



Ref. Certif. No.

JPTUV-035026

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 City, Taipei County 23553 Taiwan

Name and address of the manufacturer
Nom et adresse du fabricant

NEC Display Solutions, Ltd.
4-13-23 Shibaura
Minato-ku, Tokyo, 108-0023 JAPAN

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

See additional page(s)

Rating and principal characteristics
Valeurs nominales et caractéristiques principales

1)AC 100-240V; 50/60Hz; 3.6A-1.45A; Class I
2)AC 100-240V; 50/60Hz; 3.9A-1.6A; Class I
3)AC 100-240V; 50/60Hz; 3.5A-1.45A; Class I
4)AC 100-240V; 50/60Hz; 2.9A-1.2A; Class I
NEC

Trade mark (if any)
Marque de fabrique (si elle existe)

1)L468TP, 2)L468TN, L468TT, L468N6,
3)L408TM, L408TR, L408N5, 4)L460NZ

Model/type Ref.
Ref. de type

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

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
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 une partie de ce Certificat

17017553 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

Signature:

Ing. M. Eichenseder

Date: 30.09.2010

1. TPV Technology (Beijing) Co., Ltd.
No. 10, Jiu Xian Qiao Rd.
Chao Yang District, Beijing 100016
P.R. China
2. Tatung Mexico S.A. de C.V.
Ave. Rosa Ma. Fuentes #7050
Complejo Industrial Fuentes
C.P. 32320, Cd. Juarez. Chih,
MEXICO
3. TPV Display Technology (Wuhan)
Co., Ltd.
Unique No. 11, Zhuankou Development
District of Economic Technological
Development Zone, Wuhan City 430056, P.R. China
4. TPV Electronics (Fujian) Co., Ltd.
Yuan Hong Rd., Shang-Zheng Hong-Lu
Fuqing City Fujian 350301
P.R. China
5. Envision Industry of Electronic
Products Ltd.
895, Joao Marcos Pozzetti Street,
Industrial District II,
69.075-215 Manaus, Am, Brazil
6. Tatung Czech s.r.o
U Nove Hospody 4
30100 Plzen
Czech Republic
7. TPV Technology (Suzhou) Co., Ltd.,
Zhujiang Branch
No. 161, Zhujiang Road, Suzhou
New District, Suzhou City, Jiangsu
Province, P.R. China
8. Envision Industry of Electronic
Products Ltd.
Rodovia Anhanguera S/N-KM 49
13.205-700 Tijuco Preto-Jundiai-SP-
Brazil
9. TPV Displays Polska Sp. z o.o.
ul. Zlotego Smoka 9
66-400 Gorzów Wlkp.
Poland

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

Date: 30.09.2010

Signature:


Ing. M. Eichenseder



Ref. Certif. No.

JPTUV-035026

PAGE 3 OF 3

10. L&T Display Technology (Fujian) Ltd.
Optoelectronic Park, Rongqiao
Economic and Technological
Development Zone
Fuqing, Fujian 350301, P.R. China

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

Date: 30.09.2010

Signature:


Ing. M. Eichenseder

NEC Display Solutions, Ltd.
Mr. Shinichi Hashimoto
-
4-13-23 Shibaura
Minato-ku, Tokyo
108-0023 JAPAN

Date : 30.09.2010
Our ref. : WangAn ZJ
Your ref.: 163067501

Ref : CB Certificate Japan

Type of Equipment : LCD Monitor
Model Designation : See Certificate
Certificate No. : JPTUV-035026
Report No. : 17017553 001

Dear Mr. Shinichi Hashimoto,

Thank you very much for your interest in our services.

Please find enclosed your certification documents.

We appreciate your support and would like to offer our assistance in the approval of your future products through our extensive range of technical services. Please feel free to contact us whatever your requirements may be.

With kind regards,

Certification Body



Ing. M. Eichenseder

Enclosure

TÜV Rheinland
(Shenzhen) Co., Ltd.

34/F, Tower A,
World Finance Centre,
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Luohu District,
518001 Shenzhen, P.R.China

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Test Report issued under the responsibility of:



TEST REPORT

IEC 60950-1: 2005 (2nd Edition) and/or EN 60950-1:2006 Information technology equipment – Safety – Part 1: General requirements

Report Reference No......: 17017553 001

Date of issue: 28. Sep. 2010

Total number of pages: 143 pages

CB/CCA Testing Laboratory.....: TÜV Rheinland (Shenzhen) Co., Ltd.

Address: 34F Tower A World Finance Centre, Shennan East Road 4003,
Luohu District, 518001 Shenzhen, P.R. China

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

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

Manufacturer's name: NEC Display Solutions Ltd.

Address: 4-13-23 Shibaura, Minato-ku, Tokyo, 108-0023 Japan

Factory's name: See page 9 for factories.

Address: See page 9 for factories.

Test specification:

Standard.....: ☒ IEC 60950-1:2005 (2nd Edition) and/or
☒ EN 60950-1:2006 + A11:2009

Test procedure: CB

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

Test Report Form No......: IECEN60950_1C

Test Report Form(s) Originator: SGS Fimko Ltd

Master TRF: Dated 2007-06

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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.

If this Test Report Form is used by non-CCA members, the CIG logo and the reference to the CCA Procedure shall be removed.

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Test item description	LCD Monitor
Trade Mark	NEC
Manufacturer	See previous page.
Model/Type reference.....	1) L468TP; 2) L468TN, L468TT, L468N6; 3) L408TM, L408TR, L408N5; 4) L460NZ
Ratings	1) 100-240V~, 50/60Hz, 3.6A-1.45A; 2) 100-240V~, 50/60Hz, 3.9A-1.6A; 3) 100-240V~, 50/60Hz, 3.5A-1.45A; 4) 100-240V~, 50/60Hz, 2.9A-1.2A
Testing procedure and testing location:	
☐ CB/CCA Testing Laboratory: Refer to cover page Testing location/ address Refer to cover page ☐ Associated CB Laboratory: Testing location/ address Tested by (name + signature)..... Anderson Wang Approved by (+ signature) Jacky Chen	
☐ Testing procedure: TMP Tested by (name + signature)..... Approved by (+ signature) Testing location/ address	
☐ Testing procedure: WMT Tested by (name + signature)..... Witnessed by (+ signature) Approved by (+ signature) Testing location/ address	
☐ Testing procedure: SMT Tested by (name + signature)..... Approved by (+ signature) Supervised by (+ signature)..... Testing location/ address	
☐ Testing procedure: RMT Tested by (name + signature)..... Approved by (+ signature) Supervised by (+ signature)..... Testing location/ address	

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

The tests was carried out under the most unfavorable combination within the manufacturer's operating specifications of the following parameters:

- supply voltage, which ranged from 100-240Vac
- operating temperature, Max. ambient temperature 40 °C declared by the client
- operating mode: continuous
- operating load: operated under 100% brightness, 100% contrast and 1kHz sine wave sound signal at maximum volume for speaker.
- The equipment is operated at up to 3000m above sea level as declared by manufacturer. Clearance distances have evaluated according to IEC 60664-1: 1992 table A.2 with a multiplication factor of 1.14.
- The DC fans were not operated during the heating and fault condition tests.
- The stability test with downward force of 800 N was not applied to the equipment due to the dimension design in any horizontal surface of EUT except for stand base are less than 12.5cm by 20cm.
- The power supply cord set was not evaluated together with the apparatus. A suitable certified power supply cord set has to be added in the country where the apparatus is sold.

The critical tests were performed for this equipment included clauses 1.6.2, 1.7.11, 2.1.1.5, 2.1.1.7, 2.2.2, 2.2.3, 2.4.2, 2.5, 2.6.3.4, 2.9.2, 2.10.2, 2.10.3, 2.10.4, 4.2.3, 4.2.4, 4.2.5, 4.2.7, 4.5.5, 5.1.6, 5.2 and 5.3 in scope of this standard, for temperature test the thermocouples method used, regarding fault condition test simulated faults applied.

- The EUT passed the test.

Testing location:

All tests as described in Test Case and Measurement Sections were performed at the laboratory described on page 2.

Summary of compliance with National Differences:

EU Group Differences, EU Special National Conditions, EU A-Deviations, AT, AU, BE, BR, CA, CH, CN, CZ, DE, DK, FI, FR, GB, HU, IT, JP, KR, MY, NL, NO, PL, SE, SI, SG, SK, US.

Explanation of used codes: AT=Austria, AU=Australia, BE=Belgium, BR=Brazil, CA=Canada, CH=Switzerland, CN=China, CZ=Czech Republic, DE=Germany, DK=Denmark, FI=Finland, FR=France, GB=United Kingdom, HU=Hungary, IT=Italy, JP=Japan, KR=Korea, MY=Malaysia, NL=The Netherlands, NO=Norway, PL=Poland, SE=Sweden, SI=Slovenia, SG=Singapore, SK=Slovakia, US=United States of America.

National differences of Australia were considered according to AS/NZS 60950-1: 2003+A1+A2+A3 (IEC Publication 60950-1:2001).

All national differences of EU group considered according to EN 60950-1:2006, Annex ZA, Annex ZB, Annex ZC and EN 60950-1:2006+A11:2009.

For National Differences see end of this test report.

Copy of marking plate:

NEC MultiSync P401 LCD MONITOR 40英寸液晶显示器 (Model/型号:L408TM) P401-G1(C)-T VOLTS 定格电压 输入电压:100-240V~, AMPERES 定格电流 电流:3.5-1.45A (3.5-1.45A) FREQUENCY 定格周波数 工作频率: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 QUITAR EL RECINTO. NINGUNAS PIEZAS DEL USUARIO SERVICABLE ADENTRO. VARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTTAG. VAROITUS: LAITE ON LIITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA VARUSTETTUUN PISTORASIAAN. ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT. 注意: 请勿打开后盖, 小心高压电击。机内并无用户配件。 THIS CLASS B DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS. CET APPAREIL NUMÉRIQUE DE LA CLASSE B RESPECTE TOUTES LES EXIGENCES DU RÈGLEMENT SUR LE MATÉRIEL BROUILLER DU CANADA.     For USA: THE LAMPS IN THIS PRODUCT CONTAIN MERCURY. (Hg) PLEASE DISPOSE ACCORDING TO STATE, LOCAL, OR FEDERAL LAW. 灯泡含水银, 请按当地法律处理。     XXXXXX-XX NECディスプレイソリューションズ株式会社 NEC Display Solutions, Ltd. 4-13-23 SHIBAURA, MINATO-KU, TOKYO, 108-0023, JAPAN  MH27853 1E006382	NEC MultiSync P461 LCD MONITOR 46英寸液晶显示器 (Model/型号:L468TN) P461-G1(C)-T VOLTS 定格电压 输入电压:100-240V~, AMPERES 定格电流 电流:3.9-1.6A (3.9-1.6A) FREQUENCY 定格周波数 工作频率: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 QUITAR EL RECINTO. NINGUNAS PIEZAS DEL USUARIO SERVICABLE ADENTRO. VARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTTAG. VAROITUS: LAITE ON LIITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA VARUSTETTUUN PISTORASIAAN. ADVARSEL: APPARATET MÅ TILKOPLES JORDET STIKKONTAKT. 注意: 请勿打开后盖, 小心高压电击。机内并无用户配件。 THIS CLASS B DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS. CET APPAREIL NUMÉRIQUE DE LA CLASSE B RESPECTE TOUTES LES EXIGENCES DU RÈGLEMENT SUR LE MATÉRIEL BROUILLER DU CANADA.     For USA: THE LAMPS IN THIS PRODUCT CONTAIN MERCURY. (Hg) PLEASE DISPOSE ACCORDING TO STATE, LOCAL, OR FEDERAL LAW. 灯泡含水银, 请按当地法律处理。     XXXXXX-XX NECディスプレイソリューションズ株式会社 NEC Display Solutions, Ltd. 4-13-23 SHIBAURA, MINATO-KU, TOKYO, 108-0023, JAPAN  MH27853 1E006382
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NEC
MultiSync X461UN

LCD MONITOR
 46英寸液晶显示器
 (Model/型号:L468TP)
 X461UN-G1(C)-T

VOLTS 定格电压 输入电压:100-240V~, AMPERES 定格电流 电流:3.6-1.45A(3.6-1.45A)
 FREQUENCY 定格周波数 工作频率:50/60Hz

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

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUE, NE PAS OUVRIR CE BOITIER, AUCUNE PIECE INTERNE NE PEUT-ÊTRE CHANGÉE 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 UTTAG.

VAROITUS: LAITE ON LIITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA VARUSTETTUUN PISTORASIAAN.

ADVARSEL: APPARATET MÅ TILKOPLSES JORDET STIKKONTAKT.

注意: 请勿打开后盖, 小心高压电击, 机内并无用户配件。

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 CET APPAREIL NUMÉRIQUE DE LA CLASSE A RESPECTE TOUTES LES EXIGENCES DU RÈGLEMENT SUR LE MATÉRIEL BROUILLER DU CANADA.

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For U.S.A. **THE LAMPS IN THIS PRODUCT CONTAIN MERCURY. PLEASE DISPOSE ACCORDING TO STATE, LOCAL, OR FEDERAL LAW.**

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.

For Japan only

警告

高圧注意
 サービスマン以外の方は分解しないであらう。内部には高電圧が有り、万が一とむと危険です。

感電注意
 電源コードのアースリード線は必ず接続ください。故障のときに感電の原因になります。

CE

10

CCC

TÜV Rheinland

SAFETY MARK

090698-11

UL LISTED E135689 US I.T.E. 1K81

MADE IN CHINA 中国製造
 生产厂: 福建康强电子有限公司
 生产地址: 福建省福州市元洪路上海

NECディスプレイソリューションズ株式会社
 NEC Display Solutions, Ltd.
 4-13-23 SHIBAURA, MINATO-KU, TOKYO, 108-0023, JAPAN

PS E

1E006403

MH27853 1E006403

NEC
MULTEOS M461

LCD MONITOR
 46英寸液晶显示器
 (Model/型号:L468TT)
 M461-G1(C)-T

VOLTS 定格电压 输入电压:100-240V~, AMPERES 定格电流 电流:3.9-1.6A(3.9-1.6A)
 FREQUENCY 定格周波数 工作频率:50/60Hz

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

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUE, NE PAS OUVRIR CE BOITIER, AUCUNE PIECE INTERNE NE PEUT-ÊTRE CHANGÉE 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 UTTAG.

VAROITUS: LAITE ON LIITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA VARUSTETTUUN PISTORASIAAN.

ADVARSEL: APPARATET MÅ TILKOPLSES JORDET STIKKONTAKT.

注意: 请勿打开后盖, 小心高压电击, 机内并无用户配件。

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FC

TÜV Rheinland

SAFETY MARK

BZ02

UL LISTED E135689 US I.T.E. 1K81

MADE IN CHINA 中国製造
 生产厂: 福建康强电子有限公司
 生产地址: 福建省福州市元洪路上海

NECディスプレイソリューションズ株式会社
 NEC Display Solutions, Ltd.
 4-13-23 SHIBAURA, MINATO-KU, TOKYO, 108-0023, JAPAN

PS E

1E006701

NEC
MultiSync S461

LCD MONITOR
 46英寸液晶显示器
 (Model/型号:L468N6)

VOLTS 定格电压 输入电压:100-240V~, AMPERES 定格电流 电流:3.9-1.6A(3.9-1.6A)
 FREQUENCY 定格周波数 工作频率:50/60Hz

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

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUE, NE PAS OUVRIR CE BOITIER, AUCUNE PIECE INTERNE NE PEUT-ÊTRE CHANGÉE 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 UTTAG.

VAROITUS: LAITE ON LIITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA VARUSTETTUUN PISTORASIAAN.

ADVARSEL: APPARATET MÅ TILKOPLSES JORDET STIKKONTAKT.

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FC

TÜV Rheinland

SAFETY MARK

BZ02

UL LISTED E135689 US I.T.E. 1K81

MADE IN CHINA 中国製造
 生产厂: 福建康强电子有限公司
 生产地址: 福建省福州市元洪路上海

NECディスプレイソリューションズ株式会社
 NEC Display Solutions, Ltd.
 4-13-23 SHIBAURA, MINATO-KU, TOKYO, 108-0023, JAPAN

PS E

1E006671

NEC
MULTEOS M401
LCD MONITOR
40英寸液晶显示器
(Model/型号:L408TR)
M401-G1(C)-T

VOLTS 定格电压 输入电压:100-240V~, AMPERES 定格电流 电流:3.5-1.45A (3.5-1.45A)
FREQUENCY 定格周波数 工作频率:50/60Hz

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

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUE, NE PAS OUVRI
CE BOUTIER. 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.

VARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTTAG.

VAROITUS: LAITE ON LIITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA
VARUSTETTUUN PISTORASIAAN.

ADVARSEL: APPARATET MÅ TILKOPLSES JORDET STIKKONTAKT.

注意: 请勿打开后盖, 小心高压电击。机内并无用户配件。

THIS CLASS B DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE
CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.
CET APPAREIL NUMÉRIQUE DE LA CLASSE B RESPECTE TOUTES LES
EXIGENCES DU RÈGLEMENT SUR LE MATÉRIEL BROUILLER DU CANADA.

For Japan only
警告
高圧注意
サービスマンが内部の部品を交換しない
でください。内部には修理可能な部品が
ありません。分解は危険です。

高圧注意
電源コードのプラグと電源コンセントは必ず
接地してください。接地のときに電源の
回路になります。

For USA
THE LAMPS IN THIS PRODUCT CONTAIN MERCURY.
PLEASE DISPOSE ACCORDING TO STATE, LOCAL, OR FEDERAL LAW.
灯泡含水银, 请按当地法律处理。

SAFETY MARK
XXXXXX-X

NECディスプレイソリューションズ株式会社
NEC Display Solutions Ltd.
4-13-23 SHIBAURA, MINATO-KU, TOKYO, 108-0023, JAPAN

NEC
MULTEOS M401
LCD MONITOR
40英寸液晶显示器
(Model/型号:L408TR)
M401-G1(C)-T

VOLTS 定格电压 输入电压:100-240V~, AMPERES 定格电流 电流:3.5-1.45A (3.5-1.45A)
FREQUENCY 定格周波数 工作频率:50/60Hz

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

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUE, NE PAS OUVRI
CE BOUTIER. 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
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VARUSTETTUUN PISTORASIAAN.

ADVARSEL: APPARATET MÅ TILKOPLSES JORDET STIKKONTAKT.

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SAFETY MARK
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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.
4-13-23 SHIBAURA, MINATO-KU, TOKYO, 108-0023, JAPAN

NEC
MultiSync X461UNV
LCD MONITOR
46英寸液晶显示器
(Model/型号:L460NZ)

VOLTS 定格电压 输入电压:100-240V~, AMPERES 定格电流 电流:2.9-1.2A (2.9-1.2A)
FREQUENCY 定格周波数 工作频率:50/60Hz

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

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUE, NE PAS OUVRI
CE BOUTIER. 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.

VARNING: APPARATEN SKALL ANSLUTAS TILL JORDAT UTTAG.

VAROITUS: LAITE ON LIITETTÄVÄ SUOJAMAADOITUSKOSKETTIMILLA
VARUSTETTUUN PISTORASIAAN.

ADVARSEL: APPARATET MÅ TILKOPLSES JORDET STIKKONTAKT.

注意: 请勿打开后盖, 小心高压电击。机内并无用户配件。

THIS CLASS A DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE
CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.
CET APPAREIL NUMÉRIQUE DE LA CLASSE A RESPECTE TOUTES LES
EXIGENCES DU RÈGLEMENT SUR LE MATÉRIEL BROUILLER DU CANADA.

For USA
THE LAMPS IN THIS PRODUCT CONTAIN MERCURY.
PLEASE DISPOSE ACCORDING TO STATE, LOCAL, OR FEDERAL LAW.

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.

HDMI

SAFETY MARK
XXXXXX-X

NECディスプレイソリューションズ株式会社
NEC Display Solutions Ltd.
4-13-23 SHIBAURA, MINATO-KU, TOKYO, 108-0023, JAPAN

Note:

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

Test item particulars	
Equipment mobility	☐ movable ☐ hand-held ☐ transportable ☒ stationary ☐ for building-in ☐ direct plug-in
Connection to the mains.....	☒ pluggable equipment ☒ type A ☐ type B ☐ permanent connection ☒ detachable power supply cord ☐ non-detachable power supply cord ☐ not directly connected to the mains
Operating condition	☒ continuous ☐ rated operating / resting time:
Access location	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV
Over voltage category (OVC)	±10% according to client's request
Mains supply tolerance (%) or absolute mains supply values	☐ Yes ☒ No
Tested for IT power systems	N/A
IT testing, phase-phase voltage (V)	☒ Class I ☐ Class II ☐ Class III ☐ Not classified
Class of equipment	☐ PD 1 ☒ PD 2 ☐ PD 3
Considered current rating (A)	IPX0
Pollution degree (PD)	Up to 3000
IP protection class	Less than 1000
Altitude during operation (m)	29.3 / 31.2 (without / with stand) for L468TP 35.0 / 36.9 (without / with stand) for L468TN 28.0 / 29.9 (without / with stand) for L408TM 34.8 / 38.0 (without / with stand) for L468TT, L468N6 27.8 / 31.0 (without / with stand) for L408TR, L408N5 26.8 / 28.7 (without / with stand) for L460NZ
Altitude of test laboratory (m)	
Mass of equipment (kg)	
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	23. Aug. 2010
Date(s) of performance of tests	20. Sep. 2010
General remarks:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Note: This TRF includes EN Group Differences together with National Differences and Special National Conditions, if any. All Differences are located in the Appendix to the main body of this TRF. Throughout this report a point is used as the decimal separator.	

General product information:

The equipments are LCD Monitor for general office use.

The unit can be operated at following positions:

1. Horizontal position with stands.
2. Horizontal or portrait position built on wall or ceiling.

When using the display in the portrait position, the monitor should be rotated clockwise so that the left side is moved to the top and the LED indicator light is on the bottom.

The model L468TN which is similar to model L468TP except for as follows:

- Type designation
- Input rating
- Source of DC/AC inverter
- Source of Panel
- Enclosure shape which adding additional plastic enclosure around the panel (decorative part).
- Additional Speakers provided.
- Additional DVI board and HSDI board that are also used in same area of DTV board.
- Additional a glass where is placed in front of LCD panel.
- Remove the some components (PC051 etc.) from SPS board.

The model L408TM which is similar to model L468TP except for as follows:

- Type designation
- Input rating
- Source of DC/AC inverter
- Source of Panel
- Enclosure shape which adding additional plastic enclosure around the panel (decorative part) and size small than original.
- Additional Speakers provided.
- Additional DVI board and HSDI board that are also used in same area of DTV board.
- Additional a glass where is placed in front of LCD panel.
- Remove the some components (PC051 etc.) from SPS board which is same as used in the model L468TN.

The models L468TT, L468N6 which are similar to model L468TN except for as follows:

- Type designation
- Deleting DTV board
- Source of panel

The models L408TR, L408N5 which are similar to model L408TM except for as follows:

- Type designation
- Deleting DTV board
- Source of panel

The model L460NZ which are similar to model L468TN except for as follows:

- Type designation
- Deleting DTV board
- Source of panel
- Rating current

This equipment consists of following critical components:

- Lamp with TFT LCD module
- There is one non-approved built-in switching power supply board provided inside of LCD Monitor and evaluated with unit together (refer to appended table 1.5.1 for source details).
- Two DC/AC inverter boards (Master and Slave).
- Secondary function control board (as main board, SELV circuits; with D-sub, DVI connector and RGB connector etc.).
- DTV Board.
- Speakers (two provided).
- Metal enclosure.

Other remarks:

- The Norway and Sweden only applied for unit is not provided with Tuner.
- The equipment provides two TV tuner module as optional function that can be considered as multimedia equipment under the Guide 112 © IEC:2000. Therefore, the surge test, insulation resistance test and dielectric strength test were performed according to sub clause 10.1 and 10.3 of IEC 60065 as following test condition:
 - Surge test performed from AC mains of building-in switch power supply to antenna connector of tuner with 50 discharges at a maximum rate of 12 per minute, from a 1nF capacitor charged to 10kV.
 - After the test, the insulation resistance greater then 4 MΩ at 500Vdc and subjected to dielectric strength test at test voltage 4240 V d.c.
- Due to fulfilled the following considerations for the equipment, the separation requirements and test of 6.2 are not apply to cable distribution system.
 - The circuit of cable distribution system under consideration is TNV-1 circuit.
 - The common sides or earthed side of the circuit are connected to the screen of the coaxial cable through an antenna connector of tuner and to all accessible parts and circuits (SELV and accessible metal parts).
 - The screen of the coaxial cable is intended to be connected to earth in the building installation.
- This CB is based on previous CB report no. 11017087 001-003 for upgrade the standard to IEC 60950-1: 2005 (2nd Edition), to :

Factory(ies):

1. TPV Electronics (Fujian) Co., Ltd.
Yuan Hong Rd., Shang-Zheng Hong-Lu, Fuqing City Fujian 350301, P.R. China.
2. TPV Technology (Beijing) Co., Ltd.
No. 10, Jiu Xian Qiao Rd., Chao Yang District, Beijing 100016, P.R. China
3. Tatung Mexico S.A. de. C.V.
Ave. Rosa Ma. Fuentes #7050, Complejo Industrial Fuentes, C.P. 32320, Cd. Juarez. Chih, MEXICO
4. TPV Display Technology (Wuhan) Co., Ltd.
Unique No. 11, Zhuankou Development, District of Economic Technological Development Zone, Wuhan City 430056, P.R. China
5. Envision Industry of Electronic Products Ltd.
895, Joao Marcos Pozzetti Street, Industrial District II, 69.075-215 Manaus, Am Brazil
6. Tatung Czech s.r.o
U Nove Hospody 4, 30100 Plzen, Czech Republic
7. TPV Technology (Suzhou) Co., Ltd., Zhujiang Branch
No. 161, Zhujiang Road, Suzhou New District, Suzhou City, Jiangsu Province, P.R. China

8. Envision Industry of Electronic Products Ltd.
Rodovia Anhanguera S/N-KM 49, 13.205-700 Tijuco Preto-Jundiaí-SP-Brazil
9. TPV Displays Polska Sp. z o.o.
ul. Złotego Smoka 9, 66-400 Gorzów Wlkp., Poland
10. L&T Display Technology (Fujian) Ltd.
Optoelectronic Park, Rongqiao Economic and Technological Development Zone,
Fuqing, Fujian 350301, P. R. China

Other comments:

Declaration of the manufacturer: the sample(s) submitted for evaluation is (are) representative of the products from each factory."

