

CB TEST REPORT

50029843 001

for

MFP (Multi Function Printer)
TASKalfa 306ci, TASKalfa 356ci, TASKalfa 406ci
306ci, 356ci, 406ci

KYOCERA Document Solutions Inc.



This documentation consists of **242** pages (excluding this cover page).



Test Report issued under the responsibility of:



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

Report Number. : 50029843 001

Date of issue : 2015-07-17

Total number of pages : 242

Applicant's name : KYOCERA Document Solutions Inc.

Address : 1-2-28, Tamatsukuri, Chuo-ku, Osaka-shi, Osaka, 540-8585 Japan

Test specification:

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

Test procedure : CB Scheme

Non-standard test method : N/A

Test Report Form No. : IEC60950_1F

Test Report Form(s) Originator : SGS Fimko Ltd

Master TRF : Dated 2014-02

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General disclaimer:


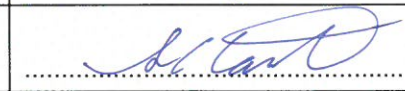

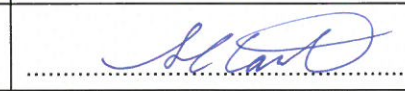
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Test item description :	MFP (Multi Function Printer)
Trade Mark..... :	KYOCERA (on the products)
Manufacturer :	(Same as Applicant)
Model/Type reference :	1) TASKalfa 306ci 2) TASKalfa 356ci, TASKalfa 406ci 3) 306ci 4) 356ci, 406ci
Ratings :	1) 220-240V~, 50/60Hz, 5.0A 2) 220-240V~, 50/60Hz, 5.9A 3) 120V~, 60Hz, 9.5A 4) 120V~, 60Hz, 10.8A

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Testing procedure and testing location:		
<input checked="" type="checkbox"/>	CB Testing Laboratory:	TÜV Rheinland Japan Ltd., Yokohama Laboratory
Testing location/ address		Global Technology Assessment Center (GTAC), 4-25-2 Kita-Yamata, Tsuzuki-ku, Yokohama 224-0021, Japan
<input type="checkbox"/>	Associated CB Testing Laboratory:	
Testing location/ address		
Tested by (name + signature).....		N. Mukaijo 
Approved by (name + signature)		S. Hamamoto 
<input checked="" type="checkbox"/>	Testing procedure: TMP/CTF Stage 1:	KYOCERA Document Solutions Inc.
Testing location/ address		1-2-28, Tamatsukuri, Chuo-ku, Osaka-shi, Osaka, 540-8585 Japan
Tested by (name + signature).....		N. Mukaijo 
Approved by (name + signature)		S. Hamamoto 
<input type="checkbox"/>	Testing procedure: WMT/CTF Stage 2:	
Testing location/ address		
Tested by (name + signature).....		
Witnessed by (name + signature)		
Approved by (name + signature)		
<input type="checkbox"/>	Testing procedure: SMT/CTF Stage 3 or 4:	
Testing location/ address		
Tested by (name + signature).....		
Witnessed by (name + signature)		
Approved by (name + signature)		
Supervised by (name + signature).....		

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List of Attachments:**Attachments included in this Test Report:**

- Measurement Section
- National Differences
- IEC/EN 60825-1 test report
- IEC/EN 62471 Measurement result table

Attachments separated from this Test Report:

- Photo Documentation

Summary of testing:**Test sample(s):**

Serial No.: Production sample with serial number:

- TASKalfa 306ci, 306ci: Z7E5300012
- TASKalfa 356ci, 356ci: Z7C5300011
- TASKalfa 406ci, 406ci: Z785300012

Relevant tests were performed on those models within the series that were considered to represent the worst case condition for the respective tests.

Appended Table 4.5 Heating test data re-calculated by Max specified ambient temperature 35°C by customer's request.

Tests performed (name of test and test clause):

(see below)

Testing location:

Tests were conducted on CTF Stage 1 location except for cl.4.3.13.6.

Measurement for cl.4.3.13.6 was conducted at CBTL.

(see "testing procedure and testing location" on the previous page)

Testing		Applicable (Yes/No)	Comments
Clause	Test description		
1.6.2	Input current	Yes	
1.7.11	Durability	Yes	
2.1.1.5	Energy hazards	Yes	
2.1.1.7	Discharge of capacitors in equipment	Yes	
2.1.1.8	Energy hazards – d.c. mains supply	No	
2.2.2	SELV/Voltage measurement under normal condition	Yes	
2.2.3	SELV/Voltage measurement under fault conditions	Yes	
2.3.5	Operating voltages generated externally	No	

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Testing		Applicable (Yes/No)	Comments
Clause	Test description		
2.4.2	Limited current circuits	Yes	
2.5	Limited power sources	Yes	
2.6.3.4	Resistance of earthing conductors and their terminations	Yes	
2.9.2	Humidity conditioning	Yes	
2.10	Creepage and Clearances, Distance through Insulation	Yes	
2.10.2.2/ 2.10.2.3	Determination of working voltage	Yes	
2.10.5	Solid insulation	Yes	
2.10.12	Enclosed and sealed parts	No	
3.2.6	Cord anchorages and strain relief	No	
4.1	Stability	Yes	
4.2	Mechanical strength	Yes	
4.3.6	Direct plug-in equipment	No	
4.3.8	Batteries	No	
4.3.13	Radiation	Yes	- See attached IEC/EN 60825-1:2007 test report - See attached IEC/EN 62471 Measurement result table
4.5.2	Maximum Temperatures	Yes	
4.5.5	Resistance to abnormal heat	Yes	
5.1	Touch current and protective conductor current	Yes	
5.2	Electric strength	Yes	
5.3	Abnormal operating and fault conditions	Yes	
6.1.2	Separation of the telecommunication network from earth	Yes	Test data from CB test report No.: 12311166.003
6.2	Protection of equipment users from overvoltages on telecom. networks	Yes	Test data from CB test report No.: 12311166.003
6.3	Protection of the telecommunication wiring system from overheating	No	
7.2	Protection of equipment users from overvoltages on cable distribution system	No	
7.3	Insulation between primary and cable distribution system	No	

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Testing		Applicable (Yes/No)	Comments
Clause	Test description		
Annex A	Resistance to heat and fire	No	
Annex B	Locked-rotor overload test	Yes	
Annex C	Overload test	Yes	
Annex G	Determining minimum clearances	No	
Annex H	Ionizing radiation	No	
Annex K	Thermal controls	No	
Annex M	Criteria for telephone ringing signals	No	
Annex Q	Voltage dependent resistors (VDRs)	No	
Annex U	Insulated wire for use without interleaved insulation	No	
Annex Y	Ultraviolet light conditioning test	No	
Annex CC	Evaluation of Integrated circuit (IC) current limiters	No	
Annex DD	Requirements for the mounting means of rack-mounted equipment	No	
Annex EE	Household and home/office document/media shredders	No	

Additionally evaluated Test specifications (see appended test report):

EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013
 UL 60950-1:2007 R10.14
 CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014
 IEC 60825-1:2007 / EN 60825-1:2007
 IEC 62471:2006 / EN 62471:2008

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

EU Group Differences, EU Special National Conditions, EU A-Deviations
 AT, CA, DK, IT, SE, GB, US

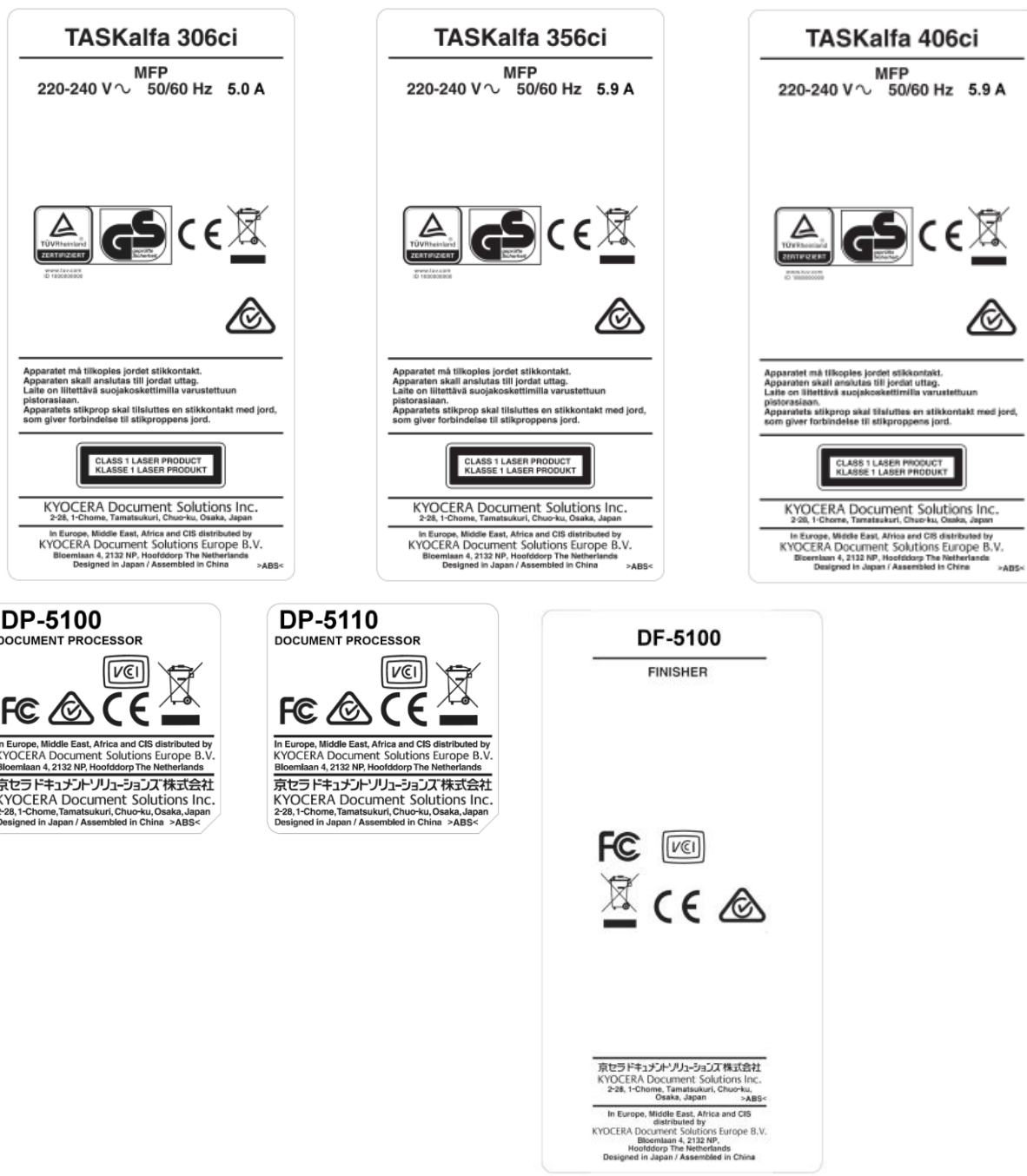
AT=Austria, CA=Canada, DK=Denmark, IT=Italy, SE=Sweden, GB=United Kingdom, US=United States of America.

For National Differences see end of this test report.

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DF-5110 FINISHER

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2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan

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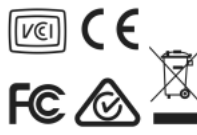
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MT-5100 MAILBOX

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AK-5100 ATTACHMENT KIT

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<p>306ci MFP 120 V~ 60 Hz 9.5 A</p>  <p>Contains FCC ID : E522R6A0881 Contains IC : 1059B-2R6A0881</p> <p>This device complies with Part 15 of the FCC Rules and RSS-Gen of IC 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 undesired operation.</p> <p>CAN ICES-3B/NMB-3B</p> <p>Complies with FDA radiation performance standards, 21 CFR Subchapter J.</p> <p>KYOCERA Document Solutions Inc. 2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan Designed in Japan / Assembled in China >ABS<</p>	<p>356ci MFP 120 V~ 60 Hz 10.8 A</p>  <p>Contains FCC ID : E522R6A0881 Contains IC : 1059B-2R6A0881</p> <p>This device complies with Part 15 of the FCC Rules and RSS-Gen of IC 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 undesired operation.</p> <p>CAN ICES-3B/NMB-3B</p> <p>Complies with FDA radiation performance standards, 21 CFR Subchapter J.</p> <p>KYOCERA Document Solutions Inc. 2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan Designed in Japan / Assembled in China >ABS<</p>	<p>406ci MFP 120 V~ 60 Hz 10.8 A</p>  <p>Contains FCC ID : E522R6A0881 Contains IC : 1059B-2R6A0881</p> <p>This device complies with Part 15 of the FCC Rules and RSS-Gen of IC 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 undesired operation.</p> <p>CAN ICES-3B/NMB-3B</p> <p>Complies with FDA radiation performance standards, 21 CFR Subchapter J.</p> <p>KYOCERA Document Solutions Inc. 2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan Designed in Japan / Assembled in China >ABS<</p>
<p>PF-5120 PAPER FEEDER 120 V~ 60 Hz</p>  <p>In Europe, Middle East, Africa and CIS distributed by KYOCERA Document Solutions Europe B.V. Bloemlaan 4, 2132 NP, Hoofddorp The Netherlands 京セラドキュメントソリューションズ株式会社 KYOCERA Document Solutions Inc. 2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan Designed in Japan / Assembled in China >ABS<</p>	<p>PF-5130 PAPER FEEDER 120 V~ 60 Hz</p>  <p>In Europe, Middle East, Africa and CIS distributed by KYOCERA Document Solutions Europe B.V. Bloemlaan 4, 2132 NP, Hoofddorp The Netherlands 京セラドキュメントソリューションズ株式会社 KYOCERA Document Solutions Inc. 2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan Designed in Japan / Assembled in China >ABS<</p>	<p>PF-5140 PAPER FEEDER 120 V~ 60 Hz</p>  <p>In Europe, Middle East, Africa and CIS distributed by KYOCERA Document Solutions Europe B.V. Bloemlaan 4, 2132 NP, Hoofddorp The Netherlands 京セラドキュメントソリューションズ株式会社 KYOCERA Document Solutions Inc. 2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan Designed in Japan / Assembled in China >ABS<</p>

Fuser Unit



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Laser Label

 DANGER - CLASS 3B LASER RADIATION WHEN OPEN, AVOID DIRECT EXPOSURE TO BEAM. ATTENTION - CLASSE 3B RAYONNEMENT LASER EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU. VORSICHT - KLASSE 3B LASERSTRAHLUNG, WENN ABDECKUNG GEOFFNET, NICHT DEM STRAHL AUSSETZEN.	ATTENZIONE - CLASSE 3B RADIAZIONE LASER IN CASO DI APERTURA. EVITARE L'ESPOSIZIONE AL FASCIO. PRECAUCION - CLASSE 3B RADIAZIONE LASER CUANDO SE ABRE. EVITAR EXPONERSE AL RAYO. PERIGO - RADIAÇÃO DE LASER CLASSE 3B QUANDO ABERTO EVITAR EXPOSIÇÃO DIRETA NO FEIXE	WAARSCHUWING - KLASSE 3B LASERSTRAAL INDIEN GEOPEND, VERMIJD DIRECTE BLOOTSTELLING AAN DE STRAAL. Внимание. - Когда устройство открыто, присутствует лазерное излучение класса 3B. Избегайте прямого попадания лазерного луча.	警告・该产品为3B类激光产品。 打开盖子后会有激光辐射。请避免光束照射。 警告・該產品為3B類激光產品。 打開蓋子後會有激光輻射。請避免光束照射。 위험・CLASS 3B 가시 레이저광선을 직접 보지마십시오. 警告・ここを開くとクラス3Bレーザー光がでます。 ビームを直接見たり、触れないでください。
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Optional Cassette Heater for Main Unit and Paper Feeder

 CAUTION EXTREMELY HOT SURFACE Avoid contact.	CUIDADO SUPERFICIE ALTAMENTE QUENTE. Evite contato.	CAUTELA SUPERFICIE ESTREMAMENTE CALDA Evitare il contatto.	VOORZICHTIG, EXTREEM HEET. Vermijd ieder contact met dit onderdeel.	注意 表面炽热, 避免触碰。	注意 表面熾熱, 避免觸碰。	고온 주의
 VORSICHT SEHR HEISSE OBERFLÄCHE	PRECAUCION SUPERFICIE SUMAMENTE CALIENTE	ВНИМАНИЕ Поверхность очень горячая. Не дотрагиваться.	ATTENTION SURFACE TRÈS CHAUDE	注意 高温部に手を触れないでください。 火傷の原因となります。		

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Test item particulars	
Equipment mobility	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input checked="" type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
Connection to the mains	<input checked="" type="checkbox"/> pluggable equipment <input checked="" type="checkbox"/> type A <input type="checkbox"/> type B <input type="checkbox"/> permanent connection <input checked="" type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input type="checkbox"/> not directly connected to the mains
Operating condition	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Access location	<input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other:
Mains supply tolerance (%) or absolute mains supply values	±10%
Tested for IT power systems	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
IT testing, phase-phase voltage (V)	230 V
Class of equipment	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified
Considered current rating of protective device as part of the building installation (A)	16A (for Europe), 20A (for Canada and USA)
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class	Not rated, indoor use only.
Altitude during operation (m)	≤ 3500 m
Altitude of test laboratory (m)	< 1000 m
Mass of equipment (kg)	TASKalfa 306ci: Approx. 48.5 kg TASKalfa 356ci, TASKalfa 406ci: Approx. 48.3 kg 306ci: Approx. 48.5 kg 356ci, 406ci: Approx. 48.3 kg

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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 : N/A for TMP

Date(s) of performance of tests : 2015-04-04 – 2015-06-04

General remarks:

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

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

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.**Manufacturer's Declaration per sub-clause 6.2.5 of IEC 60950-1:**

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

- ☒ **Yes**
☐ **Not applicable**

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

- Name and address of factory (ies) :**
- 1) KYOCERA Document Technology (Dongguan) Co., Ltd.
Kyocera Industrial Park
3 Fangzheng East Rd, Shilong, Dongguan, Guangdong,
P.R. China
 - 2) KYOCERA Document Solutions Inc. Hirakata Plant
1-38-12 Tsuda-Kita-machi, Hirakata-shi, Osaka 573-0121
Japan

IEC 60950-1**General product information:****1) Application details / Description of the product:**

The product tested is a multi-functional printer for use in a general office environment.

Max. specified ambient temperature (°C) : 32.5 °C

Supply connection..... : Appliance inlet and detachable power cord set

Laser classification..... : Class 1

Non-approved building-in type switching power supplies in main unit were tested as part of the overall configuration of the equipment.

There are optional Cassette Heaters (primary) in the main unit, the optional Paper Feeders, model PF-5120, PF-5130, PF-5140.

5V output for USB connectors (Card Reader, Key Board and Memory) were tested and complied with Limited Power Sources.

IEC 60950-1
2) Differences between the models:

The models of main units are essentially the same except for the items described in the following table.

Model Item	TASKalfa 306ci	TASKalfa 356ci	TASKalfa 406ci	306ci	356ci	406ci
Speed (sheet/min)	30ppm	35ppm	40ppm	30ppm	35ppm	40ppm
Rating Voltage	AC220-240V, 50/60Hz			AC120V, 60Hz		
Rating Current	5.0 A	5.9 A		9.5 A	10.8 A	
Switching Power Supply	MPW3162 MX	ADP-385BN AA		MPW3161 MX	ADP-385AN AA	
	(X may be blank or any number from 0 to 9 or alphabetical number.)					
High Voltage PWB, Main	MPH7712		MPH7713	MPH7712		MPH7713
High Voltage PWB, Transfer	Not provided		MPH3406	Not provided		MPH3406
Heater Lamp	QIRF 240- 926 MKQW	QIRF 240-641/427 MKQW		QIRF 120- 867 MKQW	QIRF 120-600/400 MKQW	
Cassette Heater (Optional)	Rated 240V ac 302R44407 for Main Unit and PF- 5120 302RH4405 for PF-5130 and PF-5140			Rated 120V ac 302R44406 for Main Unit and PF- 5120 302RH4404 for PF-5130 and PF-5140		
Document Processor	Provided (Standard)	DP-5100 (Option) or DP-5110 (Option)		Provided (Standard)	DP-5100 (Option) or DP-5110 (Option)	
Fax Kit (Option)	FAX System 11	FAX System 10		FAX System 11	FAX System 10	
PF-5120 (Option)	500 sheets (Under the main unit)					
PF-5130 (Option)	500 sheets/cassette x 2 (Under the PF-5120)					
PF-5140 (Option)	2000 sheets (Under the PF-5120)					
DF-5100 (Option) (300 sheets)	Provided					
DF-5110 (Option) (1000 sheets)	Not provided	Provided with AK-5100 (Attachment Kit)		Not provided	Provided with AK-5100 (Attachment Kit)	
DF-5120 (Option) (3000 sheets + 200 sheets)						
MT-5100 (Option)	Provided with AK-5100 (Attachment Kit)					
PH-5100 (Option)	Not provided	Provided with DF-5110		Not provided	Provided with DF-5110	
PH-5110 (Option)						
Hole Punch Unit (Standard)	Not provided	Provided with DF-5120		Not provided	Provided with DF-5120	

IEC 60950-1**3) Options:**

The following optional accessories were considered during relevant tests.

Document Processor, Model DP-5100, supplied by SELV

Document Processor, Model DP-5110, supplied by SELV

Paper Feeder, Model PF-5120, supplied by AC220-240V, 50/60Hz or AC120V, 60Hz *; SELV

Paper Feeder, Model PF-5130, supplied by AC220-240V, 50/60Hz or AC120V, 60Hz *; SELV

Paper Feeder, Model PF-5140, supplied by AC220-240V, 50/60Hz or AC120V, 60Hz *; SELV

Job Separator, Model JS-5100, supplied by SELV

Finisher, Model DF-5100, supplied by SELV

Finisher, Model DF-5110, supplied by SELV

Finisher, Model DF-5120, supplied by SELV

Mailbox, Model MT-5100, supplied by SELV

Attachment Kit for Finisher and Mailbox, Model AK-5100, supplied by SELV

Hole Punch Kit for Finisher Model DF-5110, Model PH-5100, Supplied by SELV

Hole Punch Kit for Finisher Model DF-5110, Model PH-5110, Supplied by SELV

Fax Kit for MFP Model TASKalfa 356ci/ 406ci and 356ci/ 406ci, Model FAX System 10, supplied by SELV; TNV circuits

Fax Kit for MFP Model TASKalfa 306ci and 306ci, Model FAX System 11, supplied by SELV; TNV circuits

*: AC220-240V when used with the main unit supplied by AC220-240V

AC120V when used with the main unit supplied by AC120V

IEC 60950-1

4) Insulation system:

- Secondary circuits are separated from primary by double/reinforced insulation.
- Primary circuits are separated from earth by at least basic insulation.
- All output / interface voltages are at SELV level.
- Secondary circuits are conductively connected to earth.
- High voltage is generated from SELV circuits, see cl. 2.2.4.
- Internal metal chassis and relevant accessible metal parts are reliably connected to protective bonding.
- TNV circuits are separated from primary by double/reinforced insulation.
- TNV circuits are separated from secondary circuits by basic insulation.

4.1) Sub-units (PCB's, ...)

With pri – sec separation: SWPS, Fixing Unit, Heater Relay PWB (Option) in main unit

With pri – parts only: (none)

HV-unit(s): High Voltage PWB (see appended table 1.5.1)

4.2) Pri - sec components, which are not part of the above mentioned sub-units:

(none)

4.3) Non certified pri-components directly mounted to chassis:

(certified components were only checked for correct-application (see 1.5.1)

Optional dehumidifying heaters (Cassette Heater) in the main unit and PF-5120, PF-5130, PF-5140.
The Heaters have reinforced insulation themselves and covered by aluminium fixed to chassis.

Attachments included in this Test Report

- Measurement Section
- National Differences
- IEC/EN 60825-1 test report

Attachment separated from this Test Report

- Photo Documentation

IEC 60950-1**Abbreviations used in the report:**

- normal conditions	N.C.	- single fault conditions	S.F.C
- functional insulation	FI	- basic insulation	BI
- double insulation	DI	- supplementary insulation	SI
- between parts of opposite polarity	BOP	- reinforced insulation	RI
- protective earth/protective bonding	PE/PB	- primary	Pri
- (switching) power supply	(SW)PS	- secondary	sec
- high voltage	HV	- ground	gnd
- printed circuit (wiring) board	PCB	- input/output	I/O
- triple insulated wire	TIW	- installation instruction	ii
- built-in application	B/I		

Indicate used abbreviations (if any)

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

1	GENERAL		P
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1.5	Components		P
1.5.1	General		P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
1.5.2	Evaluation and testing of components	Components, which are certified for IEC and/or national standards, are used correctly within their ratings.	P
1.5.3	Thermal controls	Certified components used; correct application confirmed.	P
1.5.4	Transformers	(see Annex C)	P
1.5.5	Interconnecting cables	No interconnecting cables.	N/A
1.5.6	Capacitors bridging insulation	Type X2 capacitors used between lines, type Y2 capacitors used between line and earth, double or reinforced insulation bridged between primary and secondary by Y1 capacitors comply with IEC 60384-14. (see appended table 1.5.1)	P
1.5.7	Resistors bridging insulation	See below	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	Only resistors bridging functional insulations.	P
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	No such components.	N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable	No such components.	N/A
1.5.8	Components in equipment for IT power systems	Line to PE components are rated for line to line voltage.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9	Surge suppressors	See below.	N/A
1.5.9.1	General	Only approved VDRs used in primary.	P
1.5.9.2	Protection of VDRs	Fuse (F1 in SWPS) is installed in series.	P
1.5.9.3	Bridging of functional insulation by a VDR		P
1.5.9.4	Bridging of basic insulation by a VDR	No such VDR	N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR	No such VDR	N/A

1.6	Power interface		P
1.6.1	AC power distribution systems	TN, TN-S, IT (considered for Norway)	P
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	Not hand-held equipment.	N/A
1.6.4	Neutral conductor	Neutral insulated from earth and body like as line conductor. Components between neutral and earth are rated the same as for line to earth.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7	Marking and instructions		P
1.7.1	Power rating and identification markings	See below.	P
1.7.1.1	Power rating marking		P
	Multiple mains supply connections..... :	Single mains supply connection	N/A
	Rated voltage(s) or voltage range(s) (V) :	1),2) 220-240V~ 3),4) 120V~	P
	Symbol for nature of supply, for d.c. only :	AC supply.	N/A
	Rated frequency or rated frequency range (Hz) ... :	1),2) 50/60Hz 3),4) 60Hz	P
	Rated current (mA or A) :	1) 5.0A 2) 5.9A 3) 9.5A 4) 10.8A	P
1.7.1.2	Identification markings		P
	Manufacturer's name or trade-mark or identification mark :	KYOCERA (on the products)	P
	Model identification or type reference :	1) TASKalfa 306ci 2) TASKalfa 356ci, TASKalfa 406ci 3) 306ci 4) 356ci, 406ci	P
	Symbol for Class II equipment only :	Class I equipment	N/A
	Other markings and symbols :	(see copy of marking plate)	P
1.7.1.3	Use of graphical symbols	Symbols placed on the equipment shall be explained in the user manual.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2	Safety instructions and marking	See below.	P
	<p>Operating Instructions provided to the operator, containing necessary instructions and caution information. English version checked. At least the safety relevant information is given in German or other applicable languages. Correct translation of safety relevant information for Germany confirmed.</p> <p>(In the following, relevant information may be given in an equivalent wording.)</p> <p>Dangerous levels of <u>ozone</u> not generated. Instruction for installation in a well-ventilated room is given. Non-toxic toner used. Proper disposal instructions provided. "Caution hot"; high temperature warning on fuser unit, as it does not immediately cool down when accessed during paper jam removal. <u>Laser label and warning label</u> is provided: "CLASS 1 LASER PRODUCT" and other warning label. Refer to IEC/EN 60825-1 report.</p>		—
1.7.2.1	General		P
1.7.2.2	Disconnect devices	Appliance inlet used.	N/A
1.7.2.3	Overcurrent protective device	Pluggable equipment type A	N/A
1.7.2.4	IT power distribution systems	Considered for Norway. No special modification, no instruction required.	P
1.7.2.5	Operator access with a tool	Only SELV voltages accessible to the operator without the use of another tool.	N/A
1.7.2.6	Ozone	See cl. 1.7.2.	P
1.7.3	Short duty cycles	Continuous operation.	N/A
1.7.4	Supply voltage adjustment	Single voltage range.	N/A
	Methods and means of adjustment; reference to installation instructions	--	—
1.7.5	Power outlets on the equipment	No power outlets provided.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)	<p>Fuses are clearly and adequately marked with fuse number and rating.</p> <p>SWPS MPW3162M: F1: T5AH 250V F3: T2.5AL 250V F51: T10AH 250V</p> <p>SWPS MPW3161M: F1: T6.3AH 250V F3: T2.5AL 250V F51: T12.5AH 250V</p> <p>SWPS ADP-385BN AA: F1: T6.3AH 250V F3: T16AH 250V F4: T2AH 250V</p> <p>SWPS ADP-385AN AA: F1: T10AH 250V F3: T16AH 250V F4: T2AH 250V</p> <p>No user accessible fuse holder.</p>	P
1.7.7	Wiring terminals	See below.	P
1.7.7.1	Protective earthing and bonding terminals	<p>Approved appliance inlet used.</p> <p>PB terminal where the PB wire from the inlet is connected to the chassis is marked with symbol IEC 60417, No. 5017.</p>	P
1.7.7.2	Terminals for a.c. mains supply conductors	Appliance inlet used.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors	No connection to DC mains.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.8	Controls and indicators	See below.	P
1.7.8.1	Identification, location and marking	Safety related switches and controls: Power Switch: function is obvious by positioning and marking (see 1.7.8.3) Other indicators/controls provided for functional reasons, not affecting safety.	P
1.7.8.2	Colours	No safety relevant color used	N/A
1.7.8.3	Symbols according to IEC 60417	Marking for Main Switch (Optional) according to IEC 60417, No. 5007 "I" and 5008 "O". Marking for Stand-by button No. 5009.	P
1.7.8.4	Markings using figures	Not used.	N/A
1.7.9	Isolation of multiple power sources	Single supply	N/A
1.7.10	Thermostats and other regulating devices	No such thermostats or the like.	N/A
1.7.11	Durability		P
1.7.12	Removable parts	Safety relevant markings are located on fixed installed parts.	P
1.7.13	Replaceable batteries	Lithium battery not replaceable by user.	N/A
	Language(s)	--	—
1.7.14	Equipment for restricted access locations.....	Not intended for restricted access location.	N/A

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

2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas		P
2.1.1.1	Access to energized parts	See below.	P
	Test by inspection	Operator cannot contact any hazardous bare parts or parts with only basic insulation to hazardous voltage. No ELV circuits.	P
	Test with test finger (Figure 2A)	No access to hazardous parts.	P
	Test with test pin (Figure 2B)	The test pin cannot touch hazardous bare parts through any openings in the enclosure.	P
	Test with test probe (Figure 2C)	Test probe cannot touch TNV circuits.	P
2.1.1.2	Battery compartments	No battery compartment. TNV circuits not accessible through battery compartment.	N/A
2.1.1.3	Access to ELV wiring	No ELV circuits.	N/A
	Working voltage (V _{peak} or V _{rms}); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	Not accessible to operator.	P
2.1.1.5	Energy hazards	No energy hazards in operator access area. (see appended table 2.1.1.5)	P
2.1.1.6	Manual controls	Not connected to and sufficiently separated from hazardous voltages.	P
2.1.1.7	Discharge of capacitors in equipment		P
	Measured voltage (V); time-constant (s)	(see appended table 2.1.1.7)	—
2.1.1.8	Energy hazards – d.c. mains supply	No d.c. mains supply.	N/A
	a) Capacitor connected to the d.c. mains supply .:	--	N/A
	b) Internal battery connected to the d.c. mains supply	--	N/A
2.1.1.9	Audio amplifiers	Not provided.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.1.2	Protection in service access areas	Bare parts carrying hazardous voltage or energy levels are located or guarded properly to avoid unintentional contact and bridging. No unexpected hazard. TNV circuits are sufficiently protected against bridging and/or accidental contact.	P
2.1.3	Protection in restricted access locations	Not intended to be installed in a restricted access location.	N/A

2.2	SELV circuits		P
2.2.1	General requirements	(see appended table 2.2)	P
2.2.2	Voltages under normal conditions (V) :	--	P
2.2.3	Voltages under fault conditions (V) :	Limits of 71V peak and 120Vdc were not exceeded, SELV limits not for longer than 0.2 seconds, (see appended table 2.2 and table 5.3)	P
2.2.4	Connection of SELV circuits to other circuits :	SELV not connected to primary. HV-unit(s): supplied from SELV; if HV (anode) was shorted to SELV side, SELV was not exceeded at the output connections of the unit. (measured with oscilloscope) (see appended table 2.2 and table 5.3)	P

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Clause	Requirement + Test	Result - Remark	Verdict

2.3	TNV circuits		P
2.3.1	Limits	Continuous voltages, combination of AC and DC values, are such that : $\frac{U_{ac}}{71} + \frac{U_{dc}}{120} \leq 1$	P
	Type of TNV circuits :	TNV-3	—
2.3.2	Separation from other circuits and from accessible parts		P
2.3.2.1	General requirements	Separation between SELV and TNV-3 circuit. (see appended table 2.10.3/.4)	P
2.3.2.2	Protection by basic insulation	Electric strength test: 1500V, 60 sec.	P
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	Insulation between primary and TNV is reinforced insulation.	P
	Insulation employed..... :	a)	—
2.3.4	Connection of TNV circuits to other circuits	Not connected to other circuits.	N/A
	Insulation employed..... :	--	—
2.3.5	Test for operating voltages generated externally	Not applied	N/A

2.4	Limited current circuits <i>Test performed for evaluation of cl. 1.5.6 and HV circuits.</i>		P
2.4.1	General requirements	See below.	P
2.4.2	Limit values	(see appended table 2.4.2)	P
	Frequency (Hz) :	--	—
	Measured current (mA) :	--	—
	Measured voltage (V) :	--	—
	Measured circuit capacitance (nF or µF) :	--	—
2.4.3	Connection of limited current circuits to other circuits	The limited current circuits are supplied from SELV circuits.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.5	Limited power sources <i>The following circuits were tested for limited power source:</i> <i>Model TASKalfa 406ci, TASKalfa 356ci:</i> - 24V output for Document Processor option unit - 24V output for Paper Feeder option unit - 5V output for Card Reader and KEY Board and Front USB Connector - 5V output for Operation Panel <i>Model TASKalfa 306ci:</i> - 24V output for Document Processor unit - 24V output for Paper Feeder option unit - 5V output for Front USB Connector - 5V output for Operation Panel		P
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition		P
	Use of integrated circuit (IC) current limiters		N/A
	d) Overcurrent protective device limited output	(see appended table 2.5)	P
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :	(see appended table 2.5)	—
	Current rating of overcurrent protective device (A) :	(see appended table 2.5) The fuses have the characteristics required in remark 4 of table 2C	—

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Clause	Requirement + Test	Result - Remark	Verdict

2.6	Provisions for earthing and bonding		P
	Protective Bonding wire is on one side hooked in and soldered to Protective Earth pin of appliance inlet or soldered to the pin and additionally secured by heat-shrinkable tubing, the other side has ring terminal (fixed by double crimping). Ring terminal fitted with toothed lock is secured to chassis by M4 screw.		—
2.6.1	Protective earthing	a) Accessible basic insulated conductive parts are reliably bonded to the protective earth terminal. f) Ground of SELV circuits was earthed to reduce touch current.	P
2.6.2	Functional earthing	Secondary ground either separated from hazardous voltages by double- or reinforced insulation or safely connected to PB.	P
	Use of symbol for functional earthing.....:	--	N/A
2.6.3	Protective earthing and protective bonding conductors		P
2.6.3.1	General	2.6.1 a) metal parts: See below 2.6.1 f) Ground of SELV: adequate construction for actual current.	P
2.6.3.2	Size of protective earthing conductors	(refers to table 3B, cl. 3.2.5)	P
	Rated current (A), cross-sectional area (mm ²), AWG	Rated 5.0A, 16AWG, Rated 5.9A, 16AWG, Rated 9.5A, 16AWG, Rated 10.8A, 16AWG	—
2.6.3.3	Size of protective bonding conductors	Table 3B for PB wires connected to Inlet. Tested per cl. 2.6.3.4.	P
	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)	(see appended table 2.6.3.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.3.5	Colour of insulation..... :	PE and PB conductor green/yellow. Green/Yellow wire not used for other connections.	P
2.6.4	Terminals		P
2.6.4.1	General	Appliance inlet used.	P
2.6.4.2	Protective earthing and bonding terminals	Tested per cl. 2.6.3.4	P
	Rated current (A), type, nominal thread diameter (mm)..... :	Rated 10.8A max., M4 screw used for PB terminals.	—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	Appliance inlet used.	P
2.6.5	Integrity of protective earthing		P
2.6.5.1	Interconnection of equipment		P
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switches or fuses in earthing conductors.	P
2.6.5.3	Disconnection of protective earth	Appliance inlet: It is not possible to disconnect earth without disconnecting mains.	P
2.6.5.4	Parts that can be removed by an operator	Plug and Appliance inlet: Earthing connected before and disconnected after hazardous voltage. No hazards expected on operator removable Fixing Unit.	P
2.6.5.5	Parts removed during servicing	It is not necessary to disconnect earthing except for the removing of the earthed parts itself.	P
2.6.5.6	Corrosion resistance	All protective earth connections in compliance with Annex J. Specifically no direct Al – Cu contacts.	P
2.6.5.7	Screws for protective bonding	Thread cutting or space thread screwed connections not used for protective bonding connections.	N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system	The protective earthing of the equipment does not rely on the telecommunication network.	P

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Clause	Requirement + Test	Result - Remark	Verdict

2.7	Overcurrent and earth fault protection in primary circuits		P
2.7.1	Basic requirements	The built-in device fuse provides overcurrent protection. Pluggable equipment type A. Equipment relies on 16A rated fuse or circuit breaker of the building installation for short circuit and earth fault.	P
	Instructions when protection relies on building installation	Neither pluggable equipment type B nor permanent connection.	N/A
2.7.2	Faults not simulated in 5.3.7		P
2.7.3	Short-circuit backup protection	Pluggable equipment type A, the building installation is considered as providing short circuit backup protection. Additionally verification by short / abnormal tests	P
2.7.4	Number and location of protective devices :	Overcurrent protections in primary phase by fuses F1, F3, F4 and F51 in SWPS. Earth fault protection by fuse or circuit breaker in the building installation.	P
2.7.5	Protection by several devices	Only these fuses in phase or line.	N/A
2.7.6	Warning to service personnel :	No unexpected hazard.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

2.8	Safety interlocks		P
2.8.1	General principles	Safety interlocks are provided and prevent operator from access to hazardous moving parts and hazardous voltages.	P
	<p><u>Main Unit:</u> Power (DC 24V) to the following parts is cut by Front Cover Interlock Switch or Right Cover Interlock Switch located in secondary when Front Cover or Right Cover opened. High Voltage PWB (Main and Transfer), Image Motor, Feed/ Black DLP Motor, Fuser Motor, Colour DLP Motor, Black Drum Motor, Colour Drum Motor</p> <p><u>Accessories:</u> Document Processor, Model DP-5110: Power (DC 24V) to the following parts is cut by Interlock Switch located in secondary when PF Cover opened. All motors and Clutch</p> <p>Finisher, Model DF-5100: Power (DC 24V) to the following parts is cut by Interlock Switch located in secondary when the sliding unit opened. All motors and Solenoid except for Eject Release Motor and Width Adjustment Motors</p> <p>Finisher, Model DF-5110: Power (DC 24V) to the following parts is cut by Front Cover Interlock Switch or Top Cover Interlock Switch located in secondary when Front Open Cover or Top Open Cover opened. All motors and Solenoid except for Eject Release Motor and Width Adjustment Motors</p> <p>Finisher, Model DF-5120: Power (DC 24V) to the following parts is cut by Front Cover Interlock Switch or Eject Manual Staple Interlock Switch located in secondary when Front Open Cover opened or Turn Guide lifted. All motors, Solenoids and Clutch except for Eject Release Motor and Width Adjustment Motors</p> <p>Hole Punch Kit, Model PH-5100 and PH-5110: Power (DC 24V) to the following parts is cut by one of the interlock switches of Finisher Model DF-5110. All motors and Solenoid</p>		—

