UL 62368-1, Second Edition, December 1, 2014
CAN/CSA-C22.2 No. 62368-1-14, Second Edition

AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT – Part 1: Safety requirements

TEST REPORT

For

Guangzhou Long Qi Trade Co., Ltd.
No.1154-2 Room , No.111 Airport road, Baiyun District,Guangzhou City, China

Model: DROK-200218

Report Type: Original Report		**Product Type:** Switch Power Supply
Prepared By	Robert Duan Safety Engineer	Robert Duan
Report Number	RDG200622030-SF	
Report Date	2020-07-08	
Reviewed By	Eric Ding Safety Engineer	Eric Ding
Bay Area Compliance Laboratories Corp. (Dongguan) No.69, Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China		

ACCREDITED
TESTING LABORATORY
CERTIFICATE # 4820.01

Note: This test report was prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. This test report **shall not** be used by the customer to claim product certification, approval, or endorsement by A2LA or any agency of the United States Government or any foreign government.

* This test report may contain data and test methods that are not covered by BACL's scope of accreditation as of the test report date shown above. These items are marked within the test report text with an asterisk "*"

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	RDG200622030-SF	Original Report	2020-07-08

Test Item description ..... :	Switch Power Supply
Trade Mark ..... :	
Manufacturer ..... :	Guangzhou Long Qi Trade Co., Ltd.
Model/Type reference ..... :	DROK-200218
Ratings ..... :	Input:100-120V~ 7A, 50/60Hz, Output: 0-36Vdc 10A; Input:200-240V~ 4A, 50/60Hz, Output: 0-48Vdc 10A

Testing procedure and testing location:

☒ Testing Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan)	
Testing location/ address ..... :	No.69, Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China	
☐ Associated Testing Laboratory:		
Testing location/ address ..... :		
Tested by (name + signature)..... :	Robert Duan	Robert Duan
Approved by (name + signature) ..... :	Eric Ding	Eric Ding

including a total number of pages in each attachment):

1. Main Test report (36 pages)
2. US and Canadian National Differences(5 pages)
3. Test Table (14 pages)
4. EUT Photos (4 pages).

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
-5.2 Classification of electrical energy sources -5.4.1.4, 6.3.2, 9.0, B.2.6 TABLE: Temperature measurements -5.4.1.10.3 Ball pressure test -5.4.8 Humidity conditioning -5.4.9 Electric Strength test -5.5.2.2 Stored discharge on capacitors -5.6.6.2 Resistance of protective conductors and terminations -6.2.2 Power source circuit classifications - B.2.5 Input Current - Annex B.3, B.4, Annex G.5.3, G.5.4 Abnormal &fault condition test - Annex F.3.9 Durability, legibility and permanence of markings - Annex T.2 Steady force test, 30 N	Bay Area Compliance Laboratories Corp. (Dongguan) No.69, Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China **Testing Date:** Jun 18th, 2020 to Jul 08th, 2020 **Test Engineer:** Robert Duan

Summary of compliance with National Differences:

List of countries addressed

☒**The product fulfils the requirements of UL 62368-1, Second Edition, December 1, 2014 and CAN/CSA-C22.2 No. 62368-1-14, Second Edition, AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT – Part 1: Safety requirements.**

Copy of Marking Plate

The artwork proposed in the facsimile may be only a draft. The use of certification marks on a final product must be authorized by the respective Certification Bodies that have ownership those marks.

Specifications: Labels are printed in indelible ink on permanent adhesive backing or silk-screened and shall be affixed at a conspicuous location on the EUT. The label cannot be positioned on a removable portion of the EUT (e.g. battery cover).

Note: .

TEST ITEM PARTICULARS:	
Classification of use by ..... :	☐ Ordinary person ☒ Instructed person ☒ Skilled person ☐ Children likely to be present
Supply Connection ..... :	☒ AC Mains ☐ DC Mains ☐ External Circuit - not Mains connected - ☐ ES1 ☐ ES2 ☐ ES3
Supply % Tolerance ..... :	☒ +10%/-10% ☐ +20%/-15% ☐ None
Supply Connection – Type ..... :	☐ pluggable equipment type A – ☐ non-detachable supply cord ☐ appliance coupler ☐ direct plug-in ☐ mating connector ☐ pluggable equipment type B - ☐ non-detachable supply cord ☐ appliance coupler ☐ permanent connection ☐ mating connector ☒ other: Built-in component, considered in end system __
Considered current rating of protective device as part of building or equipment installation..... :	___20___ A; ☐ N/A Installation location: ☒ building; ☐ equipment
Equipment mobility..... :	☐ movable ☐ hand-held ☐ transportable ☐ stationary ☒ for building-in ☐ direct plug-in ☐ rack-mounting ☐ wall-mounted
Over voltage category (OVC) ..... :	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other:
Class of equipment ..... :	☒ Class I ☐ Class II ☐ Class III
Access location ..... :	☐ restricted access location ☒ N/A
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maxium operating ambient..... :	_40_ °C
IP protection class ..... :	☒ IPX0 ☐ IP___
Power Systems ..... :	☒ TN ☐ TT ☐ IT - ____ V_{L-L} ☐ N/A
Altitude during operation (m) ..... :	☒ 2000 m or less ☐ _____ m
Altitude of test laboratory (m) ..... :	☒ 2000 m or less ☐ _____ m
Mass of equipment (kg) ..... :	0.79 kg
POSSIBLE TEST CASE VERDICTS:	
- test case does not apply to the test object..... :	N/A
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)