Attachments to this Test Report:

The completed test report includes attachment of photo documentation (30 pages).

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	GENERAL		P
1.5	Components		
1.5.1	General	See below	P
	Comply with IEC 60950 or relevant component standard	Components, which were found to affect safety aspects, comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards (see appended table 1.5.1).	P
1.5.2	Evaluation and testing of components	Components, which are certified to IEC and/or national standards, are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	P
1.5.3	Thermal controls	No thermal controls provided.	N/A
1.5.4	Transformers	Transformers used are suitable for the intended application and complies with the relevant requirements of the standard and particularly with those of Annex C.	P
1.5.5	Interconnecting cables	Interconnection o/p cable to other device is carrying only SELV voltages on an energy level below 240VA. Except the insulation material, there are no further requirements to the o/p interconnection cable.	P
1.5.6	Capacitors bridging insulation	Between lines: X1 or X2 capacitor according to IEC 60384-14 with 21 days damp heat test was used. Between line/neutral and PB: 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
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable	No bridging resistors.	N/A
1.5.8	Components in equipment for IT power systems	See clause 2.4.	P
1.5.9	Surge suppressors		P
1.5.9.1	General	Approved surge suppression varistor used after fuse link (see appended table 1.5.1 and annex Q)	P
1.5.9.2	Protection of VDRs	See above.	P
1.5.9.3	Bridging of functional insulation by a VDR	Used between L and N and located after fuse link	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	TN power system and IT power system (for Norway).	P
1.6.2	Input current	Max. normal load according to 1.2.2.1 for this equipment is the unit operated under max. brightness, contrast of LCD backlight circuit and max. volume of speakers.	P
1.6.3	Voltage limit of hand-held equipment	This appliance is not a hand-held equipment.	N/A
1.6.4	Neutral conductor	The neutral is not identified in the equipment. Basic insulation for rated voltage between earthed parts and primary phases.	P

1.7	Marking and instructions		P
1.7.1	Power rating	See below.	P
	Rated voltage(s) or voltage range(s) (V)	See marking plates for details	P
	Symbol for nature of supply, for d.c. only	AC source	N/A
	Rated frequency or rated frequency range (Hz) ...	See marking plates for details	P
	Rated current (mA or A)	See marking plates for details	P
	Manufacturer's name or trade-mark or identification mark	See page 2 for details	P
	Model identification or type reference	See page 2 for details	P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Symbol for Class II equipment only	Class I equipment.	N/A
	Other markings and symbols	Additional symbol or marking does not give rise to misunderstanding.	P
1.7.2	Safety instructions and marking	The user's manual contains the following information. 1. Connections and operation 2. Installation instruction for mounting on wall or ceiling. 3. Product specification and used a specified power supply cord. 4. Safety caution for power cord used and connection to cable distribution system	P
1.7.2.1	General		P
1.7.2.2	Disconnect devices	AC inlet serves as disconnect device.	P
1.7.2.3	Overcurrent protective device	Not type B pluggable equipment or permanently connected equipment.	N/A
1.7.2.4	IT power distribution systems	TN power system.	N/A
1.7.2.5	Operator access with a tool	No such access required.	N/A
1.7.2.6	Ozone	Ozone not used or generated.	N/A
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	N/A
1.7.4	Supply voltage adjustment	Single input voltage range without adjustment.	N/A
	Methods and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment	No power outlets provided.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)	Fuses marking adjacent to each fuse as below: F001 T8AH 250V F003 T2.5AH 250V CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS OF FUSES.	P
1.7.7	Wiring terminals	See below.	P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.7.1	Protective earthing and bonding terminals :	The equipment is provided with appliance inlet, which is for connection of a detachable type power supply cord. One green/yellow wire is soldered and hook-in the PE-pin of the appliance inlet and fixed to the stud of metal chassis by ring lock terminal, washer, spring washer and screw.	P
1.7.7.2	Terminals for a.c. mains supply conductors	Same as above.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors	No such conductors.	N/A
1.7.8	Controls and indicators	See below.	P
1.7.8.1	Identification, location and marking :	The marking and indication of the power switch and stand by condition are located that indication of function is clearly.	P
1.7.8.2	Colours :	No safety relevant control or indicator.	P
1.7.8.3	Symbols according to IEC 60417 :	1. Symbol according 60417-1-IEC- 5009 (line half inside circle) provided on the front screen. 2. Symbol for rocker type switch according 60417-1-IEC-5007 and 60417-1-IEC-5008.	P
1.7.8.4	Markings using figures :	No indicators for different positions of control.	N/A
1.7.9	Isolation of multiple power sources :	Single power source only.	N/A
1.7.10	Thermostats and other regulating devices :	For Norway compliance has to be evaluated during the national approved.	N/A
1.7.11	Durability	Neither thermostats nor other regulating devices provided.	N/A
1.7.12	Removable parts	User's manual provided in English and marking label is in English. Versions of other languages will be provided when submitted for national approval.	—
1.7.13	Replaceable batteries :	Two alkaline batteries, type AA for remote controller.	N/A
	Language(s) :		—

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.14	Equipment for restricted access locations..... :	Equipment not intended for installation 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	No hazard in operator accessible areas.	P
2.1.1.1	Access to energized parts	See below.	P
	Test by inspection	No access with test finger to any parts with only basic insulation to ELV or hazardous voltage. The test pin cannot touch hazardous voltage though any seams within the appliance.	P
	Test with test finger (Figure 2A)	Same as above.	P
	Test with test pin (Figure 2B)	Same as above.	P
	Test with test probe (Figure 2C)	No TNV circuit.	N/A
2.1.1.2	Battery compartments	Same as above.	P
2.1.1.3	Access to ELV wiring	Same as above.	P
	Working voltage (V _{peak} or V _{rms}); minimum distance through insulation (mm)	No TNV circuit.	—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage circuit in operator access area.	N/A
2.1.1.5	Energy hazards	No energy hazard in operator access area.	P
2.1.1.6	Manual controls	No conductive shafts of operating knobs and handles.	N/A
2.1.1.7	Discharge of capacitors in equipment	No risk of electric shock.	P
	Measured voltage (V); time-constant (s)	See appended table 2.1.1.7.	—
2.1.1.8	Energy hazards – d.c. mains supply	a.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		N/A
2.1.2	Protection in service access areas	No maintenance works in operation mode necessary.	N/A
2.1.3	Protection in restricted access locations	The unit is not limited to be used in restricted access locations.	N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.2	SELV circuits		P
2.2.1	General requirements	The secondary circuits were tested as SELV. See sub-clauses 2.2.1 to 2.2.4.	P
2.2.2	Voltages under normal conditions (V) :	42.4V peak or 60V d.c. are not exceeded in SELV circuit under normal operation.	P
2.2.3	Voltages under fault conditions (V) :	Single fault did not cause excessive voltage in accessible SELV circuits. Limits of 71V peak and 120V d.c. were not exceeded within 0.2 sec. and limits 42.4V peak and 60V d.c. were not exceeded for longer than 0.2 sec., see appended tables 2.2.3 and 5.3.	P
2.2.4	Connection of SELV circuits to other circuits :	See sub-clauses 1.5.6, 2.2.2, 2.2.3 and 2.4.3. No direct connection between SELV and any primary circuits.	P

2.3	TNV circuits <i>Cable distribution system is considered to comply with TNV-1 circuit.</i>		P
2.3.1	Limits		N/A
	Type of TNV circuits :		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions :		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed..... :		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed..... :		—
2.3.5	Test for operating voltages generated externally		N/A

2.4	Limited current circuits		P
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IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.4.1	General requirements	Considered for output of DC/AC inverter and output circuit connected to primary via bridging capacitors.	P
2.4.2	Limit values	See appended table 2.4.2.	P
	Frequency (Hz)	See appended table 2.4.2.	—
	Measured current (mA).....	See appended table 2.4.2.	—
	Measured voltage (V)	See appended table 2.4.2.	—
	Measured circuit capacitance (nF or μ F)	See appended table 2.4.2.	—
2.4.3	Connection of limited current circuits to other circuits	Complies.	P

2.5	Limited power sources		N/A
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition		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	One green/yellow wire with ring terminal is soldered and hook-in the PE-pin of the appliance inlet and fixed to the stud of metal chassis by ring lock terminal, washer, spring washer and screw.	P
2.6.2	Functional earthing	Secondary functional earthing is separated to primary by double or reinforce insulation or by basic insulation and protective earthing.	P
2.6.3	Protective earthing and protective bonding conductors	See below.	P
2.6.3.1	General	No power supply cord provided. See sub clause 2.6.3.4.	P
2.6.3.2	Size of protective earthing conductors	No power cord provided.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Rated current (A), cross-sectional area (mm ²), AWG		—
2.6.3.3	Size of protective bonding conductors	Evaluation by test. Rated current below 16A (20A for North America).	N/A
	Rated current (A), cross-sectional area (mm ²), AWG		—
	Protective current rating (A), cross-sectional area (mm ²), AWG		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min)	Refer to appended table 2.6.3.4.	P
2.6.3.5	Colour of insulation	See 2.6.1.	P
2.6.4	Terminals	See below.	P
2.6.4.1	General	Refer to 2.6.4.2 and 2.6.4.3.	P
2.6.4.2	Protective earthing and bonding terminals	Appliance inlet considered as protective earthing terminal.	P
	Rated current (A), type, nominal thread diameter (mm)	Rated current: 3.6A max. The earthing terminal in approved AC inlet serves as main PE terminal. Each screw connection fixing power board to metal chassis and metal chassis to Green/yellow wire as the protective bonding terminal, Φ=2.8, spring washer used. The test of 2.6.3.4 complied.	—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	Separated PE and protective bonding conductor used. The protective bonding conductor is connected to the approved appliance inlet. Protective earthing conductor is in appliance inlet; green/yellow wire is provided for protective bonding conductor from AC appliance inlet to metal chassis.	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 DC output connector shall provide 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 protective earthing or bonding conductor.	P
2.6.5.3	Disconnection of protective earth	It is not possible to disconnect earth without disconnecting mains as an appliance inlet is used.	P
2.6.5.4	Parts that can be removed by an operator	Same as above.	P
2.6.5.5	Parts removed during servicing	Same as above.	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	No self-tapping or spaced thread screws.	N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system	No TNV.	N/A

2.7	Overcurrent and earth fault protection in primary circuits		P
2.7.1	Basic requirements	Equipment relies on rated fuse or 16A (20A for North America) circuit breaker of the wall outlet installation protection of the building installation in regard to L to N short circuit. Over current protection is provided by built-in fuses.	P
	Instructions when protection relies on building installation	Pluggable equipment type A.	N/A
2.7.2	Faults not simulated in 5.3.7	The protection devices are well dimensioned and mounted.	P
2.7.3	Short-circuit backup protection	Pluggable equipment type A. Building installation is considered as providing short-circuit backup protection.	P
2.7.4	Number and location of protective devices	Over current protection by built-in fuses.	P
2.7.5	Protection by several devices	Only fuse in line provided.	N/A
2.7.6	Warning to service personnel	No service work necessary.	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

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Clause	Requirement + Test	Result - Remark	Verdict
2.8.4	Fail-safe operation		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches and relays		N/A
2.8.7.1	Contact gaps (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	(see appended table 5.2)	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.	P
2.9.2	Humidity conditioning	Carried out for 120 h.	P
	Relative humidity (%), temperature (°C)	93	—
2.9.3	Grade of insulation	25	—
2.9.4	Separation from hazardous voltages	Adequate levels of safety insulation were provided and maintained to comply with the requirements of this standard.	P
	Method(s) used	SELV separated from primary by reinforced or double insulation.	—

2.10	Clearances, creepage distances and distances through insulation		P
2.10.1	General	See below.	P
2.10.1.1	Frequency	Considered	P
2.10.1.2	Pollution degrees	2	P
2.10.1.3	Reduced values for functional insulation	Considered	P
2.10.1.4	Intervening unconnected conductive parts	Considered	P
2.10.1.5	Insulation with varying dimensions	Insulation kept homogenous.	N/A
2.10.1.6	Special separation requirements	Not applied.	N/A
2.10.1.7	Insulation in circuits generating starting pulses	No such circuits.	N/A
2.10.2	Determination of working voltage		P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.2.1	General	The rms and the peak voltages were measured for the unit. The unit was connected to a 240V TN power system. Results see appended table 2.10.2.	P
2.10.2.2	RMS working voltage	See table 2.10.2	P
2.10.2.3	Peak working voltage	See table 2.10.2	P
2.10.3	Clearances	See below and advantage of annex G is not considered.	P
2.10.3.1	General	Considered.	P
2.10.3.2	Mains transient voltages		P
	a) AC mains supply	240V a.c. and Overvoltage Category II	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	Sub-clause 5.3.4 considered.	P
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply	Normal transient voltage considered (overvoltage category II for primary circuit).	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		P
2.10.4.1	General		P
2.10.4.2	Material group and comparative tracking index		P
	CTI tests	CTI rating for all materials of min. 100.	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5	Solid insulation		P
2.10.5.1	General		P
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation	Only inside approved optocoupler.	N/A
2.10.5.4	Semiconductor devices	Approved optocoupler complies to IEC 60747-5-2 and having $dti \geq 0.4\text{mm}$.	P
2.10.5.5	Cemented joints	Not applied.	N/A
2.10.5.6	Thin sheet material – General		P
2.10.5.7	Separable thin sheet material	Thin sheet insulation material used for T201, T301 and T401.	P
	Number of layers (pcs)	See appended table C.2.	—
2.10.5.8	Non-separable thin sheet material	Not applied for.	—
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	2 layers of three	P
	Electric strength test	(see appended table 5.2)	—
2.10.5.11	Insulation in wound components	See only 2.10.5.6	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	Not applied.	N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components	Not applied.	N/A
	Working voltage		N/A
	- Basic insulation not under stress		N/A
	- Supplementary, reinforced insulation		N/A
2.10.6	Construction of printed boards		P
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	P
2.10.6.2	Coated printed boards	Not applied.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	Not multi-layer printed board.	N/A
2.10.6.4	Insulation between conductors on different layers of a printed board	See above.	N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs)		N/A
2.10.7	Component external terminations	Coatings not used over terminations to increase effective clearance and creepage distance.	N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound	Pollution Degree 2.	N/A
2.10.11	Tests for semiconductor devices and cemented joints	Photo couplers are approved components. No other components applied for.	N/A
2.10.12	Enclosed and sealed parts	No hermetically sealed component.	N/A

3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	Line, Neutral and PE wirings used 18AWG. Other internal wires are UL recognized wiring, which is PVC insulated, rated VW-1, min. 80°C, 300V. Internal wiring gauge is suitable for current intended to be carried.	P
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges and heatsinks, which could damage the insulation.	P
3.1.3	Securing of internal wiring	Internal wires are secured by the soldering and quick connector 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	Not used.	N/A
3.1.6	Screws for electrical contact pressure	Electrical connections screwed two or more complete threads into metal. No screws of insulating material for electrical connections, or where supplementary or reinforced insulation could be impaired by a metal replacement.	P
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	No self-tapping or spaced thread screws used.	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	No sleeving used as supplementary insulation.	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 used.	P
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections	Only AC mains supply connection.	N/A
3.2.3	Permanently connected equipment	Not permanently connected equipment.	N/A
	Number of conductors, diameter of cable and conduits (mm) :		—
3.2.4	Appliance inlets	The appliance inlet complies with IEC 60320-1. The power cord can be inserted without difficulties and does not support the unit.	P
3.2.5	Power supply cords	Not provided.	N/A
3.2.5.1	AC power supply cords	ot provided.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Type		—
	Rated current (A), cross-sectional area (mm ²), AWG		—
3.2.5.2	DC power supply cords	Not provided.	N/A
3.2.6	Cord anchorages and strain relief	Appliance inlet used	N/A
	Mass of equipment (kg), pull (N)		—
	Longitudinal displacement (mm)		—
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	No 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	Not permanent connection or non-detachable power cord type.	N/A

3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals	AC inlet used.	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 used as disconnect device.	P
3.4.3	Permanently connected equipment	Not permanently connected equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.4.4	Parts which remain energized	When the power cord is removed from the appliance inlet, no remaining parts with hazardous voltage in the equipment.	P
3.4.5	Switches in flexible cords	No power supply cords provided.	N/A
3.4.6	Number of poles - single-phase and d.c. equipment	Both poles are disconnected simultaneously.	P
3.4.7	Number of poles - three-phase equipment	Single-phase equipment.	N/A
3.4.8	Switches as disconnect devices	See sub clause 3.4.2.	N/A
3.4.9	Plugs as disconnect devices	See sub clause 3.4.2.	N/A
3.4.10	Interconnected equipment	Interconnection of the power supply to the other PCBs in the equipment by secondary output cable only.	N/A
3.4.11	Multiple power sources	Only one supply connection provided.	N/A

3.5	Interconnection of equipment		
3.5.1	General requirements	See below.	P
3.5.2	Types of interconnection circuits	Interconnection circuits of SELV through the connector.	P
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection.	N/A
3.5.4	Data ports for additional equipment	Relevant data ports tested for LPS (see appended table 2.5)	P

4	PHYSICAL REQUIREMENTS		P
4.1	Stability		P
	Angle of 10°	The equipment does not overbalance when tilted to 10°	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Test force (N)	- Unit not falls over after force: 61.2N (L468TP) / 72.3N (L468TN) / 58.6N (L408TM) / 74.1N (L468TT, L468N6) / 60.5N (L408TR, L408N5) / 56.0N (L460NZ) applied to equipment in any direction except upwards. - The stability test with downward force of 800 N was not applied to the equipment, due the dimension design in any horizontal surface of EUT except for stand base are less than 12.5cm by 20cm	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, 2.10 and 4.4.1.	P
4.2.2	Steady force test, 10 N	10 N applied to components other than parts serving as an enclosure.	P
4.2.3	Steady force test, 30 N	No internal enclosure.	N/A
4.2.4	Steady force test, 250 N	250 N applied to outer enclosure of metal enclosure at top, side, front and rear. No energy or other hazards.	P
4.2.5	Impact test	No hazard as result from steel sphere ball impact test applied for top/side/front/rear for metal enclosure.	P
	Fall test	Same as above.	P
	Swing test	Same as above.	P
4.2.6	Drop test; height (mm)		N/A
4.2.7	Stress relief test	For the plastic enclosure (all type of enclosure source) after 7 hours at 70°C and cooling down to room temperature, no shrinkage, distortion or loosening any enclosure part was found.	P
4.2.8	Cathode ray tubes	No CRT	N/A
	Picture tube separately certified		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.2.9	High pressure lamps	No high pressure lamps	N/A
4.2.10	Wall or ceiling mounted equipment; force (N) :	No any hazards after applied force 87.9kg (L468TP) 105kg (L468TN) 84kg (L408TM) 104.4kg (L468TT) 83.4kg (L408TR) 80.4kg (L460NZ)	P

4.3	Design and construction		P
4.3.1	Edges and corners	Edges and corners of the enclosure are rounded.	P
4.3.2	Handles and manual controls; force (N) :	No any hazards after applied force as below: 1. 50 N on handles. 2. 30 N on power switch.	P
4.3.3	Adjustable controls	No such controls.	N/A
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress. For the protection solder pins are used. No connections likely to be exposed to mechanical stress are inside the unit.	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	Not direct plug-in type.	N/A
	Torque :		—
	Compliance with the relevant mains plug standard :		N/A
4.3.7	Heating elements in earthed equipment	No heating elements.	N/A
4.3.8	Batteries	Two alkaline batteries, type AA batteries used in remote control.	N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease	None.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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	None	N/A
4.3.12	Flammable liquids	None	N/A
	Quantity of liquid (l)		N/A
	Flash point (°C)		N/A
4.3.13	Radiation		P
4.3.13.1	General	See below	P
4.3.13.2	Ionizing radiation	No 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	No ultraviolet radiation	N/A
	Part, property, retention after test, flammability classification		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation	No ultraviolet radiation	N/A
4.3.13.5	Laser (including LEDs)	The LED used as indicating light.	P
	Laser class	Class 1	—
4.3.13.6	Other types		N/A
4.4	Protection against hazardous moving parts		P
4.4.1	General	The hazards moving parts is located inside of unit which could not be access by the user.	P
4.4.2	Protection in operator access areas	Same as above.	P
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A
4.5	Thermal requirements		P
4.5.1	General		P
4.5.2	Temperature tests		P
	Normal load condition per Annex L	Equipment loaded with rated output current.	—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat :	Bobbin materials of transformer T201, T301 and T401 are Phenolic that is accepted without further tests. Others see appended table 4.5.5.	P

4.6	Openings in enclosures		P
4.6.1	Top and side openings	No hazardous parts or energy within a vertical projection of 5°.	P
	Dimensions (mm) :	(see appended table 4.6.1 and 4.6.2)	—
4.6.2	Bottoms of fire enclosures	(see appended table 4.6.1 and 4.6.2)	P
	Construction of the bottom, dimensions (mm) :		—
4.6.3	Doors or covers in fire enclosures	No doors or covers.	N/A
4.6.4	Openings in transportable equipment	Not 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	No 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	No excessive temperatures. No easily burning materials employed. Fire enclosure provided. Safety relevant components used within their specified temperature limits.	P
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	P
	Method 2, application of all of simulated fault condition tests		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.2	Conditions for a fire enclosure	With having the following parts: - Components in primary - Insulated wiring - Components in secondary (not supplied by LPS, and not applied all fault condition test) Metal enclosure used as fire enclosure. Side enclosure framing monitor/panel V-0 plastic material used.	P
4.7.2.1	Parts requiring a fire enclosure	See above.	P
4.7.2.2	Parts not requiring a fire enclosure		P
4.7.3	Materials		P
4.7.3.1	General	PCB rated accordingly. For details see table 1.5.1.	P
4.7.3.2	Materials for fire enclosures	Metal enclosure provided.	P
4.7.3.3	Materials for components and other parts outside fire enclosures	Metal with decorative part min. HB for stand.	P
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are V-2 or better.	P
4.7.3.5	Materials for air filter assemblies	No air filters provided.	N/A
4.7.3.6	Materials used in high-voltage components	No high voltage components provided.	N/A

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current		P
5.1.1	General	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	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	Using figure 5A.	P
5.1.4	Application of measuring instrument	See appended table 5.1.6.	P
5.1.5	Test procedure	The touch current was measured from mains to metal enclosure and plastic enclosures and SELV circuit with metal foil.	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.1.6	Test measurements	(see appended table 5.1.6)	P
	Supply voltage (V)		—
	Measured touch current (mA)		—
	Max. allowed touch current (mA)		—
	Measured protective conductor current (mA)		—
	Max. allowed protective conductor current (mA) ...		—
5.1.7	Equipment with touch current exceeding 3,5 mA	Touch current does not exceed 3.5mA.	N/A
5.1.7.1	General		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	No TNV circuits.	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V)		—
	Measured touch current (mA)		—
	Max. allowed touch current (mA)		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

5.2	Electric strength		P
5.2.1	General	(see appended table 5.2)	P
5.2.2	Test procedure	(see appended table 5.2)	P

5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	See below.	P
5.3.2	Motors	Certified DC Fan used.	P
5.3.3	Transformers	With shorted and overload of the transformer, no high temperature of the transformer was recorded. Results of the short-circuit and overload see appended table 5.3 and Annex C.	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.3.4	Functional insulation..... :	Method c). Test results see appended table 5.3.	P
5.3.5	Electromechanical components	No electromechanical component provided.	N/A
5.3.6	Audio amplifiers in ITE :		N/A
5.3.7	Simulation of faults	(see appended table 5.3.)	P
5.3.8	Unattended equipment	No such equipment.	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	After test, neither fire occurs nor molten metal was emitted, no heat related or chemical hazards were observed. Electric strength tests passed for the parts between primary to secondary and primary to earth.	P
5.3.9.1	During the tests	No fire or molten metal occurred and no deformation of enclosure during the tests.	P
5.3.9.2	After the tests	No reduction of clearance and creepage distance. Electric strength test is made on basic, supplementary and reinforced insulation after test.	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)		—
6.1.2.2	Exclusions		

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

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Clause	Requirement + Test	Result - Remark	Verdict
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	(see appended table 5.2)	N/A
7.4.3	Impulse test	(see appended table 5.2)	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
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)		—

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Clause	Requirement + Test	Result - Remark	Verdict
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)		P
B.1	General requirements	Approved DC fan used.	P
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days)		—
	Electric strength test: test voltage (V)		—
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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 :	T201, T301, T401	—
	Manufacturer :	See appended table 1.5.1.	—
	Type :	See appended table 1.5.1.	—
	Rated values :	See appended table 1.5.1.	—
	Method of protection..... :	By protection circuit.	—
C.1	Overload test	(see appended table 5.3)	P
C.2	Insulation	See appended table C.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		P
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		P
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Clearances		N/A
G.1.1	General		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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	The internal metal enclosure is made of mild steel, screw spring washers are made of Ni on steel, the combined electrochemical potential is below 0.6V according to Table J.1.	—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V)		N/A
K.3	Thermostat endurance test; operating voltage (V) :		N/A
K.4	Temperature limiter endurance; operating voltage (V)		N/A
K.5	Thermal cut-out reliability		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
K.6	Stability of operation	(see appended table 5.3)	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	Ringling signal		N/A
M.3.1.1	Frequency (Hz)		—
M.3.1.2	Voltage (V)		—
M.3.1.3	Cadence; time (s), voltage (V)		—
M.3.1.4	Single fault current (mA)		—
M.3.2	Tripping device and monitoring voltage		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V)		N/A

N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A

P	ANNEX P, NORMATIVE REFERENCES		—
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Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		P
	a) Preferred climatic categories		P
	b) Maximum continuous voltage		P