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Clause	Requirement + Test	Result - Remark	Verdict
2.8.2	Protection requirements	Hazardous voltages and energy levels are de-energized when interlock is activated, moving parts are stopped and/or slowed down to non-hazardous speeds. No access to hazardous parts by test finger in interlocked areas.	P
2.8.3	Inadvertent reactivation	Inadvertent reactivation is not possible. Test finger cannot override interlock system.	P
2.8.4	Fail-safe operation	Failure in interlock system will result in open circuit condition of the system, no hazard.	P
	Protection against extreme hazard		P
2.8.5	Moving parts	Mechanism tested 10000 cycles, no hazard.	P
2.8.6	Overriding	No such systems.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.8.7	Switches, relays and their related circuits	Switches comply with IEC 61058-1. No relays related to interlock.	P
2.8.7.1	Separation distances for contact gaps and their related circuits (mm)	Approved switches.	N/A
2.8.7.2	Overload test	Approved switches.	N/A
2.8.7.3	Endurance test	Approved switches.	N/A
2.8.7.4	Electric strength test	Not tested per 2.8.7.2/.3	N/A
2.8.8	Mechanical actuators	Adequate design of the actuator/switch mechanism, no overstress.	P

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	Humidity treatment conducted for 120h.	P
	Relative humidity (%), temperature (°C)	93%, 40°C	—
2.9.3	Grade of insulation	Kind of insulation and working voltage considered.	P
2.9.4	Separation from hazardous voltages		P
	Method(s) used	Method 1: a, b Method 2	—

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Clause	Requirement + Test	Result - Remark	Verdict

2.10	Clearances, creepage distances and distances through insulation		P
2.10.1	General		P
2.10.1.1	Frequency :	(see appended table 2.10.2)	P
2.10.1.2	Pollution degrees :	Pollution degree 2.	P
2.10.1.3	Reduced values for functional insulation	5.3.4 a) not applied except for before fuse. (see appended table 2.10.3/.4)	P
2.10.1.4	Intervening unconnected conductive parts	For Transformer T1,T201. (see appended table 2.10.3/.4)	P
2.10.1.5	Insulation with varying dimensions	No applied.	N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage	The r.m.s. and the peak voltages were measured on all sources of the switching power supply.	P
2.10.2.1	General		P
2.10.2.2	RMS working voltage	(see appended table 2.10.2)	P
2.10.2.3	Peak working voltage	(see appended table 2.10.2)	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.3	Clearances		P
2.10.3.1	General	Comply with 2.10.3.3/.4. Annex G applied for interlock in sec.	P
2.10.3.2	Mains transient voltages	Not measured, normal transient levels considered.	P
	a) AC mains supply	2500V considered for the rating AC220-240V. 1500V considered for the rating AC120V.	P
	b) Earthed d.c. mains supplies	No direct connection to dc mains.	N/A
	c) Unearthed d.c. mains supplies	--	N/A
	d) Battery operation	No such batteries.	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	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.5	Clearances in circuits having starting pulses	No such lamps used.	N/A
2.10.3.6	Transients from a.c. mains supply	(see cl. 2.10.3.9)	N/A
2.10.3.7	Transients from d.c. mains supply	No d.c. mains.	N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems	Considered 1500V for TNV-3.	N/A
2.10.3.9	Measurement of transient voltage levels	Not measured, normal transient levels considered.	N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply	--	N/A
	For a d.c. mains supply	--	N/A
	b) Transients from a telecommunication network..	--	N/A
2.10.4	Creepage distances	(see appended table 2.10.3 and 2.10.4)	P
2.10.4.1	General		P
2.10.4.2	Material group and comparative tracking index	See below.	P
	CTI tests	Material group IIIb is assumed to be used.	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5	Solid insulation	(see appended table 2.10.5)	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	No such insulations.	N/A
2.10.5.4	Semiconductor devices	Photo-couplers are approved components.	N/A
2.10.5.5.	Cemented joints	Not considered.	N/A
2.10.5.6	Thin sheet material – General	Provided for reinforced insulation within Transformer T1, T201 used in SWPS.	P
2.10.5.7	Separable thin sheet material		P
	Number of layers (pcs) :	3 layers for the reinforced insulation within Transformer T1 used in SWPS.	—
2.10.5.8	Non-separable thin sheet material	No such construction.	N/A
2.10.5.9	Thin sheet material – standard test procedure		N/A
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure		P
	Electric strength test	(see appended table 2.10.5)	—
2.10.5.11	Insulation in wound components	(see cl. 2.10.5.6)	P
2.10.5.12	Wire in wound components	Not considered.	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 used.	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

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Clause	Requirement + Test	Result - Remark	Verdict
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	Coating not tested.	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board	Not used to provide supplementary or double/reinforced insulation.	N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs)..... :	--	N/A
2.10.7	Component external terminations	No such components.	N/A
2.10.8	Tests on coated printed boards and coated components	Coating not tested.	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

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.9	Thermal cycling	<p>Photo Coupler (PC1, PC5) on SWPS for Model TASKalfa 306ci and 306ci was certified.</p> <p>Photo Coupler (PC3), on SWPS for Model TASKalfa 306ci and 306ci was tested.</p> <p>Photo Coupler (IC51, IC55, IC302, IC305, IC311) on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Sharp Corp., Type PC123 was certified.</p> <p>Photo Coupler (IC51, IC55, IC302, IC305, IC311), Alternate on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Everlight Electronics Co., Ltd., Type EL816M was certified.</p> <p>Photo Coupler (IC51, IC55, IC302, IC305, IC311), Alternate on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Lite-On Technology Corp., Type LTV-816 series was cetified.</p> <p>Photo Coupler (IC51, IC55, IC302, IC305, IC311), Alternate on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Vishay Semiconductor, Type VO617C was certified.</p> <p>Photo Coupler (IC51, IC55, IC302, IC305, IC311), Alternate on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Toshiba Corp., Type TLP785F was certified.</p> <p>Photo Coupler (IC301, IC309) on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Toshiba Corp., Type TLP3063F was certified.</p> <p>Photo Coupler (IC301, IC309), Alternate on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Everlight Electronics Co., Ltd., Type EL3063M was certified.</p>	P

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Clause	Requirement + Test	Result - Remark	Verdict
Cont.		<p>Optical Isolator (PC10) on Fax Kit, Cosmo Electronics Corporation, Type K3010 was certified.</p> <p>Optical Isolator (PC10), Alternate on Fax Kit, Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div., Type TLP620, TLP627, TLP621, TLP320, TLP629 were certified.</p> <p>Optical Isolator (PC11) on Fax Kit, Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div., Type TLP620, TLP627, TLP621 were certified.</p> <p>Optical Isolator (PC11), Alternate on Fax Kit, Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div., Type TLP320, TLP629 were certified.</p>	
2.10.10	Test for Pollution Degree 1 environment and insulating compound	Not applied	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.11	Tests for semiconductor devices and cemented joints	<p>Photo Coupler (PC1, PC5) on SWPS for Model TASKalfa 306ci and 306ci was certified.</p> <p>Photo Coupler (PC3), on SWPS for Model TASKalfa 306ci and 306ci was tested.</p> <p>Photo Coupler (IC51, IC55, IC302, IC305, IC311) on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Sharp Corp., Type PC123 was certified.</p> <p>Photo Coupler (IC51, IC55, IC302, IC305, IC311), Alternate on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Everlight Electronics Co., Ltd., Type EL816M was certified.</p> <p>Photo Coupler (IC51, IC55, IC302, IC305, IC311), Alternate on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Lite-On Technology Corp., Type LTV-816 series was cetified.</p> <p>Photo Coupler (IC51, IC55, IC302, IC305, IC311), Alternate on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Vishay Semiconductor, Type VO617C was certified.</p> <p>Photo Coupler (IC51, IC55, IC302, IC305, IC311), Alternate on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Toshiba Corp., Type TLP785F was certified.</p> <p>Photo Coupler (IC301, IC309) on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Toshiba Corp., Type TLP3063F was certified.</p> <p>Photo Coupler (IC301, IC309), Alternate on SWPS for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, Everlight Electronics Co., Ltd., Type EL3063M was certified.</p>	P

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Clause	Requirement + Test	Result - Remark	Verdict
Cont.		<p>Optical Isolator (PC10) on Fax Kit, Cosmo Electronics Corporation, Type K3010 was certified.</p> <p>Optical Isolator (PC10), Alternate on Fax Kit, Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div., Type TLP620, TLP627, TLP621, TLP320, TLP629 were certified.</p> <p>Optical Isolator (PC11) on Fax Kit, Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div., Type TLP620, TLP627, TLP621 were certified.</p> <p>Optical Isolator (PC11), Alternate on Fax Kit, Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div., Type TLP320, TLP629 were certified.</p>	
2.10.12	Enclosed and sealed parts	Not applied	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	Sufficient cross sectional area of internal wiring. Internal wires are UL recognized wires.	P
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges and heat sinks that could damage the insulation and cause hazard.	P
3.1.3	Securing of internal wiring	Internal secondary wires with basic isolation are routed so that they are not close to any live bare components. Wires are adequately fixed to prevent excessive strain or damage of the conductors' insulation.	P
3.1.4	Insulation of conductors	The insulation of the individual conductors is suitable for the application and the working voltage.	P
3.1.5	Beads and ceramic insulators	Ends of heater lamps. Adequately fixed, 10N applied. No hazard.	P
3.1.6	Screws for electrical contact pressure	Relevant electrical and earthing/bonding connections engage at least two complete threads into metal. No screws of insulating material are used for electrical and earthing connections.	P
3.1.7	Insulating materials in electrical connections	Relevant current carrying and all protective earthing/bonding connections are metal to metal.	P
3.1.8	Self-tapping and spaced thread screws	Where safety is involved, thread cutting or space thread screws not used for current carrying electrical connections.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.1.9	Termination of conductors	Conductors are suitable terminated, creepage and clearances maintained, second securing for soldered terminations provided.	P
	10 N pull test	10 N applied to relevant conductors.	P
3.1.10	Sleeving on wiring	Relevant sleeving on primary and secondary wirings reliably kept in position.	P

3.2	Connection to a mains supply		P
3.2.1	Means of connection		P
3.2.1.1	Connection to an a.c. mains supply	Appliance inlet.	P
3.2.1.2	Connection to a d.c. mains supply	DC input connector used.	N/A
3.2.2	Multiple supply connections	Only one supply connection.	N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm)	--	—
3.2.4	Appliance inlets	The appliance inlet complies with IEC 60320 and is located at the rear of the unit. The power cord can be inserted without difficulties and does not support the unit.	P
3.2.5	Power supply cords		P
3.2.5.1	AC power supply cords	The power supply cord is provided with this unit.	P
	Type	(see appended table 1.5.1)	—
	Rated current (A), cross-sectional area (mm ²), AWG	Rated 5.0A, 1.0mm ² , Rated 5.9A, 1.0mm ² , Rated 9.5A, 16AWG, Rated 10.8A, 16AWG	—
3.2.5.2	DC power supply cords		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 sharp points or cutting edges that may damage the power supply cord.	P

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Clause	Requirement + Test	Result - Remark	Verdict

3.2.8	Cord guards	Neither hand-held nor intended to be moved while in operation.	N/A
	Diameter or minor dimension D (mm); test mass (g)	--	—
	Radius of curvature of cord (mm).....	--	—
3.2.9	Supply wiring space	Appliance inlet used.	N/A

3.3	Wiring terminals for connection of external conductors <i>No terminals, appliance inlet and detachable power supply cord.</i>		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm ²).....	--	—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm)	--	—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.4	Disconnection from the mains supply		P
3.4.1	General requirement	Disconnect device is provided.	P
3.4.2	Disconnect devices	Appliance inlet.	P
3.4.3	Permanently connected equipment	Pluggable equipment type A.	N/A
3.4.4	Parts which remain energized	No parts remain energized.	P
3.4.5	Switches in flexible cords	Not provided.	N/A
3.4.6	Number of poles - single-phase and d.c. equipment	The appliance inlet disconnects both poles simultaneously.	P
3.4.7	Number of poles - three-phase equipment	Single phase equipment.	N/A
3.4.8	Switches as disconnect devices	Switch not used as disconnect device.	N/A
3.4.9	Plugs as disconnect devices	Appliance inlet used.	N/A
3.4.10	Interconnected equipment	No such interconnection	N/A
3.4.11	Multiple power sources	Single supply connection.	N/A

3.5	Interconnection of equipment		P
3.5.1	General requirements	See below.	P
3.5.2	Types of interconnection circuits	SELV to SELV. TNV-3 to TNV-3. Hazardous voltage to Hazardous voltage.	P
3.5.3	ELV circuits as interconnection circuits	No ELV circuits.	N/A
3.5.4	Data ports for additional equipment	Supplied from limited power source. (see cl. 2.5)	P

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Clause	Requirement + Test	Result - Remark	Verdict

4	PHYSICAL REQUIREMENTS		P
4.1	Stability		P
	Angle of 10°	Stable mechanical construction, equipment does not overbalance when tilted to an angle of 10° from its normal upright position.	P
	Test force (N)	250N, 800N tested anyway.	P

4.2	Mechanical strength		P
4.2.1	General	Outer enclosure shows sufficient strength to withstand expected handling conditions.	P
	Rack-mounted equipment.	Not rack-mounted.	N/A
4.2.2	Steady force test, 10 N	Applied to relevant parts, no hazard.	P
4.2.3	Steady force test, 30 N	30 N applied to internal enclosures.	P
4.2.4	Steady force test, 250 N	250N applied to outer enclosure. Test points: (see appended table 4.2)	P
4.2.5	Impact test		P
	Fall test	Test points: Rear Lower Cover, Right Rear Cover, Front Cover	P
	Swing test		N/A
4.2.6	Drop test; height (mm)	Neither direct plug-in nor hand held.	N/A
4.2.7	Stress relief test	After 7h at 75°C and cooling down to room temperature, no shrinkage, distortion or loosening of enclosure parts was noticeable on the unit.	P
4.2.8	Cathode ray tubes	No CRT.	N/A
	Picture tube separately certified	--	N/A
4.2.9	High pressure lamps	No such lamp.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N)	Not intended for wall or ceiling mounting.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.3	Design and construction		P
4.3.1	Edges and corners	Edges and corners of the enclosure are rounded and smooth.	P
4.3.2	Handles and manual controls; force (N) :	15N (Main Switch)	P
4.3.3	Adjustable controls	Full range circuit, no voltage adjustment necessary. Operational controls not likely to cause any hazard.	N/A
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress. Relevant screws provided with lock-washer.	P
4.3.5	Connection by plugs and sockets	In operator and service areas, mismatching prevented by incompatible form or location.	P
4.3.6	Direct plug-in equipment	Not direct plug-in.	N/A
	Torque :	--	—
	Compliance with the relevant mains plug standard :	--	N/A
4.3.7	Heating elements in earthed equipment	Each heater lamp protected by certified thermal cutouts in one phase and TRIAC in the other.	P
4.3.8	Batteries	Lithium battery (CR2032) circuits in Main PWB utilize a diode in series with a 1kΩ resistor.	P
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery	(see above)	P
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery	(see above)	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.9	Oil and grease	Insulation not in contact with oil or grease.	N/A
4.3.10	Dust, powders, liquids and gases	Insulation not exposed to any possible paper dust or toner; separation by internal covers.	P
4.3.11	Containers for liquids or gases	No liquid contained.	N/A
4.3.12	Flammable liquids	No flammable liquids present.	N/A
	Quantity of liquid (l)	--	N/A
	Flash point (°C)	--	N/A
4.3.13	Radiation	See below.	P
4.3.13.1	General	Adequate construction confirmed.	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 (UV) radiation.	N/A
	Part, property, retention after test, flammability classification	--	N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation	--	N/A
4.3.13.5	Lasers (including laser diodes) and LEDs		P
4.3.13.5.1	Lasers (including laser diodes)	For laser see IEC/EN 60825-1 test report.	P
	Laser class	Class 1	—
4.3.13.5.2	Light emitting diodes (LEDs)	Classified as Exempt group.	P
4.3.13.6	Other types	--	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.4	Protection against hazardous moving parts		P
4.4.1	General	Access to hazardous moving parts prevented by construction.	P
4.4.2	Protection in operator access areas :	Operator accessible moving parts represent no hazard, e.g. paper feeding / –exit areas. Hazardous moving parts are protected by interlock per cl.2.8.	P
	Household and home/office document/media shredders	Not shredder.	N/A
4.4.3	Protection in restricted access locations :	--	N/A
4.4.4	Protection in service access areas	No unexpected hazard.	N/A
4.4.5	Protection against moving fan blades	No user accessible fan blade. Service accessible fan blade: see cl. 4.4.5.3.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.4.5.1	General	<p>1), DLP Fan 1, DLP Fan 2, LVU Fan Type: D06F-24TH 03 (EX) m = 0.045kg r = 30mm N = 4500rpm K = 492.08 a): 0.51</p> <p>2), DLP Fan 3, DLP Fan 4, Toner Sucking Fan, Belt Fan, Cooling Fan(AK-5100) Type: D05F-24PH 17(EX) m = 0.028kg r = 19mm N = 5700rpm K = 197.05 a): 0.46</p> <p>3), Steam Spread Fan Type: D04R-24TM 19 (EX) m = 0.027kg r = 20mm N = 6000rpm K = 233.28 a): 0.50</p> <p>4), Exit Fan Type: 2410RL-05W-S60-C01 m = 0.06kg r = 30mm N = 4900rpm K = 777.92 a): 0.65</p> <p>5), Controller Fan Type: D06R-05TM 12H1(EX) m = 0.04kg r = 30mm N = 4200rpm K = 381.02 a): 0.44</p> <p>6), Controller Fan Type: D06R-24TH 04(AX) m = 0.04kg r = 30mm N = 5000rpm K = 540.00 a): 0.56</p> <p>7), Clutch Fan Type: D04R-24TM 19 (EX) m = 0.027kg r = 20mm N = 6000rpm K = 233.28 a): 0.50</p> <p>8), Paper Cooing Fan Type: BFB0524HHA-BN20 m = 0.025kg r = 25mm N = 5900rpm K = 326.34 a): 0.53</p>	P

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Clause	Requirement + Test	Result - Remark	Verdict

	Not considered to cause pain or injury. a)..... :	$\frac{r/min}{15\,000} + \frac{K\ factor}{2\,400} = \text{Less than 1}$ (see above)	P
	Is considered to cause pain, not injury. b)..... :	--	N/A
	Considered to cause injury. c)..... :	--	N/A
4.4.5.2	Protection for users	No user accessible fan blade.	N/A
	Use of symbol or warning	--	N/A
4.4.5.3	Protection for service persons	Inadvertent contact by service person is impossible.	P
	Use of symbol or warning	--	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	Thermal requirements		P
4.5.1	General		P
4.5.2	Temperature tests	(see appended table 4.5)	P
	Normal load condition per Annex L :	Method L.5	—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat :	(see appended table 4.5.5)	P

4.6	Openings in enclosures		P
4.6.1	Top and side openings	No openings above parts with hazardous voltages. Side openings comply with the 5° angle projection. Requirements for fire enclosure considered. Accessories: no hazardous voltages, SELV only	P
	Dimensions (mm) :	(see appended table 4.6.1)	—
4.6.2	Bottoms of fire enclosures		P
	Construction of the bottom, dimensions (mm) .. :	No openings below parts requiring fire enclosure.	—
4.6.3	Doors or covers in fire enclosures	Doors and covers are interlocked per cl. 2.8.	P
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	Not used.	N/A
	Conditioning temperature (°C), time (weeks) :	--	—

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Clause	Requirement + Test	Result - Remark	Verdict
4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame	Materials with the required flammability classes are used. Safety relevant components used within their specified rating. Electrical parts are not likely to ignite nearby materials. Temperatures see 4.5.1.	P
	Method 1, selection and application of components wiring and materials	(see appended table 1.5.1)	P
	Method 2, application of all of simulated fault condition tests	(see appended table 5.3)	P
4.7.2	Conditions for a fire enclosure	See below.	P
4.7.2.1	Parts requiring a fire enclosure	Components with windings, wiring, semiconductor devices, resistors, capacitors and inductors are located inside a fire enclosure.	P
4.7.2.2	Parts not requiring a fire enclosure	The following parts are located outside a fire enclosure: Cables and connectors in sec circuits supplied with LPS, power supply cord sets.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.3	Materials		P
4.7.3.1	General	Materials with the required flammability classes are used. For overheating of VDRs (Z1) by fault conditions, the VDRs were mounted on PCBs with min. V-1 and other components / materials (C1, L1 for SWPS type MPW3161M, MPW3162M and CX1, FL2, CY3, CY4 for SWPS type ADP-385AN AA, ADP-385BN AA) within 13 mm from VDRs were min. V-1 Class Material or approved components.	P
4.7.3.2	Materials for fire enclosures	Metal enclosure. Plastic enclosures: 5VB (see appended table 1.5.1)	P
4.7.3.3	Materials for components and other parts outside fire enclosures	Decorative parts rated at least HB75 or HB40.	P
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are V-2, HF-2 or better. Small parts were mounted on min. V-1 PCB.	P
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components	Transformers on High Voltage Unit of main materials have flammability V-2 or better.	P

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Clause	Requirement + Test	Result - Remark	Verdict

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current		P
5.1.1	General	Tested for TN system.	P
5.1.2	Configuration of equipment under test (EUT)		P
5.1.2.1	Single connection to an a.c. mains supply		P
5.1.2.2	Redundant multiple connections to an a.c. mains supply	Single-supply equipment.	N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit	Per figure 5A.	P
5.1.4	Application of measuring instrument	Per Annex D.	P
5.1.5	Test procedure		P
5.1.6	Test measurements		P
	Supply voltage (V)	(see appended table 5.1)	—
	Measured touch current (mA)	(see appended table 5.1)	—
	Max. allowed touch current (mA)	(see appended table 5.1)	—
	Measured protective conductor current (mA)	(see appended table 5.1)	—
	Max. allowed protective conductor current (mA) ..	3.5 mA	—
5.1.7	Equipment with touch current exceeding 3,5 mA	Not exceed.	N/A
5.1.7.1	General	--	N/A
5.1.7.2	Simultaneous multiple connections to the supply	Single supply equipment.	N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	Per figure 5A.	P
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		P
	Supply voltage (V)	(see appended table 5.1)	—
	Measured touch current (mA)	(see appended table 5.1)	—
	Max. allowed touch current (mA)	0.25 mA	—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports	--	N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.2	Electric strength		P
5.2.1	General	(see appended table 5.2)	P
5.2.2	Test procedure		P
5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors	Motors locked, stepping motors excluded. Temperature limits of Annex B not exceeded. (see appended Annex B)	P
5.3.3	Transformers	Adequate protection against overload provided. (see appended Annex C)	P
5.3.4	Functional insulation	Short circuit tests. (see appended table 5.3)	P
5.3.5	Electromechanical components	Movement locked. Solenoids and clutches continuously energized. Stepping motors driver short or one winding continuously energized. (see appended table 5.3)	P
5.3.6	Audio amplifiers in ITE	Not provided.	N/A
5.3.7	Simulation of faults	(see appended table 5.3)	P
5.3.8	Unattended equipment	Fault condition in temperature regulating circuit for heater lamps did not result in a hazard. (see appended table 5.3)	P
5.3.9	Compliance criteria for abnormal operating and fault conditions		P
5.3.9.1	During the tests	No fire propagated beyond the equipment. No molten metal was emitted.	P
5.3.9.2	After the tests	Electric strength test primary to SELV passed.	P

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Clause	Requirement + Test	Result - Remark	Verdict

6	CONNECTION TO TELECOMMUNICATION NETWORKS		P
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		P
6.1.1	Protection from hazardous voltages		P
6.1.2	Separation of the telecommunication network from earth		P
6.1.2.1	Requirements	Sufficient insulation provided. Operating voltage: DC 500V or DC 1000V. Limit: $U_{peak} + \Delta U_{sp} + \Delta U_{sa}$ = 460V max for DC 500V or 560V max. for DC 1000V Tested with 1.5kV, surge suppressors SA10, SA11 removed.	P
	Supply voltage (V)	120V, 240V	—
	Current in the test circuit (mA)	Measured leakage current with Varistor: 0mA	—
6.1.2.2	Exclusions	--	N/A

6.2	Protection of equipment users from overvoltages on telecommunication networks		P
6.2.1	Separation requirements		P
6.2.2	Electric strength test procedure	See below.	P
6.2.2.1	Impulse test	Tested with 1.5kV on surge suppressors SA10, SA11 (RA-102M-C6 and RA-501M-C6) required by cl. 6.2.2.2.	P
6.2.2.2	Steady-state test	Operation Panel: 3.0kV SA10, SA11 removed for the followings. Enclosure (PE): 1.5kV I/O connectors: 1.5kV Voltages applied for were requested by the manufacturer.	P
6.2.2.3	Compliance criteria	No flashover or breakdown.	P

6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. output current (A)	Line is not used for power distribution.	—
	Current limiting method	--	—

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

7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS <i>No Cable Distribution System.</i>		N/A
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A
7.4.3	Impulse test		N/A

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

A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE <i>Not tested; flammability data were taken from available literature.</i>		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) :	--	—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material..... :	--	—
	Wall thickness (mm) :	--	—
A.2.2	Conditioning of samples; temperature (°C) :	--	N/A
A.2.3	Mounting of samples :	--	N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C :	--	—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s) :	--	—
	Sample 2 burning time (s) :	--	—
	Sample 3 burning time (s) :	--	—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s) :	--	—
	Sample 2 burning time (s) :	--	—
	Sample 3 burning time (s) :	--	—
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		P
B.1	General requirements		P
	Position	(see appended table 1.5.1)	—
	Manufacturer	(see appended table 1.5.1)	—
	Type	(see appended table 1.5.1)	—
	Rated values	(see appended table 1.5.1)	—
B.2	Test conditions	Motors were locked inside the equipment or in a bench test set-up. For stepping motors no test performed. (see appended table annex B)	P
B.3	Maximum temperatures	(see appended table annex B)	P
B.4	Running overload test	DC motors in secondary only	N/A
B.5	Locked-rotor overload test	DC motors in secondary only.	N/A
	Test duration (days)	--	—
	Electric strength test: test voltage (V)	--	—
B.6	Running overload test for d.c. motors in secondary circuits	Running overload not likely. Electronically controlled.	N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V)	--	N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		P
B.7.1	General	See below.	P
B.7.2	Test procedure	(see appended table annex B)	P
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	(none)	N/A
B.9	Test for three-phase motors	(none)	N/A
B.10	Test for series motors	(none)	N/A
	Operating voltage (V)	--	—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		P
	Position	Pri – sec transformer: T1,T201	—
	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	--	—
C.1	Overload test	(see appended table 5.3)	P
C.2	Insulation	(see appended tables 2.10.5 and 5.2)	P
	Protection from displacement of windings.....	Adequate construction; for further details, see appended table 2.10.3/4.	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) <i>Thermocouples used.</i>		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G) <i>Measured accordingly.</i>		P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		P
G.1	Clearances	Applied for interlock in sec.	P
G.1.1	General		P
G.1.2	Summary of the procedure for determining minimum clearances		P
G.2	Determination of mains transient voltage (V)		P
G.2.1	AC mains supply	2500V considered.	P
G.2.2	Earthed d.c. mains supplies	No d.c. mains.	N/A
G.2.3	Unearthed d.c. mains supplies	--	N/A
G.2.4	Battery operation	No such operation.	N/A
G.3	Determination of telecommunication network transient voltage (V)	TNV-3 considered.	P
G.4	Determination of required withstand voltage (V)		P
G.4.1	Mains transients and internal repetitive peaks	1500V, rule 3) b3) used.	P
G.4.2	Transients from telecommunication networks	1500V	P
G.4.3	Combination of transients		P
G.4.4	Transients from cable distribution systems	No such 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	(see appended table 2.10.3/.4)	P

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

H	ANNEX H, IONIZING RADIATION (see 4.3.13) <i>No ionizing radiation source.</i>		N/A
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J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		P
	Metal(s) used	Mild steel/ Ni on steel.	—

K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8) <i>Approved control used.</i>		P
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V)	--	N/A
K.3	Thermostat endurance test; operating voltage (V) :	--	N/A
K.4	Temperature limiter endurance; operating voltage (V)	--	N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation	(see appended table 5.3)	P

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	Tested at continuous printing and others.	P
L.6	Motor-operated files		N/A
L.7	Other business equipment		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1) <i>No ringing signals generated.</i>		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) <i>Not used.</i>		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	ANNEX P, NORMATIVE REFERENCES		—
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1) <i>Approved Surge Suppressor used.</i>		P
	- Preferred climatic categories :	40/085/56	P
	- Maximum continuous voltage :	300V	P
	- Combination pulse current :	--	P
	Body of the VDR Test according to IEC60695-11-5.....:	--	N/A
	Body of the VDR. Flammability class of material (min V-1).....:	--	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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) <i>Not applied.</i>		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) <i>Not applied.</i>		N/A
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4) <i>Not used.</i>		N/A
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1) <i>Considered.</i>		P
V.1	Introduction		P
V.2	TN power distribution systems		P
W	ANNEX W, SUMMATION OF TOUCH CURRENTS <i>Not applied.</i>		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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1) <i>Considered.</i>		P
X.1	Determination of maximum input current		P
X.2	Overload test procedure		P
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3) <i>No ultraviolet light source.</i>		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) <i>Considered.</i>		P
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8) <i>Not applied</i>		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—
CC	ANNEX CC, Evaluation of integrated circuit (IC) current limiters <i>Not applied.</i>		N/A
CC.1	General		N/A
CC.2	Test program 1	--	N/A
CC.3	Test program 2	--	N/A
CC.4	Test program 3	--	N/A
CC.5	Compliance	--	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

DD	ANNEX DD, Requirements for the mounting means of rack-mounted equipment <i>Not applied.</i>		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N	--	N/A
DD.3	Mechanical strength test, 250N, including end stop	--	N/A
DD.4	Compliance	--	N/A

EE	ANNEX EE, Household and home/office document/media shredders <i>Not applied.</i>		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols	--	N/A
	Information of user instructions, maintenance and/or servicing instructions	--	N/A
EE.3	Inadvertent reactivation test.....	--	N/A
EE.4	Disconnection of power to hazardous moving parts:	--	N/A
	Use of markings or symbols	--	N/A
EE.5	Protection against hazardous moving parts	--	N/A
	Test with test finger (Figure 2A)	--	N/A
	Test with wedge probe (Figure EE1 and EE2)	--	N/A

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

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Power Supply Cord for 220 - 240V (Optional)	Harvest Electric Wire And Products Mfg. Co., Ltd.	Plug: HE-104 Cord: H05VV-F Connector: HP-3	250V, 16A 1.0 mm ² x 3 250V, 10A	DIN VDE 0620-1 DIN VDE 0281-5 HD21.5 S3 IEC/EN60320-1 VDE 0625-1	VDE	
Power Supply Cord for 120V (Optional)	Volex	Plug: PS204X (X may be any alphabetical number or blank) Cord: SJT Connector: V1625	125V, 13A or 15A 16 AWG x 3 125V, 13A Max. 4.5m long, min. 1.5m long	UL817 UL62	UL(E62405) UL(E159216) UL(E156136)	
Appliance Inlet	Rong Feng Industrial Co., Ltd.	SS-120 Series	250Vac, 10A (VDE) 250Vac, 15A (UL)	EN60320-1 IEC60320-1 UL498	VDE UL(E102641)	
Switch						
Main Switch (Optional)	Shinmei Electric Co., Ltd.	SLS-11-800-1BB	16A, 250Vac	IEC/EN61058-1 UL61058-1/1054	TUV UL(E90211)	
Front Cover Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN/IEC61058-1 UL1054	ENEC/VDE UL(E41515)	
Right Cover Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN/IEC61058-1 UL1054	ENEC/VDE UL(E41515)	

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

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Fixing Unit						
Thermal Cutoff for Model TASKalfa 306ci, 306ci	Wako Electronics Co., Ltd.	B-2	125Vac/25A, 250Vac/15A, 180°C	EN/IEC60730 UL873	VDE UL(E50367)	
Heater Lamp for 220 - 240V for Model TASKalfa 306ci	Ushio Inc.	QIRF 240-926 MKQW	240Vac , 926W	-	Evaluated together with unit	
Heater Lamp for 120V for Model 306ci	Ushio Inc.	QIRF 120-867 MKQW	120Vac , 867W	-	Evaluated together with unit	
Thermal Cutoff for Model TASKalfa 356ci, TASKalfa 406ci, 356ci, 406ci	Wako Electronics Co., Ltd.	B-2	Two provided. 125Vac/25A, 250Vac/15A, 180°C	EN/IEC60730 UL873	VDE UL(E50367)	
Heater Lamp for 220 - 240V for Model TASKalfa 356ci, TASKalfa 406ci	Ushio Inc.	QIRF 240-641/427 MKQW	240Vac , Main: 641W, Sub: 427W	-	Evaluated together with unit	
Heater Lamp for 120V for Model 356ci, 406ci	Ushio Inc.	QIRF 120-600/400 MKQW	120Vac , Main: 600W, Sub: 400W	-	Evaluated together with unit	
Fuser Right Cover, Exit Guide, Side F Cover, Side R Cover, Paper Fuser Guide, Drive Press Cover, Fuser Left Frame	Kaneka Corp.	3401NX	V-0, Min. 1.5mm thick	UL94	UL(E48854)	
Fuser Unit – Heater Connector	Japan Solderless Terminal Mfg. Co., Ltd.	Type L, series EL	300V max., 10A max.	IEC/EN61984 UL1977	TUV UL(E60389)	

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

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Switching Power Supply for Model TASKalfa 306ci and 306ci						
Switching Power Supply Unit for 220 - 240V	Murata Mfg. Co., Ltd.	MPW3162MX (X may be blank or any number from 0 to 9 or alphabetical number.)	Input: AC 220 - 240 V Output: 24V/7.0A	-	Evaluated together with unit	
Switching Power Supply Unit for 120V	Murata Mfg. Co., Ltd.	MPW3161MX (X may be blank or any number from 0 to 9 or alphabetical number.)	Input: AC 100 - 120V Output: 24V/7.0A	-	Evaluated together with unit	
Bleeding Resistors (R4, R5)	Interchangeable	Interchangeable	2.7 kohm, 1/4 W	-	Evaluated together with unit	
Bleeding Resistors (R6, R7)	Interchangeable	Interchangeable	5.6 kohm, 1/4 W	-	Evaluated together with unit	
PWM Control IC (IC1)	Fuji Electric Co., Ltd.	FA8A71N (8A71)	VH pin: 500V/10mA VCC pin: 28V/20mA	IEC/EN60950-1	NEMKO CB (NO81148)	
Surge Suppressor (Z1)	Nippon Chemi-Con Corp.	TNR14SE471K or TND14SE471K (Marking: 14SE471)	300 Vac	IEC/EN61051 IEC/EN60950-1 Annex Q UL1449	VDE UL(E323623)	
X - Capacitor (C1) for 220 - 240V	Okaya Electric Industries Co., Ltd.	LE-MX (Marking: LE224)	310V, 0.22uF X2	EN/IEC60384-14 UL60384-14	ENEC(SEMKO)) UL(E47474)	
X - Capacitor (C6) for 220 - 240V	Okaya Electric Industries Co., Ltd.	LE-MX (Marking: LE104)	310V, 0.1uF X2	EN/IEC60384-14 UL60384-14	ENEC(SEMKO)) UL(E47474)	
X - Capacitor (C1, C6) for 120V	Okaya Electric Industries Co., Ltd.	LE-MX (Marking: LE334)	310V, 0.33uF X2	EN/IEC60384-14 UL60384-14	ENEC(SEMKO)) UL(E47474)	
Y -Capacitors (C4, C5) for 220 - 240V	Murata Mfg. Co., Ltd.	KH	300V/250V, 470pF Y2	EN/IEC60384-14 UL1414/ UL60384-14	SEMKO UL(E37921)	
Y -Capacitors (C4, C5) for 120V	Murata Mfg. Co., Ltd.	KH	300V/250V, 2200pF Y2	EN/IEC60384-14 UL1414/ UL60384-14	SEMKO UL(E37921)	
Bridge Capacitor (C50)	Murata Mfg. Co., Ltd.	KX	300V/250V, 4700pF Y1	EN/IEC60384-14 UL1414/ UL60384-14	SEMKO UL(E37921)	

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Electrolytic Capacitor (C7) for 220 - 240V	Interchangeable	Interchangeable	400V or 450V, 270uF	-	Evaluated together with unit	
Electrolytic Capacitor (C7) for 120V	Interchangeable	Interchangeable	200V, 1200uF	-	Evaluated together with unit	
Inductor (L1, L2) for 220 - 240V	Tokyo Parts Industrial Co., Ltd.	TLV-20 (1R5A402V20A) (Marking: 402A)	4.0mH Class E	-	Evaluated together with unit	
Inductor (L1, L2) for 120V	Tokyo Parts Industrial Co., Ltd.	TLF-28YA (4R0A262F28YA) (Marking: 4R0A262A)	2.6mH Class A	-	Evaluated together with unit	
Inductor (L3) for 220 - 240V	Tabuchi Electric Co., Ltd.	E2815C0785A-S (Marking: E2815C0785A)	4.0mH Class A	-	Evaluated together with unit	
Inductor (L51) for 220 - 240V	Tamura Corp.	SKP-T16274	40uH Class A	-	Evaluated together with unit	
Inductor (L51) for 120V	Tamura Corp.	SKP-T16413	35uH Class A	-	Evaluated together with unit	
Bridge Rectifier (D1) for 220 - 240V	Interchangeable	Interchangeable	Min. 600V, Min. 4A	UL1557	UL	
Bridge Rectifier (D1) for 120V	Interchangeable	Interchangeable	Min. 600V, Min. 15A	UL1557	UL	
FET (Q1, Q2) for 220 - 240V	Interchangeable	Interchangeable	Min. 900V, Min. 5A	-	Evaluated together with unit	
FET (Q1, Q2) for 120V	Interchangeable	Interchangeable	Min. 500V, Min. 12A	-	Evaluated together with unit	
Triac (TRA31) for 220 - 240V	Interchangeable	Interchangeable	Min. 800V, Min. 12A	-	Evaluated together with unit	
Triac (TRA31) for 120V	Interchangeable	Interchangeable	Min. 600V, Min. 16A	-	Evaluated together with unit	
Photo Coupler (PC1, PC5)	Everlight Electronics Co., Ltd.	EL816M2 (Marking: EL816)	Isolation thickness: ≥ 0.5 mm, Ext. cr.: ≥7.7 mm, Int. cr. : ≥6 mm,	IEC/EN60950-1 IEC/EN60065 UL1577	SEMKO UL(E214129)	