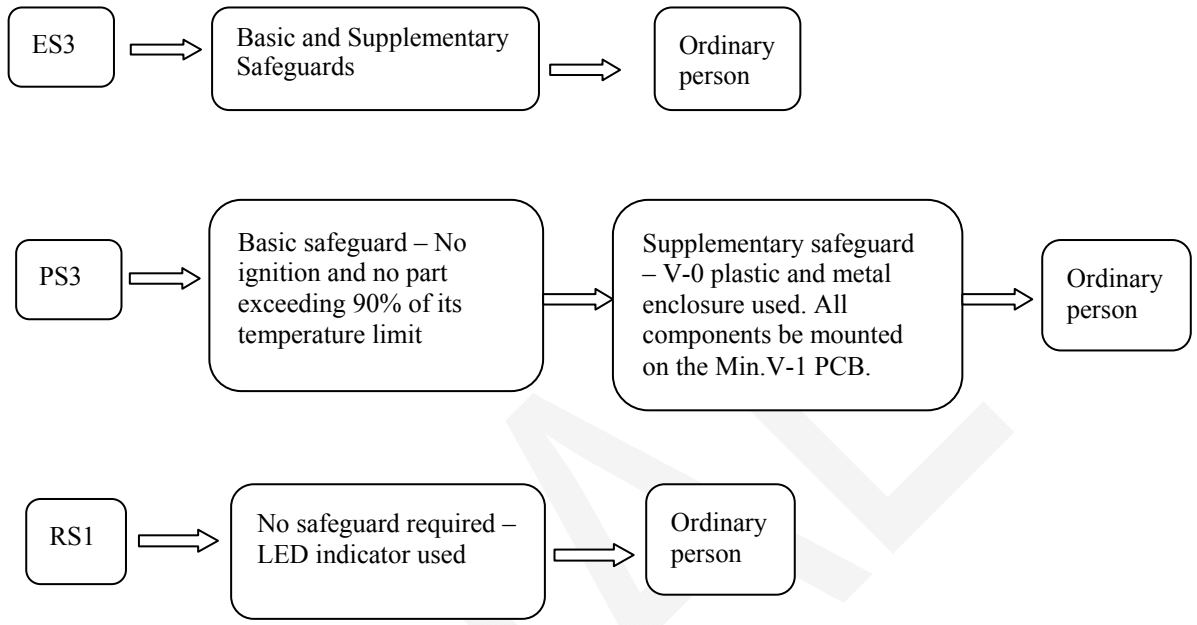
TESTING:	
Date of receipt of test item ..... :	2020-06-18
Date (s) of performance of tests ..... :	2020-06-18 to 2020-07-08
GENERAL REMARKS:	
"(See Enclosure #)" refers to additional information appended to the report. **"(See appended table)" refers to a table appended to the report.** **Throughout this report a ☐ comma / ☒ point is used as the decimal separator.**	
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies).....:	Name: Guangzhou Long Qi Trade Co., Ltd. Address: No.1154-2 Room , No.111 Airport road, Baiyun District,Guangzhou City, China
GENERAL PRODUCT INFORMATION:	
Product Description – 1. The equipment is a Switch Power Supply which is a Class I equipment. 2. When installing these power supplies, all requirements of the relevant standards must be fulfilled. 3. For built-in type equipment, suitable enclosure should be provided by end system. 4. When installed these power supplies into the end system, connect earth before connecting L/N conductors, disconnect earth after disconnecting L/N conductors. 5. These power supplies can only be used in equipment which provides with reliable earthing. 6. The maximum operating temperature is 40°C. 7. All circuits are considered as ES3 circuits, PS3 circuits. 8. Adjust the voltage to the correct device before use	
Model Differences –	
Additional application considerations – (Considerations used to test a component or sub-assembly) – N/A	

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.) (Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.	
Electrically-caused injury (Clause 5): (Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification) Example: +5 V dc input ES1	
Source of electrical energy	**Corresponding classification (ES)**
All circuit	ES3
Electrically-caused fire (Clause 6): (Note: List sub-assembly or circuit designation and corresponding energy source classification) Example: Battery pack (maximum 85 watts): PS2	
Source of power or PIS	**Corresponding classification (PS)**
All circuit	PS3
Injury caused by hazardous substances (Clause 7) (Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.) Example: Liquid in filled component.....Glycol	
Source of hazardous substances	**Corresponding chemical**
N/A	N/A
Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.) Example: Wall mount unit MS2	
Source of kinetic/mechanical energy	**Corresponding classification (MS)**
N/A	N/A
Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.) Example: Hand-held scanner – thermoplastic enclosure.....TS1	
Source of thermal energy	**Corresponding classification (TS)**
N/A	N/A
Radiation (Clause 10) (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product RS1	
Type of radiation	**Corresponding classification (RS)**
LED indicator—Exempt group	RS1

ENERGY SOURCE DIAGRAM

Indicate which energy sources are included in the energy source diagram. Insert diagram below

☒ **ES** ☒ **PS** ☐ **MS** ☐ **TS** ☒ **RS**



OVERVIEW OF EMPLOYEDSAFEGUARDS				
Clause	**Possible Hazard**			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Instructed and Skilled person	ES3: Primary Circuit (X-cap)	N/A	N/A	Bleeder resistor cl.5.5.2.2
Instructed and Skilled person	ES3: All Circuit	Basic insulation Distances: cl. 5.4.2 and 5.4.3, 5.4.9	Protective bonding conductor (comply 5.6.4 (Table G.5)	N/A
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
All combustible materials within equipment	PS3: All circuits	(N) and (A): 1. No ignition occurred; 2. No parts exceeding 90% of its spontaneous ignition temperature	(S): V-0 plastic and metal enclosure used. All components be mounted on the Min.V-1 PCB.	N/A
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
N/A	N/A	N/A	N/A	N/A
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	RS1: LED indicator – Exempt group	N/A	N/A	N/A
Supplementary Information:				

(1) See attached energy source diagram for additional details.
(2) "N" – Normal Condition; "A" – Abnormal Condition; "S" Single Fault.

Clause	Requirement + Test	Result - Remark	Verdict
4	**GENERAL REQUIREMENTS**		P
4.1.1	Acceptance of materials, components and subassemblies	(See appended table 4.1.2)	P
4.1.2	Use of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	P
4.1.3	Equipment design and construction	No accessible part which could cause injury	P
4.1.15	Markings and instructions.....:	(See Annex F)	P
4.4.4	Safeguard robustness	Built-in component, considered in end system	N/A
4.4.4.2	Steady force tests.....:	Built-in component, considered in end system	N/A
4.4.4.3	Drop tests.....:	Built-in component, considered in end system	N/A
4.4.4.4	Impact tests.....:	Built-in component, considered in end system	N/A
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....:		N/A
4.4.4.6	Glass Impact tests.....:	No glass used	N/A
4.4.4.7	Thermoplastic material tests.....:	Built-in component, considered in end system	N/A
4.4.4.8	Air comprising a safeguard.....:		N/A
4.4.4.9	Accessibility and safeguard effectiveness		N/A
4.5	Explosion	Compliance is checked by inspection and tests as specified in Clause B.2, Clause B.3, Clause B.4	P
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard	See below	P
4.6.2	10 N force test applied to .....:	(See Annex T.2)	P
4.7	Equipment for direct insertion into mains socket - outlets	Built-in component, considered in end system	N/A
4.7.2	Mains plug part complies with the relevant standard:		N/A
4.7.3	Torque (Nm).....:		N/A
4.8	Products containing coin/button cell batteries	No coin/button battery used	N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery.....:		—
4.8.4	Battery Compartment Mechanical Tests.....:		N/A

Clause	Requirement + Test	Result - Remark	Verdict
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object .....:	Built-in component, considered in end system	N/A
5	**ELECTRICALLY-CAUSED INJURY**		P
5.2.1	Electrical energy source classifications.....:	(See appended table 5.2)	P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current.....:	(See appended table 5.2)	P
5.2.2.3	Capacitance limits.....:	(See appended table 5.2)	P
5.2.2.4	Single pulse limits.....:		N/A
5.2.2.5	Limits for repetitive pulses .....:		N/A
5.2.2.6	Ringing signals .....:	No such circuits	N/A
5.2.2.7	Audio signals .....:	No audio signal terminals	N/A
5.3	Protection against electrical energy sources	All parts should be considered in end system	N/A
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		N/A
5.3.2.1	Accessibility to electrical energy sources and safeguards		N/A
5.3.2.2	Contact requirements		N/A
	a) Test with test probe from Annex V.....:		N/A
	b) Electric strength test potential (V) .....:		N/A
	c) Air gap (mm) .....:		N/A
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		N/A
5.4.1.3	Humidity conditioning.....:	No hygroscopic insulating material used as insulation	N/A
5.4.1.4	Maximum operating temperature for insulating materials .....:	(See appended table 5.4.1.4)	P
5.4.1.5	Pollution degree .....:	Pollution degree 2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions	No such transformer	N/A
5.4.1.7	Insulation in circuits generating starting pulses	No such circuit	N/A
5.4.1.8	Determination of working voltage		P
5.4.1.9	Insulating surfaces		N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		N/A
5.4.1.10.2	Vicat softening temperature.....:	Compliance is checked by ball pressure test	N/A

Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.10.3	Ball pressure ..... :	(See appended table 5.4.1.10.3)	P
5.4.2	Clearances	Considered in end system	N/A
5.4.2.2	Determining clearance using peak working voltage		N/A
5.4.2.3	Determining clearance using required withstand voltage .		N/A
	a) a.c. mains transient voltage ..... :		—
	b) d.c. mains transient voltage ..... :		—
	c) external circuit transient voltage ..... :		—
	d) transient voltage determined by measurement ..... :		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test		N/A
5.4.2.5	Multiplication factors for clearances and test voltages.....		N/A
5.4.3	Creepage distances..... :		N/A
5.4.3.1	General		N/A
5.4.3.3	Material Group ..... :		—
5.4.4	Solid insulation		N/A
5.4.4.2	Minimum distance through insulation ..... :		N/A
5.4.4.3	Insulation compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Cemented joints		N/A
5.4.4.6	Thin sheet material	Insulation tape wrapped on outer of T1 is used as reinforced insulation	P
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material		P
	Number of layers (pcs) ..... :	Min. 2 layers	P
5.4.4.6.3	Non-separable thin sheet material	No such material used	N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material..... :		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		N/A
5.4.4.9	Solid insulation at frequencies >30 kHz..... :		N/A
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ) ..... :		—
5.4.6	Insulation of internal wire as part of supplementary safeguard..... :	No such insulation	N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		P

Clause	Requirement + Test	Result - Remark	Verdict
	Relative humidity (%).....:	93% RH	—
	Temperature (°C) .....:	40 °C	—
	Duration (h) .....:	120 h	—
5.4.9	Electric strength test.....:	(See appended table 5.4.9)	P
5.4.9.1	Test procedure for a solid insulation type test		P
5.4.9.2	Test procedure for routine tests		N/A
5.4.10	Protection against transient voltages between external circuit	No transient voltage from external circuit	N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test.....:		N/A
5.4.10.2.3	Steady-state test .....:		N/A
5.4.11	Insulation between external circuits and earthed circuitry.....:	No such external circuit	N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage U_{op}(V) .....:		
	Nominal voltage U_{peak}(V) .....:		
	Max increase due to variation U_{sp} .....:		
	Max increase due to ageing ΔU_{sa} .....:		
	$U_{op}= U_{peak}+ \Delta U_{sp}+\Delta U_{sa}$ .....:		
5.5	Components as safeguards		
5.5.1	General		P
5.5.2	Capacitors and RC units		P
5.5.2.1	General requirement		P
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector .....:	(See appended table 5.5.2.2)	P
5.5.3	Transformers	(See Annex G.5.3)	P
5.5.4	Optocouplers	(See sub-clause 5.4 or Annex G.12)	P
5.5.5	Relays	No relays	N/A
5.5.6	Resistors	Bleeder resistors R1 used as discharge safeguards.	P
5.5.7	SPD's	No SPD's	N/A
5.5.7.1	Use of an SPD connected to reliable earthing		N/A
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable .....:		N/A
5.6	Protective conductor		P

Clause	Requirement + Test	Result - Remark	Verdict
5.6.2	Requirement for protective conductors		P
5.6.2.1	General requirements		P
5.6.2.2	Colour of insulation	Built-in component, considered in end system	N/A
5.6.3	Requirement for protective earthing conductors	Built-in component, considered in end system	N/A
	Protective earthing conductor size (mm^2) .....:		—
5.6.4	Requirement for protective bonding conductors		P
5.6.4.1	Protective bonding conductors		P
	Protective bonding conductor size (mm^2). .....:	Metallic enclosure used as bonding conductors comply with 5.6.6 and Table 31	—
	Protective current rating (A) ..... :	20A	—
5.6.4.3	Current limiting and overcurrent protective devices	No such current limiting device or overcurrent protective device be connected in parallel with protective bonding conductor	P
5.6.5	Terminals for protective conductors		P
5.6.5.1	Requirement	See below	P
	Conductor size (mm^2), nominal thread diameter (mm). ...	Built-in component, considered in end system	P
5.6.5.2	Corrosion	(See Clause N)	P
5.6.6	Resistance of the protective system		P
5.6.6.1	Requirements	(See appended table 5.6.6.2)	P
5.6.6.2	Test Method Resistance (Ω) .....:	(See appended table 5.6.6.2)	P
5.6.7	Reliable earthing	Built-in component, considered in end system	N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks		P
5.7.2.1	Measurement of touch current .....:	(See appended table 5.7.2.2, 5.7.4)	P
5.7.2.2	Measurement of prospective touch voltage		P
5.7.3	Equipment set-up, supply connections and earth connections	Built-in component, considered in end system	N/A
	System of interconnected equipment (separate connections/single connection).....:		—
	Multiple connections to mains (one connection at a time/simultaneous connections).....:		—
5.7.4	Earthed conductive accessible parts.....:	See appended table 5.7.2.2, 5.7.4	P
5.7.5	Protective conductor current	See below	P
	Supply Voltage (V).....:	264V~, 60Hz	—
	Measured current (mA).....:	0.68mA r.m.s	—
	Instructional Safeguard.....:		N/A

Clause	Requirement + Test	Result - Remark	Verdict
5.7.6	Prospective touch voltage and touch current due to external circuits	The equipment not intended connect to external circuits.	N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits		N/A
	a) Equipment with earthed external circuits Measured current (mA) .....:		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....:		N/A
6	**ELECTRICALLY- CAUSED FIRE**		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications	PS3	P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault ..... :		P
6.2.2.3	Power measurement for worst-case power source fault	(See appended table 6.2.2)	P
6.2.2.4	PS1 ..... :		N/A
6.2.2.5	PS2 ..... :		N/A
6.2.2.6	PS3 ..... :	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS ..... :	(See appended table 6.2.3.1)	P
6.2.3.2	Resistive PIS ..... :	(See appended table 6.2.3.2)	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials.....:	(See appended table 5.4.1.5, 6.3.2, 9.0, B.2.6) No ignition occurred, and no part of the equipment attained a temperature value greater than 300 °C.	P
6.3.1 (b)	Combustible materials outside fire enclosure		N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	The method for control fire spread is used Metal enclosure and Min V-1 PCB , VW-1 internal wire used.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	General		N/A
6.4.3.2	Supplementary Safeguards		N/A

Clause	Requirement + Test	Result - Remark	Verdict
	Special conditions if conductors on printed boards are opened or peeled		N/A
6.4.3.3	Single Fault Conditions ..... :		N/A
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		N/A
6.4.5	Control of fire spread in PS2 circuits		N/A
6.4.5.2	Supplementary safeguards .....:		N/A
6.4.6	Control of fire spread in PS3 circuit		P
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.1	General .....:		N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers	Metal case provided and built-in component, also considered in end system	N/A
6.4.8.1	Fire enclosure and fire barrier material properties		N/A
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure		N/A
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		N/A
6.4.8.3.1	Fire enclosure and fire barrier openings		N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions(mm) ...:		N/A
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) ..... :		N/A
	Flammability tests for the bottom of a fire enclosure .:		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c).....:		N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating .....:		N/A
6.5	Internal and external wiring		P
6.5.1	Requirements		P
6.5.2	Cross-sectional area (mm^2) .....:	See appended table 4.1.2	—
6.5.3	Requirements for interconnection to building wiring..:		N/A
6.6	Safeguards against fire due to connection to additional equipment		N/A
	External port limited to PS2 or complies with Clause Q.1		N/A