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Clause	Requirement + Test	Result - Remark	Verdict
	c) Pulse current :		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
		Certified component used.	—
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		P
V.2	TN power distribution systems		P
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus	:	N/A
Y.2	Mounting of test samples	:	N/A
Y.3	Carbon-arc light-exposure apparatus	:	N/A
Y.4	Xenon-arc light exposure apparatus	:	N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		N/A
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
EN 60950-1 :2006 – CENELEC COMMON MODIFICATIONS			
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations		P
General	Delete all the “country” notes in the reference document 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
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment – Maximum sound pressure level measurement methodology and limit considerations – Part 1: General method for “one package equipment”, and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment – Maximum sound pressure level measurement methodology and limit considerations – Part 2: Guidelines to associate sets with headphones coming from different manuFacturers.		N/A
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		P
1.7.2.1	Add the following NOTE: NOTE Z1 In addition, the instructions shall include, as far as applicable, a warning that excessive sound pressure from earphones and headphones can cause hearing loss		N/A

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Clause	Requirement + Test	Result - Remark	Verdict												
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		P												
2.7.2	This subclause has been declared 'void'.		P												
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N/A												
3.2.5.1	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: <table><tr><td> Up to and including 6</td><td></td><td>0,75 ^{a)}</td><td> </td></tr><tr><td> Over 6 up to and including 10</td><td>(0,75) ^{b)}</td><td>1,0</td><td> </td></tr><tr><td> Over 10 up to and including 16</td><td>(1,0) ^{c)}</td><td>1,5</td><td> </td></tr></table> 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.	Up to and including 6		0,75 ^{a)}		Over 6 up to and including 10	(0,75) ^{b)}	1,0		Over 10 up to and including 16	(1,0) ^{c)}	1,5			N/A
Up to and including 6		0,75 ^{a)}													
Over 6 up to and including 10	(0,75) ^{b)}	1,0													
Over 10 up to and including 16	(1,0) ^{c)}	1,5													
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: <table><tr><td> Over 10 up to and including 16</td><td>1,5 to 2,5</td><td> </td><td>1,5 to 4</td></tr></table> Delete the fifth line: conductor sizes for 13 to 16 A.	Over 10 up to and including 16	1,5 to 2,5		1,5 to 4		N/A								
Over 10 up to and including 16	1,5 to 2,5		1,5 to 4												
4.3.13.6	Add the following NOTE: 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. Standards taking into account this Recommendation which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A												

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 $\mu\text{Sv/h}$ (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.		N/A
Bibliography	Additional EN standards.		—

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	—
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ZB	SPECIAL NATIONAL CONDITIONS	P
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
1.5.7.1	In Finland, Norway and Sweden , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2.	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).	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: "Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan" In Norway: "Apparatet må tilkoples jordet stikkontakt" In Sweden: "Apparaten skall anslutas till jordat uttag"	N/A
1.7.5	In Denmark , socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.	N/A
2.2.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	N/A
2.3.2	In Finland, Norway and Sweden there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	N/A
2.3.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict																								
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.		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: <table border="0"> <tr> <td>SEV 6532-2.1991</td><td>Plug Type 15</td><td>3P+N+PE</td><td>250/400 V, 10 A</td></tr> <tr> <td>SEV 6533-2.1991</td><td>Plug Type 11</td><td>L+N</td><td>250 V, 10 A</td></tr> <tr> <td>SEV 6534-2.1991</td><td>Plug Type 12</td><td>L+N+PE</td><td>250 V, 10 A</td></tr> </table> 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: <table border="0"> <tr> <td>SEV 5932-2.1998</td><td>Plug Type 25</td><td>3L+N+PE</td><td>230/400 V, 16 A</td></tr> <tr> <td>SEV 5933-2.1998</td><td>Plug Type 21</td><td>L+N</td><td>250 V, 16 A</td></tr> <tr> <td>SEV 5934-2.1998</td><td>Plug Type 23</td><td>L+N+PE</td><td>250 V, 16 A</td></tr> </table>	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	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, 16 A	SEV 5934-2.1998	Plug Type 23	L+N+PE	250 V, 16 A		N/A
SEV 6532-2.1991	Plug Type 15	3P+N+PE	250/400 V, 10 A																								
SEV 6533-2.1991	Plug Type 11	L+N	250 V, 10 A																								
SEV 6534-2.1991	Plug Type 12	L+N+PE	250 V, 10 A																								
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SEV 5933-2.1998	Plug Type 21	L+N	250 V, 16 A																								
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	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																								

IEC/EN 60950-1			
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.		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

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.1	In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manuFacturing, using a test voltage of 1,5 kV. It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 132400; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400.		N/A
6.1.2.2	In Finland, Norway and Sweden, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	In Finland, Norway and Sweden, for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
7.3	In Norway and Sweden, there are many buildings where the screen of the coaxial cable is normally not connected to the earth in the building installation.		N/A
7.3	In Norway, for installation conditions see EN 60728-11:2005.		N/A
ZC	A-DEVIATIONS (informative)		P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.1	Sweden (Ordinance 1990:944) Add the following: NOTE In Sweden, switches containing mercury are not permitted.		P
1.5.1	Switzerland (Ordinance on environmentally hazardous substances SR 814.081, Annex 1.7, Mercury – Annex 1.7 of SR 814.81 applies for mercury.) Add the following: NOTE In Switzerland, switches containing mercury such as thermostats, relays and level controllers are not allowed.		P
1.7.2.1	Denmark (Heavy Current Regulations) Supply cords of CLASS I EQUIPMENT, which is delivered without a plug, must be provided with a visible tag with the following text: Vigtigt! Lederen med grøn/gul isolation må kun tilsluttes en klemme mærket  eller  If essential for the safety of the equipment, the tag must in addition be provided with a diagram, which shows the connection of the other conductors, or be provided with the following text: "For tilslutning af de øvrige ledere, se medfølgende installationsvejledning."		N/A
1.7.2.1	Germany (Gesetz über technische Arbeitsmittel und Verbraucherprodukte (Geräte- und Produktsicherheitsgesetz – GPSG) [Law on technical labour equipment and consumer products], of 6 th January 2004, Section 2, Article 4, Clause (4), Item 2). If for the assurance of safety and health certain rules during use, amending or maintenance of a technical labour equipment or readymade consumer product are to be followed, a manual in German language has to be delivered when placing the product on the market. Of this requirement, rules for use even only by SERVICE PERSONS are not exempted.		N/A
1.7.5	Denmark (Heavy Current Regulations) With the exception of CLASS II EQUIPMENT provided with a socket outlet in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-4a, CLASS II EQUIPMENT shall not be fitted with socket-outlets for providing power to other equipment.		N/A
1.7.13	Switzerland (Ordinance on chemical hazardous risk reduction SR 814.81, Annex 2.15 Batteries) Annex 2.15 of SR 814.81 applies for batteries.		N/A
5.1.7.1	Denmark (Heavy Current Regulations, Chapter 707, clause 707.4) TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B.		N/A

IEC/EN 60950-1				
Clause	Requirement + Test		Result - Remark	Verdict
Annex ZA (modified by A11)				P
Normative references to international publications with their corresponding European publications				
The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.				
Publication	Year	Title	EN/HD	Year
IEC 60065 (mod)	2001	Audio, video and similar electronic apparatus - Safety requirements	EN 60065	2002
A1	2005		A1	2006
A2	- ¹⁾		+ A11 A2	2008 - ¹⁾
IEC 60068-2-78	- ²⁾	Environmental testing Part 2-78: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	2001 ³⁾
IEC 60073	- ²⁾	Basic and safety principles for man-machine interface, marking and identification - Coding principles for indication devices and actuators	EN 60073	2002 ³⁾
IEC 60083	- ²⁾	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC	-	-
IEC 60085	2004	Electrical insulation - Thermal classification	EN 60085	2004
IEC 60112	- ²⁾	Method for determining the proof and comparative tracking indices of insulating materials	EN 60112	2003 ³⁾
IEC 60216-4-1	- ²⁾	Guide for the determination of thermal endurance properties of electrical insulating materials Part 4: Ageing ovens Section 1: Single-chamber ovens	EN 60216-4-1	2006 ³⁾
IEC 60227 (mod)	Series	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V	HD 21 ⁴⁾	Series
IEC 60245 (mod)	Series	Rubber insulated cables of rated voltages up to and including 450/750V	HD 22 ⁵⁾	Series

IEC/EN 60950-1				
Clause	Requirement + Test		Result - Remark	Verdict
<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60309 (mod)	Series	Plugs, socket-outlets and couplers for industrial purposes	EN 60309	Series
IEC 60317	Series	Specifications for particular types of winding wires	EN 60317	Series
IEC 60317-43	- ²⁾	Part 43: Aromatic polyimide tape wrapped round copper wire, class 240	EN 60317-43	1997 ³⁾
IEC 60320 (mod)	Series	Appliance couplers for household and similar general purposes	EN 60320	Series
IEC 60364-1 (mod)	2001	Electrical installations of buildings Part 1: Fundamental principles, assessment of general characteristics, definitions	HD 384.1 S2	2001
IEC 60384-14 A1	1993 1995	Fixed capacitors for use in electronic equipment Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	EN 132400 ⁶⁾	1994
IEC 60417	Data-base	Graphical symbols for use on equipment	-	-
IEC 60664-1 + A1 + A2	1992 2000 2002	Insulation coordination for equipment within low-voltage systems Part 1: Principles, requirements and tests	EN 60664-1	2003
IEC 60695-2-11	- ²⁾	Fire hazard testing Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products	EN 60695-2-11	2001 ³⁾
IEC 60695-2-20	- ²⁾	Part 2-20: Glowing/hot-wire based test methods - Hot-wire coil ignitability - Apparatus, test method and guidance	-	-
IEC 60695-10-2	- ²⁾	Part 10-2: Guidance and test methods for the minimization of the effects of abnormal heat on electrotechnical products involved in fires - Method for testing products made from non-metallic materials for resistance to heat using the ball pressure test	EN 60695-10-2	2003 ³⁾
IEC 60695-11-3	- ²⁾	Part 11-3: Test flames - 500 W flames - Apparatus and confirmational test methods	-	-
IEC 60695-11-4	- ²⁾	Part 11-4: Test flames - 50 W flames - Apparatus and confirmational test methods	-	-
IEC 60695-11-10 A1	- ²⁾	Part 11-10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10 A1	1999 ³⁾ 2003 ³⁾

IEC/EN 60950-1				
Clause	Requirement + Test		Result - Remark	Verdict
<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60695-11-20 A1	- ²⁾	Part 11-20: Test flames - 500 W flame test methods	EN 60695-11-20 A1	1999 ³⁾ 2003 ³⁾
IEC 60730-1 (mod) A1	1999 2003	Automatic electrical controls for household and similar use Part 1: General requirements	EN 60730-1 A1 + A12 + A13 + A14 + A16	2000 2004 2003 2004 2005 2007
A2	2007		A2	2008
IEC 60747-5-5	2007	Semiconductor devices - Discrete devices Part 5-5: Optoelectronic devices - Photocouplers	EN 60747-5-5	- ¹⁾
IEC 60825-1	- ²⁾	Safety of laser products Part 1: Equipment classification, requirements and user's guide	EN 60825-1	2007 ³⁾
IEC 60825-2	- ²⁾	Part 2: Safety of optical fibre communication systems	EN 60825-2 A1	2004 ³⁾ 2007 ³⁾
IEC/TR 60825-9	- ²⁾	Part 9: Compilation of maximum permissible exposure to incoherent optical radiation	-	-
IEC 60825-12	- ²⁾	Part 12: Safety of free space optical communication systems used for transmission of information	EN 60825-12	2004 ³⁾
IEC 60851-3 A1	1996 1997	Winding wires - Test methods Part 3: Mechanical properties	EN 60851-3 A1	1996 1997
IEC 60851-5 A1 A2	1996 1997 2004	Part 5: Electrical properties	EN 60851-5 A1 A2	1996 1997 2004
IEC 60851-6	1996	Part 6: Thermal properties	EN 60851-6	1996
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	-	-
IEC 60906-1	- ²⁾	IEC System of plugs and socket-outlet for household and similar purposes Part 1: Plugs and socket-outlets 16 A 250 V a.c.	-	-
IEC 60906-2	- ²⁾	Part 2: Plugs and socket-outlets 15 A 125 V a.c.	-	-
IEC 60947-1	2004	Low voltage switchgear and control gear Part 1: General rules	EN 60947-1	2004
IEC 60990	1999	Methods of measurement of touch current and protective conductor current	EN 60990	1999

IEC/EN 60950-1				
Clause	Requirement + Test		Result - Remark	Verdict
<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61051-2	1991	Varistors for use in electronic equipment Part 2: Sectional specification for surge suppression varistors	-	-
IEC 61058-1 (mod)	2000	Switches for appliances Part 1: General requirements	EN 61058-1 ⁷⁾	2002
ISO 178	- ²⁾	Plastics - Determination of flexural properties	EN ISO 178	2003 ³⁾
ISO 179	Series	Plastics - Determination of Charpy impact strength	EN ISO 179	Series
ISO 180	- ²⁾	Plastics - Determination of Izod impact strength	EN ISO 180	2000 ³⁾
ISO 261	- ²⁾	ISO general-purpose metric screw threads - General plan	-	-
ISO 262	- ²⁾	ISO general-purpose metric screw threads - Selected sizes for screws, bolts and nuts	-	-
ISO 527	Series	Plastics - Determination of tensile properties	EN ISO 527	Series
ISO 3864	Series	Safety colours and safety signs	-	-
ISO 4892-1	- ²⁾	Plastics - Methods of exposure to laboratory light sources Part 1: General guidance	EN ISO 4892-1	2000 ³⁾
ISO 4892-2	- ²⁾	Part 2: Xenon-arc sources	EN ISO 4892-2	2006 ³⁾
ISO 4892-4	- ²⁾	Part 4: Open-flame carbon-arc lamps	-	-
ISO 7000	Data- base	Graphical symbols for use on equipment - Index and synopsis	-	-
ISO 8256	- ²⁾	Plastics - Determination of tensile-impact strength	EN ISO 8256	2004 ³⁾
ISO 9772	- ²⁾	Cellular plastics - Determination of horizontal burning characteristics of small specimens subjected to a small flame	-	-
ISO 9773	- ²⁾	Plastics - Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source	EN ISO 9773	1998 ³⁾
ITU-T Recommendation K.44	- ²⁾	Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents - Basic Recommendation	-	-

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
Annex ZB (Modified by A11: 2009) Special national conditions			P
Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions. Note if it affects harmonization, it forms part of the European Standard. For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative. Change the existing special national conditions as follows:			
1.2.3.14	In Norway and Sweden , for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1	Replace the exiting SNC by the following: 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
1.7.2.1	Add as new SNC: In Norway and Sweden, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: "Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing — and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)" NOTE In Norway, due to regulation for		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	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 1,5kV 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 nettet, kan forårsake brannfare. For å unngå dette skal det ved tilkpoling av utstyret til kabel-TV nettet installeres en galvanisk isolator finnes mellom og kabel-TV nettet.” Translation to Swedish: “Utstyting som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustningen och samtidigt är kapplad till kabel-TV nät kan i vissa fall medföra risk för brand. For ått undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnes mellan utrustningen och kabel-TV nätet.”		
1.7.5	Add the following paragraph to the existing SNC for Demark: For Class II equipment the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.	Added	N/A
7.3	Delete the existing SNC for Norway and Sweden (Based on Note 1 of IEC 60950-1: 2005 + Corr.1). Add as new SNC (Based on future Note 3 of IEC 60950-1: 200X): In Norway and Sweden, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
Annex ZC (Modified by A11: 2009)			P
A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CENELEC national member. This European Standard falls under Directives RTTED (1999/5/EC) and LVD (2006/95/EC). NOTE (from CEN/CENELEC IR Part 2:2006, 2.17) Where standards fall under EC Directives, it is the view of the Commission of the European Communities (OJ No. C 59, 1982-03-09) that the effect of the decision of the Court of Justice in case 815/79 Cremonini/Vrankovich (European Court Reports 1980, p. 3583) is that compliance with A-deviations is no longer mandatory and that the free movement of products complying with such a standard should not be restricted within the EC except under the safeguard procedure provided for in the relevant Directive. A-deviations in an EFTA-country are valid instead of the relevant provisions of the European Standard in that country until they have been removed.			
1.5.1	Denmark Delete the A-deviation	Deleted.	N/A
1.7.2.1	Denmark Delete the A-deviation	Deleted.	N/A
1.7.5	Denmark Delete the A-deviation	Deleted.	N/A
5.1.7.1	Denmark Delete the A-deviation	Deleted.	N/A

1.5.1	TABLE: list of critical components					P
Object/part no.	Manufacturer/ trademark	Type/model	Technical data	Standard	Mark(s) of conformity ¹ .	
Metal Enclosure	--	--	Metal, 1.0mm thick min.	--	--	
Metal Enclosure (around panel) for L468TP	--	--	Metal, 0.4mm thick min.	--	--	
Plastic enclosure around the panel (decorative part) for L468TN, L408TM	TEIJIN	MN-3600H	V-1 minimum, 80°C minimum. 1.0mm thick minimum	UL 94	UL	
PCB	--	--	V-1 or better, min. 105°C	UL 94	UL	
Stands (Two provided) (Optional)	--	--	Metal with decorative part min. HB, weight: 1.9kg	UL 94	UL	
Stands (optional)	--	--	Metal, weight: 3.2 kg	--	Test in appliance	
Remote Controller	--	--	--	--	--	
- Battery (two provided)	--	--	Alkaline / AA type, 1.5V	--	--	
- Enclosure	--	--	HB or better	UL 94	UL	
- PCB	--	--	V-1 or better, 105°C min.	UL 94	UL	
DTV Board (Optional)	NEC	L006WM	--	--	--	
- Tuner	Mitsumi	MDB1-A02	16V, 10W	--	--	
DVI Board (Optional)	NEC	L008WU	--	--	--	
HDSDI Board (Optional)	NEC	L007KK	--	--	--	
Speaker (2 provided) (Optional) for L468TN, L408TM	--	--	8 ohm, 15W	--	--	
Panel for L468TP	Samsung	LTI460AA04	46.0", TFT type	--	--	

Panel for L468TN	Samsung	LT1460HA02	46.0", TFT type	--	--
Panel for L408TM	SAMSUNG	LT1400HA02	40", TFT type	--	--
System Fan-1 (Two provided)	Xinruilian Science & Technology	RDM8025B	DC 12V, max. 0.132A, min 26.09CFM	IEC 60950-1: 2005, EN 60950-1: 2006	VDE, TÜV
AC Inlet	Yamate	AP-300	250Vac, 10A	IEC 60320-1	VDE, UL
Power Switch	Matsushita	AJ8 series	250Vac, 16A	IEC 61058-1, EN 61058-1	VDE, UL, CSA
Primary connector (power switch used)	Nippon Tanshi Co, Ltd.	CN86-05	250Vac, 16A, 95°C	--	UL
	Nippon Tanshi Co, Ltd.	CN86 series	250Vac, 16A, 105°C	--	UL
Primary connector (connect power board CNAC)	JST	VH series	250Vac, 7A, 85°C	IEC 61984:2001, EN 61984:2001	TÜV, UL
Switching Power Supply Board	Murata	MPF2932	I/P: 100-240ac, 50/60Hz, 3.6-1.45A O/P: +6Vdc / 4.7A max.; +16Vdc / 8.0A max.; +24Vdc / 12A max.	--	--
- Primary Connector (CNAC)	JST	VH series	250Vac, 7A, 85°C	IEC/EN 61984	TUV, UL
- Fuse (F001)	Littelfuse	215	T8AH, 250V	IEC 60127-1, EN 60127-1, IEC 60127-2, EN 60127-2	VDE, UL, CSA
- Fuse (F003)	Littelfuse	215	T2.5AH, 250V	IEC 60127-1, EN 60127-1, IEC 60127-2, EN 60127-2	VDE, UL
- Varistor (Z001)	Matsushita	ERZV140621	385Vac, 505Vdc	IEC 61051-2, UL 1449	VDE, UL
- X-Capacitor (C001, C002) (Optional)	Arcotronics	R.46	Min. 250Vac, 110°C, max. 0.47µF	IEC 60384-14	ENEC 03, UL

	Matsushita	ECQUL	Min. 250Vac, 100°C, max. 0.47µF	IEC 60384-14	VDE, UL
	Okaya	LE	Min. 250Vac, 110°C, max. 0.47µF	IEC 60384-14	ENEC, UL
- Bleeder Resistor (R001)	--	--	Max. 1M ohm, 1W	--	--
- Line Filter (L003) (Optional)	NEC-TOKIN	SC-10-E035J	105°C	--	--
- Line Filter (L001) (Optional)	NEC-TOKIN	SC-08-44JM	105°C	--	--
- Line Filter (L002) (Optional)	NEC-TOKIN	SC-08-100JM	105°C	--	--
- Relay (RL001, RL002)	Matsushita	LKQ1aF-5V-TV8	Contact: 250Vac, 8A Coil: 3 - 24Vdc.	IEC 61058-1	TÜV, UL
- Y-Capacitor (C092, C093) (Optional)	TDK	CD	Min. 250Vac, max. 1000pF, 125°C	IEC 60384-14	VDE, UL, S, FI
	MURATA	KX	Min. 250Vac, max. 1000pF, 125°C	IEC 60384-14	VDE, UL, S, FI
- Y-Capacitor (C095) (Optional)	TDK	CD	Min. 250Vac, max. 220pF, 125°C	IEC 60384-14	VDE, UL, S, FI
	MURATA	KX	Min. 250Vac, max. 220pF, 125°C	IEC 60384-14	VDE, UL, S, FI
- Bridge Capacitor (C291, C391, C094) (Y1 type) (Optional)	TDK	CD	Min. 250Vac, 125°C, C291, C391 max. 220pF, C094 max. 470pF.	IEC 60384-14	VDE, UL, S, FI
	MURATA	KX	Min. 250Vac, 125°C, C291, C391 max. 220pF, C094 max. 470pF.	IEC 60384-14	VDE, UL, S, FI
- Bridge Diode (D001, D002)	--	--	Min. 600V, min. 10A	--	--

- Common Choke (L102)	MURATA	1V010	105°C	--	--
- Storage Capacitor (C111, C112)	--	--	270µF, 105°C, 450V	--	--
- Storage Capacitor (C201)	--	--	47µF, 105°C, 450V	--	--
- Transistor (Q101)	--	--	Min. 600V, 10A	--	--
- Transistor (Q201)	--	--	Min. 600V, 6A	--	--
- Transistor (Q301, Q320)	--	--	Min. 600V, 6A	--	--
- Transistor (Q401, Q420)	--	--	Min. 600V, 6A	--	--
- Photo-Coupler (PC051, PC201, PC202, PC203, PC301, PC401), No PC051 provided for model L468TN, L408TM	NEC	PS2581AL1	Dti= 0.4mm, Int. Cr.> 4mm, Ext. Cr.=8.0mm, 100°C	IEC 60950-1, IEC 60747-5-2, EN 60950-1, EN 60747-5-2	VDE, UL
- Transformer (T201)	MURATA	202D1	Class 120 material (B)	Applicable parts in IEC 60950-1 and acc. to IEC 60085	Accepted by TÜV Rheinland
- Transformer (T301)	MURATA	2V092	Class 120 material (B)	Applicable parts in IEC 60950-1 and acc. to IEC 60085	Accepted by TÜV Rheinland
- Transformer (T401)	MURATA	2V089	Class 120 material (B)	Applicable parts in IEC 60950-1 and acc. to IEC 60085	Accepted by TÜV Rheinland
- PCB	--	--	V-1 or better, min. 105°C	UL 94	UL
For Model: L468TP					
DC/AC Inverter (Two provided)	Hansol	SSI460_24D01	I/P: 24Vdc, 12A O/P: 1400Vrms, 6.5mArms max.	--	--
- Fuse (F1, F1, F101, F102)	Littelfuse Inc	451 series	125V, 5A	UL 248-1	UL

- Transformer (T1, T2, T3, T4, T5, T6, T101, T102, T103, T104, T105, T106)	Union Company., Limited	EFD 2645	105°C minimum.	--	--
- PCB	--	--	V-1 or better, min. 105°C	UL 94	UL
For Model: L468TN					
DC/AC Inverter	Samsung	SSI460_16A01	I/P: DC 26.4V max., 9.4A max., O/P: AC 1840Vrms, 11.0mArms max.	--	--
- Transformers (T101, T201, T301, T401)	UNION	U-1666KC-C-460S4	105°C	--	--
- Transformers (CT301)	UNION	U-1017-460CT	105°C	--	--
- PCB	--	--	V-0 or better, 105°C	UL 94	UL
For Model: L408TM					
DC/AC Inverter	SAMSUNG	INV40N14A	I/P: DC 26.4V max., 8.0A max., O/P: AC 1750Vrms, 11.5mArms max.	--	--
- Transformers (T101, T102, T103)	NAM YANG	LT-4014-1	105°C	--	--
	UNION	LT-4014-1	105°C	--	--
- Transformer (T104)	NAM YANG	LT-4014-2	105°C	--	--
	UNION	LT-4014-2	105°C	--	--
- PCB	--	--	V-0 or better, 105°C	UL 94	UL
For added models: L468TT, L468N6					
Alternative Panel	Samsung	LTI460HA01	46.0", TFT type	--	Test in appliance
Alternative DC/AC Inverter (Two provided)	Hansol	SSI460_16D01	I/P: DC 26.4V max., 9.4A max., O/P: AC 1840Vrms, 11.0mArms max.	--	Test in appliance
For added models: L408TR, L408N5					

Alternative Panel	Samsung	LTI400HA01	40", TFT type	--	Test in appliance
Alternative DC/AC Inverter	Samsung	INV40N14B	I/P: DC 26.4V max., 8.0A max., O/P: AC 1750Vrms, 11.5mArms max.	--	Test in appliance
For added model: L460NZ					
Alternative Panel	Samsung	LTI460AA05	46.0", TFT type	--	Test in appliance
Alternative DC/AC Inverter	Samsung	SSI460_12B01	I/P: DC 26.4V max., 7.36A max., O/P: AC 1600Vrms, 1420mArms max.	--	Test in appliance
Note(s): 1. An asterisk indicates a mark that assures the agreed level of surveillance. 2. In Photo Coupler technical data column, where "Dti" means distance through insulation, "Int. Cr." means internal creepage distance, "Ext. Cr." means external creepage distance.					