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

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Photo Coupler (PC3)	Toshiba Corp.	TLP363JF (Marking: P363JF)	Isolation thickness: > 0.4 mm, Ext. cr.: > 8 mm, Int. cr. = thermal cycling tested (2.10.11), Isolation voltage: min. AC 5000V	IEC/EN60950-1 IEC/EN60747-5- 2 UL1577	SEMKO UL(E67349)	
Transformer (T1) for 220 - 240V	Murata Mfg. Co., Ltd.	2V121	Class B UL System Designation: CM	UL1446	Evaluated together with unit UL(E247878)	
Transformer (T1) for 120V	Murata Mfg. Co., Ltd.	2V120	Class B UL System Designation: CM	UL1446	Evaluated together with unit UL(E247878)	
Fuse (F1) for 220 - 240V	Cooper Bussmann Inc.	S505 (-R series)	250V, T5AH	EN60127-2 IEC60127-2 UL248-1/ UL248- 14	SEMKO UL(E19180)	
Fuse (F1) for 220 - 240V, Alternate	SkyGate Co., Ltd.	SG5063	250V, T5AH	EN60127-2 IEC60127-2 UL248-1/ UL248- 14	SEMKO UL(E195833)	
Fuse (F1) for 120V	Cooper Bussmann Inc.	S505 (-R series)	250V, T6.3AH	EN60127-2 IEC60127-2 UL248-1/ UL248- 14	SEMKO UL(E19180)	
Fuse (F1) for 120V, Alternate	SkyGate Co., Ltd.	SG5063	250V, T6.3AH	EN60127-2 IEC60127-2 UL248-1/ UL248- 14	SEMKO UL(E195833)	
Fuse (F3)	SkyGate Co., Ltd.	SCT	250V, T2.5AL	EN60127-3 IEC60127-3 UL248-1/ UL248- 14	SEMKO UL(E195833)	
Fuse (F3), Alternate	Hollyland Company Ltd.	5ET	250V, T2.5AL	EN60127-3 IEC60127-3 UL248-1/ UL248- 14	SEMKO UL(E156471)	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Fuse (F51) for 220 - 240V	Cooper Bussmann Inc.	S505 (-R series)	250V, T10AH	EN60127-2 IEC60127-2 UL248-1/ UL248- 14	SEMKO UL(E19180)	
Fuse (F51) for 220 - 240V, Alternate	SkyGate Co., Ltd.	SG5063	250V, T10AH	EN60127-2 IEC60127-2 UL248-1/ UL248- 14	SEMKO UL(E195833)	
Fuse (F51) for 120V	Hollyland Co., Ltd.	50CT(P) series	250V, T12.5AH	EN60127-2 IEC60127-2 UL248-1/ UL248- 14	SEMKO UL(E156471)	
Relay (RL1) for 220 - 240V	Daiichi Electric Co., Ltd.	DG1U series	Contact: 250V, 10A Coil: 24 Vdc	EN/IEC61810-1 (TUV) EN/IEC61058-1 (SEMKO) UL508 UL60947	TUV SEMKO UL(E98688)	
Relay (RL1) for 220 - 240V, Alternate	Panasonic Electric Works Co., Ltd. or Panasonic	LK series (LKP1aF-24V or ALKP322)	Contact: 250/277V, 10A Coil: 24 Vdc	EN/IEC61810-1 UL508 UL60947	TUV UL(E43149)	
Relay (RL1) for 120V	Panasonic Electric Works Co., Ltd. or Panasonic	ALE series (ALE1PB24)	Contact: 250/277V, 16A Coil: 24 Vdc	EN/IEC61810-1 UL508 UL60947	VDE UL(E43149)	
Relay (RL1) for 120V, Alternate	Daiichi Electric Co., Ltd.	DH1U series	Contact: 250V, 16A Coil: 24 Vdc	EN/IEC61810-1 UL508	VDE UL(E98688)	
Connector (CN3)	Japan Solderless Terminal Mfg Co., Ltd.	Type H, series XH	250V, 3A (AWG 22)	IEC/EN61984 UL1977	TUV UL(E60389)	
Connector (YC101)	Japan Solderless Terminal Mfg Co., Ltd.	Type H, series VT	250V, 12A (AWG 16)	IEC/EN61984 UL1977	TUV UL(E60389)	
Connector (YC102)	Japan Solderless Terminal Mfg Co., Ltd.	Type H, series VH	250V, 10A (AWG 16)	IEC/EN61984 UL1977	TUV UL(E60389)	
Printed Wiring Board	Interchangeable	Interchangeable	Min. V-1, Min. 105°C	UL796	UL	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Switching Power Supply for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci						
Switching Power Supply Unit for 220 - 240V	Delta Electronics, Inc.	ADP-385BN AA	Input: AC 220 - 240 V Output: 5V0/max. 9.2A, 24V2/max. 10.154A, 24V2PF/max. 1A, 24V2DF/max. 3A	-	Evaluated together with unit	
Switching Power Supply Unit for 120V	Delta Electronics, Inc.	ADP-385AN AA	Input: AC 100 - 127 V Output: 5V0/max. 9.2A, 24V2/max. 10.154A, 24V2PF/max. 1A, 24V2DF/max. 3A	-	Evaluated together with unit	
Bleeding Resistor (R202)	Interchangeable	Interchangeable	15 kohm, 1/4 W	-	Evaluated together with unit	
PWM Control IC (IC202)	Fuji Electric Co., Ltd.	FA8A41N (8A41)	VH pin: 500V/10mA VCC pin: 28V/20mA	IEC/EN60950-1	NEMKO CB (NO81148)	
Varistor (Z1)	Joyin Co., Ltd.	JVH14S471K or 14S471K	300 Vac	IEC/EN61051 IEC/EN60950-1 Annex Q UL1449	VDE UL(E325508)	
Varistor (Z1), Alternate	Thinking Electronic Industrial Co., Ltd.	TVR14471-D or TVR14471	300 Vac	IEC/EN61051 IEC/EN60950-1 Annex Q UL1449	VDE UL(E314979)	
Varistor (Z1), Alternate	Epcos OHG or Epcos (Zhuhai FTZ) Co., Ltd.	S14K300E2K1 (S14KV471))	300 Vac	EN/IEC61051 IEC/EN60950-1 Annex Q UL1449	VDE UL(E321126)	
X - Capacitors (CX1, CX2)	EUROPTRONIC (TAIWAN) INDUSTRIAL CORP	MPX2	250/275/305V, 0.47uF X2	EN/IEC60384-14 UL60384-14	ENEC(VDE) UL(E211347)	
X - Capacitors (CX1, CX2), Alternate	Hua Jung Components Co., Ltd.	MKP	250/275/305/310V, 0.47uF X2	EN/IEC60384-14 UL60384-14	ENEC(SEMKO) UL(E149075)	
X - Capacitors (CX1, CX2), Alternate	Kemet Electronics Corp.	R.46 series	275/300/310V, 0.47uF X2	EN/IEC60384-14 UL60384-14	ENEC(IMQ) UL(E97797)	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
X - Capacitors (CX1, CX2), Alternate	Zhuhai Sung Ho Electronics Co., Ltd.	CMPP	275/310V, 0.47uF X2	EN/IEC60384-14 UL60384-14	ENEC(VDE) UL(E327138)	
X - Capacitors (CX1, CX2), Alternate	Okaya Electric Industries Co., Ltd.	LE series (Marking: LE474)	250 - 310V, 0.47uF X2	EN/IEC60384-14 UL60384-14	ENEC(SEMKO) UL(E47474)	
X - Capacitors (CX1, CX2), Alternate	Panasonic	ECQUL	275V, 0.47uF X2	EN/IEC60384-14 UL60384-14	VDE UL(E62674)	
X - Capacitors (CX1, CX2), Alternate	Epcos Electronic Components SA	B3292 series	275/305V, 0.47uF X2	EN/IEC60384-14 UL60384-14	ENEC(UL) UL(E97863)	
X - Capacitors (CX1, CX2), Alternate	Pilkor or Cowell Fashion Co., Ltd. Pilkor Electronics	PCX2 339 or 339	275/305V, 0.47uF X2	EN/IEC60384-14 UL60384-14	ENEC(SEMKO) UL(E165646)	
X - Capacitors (CX1, CX2), Alternate	Xiamen Faratronic Co., Ltd.	MKP62 or C42	275/305/310V, 0.47uF X2	EN/IEC60384-14 UL60384-14	ENEC(VDE) UL(E186600)	
Y -Capacitors (CY3, CY4)	Murata Mfg. Co., Ltd.	KX	300V/250V, 1000pF Y1	EN/IEC60384-14 UL60384-14	SEMKO UL(E37921)	
Y -Capacitors (CY3, CY4), Alternate	TDK-EPC Corp.	CD	250V, 1000pF Y1	EN/IEC60384-14 UL60384-14	SEMKO UL(E37861)	
Y -Capacitors (CY3, CY4), Alternate	Walsin Technology Corp.	AH series	250V, 1000pF Y1	EN/IEC60384-14 UL60384-14	SEMKO UL(E146544)	
Bridge Capacitor (CY1, CY2)	TDK-EPC Corp.	CD	250V, 1500pF Y1	EN/IEC60384-14 UL60384-14	SEMKO UL(E37861)	
Bridge Capacitor (CY1, CY2), Alternate	Murata Mfg. Co., Ltd.	KX	300V/250V, 1500pF Y1	EN/IEC60384-14 UL60384-14	SEMKO UL(E37921)	
Bridge Capacitor (CY1, CY2), Alternate	Walsin Technology Corp.	AH series	250V, 1500pF Y1	EN/IEC60384-14 UL60384-14	SEMKO UL(E146544)	
Bridge Capacitor (CY1, CY2), Alternate	Kunshan Wansheng Electronics Co., Ltd.	CT7	250V, 1500pF Y1	EN/IEC60384-14 UL60384-14	SEMKO UL(E249006)	
Electrolytic Capacitor (C1)	Interchangeable	Interchangeable	450V, 470uF or 560uF	-	Evaluated together with unit	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Inductor (FL2, FL3)	Delta Electronics Inc.	HFV-DA10605	Min. 12mH Class A	-	Evaluated together with unit	
Inductor (FL2, FL3), Alternate	Delta Electronics Inc.	HFV-MP14359	Min. 12mH Class A	-	Evaluated together with unit	
Inductor (FL4)	Delta Electronics Inc.	HFV-MP12234	Min. 4.14mH Class A	-	Evaluated together with unit	
Inductor (FL4), Alternate	Delta Electronics Inc.	HFV-MP15052	Min. 4.14mH Class A	-	Evaluated together with unit	
Inductor (L1)	Delta Electronics Inc.	PFCV-MP14023	150uH Class A	-	Evaluated together with unit	
Inductor (L301)	Delta Electronics Inc.	CRV-MP11200	150uH Class A	-	Evaluated together with unit	
Bridge Rectifier (BD1)	Interchangeable	Interchangeable	Min. 600V, Min. 25A	UL1557	UL	
FET (Q1, Q2) for 220 - 240V	Interchangeable	Interchangeable	Min. 600V, Min. 9.7A	-	Evaluated together with unit	
FET (Q1, Q2) for 120V	Interchangeable	Interchangeable	Min. 600V, Min. 15.8A	-	Evaluated together with unit	
FET (Q3, Q4)	Interchangeable	Interchangeable	Min. 600V, Min. 11.5A	-	Evaluated together with unit	
FET (Q201)	Interchangeable	Interchangeable	Min. 800V, Min. 2.0A	-	Evaluated together with unit	
Triac (TR301)	Interchangeable	Interchangeable	Min. 600V, Min. 16A	-	Evaluated together with unit	
Triac (TR302) for 220 - 240V	Interchangeable	Interchangeable	Min. 600V, Min. 16A	-	Evaluated together with unit	
Triac (TR302) for 120V	Interchangeable	Interchangeable	Min. 600V, Min. 25A	-	Evaluated together with unit	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Photo Coupler (IC51, IC55, IC302, IC305, IC311)	Sharp Corp.	PC123	Isolation thickness: > 0.4 mm, Ext. cr.: > 8 mm, Int. cr. = thermal cycling tested (2.10.11), Isolation voltage: min. AC 5000V	EN/IEC60950-1 EN/IEC60065 UL1577	SEMKO UL(E64380)	
Photo Coupler (IC51, IC55, IC302, IC305, IC311), Alternate	Everlight Electronics Co., Ltd.	EL816M (Marking: EL816)	Isolation thickness: ≥ 0.5 mm, Ext. cr.: ≥7.7 mm, Int. cr.: ≥6 mm,	IEC/EN60950-1 IEC/EN60065 UL1577	SEMKO UL(E214129)	
Photo Coupler (IC51, IC55, IC302, IC305, IC311), Alternate	Lite-On Technology Corp.	LTV-816 series	Isolation thickness: ≥ 0.6 mm, Ext. cr.: ≥8.0 mm, Int. cr.: ≥5.2mm	IEC/EN60950-1 IEC/EN60065 UL1577	DEMKO UL(E113898)	
Photo Coupler (IC51, IC55, IC302, IC305, IC311), Alternate	Vishay Semiconductor	VO617C	Isolation thickness: ≥ 0.6 mm, Ext. cr.: ≥8.0 mm, Int. cr.: ≥5.2mm	IEC/EN60950-1 IEC/EN60065 UL1577	FIMKO UL(E52744)	
Photo Coupler (IC51, IC55, IC302, IC305, IC311), Alternate	Toshiba Corp.	TLP785F (Marking: P785F)	Isolation thickness: > 0.6 mm, Ext. cr.: > 8.0 mm, Int. cr.: > 5.2 mm,	IEC/EN60950-1 IEC/EN60065 UL1577	SEMKO UL(E67349)	
Photo Coupler (IC301, IC309)	Toshiba Corp.	TLP3063F	Isolation thickness: > 0.5 mm, Ext. cr.: > 8 mm, Int. cr. = thermal cycling tested (2.10.11), Isolation voltage: min. AC 5000V	IEC/EN60950-1 IEC/EN60747-5- 5 UL1577	SEMKO UL(E67349)	
Photo Coupler (IC301, IC309), Alternate	Everlight Electronics Co., Ltd.	EL3063M (Marking: EL3063)	Isolation thickness: ≥ 0.5 mm, Ext. cr.: ≥7.7 mm, Int. cr.: ≥5.5 mm,	IEC/EN60950-1 IEC/EN60065 UL1577	SEMKO UL(E214129)	
Transformer (T1)	Delta Electronics Inc.	MH-MP14254	450uH Class A UL System Designation: MP- 130I	-	Evaluated together with unit	
Transformer (T201)	Delta Electronics Inc.	MH-MP14088	1000uH Class A UL System Designation: MP- 130I	-	Evaluated together with unit	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Fuse (F1) for 220 - 240V	Walter Electronic Co., Ltd.	TSC+P	250V, T6.3AH	EN60127-2 IEC60127-2 UL248-1/ UL248-14	VDE UL(E56092)	
Fuse (F1) for 220 - 240V, Alternate	Littelfuse Inc.	215 series	250V, T6.3AH	IEC/EN60127-2 UL248-1/ UL248-14	VDE UL(E10480)	
Fuse (F1) for 220 - 240V, Alternate	Conquer Electronics Co., Ltd.	UDA-P series	250V, T6.3AH	IEC/EN60127-2 UL248-1/ UL248-14	TUV UL(E82636)	
Fuse (F1) for 220 - 240V, Alternate	Hollyland Co., Ltd.	5CT	250V, T6.3AH	IEC/EN60127-2 UL248-1/ UL248-14	VDE UL(E156471)	
Fuse (F1) for 120V	Walter Electronic Co., Ltd.	TSC	250V, T10AH	EN60127-2 IEC60127-2 UL248-1/ UL248-14	VDE UL(E56092)	
Fuse (F1) for 120V, Alternate	Conquer Electronics Co., Ltd.	UDA series or UDA-A series	250V, T10AH	IEC/EN60127-2 UL248-1/ UL248-14	VDE UL(E82636)	
Fuse (F1) for 120V, Alternate	Littelfuse Inc.	215 series	250V, T10AH	IEC/EN60127-2 UL248-1/ UL248-14	VDE UL(E10480)	
Fuse (F3)	Littelfuse Inc.	215 series	250V, T16AH	IEC/EN60127-2 UL248-1/ UL248-14	TUV UL(E10480)	
Fuse (F3), Alternate	Conquer Electronics Co., Ltd.	UDA series or UDA-A series	250V, T16AH	IEC/EN60127-2 UL248-1/ UL248-14	TUV UL(E82636)	
Fuse (F4)	Walter Electronic Co., Ltd.	TSC+P	250V, T2AH	EN60127-2 IEC60127-2 UL248-1/ UL248-14	VDE UL(E56092)	
Fuse (F4), Alternate	Conquer Electronics Co., Ltd.	UDA-P series	250V, T2AH	IEC/EN60127-2 UL248-1/ UL248-14	TUV UL(E82636)	
Fuse (F4), Alternate	Littelfuse Inc.	215 series	250V, T2AH	IEC/EN60127-2 UL248-1/ UL248-14	VDE UL(E10480)	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Relay (RL51)	Xiamen Hongfa Electroacoustic Co., Ltd.	HF115F-I series (HF115F-I/024- 1HS3A)	Contact: 250V, 16A Coil: 24 Vdc	EN/IEC61810-1 UL508 UL60947	VDE UL(E134517)	
Relay (RL51), Alternate	Xiamen Hongfa Electroacoustic Co., Ltd.	HF14FW series (HF14FW/024- HST)	Contact: 250V, 16A Coil: 24 Vdc	EN/IEC61810-1 UL508 UL60947	VDE UL(E134517)	
Relay (RL51), Alternate	Omron Corp.	G5RL-1A-E-LN	Contact: 250V, 16A Coil: 24 Vdc	EN/IEC61810-1 UL508 UL60947	VDE UL(E41643)	
Connector (YC2)	Japan Solderless Terminal Mfg Co., Ltd.	Type H, series VH	250V, 10A (AWG 16)	IEC/EN61984 UL1977	TUV UL(E60389)	
Connector (YC4)	Japan Solderless Terminal Mfg Co., Ltd.	Type H, series XH	250V, 3A (AWG 22)	IEC/EN61984 UL1977	TUV UL(E60389)	
Printed Wiring Board	Interchangeable	Interchangeable	Min. V-1, Min. 105°C	UL796	UL	
Heater Relay PWB (Option)						
Relay (RY1)	Panasonic Corp.	ALQ105 (ALQ1 series)	Contact: 250V, 10A Coil: 5 Vdc	EN/IEC61810-1 UL508 UL60947	VDE UL(E43028)	
Connector (YC2, YC3)	Japan Solderless Terminal Mfg Co., Ltd.	Type H, series XA	250V, 3A (AWG 20/22)	IEC/EN61984 UL1977	TUV UL(E60389)	
Printed Wiring Board	Interchangeable	Interchangeable	Min. V-1, Min. 105°C	UL796	UL	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
High Voltage PWB, Main for Model TASKalfa 306ci, TASKalfa 356ci, 306ci and 356ci						
High Voltage Unit	Murata Mfg. Co., Ltd.	MPH7712	Inputs: 24Vdc/ max. 1.0A Outputs: M: max. 3kV, Vslv: 1.5kVp-p, Vmag: 0.8kVp-p, T1: max. -5kV, T2: max. - 7kV, CL: max -3.5kV, PB: max 1300V	-	Evaluated together with unit	
High Voltage Unit - Transformer (B51)	Murata Mfg. Co., Ltd.	NQ035	Class A	-	Evaluated together with unit	
High Voltage Unit - Transformer (B101, B201, B301, B401)	Murata Mfg. Co., Ltd.	QJ001	Class A	-	Evaluated together with unit	
High Voltage Unit - Transformer (B151, B251, B351, B451)	Murata Mfg. Co., Ltd.	QU101	Class A	-	Evaluated together with unit	
High Voltage Unit - Transformer (B501)	Murata Mfg. Co., Ltd.	QU001	Class A	-	Evaluated together with unit	
High Voltage Unit - Transformer (B551)	Murata Mfg. Co., Ltd.	QP537	Class A	-	Evaluated together with unit	
High Voltage Unit - Transformer (B661, B761, B861, B961)	Murata Mfg. Co., Ltd.	QW108	Class A	-	Evaluated together with unit	
Printed Wiring Board	Interchangeable	Interchangeable	Min. V-1, Min. 105°C	UL796	UL	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
High Voltage PWB, Main for Model TASKalfa 406ci and 406ci						
High Voltage Unit	Murata Mfg. Co., Ltd.	MPH7713	Inputs: 24Vdc/ max. 2.0A Outputs: M: 1.1kVp- p, Vslv: 1.6kVp-p, Vmag: 2.3kVp-p, T2: max. -7kV, CL: max -3.5kV, PB: max 1300V	-	Evaluated together with unit	
High Voltage Unit - Transformer (B51)	Murata Mfg. Co., Ltd.	NQ035	Class A	-	Evaluated together with unit	
High Voltage Unit - Transformer (B101, B201, B301, B401)	Murata Mfg. Co., Ltd.	QW021	Class A	-	Evaluated together with unit	
High Voltage Unit - Transformer (B151, B251, B351, B451)	Murata Mfg. Co., Ltd.	QU101	Class A	-	Evaluated together with unit	
High Voltage Unit - Transformer (B501)	Murata Mfg. Co., Ltd.	QU001	Class A	-	Evaluated together with unit	
High Voltage Unit - Transformer (B551)	Murata Mfg. Co., Ltd.	QP537	Class A	-	Evaluated together with unit	
High Voltage Unit - Transformer (B1001, B1101, B1201, B1301)	Murata Mfg. Co., Ltd.	QM115	Class A	-	Evaluated together with unit	
High Voltage Unit - Transformer (B1051, B1151, B1251, B1351)	Murata Mfg. Co., Ltd.	QW020	Class A	-	Evaluated together with unit	
High Voltage Unit - Transformer (B631, B731)	Murata Mfg. Co., Ltd.	QU111	Class A	-	Evaluated together with unit	
Printed Wiring Board	Interchangeable	Interchangeable	Min. V-1, Min. 105°C	UL796	UL	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
High Voltage PWB, Transfer for Model TASKalfa 406ci and 406ci						
High Voltage Unit	Murata Mfg. Co., Ltd.	MPH3406	Inputs: 24Vdc/ max. 0.5A Outputs: T1: max. - 5.0kV	-	Evaluated together with unit	
High Voltage Unit - Transformer (B51)	Murata Mfg. Co., Ltd.	QU103	Class A	-	Evaluated together with unit	
High Voltage Unit - Transformer (B101, B201, B301, B401)	Murata Mfg. Co., Ltd.	QJ001	Class A	-	Evaluated together with unit	
Printed Wiring Board	Interchangeable	Interchangeable	Min. V-1, Min. 105°C	UL796	UL	
Fan Motor, Motor, Clutch, Solenoid						
DLP Fan 1	Nidec Corp.	D06F-24SH 03 (EX)	24Vdc, 0.192A max.	-	Evaluated together with unit	
DLP Fan 2	Nidec Corp.	D06F-24SH 03 (EX)	24Vdc, 0.192A max.	-	Evaluated together with unit	
DLP Fan 3	Nidec Corp.	D05F-24PH 17 (EX)	24Vdc, 0.12A max.	-	Evaluated together with unit	
DLP Fan 4	Nidec Corp.	D05F-24PH 17 (EX)	24Vdc, 0.12A max.	-	Evaluated together with unit	
Steam Spread Fan	Nidec Corp.	D04R-24TM 19 (EX)	24Vdc, 0.08A max.	-	Evaluated together with unit	
Exit Fan	Minebea Co., Ltd. or Minebea Motor Manufacturing Corp.	2410RL-05W-S60- C01	24Vdc, 0.12A max.	-	Evaluated together with unit	
Toner Sucking Fan for Model TASKalfa 406ci, 406ci	Nidec Corp.	D05F-24PH 17 (EX)	24Vdc, 0.12A max.	-	Evaluated together with unit	
Belt Fan for Model TASKalfa 406ci, 406ci	Nidec Corp.	D05F-24PH 17 (EX)	24Vdc, 0.12A max.	-	Evaluated together with unit	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Controller Fan for Model TASKalfa 356ci, TASKalfa 406ci, 356ci, 406ci	Nidec Corp.	D06R-05TM 12H1 (EX)	5Vdc, 0.41A max.	-	Evaluated together with unit	
Controller Fan for Model TASKalfa 306ci, 306ci	Nidec Corp.	D06R-24TH 04 (AX)	24Vdc, 0.11A max.	-	Evaluated together with unit	
LVU Fan	Nidec Corp.	D06F-24SH 03 (EX)	24Vdc, 0.192A max.	-	Evaluated together with unit	
Clutch Fan	Nidec Corp.	D04R-24TM 19 (EX)	24Vdc, 0.08A max.	-	Evaluated together with unit	
Paper Cooling Fan (Optional)	Delta Electronics, Inc.	BFB0524HHA- BN20	Max. two provided. 24Vdc, 0.20A max.	-	Evaluated together with unit	
Polygon Motor	Minebea Co., Ltd.	MASQ8NF12RK	24Vdc, 0.6Arms max. Brushless Motor	-	Evaluated together with unit	
LSU Cleaning Motor	Mabuchi Motor Co., Ltd.	RK-370CA-081050	24Vdc, 110mA max.	-	Evaluated together with unit	
LSU Cleaning Motor, Alternate	Mabuchi Motor Co., Ltd.	RK-370CA-11670	24Vdc, 130mA max.	-	Evaluated together with unit	
Exit Motor	Minebea Co., Ltd.	PM42S-F48-MIN9	Stepper type 24Vdc, 310mA (peak), Class E	--	Evaluated together with unit	
Transfer Belt Release Motor	Mabuchi Motor Co., Ltd.	RK-370CA-081050	24Vdc, 110mA max.	-	Evaluated together with unit	
Lift Motor	Standard Motor Co., Ltd.	RC370-KT-081000 (RC370- KT/081000/DV)	24Vdc, 110mA max.	-	Evaluated together with unit	
Container Motor	Mabuchi Motor Co., Ltd.	RK-370CA-11670	Four provided. 24Vdc, 130mA max.	-	Evaluated together with unit	
Feed/ Black DLP Motor	Nidec Corp.	42M069F251	24Vdc, 1.1A max. Brushless Motor	-	Evaluated together with unit	
Feed/ Black DLP Motor, Alternate	Nidec Corp.	48M069F261	24Vdc, 1.6A max Brushless Motor	-	Evaluated together with unit	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Image Motor	Nidec Corp.	48M069F261	24Vdc, 1.6A max Brushless Motor	-	Evaluated together with unit	
Fuser Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type, 24Vdc, 650mA	-	Evaluated together with unit	
Fuser Motor, Alternate	Nidec Servo Corp.	KV4239-N3B005	Stepper type, 24Vdc, 1.0A	-	Evaluated together with unit	
Colour DLP Motor	Nidec Corp.	48M069F261	24Vdc, 1.6A max Brushless Motor	-	Evaluated together with unit	
Colour DLP Motor, Alternate	Nidec Corp.	48M069F271	24Vdc, 2.2A max Brushless Motor	-	Evaluated together with unit	
Black Drum Motor	Nidec Corp.	48M069G020	24Vdc, 1.6A max Brushless Motor	-	Evaluated together with unit	
Colour Drum Motor for Model TASKalfa 306ci, 306ci	Nidec Corp.	48M069G020	24Vdc, 1.6A max Brushless Motor	-	Evaluated together with unit	
Colour Drum Motor for Model TASKalfa 356ci, TASKalfa 406ci, 356ci, 406ci	Nidec Corp.	48M069F180	24Vdc, 2.2A max Brushless Motor	-	Evaluated together with unit	
Scanner Motor	Minebea Co., Ltd.	PM42S-096-MIM6	Stepper type, 24Vdc, 600mA (Peak)	-	Evaluated together with unit	
DLP Vibration Motor (Optional)	Nidec Copal Corp.	LA3R5-475DB2	Four provided. 3.0Vdc, 75mA max.	-	Evaluated together with unit	
Black DLP Clutch	Tenryu Marusawa Co., Ltd.	TMC-3.5L-01	24Vdc, 0.083A	-	Evaluated together with unit	
Resist Clutch	Tenryu Marusawa Co., Ltd.	TMC-3.5L-01	24Vdc, 0.083A	-	Evaluated together with unit	
Feed Clutch	Tenryu Marusawa Co., Ltd.	TMC-3.5L-01	24Vdc, 0.083A	-	Evaluated together with unit	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Middle Clutch	Tenryu Marusawa Co., Ltd.	TMC-3.5L-01	24Vdc, 0.083A	-	Evaluated together with unit	
DU Clutch	Tenryu Marusawa Co., Ltd.	TMC-3.5L-01	24Vdc, 0.083A	-	Evaluated together with unit	
MPF Solenoid	TDS Co., Ltd.	TDS-F06A-18	24Vdc, 300mA max.	-	Evaluated together with unit	
Junction Solenoid	TDS Co., Ltd.	TDS-08A	24Vdc, 1.0A max.	-	Evaluated together with unit	
Laser Diode	Rohm Co., Ltd.	RLD65NZN7-10B	Four provided. Class 3B, Wavelength: 670nm, Output Power: 15mW	-	Evaluated together with unit	
Scanner LED	KYOCERA Document Solutions Inc.	3V2R60115 or A0758XLE+XXXX (X may be any alphabetical number or any number 0 to 9)	24Vdc max. Classified as Exempt Group	IEC/EN62471	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional)	Kurabe Industrial Co., Ltd.	302R44407	240V, 12W	-	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional) - Thermal Fuses (Optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50128C or G4A50128C	250V, 10A, 128°C	EN/IEC 60691 UL60691	VDE UL(E40667)	
Cassette Heater for 120V (Optional)	Kurabe Industrial Co., Ltd.	302R44406	120V, 11.5W	-	Evaluated together with unit	
Cassette Heater for 120V (Optional) - Thermal Fuse (Optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50128C or G4A50128C	250V, 10A, 128°C	EN/IEC 60691 UL60691	VDE UL(E40667)	
Lithium Battery (BAT1) on Main PWB	Interchangeable	CR2032	3 V; max. 10mA reverse charging current. Protected by a diode and a 1 kohm resistor.	UL1642	UL	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Fuse (YF7) on Engine PWB for standard Document Processor Unit of Model TASKalfa 306ci, 306ci	SkyGate Co., Ltd.	1206FA or 1206FA- T	48Vdc, 4A	UL248-1/ UL248- 14	UL(E195833)	
Fuse (YF8) on Engine PWB for optional Paper Feeder Unit of Model TASKalfa 306ci, 306ci	SkyGate Co., Ltd.	1206FA or 1206FA- T	48Vdc, 4A	UL248-1/ UL248- 14	UL(E195833)	
Fuse (F2000) on Main PWB for optional Card Reader USB Connector, optional Key Board USB Connector and Memory USB Connector of Model TASKalfa 306ci, 306ci	SkyGate Co., Ltd.	1206FT	32Vdc, 4A	UL248-1/ UL248- 14	UL(E195833)	
Fuse (YF2001) on Main PWB for 5V Line Operation Panel of Model TASKalfa 306ci, 306ci	SkyGate Co., Ltd.	SCT	250V, T4A	IEC/EN60127-3 UL248-1/ UL248- 14	SEMKO UL(E195833)	
Fuse (YF2002) on Main PWB for 5V Line Operation Panel of Model TASKalfa 306ci, 306ci	SkyGate Co., Ltd.	1206FT	32Vdc, 2A	UL248-1/ UL248- 14	UL(E195833)	
Fuse (YF6) on Engine PWB for optional Document Processor Unit of Model TASKalfa 356ci, TASKalfa 406ci, 356ci, 406ci	SkyGate Co., Ltd.	1206FA or 1206FA- T	48Vdc, 4A	UL248-1/ UL248- 14	UL(E195833)	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Fuse (F101) on SWPS for optional Paper Feeder Unit of Model TASKalfa 356ci, TASKalfa 406ci, 356ci, 406ci	Conquer Electronics Co., Ltd.	MST series	250V, T4A	IEC/EN60127-3 UL248-1/ UL248-14	VDE UL(E82636)	
Fuse (F101), Alternate on SWPS for optional Paper Feeder Unit of Model TASKalfa 356ci, TASKalfa 406ci, 356ci, 406ci	Walter Electronic Co., Ltd. or Ever Island Electric Co., Ltd. and Walter Electric	2010 series	250V, T4A	IEC/EN60127-3 UL248-1/ UL248-14	VDE UL(E56092)	
Fuse (F101), Alternate on SWPS for optional Paper Feeder Unit of Model TASKalfa 356ci, TASKalfa 406ci, 356ci, 406ci	Hollyland Company Ltd.	5ET	250V, T4A	IEC/EN60127-3 UL248-1/ UL248-14	SEMKO UL(E156471)	
Fuse (YF13) on Main PWB for optional Card Reader USB Connector, optional Key Board USB Connector and Memory USB Connector of Model TASKalfa 356ci, TASKalfa 406ci, 356ci, 406ci	SkyGate Co., Ltd.	1206FT	32Vdc, 4A	UL248-1/ UL248-14	UL(E195833)	
Fuse (YF10) on Main PWB for 5V Line Operation Panel of Model TASKalfa 356ci, TASKalfa 406ci, 356ci, 406ci	SkyGate Co., Ltd.	1206FT	32Vdc, 4A	UL248-1/ UL248-14	UL(E195833)	
Hard Disk Drive (Optional)	Western Digital Technologies, Inc. or equivalent	WD3200LUCT-63C26Y0 or equivalent	0.55A max.	EN/IEC 60950-1 UL60950-1	TUV UL(E101559)	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Enclosure Option Plate	Interchangeable	Interchangeable	Steel, min. 1.0 mm thick.	-	Evaluated together with unit	
Enclosure Exit Cover, Rear Left Cover, Rear Right Cover, Rear Lower Cover, Right Cover, Right Rear Cover, Right Top Cover, Right Top Lid	Bayer MaterialScience	FR3006 HF	5VB, Min. 1.8mm thick	UL94	UL(E41613)	
Exit Front Cover, Exit Left Cover, Exit Top Cover, Front Cover, Front Upper Cover, Front Right Cover, ISU Rear Cover, Left Controller Cover, Left Lower Cover, Right Lower Cover, Tray Cover, Tray B Cover, Tray Rear Cover, Tray Rear Lid, Paper Stoppers, MPF Front Cursor, MPF Rear Cursor, MPF A Table, MPF B Table, MPF C Table, MPF D Table, ISU Bottom Frame, ISU Top Frame, Cassette, Operation Cover, Operation Rear Cover, Operation Rear Lid, Hinge Lid, Panel Lid, Release Hook Cover	Interchangeable	Interchangeable	Min. HB75	UL94	UL	
Panel Cover	Interchangeable	Interchangeable	Min. HB75	UL94	UL	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Document Processor Unit (Standard) for Model TASKalfa 306ci and 306ci						
Feed Motor	Nidec Servo Corp.	KV4239-T3B006	Two provided. Stepper type, 24Vdc, 0.8A	-	Evaluated together with unit	
Junction Motor	Minebea Co., Ltd.	PM35L-048-MIM2	Stepper type, 24Vdc, 0.7A (peak)	-	Evaluated together with unit	
Front Cover, Front B Cover, Rear A Cover, Rear B Cover, PF Cover, Cursor Cover, Front Cursor, Rear Cursor, Main Table, Lower Guide, Lower Left Guide, Lower Right Guide, DP Base, Base Stopper	Interchangeable	Interchangeable	Min. HB75	UL94	UL	
Document Processor, Model DP-5100 (Option) for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci						
Feed Motor	Nidec Servo Corp.	KV4239-T3B006	Two provided. Stepper type, 24Vdc, 0.8A	-	Evaluated together with unit	
Junction Motor	Minebea Co., Ltd.	PM35L-048-MIM2	Stepper type, 24Vdc, 0.7A (Peak)	-	Evaluated together with unit	
DP Base, Front Cover, Front B Cover, PF Cover, Rear A Cover, Rear B Cover, Size Switch Cover, Table Cover, Front Cursor, Rear Cursor, Cursor Cover, Main Table, Base Stopper, Lower Guide, Lower Left Guide, Lower Right Guide	Interchangeable	Interchangeable	Min. HB75	UL94	UL	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Document Processor, Model DP-5110 (Option) for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci						
Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN/IEC61058-1 UL1054	ENEC/VDE UL(E41515)	
Feed Motor	Nidec Servo Corp.	KV4239-T3B007	Two provided. Stepper type, 24Vdc, 0.8A	-	Evaluated together with unit	
Feed Clutch	Tenryu Marusawa Co., Ltd.	TMC-3.5L-01	24Vdc, 0.083A	-	Evaluated together with unit	
CIS	Creative Sensor Inc.	CA-4B4L or CA4B4L	3.6Vdc max. Classified as Exempt Group	IEC/EN62471	Evaluated together with unit	
DP Base	Bayer MaterialScience	FR3006 HF	5VB, Min. 1.8mm thick	UL94	UL(E41613)	
Base Cover, Front Cover, Front B Cover, PF Cover, Rear A Cover, Rear B Cover, Size Switch Cover, Table Cover, Front Cursor, Rear Cursor, Cursor Cover, Main Table, Base Stopper	Interchangeable	Interchangeable	Min. HB75	UL94	UL	
Job Separator, Model JS-5100 (Option)						
Eject Tray	Interchangeable	Interchangeable	Min. HB75	UL94	UL	
PI Mount, Tray Eject Cover	Interchangeable	Interchangeable	Min. HB75	UL94	UL	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Finisher, Model DF-5100 (Option)						
Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN/IEC61058-1 UL1054	ENEC/VDE UL(E41515)	
Eject Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	--	Evaluated together with unit	
Stapler Shift Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	--	Evaluated together with unit	
Eject Release Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	--	Evaluated together with unit	
Middle Motor	Minebea Co., Ltd. or Minebea Motor Manufacturing Corp.	17PM-J349-G2VS	Stepper type 24Vdc, 1.3A	-	Evaluated together with unit	
Knock Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK560A	Stepper type 24Vdc, 500mA	-	Evaluated together with unit	
Width Adjustment Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Two provided Stepper type 24Vdc, 300mA	--	Evaluated together with unit	
Staple Motor	Fuji Micro Co., Ltd.	FM-116K-7PA-CF	24Vdc, 1.09A	--	Evaluated together with unit	
Staple Motor, Alternate	Nidec Servo Co., Ltd.	DME35BF-001	24Vdc, 1.09A	--	Evaluated together with unit	
Tray Motor	Mabuchi Motor Co., Ltd.	RK-370CA-11670	24V, 130mA max.	--	Evaluated together with unit	
Paper Hold Solenoid	TDS Co., Ltd.	TDS-08A	24V dc, 1A max.	--	Evaluated together with unit	
Rail Stay	Interchangeable	Interchangeable	Steel, min. 1.0 mm thick.	-	Evaluated together with unit	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Front L Cover, Front R Cover, Rear L Cover, UP L Cover, UP R Cover, Finisher Partition	Bayer MaterialScience	FR3006 HF	5VB, Min. 1.8mm thick	UL94	UL(E41613)	
Tray A, Tray B, Tray C	Interchangeable	Interchangeable	Min. HB75	UL94	UL	
Finisher, Model DF-5110 (Option) for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci						
Front Cover Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN/IEC61058-1 UL1054	ENEC/VDE UL(E41515)	
Top Cover Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN/IEC61058-1 UL1054	ENEC/VDE UL(E41515)	
Eject Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	--	Evaluated together with unit	
Stapler Shift Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	--	Evaluated together with unit	
Eject Release Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Carry Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Middle Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Knock Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Width Adjustment Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Two provided Stepper type 24Vdc, 300mA	--	Evaluated together with unit	
Staple Motor	Fuji Micro Co., Ltd.	FM-116K-7PA-CF	24Vdc, 1.09A	--	Evaluated together with unit	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Staple Motor, Alternate	Nidec Servo Co., Ltd.	DME35BF-001	24Vdc, 1.09A	--	Evaluated together with unit	
Tray Motor	Mabuchi Motor Co., Ltd.	RS-385PH-16140	24V, 420mA max.	--	Evaluated together with unit	
Feed Solenoid	TDS Co., Ltd.	TDS-08A	24V dc, 400mA max.	--	Evaluated together with unit	
Enclosure Top Cover, Top Open Cover, Front Cover, Front Open Cover, Rear Cover, Left Upper Cover, Finisher Partition	Bayer MaterialScience	FR3006 HF	5VB, Min. 1.8mm thick	UL94	UL(E41613)	
Main Tray, Bottom Cover, Foot Covers, Leg Covers	Interchangeable	Interchangeable	Min. HB75	UL94	UL	
Finisher, Model DF-5120 (Option) for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci						
Front Cover Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN/IEC61058-1 UL1054	ENEC/VDE UL(E41515)	
Eject Manual Staple Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN/IEC61058-1 UL1054	ENEC/VDE UL(E41515)	
Eject Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	--	Evaluated together with unit	
Stapler Shift Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	--	Evaluated together with unit	
Eject Release Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Carry Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Middle Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Knock Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Width Adjustment Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Two provided Stepper type 24Vdc, 300mA	--	Evaluated together with unit	
Staple Motor	Fuji Micro Co., Ltd.	FM-116K-7PA-CF	24Vdc, 1.09A	--	Evaluated together with unit	
Staple Motor, Alternate	Nidec Servo Co., Ltd.	DME35BF-001	24Vdc, 1.09A	--	Evaluated together with unit	
Tray Motor	Nidec Corp.	48M069G010	24V dc, 2.6A max.	--	Evaluated together with unit	
Punch Motor	Shenzhen Weizhen Motor Co., Ltd.	WRS-555PH-3049	24Vdc, 5.5A max.	-	Evaluated together with unit	
Punch Shift Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	--	Evaluated together with unit	
Eject Clutch	Daiken Co., Ltd. or Sinfonia Microtec Co., Ltd.	MCA-50T	24Vdc, 0.104A	-	Evaluated together with unit	
Sub Tray Junction Solenoid	TDS Co., Ltd.	TDS-08A	24V dc, 400mA max.	--	Evaluated together with unit	
Feed Solenoid	TDS Co., Ltd.	TDS-08A	24V dc, 400mA max.	--	Evaluated together with unit	
Hole Change Solenoid	TDS Co., Ltd.	TDS-KN10SL	24Vdc, 1.3A max.	--	Evaluated together with unit	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Enclosure Top Cover, Top B Cover, Front Cover, Front Lower Cover, Front Open Cover, Rear Cover, Left Lower Cover, Main Exit Cover, Turn Guide, Finisher Partition	Bayer MaterialScience	FR3006 HF	5VB, Min. 1.8mm thick	UL94	UL(E41613)	
Main Tray, Eject Tray	Interchangeable	Interchangeable	Min. HB75	UL94	UL	
Operation Cover	Interchangeable	Interchangeable	Min. HB75	UL94	UL	
Mailbox, Model MT-5100 (Option)						
Drive Motor	Mitsumi Electric Co., Ltd.	M49SP-2K	Stepper type 24Vdc, 0.8A (Peak)	-	Evaluated together with unit	
Side L Covers, Side R Covers, Vertical Cover, Top Cover, Bottom Cover, Feed In Upper Guide, Feed In Lower Guide	Bayer MaterialScience	FR3006 HF	5VB, Min. 1.8mm thick	UL94	UL(E41613)	
Foot Covers, Eject Trays	Interchangeable	Interchangeable	Min. HB75	UL94	UL	
Hole Punch Kit, Model PH-5100 and PH-5110 (Option) for Finisher Model DF-5110						
Punch Motor	Shenzhen Weizhen Motor Co., Ltd.	WRS-555PH-3049	24Vdc, 5.5A max.	-	Evaluated together with unit	
Shift Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	--	Evaluated together with unit	
PH Solenoid	TDS Co., Ltd.	TDS-KN10SL	24Vdc, 1.3A max.	--	Evaluated together with unit	

