CLASS I or CLASS 0I EQUIPMENT unless it is intended to be installed by a SERVICE PERSON or installation personnel.	Added. Not transportable equipment	P
1.5.1	Replace the first paragraph with the following: Where safety is involved, components shall comply either with the requirements of this standard, with the safety aspects of the relevant JIS component standards, or IEC component standards in case there is no applicable JIS component standard available. However, a component that falls within the scope of METI Ministerial ordinance No. 85 is properly used in accordance with its marked ratings, requirements of 1.5.4, 2.8.7 and 3.2.5 apply, and in addition, for connector of power cord set which is capable of insertion to one of appliance inlets specified in either IEC 60320-1 or JIS C 8283-1, the connector shall comply with the dimensions of the appropriate connector specified in IEC 60320-1 or JIS C 8283-1. Replace NOTE 1 with the following: NOTE 1 A JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope.	Replaced.	P

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.2	Replace first sentence in the first dashed paragraph with the following: - a component that has been demonstrated to comply with a JIS component standard harmonized with the relevant IEC component standard, or where such JIS component standard is not available, a component that has been demonstrated to comply with the relevant IEC component standard shall be checked for correct application and use in accordance with its rating. Replace existing NOTE to NOTE 1 without modification of the sentence in the second dashed paragraph. Replace “where no relevant IEC component standard exists” to “where neither the relevant IEC component standard nor JIS standard corresponding to the relevant IEC component standard exists” in the third dashed paragraph. Add NOTE 2 as follows: NOTE 2 If an appliance inlet with a rated current of 10A, which is of STANDARD SHEET C14 specified in JIS C 8283-1, is used for equipment with a rated voltage of 125V or less; and with a rated current of exceeding 10A, refer to 1.7.5A.	Replaced.	P
1.5.9.1	General Replace the following at first dash of NOTE 2: JIS C5381-21 [Part 21 of Low pressure surge protection device : Performance requirement and test method of surge protection device (SPD) which connected with communication channel and signal]		N/A
1.5.9.4	Add the following at last paragraph: It is permitted to use a gas discharge tube (GDT) in series with a VDR that bridges BASIC INSULATION in accordance with the conditions in this subclause if the GDT complies with the requirements for FUNCTIONAL INSULATION.	Complied	P

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	Replace the existing dashed items for manufacturer's name etc. and for model identification etc. with the following respectively: - manufacturer's (or responsible business operator's) name or trade-mark or identification mark; - manufacturer's (or responsible business operator's) model identification or type reference; In the last paragraph, replace "ISO 7000 or IEC 60417" with "JIS S 0101, ISO 7000 or IEC 60417".	Replaced.	P
1.7.2.1	Add the following: Instructions and the marking(s) on equipment, which related to safety, shall be made in Japanese.	Added. Shall be evaluated during national approval	N/A
1.7.5	Replace IEC 60083 with JIS C 8303 in the second paragraph.	Replaced.	N/A
1.7.5A	Add the following new clause after 1.7.5 1.7.5.A Power supply cord set If an appliance inlet with a rated current of 10 A, which is of STANDARD SHEET C14 specified in JIS C 8283-1, is used for equipment with a rated voltage of 125 V or less and with a rated current of exceeding 10 A, the operating instructions shall provide the following or equivalent instruction: “この機器に同こん（梱）した指定の電源コードセットだけを使用する。” For equipment with an appliance inlet, if a power supply cord set is not provided by packing together with the equipment, the operating instructions shall provide information on the applicable power supply cord set. NOTE For the combination of CLASS 0I EQUIPMENT equipped with an appliance inlet with earthing contact and a power supply cord set of two conductors (exclude earthing conductor), to pack the power supply cord set together with the equipment and to provide a sentence calling attention of the following purport in the operating instructions are recommended, because such power supply cord set is a special kind of cord set: - this is usable only for this equipment; and - to use this for other equipment is not allowed.	Added. Not Exceed 10A	N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.14A	Add the following new clause after 1.7.14 1.7.14A Marking for protective earthing connection for CLASS 0I EQUIPMENT CLASS 0I EQUIPMENT shall be provided with the following or equivalent instruction: - on the mains-plug or the easily visible section of equipment, the following instruction: 必ず接地接続を行って下さい。 - in the easily visible section of equipment or in the operating instructions, the following instruction: 接地接続は必ず、電源プラグを電源につなぐ前に行って下さい。 また、接地接続を外す場合は、必ず電源プラグを電源から切り離してから行って下さい。	Added. Shall be evaluated during national approval	N/A
1.7.14B	Add the following new clause after 1.7.14 1.7.14B Protective earth wire used for CLASS 0I EQUIPMENT For CLASS 0I EQUIPMENT equipped with a separate protective earthing terminal as main protective earthing terminal, if a protective earth wire is not provided by packing together with the equipment, the operating instructions shall provide information on the applicable protective earth wire. (See 2.6.3.2.)	Added.	P
2.1.1.1	In b) of the fifth paragraph, replace “IEC 60083, IEC 60309, IEC 60320, IEC 60906-1 or IEC 60906-2” with “JIS C 8303, (the Ministerial Ordinance establishing Technical Requirements for Electrical Appliances and Materials, METI Ordinance No. 85, Clause 1 (METI Ordinance No. 34 of 2013), JIS C 8285, the IEC 60309 series of standards, the JIS C 8283 series of standards, the IEC 60320 series of standards”.	Replaced.	P
2.6.3.2	Add the following: If the conductor of protective earthing lead wire or the protective earth wire of CLASS 0I EQUIPMENT is of single-core, it shall be one of the following: - annealed copper wire of 1,6 mm in diameter, or metallic wire having the same or more strength and diameter and being not easily corrosive; or - single-core cord or single-core cable (sheathed flexible cable), which have a cross-sectional area of at least 1,25 mm².	Added.	P

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.3.5	Add the following: However, this requirement does not apply to the inside conductor of power supply cord (or power supply cord set), which has been molded together with a plug and a connector and has been sheathed.	Added. No power cord provided	N/A
2.6.4.2	Add the following: For CLASS 0I EQUIPMENT equipped with a separate protective earthing terminal, the protective earthing terminal may be used as the main protective earthing terminal.	Added.	P
2.6.5.4	Replace 1st sentence with the following. "Protective earthing conductors" with "Protective earthing conductors of CLASS I EQUIPMENT".	Added.	P
2.6.5.6	Replace "protective earthing terminals" with "protective earthing and protective bonding terminals".	Added.	N/A
2.6.5.8A	Add the following new clause. after 2.6.5.8A 2.6.5.8A Earthing of CLASS 0I EQUIPMENT Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V. For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip. CLASS 0I EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external location where easily visible.	Added.	P
2.9.3 Table 2H	Deleted the following mark of Figure 2H: B13 e) and S2 d)	Deleted	N/A
2.9.3 Figure 2H	Addition of marking for table 2H: B8, B9, B12, B13, S1	Added	N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.1	In the third paragraph, replace IEC 60664-1 with JIS C 60664-1. Replace the 8th paragraph with the following: The above minimum CLEARANCES for connectors do not apply to: - connectors that comply with JIS C 8285, the IEC 60309 series of standards, the JIS C 8283 series of standards, the IEC 60320 series of standards or JIS C 8303; and - connectors that comply with the Ministerial Ordinance establishing Technical Requirements for Electrical Appliances and Materials MEIT Ordinance No. 85, Clause 1 (METI Ordinance No. 34 of 2013), and comply with the dimensions specified in the JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2; see also 1.5.2.	Replaced.	P
2.10.3.2	In the bottom column of Table 2J, add the following: In Japan, the MAINS TRANSIENT VOLTAGE value against the nominal AC MAINS SUPPLY voltage of 100 V is decided by applying the columns for the AC MAINS SUPPLY voltage of 150 V.	Added.	P
2.10.3.3	In Table 2L, add the following into the column specifying the additional CLEARANCES and at the end: For intermediate voltage values between the PEAK WORKING VOLTAGE values given in this table, linear interpolation is permitted between the nearest two points, the calculated additional minimum CLEARANCE being rounded up to the next higher 0,1 mm increment.	Added.	P
2.10.4.3	Replace the 6th paragraph with the following: The above minimum CLEPAGE DISTANCES for connectors do not apply to: - connectors that comply with JIS C 8285, the IEC 60309 series of standards, the JIS C 8283 series of standards, the IEC 60320 series of standards or JIS C 8303; and - connectors that comply with the Ministerial Ordinance establishing Technical Requirements for Electrical Appliances and Materials MEIT Ordinance No. 85, Clause 1 (METI Ordinance No. 34 of 2013), and comply with the dimensions specified in the JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2; see also 1.5.2.	Replaced.	P
2.10.9	Replace clause which as test method of T^I from 1.4.5 to 1.4.12.	Replaced.	N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	Add the following: When equipment with an appliance inlet connects to AC mains supply, see clause 1.7.5A for the relevant mark of power supply cord set.	Added.	N/A
3.2.3	Add the following after Table 3A: Table 3A applies when cables complying JIS C 3662 or JIS C 3663 are used. In case of other cables, cable entries shall be so designed that a conduit suitable for the cable used can be fitted.	Added.	N/A
3.2.4	Add the following: The equipment shall have a structure of which the soldered sections of the terminals of appliance inlet are not subjected to mechanical stress during the insertion or removal of the connector, except the case fixing the appliance inlet itself mechanically but not only by soldering.	Added. Inlet is cover by adequate mechanical construction, not rely on soldering.	P
3.2.5.1	At the end of the first dashed item, replace “; and” with “, or be a sheathed cord complying with Appendix 1 specified in the Interpretation for the Ministerial Ordinance establishing Technical Requirements for Electrical Appliances and Materials MEIT Ordinance No. 85, Clause 1 (METI Ordinance No. 34 of 2013) ; and”.	Added.	N/A
	In the second dashed item, replace “insulated:” with “insulated, be a cord of the following or be a sheathed cord complying with Appendix 1 specified in the Interpretation for the Ministerial Ordinance establishing Technical Requirements for Electrical Appliances and Materials MEIT Ordinance No. 85, Clause 1 (METI Ordinance No. 34 of 2013), :”	Replaced.	N/A
	In the third dashed item, add the following: However, the coating of the protective earth conductor inside covered with sheath (cord set) power cord integrally formed with the connector and the plug need not be a combination of green and yellow. In addition, the power cord of CLASS OI EQUIPMENT having a protective earth conductor separately, it is not necessary to provide a protective earth conductor.	Added.	N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
	Replace the existing fourth dashed item with the following: - if those complying with JIS C 3662-5 or JIS C 3663-4, have conductors with cross-sectional areas not less than those specified in Table 3B, and if others, comply with the relevant wiring rules. In Table 3B, replace “IEC 60320” with “the JIS C8283 series of standards or the IEC 60320 series of standards”.	Replaced.	N/A
3.3.4	Add the following note to Table 3D: For cables other than those complying with JIS C 3662 or JIS C 3663, terminals shall be suitable for the size of the intended cables.	Added.	N/A
3.3.7	Add the following after the first sentence: This requirement is not applicable to the external earthing terminal of CLASS 0I EQUIPMENT.	Added.	N/A
4.3.4	Add the following after the first sentence: This requirement also applies to those connections in CLASS 0I EQUIPMENT, where CLEARANCE or CREEPAGE DISTANCES of BASIC INSULATION would be reduced to less than the values specified in 2.10.	Added.	N/A
4.3.5	In the paragraph, replace “IEC 60083 or IEC 60320” with “the JIS C 8283 series of standards, JIS C 8303 or JIS C 8358”.	Replaced.	P
4.5.3	In the item b in Table 4B, add the following: NOTE If no data of material is available, Appendix 4, 1(1), 3 specified in the Interpretation for “the Ministerial Ordinance establishing Technical Requirements for Electrical Appliances and Materials MEIT Ordinance No. 85, Clause 1 (METI Ordinance No. 34 of 2013)” is applicable. In the item c in Table 4B, replace IEC 60085 with JIS C 4003.	Replaced.	P
5.1.3	Add a note after the first paragraph as follows: NOTE In Japan, three-phase power distribution systems of delta connection are typical, therefore, in such case, test is conducted using the test circuit from IEC 60990, figure 13.	Added. Single phase power distribution system used.	N/A
5.1.6	Replace Table 5A as follows	Replaced. See IEC 60950-1 report	P