1.6.2	TABLE: electrical data (in normal conditions)					P
Fuse #	Irated (A)	U(V)/F(Hz)	P (W)	I (A)	Ifuse (A)	Condition/status
For model L468TP:						
Unit test under HDMI mode						
F001	--	90/50	235.5	2.69	2.69	Maximum normal load
F001	--	90/60	235.7	2.69	2.69	Maximum normal load
F001	3.6	100/50	234.3	2.42	2.42	Maximum normal load
F001	3.6	100/60	234.7	2.42	2.42	Maximum normal load
F001	1.45	240/50	234.8	1.05	1.05	Maximum normal load
F001	1.45	240/60	234.9	1.05	1.05	Maximum normal load
F001	--	255/50	235.4	1.01	1.01	Maximum normal load
F001	--	255/60	235.4	1.0	1.0	Maximum normal load
F001	--	264/50	235.5	0.99	0.99	Maximum normal load
F001	--	264/60	235.5	0.98	0.98	Maximum normal load
Unit test under D-SUB mode						
F001	--	90/50	233.1	2.66	2.66	Maximum normal load
F001	--	90/60	233.2	2.66	2.66	Maximum normal load
F001	3.6	100/50	232.0	2.39	2.39	Maximum normal load

F001	3.6	100/60	232.2	2.39	2.39	Maximum normal load
F001	1.45	240/50	232.8	1.04	1.04	Maximum normal load
F001	1.45	240/60	232.9	1.04	1.04	Maximum normal load
F001	--	255/50	233.4	1.0	1.0	Maximum normal load
F001	--	255/60	233.7	1.0	1.0	Maximum normal load
F001	--	264/50	233.8	0.98	0.98	Maximum normal load
F001	--	264/60	233.9	0.98	0.98	Maximum normal load
Unit test under DVI mode						
F001	--	90/50	234.0	2.67	2.67	Maximum normal load
F001	--	90/60	234.0	2.67	2.67	Maximum normal load
F001	3.6	100/50	232.8	2.40	2.40	Maximum normal load
F001	3.6	100/60	232.9	2.4	2.4	Maximum normal load
F001	1.45	240/50	233.3	1.05	1.05	Maximum normal load
F001	1.45	240/60	233.5	1.04	1.04	Maximum normal load
F001	--	255/50	234.2	1.0	1.0	Maximum normal load
F001	--	255/60	234.3	1.0	1.0	Maximum normal load
F001	--	264/50	234.9	0.99	0.99	Maximum normal load
F001	--	264/60	234.6	0.98	0.98	Maximum normal load
Unit test under VIDEO (AV) mode						
F001	--	90/50	231.5	2.65	2.65	Maximum normal load
F001	--	90/60	231.7	2.65	2.65	Maximum normal load
F001	3.6	100/50	230.3	2.38	2.38	Maximum normal load
F001	3.6	100/60	230.4	2.37	2.37	Maximum normal load
F001	1.45	240/50	230.8	1.04	1.04	Maximum normal load
F001	1.45	240/60	231.1	1.03	1.03	Maximum normal load
F001	--	255/50	231.5	1.0	1.0	Maximum normal load
F001	--	255/60	231.7	0.99	0.99	Maximum normal load
F001	--	264/50	231.9	0.98	0.98	Maximum normal load
F001	--	264/60	231.9	0.97	0.97	Maximum normal load
Unit test under S-Video mode						
F001	--	90/50	231.8	2.65	2.65	Maximum normal load
F001	--	90/60	231.9	2.65	2.65	Maximum normal load
F001	3.6	100/50	230.7	2.38	2.38	Maximum normal load
F001	3.6	100/60	230.7	2.38	2.38	Maximum normal load
F001	1.45	240/50	231.2	1.04	1.04	Maximum normal load

F001	1.45	240/60	231.4	1.03	1.03	Maximum normal load
F001	--	255/50	231.9	1.0	1.0	Maximum normal load
F001	--	255/60	232.0	0.99	0.99	Maximum normal load
F001	--	264/50	232.1	0.98	0.98	Maximum normal load
F001	--	264/60	232.2	0.97	0.97	Maximum normal load
Unit test under RGB mode						
F001	--	90/50	232.7	2.66	2.66	Maximum normal load
F001	--	90/60	232.9	2.66	2.66	Maximum normal load
F001	3.6	100/50	231.6	2.39	2.39	Maximum normal load
F001	3.6	100/60	231.8	2.39	2.39	Maximum normal load
F001	1.45	240/50	232.2	1.04	1.04	Maximum normal load
F001	1.45	240/60	232.4	1.04	1.04	Maximum normal load
F001	--	255/50	232.9	1.0	1.0	Maximum normal load
F001	--	255/60	233.1	0.99	0.99	Maximum normal load
F001	--	264/50	233.2	0.98	0.98	Maximum normal load
F001	--	264/60	233.2	0.97	0.97	Maximum normal load
Unit test under Tuner mode						
F001	--	90/50	231.4	2.64	2.64	Maximum normal load
F001	--	90/60	231.6	2.64	2.64	Maximum normal load
F001	3.6	100/50	230.3	2.37	2.37	Maximum normal load
F001	3.6	100/60	230.3	2.37	2.37	Maximum normal load
F001	1.45	240/50	231.2	1.03	1.03	Maximum normal load
F001	1.45	240/60	231.4	1.03	1.03	Maximum normal load
F001	--	255/50	231.4	0.99	0.99	Maximum normal load
F001	--	255/60	231.5	0.99	0.99	Maximum normal load
F001	--	264/50	231.6	0.97	0.97	Maximum normal load
F001	--	264/60	231.6	0.96	0.96	Maximum normal load
For model L468TN:						
Unit test under HDMI mode with DTV board (DTV board is loaded 16V, 4A)						
F001	--	90/50	354	4.04	4.04	Maximum normal load
F001	--	90/60	354	4.00	4.00	Maximum normal load
F001	3.9	100/50	351	3.58	3.58	Maximum normal load
F001	3.9	100/60	350	3.59	3.59	Maximum normal load
F001	1.6	240/50	343	1.51	1.51	Maximum normal load
F001	1.6	240/60	344	1.49	1.49	Maximum normal load

F001	--	255/50	344	1.43	1.43	Maximum normal load
F001	--	255/60	344	1.43	1.43	Maximum normal load
F001	--	264/50	343	1.40	1.40	Maximum normal load
F001	--	264/60	343	1.39	1.39	Maximum normal load
Unit test under D-SUB mode with DTV board (DTV board is loaded 16V, 4A)						
F001	--	90/50	352	3.99	3.99	Maximum normal load
F001	--	90/60	352	3.98	3.98	Maximum normal load
F001	3.9	100/50	348	3.56	3.56	Maximum normal load
F001	3.9	100/60	349	3.57	3.57	Maximum normal load
F001	1.6	240/50	342	1.50	1.50	Maximum normal load
F001	1.6	240/60	343	1.49	1.49	Maximum normal load
F001	--	254/50	342	1.43	1.43	Maximum normal load
F001	--	254/60	343	1.42	1.42	Maximum normal load
F001	--	264/50	342	1.39	1.39	Maximum normal load
F001	--	264/60	343	1.38	1.38	Maximum normal load
Unit test under DVI mode with DTV board (DTV board is loaded 16V, 4A)						
F001	--	90/50	355	4.05	4.05	Maximum normal load
F001	--	90/60	355	4.07	4.07	Maximum normal load
F001	3.9	100/50	351	3.60	3.60	Maximum normal load
F001	3.9	100/60	352	3.62	3.62	Maximum normal load
F001	1.6	240/50	343	1.51	1.51	Maximum normal load
F001	1.6	240/60	344	1.50	1.50	Maximum normal load
F001	--	254/50	344	1.43	1.43	Maximum normal load
F001	--	254/60	345	1.44	1.44	Maximum normal load
F001	--	264/50	343	1.40	1.40	Maximum normal load
F001	--	264/60	344	1.39	1.39	Maximum normal load
Unit test under VIDEO (AV) mode with DTV board (DTV board is loaded 16V, 4A)						
F001	--	90/50	350	3.99	3.99	Maximum normal load
F001	--	90/60	351	3.98	3.98	Maximum normal load
F001	3.9	100/50	348	3.56	3.56	Maximum normal load
F001	3.9	100/60	348	3.55	3.55	Maximum normal load
F001	1.6	240/50	341	1.50	1.50	Maximum normal load
F001	1.6	240/60	342	1.50	1.50	Maximum normal load
F001	--	254/50	341	1.42	1.42	Maximum normal load
F001	--	254/60	341	1.42	1.42	Maximum normal load

F001	--	264/50	342	1.39	1.39	Maximum normal load
F001	--	264/60	342	1.38	1.38	Maximum normal load
Unit test under S-Video mode with DTV board (DTV board is loaded 16V, 4A)						
F001	--	90/50	351	3.99	3.99	Maximum normal load
F001	--	90/60	351	3.99	3.99	Maximum normal load
F001	3.9	100/50	350	3.57	3.57	Maximum normal load
F001	3.9	100/60	348	3.56	3.56	Maximum normal load
F001	1.6	240/50	342	1.51	1.51	Maximum normal load
F001	1.6	240/60	343	1.50	1.50	Maximum normal load
F001	--	254/50	343	1.43	1.43	Maximum normal load
F001	--	254/60	343	1.42	1.42	Maximum normal load
F001	--	264/50	342	1.40	1.40	Maximum normal load
F001	--	264/60	343	1.38	1.38	Maximum normal load
Unit test under RGB mode with DTV board (DTV board is loaded 16V, 4A)						
F001	--	90/50	351	4.00	4.00	Maximum normal load
F001	--	90/60	352	3.99	3.99	Maximum normal load
F001	3.9	100/50	348	3.58	3.58	Maximum normal load
F001	3.9	100/60	349	3.57	3.57	Maximum normal load
F001	1.6	240/50	344	1.50	1.50	Maximum normal load
F001	1.6	240/60	343	1.49	1.49	Maximum normal load
F001	--	254/50	342	1.43	1.43	Maximum normal load
F001	--	254/60	343	1.42	1.42	Maximum normal load
F001	--	264/50	343	1.39	1.39	Maximum normal load
F001	--	264/60	343	1.38	1.38	Maximum normal load
Unit test under Tuner mode (DTV board is loaded 16V, 4A)						
F001	--	90/50	305	3.50	3.50	Maximum normal load
F001	--	90/60	305	3.51	3.51	Maximum normal load
F001	3.9	100/50	304	3.11	3.11	Maximum normal load
F001	3.9	100/60	303	3.12	3.12	Maximum normal load
F001	1.6	240/50	300	1.37	1.37	Maximum normal load
F001	1.6	240/60	298	1.38	1.38	Maximum normal load
F001	--	254/50	296	1.31	1.31	Maximum normal load
F001	--	254/60	296	1.31	1.31	Maximum normal load
F001	--	264/50	298	1.27	1.27	Maximum normal load
F001	--	264/60	296	1.28	1.28	Maximum normal load

Unit test under HDSOI mode (HDSOI board is loaded 16V, 4A)						
F001	--	90/50	305	3.50	3.50	Maximum normal load
F001	--	90/60	305	3.51	3.51	Maximum normal load
F001	3.9	100/50	304	3.11	3.11	Maximum normal load
F001	3.9	100/60	303	3.12	3.12	Maximum normal load
F001	1.6	240/50	300	1.37	1.37	Maximum normal load
F001	1.6	240/60	298	1.38	1.38	Maximum normal load
F001	--	254/50	296	1.31	1.31	Maximum normal load
F001	--	254/60	296	1.31	1.31	Maximum normal load
F001	--	264/50	298	1.27	1.27	Maximum normal load
F001	--	264/60	296	1.28	1.28	Maximum normal load
Unit test under DVI mode (DVI board is loaded 16V, 4A)						
F001	--	90/50	305	3.50	3.50	Maximum normal load
F001	--	90/60	305	3.51	3.51	Maximum normal load
F001	3.9	100/50	304	3.11	3.11	Maximum normal load
F001	3.9	100/60	303	3.12	3.12	Maximum normal load
F001	1.6	240/50	300	1.37	1.37	Maximum normal load
F001	1.6	240/60	298	1.38	1.38	Maximum normal load
F001	--	254/50	296	1.31	1.31	Maximum normal load
F001	--	254/60	296	1.31	1.31	Maximum normal load
F001	--	264/50	298	1.27	1.27	Maximum normal load
F001	--	264/60	296	1.28	1.28	Maximum normal load
For model L408TM:						
Unit test under HDMI mode with DTV board (DTV board is loaded 16V, 4A)						
F001	--	90/50	323	3.62	3.62	Maximum normal load
F001	--	90/60	323	3.62	3.62	Maximum normal load
F001	3.5	100/50	321	3.25	3.25	Maximum normal load
F001	3.5	100/60	321	3.25	3.25	Maximum normal load
F001	1.45	240/50	312	1.38	1.38	Maximum normal load
F001	1.45	240/60	313	1.38	1.38	Maximum normal load
F001	--	255/50	313	1.32	1.32	Maximum normal load
F001	--	255/60	313	1.31	1.31	Maximum normal load
F001	--	264/50	313	1.29	1.29	Maximum normal load
F001	--	264/60	313	1.28	1.28	Maximum normal load
Unit test under D-SUB mode with DTV board (DTV board is loaded 16V, 4A)						

F001	--	90/50	319	3.58	3.58	Maximum normal load
F001	--	90/60	319	3.58	3.58	Maximum normal load
F001	3.5	100/50	317	3.21	3.21	Maximum normal load
F001	3.5	100/60	317	3.21	3.21	Maximum normal load
F001	1.45	240/50	309	1.37	1.37	Maximum normal load
F001	1.45	240/60	309	1.36	1.36	Maximum normal load
F001	--	254/50	310	1.31	1.31	Maximum normal load
F001	--	254/60	310	1.30	1.30	Maximum normal load
F001	--	264/50	310	1.28	1.28	Maximum normal load
F001	--	264/60	310	1.27	1.27	Maximum normal load
Unit test under DVI mode with DTV board (DTV board is loaded 16V, 4A)						
F001	--	90/50	323	3.63	3.63	Maximum normal load
F001	--	90/60	323	3.63	3.63	Maximum normal load
F001	3.5	100/50	321	3.25	3.25	Maximum normal load
F001	3.5	100/60	321	3.25	3.25	Maximum normal load
F001	1.45	240/50	313	1.39	1.39	Maximum normal load
F001	1.45	240/60	313	1.38	1.38	Maximum normal load
F001	--	254/50	314	1.32	1.32	Maximum normal load
F001	--	254/60	314	1.31	1.31	Maximum normal load
F001	--	264/50	314	1.29	1.29	Maximum normal load
F001	--	264/60	314	1.28	1.28	Maximum normal load
Unit test under VIDEO (AV) mode with DTV board (DTV board is loaded 16V, 4A)						
F001	--	90/50	319	3.59	3.59	Maximum normal load
F001	--	90/60	319	3.59	3.59	Maximum normal load
F001	3.5	100/50	317	3.22	3.22	Maximum normal load
F001	3.5	100/60	317	3.22	3.22	Maximum normal load
F001	1.45	240/50	309	1.37	1.37	Maximum normal load
F001	1.45	240/60	309	1.36	1.36	Maximum normal load
F001	--	254/50	310	1.31	1.31	Maximum normal load
F001	--	254/60	310	1.30	1.30	Maximum normal load
F001	--	264/50	310	1.28	1.28	Maximum normal load
F001	--	264/60	310	1.27	1.27	Maximum normal load
Unit test under S-Video mode with DTV board (DTV board is loaded 16V, 4A)						
F001	--	90/50	320	3.59	3.59	Maximum normal load
F001	--	90/60	320	3.59	3.59	Maximum normal load

F001	3.5	100/50	314	3.22	3.22	Maximum normal load
F001	3.5	100/60	314	3.21	3.21	Maximum normal load
F001	1.45	240/50	310	1.37	1.37	Maximum normal load
F001	1.45	240/60	310	1.36	1.36	Maximum normal load
F001	--	254/50	310	1.31	1.31	Maximum normal load
F001	--	254/60	310	1.30	1.30	Maximum normal load
F001	--	264/50	310	1.28	1.28	Maximum normal load
F001	--	264/60	310	1.27	1.27	Maximum normal load
Unit test under RGB mode with DTV board (DTV board is loaded 16V, 4A)						
F001	--	90/50	320	3.60	3.60	Maximum normal load
F001	--	90/60	320	3.60	3.60	Maximum normal load
F001	3.5	100/50	314	3.22	3.22	Maximum normal load
F001	3.5	100/60	315	3.22	3.22	Maximum normal load
F001	1.45	240/50	310	1.38	1.38	Maximum normal load
F001	1.45	240/60	311	1.37	1.37	Maximum normal load
F001	--	254/50	311	1.31	1.31	Maximum normal load
F001	--	254/60	311	1.30	1.30	Maximum normal load
F001	--	264/50	311	1.28	1.28	Maximum normal load
F001	--	264/60	311	1.27	1.27	Maximum normal load
Unit test under Tuner mode (DTV board is loaded 16V, 4A)						
F001	--	90/50	273	3.08	3.08	Maximum normal load
F001	--	90/60	273	3.06	3.06	Maximum normal load
F001	3.5	100/50	270	2.76	2.76	Maximum normal load
F001	3.5	100/60	271	2.75	2.75	Maximum normal load
F001	1.45	240/50	264	1.18	1.18	Maximum normal load
F001	1.45	240/60	264	1.18	1.18	Maximum normal load
F001	--	254/50	265	1.13	1.13	Maximum normal load
F001	--	254/60	265	1.12	1.12	Maximum normal load
F001	--	264/50	265	1.1	1.1	Maximum normal load
F001	--	264/60	265	1.09	1.09	Maximum normal load
Unit test under HDSOI mode (HDSOI board is loaded 16V, 4A)						
F001	--	90/50	273	3.08	3.08	Maximum normal load
F001	--	90/60	273	3.06	3.06	Maximum normal load
F001	3.5	100/50	270	2.76	2.76	Maximum normal load
F001	3.5	100/60	271	2.75	2.75	Maximum normal load

F001	1.45	240/50	264	1.18	1.18	Maximum normal load
F001	1.45	240/60	264	1.18	1.18	Maximum normal load
F001	--	254/50	265	1.13	1.13	Maximum normal load
F001	--	254/60	265	1.12	1.12	Maximum normal load
F001	--	264/50	265	1.1	1.1	Maximum normal load
F001	--	264/60	265	1.09	1.09	Maximum normal load
Unit test under DVI mode (DVI board is loaded 16V, 4A)						
F001	--	90/50	273	3.08	3.08	Maximum normal load
F001	--	90/60	273	3.06	3.06	Maximum normal load
F001	3.5	100/50	270	2.76	2.76	Maximum normal load
F001	3.5	100/60	271	2.75	2.75	Maximum normal load
F001	1.45	240/50	264	1.18	1.18	Maximum normal load
F001	1.45	240/60	264	1.18	1.18	Maximum normal load
F001	--	254/50	265	1.13	1.13	Maximum normal load
F001	--	254/60	265	1.12	1.12	Maximum normal load
F001	--	264/50	265	1.1	1.1	Maximum normal load
F001	--	264/60	265	1.09	1.09	Maximum normal load
For model L468TT:						
Unit test under HDMI mode						
F001	--	90/50	238	2.63	2.63	Maximum normal load
F001	--	90/60	236	2.61	2.61	Maximum normal load
F001	3.9	100/50	233	2.33	2.33	Maximum normal load
F001	3.9	100/60	233	2.33	2.33	Maximum normal load
F001	1.6	240/50	229	1.01	1.01	Maximum normal load
F001	1.6	240/60	228	1.01	1.01	Maximum normal load
F001	--	264/50	228	0.95	0.95	Maximum normal load
F001	--	264/60	229	0.94	0.94	Maximum normal load
Unit test under D-SUB mode						
F001	--	90/50	247	2.73	2.73	Maximum normal load
F001	--	90/60	246	2.73	2.73	Maximum normal load
F001	3.9	100/50	246	2.47	2.47	Maximum normal load
F001	3.9	100/60	246	2.46	2.46	Maximum normal load
F001	1.6	240/50	244	1.06	1.06	Maximum normal load
F001	1.6	240/60	247	1.07	1.07	Maximum normal load
F001	--	264/50	246	1.00	1.00	Maximum normal load

F001	--	264/60	244	0.993	0.993	Maximum normal load
Unit test under DVI mode						
F001	--	90/50	246	2.74	2.74	Maximum normal load
F001	--	90/60	246	2.73	2.73	Maximum normal load
F001	3.9	100/50	245	2.47	2.47	Maximum normal load
F001	3.9	100/60	245	2.45	2.45	Maximum normal load
F001	1.6	240/50	245	1.05	1.05	Maximum normal load
F001	1.6	240/60	245	1.07	1.07	Maximum normal load
F001	--	264/50	244	1.00	1.00	Maximum normal load
F001	--	264/60	244	0.993	0.993	Maximum normal load
Unit test under VIDEO (AV) mode						
F001	--	90/50	227	2.60	2.60	Maximum normal load
F001	--	90/60	228	2.58	2.58	Maximum normal load
F001	3.9	100/50	226	2.31	2.31	Maximum normal load
F001	3.9	100/60	226	2.31	2.31	Maximum normal load
F001	1.6	240/50	224	1.00	1.00	Maximum normal load
F001	1.6	240/60	224	1.00	1.00	Maximum normal load
F001	--	264/50	225	0.94	0.94	Maximum normal load
F001	--	264/60	226	0.94	0.94	Maximum normal load
Unit test under S-Video mode						
F001	--	90/50	234	2.61	2.61	Maximum normal load
F001	--	90/60	234	2.60	2.60	Maximum normal load
F001	3.9	100/50	232	2.33	2.33	Maximum normal load
F001	3.9	100/60	233	2.33	2.33	Maximum normal load
F001	1.6	240/50	228	1.01	1.01	Maximum normal load
F001	1.6	240/60	228	1.01	1.01	Maximum normal load
F001	--	264/50	228	0.95	0.95	Maximum normal load
F001	--	264/60	229	0.94	0.94	Maximum normal load
Unit test under RGB mode						
F001	--	90/50	230	2.60	2.60	Maximum normal load
F001	--	90/60	229	2.60	2.60	Maximum normal load
F001	3.9	100/50	227	2.33	2.33	Maximum normal load
F001	3.9	100/60	227	2.33	2.33	Maximum normal load
F001	1.6	240/50	224	1.00	1.00	Maximum normal load
F001	1.6	240/60	224	1.00	1.00	Maximum normal load

F001	--	264/50	224	0.94	0.94	Maximum normal load
F001	--	264/60	224	0.94	0.94	Maximum normal load
For model L408TR:						
Unit test under HDMI mode						
F001	--	90/50	224	2.534	2.534	Maximum normal load
F001	--	90/60	223	2.529	2.529	Maximum normal load
F001	3.5	100/50	222	2.244	2.244	Maximum normal load
F001	3.5	100/60	222	2.236	2.236	Maximum normal load
F001	1.45	240/50	221	0.981	0.981	Maximum normal load
F001	1.45	240/60	220	0.979	0.979	Maximum normal load
F001	--	264/50	219.4	0.925	0.925	Maximum normal load
F001	--	264/60	219.8	0.921	0.921	Maximum normal load
Unit test under D-SUB mode						
F001	--	90/50	223	2.524	2.524	Maximum normal load
F001	--	90/60	223	2.513	2.513	Maximum normal load
F001	3.5	100/50	221	2.234	2.234	Maximum normal load
F001	3.5	100/60	221	2.236	2.236	Maximum normal load
F001	1.45	240/50	220	0.979	0.979	Maximum normal load
F001	1.45	240/60	219	0.977	.977	Maximum normal load
F001	--	264/50	219.4	0.922	0.922	Maximum normal load
F001	--	264/60	219.5	0.916	0.916	Maximum normal load
Unit test under DVI mode						
F001	--	90/50	223	2.524	2.524	Maximum normal load
F001	--	90/60	223	2.513	2.513	Maximum normal load
F001	3.5	100/50	221	2.234	2.234	Maximum normal load
F001	3.5	100/60	221	2.236	2.236	Maximum normal load
F001	1.45	240/50	220	0.979	0.979	Maximum normal load
F001	1.45	240/60	219	0.977	0.977	Maximum normal load
F001	--	264/50	219.4	0.922	0.922	Maximum normal load
F001	--	264/60	219.5	0.916	0.916	Maximum normal load
Unit test under VIDEO (AV) mode						
F001	--	90/50	221	2.515	2.515	Maximum normal load
F001	--	90/60	221	2.516	2.516	Maximum normal load
F001	3.5	100/50	220	2.214	2.214	Maximum normal load
F001	3.5	100/60	220	2.223	2.223	Maximum normal load

F001	1.45	240/50	217	0.972	0.972	Maximum normal load
F001	1.45	240/60	218	0.972	0.972	Maximum normal load
F001	--	264/50	217	0.917	0.917	Maximum normal load
F001	--	264/60	216	0.915	0.915	Maximum normal load
Unit test under S-Video mode						
F001	--	90/50	221	2.517	2.517	Maximum normal load
F001	--	90/60	221	2.516	2.516	Maximum normal load
F001	3.5	100/50	220	2.212	2.21	Maximum normal load
F001	3.5	100/60	220	2.2	2.24	Maximum normal load
F001	1.45	240/50	217	0.97	0.97	Maximum normal load
F001	1.45	240/60	218	0.971	0.971	Maximum normal load
F001	--	264/50	217	0.918	0.918	Maximum normal load
F001	--	264/60	216	0.916	0.916	Maximum normal load
Unit test under RGB mode						
F001	--	90/50	222	2.518	2.518	Maximum normal load
F001	--	90/60	221	2.515	2.515	Maximum normal load
F001	3.5	100/50	220	2.213	2.213	Maximum normal load
F001	3.5	100/60	219	2.211	2.211	Maximum normal load
F001	1.45	240/50	217	0.974	0.974	Maximum normal load
F001	1.45	240/60	218	0.972	0.972	Maximum normal load
F001	--	264/50	216	0.917	0.917	Maximum normal load
F001	--	264/60	216	0.916	0.916	Maximum normal load
For model L460NZ:						
Unit test under HDMI mode without DTV board						
F001	--	90/50	130.0	1.54	1.54	Maximum normal load
F001	--	90/60	130.0	1.54	1.54	Maximum normal load
F001	2.9	100/50	127.5	1.39	1.39	Maximum normal load
F001	2.9	100/60	127.5	1.39	1.39	Maximum normal load
F001	1.2	240/50	130.8	0.64	0.64	Maximum normal load
F001	1.2	240/60	130.8	0.64	0.64	Maximum normal load
F001	--	254/50	131.6	0.63	0.63	Maximum normal load
F001	--	254/60	131.6	0.63	0.63	Maximum normal load
F001	--	264/50	131.5	0.65	0.65	Maximum normal load
F001	--	264/60	131.5	0.65	0.65	Maximum normal load
Unit test under D-SUB mode without DTV board						