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Attachment Kit, Model AK-5100 (Option) for Finisher Model DF-5110, DF-5120 and Mailbox Model MT-5100						
Conveying Motor	Minebea Co., Ltd.	PM42S-F48-MIN9	Stepper type 24Vdc, 310mA (peak)	--	Evaluated together with unit	
Cooling Fan	Nidec Corp.	D05F-24PH 17 (EX)	24Vdc, 0.12A max.	--	Evaluated together with unit	
Lower Guide Cover, Joint Cover	Bayer MaterialScience	FR3006 HF	5VB, Min. 1.8mm thick	UL94	UL(E41613)	
Guide Upper Cover, Upper Right Guide, Lower Guide	Teijin Limited Resin and Plastic	MN-3600H	5VB, Min. 2.0mm thick	UL94	UL(E98529)	
Paper Feeder, Model PF-5120 (Option)						
Feed Motor	Nidec Corp.	42M069F251	24Vdc, 1.1A max. Brushless Motor	-	Evaluated together with unit	
Lift Motor	Standard Motor Co., Ltd.	RC370-KT-081000	24Vdc, 110mA max.	-	Evaluated together with unit	
Feed Clutch	Tenryu Marusawa Co., Ltd.	TMC-3.5L-01	24Vdc, 0.083A	-	Evaluated together with unit	
Vertical Conveying Clutch	Tenryu Marusawa Co., Ltd.	TMC-3.5L-01	24Vdc, 0.083A	-	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional)	Kurabe Industrial Co., Ltd.	302R44407	240V, 12W	-	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional) - Thermal Fuses (Optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50128C or G4A50128C	250V, 10A, 128°C	EN/IEC 60691 UL60691	VDE UL(E40667)	
Cassette Heater for 120V (Optional)	Kurabe Industrial Co., Ltd.	302R44406	120V, 11.5W	-	Evaluated together with unit	
Cassette Heater for 120V (Optional) - Thermal Fuse (Optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50128C or G4A50128C	250V, 10A, 128°C	EN/IEC 60691 UL60691	VDE UL(E40667)	

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Enclosure Rear Cover	Bayer MaterialScience	FR3006 HF	5VB, Min. 1.8mm thick	UL94	UL(E41613)	
Enclosure Left Cover, Conveying Cover, Right Front Cover, Right Rear Cover, Cassette	Interchangeable	Interchangeable	Min. HB75	UL94	UL	
Paper Feeder, Model PF-5130 (Option) (Provided with PF-5120)						
Feed Motor	Nidec Corp.	42M069F251	24Vdc, 1.1A max. Brushless Motor	-	Evaluated together with unit	
Lift Motor	Standard Motor Co., Ltd.	RC370-KT-081000	Two provided. 24Vdc, 110mA max.	-	Evaluated together with unit	
Feed Clutch	Tenryu Marusawa Co., Ltd.	TMC-3.5L-01	Two provided. 24Vdc, 0.083A	-	Evaluated together with unit	
Vertical Conveying Clutch	Tenryu Marusawa Co., Ltd.	TMC-3.5L-01	Two provided. 24Vdc, 0.083A	-	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional)	Kurabe Industrial Co., Ltd.	302RH4405 or 303PZ4403	240V, 16W	-	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional) - Thermal Fuses (Optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50128C or G4A50128C	250V, 10A, 128°C	EN/IEC 60691 UL60691	VDE UL(E40667)	
Cassette Heater for 120V (Optional)	Kurabe Industrial Co., Ltd.	302RH4404 or 303PZ4402	120V, 15W	-	Evaluated together with unit	
Cassette Heater for 120V (Optional) - Thermal Fuse (Optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50128C or G4A50128C	250V, 10A, 128°C	EN/IEC 60691 UL60691	VDE UL(E40667)	
Enclosure Rear Cover	Bayer MaterialScience	FR3006 HF	5VB, Min. 1.8mm thick	UL94	UL(E41613)	

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Enclosure Left Cover, Right Cover, Conveying Cover, Front Lower Cover, Cassette	Interchangeable	Interchangeable	Min. HB75	UL94	UL	
Paper Feeder, Model PF-5140 (Option) (Provided with PF-5120)						
Feed Motor	Nidec Corp.	42M069F251	24Vdc, 1.1A max. Brushless Motor	-	Evaluated together with unit	
Lift Motor	Daiken Co., Ltd. or Sinfonia Microtec Co., Ltd.	303NF4401	24Vdc, 550mA max.	-	Evaluated together with unit	
Feed Clutch	Tenryu Marusawa Co., Ltd.	TMC-3.5L-01	24Vdc, 0.083A	-	Evaluated together with unit	
Vertical Conveying Clutch	Tenryu Marusawa Co., Ltd.	TMC-3.5L-01	24Vdc, 0.083A	-	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional)	Kurabe Industrial Co., Ltd.	302RH4405 or 303PZ4403	240V, 16W	-	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional) - Thermal Fuses (Optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50128C or G4A50128C	250V, 10A, 128°C	EN/IEC 60691 UL60691	VDE UL(E40667)	
Cassette Heater for 120V (Optional)	Kurabe Industrial Co., Ltd.	302RH4404 or 303PZ4402	120V, 15W	-	Evaluated together with unit	
Cassette Heater for 120V (Optional) - Thermal Fuse (Optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50128C or G4A50128C	250V, 10A, 128°C	EN/IEC 60691 UL60691	VDE UL(E40667)	
Enclosure Rear Cover	Bayer MaterialScience	FR3006 HF	5VB, Min. 1.8mm thick	UL94	UL(E41613)	
Enclosure Front Deck Cover, Right Cover, Left Cover, Conveying Cover	Interchangeable	Interchangeable	Min. HB75	UL94	UL	

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

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
<i>Fax Kit, Model FAX System 10 (Option) for Model TASKalfa 356ci, TASKalfa 406ci, 356ci and 406ci, and Model FAX System 11 (Option) for Model TASKalfa 306ci and 306ci</i>						
NCU Board	--	--	Comprised of the following components:	--	--	
Surge Absorbers (SA10, SA11)	Okaya Electric Industries Co., Ltd.	RA-102M-C6	1kV	UL1449	UL (E322107)	
Surge Absorbers (SA10, SA11), Alternate	Okaya Electric Industries Co., Ltd.	RA-501M-C6	500V	UL1449	UL (E322107)	
Surge Absorber (SA12)	Littelfuse/Teccor	SIDACtor type, P3100SCLRP	Switching Voltage 350V	UL497B	UL (E133083)	
Optical Isolator (PC10)	Cosmo Electronics Corporation	K3010	Ext. cr.: ≥ 5 mm, Int. cr. ≥ 4 mm, Isolation voltage: min. AC 5000V	IEC/EN 60950-1 UL 1577	FIMKO UL(E169586)	
Optical Isolator (PC10), Alternate	Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div.	TLP620, TLP627, TLP621	Ext. cr.: > 8 mm, Int. cr. = thermal cycling tested (2.10.11), Isolation voltage: min. AC 5000V	IEC/EN 60950-1 UL 1577	SEMKO UL(E67349) UL(E152349)	
Optical Isolator (PC10), Alternate	Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div.	TLP320 or TLP629	Ext. cr.: > 6.4 mm, Int. cr. = thermal cycling tested (2.10.11), Isolation voltage: min. AC 5000V	IEC/EN 60950-1 UL 1577	BSI UL(E67349) UL(E152349)	
Optical Isolator (PC10), Alternate	Lite-On Technology Corp.	LTV-814H	Ext. cr.: ≥ 7 mm, Int. cr. ≥ 1.5 mm, Isolation voltage: min. AC 5300V	IEC/EN 60950-1 UL 1577	VDE UL(E113898)	
Optical Isolator (PC11) for 120V and 220 – 240V	Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div.	TLP620, TLP627, TLP621	Ext. cr.: > 8 mm, Int. cr. = thermal cycling tested (2.10.11), Isolation voltage: min. AC 5000V	IEC/EN 60950-1 UL 1577	SEMKO UL(E67349) UL(E152349)	
Optical Isolator (PC11) for 120V and 220 – 240V Alternate	Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div.	TLP320 or TLP629	Ext. cr.: > 6.4 mm, Int. cr. = thermal cycling tested (2.10.11), Isolation voltage: min. AC 5000V	IEC/EN 60950-1 UL 1577	BSI UL(E67349) UL(E152349)	

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

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity	
Optical Isolator (PC11) for 120V and 220 – 240V Alternate	Lite-On Technology Corp.	LTV-814H	Ext. cr.: ≥ 7 mm, Int. cr. ≥ 1.5 mm, Isolation voltage: min. AC 5300V	IEC/EN 60950-1 UL 1577	VDE UL(E113898)	
Capacitors (C12, C13)	Murata Mfg. Co., Ltd.	KY	250V, 220pF-680pF, Y2 type	IEC/EN60384-14 UL1414	SEMKO UL(E37921)	
Relay (RLY10)	Fujitsu Components	FTR-C2	Contact: 30Vdc, 1.0A Coil: 5Vdc	IEC/EN60950-1 UL508	BSI UL(E63615)	
Relay (RLY12) for 220 - 240V	Tyco Electronics	OUAZ	Contact: 24Vdc, 1.0A Coil: 5Vdc	IEC/EN61810-1 UL508	TUV UL(E82292)	
Relay (RLY12) for 220 - 240V, Alternate	Xiamen Hongfa Electroacoustic Co., Ltd.	HFD41 or HFD41A	Contact: 30Vdc, 1.0A Coil: 5Vdc	UL508	UL(E133481)	
Fuse (F11) for 220 - 240V	Littelfuse Inc.	461 Series	1.25A, 600V	UL248-1/UL248- 14	UL(E10480)	
Fuse (F11) for 220 - 240V, Alternate	Skygate Co., Ltd.	20N	1.25A, 125V	UL248-1/UL248- 14	UL(E195833)	
PTC Thermistor (POS10) for 120V	Murata Mfg. Co., Ltd.	PTGL06BB220N*** *** (*: any alphanumeric)	Vmax: 250V, Imax: 0.6A, 22 ohms at 25°C	UL1434	UL(E137188)	
Modular Jacks (JK10, JK11)	JST Mfg. Co., Ltd.	MJ-62J-RD	Type RJ-11	UL1863	UL(E174260)	
Modular Jacks (JK10, JK11), Alternate	Wenzhou Yihua Connector Co., Ltd.	JK002	Type RJ-11	UL1863	UL(E166108)	
Connector (CN10)	Iriso Electronics Co., Ltd	IMSA-9210 Series	250V, 3A	UL1977	UL(E115889)	
PWB	Interchangeable	Interchangeable	Min. V-1, Min. 105°C	UL796	UL	
FCB Board	--	--	Comprised of the following components:	--	--	

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Clause	Requirement + Test	Result - Remark	Verdict

Capacitors (C206, C207)	Murata Mfg. Co., Ltd.	GF	250V, 33pF, Y2 type	EN/IEC60384-14 UL60950-1	SEMKO UL(E316111)
Capacitors (C206, C207), Alternate	Murata Mfg. Co., Ltd.	KY	250V, 33pF, Y2 type	IEC/EN60384-14 UL1414 UL60384-14	SEMKO UL(E37921)
Capacitor (C205) (Optional)	Murata Mfg. Co., Ltd.	GF	250V, 10pF-220pF, Y2 type	EN/IEC60384-14 UL60950-1	SEMKO UL(E316111)
Capacitor (C205) (Optional), Alternate	Murata Mfg. Co., Ltd.	KY	250V, 10pF-220pF, Y2 type	IEC/EN60384-14 UL1414 UL60384-14	SEMKO UL(E37921)
PWB	Interchangeable	Interchangeable	Min. V-1, Min. 105°C	UL796	UL

Supplementary information:

Mark(s) of conformity: Provided evidence ensures the agreed level of compliance. See OD-CB2039.

1.5.1	TABLE: Opto Electronic Devices	P
Manufacturer.....: --		
Type.....: --		
Separately tested.....: --		
Bridging insulation: --		
External creepage distance: --		
Internal creepage distance: --		
Distance through insulation: --		
Tested under the following conditions: --		
Input.....: --		
Output.....: --		
supplementary information		
See appended table 1.5.1 for details		

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Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: Electrical data (in normal conditions)						P
U (V)	I (A)	I _{rated} (A)	P (W)	Fuse #	I _{fuse} (A)	Condition/status	
Model TASKalfa 406ci with PF-5120, PF-5140, DP-5110, AK-5100, DF-5120 and FAX SYSTEM (10)							
198V/50Hz	5.4	—	1070	*1	1.3/4.1	Warm up	
198V/60Hz	5.4	—	1067	*1	1.3/4.1	Warm up	
220V/50Hz	5.6	5.9	1210	*1	1.2/4.4	Warm up	
220V/60Hz	5.6	5.9	1207	*1	1.2/4.4	Warm up	
240V/50Hz	5.7	5.9	1342	*1	1.1/4.6	Warm up	
240V/60Hz	5.7	5.9	1341	*1	1.1/4.6	Warm up	
264V/50Hz	5.8	—	1501	*1	1.0/4.8	Warm up	
264V/60Hz	5.8	—	1500	*1	1.0/4.8	Warm up	
198V/50Hz	4.2	—	815	*1	1.2/3.0	Copying	
198V/60Hz	4.2	—	819	*1	1.2/3.0	Copying	
220V/50Hz	4.3	5.9	925	*1	1.1/3.2	Copying	
220V/60Hz	4.3	5.9	927	*1	1.1/3.2	Copying	
240V/50Hz	4.3	5.9	1033	*1	1.0/3.3	Copying	
240V/60Hz	4.3	5.9	1030	*1	1.0/3.3	Copying	
264V/50Hz	4.4	—	1138	*1	0.9/3.5	Copying	
264V/60Hz	4.4	—	1135	*1	0.9/3.5	Copying	
Model 406ci with PF-5120, PF-5140, DP-5110, AK-5100, DF-5120 and FAX SYSTEM (10)							
108V/60Hz	10.2	—	1075	*1	2.3/7.9	Warm up	
120V/60Hz	10.4	10.8	1220	*1	2.0/8.4	Warm up	
132V/60Hz	10.6	—	1370	*1	1.8/8.8	Warm up	
108V/60Hz	10.0	—	1080	*1	2.2/7.8	Copying	
120V/60Hz	10.2	10.8	1198	*1	1.9/8.3	Copying	
132V/60Hz	10.4	—	1341	*1	1.7/8.7	Copying	
Model TASKalfa 306ci with PF-5120, PF-5130, DF-5100 and FAX SYSTEM(11)							
198V/50Hz	4.44	—	862	*2	0.94/3.5	Warm up	
198V/60Hz	4.44	—	860	*2	0.94/3.5	Warm up	
220V/50Hz	4.56	5.0	983	*2	0.86/3.7	Warm up	
220V/60Hz	4.56	5.0	985	*2	0.86/3.7	Warm up	
240V/50Hz	4.75	5.0	1117	*2	0.85/3/9	Warm up	

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Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: Electrical data (in normal conditions)						P
U (V)	I (A)	I _{rated} (A)	P (W)	Fuse #	I _{fuse} (A)	Condition/status	
240V/50Hz	4.75	5.0	1115	*2	0.85/3/9	Warm up	
264V/50Hz	4.84	—	1250	*2	0.74/4.1	Warm up	
264V/60Hz	4.84	—	1251	*2	0.74/4.1	Warm up	
198V/50Hz	4.0	—	776	*2	1.3/2.7	Copying	
198V/60Hz	4.0	—	773	*2	1.3/2.7	Copying	
220V/50Hz	4.1	5.0	882	*2	1.2/2.9	Copying	
220V/60Hz	4.1	5.0	880	*2	1.2/2.9	Copying	
240V/50Hz	4.1	5.0	964	*2	1.1/3.0	Copying	
240V/60Hz	4.1	5.0	967	*2	1.1/3.0	Copying	
264V/50Hz	4.1	—	1060	*2	1.0/3.1	Copying	
264V/60Hz	4.1	—	1055	*2	1.0/3.1	Copying	
Model 306ci with PF-5120, PF-5130, DF-5100 and FAX SYSTEM(11)							
108V/60Hz	8.7	—	924	*2	1.8/6.9	Warm up	
120V/60Hz	9.0	9.5	980	*2	1.7/7.3	Warm up	
132V/60Hz	9.3	—	1201	*2	1.6/7.7	Warm up	
108V/60Hz	8.2	—	868	*2	2.7/5.5	Copying	
120V/60Hz	8.2	9.5	984	*2	2.3/5.9	Copying	
132V/60Hz	8.3	—	1070	*2	2.2/6.1	Copying	
supplementary information:							
*1: F1 for Trans / F3 for Fuser, on Switching Power Supply Unit, Model ADP-385AN AAA or ADP-385BN AAA.							
*2: F1 for Trans / F51 for Fuser, on Switching Power Supply Unit, Model ADP-385AN AAA or ADP-385BN AAA.							

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Clause	Requirement + Test	Result - Remark	Verdict

2.1.1.5 c) 1)	TABLE: max. V, A, VA test				P
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
Switching Power Supply Unit, Model ADP-385BN AA					
24V	10.154	24.4	17.7	23.8*17.7=421 ¹⁾	
5V	9.2	5.17	10.2	4.49*10.2=45.8 ¹⁾	
Switching Power Supply Unit, Model ADP-385AN AA					
24V	10.154	24.4	17.6	23.8*17.6=419 ¹⁾	
5V	9.2	5.15	10.2	5.15*10.2=52.5 ¹⁾	
Switching Power Supply Unit, Model MPW3162M					
24V	7.0	24.2	13.8	24.1*13.8=333 ¹⁾	
Switching Power Supply Unit, Model MPW3161M					
24V	7.0	24.2	13.5	24.1*13.5=328 ¹⁾	
supplementary information:					
¹⁾ not touchable					

2.1.1.5 c) 2)	TABLE: stored energy		N/A
Capacitance C (µF)	Voltage U (V)	Energy E (J)	
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supplementary information:			
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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
Switching Power Supply Unit, Model ADP-385BN AA, Supply Voltage: 264V 50Hz				
T1 Pin 11 - pin 9 (GND)		35.2	--	T1
T1 Pin 13 - pin 9 (GND)		34.8	--	T1
D101 cathode – T1 pin 9 (GND)		--	25.0	--
T201 Pin 10 – pin 9(GND)		42.8	--	--
D303 cathode – T201 pin9 (GND)		--	6.76	D303, D304
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
Supply voltage: 264V, 50Hz				
SWPS, Model ADP-385BN AA				
5V output (D303 shorted)		0 Vdc (Output shut down in 0.1 sec after D303 shorted.)		
5V output (D304 shorted)		0 Vdc (Output shut down in 0.1 sec after D304 shorted.)		
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
Switching Power Supply Unit, Model ADP-385AN AA, Supply Voltage: 132V 60Hz				
T1 Pin 11 - pin 9 (GND)		34.8	--	T1
T1 Pin 13 - pin 9 (GND)		35.4	--	T1
D101 cathode – T1 pin 9 (GND)		--	25.0	--
T201 Pin 10 – pin 9(GND)		41.4	--	T201
D303 cathode – T201 pin9 (GND)		--	6.60	D303, D304
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
Supply voltage: 132V, 60Hz				
SWPS, Model ADP-385AN AA				
5V output (D303 shorted)		0 Vdc (Output shut down in 0.1 sec after D303 shorted.)		
5V output (D304 shorted)		0 Vdc (Output shut down in 0.1 sec after D304 shorted.)		
supplementary information:				
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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
Switching Power Supply Unit, Model MPW3162M Supply Voltage: 264V 50Hz				
T1 pin 9 – pin 16 (GND)		54.8	--	--
D101 cathode – pin 16 (GND)		--	32.4	D101
D102 cathode – pin 16 (GND)		--	32.4	D102
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
Supply voltage: 264V, 50Hz				
SWPS, Model MPW3162M				
24V output (D101 shorted)		0 Vdc (Output shut down in 0.1 sec after D101 shorted.)		
24V output (D102 shorted)		0 Vdc (Output shut down in 0.1 sec after D102 shorted.)		
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
Switching Power Supply Unit, Model MPW3161M Supply Voltage: 132V 60Hz				
T1 pin 9 – pin 16 (GND)		59.2	--	--
D101 cathode – pin 16 (GND)		--	34.4	D101
D102 cathode – pin 16 (GND)		--	34.4	D102
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
Supply voltage: 132V, 60Hz				
SWPS, Model MPW3161M				
24V output (D101 shorted)		0 Vdc (Output shut down in 0.1 sec after D101 shorted.)		
24V output (D102 shorted)		0 Vdc (Output shut down in 0.1 sec after D102 shorted.)		
supplementary information:				
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Clause	Requirement + Test	Result - Remark	Verdict

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
High Voltage PWB, Main , Model MPH7713 Supply Voltage: 24V				
B1351/B1251/B1151/B1051 for Vslv pin6 – CN1 pin11 (GND)		1.41k	--	--
B1351/B1251/B1151/B1051 for Vslv pin1 – CN1 pin11 (GND)		630	--	--
B1351/B1251/B1151/B1051 for Vslv pin3 – CN1 pin11 (GND)		0	--	B1351/B1251/B1151/B1051
B1351/B1251/B1151/B1051 for Vslv pin4 – CN1 pin11 (GND)		11.3	--	B1351/B1251/B1151/B1051
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
High Voltage PWB, Main , Model MPH7713 Supply Voltage: 24V				
B1351/B1251/B1151/B1051 pin3 – pin6 short		26.8Vpk		
supplementary information:				
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Clause	Requirement + Test	Result - Remark	Verdict

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
High Voltage PWB, Main , Model MPH7713 Supply Voltage: 24V				
B551 for output T2 – CN1 pin11 (GND)		--	-6.2k	--
B551 for output T2 pin7 – CN1 pin11 (GND)		660	--	--
B551 for output T2 pin3 – CN1 pin11 (GND)		--	24	B551
B551 for output T2 pin2 – CN1 pin11 (GND)		--	0	B551
B551 for output T2 pin4 – CN1 pin11 (GND)		--	1.2	B551
B551 for output T2 pin1 – CN1 pin11 (GND)		3.4	--	B551
B551 for output T2 pin6 – CN1 pin11 (GND)		3.4	--	B551
B551 for output T2 pin5 – CN1 pin11 (GND)		5.8	--	B551
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
High Voltage PWB, Main , Model MPH7713 Supply Voltage: 24V				
Output T2 of B551 – B551 pin 3 short		26.8Vpk		
supplementary information:				
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Clause	Requirement + Test	Result - Remark	Verdict

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
High Voltage PWB, Main , Model MPH7713 Supply Voltage: 24V				
B501 for output CL pin7 – CN1 pin11 (GND)		--	-630	
B501 for output CL pin9 – CN1 pin11 (GND)		--	-3.5k	
B501 for output CL pin6 – CN1 pin11 (GND)		--	24	B501
B501 for output CL pin5 – CN1 pin11 (GND)		--	24	B501
B501 for output CL pin4 – CN1 pin11 (GND)		6.4	--	B501
B501 for output CL pin3 – CN1 pin11 (GND)		0	--	B501
B501 for output CL pin2 – CN1 pin11 (GND)		3.4	--	B501
B501 for output CL pin1 – CN1 pin11 (GND)		0	--	B501
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
High Voltage PWB, Main , Model MPH7713 Supply Voltage: 24V				
B501 for output CL pin5 - pin 9 short		26.8Vpk		
supplementary information:				
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Clause	Requirement + Test	Result - Remark	Verdict

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
High Voltage PWB, Model MPH7712 Supply Voltage: 24V				
B151, B251, B351, B451 for output M pin5 to gnd		2.48k	--	
B151, B251, B351, B451 for output M pin1 to gnd		--	26.4	B151, B251, B351, B451
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
High Voltage PWB, Main , Model MPH7713 Supply Voltage: 24V				
B501 for output CL pin5 - pin 9 short		26.8Vpk		
supplementary information:				
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Clause	Requirement + Test	Result - Remark	Verdict

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
High Voltage PWB, Model MPH7712 Supply Voltage: 24V				
B551 for output T2 to gnd		5.76k	--	--
B551 pin1 to gnd		--	26.4	B551
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
High Voltage PWB, Model MPH7712 Supply Voltage: 24V				
B551 pin1 – Output T2 short		26.4Vpk		
supplementary information:				
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Clause	Requirement + Test	Result - Remark	Verdict

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
High Voltage PWB, Model MPH7712 Supply Voltage: 24V				
B501 for output CL pin7 to gnd		1.26k	--	--
B501 pin5 to gnd		--	26.4	B501
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
High Voltage PWB, Model MPH7712 Supply Voltage: 24V				
B501 pin5 – pin7 short		26.4Vpk		
supplementary information:				
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Clause	Requirement + Test	Result - Remark	Verdict

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components	
	V peak	V d.c.		
High Voltage PWB, Model MPH7712 Supply Voltage: 24V				
B661,B761,B861,B961 for output Vslv pin6 to gnd	2.2k	--	--	
B661,B761,B861,B961 for output Vslv pin4 to gnd	19.9	--	B661,B761,B861,B961	
Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)			
High Voltage PWB, Model MPH7712 Supply Voltage: 24V				
B661,B761,B861,B961 pin6 – pin4 short	26.4Vpk			
supplementary information:				
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Clause	Requirement + Test	Result - Remark	Verdict

2.4.2	TABLE: Limited current circuit measurement					P
Location	Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments	
SWPS Model: ADP-385BN AA(Input 240V)						
CY1 (No fault)	121Vpk	0.045	--	0.7	Measured by Annex D	
CY1 (C34 short)	--	0.045	--	0.7	Measured by Annex D	
CY2 (No fault)	121Vpk	0.043	--	0.7	Measured by Annex D	
CY2 (R221 short)	--	0.043	--	0.7	Measured by Annex D	
SWPS Model: ADP-385AN AA(Input 120V)						
CY1 (No fault)	51Vpk	0.029	--	0.7	Measured by Annex D	
CY1 (C34 short)	--	0.029	--	0.7	Measured by Annex D	
CY2 (No fault)	51Vpk	0.031	--	0.7	Measured by Annex D	
CY2 (R221 short)	--	0.031	--	0.7	Measured by Annex D	
SWPS Model: MPW3162M (Input 240V)						
C50 (No fault)	358 Vpk	0.32	--	0.7	Measured by Annex D	
C50 (C16 short)	--	0.31	--	0.7	Measured by Annex D	
SWPS Model: MPW3161M (Input 120V)						
C50 (No fault)	168 Vpk	0.175	--	0.7	Measured by Annex D	
C50 (C16 short)	--	0.17	--	0.7	Measured by Annex D	
High voltage PWB Model: MPH7713(Input 24V)						
Output T2 (No fault)	-6.20kVdc	0.195	--	2.0	Measured by at 2kΩ, calculated.	
Output T2 (IC16 pin3 open)	-8.10kVdc	1.5	--	2.0	Measured by at 2kΩ, calculated. Capacitance of output was 0.25nF. Limit 45/8.1=5.56nF.	
Output CL(No fault)	-3.5kVdc	0.03	--	0.7	Measured by at 2kΩ, calculated.	
Output CL(IC1 pin2-3 short)	-6.3kVdc	0.34	--	0.7	Measured by at 2kΩ, calculated. Capacitance of output was 0.19nF. Limit 45/6.3=7.14nF.	
Output PB(No fault)	240Vdc	0.01	--	0.7	Measured by Annex D	
Output PB(IC1 pin2-3 short)	880Vdc	0.02	--	0.7	Measured by Annex D, Capacitance of output was 0.12nF. Limit 45/0.88=51.1nF.	
Output M(K) (No fault)	2.47kVp-p	0.18	--	0.7	Measured by Annex D	

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Clause	Requirement + Test	Result - Remark	Verdict

2.4.2	TABLE: Limited current circuit measurement					P
Output M(K) (VR2 pin3 open)	2.76kVp-p	0.19	--	0.7	Measured by Annex D. Capacitance of output was 0.12nF. Limit 45/1.38=32.6nF.	
Output M(M) (No fault)	2.47kVp-p	0.18	--	0.7	Measured by Annex D	
Output M(M) (VR2 pin3 open)	2.76kVp-p	0.19	--	0.7	Measured by Annex D. Capacitance of output was 0.12nF. Limit 45/1.38=32.6nF.	
Output M(C) (No fault)	2.47kVp-p	0.18	--	0.7	Measured by Annex D	
Output M(C) (VR2 pin3 open)	2.76kVp-p	0.19	--	0.7	Measured by Annex D. Capacitance of output was 0.12nF. Limit 45/1.38=32.6nF.	
Output M(Y) (No fault)	2.47kVp-p	0.18	--	0.7	Measured by Annex D	
Output M(Y) (VR2 pin3 open)	2.76kVp-p	0.19	--	0.7	Measured by Annex D. Capacitance of output was 0.12nF. Limit 45/1.38=32.6nF.	
Output Vslv(K) (No fault)	1.42kVmax, - 0.97kVmin ac	1.15	--	0.7	Measured by Annex D. Not LCC	
Output Vslv(K) (VR2 pin3 open)	1.5kVmax, - 1.0kVmin ac	1.2	--	0.7	Measured by Annex D. Not LCC. Capacitance of Output was 0.24nF. Limit:45/1.5=30nF.	
Output Vslv(M) (No fault)	1.42kVmax, - 0.97kVmin ac	1.15	--	0.7	Measured by Annex D. Not LCC	
Output Vslv(M) (VR2 pin3 open)	1.5kVmax, - 1.0kVmin ac	1.2	--	0.7	Measured by Annex D. Not LCC. Capacitance of Output was 0.24nF. Limit:45/1.5=30nF.	
Output Vslv(C) (No fault)	1.42kVmax, - 0.97kVmin ac	1.15	--	0.7	Measured by Annex D. Not LCC	
Output Vslv(C) (VR2 pin3 open)	1.5kVmax, - 1.0kVmin ac	1.2	--	0.7	Measured by Annex D. Not LCC. Capacitance of Output was 0.24nF. Limit:45/1.5=30nF.	
Output Vslv(Y) (No fault)	1.42kVmax, - 0.97kVmin ac	1.15	--	0.7	Measured by Annex D. Not LCC	
Output Vslv(Y) (VR2 pin3 open)	1.5kVmax, - 1.0kVmin ac	1.2	--	0.7	Measured by Annex D. Not LCC. Capacitance of Output was 0.24nF. Limit:45/1.5=30nF.	
Output Vmag(K) (No fault)	1.52kVmax, - 0.81kVmin ac	0.58	--	0.7	Measured by Annex D. Capacitance of Output was 0.36nF. Limit:45/1.52=29.6nF.	
Output Vmag(K) (Q1356 C-B Short)	0.49kVdc	0.07	--	0.7	Measured by Annex D. Capacitance of Output was 0.36nF. Limit:45/0.49=91.8nF.	
Output Vmag(M) (No fault)	1.52kVmax, - 0.81kVmin ac	0.58	--	0.7	Measured by Annex D. Capacitance of Output was 0.36nF. Limit:45/1.52=29.6nF.	

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Clause	Requirement + Test	Result - Remark	Verdict

2.4.2	TABLE: Limited current circuit measurement					P
Output Vmag(M) (Q1256 C-B Short)	0.49kVdc	0.07	--	0.7	Measured by Annex D. Capacitance of Output was 0.36nF. Limit:45/0.49=91.8nF.	
Output Vmag(C) (No fault)	1.52kVmax, -0.81kVmin ac	0.58	--	0.7	Measured by Annex D. Capacitance of Output was 0.36nF. Limit:45/1.52=29.6nF.	
Output Vmag(C) (Q1156 C-B Short)	0.49kVdc	0.07	--	0.7	Measured by Annex D. Capacitance of Output was 0.36nF. Limit:45/0.49=91.8nF.	
Output Vmag(Y) (No fault)	1.52kVmax, -0.81kVmin ac	0.58	--	0.7	Measured by Annex D. Capacitance of Output was 0.36nF. Limit:45/1.52=29.6nF.	
Output Vmag(Y) (Q1056 C-B Short)	0.49kVdc	0.07	--	0.7	Measured by Annex D. Capacitance of Output was 0.36nF. Limit:45/0.49=91.8nF.	
High voltage PWB Model:MPH3406 (Input 24V)						
Output T1(BK) (No fault)	-1.19kVdc	0.02	--	0.7	Measured by Annex D	
Output T1(BK) (D403 short)	-6.30kVdc	0.32	--	0.7	Measured by Annex D. Capacitance of output was 0.18nF. Limit:45/6.3=7.14nF.	
Output T1(Y) (No fault)	-1.19kVdc	0.02	--	0.7	Measured by Annex D	
Output T1(Y) (D103 short)	-6.30kVdc	0.32	--	0.7	Measured by Annex D. Capacitance of output was 0.18nF. Limit:45/6.3=7.14nF.	
Output T1(C) (No fault)	-1.19kVdc	0.02	--	0.7	Measured by Annex D	
Output T1(C) (D203 short)	-6.30kVdc	0.32	--	0.7	Measured by Annex D. Capacitance of output was 0.18nF. Limit:45/6.3=7.14nF.	
Output T1(M) (No fault)	-1.19kVdc	0.02	--	0.7	Measured by Annex D	
Output T1(M) (D303 short)	-6.30kVdc	0.32	--	0.7	Measured by Annex D. Capacitance of output was 0.18nF. Limit:45/6.3=7.14nF.	
High voltage PWB Model:MPH7712 (Input 24V)						
Output M(Y) (No fault)	2.5kVdc	0.055	--	0.7	Measured by Annex D	
Output M(Y) (Q668-E open)	2.5kVdc	2.70	--	0.7	Measured by Annex D. Not LCC. Capacitance of output was 0.39nF. Limit:45/2.5=18nF.	
Output M(C) (No fault)	2.5kVdc	0.055	--	0.7	Measured by Annex D	
Output M(C) (Q668-E open)	2.5kVdc	2.70	--	0.7	Measured by Annex D. Not LCC. Capacitance of output was 0.39nF. Limit:45/2.5=18nF.	

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Clause	Requirement + Test	Result - Remark	Verdict

2.4.2	TABLE: Limited current circuit measurement					P
Output M(M) (No fault)	2.5kVdc	0.055	--	0.7	Measured by Annex D	
Output M(M) (Q668-E open)	2.5kVdc	2.70	--	0.7	Measured by Annex D. Not LCC. Capacitance of output was 0.39nF. Limit:45/2.5=18nF.	
Output M(K) (No fault)	2.5kVdc	0.055	--	0.7	Measured by Annex D	
Output M(K) (Q668-E open)	2.5kVdc	2.70	--	0.7	Measured by Annex D. Not LCC. Capacitance of output was 0.39nF. Limit:45/2.5=18nF.	
Output Vslv(Y) (No fault)	2.02kVdc	0.41	--	0.7	Measured by Annex D	
Output Vslv(Y) (Q668-E open)	2.02kVdc	3.05	--	0.7	Measured by Annex D. Not LCC. Capacitance of output was 0.19nF. Limit:45/2.02=22.3nF	
Output Vslv(C) (No fault)	2.02kVdc	0.41	--	0.7	Measured by Annex D	
Output Vslv(C) (Q668-E open)	2.02kVdc	3.05	--	0.7	Measured by Annex D. Not LCC. Capacitance of output was 0.19nF. Limit:45/2.02=22.3nF	
Output Vslv(M) (No fault)	2.02kVdc	0.41	--	0.7	Measured by Annex D	
Output Vslv(M) (Q668-E open)	2.02kVdc	3.05	--	0.7	Measured by Annex D. Not LCC. Capacitance of output was 0.19nF. Limit:45/2.02=22.3nF	
Output Vslv(K) (No fault)	2.02kVdc	0.41	--	0.7	Measured by Annex D	
Output Vslv(K) (Q668-E open)	2.02kVdc	3.05	--	0.7	Measured by Annex D. Not LCC. Capacitance of output was 0.19nF. Limit:45/2.02=22.3nF	
Output Vmag(Y) (No fault)	1.40kVdc	0.36	--	0.7	Measured by Annex D	
Output Vmag(Y) (Q668-E open)	1.40kVdc	2.50	--	0.7	Measured by Annex D. Not LCC. Capacitance of output was 0.34nF. Limit:45/1.4=32.1nF.	
Output Vmag(C) (No fault)	1.40kVdc	0.36	--	0.7	Measured by Annex D	
Output Vmag(C) (Q668-E open)	1.40kVdc	2.50	--	0.7	Measured by Annex D. Not LCC. Capacitance of output was 0.34nF. Limit:45/1.4=32.1nF.	
Output Vmag(M) (No fault)	1.40kVdc	0.36	--	0.7	Measured by Annex D	
Output Vmag(M) (Q668-E open)	1.40kVdc	2.50	--	0.7	Measured by Annex D. Not LCC. Capacitance of output was 0.34nF. Limit:45/1.4=32.1nF.	
Output Vmag(K) (No fault)	1.40kVdc	0.36	--	0.7	Measured by Annex D	
Output Vmag(K) (No fault)	1.40kVdc	2.50	--	0.7	Measured by Annex D. Not LCC. Capacitance of output was 0.34nF. Limit:45/1.4=32.1nF.	
Output T1(Y) (No fault)	-3.84kVdc	0.043	--	0.7	Measured by Annex D.	