National Differences					
Clause	Requirement + Test		Result - Remark	Verdict	
	Type of equipment		Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s.^a	Maximum PROTECTIVE CONDUCTOR CURRENT
	All equipment		Accessible parts and circuits not connected to protective earth ^b	0,25	—
	HAND-HELD		Class I equipment main protective earthing terminal	0,75	—
			Class 0I equipment main protective earthing terminal	0,5	—
	MOVABLE (other than HAND-HELD, but including TRANSPORTABLE EQUIPMENT)		Class I equipment main protective earthing terminal	3,5	—
			Class 0I equipment main protective earthing terminal	1,0	—
	STATIONARY, PLUGGABLE TYPE A		Class I equipment main protective earthing terminal	3,5	—
			Class 0I equipment main protective earthing terminal	1,0	—
	All other STATIONARY EQUIPMENT — not subject to the conditions of 5.1.7 — subject to the conditions of 5.1.7		Class I equipment main protective earthing terminal	3,5 —	— 5 % of input current
			Class 0I equipment main protective earthing terminal	1,0 —	— —
	^a If peak values of TOUCH CURRENT are measured, the maximum values are obtained by multiplying the r.m.s. values in the table by 1,414. ^b Some unearthed accessible parts are covered in 1.5.6 and 1.5.7 and the requirements of 2.4 apply. These may be different from those in 5.1.6.				
	6	Add following in the end of NOTE 1: For suitable additional measures, see Annex JB.		No TNV.	N/A
	6.1.2.1	Add the following: NOTE 3 For example, the highest nominal voltage is 230 V in Europe and 120 V in North America.		No TNV.	N/A
Annex G.6	Replace the existing 8 th paragraph with the following: The above minimum CLEARANCES for connectors do not apply to: - connectors that comply with JIS C 8285, the IEC 60309 series of standards, the JIS C 8283 series of standards, the IEC 60320 series of standards or JIS C 8303; and - connectors that with the Ministerial Ordinance establishing Technical Requirements for Electrical Appliances and Materials (MEIT Ordinance No. 34 of 2013) and comply with the dimensions specified in the JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2; see also 1.5.2.		Replaced.	N/A	

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
Annex M	In M.1, replace the existing paragraph with the following: One of the two methods specified in this annex shall be applied. NOTE Method A specified in the annex is typical of analogue telephone network in Europe and Method B of those in North America.	No telephone ringing signals.	N/A
Annex P	Replace the existing Annex P with the following:	Replaced.	P
	Annex P (normative) Normative references The following reference documents are indispensable for the application of this standard. If the date of the reference document is given, only that edition applies, and any newer edition and subsequent amendments do not apply. If the date of the reference document is not given, the latest edition including the amendments applies. Further information on the reference documents, including how to obtain copies, can be found on the following internet sites: http://www.jisc.go.jp/ http://www.iec.ch http://www.iso.org http://www.itu.int JIS B 0205-2, ISO general purpose metric screw threads - Part2: General plan NOTE Corresponding IS: ISO 261, ISO general purpose metric screw threads—General plan (IDT) JIS B 0205-3, ISO general purpose metric screw threads - Part3 : Selected sizes for screws, bolts and nuts NOTE Corresponding IS: ISO 262, ISO general purpose metric screw threads - Selected sizes for screws, bolts and nuts (IDT) JIS C 0448, Coding of indicating devices and actuators by colours and supplementary means NOTE Corresponding IS: IEC 60073, Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicator devices and actuators (IDT) JIS C 2134, Method for the determination of the proof and the comparative tracking indices of solid insulating materials NOTE Corresponding IS: IEC 60112, Method for the determination of the proof and the comparative tracking indices of insulating materials (IDT) JIS C 3215 (all parts), Specifications for particular types of winding wires NOTE Corresponding IS: IEC 60317 (all parts), Specifications for particular types of winding wires (IDT) JIS C 3661-1:1998, Electrical test methods for electric cables - Part 1: Electrical tests for cables, cords and wires for voltages up to and including 450/750V NOTE Corresponding IS: IEC 60885-1:1987, Electrical test methods for electric cables. Part 1: Electrical tests for cables, cords and wires for voltages up to and including 450/750 V (IDT) JIS C 3662 (all parts), Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V - Part 1 : General requirements NOTE Corresponding IS: IEC 60227 (all parts), Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V (MOD) JIS C 3663 (all parts), Rubber insulated cables - Rated voltages up to and including 450/750 V NOTE Corresponding IS: IEC 60245 (all parts), Rubber insulated cables - Rated voltages up to and including 450/750 V (MOD) JIS C 4003, Electrical insulation-Thermal evaluation and designation NOTE Corresponding IS: IEC 60085:2004, Electrical insulation - Thermal classification (MOD) JIS C 4526-1:2005, Switches for appliances - Part 1: General requirements NOTE Corresponding IS: IEC 61058-1:2000, Switches for appliances - Part 1: General requirements (MOD) JIS C 5101-14:2009, Fixed capacitors for use in electronic equipment - Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains NOTE Corresponding IS: IEC 60384-14:2005, Fixed capacitors for use in electronic equipment - Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains (IDT) JIS C 6065:2007 and Amendment 1:2009, Audio, video and similar electronic apparatus - Safety requirements NOTE Corresponding IS: IEC 60065:2001, Audio, video and similar electronic apparatus - Safety requirements and Amendment 1:2005 (MOD) JIS C 6802, Safety of laser products		

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
	NOTE Corresponding IS: IEC 60825-1, Safety of laser products-Part 1: Equipment classification and requirements (IDT) JIS C 6803, Safety of laser products-Safety of optical fiber communication systems NOTE Corresponding IS: IEC 60825-2, Safety of laser products-Part 2: Safety of optical fiber communication systems (OFCS) (IDT) JIS C 6804, Safety of laser products-Safety of free space optical communication systems used for transmission of information NOTE Corresponding IS: IEC 60825-12, Safety of laser products - Part 12: Safety of free space optical communication systems used for transmission of information (IDT) JIS C 8201-1:2007, Low-voltage switchgear and controlgear-Part 1: General rules NOTE Corresponding IS: IEC 60947-1:2004, Low-voltage switchgear and controlgear - Part 1: General rules (MOD) JIS C 8283 (all parts), Appliance couplers for household and similar general purposes NOTE Corresponding IS: IEC 60320 (all parts), Appliances couplers for household and similar general purposes (MOD) JIS C 8285, Plugs, socket-outlets and couplers for industrial purposes NOTE Corresponding IS: IEC 60309-1, Plugs, socket-outlets and couplers for industrial purposes - Part 1: General requirements (MOD) JIS C 8303, Plugs and receptacles for domestic and similar general use JIS C 8358:1994, Appliance couplers for domestic and similar use JIS C 9730-1:2010, Automatic electrical controls for household and similar use - Part 1:General requirements NOTE Corresponding IS: IEC 60730-1:1999, Automatic electrical controls for household and similar use - Part 1: General requirements and Amendment 1:2003 (MOD) JIS C 60068-2-78, Environmental testing - Test Cab:Damp heat,steady state NOTE Corresponding IS: IEC 60068-2-78, Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state (IDT) JIS C 60364-1:2006, Low-voltage electrical installations - Part 1: Fundamental principles, assessment of general characteristics, definitions NOTE Corresponding IS: IEC 60364-1:2001, Electrical installations of buildings - Part 1: Fundamental principles, assessment of general characteristics, definitions (IDT) JIS C 60664-1:2009, Insulation coordination for equipment within low-voltage systems - Part 1:Principles,requirements and tests NOTE Corresponding IS: IEC 60664-1:1992, Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests, Amendment 1:2000 and Amendment 2:2002 (IDT) JIS C 60695-2-11, Fire hazard testing - Glow-wire flammability test method for end-products NOTE Corresponding IS: IEC 60695-2-11, Fire hazard testing - Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products (IDT) JIS C 60695-2-20, Fire hazard testing—Part 2 : Glowing /Hot wire based test methods— Section 20 : Hot-wire coil ignitability test on materials NOTE Corresponding IS: IEC/TS 60695-2-20, Fire hazard testing - Part 2-20: Glowing/hot wire based test methods - Hot-wire coil ignitability - Apparatus test method and guidance (IDT) JIS C 60695-10-2, Fire hazard testing-Part 10-2: Abnormal heat-Ball pressure test NOTE Corresponding IS: IEC 60695-10-2, Fire hazard testing - Part 10-2: Abnormal heat - Ball pressure test (IDT) JIS C 60695-11-5:2007, Fire hazard testing-Part 11-5:Test flames-Needle-flame test method - Apparatus, confirmatory test arrangement and guidance NOTE Corresponding IS: IEC 60695-11-5:2004, Fire hazard testing - Part 11-5: Test flames - Needle-flame test method - Apparatus, confirmatory test arrangement and guidance (IDT) JIS C 60695-11-10, Fire hazard testing-Part 11-10:Test flames - 50 W horizontal and vertical flame test methods NOTE Corresponding IS: IEC 60695-11-10, Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods (IDT) JIS C 60695-11-20, Fire hazard testing-Part 11-20: Test flames - 500 W flame test methods NOTE Corresponding IS: IEC 60695-11-20, Fire hazard testing - Part 11-20: Test flames - 500 W flame test methods (IDT) JIS C 7550:2011, Safety for lighting of lamp and lamp system on biology JIS C 60695-10-3:2005, Fire resistance test – Electrical . Electronic – Part 10-3 : Thermal caused abnormal – Deformation test of molded stress after released NOTE Corresponding IS: IEC 60695-10-3:2002, Fire hazard testing – Part 10-3 : Abnormal heat – Mould stress relief distortion test (IDT) JIS K 7110, Plastics - Determinaion of Izod impact strength NOTE Corresponding IS: ISO 180, Plastics - Determination of Izod impact strength (MOD) JIS K 7111 (all parts), Plastics-Determination of Charpy impact properties - Part 1: Non-instrumented impact test NOTE Corresponding IS: ISO 179 (all parts), Plastics - Determination of Charpy impact properties (MOD) JIS K 7127, Plastics - Determination of tensile properties—Part 3 : Test conditions for films and sheets		

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
	NOTE Corresponding IS: ISO 527-3, Plastics - Determination of tensile properties - Part 3: Test conditions for films and sheets (IDT) JIS K 7160, Plastics—Determination of tensile-impact strength NOTE Corresponding IS: ISO 8256, Plastics - Determination of tensile-impact strength (IDT) JIS K 7161, Plastics—Determination of tensile properties—Part 1 : General principles NOTE Corresponding IS: ISO 527-1, Plastics - Determination of tensile properties - Part 1: General principles (IDT) JIS K 7162, Plastics - Determination of tensile properties - Part 2 : Test conditions for moulding and extrusion plastics NOTE Corresponding IS: ISO 527-2, Plastics - Determination of tensile properties - Part 2: Test conditions for moulding and extrusion plastics (IDT) JIS K 7164, Plastics - Determination of tensile properties - Test conditions for isotropic and orthotropic fibre-reinforced plastic composites NOTE Corresponding IS: ISO 527-4, Plastics - Determination of tensile properties - Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites (MOD) JIS K 7165, Plastics-Determination of tensile properties-Part 5: Test conditions for unidirectional fibre-reinforced plastic composites NOTE Corresponding IS: ISO 527-5, Plastics - Determination of tensile properties - Part 5: Test conditions for unidirectional fibre-reinforced plastic composites (MOD) JIS K 7171, Plastics - Determination of flexural properties NOTE Corresponding IS: ISO 178, Plastics - Determination of flexural properties (IDT) JIS K 7241, Cellular plastics-Determination of horizontal burning characteristics of small specimens subjected to a small flame NOTE Corresponding IS: ISO 9772, Cellular plastics - Determination of horizontal burning characteristics of small specimens subjected to a small flame (IDT) JIS K 7341, Plastics-Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source NOTE Corresponding IS: ISO 9773, Plastics - Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source (IDT) JIS K 7350-1, Plastics - Methods of exposure to laboratory light sources - Part 1: General guidance NOTE Corresponding IS: ISO 4892-1, Plastics - Methods of exposure to laboratory light sources - Part 1: General guidance (IDT) JIS K 7350-2, Plastics - Methods of exposure to laboratory light sources - Part 2 : Xenon-arc lamps NOTE Corresponding IS: ISO 4892-2, Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps (MOD) JIS K 7350-4, Plastics - Methods of exposure to laboratory light sources - Part 4: Open-flame carbon-arc lamps NOTE Corresponding IS: ISO 4892-4, Plastics - Methods of exposure to laboratory light sources - Part 4: Open-flame carbon-arc lamps (MOD) JIS S 0101:2000, Graphical warning symbols for consumers TS C 60695-11-3, Fire hazard testing - Part 11-3: Test flames - 500 W flames - Apparatus and confirmational test methods NOTE Corresponding IS: IEC 60695-11-3, Fire hazard testing - Part 11-3: Test flames - 500 W flames - Apparatus and confirmational test methods (IDT) TS C 60695-11-4, Fire hazard testing - Part 11-4: Test flames - 50 W flames - Apparatus and confirmational test methods NOTE Corresponding IS: IEC 60695-11-4, Fire hazard testing - Part 11-4: Test flames - 50 W flames - Apparatus and confirmational test methods (IDT) IEC 60216-4-1, Electrical insulating materials - Thermal endurance properties - Part 4-1: Ageing ovens - Single-chamber ovens IEC 60309 (all parts), Plugs, socket-outlets and couplers for industrial purposes IEC 60317 (all parts), Specifications for particular types of winding wires IEC 60317-43, Specifications for particular types of winding wires - Part 43: Aromatic polyimide tape wrapped round copper wire, class 240 IEC 60320 (all parts), Appliance couplers for household and similar general purposes IEC 60417-DB:2002, Graphical symbols for use on equipment (For DB, see the online database of the IEC.) IEC 60747-5-5, Semiconductor devices - Discrete devices - Part 5-5: Optoelectronic devices – Photocouplers IEC/TR 60825-9, Safety of laser products - Part 9: Compilation of maximum permissible exposure to incoherent optical radiation IEC 60851-3:1996, Winding wires - Test methods - Part 3: Mechanical properties and Amendment 1:1997 IEC 60851-5:1996, Winding wires - Test methods - Part 5: Electrical properties, Amendment 1:1997 and Amendment 2:2004 IEC 60851-6:1996, Methods of test for winding wires - Part 6: Thermal properties		