F001	--	90/50	110.5	1.34	1.34	Maximum normal load
F001	--	90/60	110.5	1.34	1.34	Maximum normal load
F001	2.9	100/50	110.5	1.21	1.21	Maximum normal load
F001	2.9	100/60	110.5	1.21	1.21	Maximum normal load
F001	1.2	240/50	114.6	0.58	0.57	Maximum normal load
F001	1.2	240/60	114.6	0.58	0.57	Maximum normal load
F001	--	254/50	115.1	0.58	0.58	Maximum normal load
F001	--	254/60	115.1	0.58	0.58	Maximum normal load
F001	--	264/50	115.0	0.60	0.60	Maximum normal load
F001	--	264/60	115.0	0.60	0.60	Maximum normal load
Unit test under DVI mode without DTV board						
F001	--	90/50	110.1	1.33	1.33	Maximum normal load
F001	--	90/60	110.1	1.33	1.33	Maximum normal load
F001	2.9	100/50	110.2	1.20	1.20	Maximum normal load
F001	2.9	100/60	110.2	1.20	1.20	Maximum normal load
F001	1.2	240/50	113.6	0.54	0.54	Maximum normal load
F001	1.2	240/60	113.6	0.54	0.54	Maximum normal load
F001	--	254/50	115.1	0.58	0.58	Maximum normal load
F001	--	254/60	115.1	0.58	0.58	Maximum normal load
F001	--	264/50	115.0	0.61	0.61	Maximum normal load
F001	--	264/60	115.0	0.61	0.61	Maximum normal load
Unit test under VIDEO (AV) mode without DTV board						
F001	--	90/50	127.5	1.54	1.54	Maximum normal load
F001	--	90/60	127.5	1.54	1.54	Maximum normal load
F001	2.9	100/50	127.0	1.39	1.39	Maximum normal load
F001	2.9	100/60	127.0	1.39	1.39	Maximum normal load
F001	1.2	240/50	130.0	0.64	0.64	Maximum normal load
F001	1.2	240/60	130.0	0.64	0.64	Maximum normal load
F001	--	254/50	131.0	0.64	0.64	Maximum normal load
F001	--	254/60	131.0	0.64	0.64	Maximum normal load
F001	--	264/50	131.6	0.65	0.65	Maximum normal load
F001	--	264/60	131.6	0.65	0.65	Maximum normal load
Unit test under S-Video mode without DTV board						
F001	--	90/50	110.0	1.33	1.33	Maximum normal load
F001	--	90/60	110.0	1.33	1.33	Maximum normal load

F001	2.9	100/50	109.3	1.20	1.20	Maximum normal load
F001	2.9	100/60	109.3	1.20	1.20	Maximum normal load
F001	1.2	240/50	113.5	0.57	0.57	Maximum normal load
F001	1.2	240/60	113.5	0.57	0.57	Maximum normal load
F001	--	254/50	113.7	0.58	0.58	Maximum normal load
F001	--	254/60	113.7	0.58	0.58	Maximum normal load
F001	--	264/50	113.5	0.60	0.60	Maximum normal load
F001	--	264/60	113.5	0.60	0.60	Maximum normal load
Unit test under Yb YPbPr mode without DTV board						
F001	--	90/50	110.0	1.34	1.34	Maximum normal load
F001	--	90/60	110.0	1.34	1.34	Maximum normal load
F001	2.9	100/50	109.7	1.21	1.21	Maximum normal load
F001	2.9	100/60	109.7	1.21	1.21	Maximum normal load
F001	1.2	240/50	113.5	0.57	0.57	Maximum normal load
F001	1.2	240/60	113.5	0.57	0.57	Maximum normal load
F001	--	254/50	114.0	0.58	0.58	Maximum normal load
F001	--	254/60	114.0	0.58	0.58	Maximum normal load
F001	--	264/50	113.4	0.60	0.60	Maximum normal load
F001	--	264/60	113.4	0.60	0.60	Maximum normal load

2.1.1.5	TABLE: max. V, A, VA test				P
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
For model L468TP					
For Power Board (Murata / MPF2932)					
+6	4.7	+5.9	9.3	52	
+16	8	+16.1	10.1	161	
+24	12	+23.9	14.3	335 v ^{1.}	
For model L468TN					
For Power Board (Murata / MPF2932)					
+6	8.9	+5.7	8.9	50.6	
+16	10.1	+16.0	10.1	161.8	
+24	14.9	+23.3	14.9	346.7 ^{1.}	
Note(s):					
1. It can not be bridged by the test finger.					

2.1.1.7	TABLE: discharge test			P
Condition	τ calculated (s)	τ measured (s)	$t_{u \rightarrow 0V}$ (s)	Comments
Line to Neutral (fuses in, switch on)	0.94	0.93	--	Vpk= 356V, 37% of Vpk= 132V, after 1 sec voltage drop to 108V
Line to Neutral (F003 out, switch on)	0.94	0.92	--	Vpk= 356V, 37% of Vpk= 132V, after 1 sec voltage drop to 108V
Note(s): 1. No any capacitors are present during switch off and F001 out condition. 2. Overall capacity: C001=C002=0.47 μ 3. Discharge resistor: R001=1M Ω				

2.2.2	TABLE: Hazardous voltage measurement				P
Transformer	Location	max. Voltage		Voltage Limitation Component	
		V peak	V d.c.		
For Power Board (Murata / MPF2932)					
T201	Pin 11/12 to G	40	--	--	
	After D251 to G	--	6.2	D251	
T301	Pin 10/11/12 to G	38	--	--	
	After D351 to G	--	16.4	D351	
T401	Pin 9/10/11/12 to G	44.4	--	--	
	After D451 to G	--	24.2	D451	
Note(s): Supply voltage is 240Vac, 60Hz					

2.2.3	TABLE: SEL voltage measurement		P
Location		Voltage measured (V)	Comments
For Power Board (Murata / MPF2932)			
+24 output to ground		0	D451 short, +24V output shut down immediately.
+16 output to ground		0	D351 short, +16V output shut down immediately.
+6 output to ground		0	D251 short, +6V output shut down immediately.
For model L468TN:			
HDMI Pin 1,2,4,5,12,13,15,16 - G		3.28	HV9 to earth short
HDMI Pin 8,18 to G		4.8	HV9 to earth short
HDMI Pin 19 to G		0.47	HV9 to earth short

HDMI Pin 3,6,7,9,10,11,14,17 to G	0	HV9 to earth short
HDMI Pin 1,2,4,5,12,13,15,16 to G	3.28	HV11 to earth short
HDMI Pin 8,18 to G	4.8	HV11 to earth short
HDMI Pin 19 to G	0.47	HV11 to earth short
HDMI Pin 3,6,7,9,10,11,14,17 to G	0	HV11 to earth short
HDMI Pin 1,2,4,5,12,13,15,16 - G	3.28	CT301 Pin3 to 2 short
HDMI Pin 8,18 to G	4.8	CT301 Pin3 to 2 short
HDMI Pin 19 to G	0.47	CT301 Pin3 to 2 short
HDMI Pin 3,6,7,9,10,11,14,17 to G	0	CT301 Pin3 to 2 short
HDMI Pin 1,2,4,5,12,13,15,16 to G	3.28	CT301 Pin4 to 15,16 short
HDMI Pin 8,18 to G	4.8	CT301 Pin4 to 15,16 short
HDMI Pin 19 to G	0.47	CT301 Pin4 to 15,16 short
HDMI Pin 3,6,7,9,10,11,14,17 to G	0	CT301 Pin4 to 15,16 short
HDMI Pin 1,2,4,5,12,13,15,16 to G	3.28	CT301 Pin5 to 11,12 short
HDMI Pin 8,18 to G	4.8	CT301 Pin5 to 11,12 short
HDMI Pin 19 to G	0.47	CT301 Pin5 to 11,12 short
HDMI Pin 3,6,7,9,10,11,14,17 to G	0	CT301 Pin5 to 11,12 short
D-SUB Pin 12,15 to G	4.8	HV9 to earth short
D-SUB Pin 1,2,3,4,5,6,7,8,9,11,13,14 to G	0	HV9 to earth short
D-SUB Pin 12,15 to G	4.8	HV11 to earth short
D-SUB Pin 1,2,3,4,5,6,7,8,9,11,13,14 to G	0	HV11 to earth short
D-SUB Pin 12,15 to G	4.8	CT301 Pin3 to 2 short
D-SUB Pin 1,2,3,4,5,6,7,8,9,11,13,14 to G	0	CT301 Pin3 to 2 short
D-SUB Pin 12,15 to G	4.8	T301 Pin4 to 15,16 short
D-SUB Pin 1,2,3,4,5,6,7,8,9,11,13,14 to G	0	T301 Pin4 to 15,16 short
D-SUB Pin 12,15 to G	4.8	T301 Pin5 to 11,12 short

D-SUB Pin 1,2,3,4,5,6,7,8,9,11,13,14 to G	0	T301 Pin5 to 11,12 short
RS232 Pin 3 to G	6.3	HV9 to earth short
RS232 Pin 1,2,4,5,6,7,8,9 to G	0	HV9 to earth short
RS232 Pin 3 to G	6.3	HV11 to earth short
RS232 Pin 1,2,4,5,6,7,8,9 to G	0	HV11 to earth short
RS232 Pin 3 to G	6.3	CT301 Pin3 to 2 short
RS232 Pin 1,2,4,5,6,7,8,9 to G	0	CT301 Pin3 to 2 short
RS232 Pin 3 to G	6.3	T301 Pin4 to 15,16 short
RS232 Pin 1,2,4,5,6,7,8,9 to G	0	T301 Pin4 to 15,16 short
RS232 Pin 3 to G	6.3	T301 Pin5 to 11,12 short
RS232 Pin 1,2,4,5,6,7,8,9 to G	0	T301 Pin5 to 11,12 short
DVI Pin 1,2,9,10,17,18,23,24 to G	3.28	HV9 to earth short
DVI Pin 6,7,14,16 to G	4.8	HV9 to earth short
DVI Pin 3,4,5,8,11,12,13,15,19,20,21,22, 25 to G	0	HV9 to earth short
DVI Pin 1,2,9,10,17,18,23,24 to G	3.28	HV11 to earth short
DVI Pin 6,7,14,16 to G	4.8	HV11 to earth short
DVI Pin 3,4,5,8,11,12,13,15,19,20,21,22, 25 to G	0	HV11 to earth short
DVI Pin 1,2,9,10,17,18,23,24 to G	3.28	CT301 Pin3 to 2 short
DVI Pin 6,7,14,16 to G	4.8	CT301 Pin3 to 2 short
DVI Pin 3,4,5,8,11,12,13,15,19,20,21,22, 25 to G	0	CT301 Pin3 to 2 short
DVI Pin 1,2,9,10,17,18,23,24 to G	3.28	T301 Pin4 to 15,16 short
DVI Pin 6,7,14,16 to G	4.8	T301 Pin4 to 15,16 short
DVI Pin 3,4,5,8,11,12,13,15,19,20,21,22, 25 to G	0	T301 Pin4 to 15,16 short
DVI Pin 1,2,9,10,17,18,23,24 to G	3.28	T301 Pin5 to 11,12 short
DVI Pin 6,7,14,16 to G	4.8	T301 Pin5 to 11,12 short

DVI Pin 3,4,5,8,11,12,13,15,19,20,21,22, 25 to G	0	T301 Pin5 to 11,12 short
RJ45 Pin 1,2,3,4,5,6,7,8 to G	0	HV9 to earth short
RJ45 Pin 1,2,3,4,5,6,7,8 to G	0	HV11 to earth short
RJ45 Pin 1,2,3,4,5,6,7,8 to G	0	CT301 Pin3 to 2 short
RJ45 Pin 1,2,3,4,5,6,7,8 to G	0	T301 Pin4 to 15,16 short
RJ45 Pin 1,2,3,4,5,6,7,8 to G	0	T301 Pin5 to 11,12 short
EXTERNAL SPEAKER TERMINAL Pin 1-4 to G	8.02	HV9 to earth short
EXTERNAL SPEAKER TERMINAL Pin 1-4 to G	8.02	HV11 to earth short
EXTERNAL SPEAKER TERMINAL Pin 1-4 to G	8.02	CT301 Pin3 to 2 short
EXTERNAL SPEAKER TERMINAL Pin 1-4 to G	8.02	T301 Pin4 to 15,16 short
EXTERNAL SPEAKER TERMINAL Pin 1-4 to G	8.02	T301 Pin5 to 11,12 short
REMOTE IN/OUT Pin 1, 2 to G	0	HV9 to earth short
REMOTE IN/OUT Pin 1, 2 to G	0	HV11 to earth short
REMOTE IN/OUT Pin 1, 2 to G	0	CT301 Pin3 to 2 short
REMOTE IN/OUT Pin 1, 2 to G	0	T301 Pin4 to 15,16 short
REMOTE IN/OUT Pin 1, 2 to G	0	T301 Pin5 to 11,12 short
RGB/HV IN Pin 1-5 to G	0	HV9 to earth short
RGB/HV IN Pin 1-5 to G	0	HV11 to earth short
RGB/HV IN Pin 1-5 to G	0	CT301 Pin3 to 2 short
RGB/HV IN Pin 1-5 to G	0	T301 Pin4 to 15,16 short
RGB/HV IN Pin 1-5 to G	0	T301 Pin5 to 11,12 short
RGB/HV OUT Pin 1-5 to G	0	HV9 to earth short
RGB/HV OUT Pin 1-5 to G	0	HV11 to earth short
RGB/HV OUT Pin 1-5 to G	0	CT301 Pin3 to 2 short
RGB/HV OUT Pin 1-5 to G	0	T301 Pin4 to 15,16 short
RGB/HV OUT Pin 1-5 to G	0	T301 Pin5 to 11,12 short
AUDIO IN/OUT Pin 1-7 to G	0	HV9 to earth short
AUDIO IN/OUT Pin 1-7 to G	0	HV11 to earth short
AUDIO IN/OUT Pin 1-7 to G	0	CT301 Pin3 to 2 short
AUDIO IN/OUT Pin 1-7 to G	0	T301 Pin4 to 15,16 short

AUDIO IN/OUT Pin 1-7 to G	0	T301 Pin5 to 11,12 short
S-Video Pin 1-4 to G	0	HV9 to earth short
S-Video Pin 1-4 to G	0	HV11 to earth short
S-Video Pin 1-4 to G	0	CT301 Pin3 to 2 short
S-Video Pin 1-4 to G	0	T301 Pin4 to 15,16 short
S-Video Pin 1-4 to G	0	T301 Pin5 to 11,12 short
VIDEO IN/OUT Pin 1-3 to G	0	HV9 to earth short
VIDEO IN/OUT Pin 1-3 to G	0	HV11 to earth short
VIDEO IN/OUT Pin 1-3 to G	0	CT301 Pin3 to 2 short
VIDEO IN/OUT Pin 1-3 to G	0	T301 Pin4 to 15,16 short
VIDEO IN/OUT Pin 1-3 to G	0	T301 Pin5 to 11,12 short
DVD/HD Pin 1-3 to G	0	HV9 to earth short
DVD/HD Pin 1-3 to G	0	HV11 to earth short
DVD/HD Pin 1-3 to G	0	CT301 Pin3 to 2 short
DVD/HD Pin 1-3 to G	0	T301 Pin4 to 15,16 short
DVD/HD Pin 1-3 to G	0	T301 Pin5 to 11,12 short
For model L408TM:		
HDMI Pin 1,2,4,5,12,13,15,16 - G	3.28	Out13 to earth short
HDMI Pin 8,18 to G	4.8	Out13 to earth short
HDMI Pin 19 to G	0.47	Out13 to earth short
HDMI Pin 3,6,7,9,10,11,14,17 to G	0	Out13 to earth short
HDMI Pin 1,2,4,5,12,13,15,16 to G	3.28	Out9 to earth short
HDMI Pin 8,18 to G	4.8	Out9 to earth short
HDMI Pin 19 to G	0.47	Out9 to earth short
HDMI Pin 3,6,7,9,10,11,14,17 to G	0	Out9 to earth short
HDMI Pin 1,2,4,5,12,13,15,16 - G	3.28	Out2 to earth short
HDMI Pin 8,18 to G	4.8	Out2 to earth short
HDMI Pin 19 to G	0.47	Out2 to earth short
HDMI Pin 3,6,7,9,10,11,14,17 to G	0	Out2 to earth short
HDMI Pin 1,2,4,5,12,13,15,16 to G	3.28	T104 Pin10 to 4,5 short
HDMI Pin 8,18 to G	4.8	T104 Pin10 to 4,5 short

HDMI Pin 19 to G	0.47	T104 Pin10 to 4,5 short
HDMI Pin 3,6,7,9,10,11,14,17 to G	0	T104 Pin10 to 4,5 short
HDMI Pin 1,2,4,5,12,13,15,16 to G	3.28	T103 Pin9 to 4 short
HDMI Pin 8,18 to G	4.8	T103 Pin9 to 4 short
HDMI Pin 19 to G	0.47	T103 Pin9 to 4 short
HDMI Pin 3,6,7,9,10,11,14,17 to G	0	T103 Pin10 to 4,5 short
HDMI Pin 1,2,4,5,12,13,15,16 to G	3.28	T101 Pin9 to 4 short
HDMI Pin 8,18 to G	4.8	T101 Pin9 to 4 short
HDMI Pin 19 to G	0.47	T101 Pin9 to 4 short
HDMI Pin 3,6,7,9,10,11,14,17 to G	0	T101 Pin9 to 4 short
HDMI Pin 1,2,4,5,12,13,15,16 to G	3.28	OP101 Pin1 to 4 short
HDMI Pin 8,18 to G	4.8	OP101 Pin1 to 4 short
HDMI Pin 19 to G	0.47	OP101 Pin1 to 4 short
HDMI Pin 3,6,7,9,10,11,14,17 to G	0	OP101 Pin1 to 4 short
HDMI Pin 1,2,4,5,12,13,15,16 to G	3.28	OP101 Pin2 to 3 short
HDMI Pin 8,18 to G	4.8	OP101 Pin2 to 3 short
HDMI Pin 19 to G	0.47	OP101 Pin2 to 3 short
HDMI Pin 3,6,7,9,10,11,14,17 to G	0	OP101 Pin2 to 3 short
D-SUB Pin 12,15 to G	4.8	Out13 to earth short
D-SUB Pin 1,2,3,4,5,6,7,8,9,11,13,14 to G	0	Out13 to earth short
D-SUB Pin 12,15 to G	4.8	Out9 to earth short
D-SUB Pin 1,2,3,4,5,6,7,8,9,11,13,14 to G	0	Out9 to earth short
D-SUB Pin 12,15 to G	4.8	Out2 to earth short
D-SUB Pin 1,2,3,4,5,6,7,8,9,11,13,14 to G	0	Out2 to earth short
D-SUB Pin 12,15 to G	4.8	T104 Pin10 to 4,5 short
D-SUB Pin 1,2,3,4,5,6,7,8,9,11,13,14 to G	0	T104 Pin10 to 4,5 short

D-SUB Pin 12,15 to G	4.8	T103 Pin9 to 4 short
D-SUB Pin 1,2,3,4,5,6,7,8,9,11,13,14 to G	0	T103 Pin9 to 4 short
D-SUB Pin 12,15 to G	4.8	T101 Pin9 to 4 short
D-SUB Pin 1,2,3,4,5,6,7,8,9,11,13,14 to G	0	T101 Pin9 to 4 short
D-SUB Pin 12,15 to G	4.8	OP101 Pin1 to 4 short
D-SUB Pin 1,2,3,4,5,6,7,8,9,11,13,14 to G	0	OP101 Pin1 to 4 short
D-SUB Pin 12,15 to G	4.8	OP101 Pin2 to 3 short
D-SUB Pin 1,2,3,4,5,6,7,8,9,11,13,14 to G	0	OP101 Pin2 to 3 short
RS232 Pin 3 to G	6.3	Out13 to earth short
RS232 Pin 1,2,4,5,6,7,8,9 to G	0	Out13 to earth short
RS232 Pin 3 to G	6.3	Out9 to earth short
RS232 Pin 1,2,4,5,6,7,8,9 to G	0	Out9 to earth short
RS232 Pin 3 to G	6.3	Out2 to earth short
RS232 Pin 1,2,4,5,6,7,8,9 to G	0	Out2 to earth short
RS232 Pin 3 to G	6.3	T104 Pin10 to 4,5 short
RS232 Pin 1,2,4,5,6,7,8,9 to G	0	T104 Pin10 to 4,5 short
RS232 Pin 3 to G	6.3	T103 Pin9 to 4 short
RS232 Pin 1,2,4,5,6,7,8,9 to G	0	T103 Pin9 to 4 short
RS232 Pin 3 to G	6.3	T101 Pin9 to 4 short
RS232 Pin 1,2,4,5,6,7,8,9 to G	0	T101 Pin9 to 4 short
RS232 Pin 3 to G	6.3	OP101 Pin1 to 4 short
RS232 Pin 1,2,4,5,6,7,8,9 to G	0	OP101 Pin1 to 4 short
RS232 Pin 3 to G	6.3	OP101 Pin2 to 3 short
RS232 Pin 1,2,4,5,6,7,8,9 to G	0	OP101 Pin2 to 3 short
DVI Pin 1,2,9,10,17,18,23,24 to G	3.28	Out13 to earth short
DVI Pin 6,7,14,16 to G	4.8	Out13 to earth short
DVI Pin 3,4,5,8,11,12,13,15,19,20,21,22, 25 to G	0	Out13 to earth short
DVI Pin 1,2,9,10,17,18,23,24 to G	3.28	Out9 to earth short
DVI Pin 6,7,14,16 to G	4.8	Out9 to earth short

DVI Pin 3,4,5,8,11,12,13,15,19,20,21,22, 25 to G	0	Out9 to earth short
DVI Pin 1,2,9,10,17,18,23,24 to G	3.28	Out2 to earth short
DVI Pin 6,7,14,16 to G	4.8	Out2 to earth short
DVI Pin 3,4,5,8,11,12,13,15,19,20,21,22, 25 to G	0	Out2 to earth short
DVI Pin 1,2,9,10,17,18,23,24 to G	3.28	T104 Pin10 to 4,5 short
DVI Pin 6,7,14,16 to G	4.8	T104 Pin10 to 4,5 short
DVI Pin 3,4,5,8,11,12,13,15,19,20,21,22, 25 to G	0	T104 Pin10 to 4,5 short
DVI Pin 1,2,9,10,17,18,23,24 to G	3.28	T103 Pin9 to 4 short
DVI Pin 6,7,14,16 to G	4.8	T103 Pin9 to 4 short
DVI Pin 3,4,5,8,11,12,13,15,19,20,21,22, 25 to G	0	T103 Pin9 to 4 short
DVI Pin 1,2,9,10,17,18,23,24 to G	3.28	T101 Pin9 to 4 short
DVI Pin 6,7,14,16 to G	4.8	T101 Pin9 to 4 short
DVI Pin 3,4,5,8,11,12,13,15,19,20,21,22, 25 to G	0	T101 Pin9 to 4 short
DVI Pin 1,2,9,10,17,18,23,24 to G	3.28	OP101 Pin1 to 4 short
DVI Pin 6,7,14,16 to G	4.8	OP101 Pin1 to 4 short
DVI Pin 3,4,5,8,11,12,13,15,19,20,21,22, 25 to G	0	OP101 Pin1 to 4 short
DVI Pin 1,2,9,10,17,18,23,24 to G	3.28	OP101 Pin2 to 3 short
DVI Pin 6,7,14,16 to G	4.8	OP101 Pin2 to 3 short
DVI Pin 3,4,5,8,11,12,13,15,19,20,21,22, 25 to G	0	OP101 Pin2 to 3 short
RJ45 Pin 1,2,3,4,5,6,7,8 to G	0	Out13 to earth short
RJ45 Pin 1,2,3,4,5,6,7,8 to G	0	Out9 to earth short
RJ45 Pin 1,2,3,4,5,6,7,8 to G	0	Out2 to earth short

RJ45 Pin 1,2,3,4,5,6,7,8 to G	0	T104 Pin10 to 4,5 short
RJ45 Pin 1,2,3,4,5,6,7,8 to G	0	T103 Pin9 to 4 short
RJ45 Pin 1,2,3,4,5,6,7,8 to G	0	T101 Pin9 to 4 short
RJ45 Pin 1,2,3,4,5,6,7,8 to G	0	OP101 Pin1 to 4 short
RJ45 Pin 1,2,3,4,5,6,7,8 to G	0	OP101 Pin2 to 3 short
EXTERNAL SPEAKER TERMINAL Pin 1-4 to G	8.02	Out13 to earth short
EXTERNAL SPEAKER TERMINAL Pin 1-4 to G	8.02	Out9 to earth short
EXTERNAL SPEAKER TERMINAL Pin 1-4 to G	8.02	Out2 to earth short
EXTERNAL SPEAKER TERMINAL Pin 1-4 to G	8.02	T104 Pin10 to 4,5 short
EXTERNAL SPEAKER TERMINAL Pin 1-4 to G	8.02	T103 Pin9 to 4 short
EXTERNAL SPEAKER TERMINAL Pin 1-4 to G	8.02	T101 Pin9 to 4 short
EXTERNAL SPEAKER TERMINAL Pin 1-4 to G	8.02	OP101 Pin1 to 4 short
EXTERNAL SPEAKER TERMINAL Pin 1-4 to G	8.02	OP101 Pin2 to 3 short
REMOTE IN/OUT Pin 1, 2 to G	0	Out13 to earth short
REMOTE IN/OUT Pin 1, 2 to G	0	Out9 to earth short
REMOTE IN/OUT Pin 1, 2 to G	0	Out2 to earth short
REMOTE IN/OUT Pin 1, 2 to G	0	T104 Pin10 to 4,5 short
REMOTE IN/OUT Pin 1, 2 to G	0	T103 Pin9 to 4 short
REMOTE IN/OUT Pin 1, 2 to G	0	T101 Pin9 to 4 short
REMOTE IN/OUT Pin 1, 2 to G	0	OP101 Pin1 to 4 short
REMOTE IN/OUT Pin 1, 2 to G	0	OP101 Pin2 to 3 short
RGB/HV IN Pin 1-5 to G	0	Out13 to earth short
RGB/HV IN Pin 1-5 to G	0	Out9 to earth short
RGB/HV IN Pin 1-5 to G	0	Out2 to earth short
RGB/HV IN Pin 1-5 to G	0	T104 Pin10 to 4,5 short
RGB/HV IN Pin 1-5 to G	0	T103 Pin9 to 4 short
RGB/HV IN Pin 1-5 to G	0	T101 Pin9 to 4 short
RGB/HV IN Pin 1-5 to G	0	OP101 Pin1 to 4 short
RGB/HV IN Pin 1-5 to G	0	OP101 Pin2 to 3 short