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Clause	Requirement + Test	Result - Remark	Verdict

2.4.2	TABLE: Limited current circuit measurement					P
Output T1(Y) (IC14 pin 9-10 short)	-6.52kVdc	0.44	--	0.7	Measured by Annex D. Capacitance of output was 0.19nF. Limit:45/6.52=6.9nF.	
Output T1(C) (No fault)	-3.84kVdc	0.043	--	0.7	Measured by Annex D.	
Output T1(C) (IC14 pin 5-6 short)	-6.52kVdc	0.44	--	0.7	Measured by Annex D. Capacitance of output was 0.19nF. Limit:45/6.52=6.9nF.	
Output T1(M) (No fault)	-3.84kVdc	0.043	--	0.7	Measured by Annex D.	
Output T1(M) (IC14 pin 3-4 short)	-6.52kVdc	0.44	--	0.7	Measured by Annex D. Capacitance of output was 0.19nF. Limit:45/6.52=6.9nF.	
Output T1(K) (No fault)	-3.84kVdc	0.043	--	0.7	Measured by Annex D.	
Output T1(K) (IC14 pin 11-12 short)	-6.52kVdc	0.44	--	0.7	Measured by Annex D. Capacitance of output was 0.19nF. Limit:45/6.52=6.9nF.	
Output T2 (No fault)	-5.76kVdc	0.217	--	0.7	Measured by Annex D.	
Output T2 (Q552 E-C short)	-6.92kVdc	1.55	--	0.7	Measured by Annex D. Not LCC. Capacitance of output was 0.25nF. Limit:45/6.92=6.5nF	
Output CL (No fault)	-2.92kVdc	0.032	--	0.7	Measured by Annex D.	
Output CL (IC13 pin 3-4 short)	-5.36kVdc	0.76	--	0.7	Measured by Annex D. Not LCC. Capcitanace of output was 0.22nF. Limit:45/5.36=8.4nF	
supplementary information:						
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Clause	Requirement + Test	Result - Remark	Verdict

2.5	TABLE: Limited power sources					P
Circuit output tested: (see below)						
Note: Measured Uoc (V) with all load circuits disconnected: (see below)						
Location	Uoc (V)	I _{sc} (A)		VA		
		Meas.	Limit	Meas.	Limit	
Model TASKalfa 406ci, TASKalfa 356ci						
Normal condition						
24V output for Document Processor option unit protected by Fuse YF6 on Engine PWB,4A	24	4.1	41.67	96.35	250	
24V output for Paper Feeder option unit protected by Fuse F101 on SWPS,4A	24	3.7	41.67	86.95	250	
5V output for Card Reader and KEY Board and Front USB Connector protected by Fuse YF13 on Main PWB,4A	5	6.0	200	24.6	250	
5V output for Operation Panel protected by Fuse YF10 on Main PWB,4A	5	7.7	200	29.0	250	
Model TASKalfa 306ci						
24V output for Document Processor unit protected by Fuse YF7 on Engine PWB,4A	24	4.0	41.67	94.4	250	
24V output for Paper Feeder option unit protected by Fuse YF8 on Engine PWB,4A	24	3.8	41.67	89.3	250	
5V output for Front USB Connector protected by Fuse F2000 on Main PWB,4A	5	2.0	200	7.62	250	
5V output for Operation Panel protected by Fuse YF2001 on Main PWB,4A	5	7.7	200	29.0	250	
5V output for Operation Panel protected by Fuse YF2002 on Main PWB,1.5A	5	7.7	200	29.0	250	
supplementary information:						
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Clause	Requirement + Test	Result - Remark	Verdict

2.6.3.4	TABLE: Resistance of earthing measurement		P
Location		Voltage drop (V)	Comments
Inlet earth to metal of frame rear lower		0.52	Limit: 2.5V
Inlet earth to metal of Fuser		0.56	Limit: 2.5V
supplementary information:			
Tested current 40A. Applied 2min.			

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Clause	Requirement + Test	Result - Remark	Verdict

2.10.2	Table: working voltage measurement			P
Location		RMS voltage (V)	Peak voltage (V)	Comments
Switching Power Supply Unit, Model ADP-385BN AA Input 240V, 50Hz				
T1 pin 4 – pin 11	177	279	90.05kHz	
T1 pin 4 – pin 9	201	316	90.99kHz	
T1 pin 4 – pin 13	225	339	90.83kHz	
T1 pin 7 – pin 11	143	296	91.38kHz	
T1 pin 7 – pin 9	129	278	89.49kHz	
T1 pin 7 – pin 13	132	301	89.94kHz	
T201 pin 2 – pin 10	48.7	134	2.508kHz	
T201 pin 2 – pin 8	46.5	104	101.0Hz	
T201 pin 5 – pin 10	163	438	63.91kHz	
T201 pin 5 – pin 8	176	471	64.90kHz	
T201 pin 6 – pin 10	61.3	190	63.04kHz	
T201 pin 6 – pin 8	71.0	223	64.48kHz	
T201 pin 3 – pin 10	50.2	152	1.378kHz	
T201 pin 3 – pin 8	48.7	121	220.1Hz	
between D4 and R8 and R49 – 5V0	51.3	120	100Hz	
Between R364 and R220 – 5V0	37.0	98.0	100Hz	
Between R364 and R220 –T201 pin10	39.7	126	100Hz	
Between R364 and R220 –T201 pin8	37.2	100	100Hz	
T1 pin7 – CY1(sec)	114	252	88.80kHz	
IC305 – 5V0	42.3	106	100Hz	

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Clause	Requirement + Test	Result - Remark	Verdict

2.10.2	Table: working voltage measurement			P
Location		RMS voltage (V)	Peak voltage (V)	Comments
Switching Power Supply Unit, Model ADP-385BN AA Input 220V, 50Hz				
T1 pin 4 – pin 11		177	290	90.34kHz
T1 pin 4 – pin 9		201	316	90.60kHz
T1 pin 4 – pin 13		226	342	90.36kHz
T1 pin 7 – pin 11		135	290	92.22kHz
T1 pin 7 – pin 9		120	264	90.22kHz
T1 pin 7 – pin 13		112	258	89.20kHz
T201 pin 2 – pin 10		47.7	144	100Hz
T201 pin 2 – pin 8		48.5	124	100Hz
T201 pin 5 – pin 10		162	428	58.13kHz
T201 pin 5 – pin 8		175	460	59.54kHz
T201 pin 6 – pin 10		60.2	200	57.16kHz
T201 pin 6 – pin 8		69.9	228	56.60kHz
T201 pin 3 – pin 10		47.7	140	100Hz
T201 pin 3 – pin 8		49.2	128	100Hz
between D4 and R8 and R49 – 5V0		46.9	108	100Hz
Between R364 and R220 – 5V0		39.9	96.0	100Hz
Between R364 and R220 –T201 pin10		42.6	132	100Hz
Between R364 and R220 –T201 pin8		40.3	96.0	100Hz
T1 pin7 – CY1(sec)		118	258	89.83kHz
IC305 – 5V0		42.6	106	100Hz

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Clause	Requirement + Test	Result - Remark	Verdict

2.10.2	Table: working voltage measurement			P
Location		RMS voltage (V)	Peak voltage (V)	Comments
Switching Power Supply Unit, Model ADP-385AN AA Input 120V, 60Hz				
T1 pin 4 – pin 11	172	241	90.68kHz	
T1 pin 4 – pin 9	197	264	90.57kHz	
T1 pin 4 – pin 13	222	283	90.34kHz	
T1 pin 7 – pin 11	136	246	90.56kHz	
T1 pin 7 – pin 9	121	215	90.18kHz	
T1 pin 7 – pin 13	109	202	90.76kHz	
T201 pin 2 – pin 10	28.7	89.0	4.549kHz	
T201 pin 2 – pin 8	25.8	51.0	292.1Hz	
T201 pin 5 – pin 10	158	409	57.42kHz	
T201 pin 5 – pin 8	171	443	60.54kHz	
T201 pin 6 – pin 10	47.5	164	56.36kHz	
T201 pin 6 – pin 8	58.9	186	56.76kHz	
T201 pin 3 – pin 10	30.3	83.0	937.8Hz	
T201 pin 3 – pin 8	25.8	51.0	293.8Hz	
between D4 and R8 and R49 – 5V0	26.0	64.0	120Hz	
Between R364 and R220 – 5V0	24.9	62.0	120Hz	
Between R364 and R220 –T201 pin10	29.6	92.0	120Hz	
Between R364 and R220 –T201 pin8	25.7	62.0	120Hz	
T1 pin7 – CY1(sec)	102	198	90.93kHz	
IC305 – 5V0	24.4	56.0	120Hz	

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

2.10.2	Table: working voltage measurement			P
Location		RMS voltage (V)	Peak voltage (V)	Comments
Switching Power Supply Unit, Model MPW3162M Input 240V, 50Hz				
T1 pin1 - pin9	211	382	49.74kHz	
T1 pin2 - pin9	212	362	95.42Hz	
T1 pin3 - pin9	211	402	27.64kHz	
T1 pin5 - pin9	221	464	55.65kHz	
T1 pin7 - pin9	275	692	51.48kHz	
T1 pin1 - pin16	213	358	50.07Hz	
T1 pin2 - pin16	215	388	2.706kHz	
T1 pin3 - pin16	210	356	50.04Hz	
T1 pin5 - pin16	235	510	56.43kHz	
T1 pin7- pin16	302	738	50.26kHz	
between C23 and R28 - T1 pin9	403	682	47.43kHz	
between T1 pin7 and C23 - T1 pin9	278	704	50.25kHz	
Switching Power Supply Unit, Model MPW3161M Input 120V, 60Hz				
T1 pin1 - pin9	115	214	60.91kHz	
T1 pin2 - pin9	103	183	3.942kHz	
T1 pin3 - pin9	103	231	62.16kHz	
T1 pin5 - pin9	103	215	63.83kHz	
T1 pin7- pin9	117	314	80.21kHz	
T1 pin1 - pin16	91.9	168	60.02Hz	
T1 pin2 - pin16	93.1	203	61.12kHz	
T1 pin3 - pin16	103	180	60.14Hz	
T1 pin5 - pin16	124	265	63.28kHz	
T1 pin7- pin16	152	364	63.2kHz	
between C23 and R28 - T1 pin9	143	318	64.25kHz	
between T1 pin7 and C23 - T1 pin9	127	335	62.29kHz	
supplementary information:				
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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
SWPS ADP-385BN AA (pri, gnd, sec)							
Functional:							
Pri - pri (before fuse)	< 420	< 250	1.9	3.0	2.5	3.0	
Basic / supplementary:							
Pri – gnd (traces at CY3)	< 420	< 250	2.5	8.0	2.5	8.0	
Pri – gnd (traces at CY4)	< 420	< 250	2.5	8.0	2.5	8.0	
Pri – gnd (under PWB)	< 420	< 250	2.5	5.4	2.5	5.4	
Reinforced:							
Pri – sec (traces under T1 pin4 – pin9)	< 420	< 250	4.9	25.5	5.0	25.5	
Pri – sec (traces under T1 pin 4 – pin 13)	< 420	< 250	4.9	26.4	5.0	26.4	
Pri – sec (traces under between D4 and R8 and R49 – 5V0)	< 420	< 250	4.9	21.5	5.0	21.5	
Pri – sec (traces under T1 pin 7 – CY1 sec)	< 420	< 250	4.9	9.9	5.0	9.9	
Pri – sec (traces at CY1)	< 420	< 250	4.9	7.7	5.0	7.7	
Pri – sec (traces under T201 pin5 – pin8)	471	176	5.6	24.5	5.0	24.5	
Pri – sec (traces under IC311)	< 420	< 250	4.9	7.0	5.0	7.0	
Pri – sec (traces under IC305)	< 420	< 250	4.9	7.1	5.0	7.1	

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

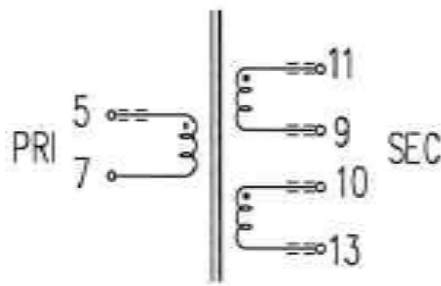
2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
SWPS ADP-385AN AA (pri, gnd, sec)							
Functional:							
Pri - pri (before fuse)	< 210	< 125	0.7	3.0	1.5	3.0	
Basic / supplementary:							
Pri – gnd (traces at CY3)	< 210	< 125	1.3	8.0	1.5	8.0	
Pri – gnd (traces at CY4)	< 210	< 125	1.3	8.0	1.5	8.0	
Pri – gnd (under PWB)	< 210	< 125	1.3	5.4	1.5	5.4	
Reinforced:							
Pri – sec (traces under T1 pin4 – pin9)	264	197	2.7	25.5	4.0	25.5	
Pri – sec (traces under T1 pin 4 – pin 13)	283	222	2.7	26.4	5.0	26.4	
Pri – sec (traces under between D4 and R8 and R49 – 5V0)	< 210	< 125	2.5	21.5	3.0	21.5	
Pri – sec (traces under T1 pin 7 – CY1 sec)	< 210	< 125	2.5	9.9	3.0	9.9	
Pri – sec (traces at CY1)	< 210	< 125	2.5	7.7	3.0	7.7	
Pri – sec (traces under T201 pin5 – pin8)	443	171	3.2	24.5	5.0	24.5	
Pri – sec (traces under IC311)	< 210	< 125	2.5	7.0	3.0	7.0	
Pri – sec (traces under IC305)	< 210	< 125	2.5	7.1	3.0	7.1	

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Clause	Requirement + Test	Result - Remark	Verdict

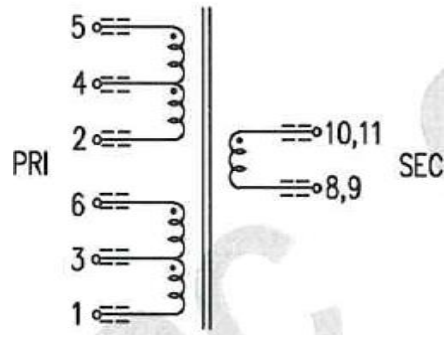
2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
SWPS-MPW3162M (pri, gnd, sec)							
Functional:							
Pri - pri (before fuse)	< 420	< 250	1.9	3.0	2.5	3.0	
Basic / supplementary:							
Pri – gnd (traces at C4)	< 420	< 250	2.5	4.0	2.5	4.0	
Pri – gnd (traces at C5)	< 420	< 250	2.5	5.0	2.5	5.0	
Pri – gnd (traces at C1)	< 420	< 250	2.5	3.7	2.5	3.7	
Pri – gnd (under PWB)	< 420	< 250	2.5	3.7	2.5	3.7	
Reinforced:							
Pri – sec (traces under T1)	738	302	6.0	8.5	6.1	8.5	
Pri – sec (between C23 and R28 - T1 pin9)	682	403	5.8	8.5	8.1	8.5	
Pri – sec (traces at PC1, PC5)	< 420	< 250	4.9	7.8	5.0	7.8	
Pri – sec (traces at PC3)	< 420	< 250	4.9	7.2	5.0	7.2	
Pri – sec (traces at RL1)	< 420	< 250	4.9	6.7	5.0	6.7	
Pri – sec (traces at C50)	< 420	< 250	4.9	7.8	5.0	7.8	

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements					P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
SWPS-MPW3161M (pri, gnd, sec)						
Functional:						
Pri – pri (before fuse)	< 210	< 125	0.7	3.0	1.5	3.0
Basic/supplementary:						
Pri – gnd (traces at C4)	< 210	< 125	1.3	4.0	1.5	4.0
Pri – gnd (traces at C5)	< 210	< 125	1.3	5.0	1.5	5.0
Pri – gnd (traces at C1)	< 210	< 125	1.3	3.7	1.5	3.7
Pri – gnd (under PWB)	< 210	< 125	1.3	3.7	1.5	3.7
Reinforced:						
Pri – sec (traces under T1)	364	152	3.0	8.5	3.1	8.5
Pri – sec (traces at PC1, PC5)	< 210	< 125	2.5	7.8	3.0	7.8
Pri – sec (traces at PC3)	< 210	< 125	2.5	7.2	3.0	7.2
Pri – sec (traces at RL1)	< 210	< 125	2.5	6.7	3.0	6.7
Pri – sec (traces at C50)	< 210	< 125	2.5	7.8	3.0	7.8
Supplementary information:						
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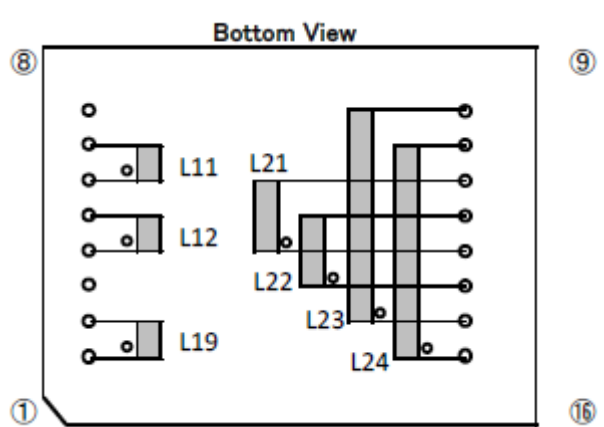
IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Transformer T1 type MH-MP14254							
Basic / supplementary:							
Pri – core (internal)	-- ¹⁾	--	--	5.2	--	5.2	
Sec – core (internal)	--	--	--	4.7	--	4.7	
Reinforced:							
Pri – core – sec	342	226	4.9	9.9	5.0	9.9	
Pri – sec	342	226	4.9	6.5	5.0	10.5	
	<p>Construction details of Transformer T1 type MH-MP14254: ¹⁾ core is floating; no electric potential defined. Pri and sec windings are separated by phenolic bobbin and its case; Sec windings are concentrically on a bobbin. Winding ends are internally fixed with tapes, they are soldered on pins outside the transformer. Bobbin: Type PM-9630 or PM-9820; Sumitomo Bakelite Co., Ltd.; Phenole, V-0, min. 0.4mm thick</p> 						

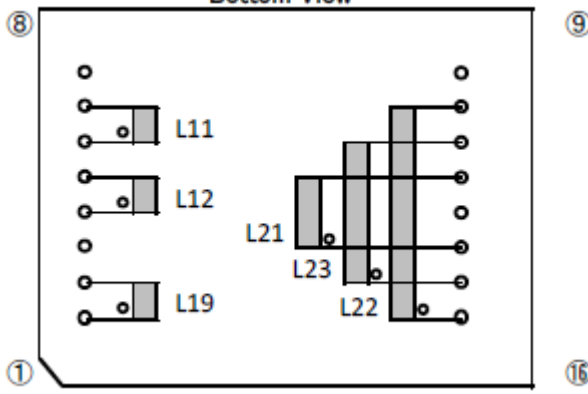
IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Transformer T201 type MH-MP14088							
Basic / supplementary:							
Pri – core (external)	-- ¹⁾	--	--	5.4	--	5.4	
Sec – core (external)	--	--	--	5.4	--	5.4	
Reinforced:							
Pri – core – sec	471	176	5.6	10.8	5.0	10.8	
Pri – sec	471	176	5.6	8.0	5.0	8.0	
	<p>Construction details of Transformer T201 type MH-MP14088:</p> <p>¹⁾ core is floating; no electric potential defined.</p> <p>Concentric pri windings and sec windings on a bobbin.</p> <p>Winding ends are internally fixed with tapes, they are soldered on pins.</p> <p>Bobbin: Type PM-9630 or PM-9820; Sumitomo Bakelite Co., Ltd.;</p> <p>Phenole, V-0, min. 0.4mm thick</p> <div style="text-align: center;">  </div>						

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

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Transformer T1 type 2V121							
Basic / supplementary:							
Pri – core (external)	-- ¹⁾	--	--	4.5	--	4.5	
Pri – core (internal)	--	--	--	6.4	--	6.4	
Sec – core (external)	--	--	--	4.5	--	4.5	
Sec – core (internal)	--	--	--	6.4	--	6.4	
Reinforced:							
Pri – core – sec	738	302	6.0	9.0	6.1	9.0	
Pri-sec	738	302	6.0	6.4	6.1	6.4	
<p>Construction details of Transformer T1 type 2V121:</p> <p>¹⁾ core is floating; no electric potential defined.</p> <p>Concentric pri windings and sec windings on a bobbin.</p> <p>Winding ends are internally fixed with tapes, they are soldered on pins.</p> <p>End tape (3 layers) above outer sec winding.</p> <p>Bobbin: Type PM-9820 or PM-9750 or PM-9630;</p> <p>Sumitomo Bakelite Co., Ltd.; Phenole, V-0, min. 0.4mm thick</p> <div style="text-align: center;">  </div> <p>Distances from core to any pri- component: dcl: min. 7.6mm, dcr: min. 12.9mm</p> <p>Distances from core to any sec- component: dcl: min. 6.0mm, dcr: min. 23.7mm</p>							

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

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Transformer T1 type 2V120							
Basic / supplementary:							
Pri – core (external)	-- ¹⁾	--	--	4.5	--	4.5	
Pri – core (internal)	--	--	--	3.2	--	3.2	
Sec – core (external)	--	--	--	4.0	--	4.0	
Sec – core (internal)	--	--	--	3.2	--	3.2	
Reinforced:							
Pri – core – sec	364	152	3.0	6.4	3.1	6.4	
Pri – sec	364	152	3.0	3.2	3.1	3.2	
<p>Construction details of Transformer T1 type 2V120:</p> <p>¹⁾ core is floating; no electric potential defined.</p> <p>Concentric pri windings and sec windings on a bobbin.</p> <p>Winding ends are internally fixed with tapes, they are soldered on pins.</p> <p>End tape (3 layers) above outer sec winding.</p> <p>Bobbin: Type PM-9820 or PM-9750 or PM-9630;</p> <p>Sumitomo Bakelite Co., Ltd.; Phenole, V-0, min. 0.4mm thick</p> <div style="text-align: center;"> <p>Bottom View</p>  </div> <p>Distances from core to any pri- component: dcl: min. 7.6mm, dcr: min. 12.9mm</p> <p>Distances from core to any sec- component: dcl: min. 6.0mm, dcr: min. 23.7mm</p>							

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

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Fax PWB							
NCU Board							
Basic:							
TNV-SELV (traces at Relay RLY12)	120	71	1.3	2.5	1.5	2.5	
TNV-SELV (traces at Relay RLY10)	120	71	1.3	2.5	1.5	2.5	
TNV-SELV (traces at Relay SA10)	120	71	1.3	2.7	1.5	2.7	
TNV-SELV (traces at Relay SA11)	120	71	1.3	2.8	1.5	2.8	
TNV-SELV (traces at C12, C13)	120	71	1.3	2.8	1.5	2.8	
TNV-SELV (traces at IC10 pin 2 - 3)	120	71	1.3	3.1	1.5	3.1	
TNV-SELV (traces at CN10 PIN 2 - 4)	120	71	1.3	2.5	1.5	2.5	
TNV-SELV (traces at PC10, PC11)	120	71	1.3	2.6	1.5	2.6	
TNV-Chassis (RLY12 - Chassis)	120	71	1.3	4.0	1.5	4.0	
FCB Board							
Basic:							
TNV-Chassis (CN402 - Chassis)	120	71	1.3	5.0	1.5	5.0	
TNV-SELV (trases at CN402 pin 1-CN403 pin 1)	120	71	1.3	2.7	1.5	2.7	
TNV-SELV (traces at C205,C206,C207)	120	71	1.3	2.9	1.5	2.9	
Supplementary information:							
Each required clearance has been multiplied by the altitude correction factor 1.215 for 3500m.							

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

2.10.5	TABLE: Distance through insulation measurements					P
Distance through insulation (DTI) at/of:		U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Insulation Tape and alternative tapes between primary winding to core of Transformer T201 on SWPS ADP-385BN AA and ADP-385AN AA. Insulation Tape and alternative tapes:1351-1 or 1350F-1 or 1350T-3 or 1350F-2 or 92 or 1205 manufactured by 3M company electrical markets Div, 35660Y or KA180K manufactured by Symbio Inc, 560S #3 or 560S #5 manufactured by Teraoka seisakusyo Co.,Ltd, CT manufactured by Jingjiang yahua pressure sensitive glue co.,Ltd, PB416F manufactured by Chyun yih tape Co.,Ltd.		471	176	AC 3000V (for 2 layers)	2 layers	3 layers
Insulation Tape and alternative tapes between Primary winding to Secondary winding of Transformer T1 type 2V121. Insulation Tape and alternative tapes:631S or 630F manufactured by Teraoka seisakusyo Co.,Ltd, CT manufactured by Jingjiang yahua pressure sensitive glue co.,Ltd, 35660Y manufactured by Symbio Inc.		738	302	AC 3000V (2 of 3 layers)	2 layers	3 layers
Insulation Tape and alternative tapes between Primary winding to Secondary winding of Transformer T1 type 2V120. Insulation Tape and alternative tapes:631S or 630F manufactured by Teraoka seisakusyo Co.,Ltd, CT manufactured by Jingjiang yahua pressure sensitive glue co.,Ltd, 35660Y manufactured by Symbio Inc.		364	152	AC 3000V (2 of 3 layers)	2 layers	3 layers
Supplementary information:						
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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.3.8	TABLE: Batteries	P
Battery category : Lithium		
Manufacturer : Interchangeable		
Type / model : CR2032		
Voltage : 3V		
Capacity : 220mAh		
Tested and Certified by (incl. Ref. No.)..... : UL		
Circuit protection diagram: See below.		
For Model TASKalfa 306ci, 306ci:		
For TASKalfa 356ci, TASKalfa 406ci, 356ci, 406ci:		
Test was not conducted, because it is clear from protect circuit diagram.		

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Clause	Requirement + Test	Result - Remark	Verdict

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

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

4.5	TABLE: Temperature rise measurements				P
Temperatures were measured according cl. 1.4.5. Test in condition A and B at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> A: Standby / 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 B: Standby / 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of 35°C (T _{ma}), as specified by the manufacturer.					
test voltage(s) (V):	A: 108 V, 60 Hz		B: 132 V 60 Hz		
t _{amb1} (°C):	A: -- B: --		t _{amb2} (°C):		A: 26 B: 24
Temperature of part/at: (measured with thermocouples)	Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
	A (°C)	B (°C)	A (°C)	B (°C)	
SWPS Z1 body	34	31	43	42	130
SWPS C1 body	49	46	58	57	105
SWPS FL2 coil	36	33	45	44	90
SWPS FL4 coil	42	39	51	50	90
SWPS L1 coil	59	55	68	66	90
SWPS L301 coil	43	40	52	51	90
SWPS BD1 body	52	47	61	58	130
SWPS Q1 body	73	69	82	80	130
SWPS Q3 body	64	62	73	73	130
SWPS Q4 body	64	62	73	73	130
SWPS Q201 body	65	61	74	72	130
SWPS TR301 body	38	35	47	46	130
SWPS TR302 body	37	35	46	46	130
SWPS IC51 body	58	55	67	66	130
SWPS IC301 body	44	41	53	52	130
SWPS T1 coil	77	75	86	86	110
SWPS T1 core	65	63	74	74	110
SWPS T201 coil	72	69	81	80	110
SWPS T201 core	61	58	70	69	110
SWPS RL51 body	56	53	65	64	130
SWPS YC2 body	33	29	42	40	85
SWPS YC4 body	31	29	40	40	85
High Voltage PWB Main B51 coil	30	28	39	39	90
High Voltage PWB Main B551 coil	29	27	38	38	90
High Voltage PWB Main B401 coil	31	29	40	40	90
High Voltage PWB Main B451 coil	31	28	40	39	90
High Voltage PWB Main B1301 coil	32	30	41	41	90
High Voltage PWB Main B1351 coil	32	29	41	40	90
High Voltage PWB Main B731coil	35	33	44	44	90
High Voltage PWB Transfer B51 coil	32	29	41	40	90
High Voltage PWB Transfer B401 coil	41	38	50	49	90
Relay PWB RY1 body	37	35	46	46	130
DLP Fan 1	28	25	37	36	100
DLP Fan 3	33	30	42	41	100
Steam Spread Fan	60	58	69	69	100

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Exit fan	48	46	57	57	100
Toner Sucking Fan	31	29	40	40	100
Belt Fan	31	30	40	41	100
Controller Fan	45	42	54	53	100
LVU Fan	39	36	48	47	100
Clutch Fan	28	25	37	36	100
Polygon Motor	36	35	45	46	100
LSU Cleaning Motor	35	33	44	44	100
Exit Motor	48	46	57	57	100
Transfer Belt Release Motor	34	32	43	43	100
Lift Motor	32	30	41	41	100
Container Motor	42	40	51	51	100
Feed/Black DLP Motor	35	33	44	44	100
Image Motor	36	34	45	45	100
Fuser Motor	44	41	53	52	100
Colour DLP Motor	44	42	53	53	100
Black Drum Motor	41	38	50	49	100
Colour Drum Motor	44	42	53	53	100
Scanner Motor	57	56	66	67	100
Black DLP Clutch	34	32	43	43	90
Resist Clutch	31	29	40	40	90
Feed Clutch	30	28	39	39	90
Middle Clutch	29	27	38	38	90
DU Clutch	30	27	39	38	90
MPF Solenoid	29	26	38	37	90
Junction Solenoid	52	51	61	62	90
Fuser Cover	89	87	98	98	--
Fuser Primary	69	67	78	78	150
Fuser Secondary	67	65	76	76	150
Inlet body	28	25	37	36	--
Enclosure Plastic	44	42	53	53	95
Enclosure Metal	26	35	35	46	70
Cassette Heater	29	27	38	38	--
Supplementary information:					
Temperatures measured with winding resistance method: Not used					

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

4.5	TABLE: Temperature rise measurements				P
Temperatures were measured according cl. 1.4.5. Test in condition C and D at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values.					
<Condition> C: Simplex side copy / 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120					
D: Simplex side copy / 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120					
Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of 35°C (T _{ma}), as specified by the manufacturer.					
test voltage(s) (V):	C: 108 V, 60 Hz		D: 132 V 60 Hz		
t _{amb1} (°C):	C: -- D: --		t _{amb2} (°C):	C: 25	D: 24
Temperature of part/at: (measured with thermocouples)	Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
	C (°C)	D (°C)	C (°C)	D (°C)	
SWPS Z1 body	63	61	73	72	130
SWPS C1 body	55	54	65	65	105
SWPS FL2 coil	72	67	82	78	90
SWPS FL4 coil	61	60	71	71	90
SWPS L1 coil	67	65	77	76	90
SWPS L301 coil	62	61	72	72	90
SWPS BD1 body	80	75	90	86	130
SWPS Q1 body	91	86	101	97	130
SWPS Q3 body	63	62	73	73	130
SWPS Q4 body	64	63	74	74	130
SWPS Q201 body	72	71	82	82	130
SWPS TR301 body	64	62	74	73	130
SWPS TR302 body	64	62	74	73	130
SWPS IC51 body	61	60	71	71	130
SWPS IC301 body	62	60	72	71	130
SWPS T1 coil	75	75	85	86	110
SWPS T1 core	68	67	78	78	110
SWPS T201 coil	67	66	77	77	110
SWPS T201 core	66	65	76	76	110
SWPS RL51 body	62	62	72	73	130
SWPS YC2 body	61	60	71	71	85
SWPS YC4 body	61	60	71	71	85
High Voltage PWB Main B51 coil	62	62	72	73	90
High Voltage PWB Main B551 coil	63	62	73	73	90
High Voltage PWB Main B401 coil	51	51	61	62	90
High Voltage PWB Main B451 coil	59	58	69	69	90
High Voltage PWB Main B1301 coil	55	54	65	65	90
High Voltage PWB Main B1351 coil	59	58	69	69	90
High Voltage PWB Main B731coil	58	57	68	68	90
High Voltage PWB Transfer B51 coil	45	45	55	56	90
High Voltage PWB Transfer B401 coil	50	50	60	61	90
Relay PWB RY1 body	59	58	69	69	130
DLP Fan 1	36	36	46	47	100
DLP Fan 3	55	55	65	66	100
Steam Spread Fan	67	66	77	77	100

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Clause	Requirement + Test		Result - Remark		Verdict
Exit fan	43	43	53	54	100
Toner Sucking Fan	45	45	55	56	100
Belt Fan	53	52	63	63	100
Controller Fan	46	46	56	57	100
LVU Fan	60	59	70	70	100
Clutch Fan	36	33	46	44	100
Polygon Motor	59	59	69	70	100
LSU Cleaning Motor	38	38	48	49	100
Exit Motor	72	72	82	83	100
Transfer Belt Release Motor	38	38	48	49	100
Lift Motor	48	48	58	59	100
Container Motor	47	47	57	58	100
Feed/Black DLP Motor	61	59	71	70	100
Image Motor	62	61	72	72	100
Fuser Motor	85	86	95	97	100
Colour DLP Motor	69	69	79	80	100
Black Drum Motor	62	61	72	72	100
Colour Drum Motor	70	69	80	80	100
Scanner Motor	60	59	70	70	100
Resist Clutch	62	60	72	71	90
Feed Clutch	56	56	66	67	90
DU Clutch	53	53	63	64	90
MPF Solenoid	55	55	65	66	90
Junction Solenoid	61	62	71	73	90
Fuser Cover	93	92	103	103	--
Fuser Primary	78	78	88	89	150
Fuser Secondary	71	71	81	82	150
Inlet body	55	55	65	66	--
Enclosure Plastic	51	51	61	62	95
Enclosure Metal	24	24	34	35	70
Cassette Heater	35	35	45	46	--
Supplementary information:					
Temperatures measured with winding resistance method: Not used					

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P
Temperatures were measured according cl. 1.4.5. Test in condition E at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> E: Duplex side copy / 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120					
Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.					
test voltage(s) (V):		E: 108 V, 60 Hz			
t _{amb1} (°C):		E: --		t _{amb2} (°C): E: 24	
Temperature of part/at: (measured with thermocouples)	Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
	E (°C)	--	E (°C)	--	
SWPS Z1 body	62	--	73	--	130
SWPS C1 body	54	--	65	--	105
SWPS FL2 coil	70	--	81	--	90
SWPS FL4 coil	60	--	71	--	90
SWPS L1 coil	66	--	77	--	90
SWPS L301 coil	61	--	72	--	90
SWPS BD1 body	79	--	90	--	130
SWPS Q1 body	89	--	100	--	130
SWPS Q3 body	62	--	73	--	130
SWPS Q4 body	63	--	74	--	130
SWPS Q201 body	72	--	83	--	130
SWPS TR301 body	62	--	73	--	130
SWPS TR302 body	63	--	74	--	130
SWPS IC51 body	60	--	71	--	130
SWPS IC301 body	61	--	72	--	130
SWPS T1 coil	74	--	85	--	110
SWPS T1 core	67	--	78	--	110
SWPS T201 coil	66	--	77	--	110
SWPS T201 core	65	--	76	--	110
SWPS RL51 body	63	--	74	--	130
SWPS YC2 body	60	--	71	--	85
SWPS YC4 body	60	--	71	--	85
High Voltage PWB Main B51 coil	62	--	73	--	90
High Voltage PWB Main B551 coil	62	--	73	--	90
High Voltage PWB Main B401 coil	50	--	61	--	90
High Voltage PWB Main B451 coil	58	--	69	--	90
High Voltage PWB Main B1301 coil	54	--	65	--	90
High Voltage PWB Main B1351 coil	58	--	69	--	90
High Voltage PWB Main B731coil	58	--	69	--	90
High Voltage PWB Transfer B51 coil	45	--	56	--	90
High Voltage PWB Transfer B401 coil	50	--	61	--	90
Relay PWB RY1 body	59	--	70	--	130
DLP Fan 1	37	--	48	--	100
DLP Fan 3	56	--	67	--	100
Steam Spread Fan	69	--	80	--	100
Exit fan	46	--	57	--	100

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Clause	Requirement + Test		Result - Remark		Verdict
Toner Sucking Fan	47	--	58	--	100
Belt Fan	54	--	65	--	100
Controller Fan	46	--	57	--	100
LVU Fan	59	--	70	--	100
Clutch Fan	35	--	46	--	100
Polygon Motor	59	--	70	--	100
LSU Cleaning Motor	39	--	50	--	100
Exit Motor	74	--	85	--	100
Transfer Belt Release Motor	41	--	52	--	100
Lift Motor	49	--	60	--	100
Container Motor	48	--	59	--	100
Feed/Black DLP Motor	56	--	67	--	100
Image Motor	61	--	72	--	100
Fuser Motor	86	--	97	--	100
Colour DLP Motor	69	--	80	--	100
Black Drum Motor	61	--	72	--	100
Colour Drum Motor	69	--	80	--	100
Scanner Motor	60	--	71	--	100
Resist Clutch	58	--	69	--	90
Feed Clutch	55	--	66	--	90
Middle Clutch	71	--	82	--	90
DU Clutch	65	--	76	--	90
MPF Solenoid	55	--	66	--	90
Junction Solenoid	79	--	90	--	90
Fuser Cover	99	--	110	--	--
Fuser Primary	83	--	94	--	150
Fuser Secondary	76	--	87	--	150
Inlet body	55	--	66	--	--
Enclosure Plastic	54	--	65	--	95
Enclosure Metal	24	--	35	--	70
Cassette Heater	35	--	46	--	--
Supplementary information:					
Temperatures measured with winding resistance method: Not used					