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
	IEC 60947-1:2004, Low-voltage switchgear and controlgear - Part 1: General rules IEC 60990:1999, Methods of measurement of touch current and protective conductor current IEC 61051-2, Varistors for use in electronic equipment - Part 2: Sectional specification for surge suppression varistors ISO 180, Plastics - Determination of Izod impact strength ISO 3864-2: Graphical symbols – Safety colours and safety signs – Part 2: principles for product safety labels. ISO 4892-1, Plastics - Methods of exposure to laboratory light sources - Part 1: General guidance ISO 7000-DB:2004, Graphical symbols for use on equipment - Index and synopsis (For DB, see the online database of the IEC.) ISO 8256, Plastics - Determination of tensile-impact strength ITU-T Recommendation K.44, Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents - Basic Recommendation		
Annex U.2.4	Replace the existing NOTE as NOTE1, add NOTE 2 as follows: NOTE 2 by taking into account environmental impact, “(for example, 1.1.1-trichloroethane)” described in the corresponding IEC standard was deleted.	Replaced.	P
Annex V.1	Replace “In 3.1.2 of IEC 60364-1” with “312 of JIS C 60364-1”.	Replaced.	P
Annex W.1	Replace second and third sentence in the first paragraph with the following: This distinction between earthed and unearthed (floating) circuit is not the same as between CLASS I EQUIPMENT, CLASS 0I EQUIPMENT and CLASS II EQUIPMENT. Floating circuits can exist in CLASS I EQUIPMENT or CLASS 0I EQUIPMENT and earthed circuits in CLASS II EQUIPMENT.	Replaced.	N/A
Annex AA	Replace figure AA.3 which correct the position of insulating metal sheet.	Replaced.	N/A
Annex BB	(Reference) [Change point which from IEC 60950-1 : 2001 (v1) to IEC 60950-1 : 2005 (v2)] (Deleted text body)		—
Annex CC	Evaluation of integrated circuit (IC) current limiters		N/A
CC.2	Test program 1		N/A
	10 000 cycles of turning enable on and off with an iron-core inductor having (0.35 ± 0.1) mH inductance at 1 kHz and less than 1 Ω DC resistance value connected in the output circuit;		N/A
	10 000 cycles of turning enable on and off with the input connected to a capacitor rated $425 \mu\text{F} \pm 10 \mu\text{F}$ and shorting the output;		N/A
	10 000 cycles of turning the input pin on and off with an iron-core inductor having (0.35 ± 0.1) mH inductance at 1 kHz and less than 1 Ω DC resistance value connected to the input supply and return while keeping enable active and shorting the output;		

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
CC.3	Test program 2		N/A
	Note: It's advisable to use that in conformity with IEC 60127-2 for quick-fusing type fuse.		N/A
Annex EE	Household and home/office document/media shredders		N/A
	Note: Delete requirements of this Annex which corresponding IS and replace this Annex by Annex JA.		N/A
	Foreword of Annex JA (Requirements for shredder) was replaced by following: It shall conformity with requirements of this Annex for that add to body with Household and home/office document /media shredders.		N/A
Annex JA	Add a new annex JA with the following contents. Annex JA (normative) Requirements for document shredding machines (see 1.7, 2.8.3, 3.4 and 4.4) Introduction This annex specifies the safety requirements for document shredding machines, except those of STATIONARY EQUIPMENT used by connecting directly to 3-phase AC MAINS SUPPLY of a voltage not the than 200V. Document shredding machines shall comply with the requirements of this annex in addition to other requirements specified in this standard, except those of STATIONARY EQUIPMENT used by connecting directly to three-phase AC MAINS SUPPLY of a voltage not less than 200V.	Not document shredding machine.	N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
JA.1	Markings and instructions In the easily visible part near to the slot for documents, by a method of clearly legible and permanent and by using easily understandable terms, document shredding machines shall have markings of the symbol  specified in 6.2.1 (general cautions) of JIS S 0101:2000, Graphical warning symbols for consumers, and also the following precautions for use: - that use by an infants/children may cause a hazard of injury etc.; - that a hand can be drawn into the mechanical section for shredding when touching the document-slot; - that clothing can be drawn into the mechanical section for shredding when touching the document-slot; - that hairs can be drawn into the mechanical section for shredding when touching the document-slot; - in case of equipment incorporating a commutator motor, that equipment may catch fire or explode by spraying of flammable gas.	Not document shredding machine.	N/A
JA.2	Inadvertent reactivation Any safety interlock that can be operated by means of the test finger, Figure JA.1, is considered to be likely to cause inadvertent reactivation of the hazard. Compliance is checked by inspection and, where necessary, by a test with the test finger, Figure JA.1	Not document shredding machine.	N/A
JA.3	Disconnect switch Document shredding machines shall incorporate an isolating switch complying with sub-clause 3.4.2 as the device disconnecting the power of hazardous moving parts. For this switch, two-position (single-use) switch or multi-position (multifunction) switch (e.g., slide switch) may be used. If two-position switch, the positions for "ON" and "OFF" shall be indicated in accordance with sub-clause 1.7.8. If multi-position switch, the position for "OFF" shall be indicated in accordance with sub-clause 1.7.8 and other positions shall be indicated with proper terms or symbols. Compliance is checked by inspection.	Not document shredding machine.	N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
JA.4	Protection in operator access area Any warning shall not be used instead of the structure for preventing access to hazardous moving parts. Document shredding machines shall comply with the following requirements. Insert the test finger, Figure JA.1, into all openings in MECHANICAL ENCLOSURES without applying appreciable force. It shall not be possible to touch hazardous moving parts with the test finger. This consideration applies to all sides of MECHANICAL ENCLOSURES when the equipment is mounted as intended. Before testing with the test finger, remove the parts detachable without a tool. Insert the wedge-probe, Figure JA.2, into the document-slot. And, against all directions of openings, if straight-cutting type, a force of 45 N shall apply to the probe, and 90 N if cross-cutting type. In this case, the weight of the probe is to be factored into the overall applied force. Before testing with the wedge-probe, remove the parts detachable without a tool. It shall not be possible to touch any hazardous moving parts, including the shredding roller or the mechanical section for shedding, with the probe.	See above.	N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict

Dimensions in millimeters

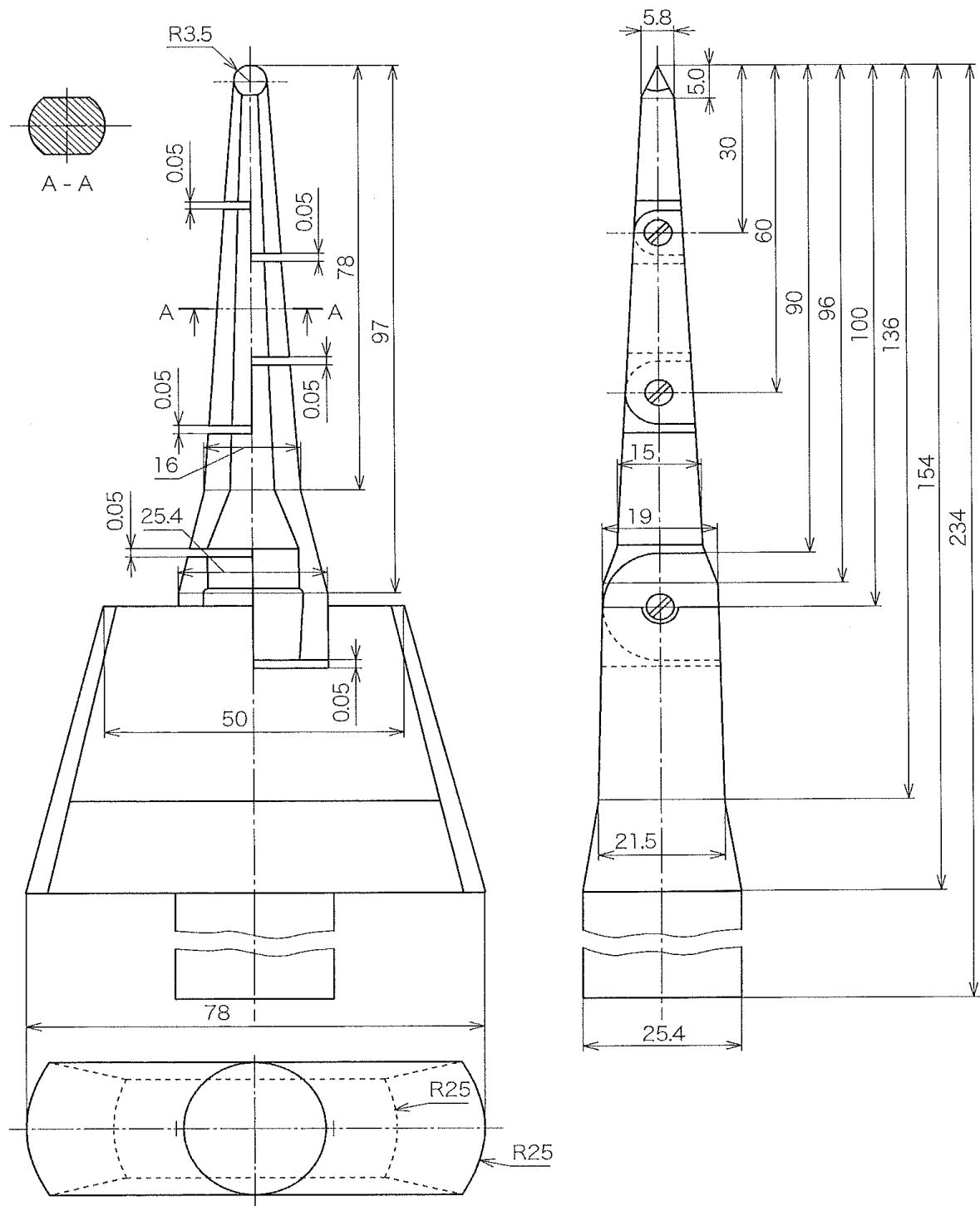
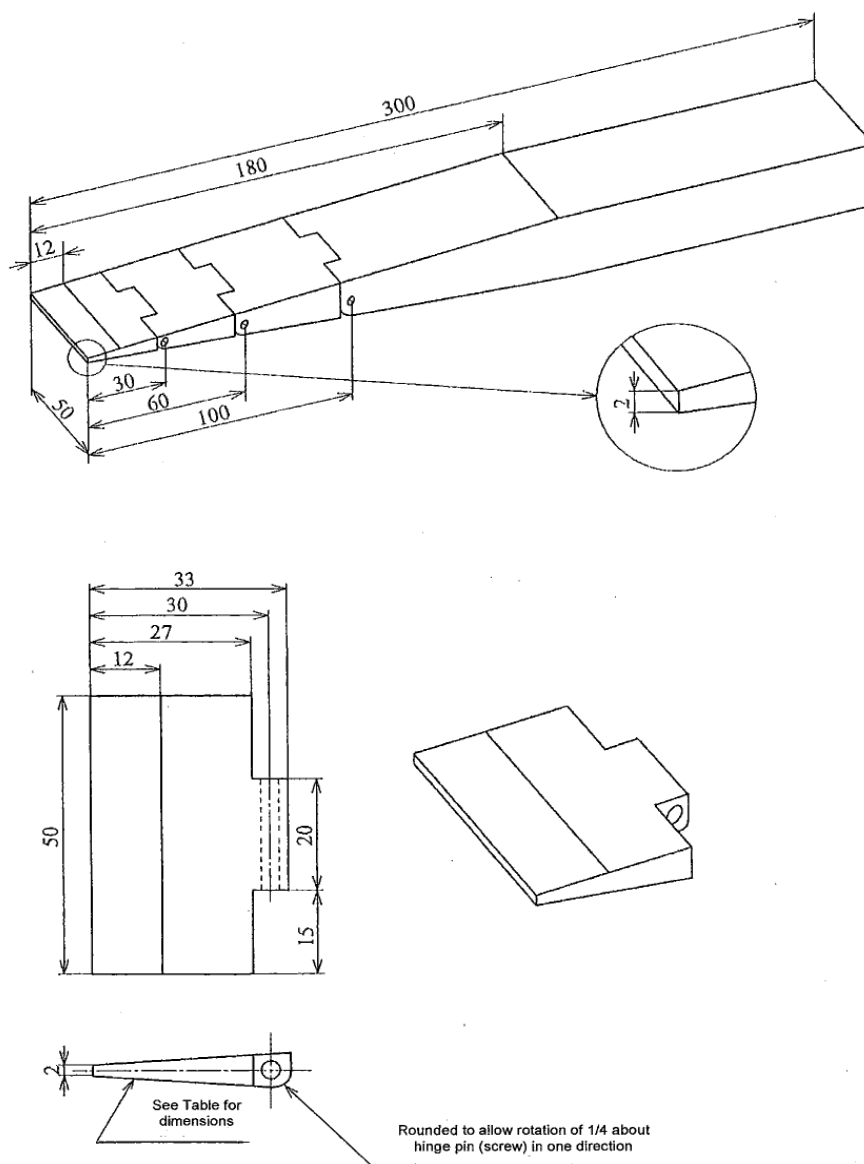