Clause	Requirement + Test	Result - Remark	Verdict
7	**INJURY CAUSED BY HAZARDOUS SUBSTANCES**		N/A
7.2	Reduction of exposure to hazardous substances	No hazardous chemicals	N/A
7.3	Ozone exposure		N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions ..... :		—
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010).....:		—
7.6	Batteries.....:		N/A
8	**MECHANICALLY-CAUSED INJURY**		N/A
8.1	General	Built-in component, considered in end system	N/A
8.2	Mechanical energy source classifications		N/A
8.3	Safeguards against mechanical energy sources		N/A
8.4	Safeguards against parts with sharp edges and corners		N/A
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts		N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard..... :		—
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks .....:		N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard.....:		—
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N) .....:		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test.....:		N/A
8.6	Stability		N/A
8.6.1	Product classification		N/A
	Instructional Safeguard.....:		—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A

Clause	Requirement + Test	Result - Remark	Verdict
	Applied Force ..... :		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt..... :		—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force) ..... :		N/A
	Position of feet or movable parts..... :		—
8.7	Equipment mounted to wall or ceiling	Not mounted to wall or ceiling	N/A
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) ..... :		N/A
8.7.2	Direction and applied force ..... :		N/A
8.8	Handles strength	No handles used	N/A
8.8.1	Classification		N/A
8.8.2	Applied Force ..... :		N/A
8.9	Wheels or casters attachment requirements	No wheels or casters used	N/A
8.9.1	Classification		N/A
8.9.2	Applied force ..... :		—
8.10	Carts, stands and similar carriers		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard..... :		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force ..... :		—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N) ..... :		—
8.10.6	Thermoplastic temperature stability (°C)..... :		N/A
8.11	Mounting means for rack mounted equipment		N/A
8.11.1	General		N/A
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable *N* .....:		N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas.....		N/A
	Button/Ball diameter (mm).....:		—

9	**THERMAL BURN INJURY**		N/A
9.2	Thermal energy source classifications		N/A

Clause	Requirement + Test	Result - Remark	Verdict
9.3	Safeguard against thermal energy sources		N/A
9.4	Requirements for safeguards		N/A
9.4.1	Equipment safeguard		N/A
9.4.2	Instructional safeguard ..... :		N/A
10	**RADIATION**		P
10.2	Radiation energy source classification	LED indicator—Exempt group	P
10.2.1	General classification		P
10.3	Protection against laser radiation	No laser within the EUT	N/A
	Laser radiation that exists equipment:		—
	Normal, abnormal, single-fault..... :		N/A
	Instructional safeguard..... :		—
	Tool..... :		—
10.4	Protection against visible, infrared, and UV radiation	No visible, infrared, and UV radiation within the EUT	N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons..... :		N/A
10.4.1.b)	RS3 accessible to a skilled person ..... :		N/A
	Personal safeguard (PPE) instructional safeguard ..... :		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1 .....:		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions ..... :		N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque. :		N/A
10.4.1.f)	UV attenuation..... :		N/A
10.4.1.g)	Materials resistant to degradation UV ..... :		N/A
10.4.1.h)	Enclosure containment of optical radiation ..... :		N/A
10.4.1.i)	Exempt Group under normal operating conditions..... :		N/A
10.4.2	Instructional safeguard..... :		N/A
10.5	Protection against x-radiation	No x-radiation within the EUT	N/A
10.5.1	X- radiation energy source that exists equipment..... :		N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards..... :		N/A
	Instructional safeguard for skilled person..... :		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation..... :		—
	Abnormal and single-fault condition ..... :		N/A
	Maximum radiation (pA/kg)..... :		N/A
10.6	Protection against acoustic energy sources		N/A
10.6.1	General		N/A

Clause	Requirement + Test	Result - Remark	Verdict
10.6.2	Classification		N/A
	Acoustic output, dB(A)..... :		N/A
	Output voltage, unweighted r.m.s. ..... :		N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards ..... :		N/A
	Equipment safeguard prevent ordinary person to RS2 ...		—
	Means to actively inform user of increase sound pressure..... :		—
	Equipment safeguard prevent ordinary person to RS2 ...		—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) L_{Aeq}acoustic pressure output..... :		—
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A) ..... :		—
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A) ..... :		—

B	**NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS**		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements..... :	(See summary of testing & appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers .	No audio amplifier circuits	N/A
B.2.3	Supply voltage and tolerances	+10 % and −10 %	P
B.2.5	Input test..... :	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements..... :	(See appended table B.3)	P
B.3.2	Covering of ventilation openings	Built-in component, considered in end system	N/A
B.3.3	D.C. mains polarity test	Not connected to D.C. mains	N/A
B.3.4	Setting of voltage selector ..... :	(See appended table B.3)	P
B.3.5	Maximum load at output terminals.....:	(See appended table B.3)	P
B.3.6	Reverse battery polarity		N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions	(See appended table B.3)	P
B.4	Simulated single fault conditions		P

Clause	Requirement + Test	Result - Remark	Verdict
B.4.2	Temperature controlling device open or short-circuited..... :		N/A
B.4.3	Motor tests		P
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature ..... :		P
B.4.4	Short circuit of functional insulation	See below	P
B.4.4.1	Short circuit of clearances for functional insulation	The functional insulation was short-circuited. See appended table B.4	P
B.4.4.2	Short circuit of creepage distances for functional insulation	The functional insulation was short-circuited. See appended table B.4	P
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors	(See appended table B.4)	P
B.4.6	Short circuit or disconnect of passive components	See appended table B.4	P
B.4.7	Continuous operation of components	Not intermittent or short-time operation equipment	N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions	During and after a single fault condition, a class 1 or class 2 energy sources did not become a class 3 energy source. For a class 3 energy source, during and after a single fault condition, at least one safeguard continued to comply with the relevant safeguard requirements.	P
B.4.9	Battery charging under single fault conditions ..... :	No battery	N/A
C	**UV RADIATION**		N/A
C.1	Protection of materials in equipment from UV radiation	No UV radiation	N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A
D	**TEST GENERATORS**		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A
E	**TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS**		N/A
E.1	Audio amplifier normal operating conditions		N/A