RGB/HV OUT Pin 1-5 to G	0	Out13 to earth short
RGB/HV OUT Pin 1-5 to G	0	Out9 to earth short
RGB/HV OUT Pin 1-5 to G	0	Out2 to earth short
RGB/HV OUT Pin 1-5 to G	0	T104 Pin10 to 4,5 short
RGB/HV OUT Pin 1-5 to G	0	T103 Pin9 to 4 short
RGB/HV OUT Pin 1-5 to G	0	T101 Pin9 to 4 short
RGB/HV OUT Pin 1-5 to G	0	OP101 Pin1 to 4 short
RGB/HV OUT Pin 1-5 to G	0	OP101 Pin2 to 3 short
AUDIO IN/OUT Pin 1-7 to G	0	Out13 to earth short
AUDIO IN/OUT Pin 1-7 to G	0	Out9 to earth short
AUDIO IN/OUT Pin 1-7 to G	0	Out2 to earth short
AUDIO IN/OUT Pin 1-7 to G	0	T104 Pin10 to 4,5 short
AUDIO IN/OUT Pin 1-7 to G	0	T103 Pin9 to 4 short
AUDIO IN/OUT Pin 1-7 to G	0	T101 Pin9 to 4 short
AUDIO IN/OUT Pin 1-7 to G	0	OP101 Pin1 to 4 short
AUDIO IN/OUT Pin 1-7 to G	0	OP101 Pin2 to 3 short
S-Video Pin 1-4 to G	0	Out13 to earth short
S-Video Pin 1-4 to G	0	Out9 to earth short
S-Video Pin 1-4 to G	0	Out2 to earth short
S-Video Pin 1-4 to G	0	T104 Pin10 to 4,5 short
S-Video Pin 1-4 to G	0	T103 Pin9 to 4 short
S-Video Pin 1-4 to G	0	T101 Pin9 to 4 short
S-Video Pin 1-4 to G	0	OP101 Pin1 to 4 short
S-Video Pin 1-4 to G	0	OP101 Pin2 to 3 short
VIDEO IN/OUT Pin 1-3 to G	0	Out13 to earth short
VIDEO IN/OUT Pin 1-3 to G	0	Out9 to earth short
VIDEO IN/OUT Pin 1-3 to G	0	Out2 to earth short
VIDEO IN/OUT Pin 1-3 to G	0	T104 Pin10 to 4,5 short
VIDEO IN/OUT Pin 1-3 to G	0	T103 Pin9 to 4 short
VIDEO IN/OUT Pin 1-3 to G	0	T101 Pin9 to 4 short
VIDEO IN/OUT Pin 1-3 to G	0	OP101 Pin1 to 4 short
VIDEO IN/OUT Pin 1-3 to G	0	OP101 Pin2 to 3 short
DVD/HD Pin 1-3 to G	0	Out13 to earth short
DVD/HD Pin 1-3 to G	0	Out9 to earth short
DVD/HD Pin 1-3 to G	0	Out2 to earth short

DVD/HD Pin 1-3 to G	0	T104 Pin10 to 4,5 short
DVD/HD Pin 1-3 to G	0	T103 Pin9 to 4 short
DVD/HD Pin 1-3 to G	0	T101 Pin9 to 4 short
DVD/HD Pin 1-3 to G	0	OP101 Pin1 to 4 short
DVD/HD Pin 1-3 to G	0	OP101 Pin2 to 3 short
Note(s):		

2.4.2	TABLE: limited current circuit measurement					P
Location		Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments
For Power Board (Murata / MPF2932) ^{3.}						
Sec. pin of C094 to earth		0.086	0.172	60Hz	0.7	
Sec. pin of C391 to earth		0.062	0.124	60Hz	0.7	
Sec. pin of C291 to earth		0.054	0.108	60Hz	0.7	
Sec. pin of C094, C291 and C391 to earth		0.168	0.336	60Hz	0.7	
For DC/AC Inverter (Hansol / SSI460_24D01): ^{4.}						
Normal condition:						
CN11 to CN13		18.8	9.4	61	42.7	
CN11 to earth		25.8	12.9	61	42.7	
CN13 to Earth		25.6	12.8	61	42.7	
CN15 to CN17		16.8	8.4	61	42.7	
CN15 to earth		24.0	12.0	61	42.7	
CN17 to Earth		23.4	11.7	61	42.7	
T3 pin 5 to 4		18.8	9.4	61	42.7	
T3 pin 4 to earth		23.4	11.7	61	42.7	
Single Fault: D13 pin 4-5 shorted						
CN11 to CN13		21.4	10.7	59	41.3	
CN11 to earth		25.8	12.9	61	42.7	
CN13 to Earth		25.6	12.8	61	42.7	
CN15 to CN17		19.6	9.8	60	42	
CN15 to earth		24.0	12.0	61	42.7	
CN17 to Earth		23.4	11.7	61	42.7	
T3 pin 5 to 4		18.8	9.4	61	42.7	
T3 pin 4 to earth		24.0	12.0	61	42.7	

Single Fault: D15 pin 4-5 shorted					
CN11 to CN13	20.0	10.0	62	43.4	
CN11 to earth	19.6	9.8	61	42.7	
CN13 to Earth	19.6	9.8	61	42.7	
CN15 to CN17	18.8	9.4	62	43.4	
CN15 to earth	20.0	10.0	61	42.7	
CN17 to Earth	20.2	10.1	61	42.7	
T3 pin 5 to 4	16.8	8.4	61	42.7	
T3 pin 4 to earth	23.8	11.9	61	42.7	
Single Fault: D17 pin 2-3 shorted					
CN11 to CN13	21.4	10.7	59	41.3	
CN11 to earth	25.8	12.9	61	42.7	
CN13 to Earth	25.6	12.8	61	42.7	
CN15 to CN17	18.8	9.4	61	42.7	
CN15 to earth	24.6	12.3	61	42.7	
CN17 to Earth	22.4	11.2	61	42.7	
T3 pin 5 to 4	19.0	9.5	62	43.4	
T3 pin 4 to earth	23.6	11.8	61	42.7	
Single Fault: U3 pin 3-5 shorted					
CN11 to CN13	0	--	--	--	Unit shut down immediately.
CN11 to earth	0	--	--	--	Unit shut down immediately.
CN13 to Earth	0	--	--	--	Unit shut down immediately.
CN15 to CN17	0	--	--	--	Unit shut down immediately.
CN15 to earth	0	--	--	--	Unit shut down immediately.
CN17 to Earth	0	--	--	--	Unit shut down immediately.
T3 pin 5 to 4	0	--	--	--	Unit shut down immediately.
T3 pin 4 to earth	0	--	--	--	Unit shut down immediately.
Single Fault: C52 shorted					
CN11 to CN13	0	--	--	--	Fuse opened immediately.
CN11 to earth	0	--	--	--	Fuse opened immediately.
CN13 to Earth	0	--	--	--	Fuse opened immediately.
CN15 to CN17	0	--	--	--	Fuse opened immediately.
CN15 to earth	0	--	--	--	Fuse opened immediately.
CN17 to Earth	0	--	--	--	Fuse opened immediately.
T3 pin 5 to 4	0	--	--	--	Fuse opened immediately.

T3 pin 4 to earth	0	--	--	--	Fuse opened immediately.
Single Fault: R227 shorted					
CN11 to CN13	6.7	3.35	61	42.7	
CN11 to earth	10.7	5.35	61	42.7	
CN13 to Earth	10.7	5.35	61	42.7	
CN15 to CN17	6.9	3.45	61	42.7	
CN15 to earth	10.8	5.4	61	42.7	
CN17 to Earth	10.7	5.35	61	42.7	
T3 pin 5 to 4	6.8	3.4	61	42.7	
T3 pin 4 to earth	11	5.5	61	42.7	
Single Fault: R327 shorted					
CN11 to CN13	6.8	3.4	61	42.7	
CN11 to earth	10.9	5.45	61	42.7	
CN13 to Earth	10.9	5.45	61	42.7	
CN15 to CN17	6.8	3.4	61	42.7	
CN15 to earth	10.8	5.4	61	42.7	
CN17 to Earth	10.8	5.4	61	42.7	
T3 pin 5 to 4	6.8	3.4	61	42.7	
T3 pin 4 to earth	10.8	5.4	61	42.7	
Normal condition					
CN112 to CN114	21.8	10.9	61	42.7	
CN112 to earth	26.2	13.1	61	42.7	
CN114 to Earth	25.2	12.6	61	42.7	
CN116 to CN118	17.8	8.9	61	42.7	
CN116 to earth	24.6	12.3	61	42.7	
CN118 to Earth	24.8	12.4	61	42.7	
Single Fault: D114 pin 4-5 shorted					
CN112 to CN114	23.2	11.6	61	42.7	
CN112 to earth	25.8	12.9	61	42.7	
CN114 to Earth	25.6	12.8	61	42.7	
CN116 to CN118	19.2	9.6	61	42.7	
CN116 to earth	25.0	12.5	61	42.7	
CN118 to Earth	25.0	12.5	61	42.7	

Single Fault: D116 pin 4-5 shorted

CN112 to CN114	11.2	5.6	62	43.4	
CN112 to earth	17.2	8.6	61	42.7	
CN114 to Earth	16.6	8.3	61	42.7	
CN116 to CN118	19.2	9.6	61	42.7	
CN116 to earth	18.8	9.4	61	42.7	
CN118 to Earth	19.6	9.8	61	42.7	
Single Fault: U104 pin 3-5 shorted					
CN112 to CN114	0	--	--	--	Unit shut down immediately.
CN112 to earth	0	--	--	--	Unit shut down immediately.
CN114 to Earth	0	--	--	--	Unit shut down immediately.
CN116 to CN118	0	--	--	--	Unit shut down immediately.
CN116 to earth	0	--	--	--	Unit shut down immediately.
CN118 to Earth	0	--	--	--	Unit shut down immediately.
Single Fault: C153 shorted					
CN112 to CN114	0	--	--	--	Fuse opened immediately.
CN112 to earth	0	--	--	--	Fuse opened immediately.
CN114 to Earth	0	--	--	--	Fuse opened immediately.
CN116 to CN118	0	--	--	--	Fuse opened immediately.
CN116 to earth	0	--	--	--	Fuse opened immediately.
CN118 to Earth	0	--	--	--	Fuse opened immediately.
Single Fault: R227 shorted					
CN112 to CN114	7.0	3.5	61	42.7	
CN112 to earth	11.2	5.6	61	42.7	
CN114 to Earth	10.8	5.4	61	42.7	
CN116 to CN118	7.1	3.55	61	42.7	
CN116 to earth	11.0	5.5	61	42.7	
CN118 to Earth	10.9	5.45	61	42.7	
Single Fault: R327 shorted					
CN112 to CN114	6.8	3.4	61	42.7	
CN112 to earth	10.8	5.4	61	42.7	
CN114 to Earth	10.7	5.35	61	42.7	
CN116 to CN118	6.7	3.35	61	42.7	
CN116 to earth	10.9	5.45	61	42.7	
CN118 to Earth	10.8	5.4	61	42.7	

Note(s):

1. Supply voltage is 240Vac, 60Hz
2. Overall capacity: C094=470pF, C391=C291=220pF on Power board (Murata / MPF2932)
3. Used the measuring instrument of figure D1.
4. Used the non-inductive resistor of 2000Ω.

2.5	TABLE: limited power source measurement			P
		Limits	Measured	Verdict
Network Board PWB-RS				
Location: External Control Connector J9001 OUT, pin 3, Uoc=6.36V				
According to Table 2B (Normal condition)				
current (in A)	8.0	0.01		P
apparent power (in VA)	100	0.03		P
According to Table 2B (Single fault condition: IC9105 pin 16 to pin 14 short)				
current (in A)	8.0	0.01		P
apparent power (in VA)	100	0.03		P
According to Table 2B (Single fault condition: Z9107 short)				
current (in A)	8.0	0.01		P
apparent power (in VA)	100	0.03		P
Location: External Control Connector J9001 IN, pin 12, Uoc=6.36V				
According to Table 2B (Normal condition)				
current (in A)	8.0	0.01		P
apparent power (in VA)	100	0.03		P
According to Table 2B (Single fault condition: IC9105 pin 16 to pin 7 short)				
current (in A)	8.0	0.01		P
apparent power (in VA)	100	0.03		P
According to Table 2B (Single fault condition: R9412 short)				
current (in A)	8.0	0.01		P
apparent power (in VA)	100	0.03		P
Location: LAN Connector J9103 Out, pin 12, Uoc=0V				
According to Table 2B (Normal condition)				
current (in A)	8.0	0		P
apparent power (in VA)	100	0		P
According to Table 2B (Single fault condition: L9115 short)				
current (in A)	8.0	0		P

apparent power (in VA)	100	0	P
Main Board PWB-Main			
Location: HDMI Connector J1002, pin 18, Uoc=4.99V			
According to Table 2B (Normal condition)			
current (in A)	8.0	0	P
apparent power (in VA)	100	0	P
According to Table 2B (Single fault condition: D1002 pin 1-2 short)			
current (in A)	8.0	*	P
apparent power (in VA)	100	*	P
According to Table 2B (Single fault condition: D1002 pin 1-3 short)			
current (in A)	8.0	0	P
apparent power (in VA)	100	0	P
According to Table 2B (Single fault condition: D1002 pin 2-3 short)			
current (in A)	8.0	*	P
apparent power (in VA)	100	*	P
Location: DVI Connector J1001, pin 29, Uoc=5.0V			
According to Table 2B (Normal condition)			
current (in A)	8.0	0	P
apparent power (in VA)	100	0	P
According to Table 2B (Single fault condition: D1002 pin 1-2 short)			
current (in A)	8.0	*	P
apparent power (in VA)	100	*	P
According to Table 2B (Single fault condition: D1002 pin 1-3 short)			
current (in A)	8.0	0	P
apparent power (in VA)	100	0	P
According to Table 2B (Single fault condition: D1002 pin 2-3 short)			
current (in A)	8.0	*	P
apparent power (in VA)	100	*	P
According to Table 2B (Single fault condition: Q1004 pin 1-2 short)			
current (in A)	8.0	0	P
apparent power (in VA)	100	0	P
According to Table 2B (Single fault condition: Q1004 pin 1-3 short)			
current (in A)	8.0	*	P
apparent power (in VA)	100	*	P
According to Table 2B (Single fault condition: Q1004 pin 2-3 short)			

current (in A)	8.0	*	P
apparent power (in VA)	100	*	P
Location: VGA Connector J1001, pin 9, Uoc=5.0V			
According to Table 2B (Normal condition)			
current (in A)	8.0	0	P
apparent power (in VA)	100	0	P
According to Table 2B (Single fault condition: D2002 pin 1-2 short)			
current (in A)	8.0	*	P
apparent power (in VA)	100	*	P
According to Table 2B (Single fault condition: D2002 pin 1-3 short)			
current (in A)	8.0	0	P
apparent power (in VA)	100	0	P
According to Table 2B (Single fault condition: D2002 pin 2-3 short)			
current (in A)	8.0	*	P
apparent power (in VA)	100	*	P
Location: Display port Connector J1003, pin T20, Uoc=5.0V			
According to Table 2B (Normal condition)			
current (in A)	8.0	0	P
apparent power (in VA)	100	0	P
According to Table 2B (Single fault condition: IC1101 pin 1-5 short)			
current (in A)	8.0	0	P
apparent power (in VA)	100	0	P
According to Table 2B (Single fault condition: ICBBD pin 2-4 short)			
current (in A)	8.0	*	P
apparent power (in VA)	100	*	P
Note(s): * Unit shut down immediately when fault applied. Main Board PWB-Main: Displayport (J1003), HDMI (J1002), DVI (J1001), VGA (J1001) as well as RGB/HV IN & RGB/HV OUT (J2001, J2002, J2003), DVD/HD (J2007), S-Video (J2008) and Audio IN & Audio OUT (701) are data ports only and are identified by schematic review as being supplied their signals by IC drivers, and thus are inherently LPS. Network Board PWB-RS: Video IN & Video OUT (J9001) and LAN connector (J9103) as well as speaker connector (J7001), Remote IN/OUT (J9102) are data ports only and are identified by schematic review as being supplied their signals by IC drivers, and thus are inherently LPS.			

2.6.3.4	TABLE: ground continue test		P
Location		Resistance measured (mΩ)	Comments
PE terminal of AC inlet to internal metal enclosure		9.0	Test with 32A, 2 minutes
		7.0	Test with 40A, 2 minutes
PE terminal of AC inlet to earth pin of VGA terminal		8.0	Test with 32A, 2 minutes
		6.0	Test with 40A, 2 minutes
PE terminal of AC inlet to metal plate of LCD panel		9.0	Test with 32A, 2 minutes
		6.0	Test with 40A, 2 minutes
PE terminal of AC inlet to the secondary ground of C491		9.0	Test with 32A, 2 minutes
		6.0	Test with 40A, 2 minutes
PE terminal of AC inlet to the secondary ground of C591		8.0	Test with 32A, 2 minutes
		6.0	Test with 40A, 2 minutes
PE terminal of AC inlet to the secondary ground of C291		8.0	Test with 32A, 2 minutes
		6.0	Test with 40A, 2 minutes
Note(s): US deviation considered. The limit is 2.5V.			

2.10.2	Table: working voltage measurement			P
Location		RMS voltage (V)	Peak voltage (V)	Comments
For Power borad (Murata / MPF2932)				
T401 pin 2 to pin 9/10/11/12		171	316	
T401 pin 2 to pin 13/14/15/16		168	268	
T401 pin 3 to pin 9/10/11/12		164	288	
T401 pin 3 to pin 13/14/15/16		178	312	
T401 pin 4 to pin 9/10/11/12		226	400	
T401 pin 4 to pin 13/14/15/16		249	408	
T401 pin 5 to pin 9/10/11/12		239	392	
T401 pin 5 to pin 13/14/15/16		262	432	* Max. Vrms and Vpeak
T401 pin 6 to pin 9/10/11/12		150	344	
T401 pin 6 to pin 13/14/15/16		143	320	
T401 pin 7 to pin 9/10/11/12		145	332	
T401 pin 7 to pin 13/14/15/16		141	308	

T301 pin 1/2 to pin 10/11/12	158	288	
T301 pin 1/2 to pin 14/15	157	252	
T301 pin 1/2 to pin 13	89.5	180	
T301 pin 3 to pin 10/11/12	171	304	
T301 pin 3 to pin 14/15	179	304	
T301 pin 3 to pin 13	123	292	
T301 pin 4 to pin 10/11/12	256	420	
T301 pin 4 to pin 14/15	271	432	
T301 pin 4 to pin 13	196	428	
T301 pin 5 to pin 10/11/12	271	452	
T301 pin 5 to pin 14/15	287	460	*Max. Vrms and Vpeak
T301 pin 5 to pin 13	218	460	
T301 pin 6 to pin 10/11/12	11.1	36	
T301 pin 6 to pin 14/15	10	27	
T301 pin 6 to pin 13	10	25	
T301 pin 7 to pin 10/11/12	167	362	
T301 pin 7 to pin 14/15	165	346	
T301 pin 7 to pin 13	89	170	
T301 pin 8 to pin 10/11/12	165	346	
T301 pin 8 to pin 14/15	164	364	
T301 pin 8 to pin 13	91	188	
T201 pin 1 to pin 7/8/9	318	444	
T201 pin 1 to pin 10	90	168	
T201 pin 1 to pin 11/12	318	484	
T201 pin 2 to pin 7/8/9	326	528	
T201 pin 2 to pin 10	117	360	
T201 pin 2 to pin 11/12	322	520	
T201 pin 3 to pin 7/8/9	354	620	*Max. Vrms and Vpeak
T201 pin 3 to pin 10	181	548	
T201 pin 3 to pin 11/12	348	580	
T201 pin 4 to pin 7/8/9	6	20	
T201 pin 4 to pin 10	6	18	
T201 pin 4 to pin 11/12	12	43	
T201 pin 5 to pin 7/8/9	164	348	
T201 pin 5 to pin 10	90	172	

T201 pin 5 to pin 11/12	165	352	
T201 pin 6 to pin 7/8/9	168	432	
T201 pin 6 to pin 10	97	252	
T201 pin 6 to pin 11/12	166	392	
T201 pin 1 to Trace (+16V-J15)	301	428	
T201 pin 2 to Trace (+16V-J15)	310	508	
T201 pin 3 to Trace (+16V-J15)	341	584	
T201 pin 4 to Trace (+16V-J15)	6	20	
T201 pin 5 to Trace (+16V-J15)	176	364	
PC201 pin 3 to pin 1	168	352	
PC201 pin 4 to pin 1	168	352	
PC201 pin 3 to pin 2	168	352	
PC201 pin 4 to pin 2	168	352	
PC202 pin 3 to pin 1	165	348	
PC202 pin 4 to pin 1	165	348	
PC202 pin 3 to pin 2	165	348	
PC202 pin 4 to pin 2	165	348	
PC203 pin 3 to pin 1	157	336	
PC203 pin 4 to pin 1	157	336	
PC203 pin 3 to pin 2	156	336	
PC203 pin 4 to pin 2	156	336	
PC301 pin 3 to pin 1	175	362	
PC301 pin 4 to pin 1	175	362	
PC301 pin 1 to Trace (J59-J45)	105	246	
PC301 pin 3 to pin 2	175	362	
PC301 pin 4 to pin 2	175	362	
PC401 pin 3 to pin 1	139	308	
PC401 pin 4 to pin 1	139	308	
PC401 pin 3 to pin 2	143	316	
PC401 pin 4 to pin 2	139	308	
PC051 pin 1 to pin 3	166	352	
PC051 pin 1 to pin 4	166	348	
PC051 pin 2 to pin 3	166	348	
PC051 pin 2 to pin 4	166	348	
T401 pin 7 to Trace (+24V-R458)	132	282	

R419 to Trace (+24V-R458)	242	432	
C094 (Pri.) to Trace (+24V-R458)	135	292	
C094	133	280	
C291	165	348	
C391	142	312	
Note(s): Supply voltage is 240Vac, 60Hz			

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements					P
Clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required dcr (mm)	dcr (mm)
Measured at Unit:						
Primary components (with 10N) on Power Board to sec. main board	420	250	4.6	55	5.0	55
Heatsink of Q420 on Power Board to metal chassis	420	250	2.3	8.5	2.5	8.5
Primary components on Power Board to rear metal chassis	420	250	2.3	19.8	2.5	19.8
Primary soldering pin on Power Board to metal chassis	420	250	2.3	9	2.5	9
For Power board (Murata / MPF2932)						
Between the parts need function insulation	420	250	1.8	See below	2.5	See below
- L / N traces before F001				3.4		3.4
- Trace under F001				5.4		5.4
Primary traces to earthed trace (on component side)	420	250	2.3	See below	2.5	See below
- F001 traces to J8				15.6		15.6
Primary traces to earthed trace (on solder side)	420	250	2.3	See below	2.5	See below
- Under C095				8.1		8.1
- Under C092 / C093				7.9		7.9
- D001 to earthed trace				8.4		8.4
- Fuse to earthed trace				8.1		8.1
- R064 earthed trace				7.8		7.8

Primary components (with 10N) to secondary components	420	250	4.6	See below	5.0	See below
- L001 to PC051 sec. pin				19.3		19.3
- C235 to heatsink of D352				12.8		12.8
Primary trace to secondary trace	420	250	4.6	See below	5.0	See below
- Under RL001/RL002				8.0		8.0
- R004 to D050				10.6		10.6
- F001 to D050				8.4		8.4
- PC051/PC203/PC202/PC201				7.8		7.8
- C291				7.8		7.8
- T201 pin 5 to CN6				7.9		7.9
- Under PC301				7.7		7.7
- C904				7.8		7.8
- C391				7.9		7.9
Primary coil to secondary coil of relay	420	250	4.6	5.6	5.0	5.6
Note(s): For Unit: 1. Altitude correction factor for clearances for an altitude of 3000 m (Based on IEC 60664-1:1992): 1.14. 2. Functional insulation, see clause 5.3.4 a). 3. Other functional insulation according to sub-clause 5.3.4 c). 4. All primary and secondary internal wirings are kept in position and could not be contact each other. 5. One mylar sheet is located under Power board (Murata / MPF2932).						

2.10.5	TABLE: distance through insulation measurements				P
Distance through insulation di at/of:		U r.m.s. (V)	Test voltage (V)	Required di (mm)	di (mm)
Photo coupler (reinforced insulation)		250	3000	0.4	1.
Note(s): 1. See appended table 1.5.1 for approved component source details.					