Figure JA.1 Test finger

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict



Details of the tip of wedge

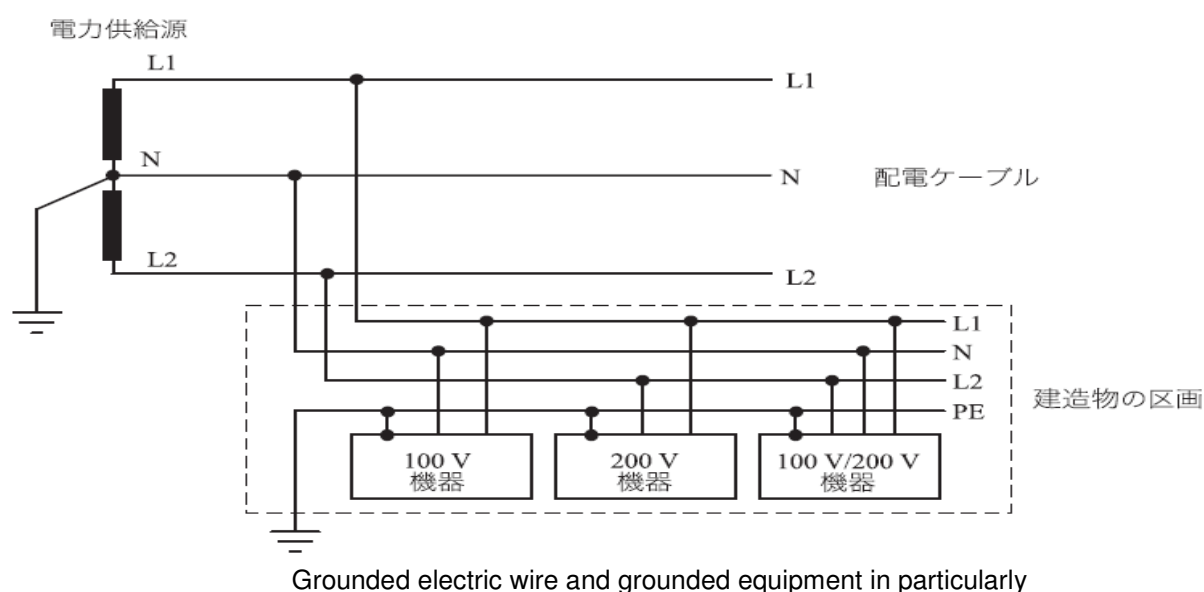
Dimensions in millimeters	
Distance from the tip	Thickness of probe
0	2
12	4
180	24

The thickness of the probe varies linearly, except changing the slope at the respective points shown in the table. The allowable dimensional tolerance of the probe shall be $\pm 0,127$ mm.

Figure JA.2 Wedge-probe.

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
Annex JB	Add Annex JB as follows: Annex JB (informative) Current conditions Installation environment on overvoltages and overcurrents, and the measures (see NOTE 1 in Clause 6) Introduction This standard is based on “ITU-T Recommendation K.11:1993” to stipulate requirement for equipment on a premise to install in the environment where appropriate measures were taken for so that overvoltage more than peak 1.5kV does not hang to the apparatus. But in Japan due to environment is difficult to integrate with “ITU-T Recommendation K.11:1993”, in here explain for desirable environment and show actions to be taken how to make a desirable setting environment.	Added.	N/A
JB.1	A desirable setting environment When lead electric wires in building for any kind service of metal wire, for overvoltage restraint and overcurrent restraint, it is desirable that be close to each other including grounding conductor. It is important to make it close each other especially the lead in point of power line, communication line and grounding conductor. In that case, attention is necessary for electromagnetic induction where occurred between a communication line and the power line which are not covered. It is desirable that set up main grounding terminal which close to lead in point of power line and communication line in building as much as possible. Due to minimize the surge current in building for all shielding conductor of cable which lead in building, it shall connected directly with main grounding terminal in lead in point via surge protection device (SPD) e.g. arrester and so on. It shall be considered corrosion measures in joint if necessary. It is desirable that SPD which set on communication line is close to lead in point toward the building as much as possible. Furthermore set the SPD near the main power line, and it may make the distance from SPD to a grounding conductor as short as possible. It is effective if use a short grounding conductor with low impedance for that decrease surge voltage between electric power system protection conductor and the communication line.		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
JB.2	Situation and countermeasure of setting environment for overvoltage and overcurrent In Japan, TT type often adopted for electric power system. Typical example is as figure JB.2. For this TT type, on condition that it shall be an electric power system which does not wired with grounding conductor except neutral line, and it shall be connected with grounding terminal which have an electrically independent different from this grounding terminal of neutral line by user for equipment which need to connect with ground.		N/A



Grounded electric wire and grounded equipment in particularly

Figure JB.2 – Example of three-wire type TT electric power system

	But as thing are stand, there are a lot of cases that an outlet is not prepared with the grounding terminal which is appropriate in the setting place of the equipment. On the other hand, grounding resistance value of SPD where set at lead-in point of communication line sometime is not enough low, it make that dielectric breakdown was occurred due to the voltage that a thunder surge current evoked for grounding resistance which flow into the communication line and drift to the ground through SPD. The same result is expected that grounding resistance value is not enough low too if set SPD on electric power system. This status is as figure JB.3. As figure JB.1, it can decrease effectively by connecting both with the conductor of the low resistance value when excessive potential difference occurred in internal equipment.		N/A
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National Differences			
Clause	Requirement + Test	Result - Remark	Verdict

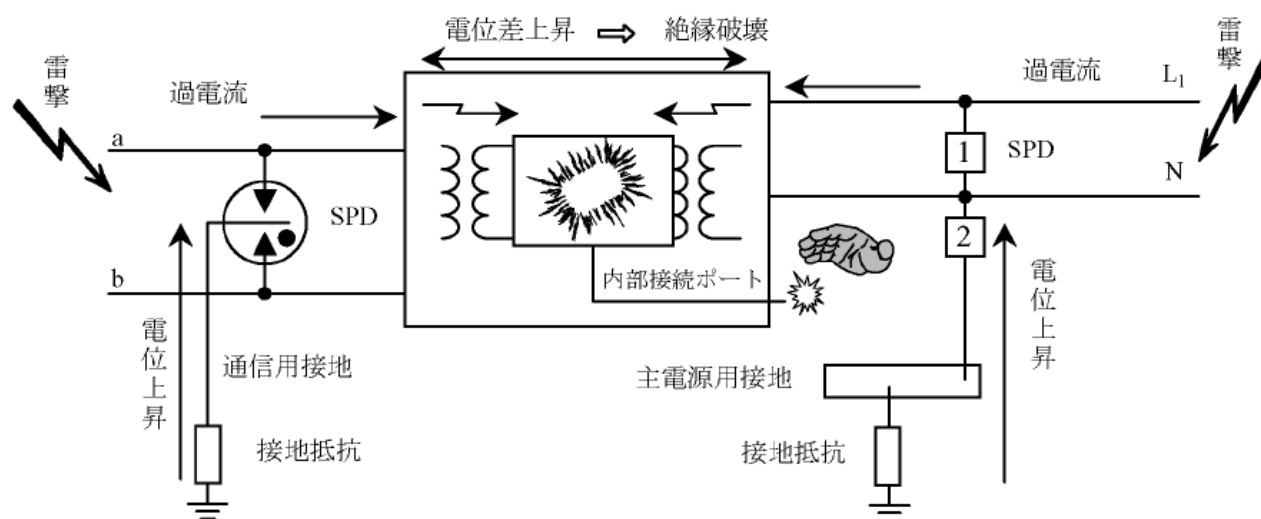


Figure JB.3 - Insufficient grounding and setting environment of bonding
(From ITU-T Recommendation K.66:2004)

	It is desirable that provide the information for set environment which appropriate measures were given based on ITU-T Recommendation K.11:1993 when perform design and sale network connected equipment.		N/A
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Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)

For model X554UN, X554UN(C), MultiSync X554UN (NEC)



Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)