Clause	Requirement + Test	Result - Remark	Verdict
	Audio signal voltage (V) ..... :		—
	Rated load impedance (Ω) ..... :		—
E.2	Audio amplifier abnormal operating conditions		N/A
F	**EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS**		P
F.1	General requirements In Canada, there are two official languages, English and French. The markings and instructions shall be in English and French. Refer to Annex DVK for acceptable French translations of the markings specified	Equipment is provided with operating instructions.	P
	Instructions – Language ..... :	English and French	—
F.2	Letter symbols and graphical symbols	Complied	P
F.2.1	Letter symbols according to IEC60027-1	Complied	P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific	Complied	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	Enclosure outside	P
F.3.2	Equipment identification markings	See below.	P
F.3.2.1	Manufacturer identification ..... :	See marking plate.	—
F.3.2.2	Model identification ..... :	See marking plate.	—
F.3.3	Equipment rating markings	See below.	P
F.3.3.1	Equipment with direct connection to mains		P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage..... :	~	—
F.3.3.4	Rated voltage..... :	100-120V, 200-240V	—
F.3.3.4	Rated frequency..... :	50/60Hz	—
F.3.3.6	Rated current or rated power ..... :	7A(100-120V), 4A(200-240V)	—
F.3.3.7	Equipment with multiple supply connections		N/A
F.3.4	Voltage setting device		P
F.3.5	Terminals and operating devices		N/A
F.3.5.1	Mains appliance outlet and socket-outlet markings... :		N/A
F.3.5.2	Switch position identification marking..... :		N/A
F.3.5.3	Replacement fuse identification and rating markings :	Fuse rating “T10A 250V” marked on PCB near fuse F1	P
F.3.5.4	Replacement battery identification marking..... :		N/A
F.3.5.5	Terminal marking location		N/A
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment	Class I Equipment	P
F.3.6.1.1	Protective earthing conductor terminal	⏚ is marked on the equipment	P

Clause	Requirement + Test	Result - Remark	Verdict
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		N/A
F.3.6.2	Class II equipment (IEC60417-5172)	Class I Equipment	N/A
F.3.6.2.1	Class II equipment with or without functional earth		N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking .....:	IPX0	—
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking	See clause F.3.10	P
F.3.10	Test for permanence of markings	Rubbing the marking by handfor 15 s with piece of clothsoaked with water and, at adifferent place for on a secondsample. For 15 s with a pieceof cloth soaked with petroleumspirit. after this test, marking islegible and cannot be easilypossible to remove markingand show no curling	P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking		N/A
	b) Instructions given for installation or initial use		P
	c) Equipment intended to be fastened in place		N/A
	d) Equipment intended for use only in restricted access area		N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard		P
	g) Protective earthing conductor current exceeding ES 2 limits		N/A
	h) Symbols used on equipment		P
	i) Permanently connected equipment not provided with all-pole mains switch		N/A
j)	j) Replaceable components or modules providing safeguard function		N/A
F.5	Instructional safeguards		P
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction		P
G	**COMPONENTS**		P
G.1	**Switches**		N/A
G.1.1	General requirements	No switches	N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	**Relays**		N/A

Clause	Requirement + Test	Result - Remark	Verdict
G.2.1	General requirements	No relays	N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
G.3	**Protection Devices**		P
G.3.1	Thermal cut-offs	No thermal cut-offs used	N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691	No thermal links	N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H)..... :		—
	Single Fault Condition..... :		—
	Test Voltage (V) and Insulation Resistance (Ω)..... :		—
G.3.3	PTC Thermistors	No PTC thermistor used	N/A
G.3.4	Overcurrent protection devices	Approved fuse-links used comply with IEC 60127-1	P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions .....:		N/A
G.4	**Connectors**		P
G.4.1	Spacings		N/A
G.4.2	Mains connector configuration .....:	Built-in component, considered in end system	N/A
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely	Mismating of output connectors to mains plugs or sockets are impossible	P
G.5	**Wound Components**		P
G.5.1	Wire insulation in wound components	Approved source of triple insulated wire used as secondary winding for reinforced insulation	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°	Separate by insulation tubing and insulation tape	P
G.5.1.2 b)	Construction subject to routine testing		N/A
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s) .....:		—

Clause	Requirement + Test	Result - Remark	Verdict
	Temperature (°C) :		—
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	**Transformers**		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1) :	Comply with the requirements as below	N/A
	Position :	T3	—
	Method of protection :	See G.5.3.3	—
G.5.3.2	Insulation		P
	Protection from displacement of windings :	Fixed by bobbin and insulation tape	—
G.5.3.3	Overload test :	(See append table B.3)	P
G.5.3.3.1	Test conditions		P
G.5.3.3.2	Winding Temperatures testing in the unit		P
G.5.3.3.3	Winding Temperatures - Alternative test method		N/A
G.5.4	**Motors**		P
G.5.4.1	General requirements		P
	Position :		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days) :		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V) :		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h) :		N/A
	Electric strength test (V) :		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		P
G.5.4.6.2	Tested in the unit		P
	Maximum Temperature :		P
	Electric strength test (V) :		P
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h) :		N/A
	Electric strength test (V) :		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage :		—

Clause	Requirement + Test	Result - Remark	Verdict
G.6	**Wire Insulation**		P
G.6.1	General	Approved TIW used in transformers	P
G.6.2	Solvent-based enamel wiring insulation		N/A
G.7	**Mains supply cords**		N/A
G.7.1	General requirements	No mains supply cords provided	N/A
	Type.....:		—
	Rated current (A).....:		—
	Cross-sectional area (mm^2), (AWG)..... :		—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N).....:		—
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm) .....:		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry ..... :		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g) .....:		—
	Diameter (m) .....:		—
	Temperature (°C).....:		—
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	**Varistors**		N/A
G.8.1	General requirements		N/A
G.8.2	Safeguard against shock		N/A
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test .....:		N/A
G.8.3.3	Temporary overvoltage.....:		N/A
G.9	**Integrated Circuit (IC) Current Limiters**		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.		N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA .....:		—
G.9.1 d)	IC limiter output current (max. 5A).....:		—
G.9.1 e)	Manufacturers' defined drift .....:		—

Clause	Requirement + Test	Result - Remark	Verdict
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	**Resistors**		P
G.10.1	General requirements		P
G.10.2	Resistor test		P
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	**Capacitor and RC units**		P
G.11.1	General requirements	(see appended table 4.1.2)	P
G.11.2	Conditioning of capacitors and RC units		P
G.11.3	Rules for selecting capacitors		P
G.12	**Optocouplers**		P
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results).....:	Optocoupler complied with cl.5.4.4.3 and 5.4.4.4. (refer to appended table 4.1.2)	P
	Type test voltage Vini.....:		—
	Routine test voltage, Vini,b .....:		—
G.13	**Printed boards**		P
G.13.1	General requirements	(See appended table 4.1.2)	P
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards	No coated printed boards used	N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction) .....:		—
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation .....:		N/A
	Number of insulation layers (pcs).....:		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
G.14	**Coating on components terminals**		N/A
G.14.1	Requirements .....:		N/A

Clause	Requirement + Test	Result - Remark	Verdict
G.15	**Liquid filled components**		N/A
G.15.1	General requirements		N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	**IC including capacitor discharge function (ICX)**		N/A
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N/A
b)	Impulse test using circuit 2 with Uc = to transient voltage .....:		N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage .....:		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A
D2)	Capacitance .....:		—
D3)	Resistance .....:		—
H	**CRITERIA FOR TELEPHONE RINGING SIGNALS**		N/A
H.1	General		N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringing signal		N/A
H.3.1.1	Frequency (Hz) .....:		—
H.3.1.2	Voltage (V) .....:		—
H.3.1.3	Cadence; time (s) and voltage (V) .....:		—
H.3.1.4	Single fault current (mA):.....:		—
H.3.2	Tripping device and monitoring voltage.....:		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V).....:		—