4.5.1	TABLE: maximum temperatures			P
	test voltage (V)	A) 90Vac B) 264Vac		—
	t1 (°C)	--		—
	t2 (°C)	--		—
Maximum temperature T of part/at:		T (°C)		allowed T _{max} (°C)
Test voltage		A)	B)	--
For unit is placed in horizontal position:				
AC Inlet		45	44	55
For Power board (Murata / MPF2932)				
CNAC body		48	49	70
C001 body		45	45	85
PWB near Z001		47	46	90
L003 coil		46	44	90
L001 coil		49	44	90
C002 body		46	44	85
L002 coil		48	43	90
RL001 coil		53	53	90
RL002 coil		53	53	90
PCB near D001		52	46	90
PCB near D002		52	46	90
L102 coil		60	51	90
PCB under Q101		60	72	90
PCB under Q301 and Q320		65	62	90
PCB under Q401 and Q420		70	66	90
C201 body		50	48	90
PCB near Q201		55	53	90
C111 body		55	61	90
C112 body		56	57	90
C094 body		76	70	110
T401 core		78	71	95
T401 coil		83	78	95
C391 body		62	59	110
T301 core		61	60	95
T301 coil		65	64	95

T201 core	55	54	95
T201 coil	55	54	95
C291 body	50	48	110
C092 body	44	43	110
C095 body	45	44	110
PC401 body	64	61	85
PC301 body	54	51	85
PC201body	50	48	85
PC202 body	49	47	85
PC203 body	49	48	85
PC051 body	49	47	85
PCB near D452	65	56	90
For Main Board			
PCB under IC400	64	64	90
PCB under IC300	50	50	0
For DC/AC inverter Board (Hansol / SSI460_24D01)			
T5 Coil	76	55	90
CT1 Coil	70	53	90
T102 Coil	80	55	90
For Unit			
Metal enclosure outside near Inverter (T5)	54	55	55
Metal enclosure outside near Inverter (T102)	52	45	55
Metal enclosure outside near Power board (T401) (Rear)	47	46	55
Metal enclosure outside near Power board (T401) (Top)	54	49	55
Tamb	26.4	24.2	--
Tma	40	40	--
For unit is placed in vertical position (wall mounted):			
Test voltage	A)	B)	--
AC Inlet	49	47	55
For Power board (Murata / MPF2932)			
CNAC body	54	51	70
C001 body	52	50	85
PWB near Z001	53	51	90
L003 coil	52	49	90
L001 coil	54	49	90

C002 body	51	48	85
L002 coil	51	47	90
RL001 coil	56	55	90
RL002 coil	55	55	90
PCB near D001	55	50	90
PCB near D002	57	51	90
L102 coil	62	60	90
PCB under Q101	57	77	90
PCB under Q301 and Q320	65	70	90
PCB under Q401 and Q420	61	65	90
C201 body	58	56	90
PCB near Q201	63	61	90
C111 body	48	50	90
C112 body	47	48	90
C094 body	67	69	110
T401 core	76	79	95
T401 coil	80	81	95
C391 body	64	67	110
T301 core	64	66	95
T301 coil	68	70	95
T201 core	63	62	95
T201 coil	61	61	95
C291 body	56	53	110
C092 body	49	47	110
C095 body	46	46	110
PC401 body	65	68	85
PC301 body	59	63	85
PC201body	56	53	85
PC202 body	55	52	85
PC203 body	55	52	85
PC051 body	52	50	85
PCB near D452	72	73	90
For Main Board			
PCB under IC400	70	69	90
PCB under IC300	64	63	90

For DC/AC inverter Board (Hansol / SSI460_24D01)			
T5 Coil	61	61	90
CT1 Coil	59	58	90
T102 Coil	81	81	90
For Unit			
Metal enclosure outside near Inverter (T5)	51	51	55
Metal enclosure outside near Inverter (T102)	54	55	55
Metal enclosure outside near Power board (T401) (Rear)	45	45	55
Metal enclosure outside near Power board (T401) (Top)	47	47	55
Tamb	27.2	27.4	--
Tma	40	40	--
For unit is placed in Horizontal position (wall mounted):			
Test voltage	A)	B)	--
AC Inlet	47	46	55
For Power board (Murata / MPF2932)			
CNAC body	50	49	70
C001 body	47	47	85
PWB near Z001	49	49	90
L003 coil	48	46	90
L001 coil	50	47	90
C002 body	47	46	85
L002 coil	49	45	90
RL001 coil	56	56	90
RL002 coil	55	56	90
PCB near D001	54	49	90
PCB near D002	54	49	90
L102 coil	64	56	90
PCB under Q101	62	78	90
PCB under Q301 and Q320	67	66	90
PCB under Q401 and Q420	72	74	90
C201 body	53	51	90
PCB near Q201	57	55	90
C111 body	57	66	90
C112 body	57	62	90
C094 body	78	79	110

T401 core	80	80	95
T401 coil	85	86	95
C391 body	63	63	110
T301 core	63	63	95
T301 coil	67	67	95
T201 core	57	56	95
T201 coil	57	56	95
C291 body	52	51	110
C092 body	46	46	110
C095 body	46	45	110
PC401 body	66	66	85
PC301 body	56	55	85
PC201body	52	51	85
PC202 body	51	50	85
PC203 body	51	50	85
PC051 body	51	49	85
PCB near D452	66	66	90
For Main Board			
PCB under IC400	66	66	90
PCB under IC300	52	52	90
For DC/AC inverter Board (Hansol / SSI460_24D01)			
T5 Coil	76	77	90
CT1 Coil	70	71	90
T102 Coil	81	82	90
For Unit			
Metal enclosure outside near Inverter (T5)	53	53	55
Metal enclosure outside near Inverter (T102)	51	53	55
Metal enclosure outside near Power board (T401) (Rear)	50	51	55
Metal enclosure outside near Power board (T401) (Top)	53	53	55
Tamb	27.0	25.7	--
Tma	40	40	--
For model L468TN:			
For unit is placed in horizontal position (wall mounted)			
Test voltage	A)	B)	--
AC Inlet	47	46	55

For Power board			
CNAC body	54	48	70
C001 body	49	46	85
PCB near Z001	51	48	90
L003 coil	54	47	90
L001 coil	57	47	90
C002 body	51	47	85
L002 coil	60	47	90
RL001 coil	58	56	90
RL002 coil	57	56	90
PCB near D001	63	50	90
PCB near D002	63	51	90
L102 coil	76	62	90
PCB under Q101	70	71	90
PCB near Q301 and Q320	86	80	90
PCB near Q401 and Q420	80	76	90
C201 body	56	52	90
PCB near Q201	61	56	90
C111 body	63	61	90
C112 body	64	61	105
C094 body	80	78	110
T401 core	84	82	95
T401 coil	86	84	95
C391 body	73	71	110
T301 core	78	76	95
T301 coil	85	83	95
T201 coil	61	58	95
T201 core	61	58	95
C291 body	55	50	110
C092 body	48	45	110
C095 body	48	46	110
PC401 body	74	72	85
PC301 body	61	58	85
PC201 body	55	50	85
PC202 body	55	50	85

PC203 body	55	50	85
PCB under D452	81	79	90
For Main Board			
PCB under IC400	73	73	90
PCB under IC300	52	52	90
For DC/AC inverter Board (Samsung / SSI460-16A01)			
T401 coil	85	84	90
T301 coil	78	77	90
CT301	72	71	90
For Unit			
Plastic enclosure inside near Inverter	61	60	65
Plastic enclosure outside near Inverter	54	54	80
Metal enclosure inside near Inverter	49	48	55
Metal enclosure inside near power	46	46	55
Tamb	25.7	25.0	
Tma	40	40	--
For unit is placed in vertical position (wall mounted)			
Test voltage	A)	B)	--
AC Inlet	52	48	55
For Power board			
CNAC body	58	51	70
C001 body	53	49	85
PCB near Z001	54	50	90
L003 coil	57	49	90
L001 coil	60	49	90
C002 body	54	48	85
L002 coil	61	48	90
RL001 coil	58	57	90
RL002 coil	56	56	90
PCB near D001	62	51	90
PCB near D002	64	52	90
L102 coil	73	62	90
PCB under Q101	69	74	90
PCB near Q301 and Q320	80	80	90
PCB near Q401 and Q420	62	62	90

C201 body	62	55	90
PCB near Q201	64	60	90
C111 body	51	49	90
C112 body	50	48	90
C094 body	59	59	110
T401 core	77	77	95
T401 coil	79	78	95
C391 body	68	68	110
T301 core	81	80	95
T301 coil	87	86	95
T201 coil	65	61	95
T201 core	66	62	95
C291 body	55	51	110
C092 body	49	47	110
C095 body	47	46	110
PC401 body	69	69	85
PC301 body	69	68	85
PC201 body	55	51	85
PC202 body	55	51	85
PC203 body	54	50	85
PCB under D452	78	77	90
For Main Board			
PCB under IC400	75	73	90
PCB under IC300	63	62	90
For DC/AC inverter Board (Samsung / SSI460-16A01)			
T401 coil	77	76	90
T403 coil	74	75	90
CT301	69	69	90
For Unit			
Plastic enclosure inside near Inverter	51	51	65
Plastic enclosure outside near Inverter	46	46	80
Metal enclosure inside near Inverter	49	48	55
Metal enclosure inside near power	44	44	55
Tamb	25.0	24.9	--
Tma	40	40	--

For model L408TM:			
For unit is placed in horizontal position (wall mounted)			
Test voltage	A)	B)	--
AC Inlet	53	48	55
For Power board			
CNAC body	53	49	70
C001 body	49	48	85
PCB near Z001	52	49	90
L003 coil	53	49	90
L001 coil	55	48	90
C002 body	50	47	85
L002 coil	56	47	90
RL001 coil	56	55	90
RL002 coil	56	55	90
PCB near D001	59	49	90
PCB near D002	60	50	90
L102 coil	71	60	90
PCB under Q101	65	71	90
PCB near Q301 and Q320	77	74	90
PCB near Q401 and Q420	75	73	90
C201 body	57	52	90
PCB near Q201	59	57	90
C111 body	60	63	90
C112 body	63	62	90
C094 body	78	77	110
T401 core	82	81	95
T401 coil	84	83	95
C391 body	71	69	110
T301 core	78	75	95
T301 coil	82	80	95
T201 coil	60	58	95
T201 core	60	59	95
C291 body	52	50	110
C092 body	48	46	110
C095 body	46	45	110

PC401 body	73	71	85
PC301 body	63	59	85
PC201 body	53	50	85
PC202 body	53	50	85
PC203 body	53	50	85
PCB under D452	78	76	90
For Main Board			
PCB under IC400	73	72	90
PCB under IC300	54	54	90
For DC/AC inverter Board (Samsung / INV40N14A)			
T104 coil	79	79	90
T103 coil	76	77	90
For Unit			
Plastic enclosure inside near Inverter	59	59	65
Plastic enclosure outside near Inverter	54	54	80
Metal enclosure inside near Inverter	49	49	55
Metal enclosure inside near power	48	48	55
Tamb	24.3	24.3	
Tma	40	40	--
For unit is placed in vertical position (wall mounted)			
Test voltage	A)	B)	--
AC Inlet	53	50	55
For Power board			
CNAC body	60	54	70
C001 body	57	52	85
PCB near Z001	58	53	90
L003 coil	61	52	90
L001 coil	61	51	90
C002 body	57	50	85
L002 coil	61	50	90
RL001 coil	59	57	90
RL002 coil	59	57	90
PCB near D001	63	53	90
PCB near D002	66	54	90
L102 coil	69	63	90

PCB under Q101	64	76	90
PCB near Q301 and Q320	78	81	90
PCB near Q401 and Q420	61	62	90
C201 body	60	58	90
PCB near Q201	66	64	90
C111 body	51	51	90
C112 body	50	50	90
C094 body	59	59	110
T401 core	75	75	95
T401 coil	77	77	95
C391 body	66	67	110
T301 core	80	80	95
T301 coil	87	88	95
T201 coil	65	65	95
T201 core	66	66	95
C291 body	62	59	110
C092 body	52	49	110
C095 body	49	50	110
PC401 body	68	69	85
PC301 body	69	71	85
PC201 body	61	56	85
PC202 body	60	55	85
PC203 body	60	55	85
PCB under D452	75	75	90
For Main Board			
PCB under IC400	77	77	90
PCB under IC300	65	64	90
For DC/AC inverter Board (Samsung / INV40N14A)			
T104 coil	70	70	90
T103 coil	79	77	90
For Unit			
Plastic enclosure inside near Inverter	51	51	65
Plastic enclosure outside near Inverter	47	47	80
Metal enclosure inside near Inverter	47	47	55
Metal enclosure inside near power	48	48	55

Tamb		24.6	24.2	--	
Tma		40	40	--	
Temperature T of winding:	R ₁ (Ω)	R ₂ (Ω)	T (°C)	allowed T _{max} (°C)	insulation class
Note(s):					
1. The temperatures were measured under the worse case normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 at voltages as described above.					
2. The maximum ambient temperature (Tma) permitted by the manufacturer's specification is 40°C.					
<u>Winding components (providing safety isolation):</u>					
- Class 120 material (B) Tmax = 120°C - 10°C -(40-25)C = 95°C					
3. All values for T(°C) are re-calculated from Tamb respectively.					
4. During the test, the all DC fans are not provided.					

4.5.2	TABLE: ball pressure test of thermoplastic parts		P
	allowed impression diameter (mm): ≤ 2 mm	—	
Part	Test temperature (°C)	Impression diameter (mm)	
Case of L001/L002/L003 (WINTECH, 2092)	125	0.8	
Case of L001/L002/L003 (WINTECH, CRN7000)	125	1.1	
Case of L001/L002/L003 (Sabic, Valox 310 SE0)	125	1.0	
Primary connector on power switch (Nippon / CN86-05)	125	0.5	
Primary connector on power switch (Nippon / CN86 series)	125	0.7	
Note(s): Bobbin of T201, T301, T401, L102 are made of Phenolic type.			

4.6.1, 4.6.2	Table: enclosure openings		P
Location		Size (mm)	Comments
For horizontal position:			
Top	Ø 4.5 Ø 3.8	Numerous circle openings.	
Left	Ø 4.5	Numerous circle openings near tuner module and DC/AC inverter.	
Right	Ø 1.7 Ø 4.5	Numerous circle openings.	
Rear	Ø 3.8	Numerous circle openings near SPS board.	
	Ø 4.5	Numerous circle openings near main control board.	

Bottom	Ø 1.7	Numerous circle openings and spacing of holes centre to centre is at least 3.4 mm on thickness 1.0 mm metal barrier.
	Ø 4.5	Numerous circle openings and no any hazardous voltage and energy with 5 ° vertical projection area according Figure 4D.
For vertical position:		
Top	Ø 4.5	Numerous circle openings near tuner module and DC/AC inverter.
Left	Ø 1.7 Ø 4.5	Numerous circle openings.
Right	Ø 4.5 Ø 3.8	Numerous circle openings.
Rear	Ø 3.8	Numerous circle openings near SPS board.
	Ø 4.5	Numerous circle openings near main control board.
Bottom	Ø 1.7	Numerous circle openings and spacing of holes centre to centre is at least 3.4 mm on thickness 1.0 mm metal barrier.
	Ø 4.5	Numerous circle openings and no any hazardous voltage and energy with 5 ° vertical projection area according Figure 4D.
Note(s):		

4.7	Table: resistance to fire				P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	
Note(s): See appended table 1.5.1 for details.					

5.1.6	TABLE: touch current measurement				P
Condition	L → terminal A (mA)	N → terminal A (mA)	Limit (mA)	Comments	
Switch ON	0.24	0.24	3.5	To output connector “-“, switch “e” opened	
Switch OFF	0.02	0.02	3.5	To output connector “-“, switch “e” opened	
Switch ON	0.24	0.24	3.5	To metal enclosure, switch “e” opened	
Switch OFF	0.02	0.02	3.5	To metal enclosure, switch “e” opened	

Note(s):

1. Supply voltage: 264V, 60Hz
2. Overall capacity: C092=C093=1000pF; C095=C291=C391=220pF; C094=470pF on Power board (Murata / MPF2932)

5.2	TABLE: electric strength tests and impulse tests		P
Test voltage applied between:		Test voltage (V)	Breakdown
For Unit:			
Unit: primary and secondary		DC 4242	No
Unit: primary and metal enclosure		DC 2877	No
Unit: primary and plastic enclosure for L468TN, L408TM		DC 4242	No
For Power board (Murata / MPF2932)			
T201/T301/T401, Primary winding and secondary winding		AC 3000	No
T201/T301/T401, Primary winding and core		AC 1922	No
T201/T301/T401, Secondary winding and core		AC 1922	No
Two layers of insulation tape used in T201, T301, T401		AC 3000	No
Note(s):			

5.3	TABLE: fault condition tests						P
		ambient temperature (°C)		:	25°C, if not otherwise stated		—
		model/type of power supply		:	See append table 1.5.1		—
		manufacturer of power supply		:	See append table 1.5.1		—
		rated markings of power supply		:	See append table 1.5.1		—
No.	Component no.	Fault	Test voltage (Vac)	Test time	Fuse no.	Fuse current (A)	Result
For Power board (Murata / MPF2932)							
1	D001+ to ~	s-c	240	1 s	F001	--	Fuse opened immediately. No hazard.
2	D002+ to ~	s-c	240	1 s	F001	--	Fuse opened immediately. No hazard.
3	C111	s-c	240	1 s	F001	--	Fuse opened immediately. No hazard.
4	Q201 (D-G)	s-c	240	1 s	F001	--	Fuse opened immediately. No hazard.
5	Q201 (D-S)	s-c	240	1 s	F001	--	Fuse opened immediately. No hazard.

6	Q201 (G-S)	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
7	Q301 (D-G)	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
8	Q301 (D-S)	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
9	Q301 (G-S)	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
10	Q320 (D-G)	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
11	Q320 (D-S)	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
12	Q320 (G-S)	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
13	Q401 (D-G)	s-c	240	30 min	F001	0.86	Only +24V output shut down immediately. No damaged, no hazard.
14	Q401 (D-S)	s-c	240	30 min	F001	0.86	Only +24V output shut down immediately. No damaged, no hazard.
15	Q401 (G-S)	s-c	240	30 min	F001	0.86	Only +24V output shut down immediately. No damaged, no hazard.
16	Q420 (D-G)	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
17	Q420 (D-S)	s-c	240	1 s	F001	--	Fuse opened immediately. No hazard.
18	Q420 (G-S)	s-c	240	30 min	F001	0.86	Only +24V output shut down immediately. No damaged, no hazard.
19	PC201 pin1	o-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
20	PC201 pin3	o-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
21	PC201 pin1-2	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
22	PC201 pin3-4	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.

23	PC202 pin1	Open	240	30 min	F001	2.14	Unit operated normally. No damaged, no hazard.
24	PC202 pin3	Open	240	30 min	F001	2.14	Unit operated normally. No damaged, no hazard.
25	PC202 pin1-2	s-c	240	30 min	F001	2.14	Unit operated normally. No damaged, no hazard.
26	PC202 pin3-4	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
27	PC203 pin1	Open	240	2 h	F001	3.7	Unit operated normally. Maximum temperature of T401 coil = 88.2°C, T301 coil = 91.7°C, T201 coil = 67.8°C, Ambient = 24.8°C. No damaged, no hazard.
28	PC203 pin3	Open	240	30 min	F001	3.7	Unit operated normally. No damaged, no hazard. Maximum temperature same as PC203 pin1 open.
29	PC203 pin1-2	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
30	PC203 pin3-4	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
31	PC301 pin1	Open	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
32	PC301 pin3	Open	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
33	PC301 pin1-2	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
34	PC301 pin3-4	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
35	PC401 pin1	Open	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
36	PC401 pin3	Open	240	30 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
37	PC401 pin1-2	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
38	PC401 pin3-4	s-c	240	30 min	F001	0.86	Only +24V output shut down immediately. No damaged, no hazard.
39	PC051 pin1	Open	240	30 min	F001	0.86	Only +24V output shut down immediately. No damaged, no hazard.

40	PC051 pin3	Open	240	30 min	F001	0.86	Only +24V output shut down immediately. No damaged, no hazard.
41	PC051 pin1-2	s-c	240	30 min	F001	0.86	Only +24V output shut down immediately. No damaged, no hazard.
42	PC051 pin3-4	s-c	240	30 min	F001	2.14	Unit operated normally. No damaged, no hazard.
43	R231	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
44	R341	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
45	D451	s-c	240	30 min	F001	0.86	Only +24V output shut down immediately. No damaged, no hazard.
46	D351	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
47	D251	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
48	D319	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
49	IC101 pin1-2	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
50	IC101 pin2-8	s-c	240	1 s	F001	--	Fuse opened immediately. No hazard.
51	IC201 pin2-6	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
52	IC301 pin2-8	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
53	Q101 (G-S)	s-c	240	1 h	F001	3.7	Unit operated normally. Maximum temperature of T401 coil = 90.5°C, T301 coil = 90.0°C, T201 coil = 66.3°C, Tamb = 23.9°C. No damaged, no hazard.
54	Q101 (D-G)	s-c	240	1 s	F001	--	Fuse opened immediately. No hazard.
55	Q101 (D-S)	s-c	240	1 s	F001	--	Fuse opened immediately. No hazard.

56	T401 pin9~12-13~16	s-c	240	1 s	F001	--	Fuse opened immediately. No hazard.
57	T401 pin4-5	s-c	240	30 min	F001	0.86	Only +24V output shut down immediately. No damaged, no hazard.
58	T401 pin6-7	s-c	240	30 min	F001	0.86	Only +24V output shut down immediately. No damaged, no hazard.
59	T401 pin2-4	s-c	240	30 min	F001	0.86	Only +24V output shut down immediately. No damaged, no hazard.
60	T301 pin12-14	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
61	T301 pin4-5	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
62	T301 pin7-8	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
63	T301 pin2-4	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
64	T201 pin8, 9-11, 12	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
65	T201 pin1-3	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
66	T201 pin5-6	s-c	240	1 s	F001	--	Fuse opened immediately. No hazard.
67	T201 11-8	o-l	240	9.5 h	F001	0.08	Unit shut down at load 9.0A. Maximum temperature at 8.7A, T401 coil = 85.2°C, T301 coil = 90.8°C, T201 coil = 88.1°C, Tamb = 27.0°C. No damaged, no hazard.
68	T301 10-14	o-l	240	14 h	F001	1.53	Only +16V output shut down at load 9.6A. Maximum temperature at 9.5A, T401 coil = 99.6°C, T301 coil = 109.0°C, T201 coil = 72.5°C, Tamb = 23.0°C, No damaged, no hazard.

69	T401 9-13	o-l	240	9 h	F001	0.86	Unit shut down at load 13.2A. Maximum temperature at 13A, T401 coil = 108.4°C, T301 coil = 96.8°C, T201 coil = 72.1°C, Tamb = 21.3°C, No damaged, no hazard.
70	+24V output	s-c	240	30 min	F001	0.86	Only +24V output shut down immediately. No damaged, no hazard.
71	+16V output	s-c	240	30 min	F001	1.53	Only +16V output shut down immediately. No damaged, no hazard.
72	+6V output	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
73	+24V to +16V	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
74	+24V to +6V	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.
75	+16V to +6V	s-c	240	10 min	F001	0.08	Unit shut down immediately. No damaged, no hazard.

For model L468TP:**For unit is placed in Horizontal position (wall mounted):**

76	Ventilation openings	b-l	240	3hr	F001	1.04	Unit operated normally. Maximum temperature: T401 coil= 73.7°C, T301 coil= 64.5°C, T201 coil= 57.8°C, Tamb= 24.8°C. No damaged, no hazard.
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For model L468TN:**For unit is placed in Horizontal position (wall mounted):**

77	Ventilation openings	b-l	240	3hr	F001	1.04	Unit operated normally. Maximum temperature: T401 coil= 92.5°C, T301 coil= 92.9°C, T201 coil= 64.9°C, Tamb= 25.1°C. No damaged, no hazard.
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For model L408TM:**For unit is placed in Horizontal position (wall mounted):**

78	Ventilation openings	b-l	240	3hr	F001	1.38	Unit operated normally. Maximum temperature: T401 coil= 91.4°C, T301 coil= 91.4°C, T201 coil= 66.1°C, Tamb= 24.3°C. No damaged, no hazard.
Note(s): 1. Used abbreviations: where s-c=short-circuited, o-c=open-circuited, o-l=overloaded, b-l=blocked. 2. Maximum temperatures limitation of safety isolation transformers based on a test temperature of 25 °C: - Class B: Tmax = 175 °C - (40-25) °C = 160 °C.							