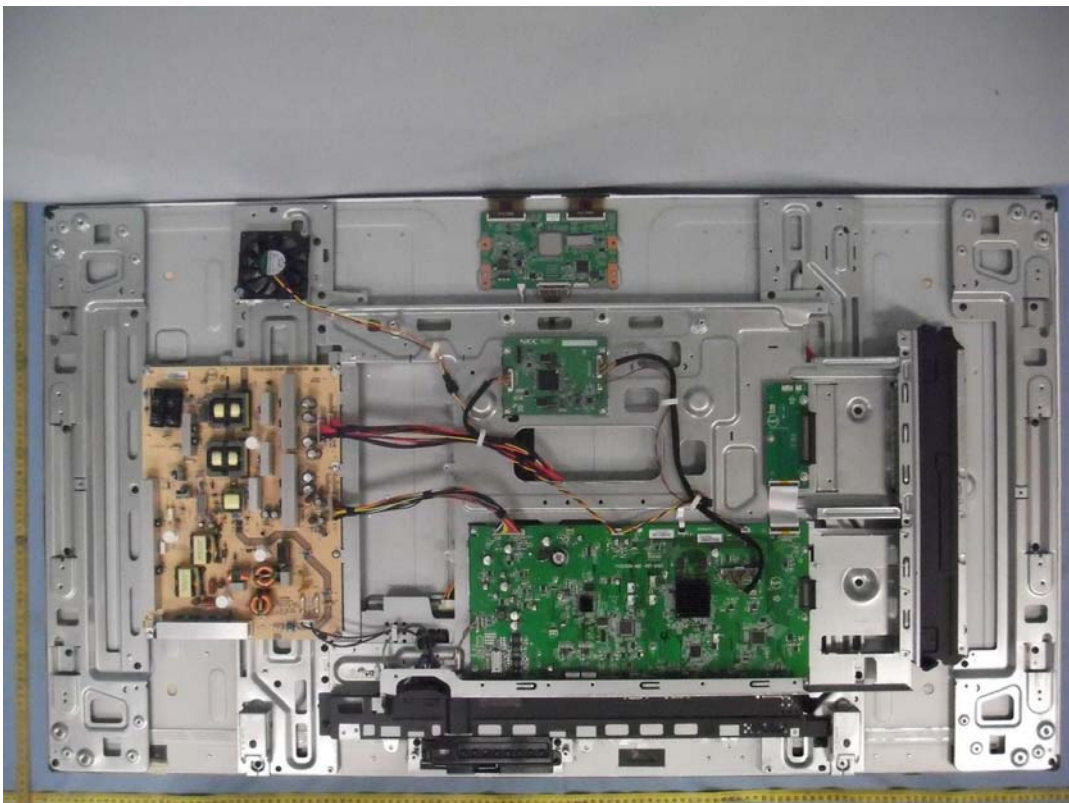
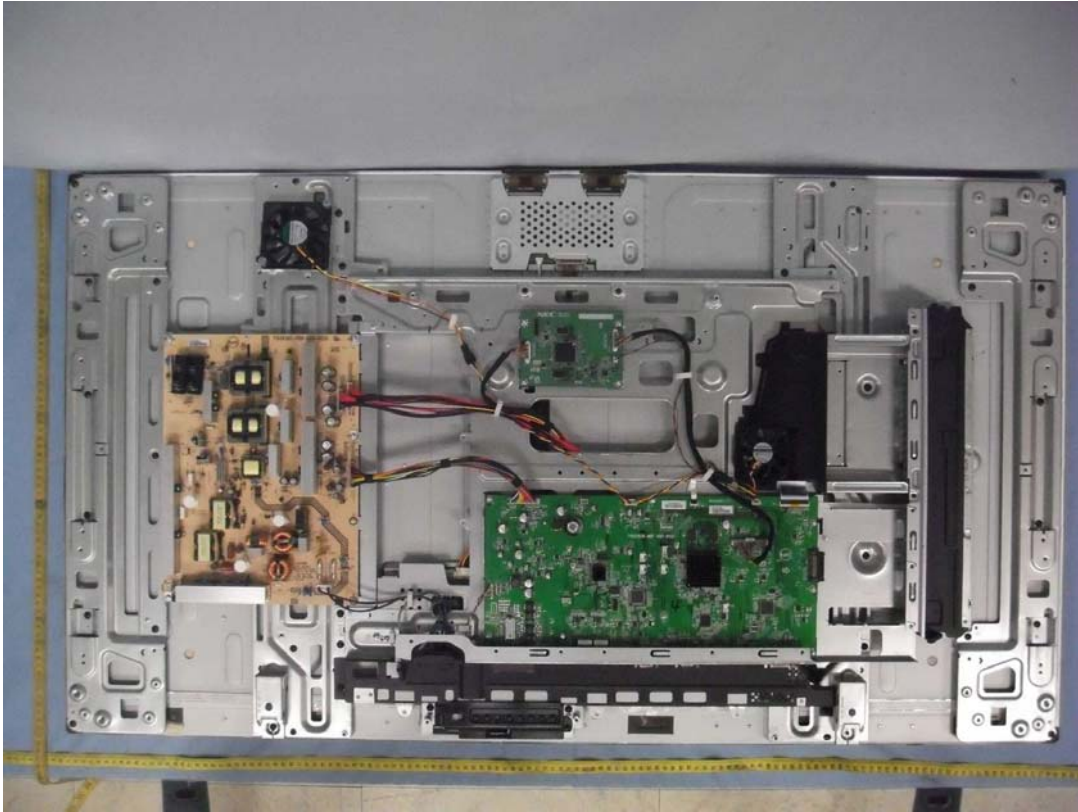


With External speakers



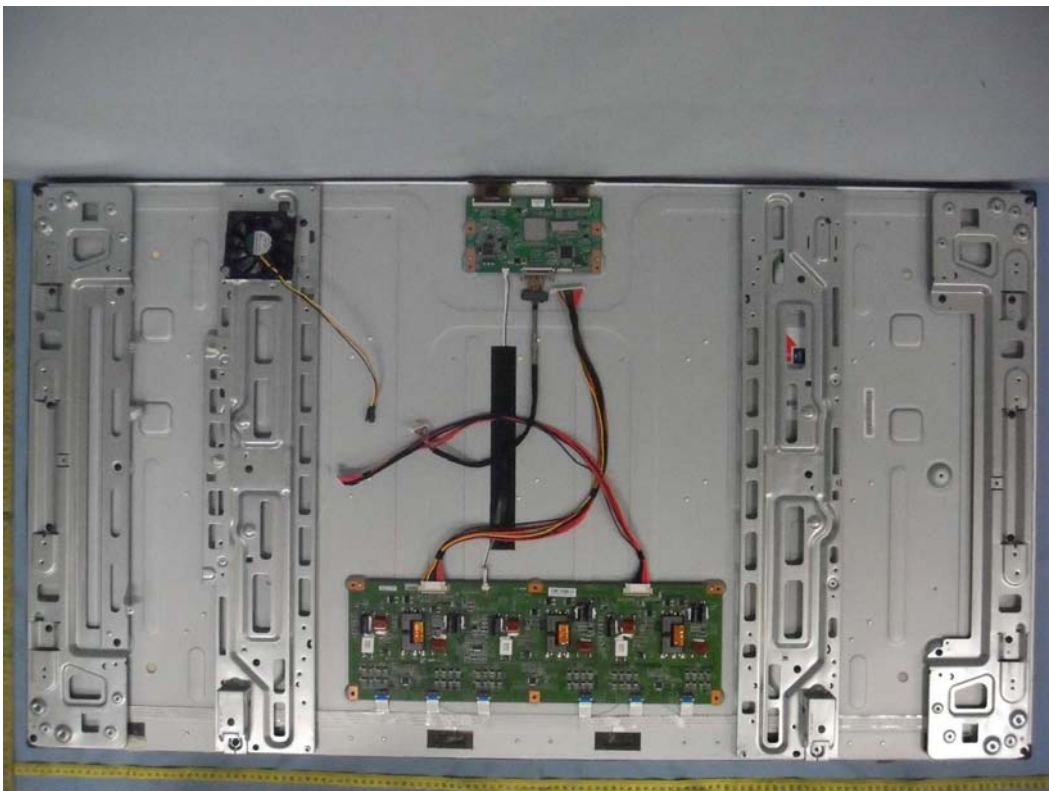
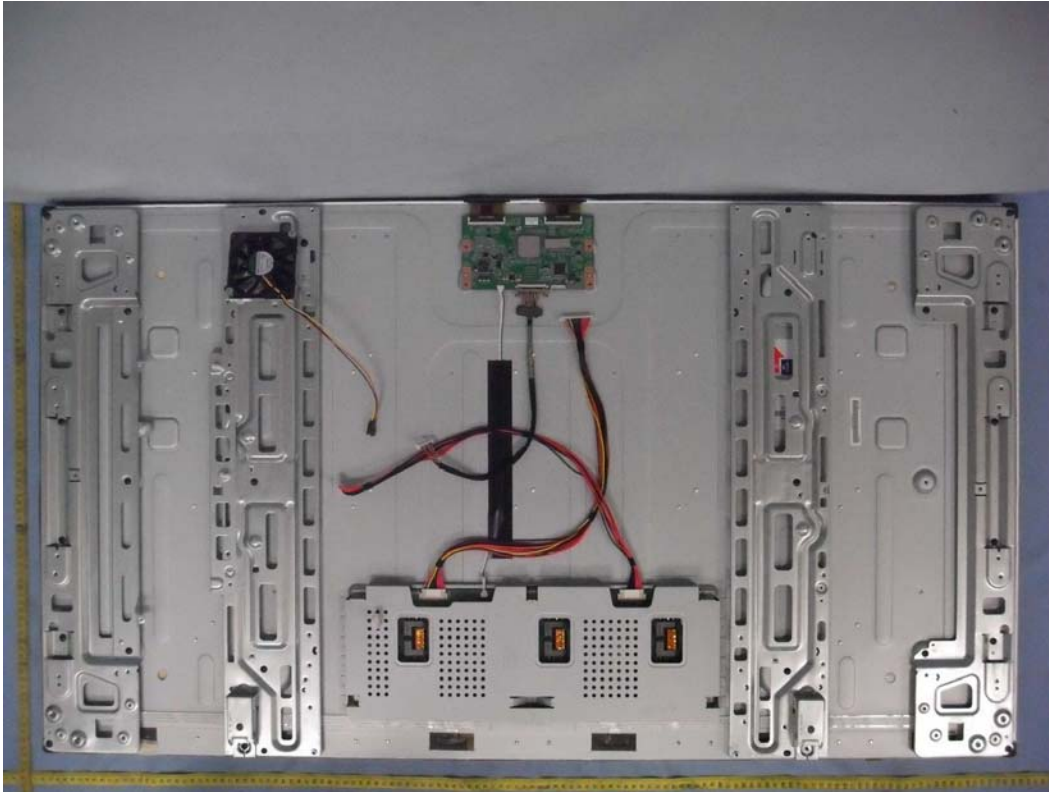
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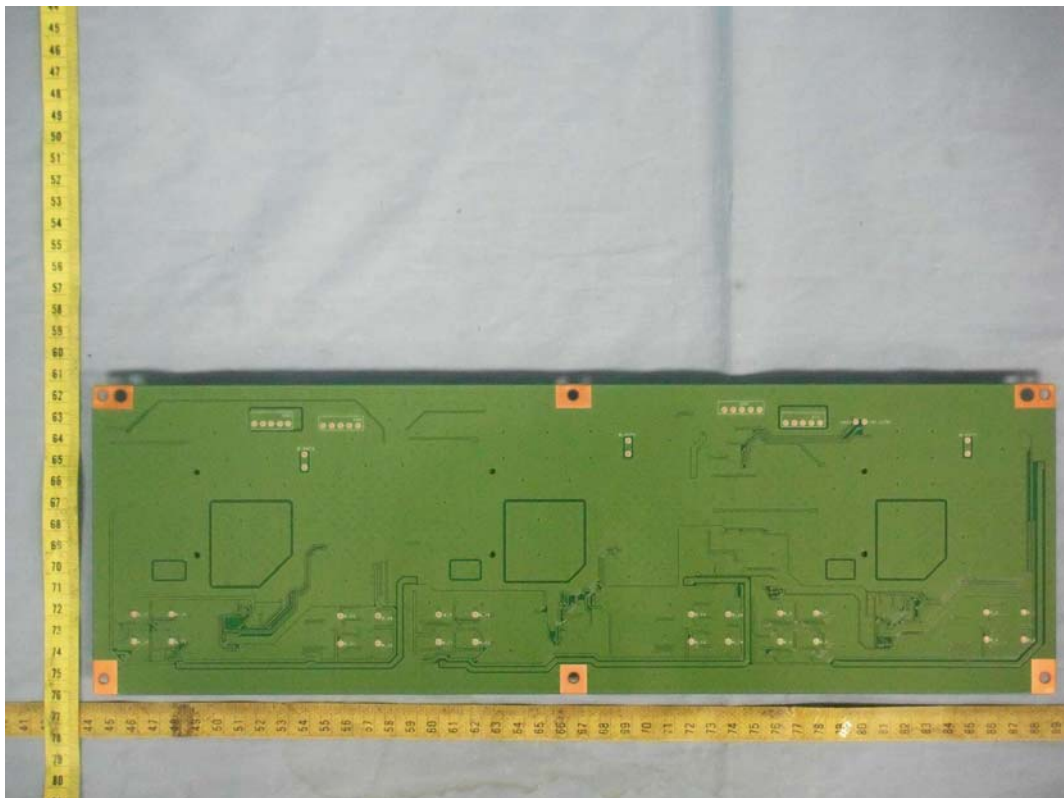
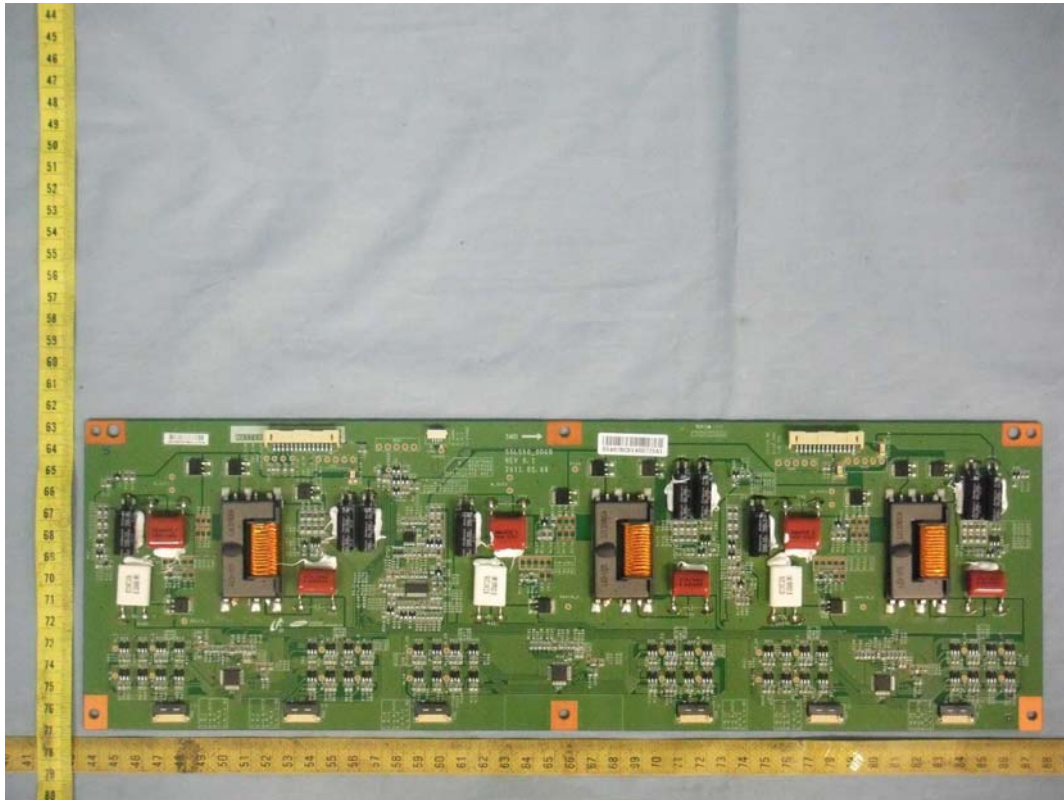
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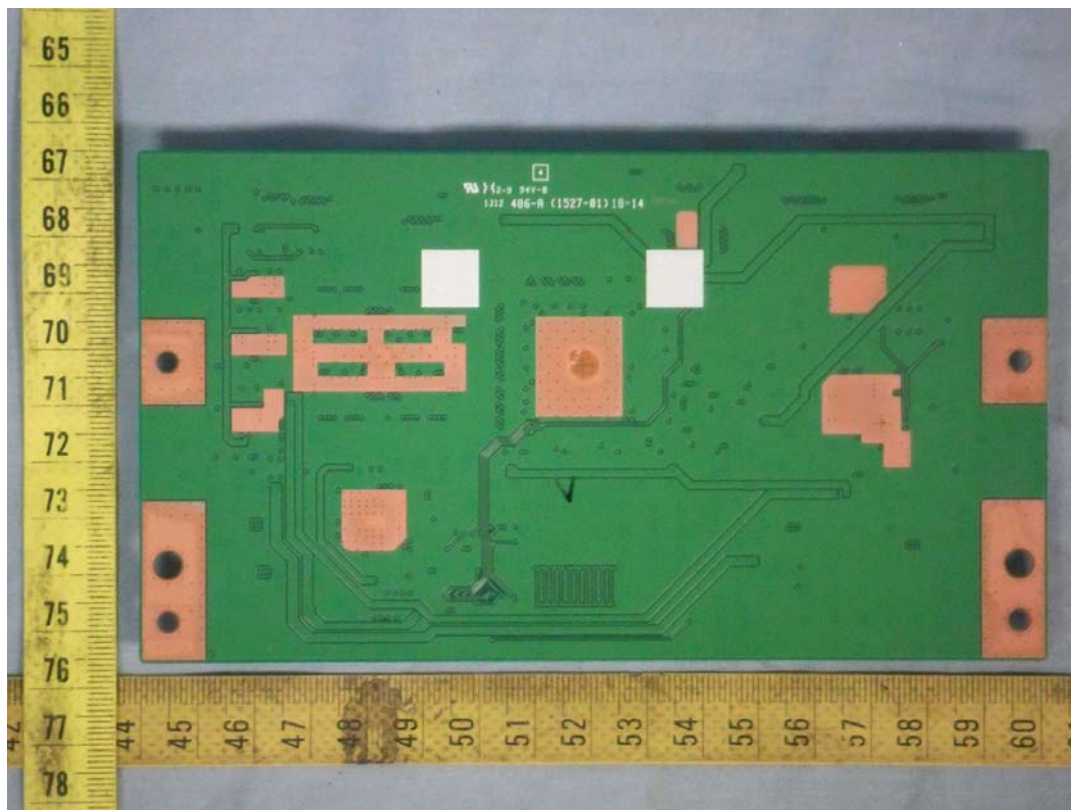
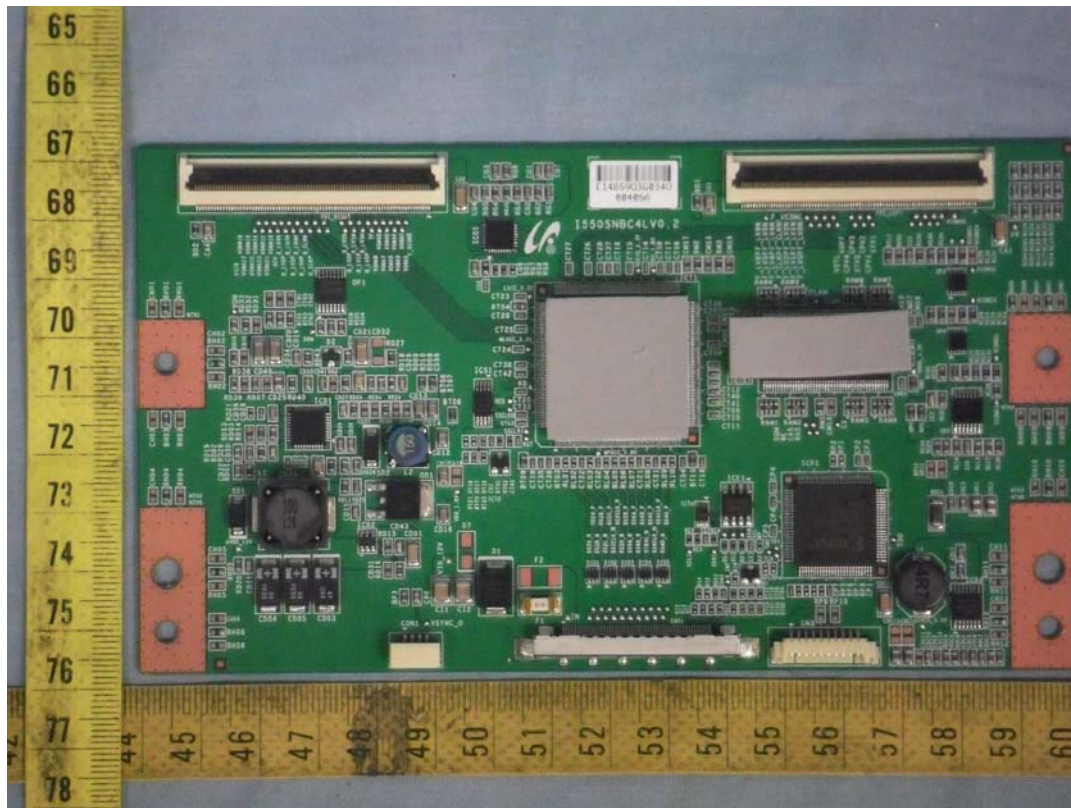
Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)