Clause	Requirement + Test	Result - Remark	Verdict
J	**INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION**		P
	General requirements	(see appended table 4.1.2)	P
K	**SAFETY INTERLOCKS**		N/A
K.1	General requirements		N/A
K.2	Components of safety interlock safeguard mechanism ..		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance .....:		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method .....:		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) .....:		N/A
K.7.2	Overload test, Current (A).....:		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test .....:		N/A
L	**DISCONNECT DEVICES**		N/A
L.1	General requirements	Built-in component, considered in end system	N/A
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized	No parts remain energized, refer to cl.5.5.2.2.	N/A
L.4	Single phase equipment	Both poles were disconnected simultaneously.	N/A
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices	Not used.	N/A
L.7	Plugs as disconnect devices	No power cord coved in report.	N/A
L.8	Multiple power sources	Single power source.	N/A
M	**EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS**		N/A
M.1	General requirements	No batteries	N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method) ..... :		N/A
M.3	Protection circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Tests		N/A

Clause	Requirement + Test	Result - Remark	Verdict
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance .....:		N/A
M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature .....:		—
M.4.2.2 b)	Single faults in charging circuitry .....:		—
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		N/A
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method) :		N/A
M.6.2	Leakage current (mA) .....:		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A

Clause	Requirement + Test	Result - Remark	Verdict
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume *Vz* (m^3/s) ..... :		—
M.8.2.3	Correction factors ..... :		—
M.8.2.4	Calculation of distance *d* (mm) ..... :		—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) ..... :		N/A
N	**ELECTROCHEMICAL POTENTIALS**		P
	Metal(s) used ..... :	Considered	—
O	**MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES**		P
	Figures O.1 to O.20 of this Annex applied ..... :	Considered	—
P	**SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS**		N/A
P.1	General requirements	Built-in component, considered in end system	N/A
P.2.2	Safeguards against entry of foreign object		N/A
	Location and Dimensions (mm) ..... :		—
P.2.3	Safeguard against the consequences of entry of foreign object		N/A
P.2.3.1	Safeguards against the entry of a foreign object		N/A
	Openings in transportable equipment		N/A
	Transportable equipment with metalized plastic parts :		N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) ..... :		N/A
P.3	Safeguards against spillage of internal liquids	No such liquid.	N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts		N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C) ..... :		—
	Tr (°C) ..... :		—
	Ta (°C) ..... :		—
P.4.2 b)	Abrasion testing ..... :		N/A
P.4.2 c)	Mechanical strength testing ..... :		N/A

Clause	Requirement + Test	Result - Remark	Verdict
Q	**CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING**		N/A
Q.1	Limited power sources		N/A
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		N/A
	- Regulating network limited output under normal operating and simulated single fault condition		N/A
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method		N/A
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A) ..... :		—
	Current limiting method ..... :		—
R	**LIMITED SHORT CIRCUIT TEST**		N/A
R.1	General requirements		N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)). ..... :		N/A
S	**TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material ..... :		—
	Wall thickness (mm) ..... :		—
	Conditioning (°C) ..... :		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material ..... :		—
	Wall thickness (mm) ..... :		—
	Conditioning (°C) ..... :		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material ..... :		—

Clause	Requirement + Test	Result - Remark	Verdict
	Wall thickness (mm) .....:		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material .....:		—
	Wall thickness (mm) .....:		—
	Conditioning (test condition), (°C).....:		—
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	After every test specimen was not consumed completely		N/A
	After fifth flame application, flame extinguished within 1 min		N/A
T	**MECHANICAL STRENGTH TESTS**		**P**
T.1	General requirements		P
T.2	Steady force test, 10 N .....:	(see appended table T.2)	P
T.3	Steady force test, 30 N .....:	Built-in component, considered in end system	N/A
T.4	Steady force test, 100 N .....:	Built-in component, considered in end system	N/A
T.5	Steady force test, 250 N .....:	Built-in component, considered in end system	N/A
T.6	Enclosure impact test	Built-in component, considered in end system	N/A
	Fall test		N/A
	Swing test		N/A
T.7	Drop test .....:	Built-in component, considered in end system	N/A
T.8	Stress relief test .....:		N/A
T.9	Impact Test (glass)	No glass used	N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J).....:		—
	Height (m).....:		—
T.10	Glass fragmentation test.....:	No glass used	N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm).....:		—

Clause	Requirement + Test	Result - Remark	Verdict
U	**MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFECTS OF IMPLOSION**		N/A
U.1	General requirements		N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen .....:		N/A
V	**DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)**		P
V.1	Accessible parts of equipment	Built-in component, considered in end system	P
V.2	Accessible part criterion		P

ATTACHMENT TO TEST REPORT IEC 62368-1 2th Ed. U.S.A. NATIONAL DIFFERENCES Audio/video, information and communication technology equipment – Part 1: Safety requirements	
Differences according to.....:	CSA/UL 62368-1:2014
Attachment Form No. .....:	US&CA_ND_IEC623681B
Attachment Originator .....:	UL(US)
Master Attachment .....:	Date 2015-06
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Clause	Requirement + Test	Result - Remark	Verdict
IEC 62368-1 - US and Canadian National Differences Special National Conditions based on Regulations and Other National Differences			
1.1	All equipment is to be designed to allow installation according to 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, for such equipment marked or otherwise identified, installation is allowed per the Standard for the Protection of Information Technology Equipment, ANSI/NFPA 75.		P
1.4	Additional requirements apply to some forms of power distribution equipment, including sub-assemblies.	The EUT is not used as distribution equipment.	N/A
4.1.17	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 generally are required to have special construction features and identification markings.		N/A
4.8	Lithium coin / button cell batteries have modified special construction and performance requirements.	No Lithium coin or button cell.	N/A
5.6.3	Protective earthing conductors comply with the minimum conductor sizes in Table G.5, except as required by Table G.7ADV.1 for cord connected equipment, or Annex DVH for permanently connected equipment		N/A
5.7.7	Equipment intended to receive telecommunication ringing signals complies with a special touch current measurement tests.	No such equipment.	N/A
6.5.1	PS3 wiring outside a fire enclosure complies with single fault testing in B.4, or be current limited per one of the permitted methods.	No wiring outside a fire enclosure.	N/A
Annex F (F.3.3.8)	Output terminals provided for supply of other equipment, except mains, supply are marked with a maximum rating or references to which equipment it is permitted to be connected.	See marking plate	P

Clause	Requirement + Test	Result - Remark	Verdict
Annex G (G.7.1)	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		N/A
Annex G (G.7.3)	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
	Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
Annex G (G.7.5)	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. Power supply cords are required to be no longer than 4.5 m in length if used in ITE Rooms.		N/A
Annex H.2	Continuous ringing signals under normal operating conditions up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	Not such equipment.	N/A
Annex H.4	For 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
Annex M	Battery packs for stationary applications comply with special component requirements.	No battery packs	N/A
Annex DVA (1)	Equipment intended for use in spaces used for environmental air are subjected to special flammability requirements for heat and visible smoke release.		N/A
	For ITE room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A
	Consumer products designed or intended primarily for children 12 years of age or younger are subject to additional requirements in accordance with U.S. & Canadian Regulations.		N/A
	Baby monitors additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
Annex DVA (5.6.3)	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.		P
Annex DVA (6.3)	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30.		N/A