C.2	Safety isolation transformer	P
Construction details:		
Transformer part name: T201		
Manufacturer: MURATA		
Type: 202D1		
All transformers are identical except for transformer part name.		
Recurring peak voltage	620V	
Required clearances for reinforced insulation (from table 2H and 2J with altitude up to 3000 m)	$(4.0 + 0.6) \times 1.14 = 5.3 \text{ mm}$	
Effective voltage rms	354V	
Required creepage distances for reinforced insulation (from table 2L)	7.4 mm (CTI III) 5.3 mm (CTI II)	
Measured min. creepage distances		
Location	inside (mm)	outside (mm)
prim-sec	6.4 (CTI II)	9.8 (CTI III)
prim-core	3.2 (CTI II)	4.6 (CTI III)
sec-core	3.2 (CTI II)	5.2 (CTI III)
prim-prim	--	--
Measured min. clearances		
Location	inside (mm)	outside (mm)
prim-sec	6.4 (CTI II)	9.5 (CTI III)
prim-core	3.2 (CTI II)	4.6 (CTI III)

sec-core	3.2 (CTI II)	4.9 (CTI III)
prim-prim	--	--
Construction:		
Concentric windings on 28.5 × 34 × 11.5 mm core size. Outer winding is primary. Three layers of insulation between primary winding and secondary windings. Winding ends additionally fixed with tape. The margin tape is 3.2 mm on top side and 6.5 mm on bottom side of bobbin. Core is considered as floating part. One layer insulation tape was wrapped on bobbin of transformer. The margin tape and insulation tape used are classified as CTI I or II material which is UL Recognized component and tested according to IEC 60112 by UL. Margin tape: - Mfr. TERAOKA SEISDAKUSHO CO LTD, Type 673F 0.5 and 673F 0.27 - Mfr. 3M COMPANY, Type 44T-A - Mfr. JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD, Type WF Insulation tape: - Mfr. TERAOKA SEISDAKUSHO CO LTD, Type 631S #25 and 630F #25 - Mfr. JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD, Type CT (YELLOW)		
Pin numbers		
Prim.	1-2-3, 5-6	
Sec.	8-12, 9-11	
Bobbin		
Material	SUMITOMO BAKELITE CO LTD, Phenolic type, V-0, 150°C, PM-9820	
Thickness	0.8 mm	
Electric strength test		
With 3000 V a.c. after humidity treatment		
Result	Pass	

C.2	Safety isolation transformer	P
Construction details:		
Transformer part name: T301		
Manufacturer: MURATA		
Type: 2V092		
All transformers are identical except for transformer part name.		
Recurring peak voltage	460V	
Required clearances for reinforced insulation (from table 2H and 2J with altitude up to 3000 m)	$(4.0 + 0.2) \times 1.14 = 4.8$ mm	
Effective voltage rms	289V	

Required creepage distances for reinforced insulation (from table 2L)	6.2 mm	
Measured min. creepage distances		
Location	inside (mm)	outside (mm)
prim-sec	6.4	11.0
prim-core	6.4	5.4
sec-core	6.4	5.6
prim-prim	--	--
Measured min. clearances		
Location	inside (mm)	outside (mm)
prim-sec	6.4	11.0
prim-core	6.4	5.4
sec-core	6.4	5.6
prim-prim	--	--
Construction:		
Concentric windings on 40 × 42 × 15 mm core size. Outer winding is primary. Three layers of insulation between primary winding and secondary windings. Winding ends additionally fixed with tape. The margin tape is 6.4 mm on both sides of bobbin. Core is considered as floating part.		
Pin numbers		
Prim.	2-3-4-5, 7-8	
Sec.	15/14-10/11	
Bobbin		
Material	SUMITOMO BAKELITE CO LTD, Phenolic type, V-0, 150°C, PM-9820	
Thickness	0.8 mm	
Electric strength test		
With 3000 V a.c. after humidity treatment		
Result	Pass	

C.2	Safety isolation transformer		P
Construction details:			
Transformer part name: T401			
Manufacturer: MURATA			
Type: 2V089			
All transformers are identical except for transformer part name.			
Recurring peak voltage		432V	
Required clearances for reinforced insulation (from table 2H and 2J with altitude up to 3000 m)		$(4.0 + 0.2) \times 1.14 = 4.8 \text{ mm}$	
Effective voltage rms		262V	
Required creepage distances for reinforced insulation (from table 2L)		5.4 mm	
Measured min. creepage distances			
Location		inside (mm)	outside (mm)
prim-sec		6.4	9.8
prim-core		6.4	4.8
sec-core		6.4	5.0
prim-prim		--	--
Measured min. clearances			
Location		inside (mm)	outside (mm)
prim-sec		6.4	9.8
prim-core		6.4	4.8
sec-core		6.4	5.0
prim-prim		--	--
Construction:			
Concentric windings on 40 × 15 × 42 mm core size. Outer winding is primary. Three layers of insulation between primary winding and secondary windings. Winding ends additionally fixed with tape. The margin tape is 6.4 mm on both sides of bobbin. Core is considered as floating part.			
Pin numbers			
Prim.		2-3-4-5, 6-7	
Sec.		15/16-11/12, 13/14-9/10	
Bobbin			

Material	SUMITOMO BAKELITE CO LTD, Phenolic type, V-0, 150°C, PM-9820
Thickness	0.8 mm
Electric strength test	
With 3000 V a.c. after humidity treatment	
Result	Pass

National Differences					
Clause	Requirement – Test			Result – Remark	Verdict
APPENDIX	Australian National Differences according to CB Bulletin No. 112A, Dec 2006 (AS/NZS 60950.1:2003) (IEC Publication 60950-1:2001)				P
EXPLANATION FOR ABBREVIATIONS P=Pass, F=Fail, N=Not applicable. Placed in the column to the right.					
Annex ZZ Variations					
1.2	Between the definitions for "Person, service" and "Range, rated frequency" insert the following: Potential ignition source 1.2.12.201			Inserted.	P
1.2.12.15	After the definition of 1.2.12.15, add the following: 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.			Added.	P
1.5.1	Add the following to the end of first paragraph: "or the relevant Australian/New Zealand Standard."			Added.	P
1.5.2	Add the following to the end of first and third dash items: "or the relevant Australian/New Zealand Standard."			Added.	P
2.1	Delete the Note.			Deleted.	P
3.2.3	Delete Note 2.			Deleted.	N/A
3.2.5.1	Modify Table 3B as follows:			Modified.	N/A
	Rated current of equipment A	Nominal cross-sectional area mm ²	AWG or kcmil (cross-sectional area in mm ²) see note 2		
	Over 0.2 up to and including 3	0.5 ¹⁾	18 [0.8]		

National Differences				
Clause	Requirement – Test		Result – Remark	Verdict
	Over 3 up to and including 7.5	0.75	16 [1.3]	
	Over 7.5 up to and including 10	$(0.75)^2$ 1.00	16 [1.3]	
	Over 10 up to and including 16	$(1.0)^3$ 1.5	14 [2]	
	Replace footnote 1) with the following: ¹⁾ This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliances, and the entry to the plug does not exceed 2 m (0.5 mm ² three-core supply flexible cords are not permitted; see AS/NZS 3191). Delete Note 1.			
4.3.6	Replace paragraph three with: Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flat-pin socket-outlet complying with AS/NZS 3112, shall comply with the requirements in AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets.		Replaced.	N/A
4.3.13.5	Add the following to the end of the first paragraph: ", or AS/NZS 2211.1"		Added.	N/A
4.7	Add the following paragraph: For alternative tests refer to clause 4.7.201.		Added.	P
4.7.201	Add the following after clause 4.7.3.6: 4.7.201 Resistance to fire - Alternative tests		Added.	P
4.7.201.1	General Parts of non-metallic material shall be resistant to ignition and spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames originating from inside the apparatus, or the following: Components that are contained in an enclosure having a flammability category of FV-0 according to AS/NSZ 4695.707 and having openings only for the connecting wires filling the openings completely, and for the ventilation not exceeding 1 mm in width regardless of the length. The following parts which would contribute negligible fuel to a fire:		Alternative tests not applied for.	N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
	small mechanical parts, the mass of which does not exceed 4 g, such as mounting parts, gears, cams, belts and bearings; small electrical components, such as capacitors with a volume not exceeding 1750 mm³, integrated circuits, transistors and optocoupler packages, if these components are mounted on material flammability category FV-1 or better according to AS/NZS 4695.707 NOTE - In considering how to minimize propagation of fire and what “small parts” are, account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating fire from one part to another. Compliance is checked by tests of 4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5. For the base materials of printed boards, compliance is checked by the test of 4.7.201.5. The tests shall be carried out on parts of non-metallic material, which have been removed from the apparatus. When the glow-wire test is carried out, the parts shall be placed in the same orientation, as they would be in normal use. These tests are not carried out on internal wiring.		
4.7.201.2	Parts of non-metallic material are subjected to glow wire test of AS/NZS 4695.2.11, which is 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 materials classified at least FH-3 according to ISO 9772 provided that the sample was not thicker than the relevant part.	See above	N/A
4.7.201.3	Testing of insulating materials Parts of insulating materials supporting potential ignition sources shall be subject to the glow-wire test of AN/NZS 4695.2.11, which is 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	See above	N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
	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 4695.2.2 with the following modifications: 5 Severities Replace with: The duration of application of the test flame shall be 30 s ± 1 s. 8 Test procedure 8.2 Modification: Replace the first sentence 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. 8.4 Modification: The first paragraph does not apply. Addition: If possible, the flame shall be applied at least 10 mm from a corner. 8.5 Replacement: The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall then withstand the test. 10 Evaluation of test results Replace with: The duration of burning (tb) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s. The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to IEC 60695-11-10, provided that the sample tested was not thicker than the relevant part.		
4.7.201.4	Testing in the event of non-extinguishing material If parts, other than enclosures, do not withstand the glow-wire tests of 4.7.201.3, by failure to extinguish within 30 s after the removal of the glow-wire tip, the needle-flame test detailed in 4.7.201.3 is made	See above	N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
	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 to be tested. NOTE 1 - If the enclosure does not withstand the glow-wire test the equipment is considered to have failed to meet the requirement 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 burring or glowing particles can fall onto an external surface underneath the equipment, the equipment is considered to have failed to meet the requirement of clause 4.7.201 without the need for consequential testing. NOTE 3 - Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting in contact with or in close proximity to connections.		
4.7.201.5	Testing of printed boards The base material of printed boards is subjected to needle-flame test to Clause 4.7.201.3. The flame is 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 for 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 FV-1 or better according to AS/NZS 4695.707, or the printed boards are protected by an enclosure meeting the flammability category FV-0 according to AS/NZS 4695.707, or made of metal, having openings only for connecting	See above	N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
	wires which fill the opening 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 printed boards supporting spark gaps which provide protection against overvoltages, is of flammability category FV-0 according to AS/NSZ 4695.707 or the printed boards are contained in a metal enclosure, having openings only for connecting wires fill the openings completely. Compliance is 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	Add the following after the first paragraph: In Australia (this variation does not apply in New Zealand), compliance with 6.2.2 is checked by the tests of both 6.2.2.1 and 6.2.2.2. Delete the note.	Added.	N/A
6.2.2.1	Delete Note 2. Add the following after the first paragraph: In Australia (this variation does not apply in New Zealand), the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator of annex N for 10/700 µs impulses. The interval between successive impulses is 60 s and the initial voltage, U_c, is: - for 6.2.1 a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and - for 6.2.1b) and 6.2.1c): 1.5 kV. NOTE 201 - The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines. NOTE 202 – The 2.5 kV impulse for 6.2.1a) was chosen to ensure adequacy of the insulation	Deleted.	N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
	concerned and does not necessarily simulate likely overvoltages.		
6.2.2.2	Delete the note. Add the following after the second paragraph: In Australia (this variation does not apply in New Zealand), the a.c. test voltage is: - for 6.2.1a): 3 kV; and - for 6.2.1b) and 6.2.1c): 1.5 kV. NOTE 201 – Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used. NOTE 202 – The 3 kV and 1.5 kV values have been determined considering the low frequency induced voltages from the power supply distribution system.	Deleted.	N/A
Annex P	Add the following Normative References to Annex P: IEC 60065, Audio, Video and similar electronic apparatus - Safety requirements AS/NZS 3112, Approval and test specification - Plugs and socket-outlets AS/NZS 3191, Approval and test specification - Electric flexible cords AS/NZS 4695.707, Fire hazard testing of electrotechnical products - Methods of test for the determination of the flammability of solid electrical insulating materials when exposed to an igniting source	Added.	P

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
APPENDIX	Canada (CAN/CSA C22.2 No. 60950-1, second edition) differences to IEC 60950-1:2005		P
Special National Conditions			
1.1.1	All equipment is to be designed to allow installations 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.	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 NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC are required to have special construction features and identification markings.	No power supply cord or other interconnecting cable provided.	N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."	Single phase equipment.	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

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
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.	Fuse used for LPS compliance not operator accessible.	P
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets, receptacles and medium-base or smaller lampholders 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 transformer overcurrent protection.	No such parts.	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.		P
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.		N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.	Not permanently connected equipment.	N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length. Flexible power supply cords are required to be compatible with 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.	Not permanently connected equipment.	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

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).		N/A
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12A, or if the motor has a nominal voltage rating greater than 120V, 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.	No such switches or breakers.	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.	Not such kind of equipment.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	No flammable liquid.	N/A
4.3.13.5	Equipment with lasers is required to meet Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No lasers.	N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 27 cubic feet are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	Not such kind of equipment.	N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m ² or a single dimension greater than 1.8 m are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.		N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	Not such kind of equipment.	N/A
Other differences			

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include: attachment plugs, battery packs (rechargeable type, used with transportable equipment), cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, transient voltage surge suppressors, tubing, wire connectors, and wire and cables.	UL approved components and materials used. See appended table 1.5.1. See also the US deviation for this clause.	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. 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 mAd.c. under normal operating conditions.	No TNV circuits.	N/A
2.3.2.1	In the event of a single fault, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.		N/A
2.6.3.3	When subject to impedance testing, protective earthing and bonding are required to be subjected to the additional test conditions specified.	Considered. See table 2.6.3.4.	P

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
2.6.3.4	When subject to impedance testing, protective earthing and bonding are required to be subjected to the additional test conditions specified.	Considered.	P
4.2.8.1	Enclosures around CRTs with a face diameter of 160mm or more are required to reduce the risk of injury due to the implosion of the CRT.	No CRTs.	N/A
4.2.11	For equipment intended for mounting on racks and provided with slide/rails allowing the equipment to slide away from the rack for installation, service and maintenance, additional construction, performance and marking requirements are applicable to determine the adequacy of the slide/rails.		N/A
4.3.2	Equipment with handles is required to comply with special loading tests.	No handles.	N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	Not such kind of equipment.	N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are to be overloaded. During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary.		P
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.		N/A
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

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
Annex NAF	Document (paper) shredders likely to be used in a home or home office (Pluggable Equipment Type A plug configuration) are required to comply with additional requirements, including markings/instructions, protection against inadvertent reactivation of a safety interlock, disconnection from the mains supply (via provision of an isolating switch), and protection against operator access (accessibility determined via new accessibility probe & probe/wedge).		N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
APPENDIX	Korean National Differences according to CB Bulletin No. 112A (K60950)		P
EXPLANATION FOR ABBREVIATIONS P=Pass, F=Fail, N=Not applicable. Placed in the column to the right.			
1.5.101	Addition: Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305).	Evaluated during national approval.	N/A
8	Addition: EMC The apparatus shall comply with the relevant CISPR standards.	Evaluated during national approval.	N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
Appendix	J3000 (H21) 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 fixed by adequate mechanical construction, not rely on soldering.	N/A
2	Requirement for equipment		—
2.1	Electric heater When diode is used in parallel for adjustment of power, the equipment shall remain safe for operation under open condition of one diode.	Not electric stove.	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 9335-2-30(2006) under open condition of one diode 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およ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

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
3	Components used in equipment	No relevant equipment or component.	N/A
3.1	Motor capacitors used in 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
	No non-metallic materials within 50 mm from capacitor surface		N/A
	Non-metallic material within 50 mm 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
APPENDIX	United States (UL60950-1, second edition) differences to IEC 60950-1:2005		P
Special National Conditions			
1.1	Equipment able to be installed in accordance with the National Electrical Code ANSI/NFPA 70	Considered.	P
1.1.1	Equipment able to be installed in accordance with ANSI/NFPA 75 and NEC Art. 645 unless intended for use outside of computer room and provided with such instructions.		P
1.1.2	Equipment in wire-line communication facilities serving high-voltage electric power stations operating at greater than 1kV are excluded.		N/A
	Equipment intended for outdoor use		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered.	P
1.5.1	All IEC standards for components identified in Annex P.1 replaced by the relevant requirements of UL component standards in Annex P.1.	UL approved component used	P
	All IEC standards for components identified in Annex P.2 alternatively satisfied by the relevant requirements of UL component standards		P
1.5.5	Interconnecting cables acceptable for the application regarding voltage, current, temperature, flammability, mechanical serviceability and the like.	Not provided	N/A
	For other than limited power and TNV circuits, the type of output circuit identified for output connector.		N/A
	External cable assemblies that exceed 3.05 m in length to be types specified in the NEC		N/A
	Detachable external interconnecting cables 3.05 m or less in length and provided with equipment marked to identify the responsible organization and the designation for the cable		N/A
	Building wiring and cable for use in ducts, plenums and other air handling space subject to special requirements and excluded from scope.		N/A
	Telephone line and extension cords and the like comply with UL 1863		N/A
1.6.1.2	Equipment intended for connection to a d.c. power (mains) distribution system subjected to special circuit classification requirements (e.g., TNV-2)	Not connection to d.c. mains	N/A
	Earthing of d.c. powered equipment provided		N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
1.7	Lamp replacement information indicated on lampholder in operator access area		N/A
1.7.1	Special marking format for equipment intended for use on a supply system with an earthed neutral and more than one phase conductor		N/A
	Equipment voltage rating not higher than rating of the plug except under special conditions	Not provided.	N/A
1.7.6	Fuse replacement marking for operator accessible fuses	No such fuse used	N/A
1.7.7	Identification of terminal connection of the equipment earthing conductor	Not used	N/A
	Connectors and field wiring terminals for external Class 2 or Class 3 circuits provided with marking indicating minimum Class of wiring to be used.		N/A
	Marking located adjacent to terminals and visible during wiring		N/A
2.1.1.1	Bare TNV conductive parts protected by a cover are exempt if instructions include directions for disconnection of TNV prior to removal of the cover	Not TNV circuits	N/A
2.3.1.b	Other telecommunication signaling systems than described in 2.3.1(b) are subject to M.4.		N/A
	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vp or 60 V d.c., the max. current limit through a resistor ≥ 2000 Ohm with loads disconnected is 7.1 mA peak or 30 mA d.c. under normal conditions		N/A
	Limits for measurements across 5000 Ohm resistor in the event of a single fault are replaced after 200 ms with the limits of M.3.1.4.		N/A
2.3.2.1	For a single fault, the limits of 2.2.3 apply to SELV circuits and accessible conductive parts.		N/A
2.3.2.4	Enamel coating on signal transformer winding wire allowed as an alternative to Basic insulation in specific telecommunication applications if subject to special construction requirements and testing		N/A
2.5	Overcurrent protection device required for Class 2 and Class 3 limiting according to the NEC, or for a Limited Power Source, not interchangeable with devices of higher ratings if operator replaceable	Fuse used for LPS compliance not operator accessible.	P
2.6.3.3	For Pluggable Equipment Type A, if a) b) or c) are not applicable, the current rating of the circuit is taken as 20 A	Considered. See table 2.6.3.4	P

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
2.6.3.4	Capacity of connection between earthing terminal and parts required to be earthed subject to special conditions based on the current rating of the circuit.	Considered.	P
2.6.4.1	Field wiring terminals for earthing conductors suitable for wire sizes (gauge) used in US		N/A
2.7.1	Data for selection of special external branch circuit overcurrent devices marked on the equipment	Not such equipment	N/A
	Standard supply outlets protected by overcurrent device in accordance with the NEC		N/A
	Overcurrent protection for individual transformers that distribute power to other units over branch circuit wiring		N/A
	Additional requirements for overcurrent protection apply to equipment provided with panelboards		N/A
	Non-motor-operated equipment requiring special overcurrent protective device marked with device rating.		N/A
2.10.5.12	Multi-layer winding wire subject to UL component wire requirements in addition to 2.10.5.12 and Annex U.		N/A
3.1.1	Permissible combinations of internal wiring/external cable sizes for overcurrent & short circuit protection	Not used	N/A
	All interconnecting cables protected against overcurrent and short circuit.		N/A
3.2	Wiring methods permit connection of equipment to primary power supply in accordance with the NEC		P
3.2.1	Permitted use for flexible cords and plugs.		N/A
	Flexible cords provided with attachment plug rated 125% of equipment current rating.		N/A
	Any Class II equipment provided with 15 or 20 A standard supply outlets, Edison-base lampholders or single pole disconnect device provided with a polarized type attachment plug.		N/A
3.2.1.2	Equipment intended for connection to DC mains supply power systems complies with special wiring requirements		N/A
	Equipment with one pole of the DC mains supply connected to both the equipment mains input terminal and the main protective earthing terminal provided with special instructions and construction provisions for earthing		N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
	Equipment with means for connecting supply to earthing electrode conductor has no switches or protective devices between supply connection and earthing electrode connection.		N/A
	Markings and instructions for equipment with provisions to connect earthed conductor of a DC supply circuit to the equipment earthing conductor		N/A
	Special markings and instructions for equipment with earthed conductor of a DC supply circuit connected to the equipment earthing conductor		N/A
	Terminals and leads provided for permanent connection of DC powered equipment to supply marked to indicate polarity if reverse polarity may result in a hazard.		N/A
3.2.3	Permanently connected equipment has provision for connecting and securing a field wiring system (i.e. conduit, or leads etc.) per the NEC	Not permanently connected equipment	N/A
	Permanently connected equipment may have terminals or leads not smaller than No. 18 AWG (0.82 mm ²) and not less than 150 mm in length for connection of field installed wiring.		N/A
	If supply wires exceed 60 °C, marking indicates use of 75 °C or 90 °C wiring for supply connection as appropriate.		N/A
	Equipment compatible with suitable trade sizes of conduits and cables.		N/A
3.2.5	Length of power supply cord limited to between 1.5 and 4.5 m unless shorter length used when intended for a special installation.		N/A
	Conductors in power supply cords sized per NEC		N/A
	Power supply cords and cord sets incorporate flexible cords suitable for the particular application.		N/A
3.2.6	Strain relief provided for non-detachable interconnecting cables not supplied by a limited power source.		N/A
3.2.9	Adequate wire bending space and volume of field wiring compartment required to properly make the field connections.		N/A
	Equipment solely for installation in Restricted Access Locations using low voltage d.c. systems may not need provision for connecting and securing a field wiring system when wiring is protected from abuse.		N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
3.3	Field wiring terminals provided for interconnection of units for other than LPS or Class 2 circuits also comply with 3.3.	No such terminal used	N/A
	Interconnection of units by LPS or Class 2 conductors may have field wiring connectors other than specified in 3.3 if wiring is reliably separated		N/A
3.3.1	Terminals for the connection of neutral conductor identified by a distinctive white marking or other equally effective means	No such terminal used	N/A
3.3.3	Wire binding screw terminal permitted for connection of No. 10 AWG (5.3 mm ²) or smaller conductor if provided with upturned lugs, cupped washer or equivalent retention.		N/A
3.3.4	Terminals accept US wire sizes (gauge)		N/A
	Terminals accept current-carrying conductors rated 125% of the equipment current rating.		N/A
3.3.6	Field wiring terminals marked to indicate the material(s) of the conductor for the terminals used		N/A
	Aluminum conductors not permitted for connection to terminal for equipment earthing conductor		N/A
	Field wiring connections made through the use of suitable pressure connectors (including set screw type), solder lugs or splices to flexible leads.		N/A
3.4.2	Separate motor control device(s) required for cord-connected equipment rated more than 12 A, or with motor rated more than 1/3 hp or more than 120 V.		N/A
3.4.8	Vertically mounted disconnect devices oriented so up position of handle is "on".		N/A
3.4.11	For computer-room applications, equipment with battery systems capable of supplying 750 VA for 5 minutes provided with battery disconnect means	Not used	N/A
4.2.8.1	Special opening restrictions for enclosures around CRTs with face dimension of 160 mm or more.	Not CRTs used	N/A
4.2.9	Compartment housing high-pressure lamp marked to indicate risk of explosion.		N/A
4.2.11	For equipment mounted on racks and provided with slide/rails allowing the equipment to slide away from the rack for installation and maintenance, additional construction, performance and marking requirements are applicable to determine the adequacy of the slide/rails		N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
4.3.2	Loading test for equipment with handle(s) used to support more than 9 kg		N/A
4.3.6	In addition to the IEC requirements, Direct Plug-in Equipment complies with UL 1310		N/A
4.3.12	The max. quantity of flammable liquid stored in equipment per ANSI/NFPA 30 (Table NAE.6)		N/A
	Equipment using replenishable liquids marked to indicate type of liquid to be used.		N/A
4.3.13.2	Equipment that produces x-radiation and does not comply with 4.3.12 under all conditions of servicing marked to indicate the presence of radiation		N/A
4.3.13.5	Requirements contained in the applicable national codes apply to lasers (21 CFR 1040).		N/A
4.7	Automated information storage equipment intended to contain more than 0.76 m ³ of combustible media requires provision for automatic sprinklers or a gaseous agent extinguishing system.		N/A
4.7.3.1	Equipment for use in environmental air space other than ducts or plenums provided with metal enclosure or with non-metallic enclosure having adequate fire-resistance and low smoke producing characteristics (according to UL 2043). Equipment for installation in space used for environmental air, described in Sec. 300-22(c) of the NEC, provided with instructions indicating suitability for installation		N/A
4.7.3.1	Flame spread rating for external surface of combustible material with exposed area greater than 0.93 m ² or a single dimension greater than 1.8 m; 50 or less for computer room applications or 200 or less for other applications.		N/A
4.7.3.4	Wire marked "VW-1" or "FT-1" considered equivalent.		P
5.1.8.2	Special earthing provisions and instructions for equipment with high touch current due to telecommunication network connections.	No high touch current	N/A
5.1.8.3	Touch current due to ringing voltage for equipment containing telecommunication network leads.		N/A
5.3.7	Overloading of SELV connectors and printed wiring board receptacles accessible to the operator.		P
	Tests interrupted by opening of a component repeated two additional times.		P

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
5.3.9.1	Test interrupted by opening of wire or trace subject to certain conditions.		N/A
6	Specialized instructions for telephones that may be connected to a telecommunications network	No TNV circuits	N/A
	Marking identifying function of telecommunication type connectors not used for connection to a telecommunication network.		N/A
6.3	Equipment remotely powered over telecommunication wiring systems provided with specialized markings adjacent to the connection.		N/A
	Overcurrent protection incorporated into equipment to provide power over telecommunication wiring system not interchangeable with devices of higher ratings if operator replaceable.		N/A
6.4	Additional requirements for equipment connected to a telecommunication network using cable subject to overvoltage from power line failures		N/A
	Where 26 AWG line cord required by Fig. 6C, either the cord is provided with the equipment or described in the safety instructions.		N/A
7	Equipment associated with the cable distribution system may need to be subjected to applicable parts of Chapter 8 of the NEC.		N/A
H	Ionizing radiation measurements made under single fault conditions according to 21 CFR 1020	No Ionizing radiation	N/A
M.2	Continuous ringing signals evaluated to Method A subjected to special accessibility considerations.		N/A
M.4	Special requirements for message waiting and similar telecommunications signals.		N/A
NAC	Equipment for use with a generic secondary protector marked with suitable instructions.		N/A
NAC	Equipment marked with suitable instructions if for use with a specific primary or secondary protector		N/A
NAD	Acoustic pressure from an ear piece for short and long duration disturbances		N/A
NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements		N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
NAF	Household/Home Office Document Shredders Not shredder		N/A
NAF.1.7	Markings and instructions alert the user to key safety considerations related to use of shredders, including not intended to be used by children, avoid touching document feed opening, avoid clothes and hair entanglement, and avoid aerosol products.		N/A
NAF.2.8.3	Safety interlock cannot be inadvertently activated by the articulated accessibility probe		N/A
NAF.3.4	Provided with an isolating switch complying with 3.4.2, including 3 mm contact gap, with appropriate markings associated with the switch.		N/A
NAF.4.4	Hazardous moving parts are not accessible, as determined using the articulated accessibility probe and the accessibility probe/wedge		N/A