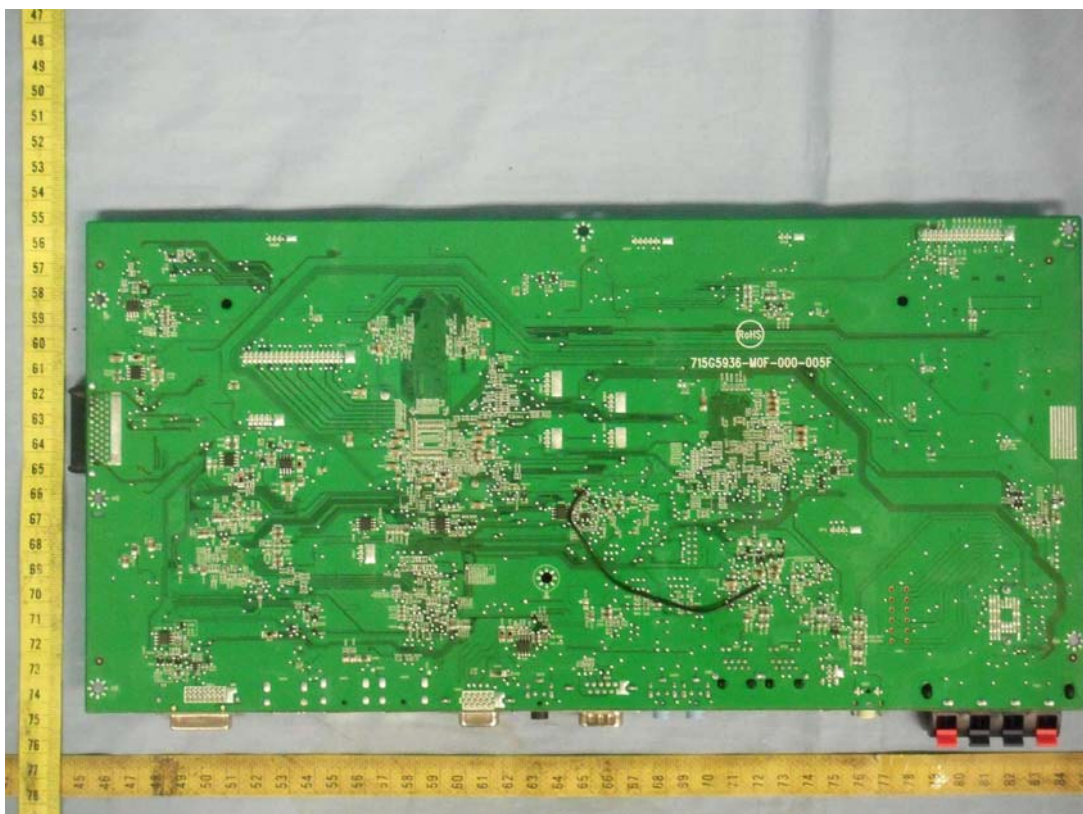
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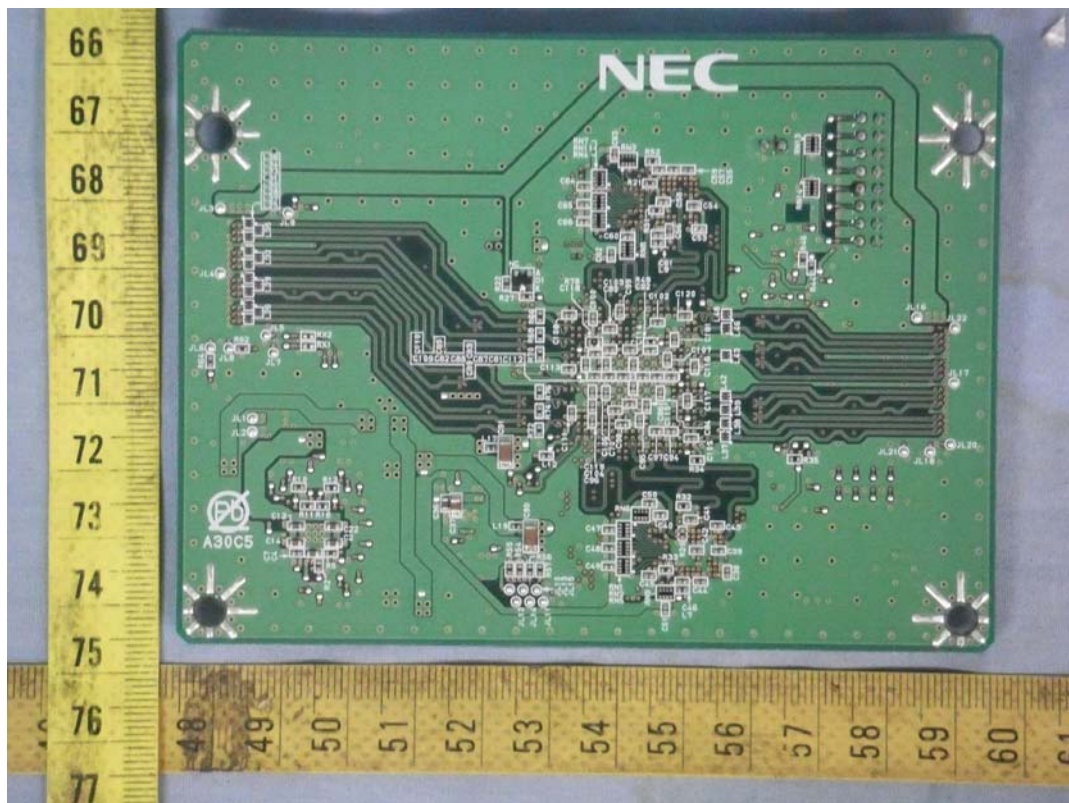
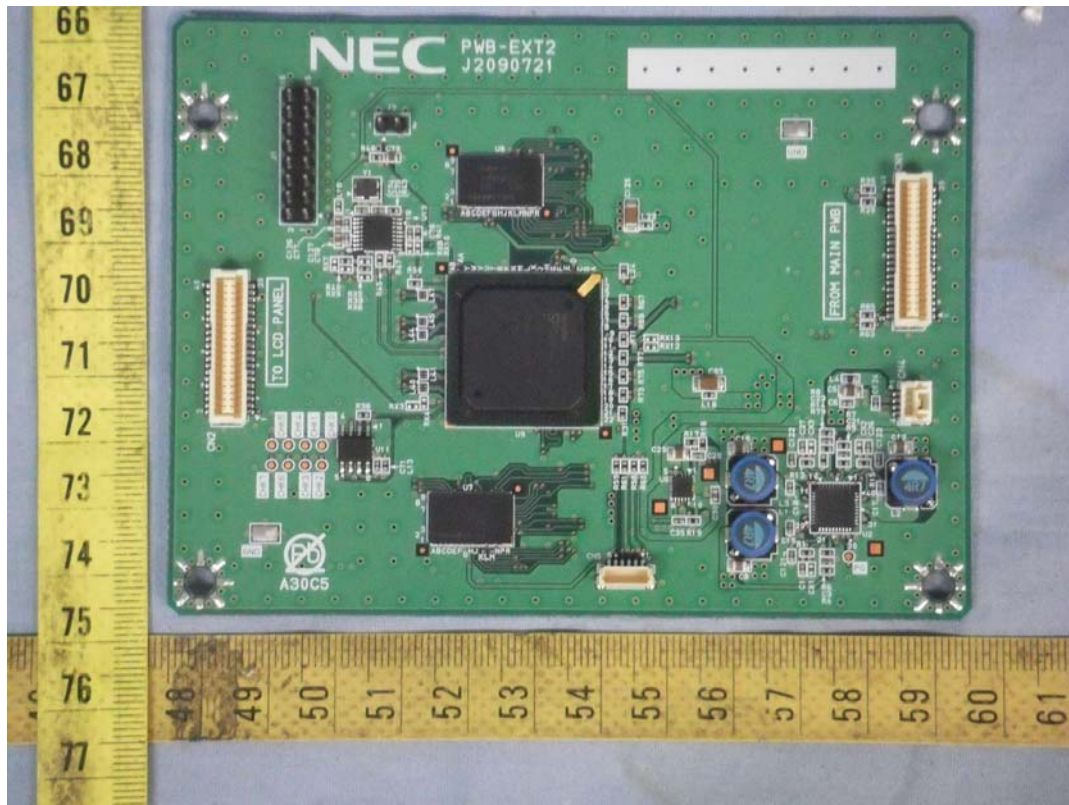
Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)