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P
Temperatures were measured according cl. 1.4.5. Test in condition F and G at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> F: Standby / TASKalfa 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 G: Standby / TASKalfa 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of 35°C (T _{ma}), as specified by the manufacturer.					
test voltage(s) (V):		F: 198 V, 50 Hz		G: 242 V 50 Hz	
t _{amb1} (°C):		F: -- G: --		t _{amb2} (°C): F: 23 G: 24	
Temperature of part/at: (measured with thermocouples)	Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
	F (°C)	G (°C)	F (°C)	G (°C)	
SWPS Z1 body	35	37	47	48	130
SWPS C1 body	49	50	61	61	105
SWPS FL2 coil	37	39	49	50	90
SWPS FL4 coil	42	42	54	53	90
SWPS L1 coil	57	56	69	67	90
SWPS L301 coil	41	42	53	53	90
SWPS BD1 body	48	48	60	59	130
SWPS Q1 body	72	68	84	79	130
SWPS Q3 body	64	65	76	76	130
SWPS Q4 body	48	49	60	60	130
SWPS Q201 body	63	65	75	76	130
SWPS TR301 body	36	37	48	48	130
SWPS TR302 body	37	38	49	49	130
SWPS IC51 body	60	62	72	73	130
SWPS IC301 body	42	43	54	54	130
SWPS T1 coil	72	73	84	84	110
SWPS T1 core	67	68	79	79	110
SWPS T201 coil	77	78	89	89	110
SWPS T201 core	63	65	75	76	110
SWPS RL51 body	52	52	64	63	130
SWPS YC2 body	33	34	45	45	85
SWPS YC4 body	32	34	44	45	85
High Voltage PWB Main B51 coil	29	30	41	41	90
High Voltage PWB Main B551 coil	29	30	41	41	90
High Voltage PWB Main B401 coil	30	31	42	42	90
High Voltage PWB Main B451 coil	29	30	41	41	90
High Voltage PWB Main B1301 coil	31	32	43	43	90
High Voltage PWB Main B1351 coil	30	31	42	42	90
High Voltage PWB Main B731coil	34	35	46	46	90
High Voltage PWB Transfer B51 coil	31	32	43	43	90
High Voltage PWB Transfer B401 coil	40	41	52	52	90
Relay PWB RY1 body	30	32	42	43	130
DLP Fan 1	24	25	36	36	100
DLP Fan 3	35	38	47	49	100
Steam Spread Fan	57	58	69	69	100

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Clause	Requirement + Test		Result - Remark		Verdict
Exit fan	44	45	56	56	100
Toner Sucking Fan	27	28	39	39	100
Belt Fan	28	29	40	40	100
Controller Fan	43	44	55	55	100
LVU Fan	38	39	50	50	100
Clutch Fan	27	28	39	39	100
Polygon Motor	34	36	46	47	100
LSU Cleaning Motor	33	35	45	46	100
Exit Motor	45	46	57	57	115
Transfer Belt Release Motor	28	29	40	40	100
Lift Motor	35	38	47	49	100
Container Motor	40	41	52	52	100
Feed/Black DLP Motor	35	35	47	46	100
Image Motor	34	35	46	46	100
Fuser Motor	42	43	54	54	100
Colour DLP Motor	43	44	55	55	100
Black Drum Motor	38	39	50	50	100
Colour Drum Motor	42	43	54	54	100
Scanner Motor	56	56	68	67	100
Black DLP Clutch	33	34	45	45	90
Resist Clutch	31	32	43	43	90
Feed Clutch	31	32	43	43	90
Middle Clutch	29	30	41	41	90
DU Clutch	29	30	41	41	90
MPF Solenoid	28	29	40	40	90
Junction Solenoid	49	51	61	62	90
Fuser Cover	86	87	98	98	--
Fuser Primary	66	68	78	79	150
Fuser Secondary	64	66	76	77	150
Inlet body	27	28	39	39	--
Enclosure Plastic	36	43	48	54	95
Enclosure Metal	38	36	50	47	70
Cassette Heater	56	71	68	82	--
Supplementary information:					
Temperatures measured with winding resistance method: Not used					

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

4.5	TABLE: Temperature rise measurements					P
Temperatures were measured according cl. 1.4.5. Test in condition H at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> H: Standby / TASKalfa 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		H: 264 V, 60 Hz				
t _{amb1} (°C):		H: --		t _{amb2} (°C):	H: 24	
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		H (°C)	--	H (°C)	--	
SWPS Z1 body		38	--	49	--	130
SWPS C1 body		51	--	62	--	105
SWPS FL2 coil		40	--	51	--	90
SWPS FL4 coil		42	--	53	--	90
SWPS L1 coil		56	--	67	--	90
SWPS L301 coil		42	--	53	--	90
SWPS BD1 body		48	--	59	--	130
SWPS Q1 body		66	--	77	--	130
SWPS Q3 body		65	--	76	--	130
SWPS Q4 body		49	--	60	--	130
SWPS Q201 body		66	--	77	--	130
SWPS TR301 body		38	--	49	--	130
SWPS TR302 body		38	--	49	--	130
SWPS IC51 body		64	--	75	--	130
SWPS IC301 body		43	--	54	--	130
SWPS T1 coil		73	--	84	--	110
SWPS T1 core		68	--	79	--	110
SWPS T201 coil		80	--	91	--	110
SWPS T201 core		66	--	77	--	110
SWPS RL51 body		52	--	63	--	130
SWPS YC2 body		34	--	45	--	85
SWPS YC4 body		34	--	45	--	85
High Voltage PWB Main B51 coil		30	--	41	--	90
High Voltage PWB Main B551 coil		30	--	41	--	90
High Voltage PWB Main B401 coil		31	--	42	--	90
High Voltage PWB Main B451 coil		30	--	41	--	90
High Voltage PWB Main B1301 coil		32	--	43	--	90
High Voltage PWB Main B1351 coil		31	--	42	--	90
High Voltage PWB Main B731coil		35	--	46	--	90
High Voltage PWB Transfer B51 coil		32	--	43	--	90
High Voltage PWB Transfer B401 coil		41	--	52	--	90
Relay PWB RY1 body		32	--	43	--	130
DLP Fan 1		25	--	36	--	100
DLP Fan 3		38	--	49	--	100
Steam Spread Fan		58	--	69	--	100

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Clause	Requirement + Test		Result - Remark		Verdict
Exit fan	45	--	56	--	100
Toner Sucking Fan	28	--	39	--	100
Belt Fan	29	--	40	--	100
Controller Fan	44	--	55	--	100
LVU Fan	39	--	50	--	100
Clutch Fan	28	--	39	--	100
Polygon Motor	36	--	47	--	100
LSU Cleaning Motor	35	--	46	--	100
Exit Motor	47	--	58	--	115
Transfer Belt Release Motor	29	--	40	--	100
Lift Motor	38	--	49	--	100
Container Motor	41	--	52	--	100
Feed/Black DLP Motor	35	--	46	--	100
Image Motor	35	--	46	--	100
Fuser Motor	43	--	54	--	100
Colour DLP Motor	44	--	55	--	100
Black Drum Motor	39	--	50	--	100
Colour Drum Motor	43	--	54	--	100
Scanner Motor	56	--	67	--	100
Black DLP Clutch	34	--	45	--	90
Resist Clutch	32	--	43	--	90
Feed Clutch	32	--	43	--	90
Middle Clutch	30	--	41	--	90
DU Clutch	30	--	41	--	90
MPF Solenoid	29	--	40	--	90
Junction Solenoid	51	--	62	--	90
Fuser Cover	87	--	98	--	--
Fuser Primary	68	--	79	--	150
Fuser Secondary	66	--	77	--	150
Inlet body	28	--	39	--	--
Enclosure Plastic	43	--	54	--	95
Enclosure Metal	36	--	47	--	70
Cassette Heater	78	--	89	--	--
Supplementary information:					
Temperatures measured with winding resistance method: Not used					

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

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition I and J at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> I: Duplex side copy / TASKalfa 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 J: Duplex side copy / TASKalfa 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T_{ma}), as specified by the manufacturer.						
test voltage(s) (V):		I: 198 V, 50 Hz		J: 242 V 50 Hz		
t_{amb1} (°C):		I: --	J: --	t_{amb2} (°C): I: 24 J: 24		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T_{amb}		Calculated temperature at T_{ma}		Allowed T_{max} (°C)
		I (°C)	J (°C)	I (°C)	J (°C)	
SWPS Z1 body		55	54	66	65	130
SWPS C1 body		53	62	64	73	105
SWPS FL2 coil		58	56	69	67	90
SWPS FL4 coil		50	54	61	65	90
SWPS L1 coil		60	58	71	69	90
SWPS L301 coil		55	55	66	66	90
SWPS BD1 body		66	63	77	74	130
SWPS Q1 body		77	71	88	82	130
SWPS Q3 body		57	57	68	68	130
SWPS Q4 body		54	54	65	65	130
SWPS Q201 body		64	64	75	75	130
SWPS TR301 body		56	55	67	66	130
SWPS TR302 body		56	55	67	66	130
SWPS IC51 body		58	58	69	69	130
SWPS IC301 body		55	54	66	65	130
SWPS T1 coil		79	79	90	90	110
SWPS T1 core		77	76	88	87	110
SWPS T201 coil		77	77	88	88	110
SWPS T201 core		64	64	75	75	110
SWPS RL51 body		57	56	68	67	130
SWPS YC2 body		55	55	66	66	85
SWPS YC4 body		55	55	66	66	85
High Voltage PWB Main B51 coil		59	58	70	69	90
High Voltage PWB Main B551 coil		58	57	69	68	90
High Voltage PWB Main B401 coil		48	48	59	59	90
High Voltage PWB Main B451 coil		55	54	66	65	90
High Voltage PWB Main B1301 coil		50	50	61	61	90
High Voltage PWB Main B1351 coil		56	56	67	67	90
High Voltage PWB Main B731coil		55	54	66	65	90
High Voltage PWB Transfer B51 coil		45	45	56	56	90
High Voltage PWB Transfer B401 coil		48	48	59	59	90
Relay PWB RY1 body		55	55	66	66	130
DLP Fan 1		38	38	49	49	100
DLP Fan 3		56	57	67	68	100
Steam Spread Fan		70	70	81	81	100

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Clause	Requirement + Test		Result - Remark		Verdict
Exit fan	67	67	78	78	100
Toner Sucking Fan	48	48	59	59	100
Belt Fan	54	54	65	65	100
Controller Fan	45	45	56	56	100
LVU Fan	57	58	68	69	100
Clutch Fan	31	31	42	42	100
Polygon Motor	61	60	72	71	100
LSU Cleaning Motor	40	40	51	51	100
Exit Motor	89	87	100	98	115
Transfer Belt Release Motor	42	42	53	53	100
Lift Motor	47	47	58	58	100
Container Motor	47	47	58	58	100
Feed/Black DLP Motor	52	52	63	63	100
Image Motor	58	58	69	69	100
Fuser Motor	84	83	95	94	100
Colour DLP Motor	67	66	78	77	100
Black Drum Motor	60	59	71	70	100
Colour Drum Motor	68	66	79	77	100
Scanner Motor	62	61	73	72	100
Black DLP Clutch	75	74	86	85	90
Resist Clutch	51	46	62	57	90
Feed Clutch	53	53	64	64	90
Middle Clutch	62	62	73	73	90
DU Clutch	57	55	68	66	90
MPF Solenoid	51	51	62	62	90
Junction Solenoid	71	71	82	82	90
Fuser Cover	96	96	107	107	--
Fuser Primary	77	77	88	88	150
Fuser Secondary	72	71	83	82	150
Inlet body	51	521	62	62	--
Enclosure Plastic	53	53	64	64	95
Enclosure Metal	41	41	52	52	70
Cassette Heater	61	73	72	84	--
Supplementary information:					
Temperatures measured with winding resistance method: Not used					

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

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition K and L at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> K: Simplex side copy / TASKalfa 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 L: Simplex side copy / TASKalfa 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		K: 198 V, 50 Hz		L: 242 V 50 Hz		
t _{amb1} (°C):		K: -- L: --		t _{amb2} (°C): K: 24 L: 24		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		K (°C)	L (°C)	K (°C)	L (°C)	
SWPS Z1 body		56	56	67	67	130
SWPS C1 body		53	53	64	64	105
SWPS FL2 coil		59	58	70	69	90
SWPS FL4 coil		55	55	66	66	90
SWPS L1 coil		61	60	72	71	90
SWPS L301 coil		57	56	68	67	90
SWPS BD1 body		68	65	79	76	130
SWPS Q1 body		79	73	90	84	130
SWPS Q3 body		58	58	69	69	130
SWPS Q4 body		55	55	66	66	130
SWPS Q201 body		65	65	76	76	130
SWPS TR301 body		58	57	69	68	130
SWPS TR302 body		59	58	70	69	130
SWPS IC51 body		59	59	70	70	130
SWPS IC301 body		56	56	67	67	130
SWPS T1 coil		82	83	93	94	110
SWPS T1 core		80	80	91	91	110
SWPS T201 coil		78	78	89	89	110
SWPS T201 core		64	65	75	76	110
SWPS RL51 body		58	57	69	68	130
SWPS YC2 body		57	56	68	67	85
SWPS YC4 body		56	56	67	67	85
High Voltage PWB Main B51 coil		60	60	71	71	90
High Voltage PWB Main B551 coil		59	59	70	70	90
High Voltage PWB Main B401 coil		49	46	60	57	90
High Voltage PWB Main B451 coil		55	55	66	66	90
High Voltage PWB Main B1301 coil		51	52	62	63	90
High Voltage PWB Main B1351 coil		57	57	68	68	90
High Voltage PWB Main B731coil		55	55	66	66	90
High Voltage PWB Transfer B51 coil		45	48	56	59	90
High Voltage PWB Transfer B401 coil		49	49	60	60	90
Relay PWB RY1 body		56	59	67	70	130
DLP Fan 1		37	35	48	46	100
DLP Fan 3		57	57	68	68	100

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Clause	Requirement + Test		Result - Remark		Verdict
Steam Spread Fan	67	66	78	77	100
Exit fan	62	61	73	72	100
Toner Sucking Fan	46	45	57	56	100
Belt Fan	54	52	65	63	100
Controller Fan	45	45	56	56	100
LVU Fan	59	58	70	69	100
Clutch Fan	31	32	42	43	100
Polygon Motor	60	59	71	70	100
LSU Cleaning Motor	39	39	50	50	100
Exit Motor	87	89	98	100	115
Transfer Belt Release Motor	41	38	52	49	100
Lift Motor	47	48	58	59	100
Container Motor	48	45	59	56	100
Feed/Black DLP Motor	54	57	65	68	100
Image Motor	59	61	70	72	100
Fuser Motor	83	84	94	95	100
Colour DLP Motor	67	68	78	79	100
Black Drum Motor	60	60	71	71	100
Colour Drum Motor	68	68	79	79	100
Scanner Motor	61	61	72	72	100
Resist Clutch	52	57	63	68	90
Feed Clutch	54	55	65	66	90
DU Clutch	48	53	59	64	90
MPF Solenoid	52	53	63	64	90
Junction Solenoid	62	62	73	73	90
Fuser Cover	93	89	104	100	--
Fuser Primary	76	75	87	86	150
Fuser Secondary	69	68	80	79	150
Inlet body	52	53	63	64	--
Enclosure Plastic	54	53	65	64	95
Enclosure Metal	41	41	52	52	70
Cassette Heater	60	42	71	53	--
Supplementary information:					
Temperatures measured with winding resistance method: Not used					

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P
Temperatures were measured according cl. 1.4.5. Test in condition M and N at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values.					
<Condition> M: Duplex side copy / TASKalfa 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120					
N: Simplex side copy / TASKalfa 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120					
Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of 35°C (T _{ma}), as specified by the manufacturer.					
test voltage(s) (V):	M: 264 V, 60 Hz		N: 264 V 60 Hz		
t _{amb1} (°C):	M: -- N: --		t _{amb2} (°C):		M: 23 N: 24
Temperature of part/at: (measured with thermocouples)	Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
	M (°C)	N (°C)	M (°C)	N (°C)	
SWPS Z1 body	53	56	65	67	130
SWPS C1 body	51	53	63	64	105
SWPS FL2 coil	55	58	67	69	90
SWPS FL4 coil	52	55	64	66	90
SWPS L1 coil	57	59	69	70	90
SWPS L301 coil	54	56	66	67	90
SWPS BD1 body	62	64	74	75	130
SWPS Q1 body	67	70	79	81	130
SWPS Q3 body	56	58	68	69	130
SWPS Q4 body	53	55	65	66	130
SWPS Q201 body	63	65	75	76	130
SWPS TR301 body	55	58	67	69	130
SWPS TR302 body	55	58	67	69	130
SWPS IC51 body	57	59	69	70	130
SWPS IC301 body	53	56	65	67	130
SWPS T1 coil	78	83	90	94	110
SWPS T1 core	75	80	87	91	110
SWPS T201 coil	76	79	88	90	110
SWPS T201 core	63	65	75	76	110
SWPS RL51 body	55	57	67	68	130
SWPS YC2 body	54	57	66	68	85
SWPS YC4 body	54	56	66	67	85
High Voltage PWB Main B51 coil	58	60	70	71	90
High Voltage PWB Main B551 coil	57	60	69	71	90
High Voltage PWB Main B401 coil	47	49	59	60	90
High Voltage PWB Main B451 coil	54	57	66	68	90
High Voltage PWB Main B1301 coil	49	53	61	64	90
High Voltage PWB Main B1351 coil	55	57	67	68	90
High Voltage PWB Main B731coil	54	56	66	67	90
High Voltage PWB Transfer B51 coil	44	45	56	56	90
High Voltage PWB Transfer B401 coil	47	49	59	60	90
Relay PWB RY1 body	54	56	66	67	130
DLP Fan 1	38	36	50	47	100
DLP Fan 3	57	57	69	68	100
Steam Spread Fan	69	67	81	78	100

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Clause	Requirement + Test	Result - Remark	Verdict

Temperature of part/at: (measured with thermocouples)	Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
	M (°C)	N (°C)	M (°C)	N (°C)	
Exit fan	66	52	78	63	100
Toner Sucking Fan	47	45	59	56	100
Belt Fan	51	53	63	64	100
Controller Fan	45	45	57	56	100
LVU Fan	57	59	69	70	100
Clutch Fan	31	31	43	42	100
Polygon Motor	60	60	72	71	100
LSU Cleaning Motor	39	39	51	50	100
Exit Motor	89	90	101	101	115
Transfer Belt Release Motor	40	39	52	50	100
Lift Motor	46	48	58	59	100
Container Motor	46	46	58	57	100
Feed/Black DLP Motor	52	57	64	68	100
Image Motor	58	60	70	71	100
Fuser Motor	83	84	95	95	100
Colour DLP Motor	66	68	78	79	100
Black Drum Motor	59	60	71	71	100
Colour Drum Motor	66	68	78	79	100
Scanner Motor	60	61	72	72	100
Resist Clutch	46	56	58	67	90
Feed Clutch	53	55	65	66	90
DU Clutch	56	50	68	61	90
MPF Solenoid	50	53	62	64	90
Junction Solenoid	70	63	82	74	90
Fuser Cover	95	90	107	101	--
Fuser Primary	76	76	88	87	150
Fuser Secondary	70	69	82	80	150
Inlet body	51	53	63	64	--
Enclosure Plastic	52	54	64	65	95
Enclosure Metal	40	41	52	52	70
Cassette Heater	78	44	90	55	--
Supplementary information:					
Temperatures measured with winding resistance method: Not used					

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition O and P at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> O: Standby / 306ci and PF-5120, PF-5130, DF-5100 P: Standby / 306ci and PF-5120, PF-5130, DF-5100 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		O: 108 V, 60 Hz		P: 132 V 60 Hz		
t _{amb1} (°C):		O: -- P: --	t _{amb2} (°C):		O: 24 P: 24	
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		O (°C)	P (°C)	O (°C)	P (°C)	
SWPS T1 coil		42	43	53	54	110
SWPS T1 core		39	40	50	51	110
SWPS L1 coil		32	32	43	43	90
SWPS L2 coil		33	33	44	44	90
SWPS L51 coil		37	37	48	48	90
SWPS D1 body		37	37	48	48	130
SWPS D101 body		39	40	50	51	130
SWPS D102 body		40	41	51	52	130
SWPS RL		41	42	52	53	130
SWPS Q1 body		31	32	42	43	130
SWPS Q2 body		33	34	44	45	130
SWPS C7 body		31	32	42	43	105
SWPS PC1 body		35	36	46	47	130
SWPS PC3 body		35	35	46	46	130
SWPS Z1 body		28	29	39	40	130
SWPS TRA31 body		46	45	57	56	130
SWPS YC101 body		32	32	43	43	85
SWPS YC102 body		30	31	41	42	85
High Voltage PWB Main B51 coil		26	27	37	38	90
High Voltage PWB Main B401 coil		30	31	41	42	90
High Voltage PWB Main B451 coil		28	28	39	39	90
High Voltage PWB Main B501 coil		27	28	38	39	90
High Voltage PWB Main B551coil		26	26	37	37	90
High Voltage PWB Main B961 coil		29	29	40	40	90
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition Q and R at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> Q: Simplex side copy / 306ci and PF-5120, PF-5130, DF-5100 R: Simplex side copy / 306ci and PF-5120, PF-5130, DF-5100 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		Q: 108 V, 60 Hz		Q: 132 V 60 Hz		
t _{amb1} (°C):		Q: -- R: --		t _{amb2} (°C): Q: 25 R: 25		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		Q (°C)	R (°C)	Q (°C)	R (°C)	
SWPS T1 coil		63	65	73	75	110
SWPS T1 core		53	54	63	64	110
SWPS L1 coil		64	59	74	69	90
SWPS L2 coil		76	69	86	79	90
SWPS L51 coil		51	50	61	60	90
SWPS D1 body		69	64	79	74	130
SWPS D101 body		60	59	70	69	130
SWPS D102 body		59	58	69	68	130
SWPS RL		47	46	57	56	130
SWPS Q1 body		53	51	63	61	130
SWPS Q2 body		52	50	62	60	130
SWPS C7 body		53	52	63	62	105
SWPS PC1 body		50	50	60	60	130
SWPS PC3 body		49	49	59	59	130
SWPS Z1 body		48	47	58	57	130
SWPS TRA31 body		74	70	84	80	130
SWPS YC101body		49	48	59	58	85
SWPS YC102 body		48	48	58	58	85
High Voltage PWB Main B51 coil		48	47	58	57	90
High Voltage PWB Main B401 coil		50	51	60	61	90
High Voltage PWB Main B451 coil		47	46	57	56	90
High Voltage PWB Main B501 coil		37	36	47	46	90
High Voltage PWB Main B551coil		46	45	56	55	90
High Voltage PWB Main B961 coil		50	50	60	60	90
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements					P
Temperatures were measured according cl. 1.4.5. Test in condition S at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> S: Duplex side copy / 306ci and PF-5120, PF-5130, DF-5100						
Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):	S: 132 V, 60 Hz					
t _{amb1} (°C):	S: --		t _{amb2} (°C):	S: 24		
Temperature of part/at: (measured with thermocouples)	Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)	
	S (°C)	--	S (°C)	--		
SWPS T1 coil	61	--	72	--	110	
SWPS T1 core	51	--	62	--	110	
SWPS L1 coil	54	--	65	--	90	
SWPS L2 coil	62	--	73	--	90	
SWPS L51 coil	46	--	57	--	90	
SWPS D1 body	59	--	70	--	130	
SWPS D101 body	56	--	67	--	130	
SWPS D102 body	55	--	66	--	130	
SWPS RL	43	--	54	--	130	
SWPS Q1 body	47	--	58	--	130	
SWPS Q2 body	47	--	58	--	130	
SWPS C7 body	48	--	59	--	105	
SWPS PC1 body	46	--	57	--	130	
SWPS PC3 body	45	--	56	--	130	
SWPS Z1 body	44	--	55	--	130	
SWPS TRA31 body	57	--	68	--	130	
SWPS YC101 body	44	--	55	--	85	
SWPS YC102 body	44	--	55	--	85	
High Voltage PWB Main B51 coil	45	--	56	--	90	
High Voltage PWB Main B401 coil	48	--	59	--	90	
High Voltage PWB Main B451 coil	43	--	54	--	90	
High Voltage PWB Main B501 coil	34	--	45	--	90	
High Voltage PWB Main B551coil	42	--	53	--	90	
High Voltage PWB Main B961 coil	47	--	58	--	90	
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition T and U at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> T: Standby / TASKalfa 306ci and PF-5120, PF-5130, DF-5100 U: Standby / TASKalfa 306ci and PF-5120, PF-5130, DF-5100 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		T: 198 V, 50 Hz		U: 242 V 50 Hz		
t _{amb1} (°C):		T: -- U: --		t _{amb2} (°C): T: 23 U: 23		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		T (°C)	U (°C)	T (°C)	U (°C)	
SWPS T1 core		40	43	52	55	110
SWPS L1 coil		31	31	43	43	105
SWPS L2 coil		32	33	44	45	105
SWPS L3 coil		30	31	42	43	90
SWPS L51 coil		33	34	45	46	90
SWPS D1 body		37	37	49	49	130
SWPS D101 body		39	40	51	52	130
SWPS D102 body		40	41	52	53	130
SWPS RL		48	49	60	61	130
SWPS Q1 body		39	41	51	53	130
SWPS Q2 body		39	42	51	54	130
SWPS C7 body		32	33	44	45	105
SWPS PC1 body		35	38	47	50	130
SWPS PC3 body		35	37	47	49	130
SWPS Z1 body		27	29	39	41	130
SWPS TRA31 body		37	38	49	50	130
SWPS YC101 body		29	31	41	43	85
SWPS YC102 body		28	30	40	42	85
High Voltage PWB Main B51 coil		26	27	38	39	90
High Voltage PWB Main B401 coil		30	31	42	43	90
High Voltage PWB Main B451 coil		28	29	40	41	90
High Voltage PWB Main B501 coil		27	28	39	40	90
High Voltage PWB Main B551coil		25	26	37	38	90
High Voltage PWB Main B961 coil		28	30	40	42	90
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements					P	
Temperatures were measured according cl. 1.4.5. Test in condition V at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> V: Standby / TASKalfa 306ci and PF-5120, PF-5130, DF-5100 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.							
test voltage(s) (V):		V: 264 V, 60 Hz					
t _{amb1} (°C):		V: --		t _{amb2} (°C):	V: 24		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)	
		V (°C)		--	V (°C)		--
SWPS T1 coil		45		--	56	--	110
SWPS T1 core		42		--	53	--	110
SWPS L1 coil		30		--	41	--	105
SWPS L2 coil		31		--	42	--	105
SWPS L3 coil		29		--	40	--	90
SWPS L51 coil		33		--	44	--	90
SWPS D1 body		35		--	46	--	130
SWPS D101 body		39		--	50	--	130
SWPS D102 body		39		--	50	--	130
SWPS RL		48		--	59	--	130
SWPS Q1 body		41		--	52	--	130
SWPS Q2 body		41		--	52	--	130
SWPS C7 body		33		--	44	--	105
SWPS PC1 body		37		--	48	--	130
SWPS PC3 body		36		--	47	--	130
SWPS Z1 body		28		--	39	--	130
SWPS TRA31 body		36		--	47	--	130
SWPS YC101 body		29		--	40	--	85
SWPS YC102 body		28		--	39	--	85
High Voltage PWB Main B51 coil		26		--	37	--	90
High Voltage PWB Main B401 coil		30		--	41	--	90
High Voltage PWB Main B451 coil		28		--	39	--	90
High Voltage PWB Main B501 coil		27		--	38	--	90
High Voltage PWB Main B551coil		25		--	36	--	90
High Voltage PWB Main B961 coil		29		--	40	--	90
Supplementary information:							
Temperatures measured with winding resistance method: Not used							

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition W and X at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> W: Simplex side copy / TASKalfa 306ci and PF-5120, PF-5130, DF-5100 X: Simplex side copy / TASKalfa 306ci and PF-5120, PF-5130, DF-5100 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		W: 198 V, 50 Hz		X: 242 V 50 Hz		
t _{amb1} (°C):		W: -- X: --		t _{amb2} (°C): W: 24 X: 23		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		W (°C)	X (°C)	W (°C)	X (°C)	
SWPS T1 coil		60	60	71	72	110
SWPS T1 core		51	50	62	62	110
SWPS L1 coil		71	51	82	63	105
SWPS L2 coil		84	71	95	83	105
SWPS L3 coil		60	54	71	66	90
SWPS L51 coil		48	46	59	58	90
SWPS D1 body		74	66	85	78	130
SWPS D101 body		62	59	73	71	130
SWPS D102 body		53	50	64	62	130
SWPS RL		48	46	59	58	130
SWPS Q1 body		77	71	88	83	130
SWPS Q2 body		71	66	82	78	130
SWPS C7 body		52	48	63	60	105
SWPS PC1 body		49	46	60	58	130
SWPS PC3 body		48	45	59	57	130
SWPS Z1 body		46	43	57	55	130
SWPS TRA31 body		56	52	67	64	130
SWPS YC101 body		46	43	57	55	85
SWPS YC102 body		45	43	56	55	85
High Voltage PWB Main B51 coil		47	45	58	57	90
High Voltage PWB Main B401 coil		50	48	61	60	90
High Voltage PWB Main B451 coil		45	43	56	55	90
High Voltage PWB Main B501 coil		36	34	47	46	90
High Voltage PWB Main B551coil		45	42	56	54	90
High Voltage PWB Main B961 coil		50	47	61	59	90
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition Y and Z at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> Y: Simplex side copy / TASKalfa 306ci and PF-5120, PF-5130, DF-5100 Z: Duplex side copy / TASKalfa 306ci and PF-5120, PF-5130, DF-5100 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		Y: 264 V, 60 Hz		Z: 264 V 60 Hz		
t _{amb1} (°C):		Y: -- Z: --		t _{amb2} (°C): Y: 23 Z: 23		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		Y (°C)	Z (°C)	Y (°C)	Z (°C)	
SWPS T1 coil		60	58	72	70	110
SWPS T1 core		50	49	62	61	110
SWPS L1 coil		59	55	71	67	105
SWPS L2 coil		67	62	79	74	105
SWPS L3 coil		52	50	64	62	90
SWPS L51 coil		46	43	58	55	90
SWPS D1 body		63	61	75	73	130
SWPS D101 body		59	57	71	69	130
SWPS D102 body		50	48	62	60	130
SWPS RL		46	45	58	57	130
SWPS Q1 body		67	65	79	77	130
SWPS Q2 body		64	61	76	73	130
SWPS C7 body		48	46	60	58	105
SWPS PC1 body		45	44	57	56	130
SWPS PC3 body		44	43	56	55	130
SWPS Z1 body		43	42	55	54	130
SWPS TRA31 body		51	47	63	59	130
SWPS YC101 body		43	42	55	54	85
SWPS YC102 body		43	42	55	54	85
High Voltage PWB Main B51 coil		45	44	57	56	90
High Voltage PWB Main B401 coil		48	47	60	59	90
High Voltage PWB Main B451 coil		43	42	55	54	90
High Voltage PWB Main B501 coil		34	34	46	46	90
High Voltage PWB Main B551coil		42	41	54	53	90
High Voltage PWB Main B961 coil		48	46	60	58	90
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition AA and AB at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> AA: Sleep / 406ci and PF-5120, PF-5140 AB: Sleep / 406ci and PF-5120, PF-5140 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		AA: 108 V, 60 Hz		AB: 132 V 60 Hz		
t _{amb1} (°C):		AA: -- AB: --		t _{amb2} (°C): AA: 26 AB: 26		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		AA (°C)	AB (°C)	AA (°C)	AB (°C)	
Cassette Heater 1		58	72	67	81	--
PF-5120 Cassette Heater		59	74	68	83	--
PF-5140 Cassette Heater		56	68	65	77	--
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition AC and AD at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values.						
<Condition> AC: Sleep / TASKalfa 406ci and PF-5120, PF-5140						
AD: Sleep / TASKalfa 406ci and PF-5120, PF-5140						
Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of 35°C (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		AC: 198 V, 50 Hz		AD: 242 V 50 Hz		
t _{amb1} (°C):		AC: -- AD: --		t _{amb2} (°C): AC: 24 AD: 25		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		AC (°C)	AD (°C)	AC (°C)	AD (°C)	
Cassette Heater 1		61	77	72	87	--
PF-5120 Cassette Heater		58	74	69	84	--
PF-5140 Cassette Heater		53	68	64	78	--
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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

4.5	TABLE: Temperature rise measurements				P
Temperatures were measured according cl. 1.4.5. Test in condition AE at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> AE: Sleep / TASKalfa 406ci and PF-5120, PF-5140					
Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.					
test voltage(s) (V):		AE: 264 V, 60 Hz			
t _{amb1} (°C):		AE: --		t _{amb2} (°C): AE: 24	
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}	
		AE (°C)		AE (°C)	
		--		--	
Cassette Heater 1		85		96	
PF-5120 Cassette Heater		81		92	
PF-5140 Cassette Heater		72		83	
Supplementary information:					
Temperatures measured with winding resistance method: Not used					

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition AF and AG at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> AF: Simplex side copy / TASKalfa 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 AG: Duplex side copy / TASKalfa 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		AF: 264 V, 60 Hz		AG: 264 V 60 Hz		
t _{amb1} (°C):		AF: -- AG: --		t _{amb2} (°C): AF: 23 AG: 22		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		AF (°C)	AG (°C)	AF (°C)	AG (°C)	
Black DLP Clutch		72	--	84	--	--
Junction Solenoid		--	74	--	87	--
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition AH and AI at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> AH: Duplex side copy / TASKalfa 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 AI: Simplex side copy / TASKalfa 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		AH: 264 V, 60 Hz		AI: 264 V 60 Hz		
t _{amb1} (°C):		AH: -- AI: --		t _{amb2} (°C): AH: 25 AI: 23		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		AH (°C)	AI (°C)	AH (°C)	AI (°C)	
DLP Vibration Motor		40	--	50	--	100
Middle Clutch		--	66	--	78	90
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition AJ and AK at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> AJ: Standby / 406ci and FAX SYSTEM 10 AK: Standby / 306ci and FAX SYSTEM 11 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		AJ: 120 V, 60 Hz		AK: 120 V 60 Hz		
t _{amb1} (°C):		AJ: -- AK: --		t _{amb2} (°C): AJ: 22 AK: 24		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		AJ (°C)	AK (°C)	AJ (°C)	AK (°C)	
FAX SYSTEM 10 C12 Body		37	--	50	--	--
FAX SYSTEM 11 C12 Body		--	38	--	49	--
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition AL and AM at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> AL: Simplex side copy / 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 AM: Duplex side copy / 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T_{ma}), as specified by the manufacturer.						
test voltage(s) (V):		AL: 120 V, 60 Hz		AM: 120 V 60 Hz		
t_{amb1} (°C):		AL: -- AM: --		t_{amb2} (°C):	AL: 22 AM: 24	
Temperature of part/at: (measured with thermocouples)		Measured temperature at T_{amb}		Calculated temperature at T_{ma}		Allowed T_{max} (°C)
		AL (°C)	AM (°C)	AL (°C)	AM (°C)	
DP-5110 Feed Motor 1		78	72	90	84	100
DP-5110 Feed Motor 2		87	80	99	92	100
DP-5110 Feed Clutch		62	57	74	69	90
DP-5110 Enclosure Cover		55	51	67	63	95
PF-5120 Feed Motor		43	42	55	54	100
PF-5120 Lift Motor		32	31	44	43	100
PF-5120 Feed Clutch		44	40	56	52	90
PF-5120 Vertical Conveying Clutch		57	46	69	58	90
PF-5120 Cassette Heater		27	27	39	39	--
PF-5120 Enclosure Cover		30	30	42	42	95
PF-5140 Feed Motor		39	36	51	48	100
PF-5140 Lift Motor		27	26	39	38	100
PF-5140 Feed Clutch		68	48	80	60	90
PF-5140 Vertical Conveying Clutch		71	51	83	63	90
PF-5140 Cassette Heater		24	24	36	36	--
PF-5140 Enclosure Cover		26	25	38	37	95
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P		
Temperatures were measured according cl. 1.4.5. Test in condition AN at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> AN: Simplex side copy / 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5120							
Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.							
test voltage(s) (V):		AN: 120 V, 60 Hz					
t _{amb1} (°C):		AN: --		t _{amb2} (°C): AN: 26			
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)	
		AN (°C)		--	AN (°C)		--
DF-5120 Eject Motor		83		--	92	--	100
DF-5120 Stapler Shift Motor		27		--	36	--	100
DF-5120 Eject Release Motor		62		--	71	--	100
DF-5120 Carry Motor		79		--	88	--	100
DF-5120 Middle Motor		75		--	84	--	100
DF-5120 Knock Motor		56		--	65	--	100
DF-5120 Width Adjustment Motor		45		--	54	--	100
DF-5120 Staple Motor		31		--	40	--	100
DF-5120 Tray Motor		32		--	41	--	100
DF-5120 Punch Motor		65		--	74	--	100
DF-5120 Punch Shift Motor		54		--	63	--	100
DF-5120 Eject Clutch		80		--	89	--	90
DF-5120 Sub Tray Junction Solenoid		60		--	69	--	90
DF-5120 Feed Solenoid		60		--	69	--	90
DF-5120 PH Solenoid		55		--	64	--	90
DF-5120 Enclosure Cover		44		--	53	--	95
Supplementary information:							
Temperatures measured with winding resistance method: Not used							

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P
Temperatures were measured according cl. 1.4.5. Test in condition AO at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> AO: Simplex side copy / 406ci and DP-5110, PF-5120, PF-5140, AK-5100, DF-5110, PH-5100					
Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T_{ma}), as specified by the manufacturer.					
test voltage(s) (V):	AO: 120 V, 60 Hz				
t_{amb1} (°C):	AO: --		t_{amb2} (°C):	AO: 24	
Temperature of part/at: (measured with thermocouples)	Measured temperature at T_{amb}		Calculated temperature at T_{ma}		Allowed T_{max} (°C)
	AO (°C)	--	AO (°C)	--	
DF-5110 Eject Motor	64	--	75	--	100
DF-5110 Stapler Shift Motor	31	--	42	--	100
DF-5110 Eject Release Motor	68	--	79	--	100
DF-5110 Carry Motor	79	--	90	--	100
DF-5110 Middle Motor	78	--	89	--	100
DF-5110 Knock Motor	61	--	72	--	100
DF-5110 Width Adjustment Motor	46	--	57	--	100
DF-5110 Staple Motor	32	--	43	--	100
DF-5110 Tray Motor	47	--	58	--	100
DF-5110 Feed Solenoid	63	--	74	--	90
DF-5110 Enclosure Cover	44	--	55	--	95
PH-5100 Punch Motor	80	--	91	--	100
PH-5100 Shift Motor	56	--	67	--	100
PH-5100 PH Solenoid	56	--	67	--	90
Supplementary information:					
Temperatures measured with winding resistance method: Not used					