Clause	Requirement + Test	Result - Remark	Verdict
Annex DVA (6.4.8)	For ITE 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. For equipment with the same dimensions for other applications, an external surface that is not a fire enclosure requires a min. flammability classification of V-1.		N/A
Annex DVA (10.3.1)	Equipment with lasers meets the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
Annex DVA (10.5.1)	Equipment that produces ionizing radiation complies with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
Annex DVA (F.3.3.3)	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. Additional considerations apply for voltage ratings that exceed the attachment cap rating or are lower than the "Normal Operating Condition" in Table 2 of CAN/CSA C22.2 No. 235."		N/A
Annex DVA (F.3.3.5)	Equipment identified for ITE (computer) room installation is marked with the rated current		N/A
Annex DVA (G.1)	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position		N/A
Annex DVA (G.3.4)	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.	No outlet.	N/A
Annex DVA (G.4.2)	Equipment with isolated ground (earthing) receptacles complies with NEC 250.146(D) and CEC 10-112 and 10-906(8).		N/A
Annex DVA (G.4.3)	Where a fuse is used to provide Class 2 or Class 3 current limiting, it is not operator-accessible unless it is non- interchangeable.		N/A
Annex DVA (G.5.3)	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.		N/A
Annex DVA (G.5.4)	Motor control devices are required for cord-connected equipment with a mains-connected motor if the equipment is rated more than 12 A, or if the equipment has a nominal voltage rating greater than 120 V, or if the motor is rated more than 1/3 hp (locked rotor current over 43 A).		N/A
Annex DVA (Annex M)	For ITE 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 ITE room remote power-off circuit.		N/A

Clause	Requirement + Test	Result - Remark	Verdict
Annex DVA (Q)	Wiring terminals intended to supply Class 2 outputs according to the NEC or CEC Part 1are marked with the voltage rating and “Class 2” or equivalent; marking is located adjacent to the terminals and visible during wiring.		N/A
Annex DVB (1)	Additional requirements apply for equipment used for entertainment purposes intended for installation in general patient care areas of health care facilities.		N/A
Annex DVC (1)	Additional requirements apply for equipment intended for mounting under kitchen cabinets.		N/A
Annex DVE (4.1.1)	Some equipment, components, sub-assemblies and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material requirements. Components required to comply include: appliance couplers, attachment plugs, battery back-up systems, battery packs, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultra-capacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), ground-fault current interrupters, interconnecting cables, data storage equipment, printed wiring, protectors for communications circuits, receptacles, surge protective devices, vehicle battery adapters, wire connectors, and wire and cables.		P
Annex DVH	Equipment for permanent connection to the mains supply is subjected to additional requirements.		N/A
Annex DVH (DVH.1)	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains are in accordance with the NEC/CEC.		N/A
Annex DVH (DVH.3.2)	Terminals for permanent wiring, including protective earthing terminals, are suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and are specially marked when specified.		N/A
Annex DVH (DVH.3.2)	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).		N/A
Annex DVH (DVH.4)	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.		N/A
Annex DVH (DVH 5.5)	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, complies with special earthing, wiring, marking and installation instruction requirements.		N/A
Annex DVI (6.7)	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses.		N/A

Clause	Requirement + Test	Result - Remark	Verdict
Annex DVJ (10.6.1)	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

4.1.2	Table: List of critical components				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1]
Metal Enclosure	Interchangeable	Interchangeable	Metal. Aluminium alloy, min. thickness 1.0mm.	UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	Tested in appliance
AC connector (CON1)	SHENZHEN CONNECTION ELECTRONIC CO LTD	BRTB825 (1)	300V, 20A, 115 °C	UL486E UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E304128 Tested in appliance
(Alternative)	DEGSON ELECTRONICS CO LTD	DG38*oo	300V, 15A, 120 °C	UL486E UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E228872 Tested in appliance
PCB	Interchangeable	Interchangeable	Rated min. V-1, min. 130 °C	UL 796 UL 94	UL, CUL Tested in appliance
NTC1	Interchangeable	Interchangeable	Min. 2.5 ohm, Min. 5A, at 25 °C	UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	Tested in appliance
Fuse (F1)	CONQUER ELECTRONICS CO LTD	UBM	T10A, 250Vac	UL 248 IEC 60127-1/-3	UL E82636 VDE
(Alternative)	XC ELECTRONICS (SHENZHEN) CORP LTD	5F	T10A, 250Vac	UL 248 IEC 60127-1/-3	UL E249609 VDE
DC Fan	SHENZHEN HUA XIN RONG PLASTIC ELECTRONIC CO LTD	EFS-12E12M	12VDC.0.25A Min.56.8CFM,1800 RPM.120*120*25mm.	IEC/EN 60950-1 UL507	UL E489978
X-capacitor (C1, C4)	XIAMEN FARATRONIC CO LTD	MKP62	Max. 0.47µF, min. 250VAC, Min.100 °C	IEC/EN/UL 60384-14	UL E186600 VDE
(Alternative)	EUROPTRONIC (TAIWAN) INDUSTRIAL CORP	MPX2, MPX	Max. 0.47µF, min. 250VAC, Min.105 °C	IEC/EN/UL 60384-14	UL E211347 VDE
(Alternative)	SHENZHEN JINGHAO CAPACITOR CO LTD	CBB62B	Max. 0.47µF, min. 250VAC, Min.110 °C	IEC/EN/UL 60384-14	UL E252286 VDE
(Alternative)	YANGZHOU NISSEI ELECTRONICS CO LTD	MP1	Max. 0.47µF, min. 250VAC, Min.100 °C	IEC/EN/UL 60384-14	UL E351313 VDE
Bleeder Resistor	Interchangeable	Interchangeable	Max. 820Kohm, Min. 1/4W	UL 62368-1,CAN/CS	Tested in appliance

(R1)				A-C22.2 No. 62368-1-14	
Internal wire	Interchangeable	Interchangeable	Min. 24AWG, VW-1, 80 °C, 300V	UL 758, UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL Test within appliance
Line Choke (L1)	Interchangeable	Interchangeable	Min. 130 °C	UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	Tested in appliance
Line Choke (T2)	Interchangeable	Interchangeable	Min. 130 °C	UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	Tested in appliance
Magnet wire	Interchangeable	Interchangeable	Min. 130 °C	UL 1446 UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL Tested in appliance
Varnish	Interchangeable	Interchangeable	Min. 130 °C	UL 1446 UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL Tested in appliance
Tape	Interchangeable	Interchangeable	Min. 130 °C	UL 510 UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL Tested in appliance
Bobbin	SUMITOMO BAKELITE CO LTD	PM-9823	Phenolic (PF), Rated V-0, 150 °C, min. thickness 0.7mm	UL 94 UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E41429 Tested in appliance
Tube	Interchangeable	Interchangeable	Min. 300V, 200 °C, VW-1	UL 224 UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL Tested in appliance
Bridge rectifier (QD)	LESHAN SHARE ELECTRONIC CO LTD	D8KB80	Min. 800V, min. 8A	UL 1557 UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E249161 Tested in appliance
(Alternative)	JGD SEMICONDUCTOR CO LTD	UG8KB80	Min. 800V, min. 8A	UL 1557 UL 62368-1,CAN/CSA-C22.2	UL E185029 Tested in appliance