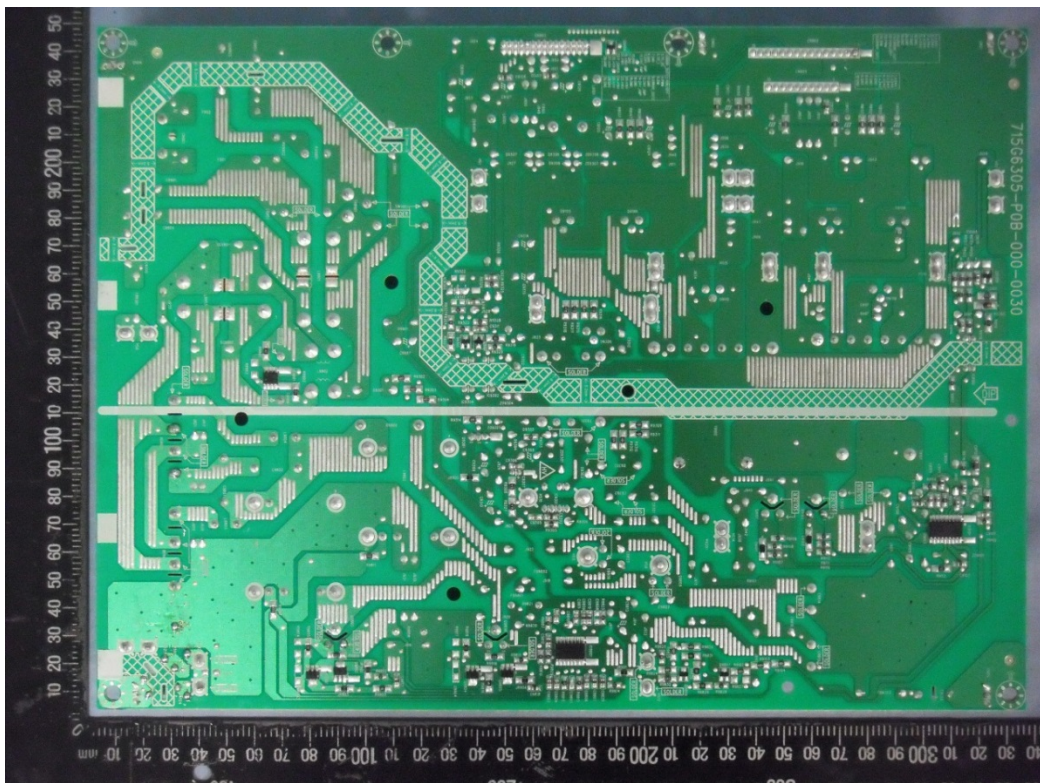
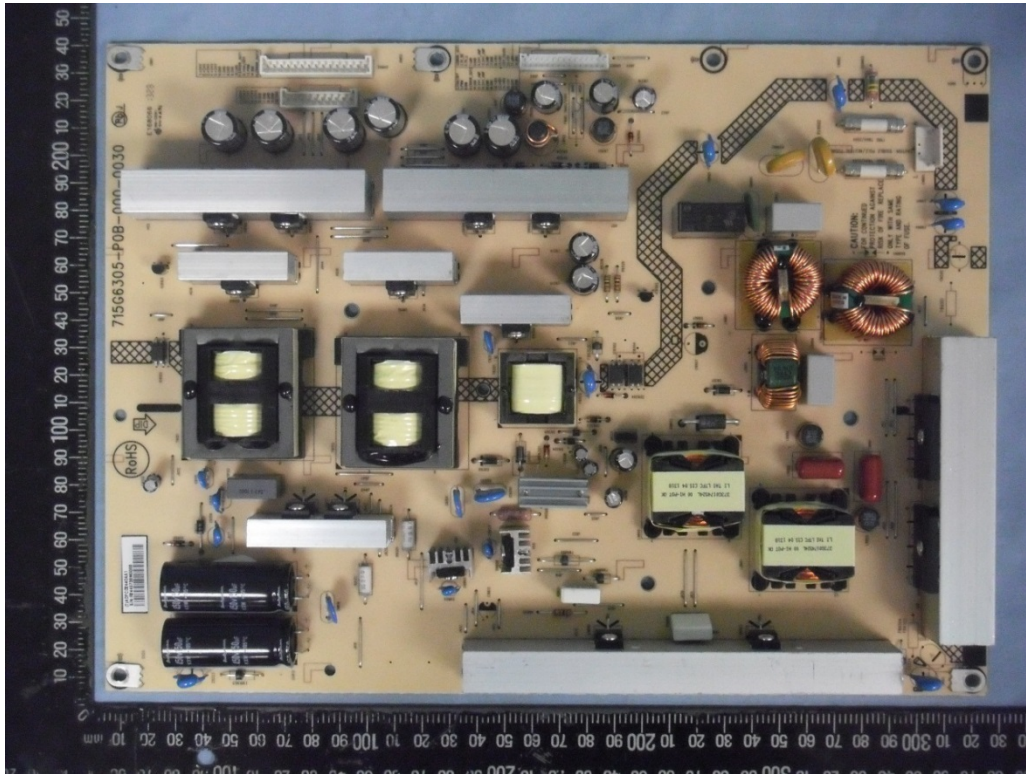
Product: LCD Monitor

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Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)



Product: LCD Monitor

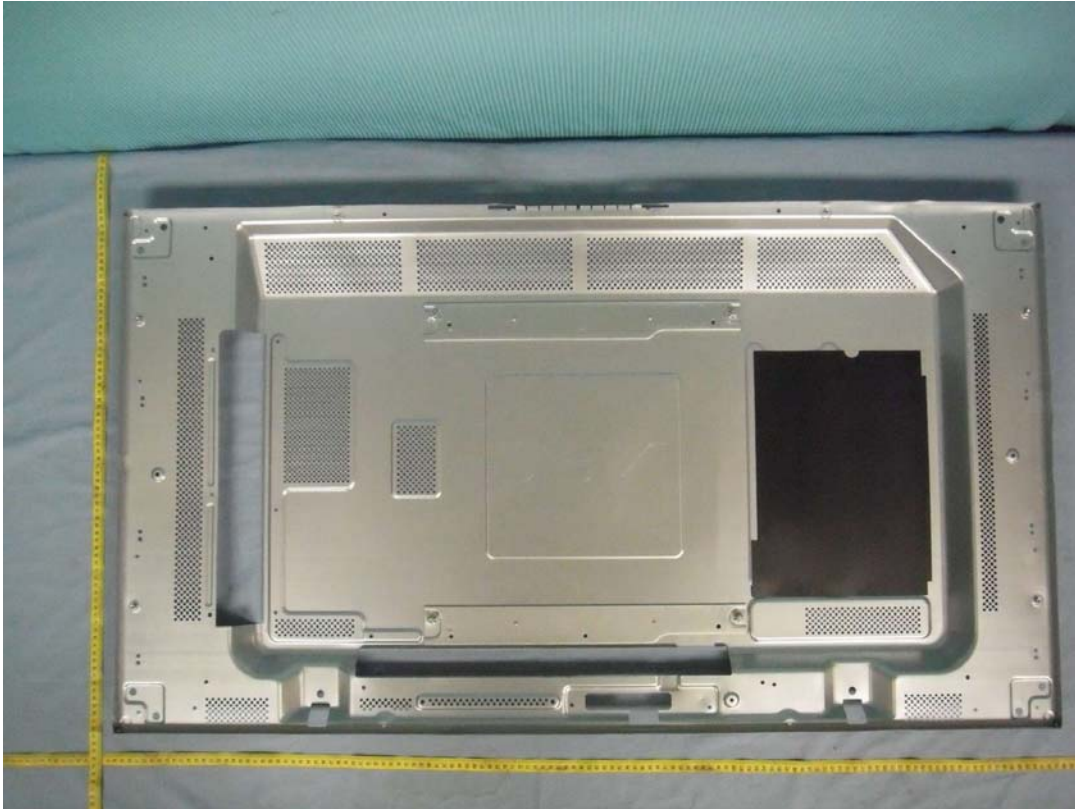
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For base stand type A



Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)



Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)