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition AP and AQ at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> AP: Simplex side copy / 406ci and DP-5110, PF-5120, PF-5140, AK-5100, MT-5100 AQ: Simplex side copy / 406ci and DP-5110, PF-5120, PF-5140, AK-5100, MT-5100 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T_{ma}), as specified by the manufacturer.						
test voltage(s) (V):		AP: 120 V, 60 Hz		AQ: 120 V 60 Hz		
t_{amb1} (°C):		AP: -- AQ: --		t_{amb2} (°C): AP: 23 AQ: 24		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T_{amb}		Calculated temperature at T_{ma}		Allowed T_{max} (°C)
		AP (°C)	AQ (°C)	AP (°C)	AQ (°C)	
MT-5100 Drive Motor		52	--	64	--	100
MT-5100 Enclosure Cover		38	--	50	--	95
AK-5100 Conveying Motor		--	86	--	97	100
AK-5100 Cooling Fan		--	64	--	75	100
AK-5100 Enclosure Cover		--	62	--	73	95
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition AR and AS at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> AR: Duplex side copy / 406ci and DP-5100, PF-5120, PF-5130, DF-5100 AS: Simplex side copy / 406ci and DP-5100, PF-5120, PF-5130, DF-5100 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		AR: 120 V, 60 Hz		AS: 120 V 60 Hz		
t _{amb1} (°C):		AR: -- AS: --		t _{amb2} (°C): AR: 24 AS: 26		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		AR (°C)	AS (°C)	AR (°C)	AS (°C)	
DP-5100 Feed Motor		89	87	100	96	100
DP-5100 Feed Motor		56	60	67	69	100
DP-5100 Junction Motor		61	41	72	50	100
DP-5100 Enclosure Cover		49	51	60	60	95
DF-5100 Eject Motor		81	83	92	92	100
DF-5100 Staple Shift Motor		54	57	65	66	100
DF-5100 Eject Release Motor		62	65	73	74	100
DF-5100 Middle Motor		74	79	85	88	100
DF-5100 Knock Motor		63	64	74	73	100
DF-5100 Width Adjustment Motor		65	69	76	78	100
DF-5100 Staple Motor		50	53	61	62	100
DF-5100 Tray Motor		54	56	65	65	100
DF-5100 Paper Hold Solenoid		66	74	77	83	90
DF-5100 Enclosure Cover		58	62	69	71	95
PF-5130 Feed Motor		33	38	44	47	100
PF-5130 Lift Motor		26	28	37	37	100
PF-5130 Feed Clutch		36	54	47	63	90
PF-5130 Vertical Conveying Clutch		49	65	60	74	90
PF-5130 Enclosure Cover		24	26	35	35	95
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition AT and AU at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> AT: Duplex side copy / 406ci and DP-5100, PF-5120 AU: Simplex side copy / 406ci and DP-5100, PF-5120 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		AT: 120 V, 60 Hz		AU: 120 V 60 Hz		
t _{amb1} (°C):		AT: -- AU: --		t _{amb2} (°C): AT: 24 AU: 25		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		AT (°C)	AU (°C)	AT (°C)	AU (°C)	
PF-5120 Feed Motor		41	45	52	55	100
PF-5120 Lift Motor		29	31	40	41	100
PF-5120 Feed Clutch		55	73	66	83	90
PF-5120 Vertical Conveying Clutch		47	59	58	69	90
PF-5120 Enclosure Cover		29	31	40	41	95
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition AV and AW at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. <Condition> AV: Duplex side copy / 406ci and DP-5100, PF-5120 AW: Simplex side copy / 406ci and DP-5100, PF-5120 Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of <u>35°C</u> (T _{ma}), as specified by the manufacturer.						
test voltage(s) (V):		AV: 120 V, 60 Hz		AW: 120 V 60 Hz		
t _{amb1} (°C):		AV: -- AU: --		t _{amb2} (°C): AV: 24 AW: 24		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T _{amb}		Calculated temperature at T _{ma}		Allowed T _{max} (°C)
		AV (°C)	AW (°C)	AV (°C)	AW (°C)	
Feed/Black DLP Motor, Alternate		50	50	61	61	100
Colour DLP Motor, Alternate		63	63	74	74	100
Fuser Motor, Alternate		58	58	69	69	100
Supplementary information:						
Temperatures measured with winding resistance method: Not used						

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Clause	Requirement + Test	Result - Remark	Verdict

4.5.5	TABLE: Ball pressure test of thermoplastic parts			P
	Allowed impression diameter (mm)	≤ 2 mm		—
Part		Test temperature (°C)	Impression diameter (mm)	
TASKalfa 406ci , TASKalfa 356ci, 406ci , 356ci				
SWPS YC2 /Nylon		125	1.3	
SWPS YC4 /Nylon		125	1.3	
Fuser Unit Heater Connector Plug /Nylon		125	1.3	
Connector Receptacle for Fuser Heater /Nylon		125	1.3	
TASKalfa 306ci , 306ci				
SWPS YC101 /Nylon		125	1.3	
SWPS YC102 /Nylon		125	1.3	
SWPS Inductor BOBBIN:L1,L2 for 220-240V /PBT		125	1.2	
SWPS Inductor BOBBIN:L1,L2 for 120V /PBT		125	1.2	
SWPS Inductor BOBBIN:L3 for 220-240V /PET		125	1.4	
SWPS Inductor Base:L51 for 220-240V /PET		125	1.4	
Fuser Unit Heater Connector Plug /Nylon		125	1.5	
Connector Receptacle for Fuser Heater /Nylon		125	1.5	
Supplementary information:				
--				

4.7	TABLE: Resistance to fire					P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence	
--	--	--	--	--	--	--
Supplementary information:						
(see appended table 1.5.1)						

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Clause	Requirement + Test	Result - Remark	Verdict

5.1	TABLE: touch current measurement						P
	Test voltage (V) : (see below)						—
Measurement location		Polarity (normal) [mA]		Polarity (reverse) [mA]		Limit (mA)	Comments
(Terminal A connected to...)		Switch: ON	Switch: OFF	Switch: ON	Switch: OFF		
406ci,356ci							
Earth terminal ("e" = open)		0.12	0.01	0.12	0.17	3.5	AC 132V, 60Hz
LAN Connector ("e" = close)		0.01	0.01	0.01	0.01	0.25	AC 132V, 60Hz
FAX PWB TNV Connector ("e" = close)		0.01	0.01	0.01	0.01	0.25	AC 132V, 60Hz
TASKalfa 406ci, TASKalfa 356ci							
Earth terminal ("e" = open)		0.36	0.02	0.36	0.60	3.5	AC 264V, 60Hz
LAN Connector ("e" = close)		0.01	0.01	0.01	0.01	0.25	AC 264V, 60Hz
FAX PWB TNV Connector ("e" = close)		0.01	0.01	0.01	0.01	0.25	AC 264V, 60Hz
306ci							
Earth terminal ("e" = open)		0.32	0.01	0.31	0.58	3.5	AC 132V, 60Hz
LAN Connector ("e" = close)		0.01	0.01	0.01	0.01	0.25	AC 132V, 60Hz
FAX PWB TNV Connector ("e" = close)		0.01	0.01	0.01	0.01	0.25	AC 132V, 60Hz
TASKalfa 306ci							
Earth terminal ("e" = open)		0.50	0.02	0.51	0.67	3.5	AC 264V, 60Hz
LAN Connector ("e" = close)		0.01	0.01	0.01	0.01	0.25	AC 264V, 60Hz
FAX PWB TNV Connector ("e" = close)		0.01	0.01	0.01	0.01	0.25	AC 264V, 60Hz
Supplementary information:							
--							

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Clause	Requirement + Test	Result - Remark	Verdict

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Functional:				
--		--	--	--
Basic/supplementary:				
TASKalfa 406ci for 220-240V (Primary – Earth)		AC	1707	No
TASKalfa 356ci for 220-240V (Primary – Earth)		AC	1707	No
TASKalfa 306ci for 220-240V (Primary – Earth)		AC	2087	No
406ci for 120V (Primary – Earth)		AC	1707	No
356ci for 120V (Primary – Earth)		AC	1707	No
306ci for 120V (Primary – Earth)		AC	1500	No
Switching Power Supply Unit: ADP-385BN AA, (Primary – Earth)		AC	1707	No
Switching Power Supply Unit: ADP-385AN AA, (Primary – Earth)		AC	1707	No
Switching Power Supply Unit:MPW3162M, (Primary - Earth)		AC	2087	No
Switching Power Supply Unit:MPW3161M, (Primary - Earth)		AC	1500	No
Transformer T1 on SWPS ADP-385BN AA and ADP-385AN AA, (Primary – Core)		AC	1707	No
Transformer T1 on SWPS ADP-385BN AA and ADP-385AN AA, (Secondary – Core)		AC	1707	No
Transformer T201 on SWPS ADP-385BN AA and ADP-385AN AA, (Primary – Core)		AC	1707	No
Transformer T201 on SWPS ADP-385BN AA and ADP-385AN AA, (Secondary – Core)		AC	1707	No
Transformer T1 on SWPS MPW3162M, (Primary – Core)		AC	2087	No
Transformer T1 on SWPS MPW3162M, (Secondary– Core)		AC	2087	No
Transformer T1 on SWPS MPW3161M, (Primary – Core)		AC	1500	No
Transformer T1 on SWPS MPW3161M, (Secondary– Core)		AC	1500	No

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Clause	Requirement + Test	Result - Remark	Verdict

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Reinforced:				
TASKalfa 406ci for 220-240V (Primary – Secondary)		AC	3000	No
TASKalfa 356ci for 220-240V (Primary – Secondary)		AC	3000	No
TASKalfa 306ci for 220-240V (Primary – Secondary)		AC	3000	No
406ci for 120V (Primary – Secondary)		AC	3000	No
356ci for 120V (Primary – Secondary)		AC	3000	No
306ci for 120V (Primary – Secondary)		AC	3000	No
Switching Power Supply Unit: ADP-385BN AA, (Primary – Secondary)		AC	3000	No
Switching Power Supply Unit: ADP-385AN AA, (Primary – Secondary)		AC	3000	No
Switching Power Supply Unit:MPW3162M, (Primary – Secondary)		AC	3000	No
Switching Power Supply Unit:MPW3161M, (Primary – Secondary)		AC	3000	No
Transformer T1 on SWPS for ADP-385BN AA and ADP-385AN AA (Primary – Secondary)		AC	3000	No
Transformer T201 on SWPS for ADP-385BN AA and ADP-385AN AA (Primary – Secondary)		AC	3000	No
Transformer T1 on SWPS for MPW3162M (Primary – Secondary)		AC	3000	No
Transformer T1 on SWPS for MPW3161M (Primary – Secondary)		AC	3000	No
Insulation Tape of Transformer T1 on SWPS for ADP-385BN AA and ADP-385AN AA (2 layer)		AC	3000	No
Insulation Tape of Transformer T201 on SWPS for ADP-385BN AA and ADP-385AN AA (2 layer)		AC	3000	No
Insulation Tape of Transformer T1 on SWPS for MPW3162M and MPW3161M		AC	3000	No
Photo Coupler (IC51, IC55, IC302, IC305, IC311) on SWPS for ADP-385BN AA and ADP-385AN AA		AC	3000	No
Photo Coupler (IC301, IC309) on SWPS for ADP-385BN AA and ADP-385AN AA		AC	3000	No
Photo Coupler (PC3) on SWPS MPW3162M and MPW3161M		AC	3000	No

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Clause	Requirement + Test	Result - Remark	Verdict

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Wiring UL1015 AWG16		AC	3000	No
Wiring UL3122 AWG18		AC	3000	No
Wiring UL3122 AWG16		AC	3000	No
Wiring UL11347 AWG22		AC	3000	No
Supplementary information:				
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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C) :		24 if not stated in each Observation		—	
	Power source for EUT: Manufacturer, model/type, output rating :		--		—	
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Switching Power Supply Unit, Model ADP-385AN AA T1	24V output overload with Fan	120V, 60Hz	5h	F1	10	All Output shutdown after 17.5A. Max temp. of T1: 92°C Ambient temp.: 24°C No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model ADP-385AN AA T201	5V output overload with Fan	120V 60Hz	4h	F1	10	All Output shutdown after 11.0A. Max temp. of T201: 106°C Ambient temp.: 25°C No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model ADP-385AN AA T1	24V output overload without Fan	120V, 60Hz	3h	F1	10	All Output shutdown after 8.0A. Max temp. of T1: 95°C Ambient temp.: 24°C No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model ADP-385AN AA T201	5V output overload without Fan	120V 60Hz	4h	F1	10	All Output shutdown after 10.5A. Max temp. of T201: 114°C Ambient temp.: 24°C No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model ADP-385BN AA T1	24V output overload with Fan	240V, 50Hz	4h	F1	6.3	All Output shutdown after 17.5A. Max temp. of T1: 78°C Ambient temp.: 24°C No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model ADP-385BN AA T201	5V output overload with Fan	240V, 50Hz	2.5h	F1	6.3	All Output shutdown after 11.0A. Max temp. of T201: 106°C Ambient temp.: 24°C No hazards. HV test: 3000Vac passed.

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Clause	Requirement + Test	Result - Remark	Verdict

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C) :		24 if not stated in each Observation			—
	Power source for EUT: Manufacturer, model/type, output rating :		--			—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Switching Power Supply Unit, Model ADP-385BN AA T1	24V output overload without Fan	240V, 50Hz	2.5h	F1	6.3	All Output shutdown after 8.0A. Max temp. of T1: 88°C Ambient temp.: 24°C No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model ADP-385BN AA T201	5V output overload without Fan	240V, 50Hz	4h	F1	6.3	All Output shutdown after 10.0A. Max temp. of T201: 117°C Ambient temp.: 24°C No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3161M T1	24V output overload with Fan	120V, 60Hz	6h	F1	6.3	All Output shutdown after 14.0A. Max temp. of T1: 72°C Ambient temp.: 24°C No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3161M T1	24V output overload without Fan	120V, 60Hz	5h	F1	6.3	All Output shutdown after 11.0A. Max temp. of T1: 103°C Ambient temp.: 23°C No hazards. HV test:
Switching Power Supply Unit, Model MPW3162M T1	24V output overload with Fan	240V, 50Hz	5h	F1	5.0	All Output shutdown after 14.0A. Max temp. of T1: 72°C Ambient temp.: No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3162M T1	24V output overload without Fan	240V, 50Hz	5.5h	F1	5.0	All Output shutdown after 10.0A. Max temp. of T1: 112°C Ambient temp.: No hazards. HV test: 3000Vac passed.

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Clause	Requirement + Test	Result - Remark	Verdict

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C) :					24 if not stated in each Observation
	Power source for EUT: Manufacturer, model/type, output rating :					--
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Switching Power Supply Unit, Model ADP-385AN AA IC31 pin2 – pin3	Short	120V, 60Hz	10min	--	--	Output shutdown immediately. No hazards. HV test:3000Vac passed.
Switching Power Supply Unit, Model ADP-385AN AA IC31 pin3 – pin4	Short	120V, 60Hz	10min	--	--	Output shutdown immediately. No hazards. HV test:3000Vac passed.
Switching Power Supply Unit, Model ADP-385AN AA IC31 pin3	Open	120V, 60Hz	10min	--	--	Output shutdown immediately. No hazards. HV test:3000Vac passed
Switching Power Supply Unit, Model ADP-385AN AA IC302 S	Open	120V, 60Hz	10min	--	--	All output shutdown immediately. No hazards. HV test:3000Vac passed.
Switching Power Supply Unit, Model ADP-385AN AA IC51 pin1-pin2	Short	120V, 60Hz	10min	--	--	All output shutdown immediately. No hazards. HV test:3000Vac passed.
Switching Power Supply Unit, Model ADP-385AN AA ZD208	Short	120V, 60Hz	10min	--	--	All output shutdown immediately. No hazards. HV test:3000Vac passed.
Switching Power Supply Unit, Model ADP-385AN AA D201	Short	120V, 60Hz	10min	F1	10A	All output shutdown immediately. D202 was broken. F1 was opened. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model ADP-385AN AA C1	Short	120V, 60Hz	10min	F1	10A	Output shutdown immediately. D1 was shorted. F1 was opened. HV test:3000Vac passed

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Clause	Requirement + Test	Result - Remark	Verdict

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C) :					24 if not stated in each Observation
	Power source for EUT: Manufacturer, model/type, output rating :					--
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Switching Power Supply Unit, Model ADP-385BN AA IC31 pin2 – pin3	Short	240V, 50Hz	10min	--	--	24V output : shutdown immediately. 5V output : normal operating. No hazards. HV test:3000Vac passed.
Switching Power Supply Unit, Model ADP-385BN AA IC31 pin3 – pin4	Short	240V, 50Hz	10min	--	--	24V output : shutdown immediately. 5V output : normal operating. No hazards. HV test:3000Vac passed.
Switching Power Supply Unit, Model ADP-385BN AA IC31 pin3	Open	240V, 50Hz	10min	--	--	24V output : shutdown immediately. 5V output : normal operating. No hazards. HV test:3000Vac passed.
Switching Power Supply Unit, Model ADP-385BN AA IC302 S	Open	240V, 50Hz	10min	--	--	All output shutdown immediately. No hazards. HV test:3000Vac passed.
Switching Power Supply Unit, Model ADP-385BN AA IC51 pin1-pin2	Short	240V, 50Hz	10min	--	--	All output shutdown immediately. No hazards. HV test:3000Vac passed.
Switching Power Supply Unit, Model ADP-385BN AA ZD208	Short	240V, 50Hz	10min	--	--	All output shutdown immediately. No hazards. HV test:3000Vac passed.
Switching Power Supply Unit, Model ADP-385BN AA D201	Short	240V, 50Hz	10min	--	--	All output shutdown immediately. D202 was broken. F1 was opened. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model ADP-385BN AA C1	Short	240V, 50Hz	10min	F1	6.3A	Output shutdown immediately. D1 was shorted. F1 was opened. HV test:3000Vac passed

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Clause	Requirement + Test	Result - Remark	Verdict

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C) :					24 if not stated in each Observation
	Power source for EUT: Manufacturer, model/type, output rating :					--
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Switching Power Supply Unit, Model MPW3161M IC1 VCC – GND	Short	120V, 60Hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3161M IC1 VH	Open	120V, 60Hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3161M IC1 VCC – FB	Short	120V, 60Hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3161M IC1 VH – FB	Short	120V, 60Hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3161M Q2 D – S	Short	120V, 60Hz	10min	F1	6.3A	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3161M C7	Open	120V, 60Hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3161M D6	Short	120V, 60hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3161M C106	Short	120V, 60hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.

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Clause	Requirement + Test	Result - Remark	Verdict

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C) :					24 if not stated in each Observation
	Power source for EUT: Manufacturer, model/type, output rating :					--
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Switching Power Supply Unit, Model MPW3161M R11	Open	120V, 60hz	10min	F1	6.3A	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3162M IC1 VCC – GND	Short	240V, 50Hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3162M IC1 VH	Open	240V, 50Hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3162M IC1 VCC – FB	Short	240V, 50Hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3162M IC1 VH – FB	Short	240V, 50Hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3162M Q2 D – S	Short	240V, 50Hz	10min	F1	6.3A	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3162M C7	Open	240V, 50Hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3162M D6	Short	240V, 50Hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.

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Clause	Requirement + Test	Result - Remark	Verdict

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C) :					24 if not stated in each Observation
	Power source for EUT: Manufacturer, model/type, output rating :					--
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Switching Power Supply Unit, Model MPW3162M C106	Short	240V, 50Hz	10min	--	--	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Switching Power Supply Unit, Model MPW3162M R11	Open	240V, 50Hz	10min	F1	6.3A	Output shutdown immediately. No hazards. HV test: 3000Vac passed.
Exit Motor Model PM42S-F48-MIN9	CE	24Vdc	10min	--	--	Max Temp.: 116°C, Motor winding was opened. Ambient temp.: 27°C No hazard.
Fuser Motor, Eject Motor(DF-5100 and DF-5110 and DF-5120), Stapler Shift Motor(DF-5100 and DF-5110 and DF-5120), Eject Release Motor(DF-5100), Punch Shift Motor(DF-5120), Shift Motor(PH-5100 and PH-5110) Model KFL42LCB661A	CE	24Vdc	10min	--	--	Temp.: 84°C, Motor winding was opened. Ambient temp.: 23°C No hazard.
Scanner Motor PM42S-096-MIM6	CE	24Vdc	10min	--	--	Max Temp.: 155°C. Motor winding was opened. Ambient temp.: 23°C No hazards.
Feed Motor(Document Processor Unit Standard), Feed Motor(DP-5100) Model KV4239-T3B006	CE	24Vdc	10min	--	--	Max Temp.: 44°C. Motor winding was opened. Ambient temp.: 23°C No hazards.

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Clause	Requirement + Test	Result - Remark	Verdict

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C)		24 if not stated in each Observation			—
	Power source for EUT: Manufacturer, model/type, output rating		--			—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Junction Motor (Document Processor Unit) Junction Motor(DP-5100) Model PM35L-048-MIM2	CE	24Vdc	10min	--	--	Max Temp.: 126°C. Motor winding was opened. Ambient temp.: 23°C No hazards.
Feed Motor(DP-5110) Model KV4239-T3B007	CE	24Vdc	10min	--	--	Max Temp.: 44°C. Motor winding was opened. Ambient temp.: 23°C No hazards.
Middle Motor(DF-5100) Model 17PM-J349-G2VS	CE	24Vdc	10min	--	--	Temp.: 42°C, Motor winding was opened. Ambient temp.: 23°C No hazard.
Knock Motor(DF-5100) Model KCL42SCK560A	CE	24Vdc	10min	--	--	Temp.: 136°C, Motor winding was opened. Ambient temp.: 23°C No hazard.
Width Ajustment Motor(DF-5100),Eject Release Motor(DF-5110),Carry Motor(DF-5110),Middle Motor(DF-5110),Knock Motor(DF-5110),Width Ajustment Motor(DF-5110), Eject Release Motor(DF-5120),Carry Motor(DF-5120),Middle Motor(DF-5120),Knock Motor(DF-5120),Width Ajustment Motor(DF-5120), Model KCL42SCK500C						Temp.: 112°C, Motor winding was opened. Ambient temp.: 23°C No hazard.

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5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C)		24 if not stated in each Observation		—	
	Power source for EUT: Manufacturer, model/type, output rating		--		—	
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Black DLP Clutch, Resist Clutch, Feed Clutch, Middle Clutch, DU Clutch, Feed Clutch(DP-5110), Feed Clutch(PF-5120), Vertical Conveying Clutch(PF-5120), Feed Clutch(PF-5130), Vertical Conveying Clutch(PF-5130), Feed Clutch(PF-5140), Vertical Conveying Clutch(PF-5140) Model TMC-3.5L-01	CE	24Vdc	7h	--	--	Temperature was stabilized. Max Temp.: 82°C. Ambient temp.: 26°C No hazard.
Drive Motor(MT-5100) Model M49SP-2K	CE	24Vdc	10min	--	--	Temp.: 122°C, Motor winding was opened. Ambient temp.: 24°C No hazard.
Eject Clutch(DF-5120) Model MCA-50T	CE	24Vdc	2.5h	--	--	Temp.: 90°C, Temperature stabilized. Ambient temp.: 23°C No hazard.
MPF Solenoid Model TDS-F06A-18	CE	24Vdc	7h			Temperature stabilized. Max. temp.: 115°C Ambient 26°C No hazards.
Junction Solenoid, Paper Hold Solenoid(DF-5100), Feed Solenoid(DF-5110), Sub Tray Junction Solenoid(DF-5120), Feed Solenoid(DF-5120) Model TDS-08A	Plunger locked and CE	24Vdc	5min	--	--	Temp.: 124°C, Thermal Fuse opened after 3min. Tested three times. Ambient temp.: 24°C No hazard.

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5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C) :				24 if not stated in each Observation	—
	Power source for EUT: Manufacturer, model/type, output rating :				--	—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Hole Change Solenoid(DF-5120), PH Solenoid(PH-5100)	CE	24Vdc	7h	--	--	Max temperature was 146.0°C Ambient temp.: 27.0 °C No hazards.
Model 406ci Main Heater Thermal control	Disable	120V, 60Hz	10min	--	--	Thermal cutoff opened in 1min after disabling. No hazards
Model 406ci Sub Heater Thermal control	Disable	120V, 60Hz	10min	--	--	Thermal cutoff opened in 2min after disabling. No hazards
Model 306ci Heater Thermal control	Disable	120V, 60Hz	10min	--	--	Thermal cutoff opened in 1min after disabling. No hazards
Model TASKalfa 406ci Main Heater Thermal control	Disable	240V, 50Hz	10min	--	--	Thermal cutoff opened in 1min after disabling. No hazards
Model TASKalfa 406ci Sub Heater Thermal control	Disable	240V, 50Hz	10min	--	--	Thermal cutoff opened in 2min after disabling. No hazards
Model TASKalfa 306ci Heater Thermal control	Disable	240V, 50Hz	10min	--	--	Thermal cutoff opened in 1min after disabling. No hazards
Model 406ci LVU Fan, Clutch Fan	Stalled Fan	120V, 60Hz	0.5h	--	--	Copying. All Output shutdown after 0.5h. Max temp. of T1: 94°C Max temp. of T201: 65°C Ambient temp.:25°C No hazards.
Model TASKalfa 406ci LVU Fan, Clutch Fan	Stalled Fan	240V, 50Hz	0.5h	--	--	Copying. All Output shutdown after 0.5h. Max temp. of T1: 115°C Max temp. of T201: 85°C Ambient temp.:24°C No hazards.

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Clause	Requirement + Test				Result - Remark		Verdict
5.3	TABLE: Fault condition tests						P
	Ambient temperature (°C) :				24 if not stated in each Observation		—
	Power source for EUT: Manufacturer, model/type, output rating :				--		—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation	
Model 306ci LVU Fan, Clutch Fan	Stalled Fan	120V, 60Hz	1.5h	--	--	Copying. Temperature stabilized. Max temp. of T1: 98°C Ambient temp.:25°C No hazards.	
Model TASKalfa 306ci LVU Fan, Clutch Fan	Stalled Fan	240V, 50Hz	1.0h	--	--	Copying. Temperature stabilized. Max temp. of T1: 101°C Ambient temp.:23°C No hazards.	
Model 406ci Ventilation openings closed	--	120V, 60Hz	2.5h	--	--	Copying. Temperature stabilized. Max. temp. of T1: 75°C Max. temp. of T201: 67°C Ambient temp.:25°C No hazards.	
Model TASKalfa 406ci Ventilation openings closed	--	240V, 50Hz	2.0h	--	--	Copying. Temperature stabilized. Max. temp. of T1: 82°C Max. temp. of T201: 75°C Ambient temp.:25°C No hazards.	
Model 306ci Ventilation openings closed	--	120V, 60Hz	2.0h	--	--	Copying. Temperature stabilized. Max. temp. of T1: 77°C Ambient temp.:23°C No hazards.	
Model TASKalfa 306ci Ventilation openings closed	--	240V, 50Hz	1.5h	--	--	Copying. Temperature stabilized. Max. temp. of T1: 73°C Ambient temp.:23°C No hazards.	
Supplementary information:							
Sc=Short circuit, Oc=Open circuit							

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B	TABLE: MOTOR TEST UNDER ABNORMAL CONDITION		P
B.7	Locked-rotor overload test for DC motor in secondary circuits		—
B.7.3	test time(h):	7h	—
Motor type / No.		Max. Temp. (°C)	Comments
DLP Fan 1 DLP Fan 2 LVU Fan D06F-24SH 03		68	Temperature saturated. Ambient Temp. at 24°C. No hazard.
DLP Fan 3 DLP Fan 4 Toner Suckin Fan Belt Fan Cooling Fan (AK-5100) D05F-24PH 17(EX)		71	Temperature saturated. Ambient Temp. at 25°C. No hazard.
Steam Spread Fan Clutch Fan D04R-24TM 19(EX)		58	Temperature saturated. Ambient Temp. at 24°C. No hazard.
Exit Fan 2410RL-05W-S60		46	Temperature saturated. Ambient Temp. at 24°C. No hazard.
Controller Fan for Model TASKalfa 356ci, 356ci TASKalfa 406ci, 406ci D06R-05TM 12H1 (EX)		53	Temperature saturated. Ambient Temp. at 25°C. No hazard.
Controller Fan for Model TASKalfa 306ci, 306ci D06R-24TH 04(AX)		48	Temperature saturated. Ambient Temp. at 24°C. No hazard.
Paper Cooling Fan (Optional) BFB0524HHA-BN20		65	Temperature saturated. Ambient Temp. at 24°C. No hazard.
Polygon Motor MASQ8NF12RK		--	Sensing circuits provided with motor disconnected power to the motor in 0.5 sec. After starting the locked rotor. No hazard.

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B	TABLE: MOTOR TEST UNDER ABNORMAL CONDITION		P
B.7	Locked-rotor overload test for DC motor in secondary circuits		—
B.7.3	test time(h):	7h	—
Motor type / No.		Max. Temp. (°C)	Comments
LSU Cleaning Motor, Transfer Belt Release Motor RK-370CA-081050		120	Temperature saturated. Ambient Temp. at 24°C. No hazard.
LSU Cleaning Motor, Alternate Container Motor Tray Motor for DF-5100 RK-370CA-11670		148	Temperature saturated. Ambient Temp. at 25°C. No hazard.
Lift Motor Lift Motor (PF-5120) Lift Motor (PF-5130) RC370-KT-081000		123	Temperature saturated. Ambient Temp. at 25°C. No hazard.
Tray Motor (DF-5110) RS-385PH-16140		--	Sensing circuits provided with motor disconnected power to the motor in 5 sec. After starting the locked rotor. No hazard.
Feed/Black DLP Motor Feed Motor for PF-5120 Feed Motor for PF-5130 Feed Motor for PF-5140 42M069F251		--	Sensing circuits provided with motor disconnected power to the motor in 0.60 sec. After starting the locked rotor. No hazard.
Image Motor Colour DLP Motor 48M069F261		--	Sensing circuits provided with motor disconnected power to the motor in 0.94 sec. After starting the locked rotor. No hazard.
Black Drum Motor Colour Drum Motor for Model TASKalfa 306ci, 306ci 48M069G020		--	Sensing circuits provided with motor disconnected power to the motor in 0.97 sec. After starting the locked rotor. No hazard
Colour Drum Motor for Model TASKalfa 356ci, 356ci TASKalfa 406ci, 406ci 48M069F180		--	Sensing circuits provided with motor disconnected power to the motor in 0.8 sec. After starting the locked rotor. No hazard

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Clause	Requirement + Test	Result - Remark	Verdict

B	TABLE: MOTOR TEST UNDER ABNORMAL CONDITION		P
B.7	Locked-rotor overload test for DC motor in secondary circuits		—
B.7.3	test time(h):	7h	—
Motor type / No.		Max. Temp. (°C)	Comments
Tray Motor (DF-5120) 48M069G010		--	Sensing circuits provided with motor disconnected power to the motor in 1.0 sec. After starting the locked rotor. No hazard
Lift Motor (PF-5140) 302NF4401		95	Temperature saturated. Ambient Temp. at 25°C. No hazard.
DLP Vibration Motor		49	Temperature saturated. Ambient Temp. at 25°C. No hazard.
Punch Motor (DF-5120) Punch Motor (PH-5100) WRS-555PH-3049		--	Sensing circuits provided with motor disconnected power to the motor in 0.6 sec. After starting the locked rotor. No hazard
Staple Motor(DF-5100) Staple Motor(DF-5110) Staple Motor(DF-5120) Model:FM-116K-7PA-CF		32	Temperature saturated. Ambient Temp. at 25°C. No hazard.
Staple Motor, Alternate(DF-5100) Staple Motor, Alternate(DF-5110) Staple Motor, Alternate(DF-5120) Model:DME35BF-001		--	Motor winding was opened after 7min 30sec. No ignition of the wrapping tissue and cheesecloth.
Supplementary information:			
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Clause	Requirement + Test	Result - Remark	Verdict

C.2	TABLE: transformers						P
Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)
--	--	--	--	--	--	--	--
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measure d distance thr. insul. / mm; number of layers
--	--			--	--	--	--
supplementary information:							
Refer to the table 2.10.3 and 2.10.4							

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Clause	Requirement + Test	Result - Remark	Verdict

List of test equipment used:

Management No.	Test Instrument Name	Type	Mechanical No.	Manufacturing	Calibration Date - Last	Calibration Date - Due
G14-C076	Temperature Recorder	4177	41YPO126	Yokogawa	2014-08-08	2015-08-07
G14-C077	Temperature Recorder	4179	4179JA141	Yokogawa	2014-08-08	2015-08-07
G14-C094	Lekage current tester	228	348	Simpson	2014-06-09	2015-06-08
G14-C095	Ball Pressure tester	T-10.02	BP-001	EXCEL	2014-08-08	2015-08-07
G14-C096	High Voltage probe	P6015A	B051259	Tektronix	2015-01-26	2016-01-25
G14-C097	Portable DC Ammeters & Voltmeters	201200	85AA1194	Yokogawa	2014-06-09	2015-06-08
G14-C099	Digital Multi Meter	(Fluke) 189	89410662	FLUKE	2014-08-11	2015-08-10
G14-C101	Temperature Recorder	437124	S5F703898	Yokogawa	2014-08-08	2015-08-07
G14-C102	Temperature Recorder	437124	S5F703899	Yokogawa	2014-08-08	2015-08-07
G14-C103	Steel Ball	TB-500	G14-C103	EXCEL	2014-10-07	2015-10-06
G14-C112	Scale Lupe	Scale Lupe 10x	G14-C112	PEAK	2014-05-23	2015-05-22
G14-C113	Steel Ruler 2m	No. 102H04J	G14-C113	Shinwa	2015-05-18	2016-05-17
G14-C114	Temp. and Humidity Meter	NT3-D	50173024	Rotronic	2015-03-13	2016-03-12
G14-C117	Digital Force Gauge	Z2-500N	202869	IMADA	2014-10-08	2015-10-07
G14-C118	Stop Watch	SVAE101	756428	SEIKO S-YARD	2014-10-08	2015-10-07
G14-C120	Digital Tester	3802	650087	HIOKI	2014-10-14	2015-10-13
G14-C122	Power Meter	253401	2534FA042	Yokogawa	2015-03-19	2016-03-18
G14-C123	Protractor	DS	---	Niigata Seiki	2014-05-22	2015-05-21
G14-C125	Dielectric Tester	TOS5051	BA002985	Kikusui	2014-08-11	2015-08-10
G14-C126	Clamp ON Power HI TESTER	3286-20	070616420	HIOKI	2014-08-11	2015-08-10
G14-C128	Earth Continuity Tester	TOS6210	MB005213	Kikusui	2015-01-21	2016-01-20
G14-C131	Vernier Caliper	CD-20B	10369	Mitsutoyo	2014-08-11	2015-08-10
G14-D001	Digital Oscilloscope	TDS3054B	B011872	Sony Tektronix	2014-05-26	2015-05-25
TS-46	Chamber	LP-201	1040000403	TABAI ESPEC	2014-10-17	2015-10-16
TS-50	Humidity Chamber	PR-3ST	0	TABAI	2014-10-14	2015-10-13

(*1): This instrument was monitored with Instrument No. G14-C114.

For Laser power measurement (IEC60825-1)

Management No.	Test Instrument Name	Type	Mechanical No.	Manufacturing	Calibration Date - Last	Calibration Date - Due
G14-C099	Digital Multi Meter	(Fluke) 189	89410662	FLUKE	2014-08-11	2015-08-10
G14-C123	Protractor	DS	---	Niigata Seiki	2014-05-22	2015-05-21
G14-C131	Vernier Caliper	CD-20B	10369	Mitsutoyo	2014-08-11	2015-08-10
G14-C132	Laser Power Meter	PD300-UV/VEGA	65574/651539	OPHIR	2014-10-09	2015-10-08
G14-D001	Digital Oscilloscope	TDS3054B	B011872	Sony Tektronix	2014-05-26	2015-05-25

ATTACHMENT		Measurement Section			
Clause	Requirement + Test			Result - Remark	Verdict
2.1.1.7	TABLE: Discharge test				P
Condition	τ calculated (s)	τ measured (s)	t u→ 0V (s)	Comments	
TASKalfa 406ci, Supply Voltage : 264V, 50Hz					
Plug in off mode	--	0.0104	0.0256	Initial Voltage(peak)V0: 372V After 1sec (0) V	
Standby mode	--	0.0064	0.0136	Initial Voltage(peak)V0: 372V After 1sec (0) V	
Sleep mode	--	0.0020	0.0088	Initial Voltage(peak)V0: 372V After 1sec (0) V	
406ci, Supply Voltage : 132V, 60Hz					
Plug in off mode	--	0.0024	0.0096	Initial Voltage(peak)V0: 187V After 1sec (0) V	
Standby mode	--	0.0064	0.0088	Initial Voltage(peak)V0: 187V After 1sec (0) V	
Sleep mode	--	0.0020	0.0088	Initial Voltage(peak)V0: 187V After 1sec (0) V	
TASKalfa 306ci, Supply Voltage : 264V, 50Hz					
Plug in off mode	--	0.080	0.148	Initial Voltage(peak)V0: 374V After 1sec (0) V	
Standby mode	--	0.068	0.120	Initial Voltage(peak)V0: 374V After 1sec (0) V	
Sleep mode	--	0.088	0.140	Initial Voltage(peak)V0: 374V After 1sec (0) V	
306ci, Supply Voltage : 132V, 60Hz					
Plug in off mode	--	0.092	0.176	Initial Voltage(peak)V0: 188V After 1sec (0) V	
Standby mode	--	0.060	0.156	Initial Voltage(peak)V0: 188V After 1sec (0) V	
Sleep mode	--	0.084	0.184	Initial Voltage(peak)V0: 188V After 1sec (0) V	
Supplementary information:					
--					

ATTACHMENT		Measurement Section	
Clause	Requirement + Test	Result - Remark	Verdict
4.2	Table: Mechanical strength		P
4.2.4 Steady force test, 250N ± 10N			
<p>Test locations:</p> <p>Exit Cover, Rear Left Cover, Rear Right Cover, Rear Lower Cover, Right Cover, Right Rear Cover, Right Top Cover, Right Top Lid, Exit Front Cover, Exit Left Cover, Exit Top Cover, Front Cover, Front Upper Cover, Front Right Cover, ISU Rear Cover, Left Controller Cover, Left Lower Cover, Tray B Cover, Tray Rear Cover, Tray Rear Lid, Paper Stoppers, MPF Front Cursor, MPF A Table, MPF B Table, MPF C Table, ISU Bottom Frame, ISU Top Frame, Cassette, Exit Front Cover, Exit Left Cover, Exit Top Cover, Front Cover, Front Upper Cover, Front Right Cover, ISU Rear Cover, Left Controller Cover, Left Lower Cover, Right Lower Cover, Tray Cover, Tray B Cover, Tray Rear Cover, Tray Rear Lid, Paper Stoppers, MPF Front Cursor, MPF Rear Cursor, MPF A Table, MPF B Table, MPF C Table, MPF D Table, ISU Bottom Frame, ISU Top Frame, Cassette, Operation Cover, Operation Rear Cover, Operation Rear Lid, Hinge Lid, Panel Lid, Release Hook Cover, Panel Cover</p> <p>Document Processor Unit(Standard) for TASKalfa 306ci, 306ci</p> <p>Front Cover, Front B Cover, Rear A Cover, Rear B Cover, PF Cover, Cursor Cover, Front Cursor, Rear Cursor, Main Table, Lower Guide, Lower Left Guide, Lower Right Guide, DP Base, Base Stopper</p> <p>DP-5100</p> <p>DP Base, Front Cover, Front B Cover, PF Cover, Rear A Cover, Rear B Cover, Size Switch Cover, Table Cover, Front Cursor, Rear Cursor, Cursor Cover, Main Table, Base Stopper, Lower Guide, Lower Left Guide, Lower Right Guide</p> <p>DP-5110</p> <p>Base Cover, Front Cover, Front B Cover, PF Cover, Rear A Cover, Rear B Cover, Size Switch Cover, Table Cover, Front Cursor, Rear Cursor, Cursor Cover, Main Table, Base Stopper</p> <p>JS-5100</p> <p>Eject Tray, Actuator Tray Cover</p> <p>DF-5100</p> <p>Front L Cover, Front R Cover, Rear L Cover, UP L Cover, UP R Cover, Finisher Partition, Tray A, Tray B, Tray C</p> <p>DF-5110</p> <p>Top Cover, Top Open Cover, Front Cover, Front Open Cover, Rear Cover, Left Upper Cover, Finisher Partition, Main Tray, Bottom Cover, Foot Covers, Leg Covers</p> <p>DF-5120</p> <p>Top Cover, Top B Cover, Front Cover, Front Lower Cover, Front Open Cover, Rear Cover, Left Lower Cover, Main Exit Cover, Turn Guide, Finisher Partition, Main Tray, Eject Tray, Operation Cover</p> <p>MT-5100</p> <p>Side L Covers, Side R Covers, Vertical Cover, Top Cover, Bottom Cover, Feed In Upper Guide, Feed In Lower Guide, Foot Covers, Eject Trays</p> <p>AK-5100</p> <p>Lower Guide Cover, Joint Cover, Guide Upper Cover, Upper Right Guide, Lower Guide</p> <p>PF-5120</p> <p>Rear Cover, Left Cover, Conveying Cover, Right Front Cover, Right Rear Cover, Cassette</p> <p>PF-5130</p> <p>Rear Cover, Left Cover, Right Cover, Conveying Cover, Front Lower Cover, Cassette</p> <p>PF-5140</p> <p>Rear Cover, Front Deck Cover, Right Cover, Left Cover, Conveying Cover</p>			