Stand base B with model X554UN



Product: LCD Monitor

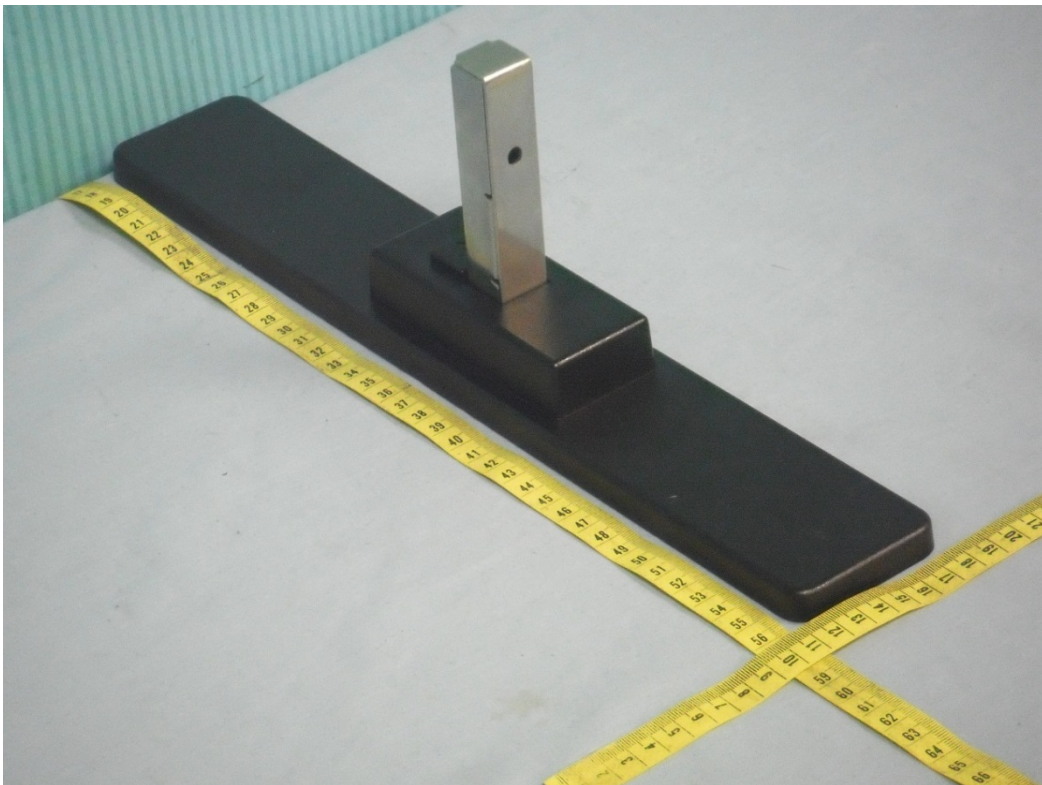
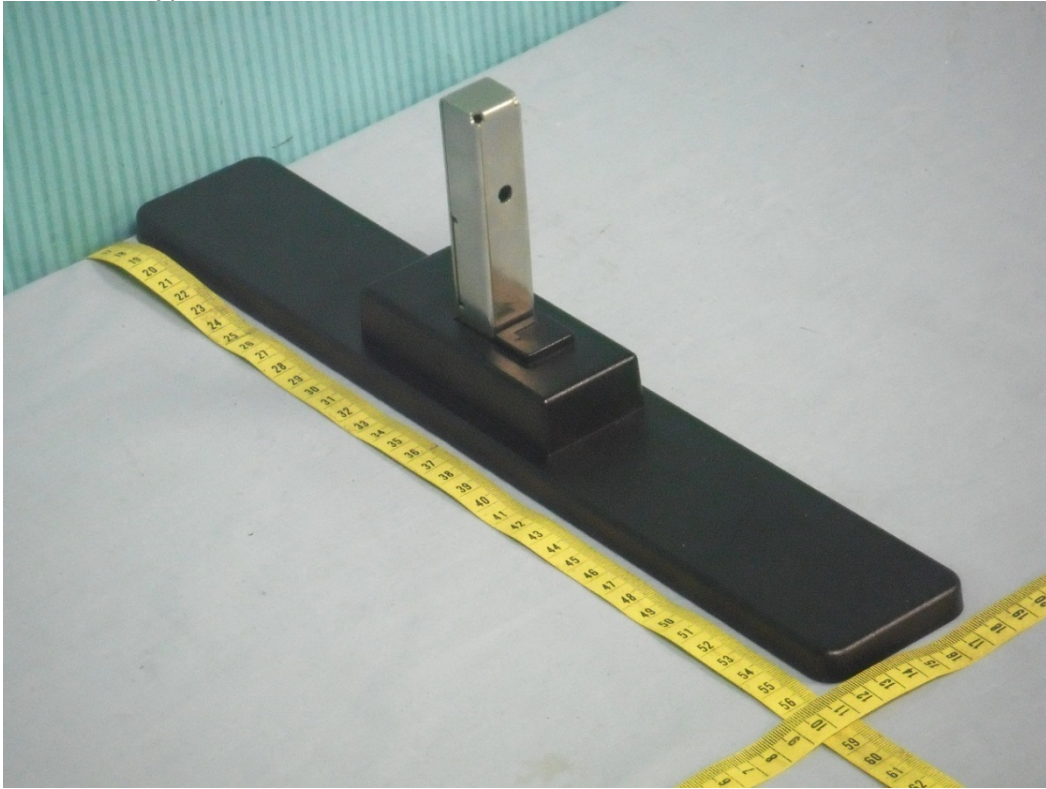
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Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)

Base Stand type B



Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)

For model X464UN, X464UN(C), MultiSync X464UN



Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)



Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)



Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)



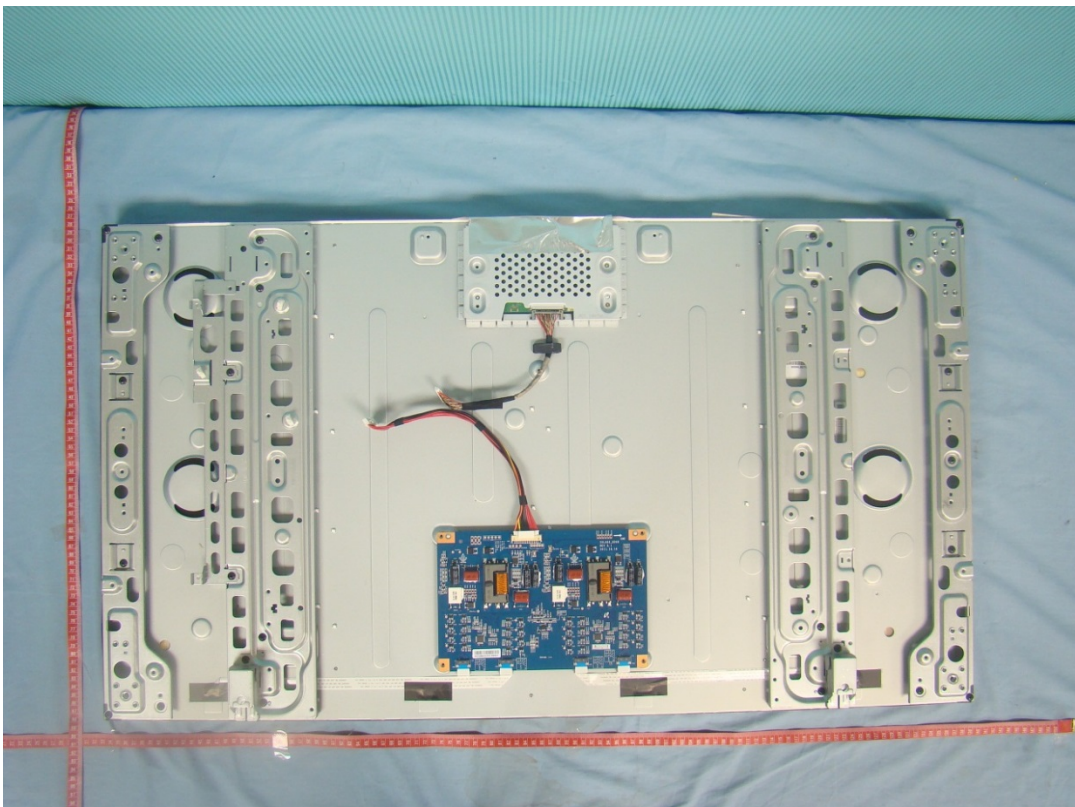
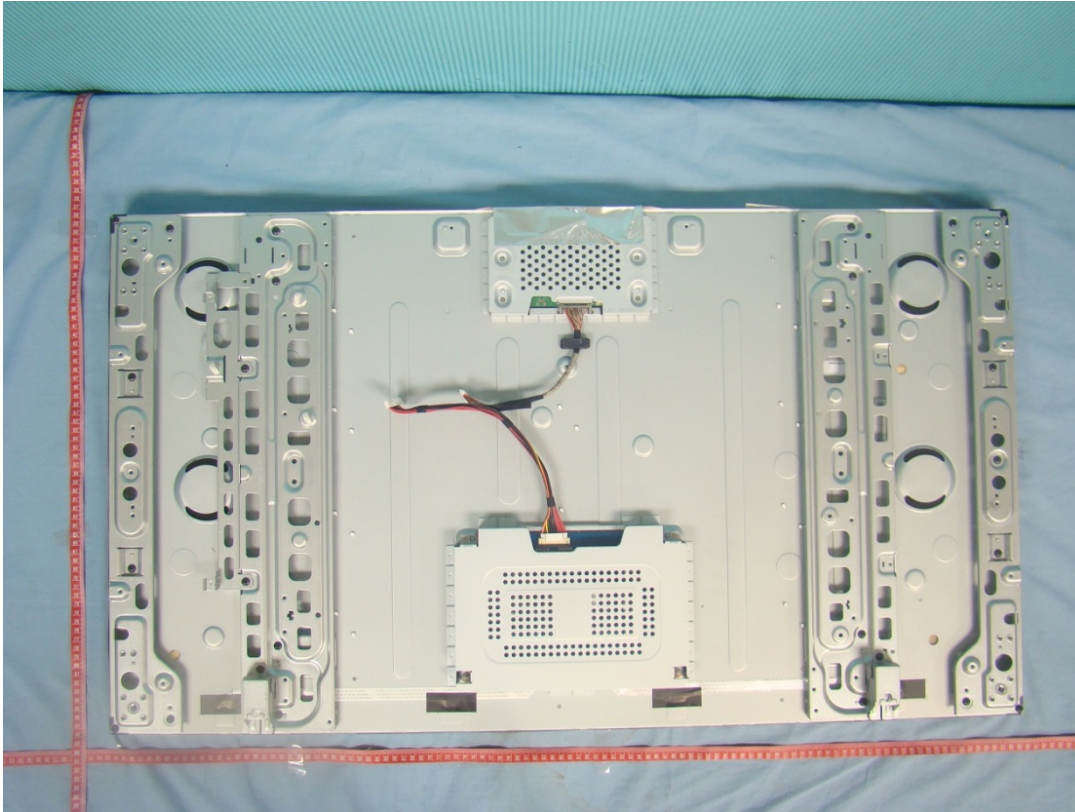
Product: LCD Monitor

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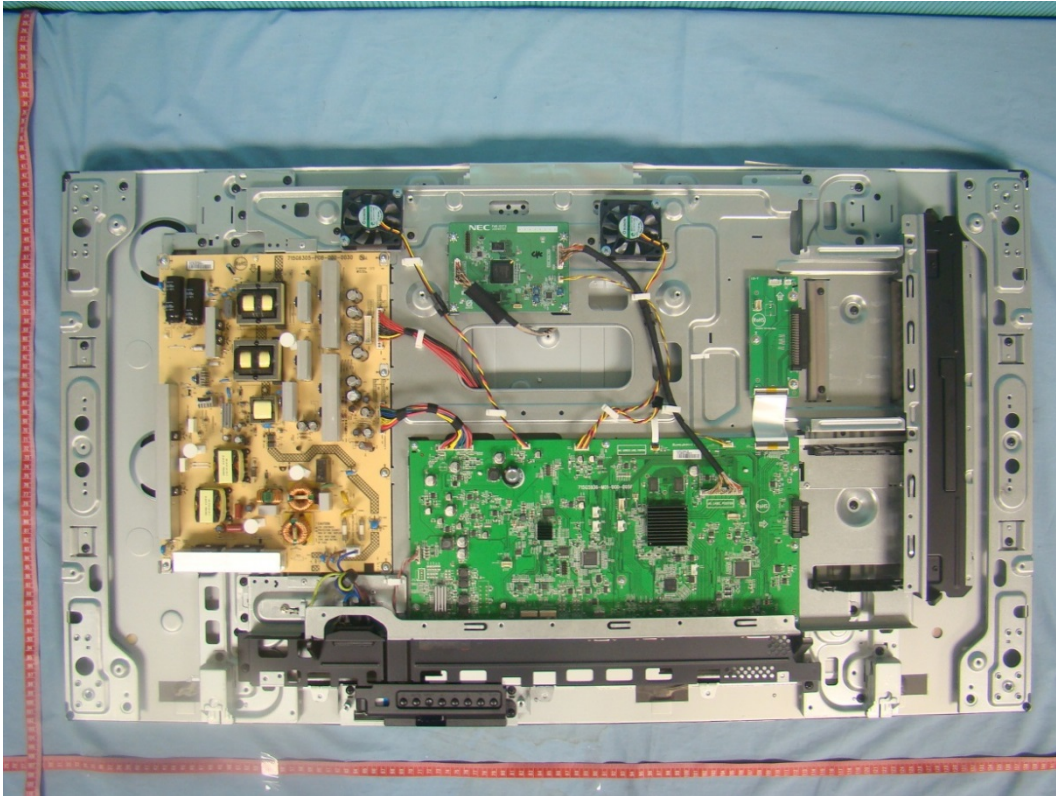
Product: LCD Monitor

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Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)



Product: LCD Monitor

Type Designation: X554UN, X554UN(C), MultiSync X554UN, X554UNS, X554UNS(C), X554UNV, X464UN, X464UN(C), MultiSync X464UN, X464UNS, X464UNS(C), X464UNV, X464UNV(C)(NEC)

Base Stand type C