ATTACHMENT		Measurement Section	
Clause	Requirement + Test	Result - Remark	Verdict

4.6.1/.2	Table: Enclosure opening measurements		P
Location	Size (mm)	Comments	
Right Top Cover of main unit	60.8 x 4.7 louver	Covering an area of 60.8mm W x 60.7mm H	
Left Lower Cover of main unit	56.8 x 4.7 louver	Covering an area of 56.8mm W x 52.7mm H	
	56.8 x 4.7 louver	Covering an area of 56.8mm W x 44.7mm H	
Tray Cover of main unit	61.0 x 4.7 louver	Covering an area of 61.0mm W x 32.7mm H	
Rear Right Cover of main unit	67.2 x 4.7 louver	Covering an area of 67.2mm W x 124.7mm H	
Rear Left Cover of main unit	60.7 x 4.7 louver	Covering an area of 60.7mm W x 52.7mm H	
Rear Lower Cover of main unit	35.0 x 4.7 louver	Covering an area of 35.0mm W x 52.7mm H	
Rear A Cover for each standard and optional Document Processor, Model DP-5100	26.8 max x 3.0 slot	Covering an area of 26.8mm W x 81.0mm H	
	18.6 max x 3.0 slot	Covering an area of 18.6mm W x 93.0mm H	
Rear A Cover for optional Document Processor, Model DP-5110	43.1 max x 3.0 slot	Covering an area of 43.1mm W x 113.0mm H	
	20.7 max x 3.0 slot	Covering an area of 20.7mm W x 93.0mm H	

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013

Attachment Form No......: EU_GD_IEC60950_1F

Attachment Originator: SGS Fimko Ltd

Master Attachment: Date 2013-09

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


IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)																																																																														
Clause	Requirement + Test			Result - Remark		Verdict																																																																								
	Clauses, subclauses, notes, tables and figures which are additional to those in IEC60950-1 and it's amendmets are prefixed "Z"					P																																																																								
Contents (A2:2013)	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZD (informative) IEC and CENELEC code designations for flexible cords					P																																																																								
General	Delete all the "country" notes in the reference document (IEC 60950-1:2005) according to the following list: <table><tr><td>1.4.8</td><td>Note 2</td><td>1.5.1</td><td>Note 2 & 3</td><td>1.5.7.1</td><td>Note</td></tr><tr><td>1.5.8</td><td>Note 2</td><td>1.5.9.4</td><td>Note</td><td>1.7.2.1</td><td>Note 4, 5 & 6</td></tr><tr><td>2.2.3</td><td>Note</td><td>2.2.4</td><td>Note</td><td>2.3.2</td><td>Note</td></tr><tr><td>2.3.2.1</td><td>Note 2</td><td>2.3.4</td><td>Note 2</td><td>2.6.3.3</td><td>Note 2 & 3</td></tr><tr><td>2.7.1</td><td>Note</td><td>2.10.3.2</td><td>Note 2</td><td>2.10.5.13</td><td>Note 3</td></tr><tr><td>3.2.1.1</td><td>Note</td><td>3.2.4</td><td>Note 3</td><td>2.5.1</td><td>Note 2</td></tr><tr><td>4.3.6</td><td>Note 1 & 2</td><td>4.7</td><td>Note 4</td><td>4.7.2.2</td><td>Note</td></tr><tr><td>4.7.3.1</td><td>Note 2</td><td>5.1.7.1</td><td>Note 3 & 4</td><td>5.3.7</td><td>Note 1</td></tr><tr><td>6</td><td>Note 2 & 5</td><td>6.1.2.1</td><td>Note 2</td><td>6.1.2.2</td><td>Note</td></tr><tr><td>6.2.2</td><td>Note</td><td>6.2.2.1</td><td>Note 2</td><td>6.2.2.2</td><td>Note</td></tr><tr><td>7.1</td><td>Note 3</td><td>7.2</td><td>Note</td><td>7.3</td><td>Note 1 & 2</td></tr><tr><td>G.2.1</td><td>Note 2</td><td>Annex H</td><td>Note 2</td><td></td><td></td></tr></table>					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
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G.2.1	Note 2	Annex H	Note 2																																																																											
General (A1:2010)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: <table><tr><td>1.5.7.1</td><td>Note</td><td>6.1.2.1</td><td>Note 2</td><td></td><td></td></tr><tr><td>6.2.2.1</td><td>Note 2</td><td>EE.3</td><td>Note</td><td></td><td></td></tr></table>					1.5.7.1	Note	6.1.2.1	Note 2			6.2.2.1	Note 2	EE.3	Note			P																																																												
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IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
General (A2:2013)	<p>Delete all the "country" notes in the reference document (IEC 60950-1:2005/A2:2013) according to the following list:</p> <p>2.7.1 Note * 2.10.3.1 Note 2</p> <p>6.2.2. Note</p> <p>* Note of secretary: Text of Common Modification remains unchanged.</p>		P
1.1.1 (A1:2010)	<p>Replace the text of NOTE 3 by the following.</p> <p>NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.</p>		N/A
1.3.Z1	<p>Add the following subclause:</p> <p>1.3.Z1 Exposure to excessive sound pressure</p> <p>The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones.</p> <p>NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.</p>	No such equipment.	N/A
(A12:2011)	<p>In EN 60950-1:2006/A12:2011</p> <p>Delete the addition of 1.3.Z1 / EN 60950-1:2006</p> <p>Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010</p>	Deleted.	N/A
1.5.1 (Added info*)	<p>Add the following NOTE:</p> <p>NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC.</p> <p>New Directive 2011/65/11 *</p>		P
1.7.2.1 (A1:2010)	<p>In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.</p>		N/A
1.7.2.1 (A12:2011)	<p>In EN 60950-1:2006/A12:2011</p> <p>Delete NOTE Z1 and the addition for Portable Sound System.</p> <p>Add the following clause and annex to the existing standard and amendments.</p>	Deleted.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>Zx Protection against excessive sound pressure from personal music players</p> <p>Zx.1 General</p> <p>This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players.</p> <p>A personal music player is a portable equipment□ for personal use, that:</p> <ul style="list-style-type: none"> - is designed to allow the user to listen to recorded or broadcast sound or video; and - primarily uses headphones or earphones that can be worn in or on or around the ears; and - allows the user to walk around while in use. <p>NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment.</p> <p>A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause.</p> <p>The requirements in this sub-clause are valid for music or video mode only.</p> <p>The requirements do not apply:</p> <ul style="list-style-type: none"> - while the personal music player is connected to an external amplifier; or - while the headphones or earphones are not used. <p>NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player.</p> <p>The requirements do not apply to:</p> <ul style="list-style-type: none"> - hearing aid equipment and professional equipment; <p>NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.</p>	No such equipment.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>- analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015.</p> <p>NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies.</p> <p>For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.</p>		
	<p>Zx.2 Equipment requirements</p> <p>No safety provision is required for equipment that complies with the following:</p> <ul style="list-style-type: none"> - equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed "programme simulation noise" as described in EN 50332-1; and a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" as described in EN 50332-1. <p>NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx.</p> <p>All other equipment shall:</p> <ol style="list-style-type: none"> protect the user from unintentional acoustic outputs exceeding those mentioned above; and have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and 		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and</p> <p>NOTE 2 Examples of means include visual or audible signals. Action from the user is always required.</p> <p>NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off.</p> <p>d) have a warning as specified in Zx.3; and</p> <p>e) not exceed the following:</p> <ol style="list-style-type: none"> 1) equipment provided as a package (player with its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and 2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1. <p>For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song.</p> <p>NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA.</p> <p>For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.</p>		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>Zx.3 Warning</p> <p>The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following:</p> <ul style="list-style-type: none"> - the symbol of Figure 1 with a minimum height of 5 mm; and - the following wording, or similar: <p>“To prevent possible hearing damage, do not listen at high volume levels for long periods.”</p>  <p>Figure 1 – Warning label (IEC 60417-6044)</p> <p>Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.</p>		N/A
	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	<p>Zx.4.1 Wired listening devices with analogue input</p> <p>With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be ≥ 75 mV.</p> <p>This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control).</p> <p>NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.</p>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>Zx.4.2 Wired listening devices with digital input</p> <p>With any playing device playing the fixed “programme simulation noise” described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA.</p> <p>This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.).</p> <p>NOTE An example of a wired listening device with digital input is a USB headphone.</p>		N/A
	<p>Zx.4.3 Wireless listening devices</p> <p>In wireless mode:</p> <ul style="list-style-type: none"> - with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and - respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and - with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. <p>NOTE An example of a wireless listening device is a Bluetooth headphone.</p>		N/A
	<p>Zx.5 Measurement methods</p> <p>Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s.</p> <p>NOTE Test method for wireless equipment provided without listening device should be defined.</p>		N/A

IEC60950_1F - ATTACHMENT															
Clause	Requirement + Test	Result - Remark	Verdict												
2.7.1	<p>Replace the subclause as follows:</p> <p>Basic requirements</p> <p>To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):</p> <p>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;</p> <p>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;</p> <p>c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.</p> <p>If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>		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	<p>Replace "60245 IEC 53" by "H05 RR-F";</p> <p>"60227 IEC 52" by "H03 VV-F or H03 VVH2-F";</p> <p>"60227 IEC 53" by "H05 VV-F or H05 VVH2-F2".</p> <p>In Table 3B, replace the first four lines by the following:</p> <table><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> </td><td>(0,75)^{b)}</td><td>1,0 </td></tr><tr><td>Over 10 up to and including 16</td><td> </td><td>(1,0)^{c)}</td><td>1,5 </td></tr></table> <p>In the conditions applicable to Table 3B delete the words "in some countries" in condition ^{a)}.</p> <p>In NOTE 1, applicable to Table 3B, delete the second sentence.</p>	Up to and including 6		0,75 ^{a)}		Over 6 up to and including 10		(0,75) ^{b)}	1,0	Over 10 up to and including 16		(1,0) ^{c)}	1,5		P
Up to and including 6		0,75 ^{a)}													
Over 6 up to and including 10		(0,75) ^{b)}	1,0												
Over 10 up to and including 16		(1,0) ^{c)}	1,5												
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		P												

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 1,5 to 2,5 1,5 to 4 Delete the fifth line: conductor sizes for 13 to 16 A		N/A
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to: 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation).		N/A
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 $\mu\text{Sv/h}$ (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.		—

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		—

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In Denmark , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		N/A
1.2.13.14 (A11:2009)	In Norway and Sweden , for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1 (A11:2009)	In Finland , Norway and Sweden , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.8	In Norway , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		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 suojakoskettimilla varustettuun pistorasiaan" In Norway : "Apparatet må tilkoples jordet stikkontakt" In Sweden : "Apparaten skall anslutas till jordat uttag"		P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1 (A11:2009)	<p>In Norway and Sweden, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system.</p> <p>It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer.</p> <p>The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in:</p> <p>“Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11).”</p> <p>NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.</p> <p>Translation to Norwegian (the Swedish text will also be accepted in Norway):</p> <p>“Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel-TV nettet.”</p> <p>Translation to Swedish:</p> <p>”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”</p>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1 (A2:2013)	<p>In Denmark, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet.</p> <p>The marking text in Denmark shall be as follows: In Denmark: "Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord."</p>		P
1.7.5	<p>In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.</p>		N/A
1.7.5 (A11:2009)	<p>For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.</p>		
1.7.5 (A2:2013)	<p>In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011.</p> <p>For class I equipment the following Standard Sheets are applicable: DK 1-3a, DK 1-1c, DK 1-1d, DK 1-5a or DK 1-7a, with the exception for STATIONARY EQUIPMENT where the socket-outlets shall be in accordance with Standard Sheet DK 1-1b, DK 1-1c, DK 1-1d or DK 1-5a.</p> <p>Socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance with DS 60884-2-D1 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with by DS 60884-2-D1 Standard Sheet DKA 1-3a or DKA 1-3b.</p> <p>Justification the Heavy Current Regulations, 6c</p>		N/A
2.2.4	<p>In Norway, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.</p>		P
2.3.2	<p>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.</p>		P
2.3.4	<p>In Norway, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.</p>		P

IEC60950_1F - ATTACHMENT			
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.		N/A
2.7.1	In the United Kingdom , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.	No direct plug-in.	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	<p>In Switzerland, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets:</p> <p>SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A</p> <p>SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A</p> <p>SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A</p> <p>In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998:</p> <p>SEV 5932-2.1998: Plug Type 25 3L+N+PE 230/400 V, 16 A</p> <p>SEV 5933-2.1998: Plug Type 21 L+N 250 V, 16A</p> <p>SEV 5934-2.1998: Plug Type 23 L+N+PE 250 V, 16 A</p>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	<p>In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</p> <p>If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.</p>		N/A
3.2.1.1 (A2:2013)	<p>In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</p> <p>If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.</p> <p>Justification the Heavy Current Regulations, 6c</p>		N/A
3.2.1.1	<p>In Spain, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994.</p> <p>Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994.</p> <p>If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.</p>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	<p>In the United Kingdom, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations.</p> <p>NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>		N/A
3.2.1.1	<p>In Ireland, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.</p>		N/A
3.2.4	<p>In Switzerland, for requirements see 3.2.1.1 of this annex.</p>		N/A
3.2.5.1	<p>In the United Kingdom, a power supply cord with conductor of 1,25 mm² is allowed for equipment with a rated current over 10 A and up to and including 13 A.</p>		N/A
3.3.4	<p>In the United Kingdom, the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is:</p> <ul style="list-style-type: none"> • 1,25 mm² to 1,5 mm² nominal cross-sectional area. 		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.6	In the United Kingdom , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A
4.3.6	In Ireland , DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.		N/A
5.1.7.1	In Finland, Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: <ul style="list-style-type: none"> • STATIONARY PLUGGABLE EQUIPMENT TYPE A that <ul style="list-style-type: none"> - is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and - has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and - is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT. 		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.1 (A1:2010)	<p>In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. 		P
	<p>Alternatively for components, there is no distance through insulation requirements for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. <p>It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b).</p> <p>It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14: - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14. 		P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.2	In Finland, Norway and Sweden , the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	In Finland, Norway and Sweden , for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
7.3 (A11:2009)	In Norway and Sweden , for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

**Annex ZD
(informative)**

IEC and CENELEC code designations for flexible cords

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

CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014			
Clause	Requirement + Test	Result - Remark	Verdict

**ATTACHMENT TO TEST REPORT IEC 60950-1 with A1:2009 and A2:2013
CANADA NATIONAL DIFFERENCES**

Information technology equipment – Safety –

PART 1: GENERAL REQUIREMENTS

Differences according to : CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014

Attachment Form No. : CA_ND_IEC60950_1F

Attachment Originator : CSA

Master Attachment..... : Date (2015-05)

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	Special national conditions		
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.		P
1.1.2	Baby monitors are required to comply with ASTM F2951, Consumer Safety Specification for Baby Monitors		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g. DP, CL2) specified in the CEC/NEC.		N/A
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC are required to have special construction features and identification markings.		N/A

CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	<p>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.</p> <p>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</p> <p>- if it is part of a range that extends into the Table 2 "Normal Operating Conditions."</p> <p>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."</p>	Single phase conductor.	N/A
1.7.7	<p>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.</p> <p>Marking shall be located adjacent to the terminals and shall be visible during wiring.</p>	No such terminals.	N/A
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.	Not accessible and interchangeable fuses used for LPS.	P
2.6	Equipment with isolated ground (earthing) receptacles is required to comply with NEC 250.146(D) and CEC 10-112 and 10-906(8).	Modified.	P
2.7.1	<p>Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.</p> <p>Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.</p>	<p>No standard supply outlets.</p> <p>No such transformers.</p>	N/A

CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014			
Clause	Requirement + Test	Result - Remark	Verdict
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.	Approved appliance inlet used.	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.	Rated: max. 10.8A Plug rated 15A.	P
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.	Not connected to DC mains.	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 permanent connection.	N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length. Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.	Type: SJT	P
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	Appliance inlet used.	N/A
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0.	Appliance inlet used.	N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm ²).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for Canadian/US wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).		N/A
3.3.5	First column of Table 3E revised to require "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."	Revised.	P

CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014			
Clause	Requirement + Test	Result - Remark	Verdict
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).	No such motor.	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.	No such systems.	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
4.3.13.5.1	Equipment with lasers is required to meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.	Tested for IEC 60825-1. (see IEC 60825-1 test report) FDA applied separately. (Accession No. 0720775-038)	P
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	No such systems.	N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m ² (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less.	No such enclosures.	N/A
	For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.		N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations, 21 CFR 1020, as applicable.	No ionizing radiation source.	N/A

CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014			
Clause	Requirement + Test	Result - Remark	Verdict
	Other National Differences The following key national differences are based on requirements other than national regulatory requirements.		P
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include: attachment plugs, battery packs (rechargeable type, used with transportable equipment) cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, transient voltage surge suppressors, tubing, wire connectors, and wire and cables.	(see appended table 1.5.1)	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply. 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.	No connection to DC mains.	N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 V _{peak} or 60 V _{d.c.} , the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.	No TNV circuits.	N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.		P
2.6.2	Equipment with functional earthing is required to be marked with the functional earthing symbol (IEC 60471-6092).		N/A

Canadian National differences

CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.	No such constructions.	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.	No CRTs.	N/A
4.3.2	Equipment with handles is required to comply with special loading tests.		N/A
4.3.8	Battery packs for both portable and stationary applications are required to comply with special component requirements.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	Max. touch current: 0.0mA	P
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are overloaded. 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.	Min. AWG 26 Cord provided. (In Optional Fax Kit)	P
Annex EE	Articulated accessibility probe (Fig EE.3) required for assessing accessibility to document/media shredders instead of the Figure 2A test finger.	Not shredders.	N/A
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.		N/A

UL 60950-1, Edition 2, Amendment 2 (IEC 60950-1, Ed 2, Am2)			
Clause	Requirement + Test	Result - Remark	Verdict

**ATTACHMENT TO TEST REPORT IEC 60950-1 with A1:2009 and A2:2013
U.S.A. NATIONAL DIFFERENCES**

Information technology equipment – Safety – Part 1: General requirements

Differences according to	UL 60950-1:2007 R10.14
Attachment Form No.	US_ND_IEC60950_1F
Attachment Originator	UL
Master Attachment	Date 2014-07
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	Special National condition		
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2.		P
	Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.		P
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g. DP, CL2) specified in the NEC.		N/A
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC are required to have special construction features and identification markings.		N/A

UL 60950-1, Edition 2, Amendment 2 (IEC 60950-1, Ed 2, Am2)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings.	Single phase conductor.	N/A
	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 CAN3-C235, and		N/A
	- if it is part of a range that extends into the Table 2 "Normal Operating Conditions."		N/A
	Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."		N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with the NEC or CEC Part 1 or NEC are marked with the voltage rating and "Class 2" or equivalent.	No such terminals.	N/A
	- Marking is located adjacent to the terminals		N/A
	- Marking is visible during wiring.		N/A
2.5	Fuse providing Class 2, Limited Power Source, or TNV current limiting is not operator-accessible unless it is not interchangeable	Not accessible and interchangeable fuses used for LPS.	P
2.6	Equipment with isolated ground (earthing) receptacles is in compliance with NEC 250.146(D) and CEC 10-112 and 10-906(8).	Modified.	P
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is provided for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.	No standard supply outlets.	N/A
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, provided with special transformer overcurrent protection.	No such transformers.	N/A

UL 60950-1, Edition 2, Amendment 2 (IEC 60950-1, Ed 2, Am2)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains is in accordance with the NEC/CEC.	Approved appliance inlet used.	P
3.2.1	Attachment plug of power supply cords are rated not less than 125 percent of the rated current of the equipment.	Rated: max. 10.8A Plug rated 15A.	P
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment comply with special earthing, wiring, marking and installation instruction requirements.	Not connected to DC mains.	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 permanent connection.	N/A
3.2.5	Power supply cords are no longer than 4.5 m in length		P
	Minimum cord length is 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement.		P
	Flexible power supply cords are compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.	Type: SJT	P
3.2.9	Permanently connected equipment has a suitable wiring compartment and wire bending space.	Appliance inlet used.	N/A
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0.	Appliance inlet used.	N/A
3.3.3	Wire binding screws are not attached with conductors larger than 10 AWG (5.3 mm ²).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are suitable for Canadian/US wire gauge sizes, are		N/A
	- rated 125 percent of the equipment rating, and		N/A
	- are specially marked when specified (1.7.7).		N/A
3.3.5	First column of Table 3E revised to require "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."	Revised.	P

UL 60950-1, Edition 2, Amendment 2 (IEC 60950-1, Ed 2, Am2)			
Clause	Requirement + Test	Result - Remark	Verdict
3.4.2	Motor control devices are provided for cord-connected equipment with a motor if the equipment is rated more than 12 A.	No such motor.	N/A
	- or if the motor has a nominal voltage rating greater than 120 V		N/A
	- or is rated more than 1/3 hp (locked rotor current over 43 A)		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position.	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 have a battery disconnect means that may be connected to the computer room remote power-off circuit.	No such systems.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30.	No flammable liquid.	N/A
4.3.13. 5.1	Equipment with lasers meets the U.S Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	Tested for IEC 60825-1. (see IEC 60825-1 test report) FDA applied separately. (Accession No. 0720775-038)	P
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	No such systems.	N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m ² (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less.	No such enclosures.	N/A
	For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.		N/A
4.7.3.1	Non-metallic enclosures of equipment for use in space used for environmental air (plenums) are required to comply with UL 2043.	No such enclosures.	N/A
Annex H	Equipment that produces ionizing radiation complies with the U.S. Code of Federal Regulations, 21CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No ionizing radiation source.	N/A

UL 60950-1, Edition 2, Amendment 2 (IEC 60950-1, Ed 2, Am2)			
Clause	Requirement + Test	Result - Remark	Verdict
	Other National Differences		P
1.5.1	<p>Some components and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (Canadian and/or US) component or material requirements.</p> <p>These components include:</p> <p>attachment plugs, battery backup systems, battery packs, cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultracapacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, surge protective devices, tubing, vehicle battery adapters, wire connectors, and wire and cables.</p>	(see appended table 1.5.1)	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as a SELV Circuit, a TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply.	No connection to DC mains.	N/A
	This maximum operating voltage includes consideration of the battery charging "float voltage" associated with the intended supply system, regardless of the marked power rating of the equipment.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 V _{peak} or 60 V _{d.c.} , the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.		P
2.6.2	Equipment with functional earthing marked with the functional earthing symbol (IEC 60417-6092).		N/A

UL 60950-1, Edition 2, Amendment 2 (IEC 60950-1, Ed 2, Am2)			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.	No such constructions.	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more reduce the risk of injury due to the implosion of the CRT.	No CRTs.	N/A
4.3.2	Equipment with handles is required to comply with special loading tests.		N/A
4.3.8	Battery packs for both portable and stationary applications comply with special component requirements.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals comply with a special touch current measurement tests.	Max. touch current: 0.0mA	P
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are overloaded.		P
	During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test is repeated twice (three tests total) using new components as necessary	Considered.	P
6.4	Equipment intended for connection to telecommunication network outside plant cable is protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.	Min. AWG 26 Cord provided. (In Optional Fax Kit)	P
Annex EE	Articulated accessibility probe (Fig EE.3) is used for assessing accessibility to document/media shredders instead of the Figure 2A test finger.	Not shredders.	N/A
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.		N/A

TEST REPORT IEC 60825-1, 2nd Edition Part 1: Equipment classification and requirements	
Report Reference No.	(see IEC60950-1 test report)
Date of issue	(see IEC60950-1 test report)
Total number of pages	--
CB Testing Laboratory	(see IEC60950-1 test report)
Address	(see IEC60950-1 test report)
Applicant's name	(see IEC60950-1 test report)
Address	(see IEC60950-1 test report)
Test specification:	
Standard	IEC 60825-1 : 2007 (2nd Edition)
Test procedure	CB / CCA
Non-standard test method	N/A
Test Report Form No.	IEC60825_1D
Test Report Form(s) Originator	Intertek Semko AB
Master TRF	Dated 2007-06
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Test item description	(see IEC60950-1 test report)
Trade Mark	(see IEC60950-1 test report)
Manufacturer	(see IEC60950-1 test report)
Model/Type reference	(see IEC60950-1 test report)
Ratings	(see IEC60950-1 test report)

IEC 60825-1

Copy of marking plate:

See IEC/EN 60950-1 test report.

Summary of testing:

Tested and evaluated in accordance with IEC/EN 60825-1 except for sub clause 4.14.1 Non-optical hazards.

For the sub clause, compliance will be checked in the end equipment.

For measuring laser radiations from Laser Scan Unit, the Unit was controlled a testing jig supplied by the manufacturer.

Tests performed (name of test and test clause):

Clause 9
Measurements of accessible emission level

Testing location:

(see IEC60950-1 test report)

Additionally evaluated Test specifications.

EN 60825-1:2007

(see below)

Summary of compliance with National Differences:

Only Annex ZA of EN 60825-1 exists and was evaluated. No additional requirements.

See Appendix EU Group Differences (EN 60825-1:2007).

Test item particulars:

Classification of installation and use : (see IEC60950-1 test report)

Supply Connection : (see IEC60950-1 test report)

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 : (see IEC60950-1 test report)

Date (s) of performance of tests : (see IEC60950-1 test report)

IEC 60825-1

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.

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

General product information:

See IEC/EN 60950-1 test report.

For Laser Scanner Unit:

The Unit has one laser diode, one polygon motor and mirror, one laser aperture.

The motor runs on 24V dc and the diode runs on 5V dc.

Number of facets on the mirror: 8

Polygon motor speed: 44802rpm, 38796rpm, 33601rpm, 32714rpm, 24535rpm.

Laser aperture dimensions: 181.0mm x 8.9mm

Laser scan angles for the aperture:

- Long sides of the aperture: +16.7 / -16.7 degrees
- Short sides of the aperture: + 9.7 degrees

Laser Product Classes shall be determined in end equipment.

IEC 60825-1			
Clause	Requirement + Test	Result – Remark	Verdict
4	ENGINEERING SPECIFICATIONS		P
4.1	General remarks		P
	Modification	Not modified product.	N/A
4.2	Protective housing		P
4.2.1	General	Protective housing provided to restrict operator access to laser radiation in excess of Class 1.	P
4.2.2	Service	Caution label on the equipment. A tool is required to remove the protective housing.	P
4.2.3	Removable laser system	Not removable.	N/A
4.3	Access panels and safety interlocks		N/A
4.3.1	Access panels of protective housing	No access panels intended.	N/A
	Product Class	Class 1 laser product.	—
	Accessible emission during removal of access panel	--	N/A
	The removal of the panel gives access to laser radiation levels designated by "X" in the table		N/A
	Accessible emissions after removal	--	—
4.3.2	Deliberate override mechanism	No such mechanisms.	N/A
4.4	Remote interlock connector	Class 1 laser product.	N/A
4.5	Manual reset	Class 1 laser product.	N/A
4.6	Key control	Class 1 laser product.	N/A
4.7	Laser radiation emission warning		N/A
4.7.1	Class 3R ($\lambda < 400$ nm; $\lambda > 700$ nm), 3B and 4	Class 1 laser product.	N/A
4.7.2	Audible or visible warning	Class 1 laser product.	N/A
4.7.3	Operational control and laser aperture		N/A
4.7.4	Laser emission distributed through more than one output		N/A
4.8	Beam stop or attenuation	Class 1 laser product.	N/A
4.9	Controls	Class 1 laser product.	N/A

IEC 60825-1			
Clause	Requirement + Test	Result – Remark	Verdict
4.10	Viewing optics	Not provided.	N/A
	a) Human access to laser radiation in excess of Class 1M prevented when the shutter is opened or attenuation varied		N/A
	b) Opening of the shutter or variation of the attenuation prevented when exposure to laser radiation in excess of Class 1M is possible		N/A
4.11	Scanning safeguard	Not considered.	N/A
4.12	Walk-in access		N/A
	a) Means provided so that any person inside the housing can prevent activation of a Class 3B or 4 laser hazard	No Walk-in access provided.	N/A
	b) A warning device provides adequate warning of emission to any person within the housing		N/A
	c) Where “walk-in” access during operation is intended or reasonably foreseeable, emission of laser radiation that is equivalent to Class 3B or Class 4 while someone is present inside the enclosure of Class 1, Class 2 or Class 3R product shall be prevented by engineering means		N/A
4.13	Environmental conditions		P
	- climatic conditions		P
	- vibration and shock		P
4.14	Protection against other hazards		P
4.14.1	Non-optical hazards (product safety standard)	(see IEC60950-1 test report)	P
	- electrical hazards;		P
	- excessive temperature;		P
	- spread of fire from the equipment;		P
	- sound and ultrasonic;		N/A
	- harmful substances;		P
	- explosion;		N/A
4.14.2	Collateral radiation	No such concerns expected.	N/A

IEC 60825-1			
Clause	Requirement + Test	Result – Remark	Verdict
5	LABELLING		P
5.1	General		P
	LASER PRODUCT CLASS	Class 1 laser product.	—
	Labelling location (Product / User instruction / Package)	Class 1 laser label provided in rating label. (see copy of marking plate)	P
	Warning label – Hazard symbol (Figure 1)		P
	Explanatory label (Figure 2)		P
5.2-5.6	Text on explanatory label	CLASS 1 LASER PRODUCT	P
5.7	Aperture label		N/A
5.8	Radiation output and standards information	For Class 1.	P
	Max output of laser radiation	--	—
	Pulse duration	--	—
	Emitted wavelength(s)	--	—
	The name and publication date of the standard.....	In instructions.	P
5.9	Labels for access panels		P
5.9.1 a) – f)	Warning wording used	Class 1 laser product. (3B was taking account of the maximum value in the specification of manufacturer and the following label was affixed anyway. DANGER CLASS 3B LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.)	P
5.9.2	Labels for safety interlocked panels		N/A
	Warning wording used	Class 1 laser product.	N/A
5.10	Warning for invisible laser radiation	No such radiation expected.	N/A
5.11	Warning for visible laser radiation	--	N/A

IEC 60825-1			
Clause	Requirement + Test	Result – Remark	Verdict
6	OTHER INFORMATIONAL REQUIREMENTS		P
6.1	Information for the user	Provided in the instructions of this product.	P
	a) adequate instructions for proper assembly, maintenance and safe use and description of the classification limitations, if appropriate	Provided.	P
	b) warning for Class 1M and 2M	Class 1 laser product.	N/A
	c) laser beam parameters for radiation above the AEL of Class 1	Class 1 laser product.	N/A
	• Wavelength	--	N/A
	• Beam divergence	--	N/A
	• Pulse duration	--	N/A
	• Maximum power or energy output	--	N/A
	d) embedded laser products and other incorporated laser products	No exposure to user expected.	N/A
	e) MPE and NOHD for Class 3B and Class 4 laser products For collimated beam Class 1M and 2M lasers the extended NOHD (ENOHD)	Class 1 laser product.	N/A
	f) information for the selection of eye protection		N/A
	g) reproduction of labels	Legible reproductions provided.	P
	h) location of laser apertures		N/A
	i) listing of controls, adjustment of procedures and warning statement		N/A
	j) information about laser energy source if not incorporated in the manual	Incorporated.	N/A
6.2	Purchasing and service information		P
	a) safety classification of each laser product stated in descriptive material	Stated.	P
	b) adequate instructions for servicing available		P

IEC 60825-1			
Clause	Requirement + Test	Result – Remark	Verdict
7	ADDITIONAL REQUIREMENTS FOR SPECIFIC LASER PRODUCTS		P
7.1	Applicable other parts of the standard series IEC/EN 60825		P
	IEC 60825-2 (Safety of optical communication systems)		N/A
	IEC 60825-4 (Laser guards)		N/A
	IEC 60825-12 (Safety of free space optical communication systems used for transmission of information)		N/A
	Further information may be found in:		P
	IEC/TR 60825-3 (Guidance for laser displays and shows)	Not referred.	—
	IEC/TR 60825-5 (Manufacturer's checklist for IEC 60825-1)	Referred.	—
	IEC/TR 60825-8 (Guidelines for the safe use of laser beams on humans)	Not referred.	—
	IEC/TR 60825-9 (Compilation of maximum permissible exposure to incoherent optical radiation)	Referred.	—
	IEC/TR 60825-10 (Application guidelines and explanatory notes to IEC 60825-1)	Referred.	—
	IEC/TR 60825-13 (Measurements for classification of laser products)	Not referred.	—
	IEC/TR 60825-14 (A user's guide)	Referred.	—
	IEC 62471 (CIE S 009) (Photobiological safety of lamps and lamp system)	Not referred.	—
7.2	Medical laser products	Not such products.	N/A
	Class 3B and Class 4 medical laser products comply with IEC 60601-2-22		N/A
7.3	Laser processing machines	Not such products.	N/A
	Comply with IEC/ISO 11553-1		N/A
7.4	Electric toys	Not such products.	N/A
	Comply with IEC 62115		N/A
7.5	Consumer electronic products	IT equipment.	P
	Complying with IEC 60950 or IEC 60065	(see IEC60950-1 test report)	P

IEC 60825-1			
Clause	Requirement + Test	Result – Remark	Verdict
8	CLASSIFICATION		P
8.2	Classification responsibilities		P
8.3	Classification rules		P
8.3a	Radiation of a single wavelength		P
8.3b	Radiation of multiple wavelengths	No such radiation.	N/A
	1) Laser product emission two or more wavelengths in spectral regions shown as additive in Table 2	--	N/A
	2) Laser product emission two or more wavelengths in spectral regions not shown as additive in Table 2	--	N/A
8.3c	Radiation from extended sources	No such sources radiating from Laser Scanner Unit considered.	N/A
	Value of angular subtense α (mrad)	--	N/A
8.3d	Non-uniform retinal image radiance profile, non-circular and multiple sources	No such sources considered.	N/A
8.3e	Time basis		P
	1) 0.25s		N/A
	2) 100s		P
	3) 30000s		N/A
8.3f	Repetitively pulsed or modulated lasers	Radiation from Laser Scanner Unit was considered as continuous output (CW) under the system configured.	N/A
	1) Exposure from any single pulse not exceeding the AEL for a single pulse		N/A
	2) Average power for a pulse train		N/A
	3a) Constant pulse energy and pulse duration		N/A
	3b) Varying pulse widths or varying pulse durations		N/A

IEC 60825-1			
Clause	Requirement + Test	Result – Remark	Verdict
9	DETERMINATION OF ACCESSIBLE EMISSION LEVELS		P
9.1	Tests		P
	Single fault eliminated		N/A
	Housing material withstanding degradation		N/A
	Fault detection		N/A
9.2	Measurement conditions	See 9.3.2.	P
	Measured laser radiation	See table "Measured laser radiation, calculations and comparison with AEL limits"	P
9.3	Measurement geometry		P
9.3.1	General, evaluation scheme		—
	a) Simplified (default) method		P
	b) Increased AEL by parameter C_6		N/A
9.3.2	Default (simplified) evaluation		P
	Condition applied	3	P
	Aperture stop diameter (mm)	7	P
	Measurement distance (mm)	At the closest point on the outside of the aperture of Laser Scanner Unit and main unit.	P
9.3.3	Extended sources	No such sources considered.	N/A
	C_6	--	N/A
9.3.3a	Aperture diameters		N/A
	Condition applied	--	N/A
	Aperture stop diameter (mm)	--	N/A
	Angular subtense of the apparent source α	--	N/A
9.3.3b	Angle of acceptance		N/A
	Condition applied	--	N/A
	1) Photochemical retinal limits	--	N/A
	Angle of acceptance	--	N/A
	2) All other retinal limits	--	N/A
	Angle of acceptance	--	N/A

IEC 60825-1			
Clause	Requirement + Test	Result – Remark	Verdict

Measured laser radiation, calculations and comparison with AEL limits:

1. Classification, Laser Class:

- Class 1 for end product
- Class 3B for laser diode from the specification

2. Calculation of AEL

Angular subtense: $\alpha = 0$ mrad assumed

Accessible emission limits (AEL)

- Class 1: 0.39 [mW] for end product
- Class 3B: 0.5 [W]

3. Measurement results of Laser Scan Unit

Laser Scan Unit with following Laser diode:

Rohm, Type RLD65NZN7-10B

3.1 Normal condition:

39.8×10^{-6} W

3.2 Fault condition

3.2.1 Polygon Motor locked:

1.383×10^{-3} W

3.2.2 Laser diode adjusted to maximum power:

76.4×10^{-6} W

3.2.3 Polygon Motor locked and Laser diode adjusted to maximum power:

2.548×10^{-3} W

Operator cannot access the Laser Scan Unit.

4. Measurement results of end product, outside the equipment (main unit) for leakage

4.1 Fault conditions

4.1.1 Polygon Motor locked and Laser diode adjusted to maximum power, all covers closed:

1×10^{-6} mW

Main unit provided to restrict operator access to laser radiation in excess of Class 1.

List of test equipment used:

(see IEC60950-1 Test report)

IEC 60825-1			
Clause	Requirement + Test	Result – Remark	Verdict

Appendix	EU Group Differences (EN 60825-1:2007)	--								
Annex ZA	<p>NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS</p> <p>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.</p> <p>NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.</p> <table><tr><td>--</td><td>IEC 60050-845: 1987</td></tr><tr><td>EN 60601-2-22: 1996 ²⁾</td><td>IEC 60601-2-22 ¹⁾</td></tr><tr><td>EN 61010-1: 2001 ³⁾</td><td>IEC 61010-1 ¹⁾</td></tr><tr><td>+ corr. June: 2002</td><td></td></tr></table>	--	IEC 60050-845: 1987	EN 60601-2-22: 1996 ²⁾	IEC 60601-2-22 ¹⁾	EN 61010-1: 2001 ³⁾	IEC 61010-1 ¹⁾	+ corr. June: 2002		P
--	IEC 60050-845: 1987									
EN 60601-2-22: 1996 ²⁾	IEC 60601-2-22 ¹⁾									
EN 61010-1: 2001 ³⁾	IEC 61010-1 ¹⁾									
+ corr. June: 2002										
	<p>1) Undated reference.</p> <p>2) Valid edition at date of issue. EN 60601-2-22:1996 will be superseded by EN 60601-1-2-22: 200X, which is based on IEC 60601-2-22:2007.</p> <p>3) Valid edition at date of issue.</p>									

IEC 60825-1			
Clause	Requirement + Test	Result – Remark	Verdict

Appended table	EQUIPMENT MANUFACTURE INFORMATION (DATA SHEET) ABOUT THE CONTAINING LASER COMPONENT/S		--
	Manufacturer	Rohm	—
	Type designation	RLD65NZN7-10B	—
	Structure	InGaAlP	—
	Wavelength	670nm	—
	Output power (min. and max.)	15mW max.	—
	Radiation is		—
	Continuous	Continuous.	—
	Pulsed	--	—
	Pulse time	--	—
	Pulse repetition frequency	--	—
	Others	--	—
	PIC UP UNIT		--
	Manufacturer	--	—
	Type designation	--	—
	Others	--	—
	TRANSMITTER/TRANSCIEVER UNIT		--
	Manufacturer	--	—
	Type designation	--	—
	Others	--	—

IEC/EN 62471			
Clause	Requirement + Test	Result – Remark	Verdict

TABLE: IEC/EN 62471 Emission limits for risk groups.**General information:**

For tests were conducted by applicant prepared simulation mode which is most unfavourable condition.

Tested condition:

- Measurement distance: 200mm

Risk	Classification
Actinic UV hazard.	Exempt
Near UV hazard.	Exempt
Retinal Blue Light hazard.	Exempt
Retinal Thermal hazard.	Exempt
IR radiation hazard.	Exempt
Thermal Skin	Pass
Supplementary information:	
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