				No. 62368-1-14	
Capacitor (C5,C6)	Interchangeable	Interchangeable	Max.1000uF, Min. 250V, Min. 105 °C	UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	Tested in appliance
Transistor (Q1)	Interchangeable	Interchangeable	Min. 500V, Min. 10A	UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	Tested in appliance
SW1	ZHE JIANG BEI ER JIA ELECTRONIC CO LTD	PS8A	6A 250Vac or 12A 125Vac , 105 °C	IEC/EN 61058-1, UL1054	UL E236875 VDE 40027141
Y-capacitor (C2, C3)	WALSIN TECHNOLOGY CORP	AH series	Max. 2200pF, min. 250VAC, 125 °C, Y1 type	IEC/EN/UL 60384-14	UL E146544 VDE
(Alternative)	YINAN DON'S ELECTRONIC COMPONENT CO LTD	CT81	Max. 2200pF, min. 250VAC, 125 °C, Y1 type	IEC/EN/UL 60384-14	UL E145038 VDE
(Alternative)	TDK CORPORATION	CD	Max. 2200pF, min. 250VAC, 125 °C, Y1 type	IEC/EN/UL 60384-14	UL E37861 VDE
(Alternative)	XIAMEN WANMING ELECTRONICS CO LTD	HJ	Max. 2200pF, min. 250VAC, 125 °C, Y1 type	IEC/EN/UL 60384-14	UL E221839 VDE
(Alternative)	KUNSHAN WANSHENG ELECTRONICS CO LTD	CT7	Max. 2200pF, min. 250VAC, 125 °C, Y1 type	IEC/EN/UL 60384-14	UL E249006 VDE
Transformer T3	SI TECH CORP LTD	T3	Class B,130°C	UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	Test within appliance
Bobbin used in T3	CHANG CHUN PLASTICS CO LTD	T375J	Phenolic Molding Compound (PMC), V-0, 150 °C, minimum thickness 0.70mm	UL 94, UL 746C, UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E59481 Test within appliance
Insulation tape used in T3	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ* (b)	Rated 130 °C	UL 510, UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E165111 Test within appliance
Magnet wire used in T3	Interchangeable	Interchangeable	Min. 130 °C	UL1446, UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	Test within appliance

Varnish used in T3	ELANTAS ELECTRICAL INSULATION ELANTAS PDG INC	V1380	Min. 130°C	UL 1446, UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E75225 Test within appliance
Transformer T1	SI TECH CORP LTD	T1	Class B,130 °C	UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	Test within appliance
Bobbin used in T1	CHANG CHUN PLASTICS CO LTD	T375J	Phenolic Molding Compound (PMC), V-0, 150 °C, minimum thickness 0.70mm	UL 94, UL 746C, UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E59481 Test within appliance
Insulation tape used in T1	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ* (b)	Rated 130 °C	UL 510, UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E165111 Test within appliance
Magnet wire used in T1	Interchangeable	Interchangeable	Min. 130 °C	UL1446, UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	Test within appliance
Varnish used in T1	ELANTAS ELECTRICAL INSULATION ELANTAS PDG INC	V1380	Min. 130°C	UL 1446, UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E75225 Test within appliance
Mylar sheet (Under PCB)	SABIC JAPAN L L C	FR1(E1) (GG1)	Rated VTM-0, 125 °C, minimum 0.25 mm thick, natural or black colour only	UL 94 UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E207780 Tested in appliance
(Alternative)	SABIC JAPAN L L C	FR700	Rated V-0, 130 °C, minimum 0.25 mm thick	UL 94 UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E207780 Tested in appliance
(Alternative)	SABIC INNOVATIVE PLASTICS US L L C	FR700 (GG)	Rated V-0, 130 °C, minimum 0.25 mm thick	UL 94 UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E121562 Tested in appliance
(Alternative)	DUPONT HONGJI FILMS FOSHAN CO LTD	EM, EP, EM1	Rated VTM-2, 105 °C, minimum 0.25 mm thick,	UL 94 UL 62368-1,CAN/CS	UL E121562 Tested in

			natural colour only	A-C22.2 No. 62368-1-14	appliance
Insulation sheet (below Q1, Q2)	BERGQUIST CO	900S(#)	Rated 150 °C, V-0, min. 0.2 mm thick, pink colour only	UL 94 UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E59150 Tested in appliance
(Alternative)	SHENZHEN BORNSUN INDUSTRIAL CO LTD	BNG410, BNG400	Rated 150 °C, V-0, min. 0.23 mm thick.	UL 94 UL 62368-1,CAN/CSA-C22.2 No. 62368-1-14	UL E256822 Tested in appliance
Supplementary information: [1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039. [2)] The manufactures of the component list has been verified by the CBTL.					

4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests	N/A
(The following mechanical tests are conducted in the sequence noted.)		

4.8.4.2	TABLE: Stress Relief test		
Part	**Material**	**Oven Temperature (°C)**	**Comments**

4.8.4.3	TABLE: Battery replacement test	
Battery part no. ..... :		—
Battery Installation/withdrawal	Battery Installation/Removal Cycle	Comments
	1	
	2	
	3	
	4	
	5	
	6	
	8	
	9	
	10	

4.8.4.4	Table: DROP TEST		
Impact Area	Drop Distance	Drop No.	Observations
		1	
		2	
		3	

4.8.4.5	TABLE: Impact		
Impacts per surface	**Surface tested**	**Impact energy (Nm)**	**Comments**

4.8.4.6	TABLE: Crush test		
Test position	**Surface tested**	**Crushing Force (N)**	**Duration force applied (s)**

Supplementary information:

4.8.5	TABLE: Lithium coin/button cell batteries mechanical test result	N/A

Test position	Surface tested	Force (N)	Duration force applied (s)

Supplementary information:

5.2	Table: Classification of electrical energy sources	P

5.2.2.2 – Steady State Voltage and Current conditions

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				U (Vrms or Vpk)	I (Apk or Arms)	Hz	
1	264Va.c. 60Hz	All circuits	Normal	--	--	--	ES3* (declared)
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	

5.2.2.3 - Capacitance Limits

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Capacitance, nF	Upk (V)	
1	264Va.c. 60Hz	L to N	Normal	C1=C4= 470	373	ES3
			Abnormal	C1=C4= 470	373	
			Single fault – SC/OC	C1=C4= 470	373	

5.2.2.4 - Single Pulses

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Duration (ms)	Upk (V)	Ipk (mA)	
N/A	N/A	N/A	Normal	N/A	N/A	N/A	N/A
			Abnormal	N/A	N/A	N/A	
			Single fault – SC/OC	N/A	N/A	N/A	

5.2.2.5 - Repetitive Pulses

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Off time (ms)	Upk (V)	Ipk (mA)	
N/A	N/A	N/A	Normal	N/A	N/A	N/A	N/A
			Abnormal	N/A	N/A	N/A	
			Single fault – SC/OC	N/A	N/A	N/A	

Test Conditions:

Normal –

Abnormal -

Supplementary information: SC=Short Circuit, OC=Open Circuit
* supplied by AC mains, and declared as ES3

5.4.1.4, 6.3.2, 9.0, B.2.6	**TABLE: Temperature measurements**					P
	Supply voltage (V) .....:	90Va.c.		132Va.c.		—
	Ambient T_{min} (°C) .....:	23.6	Shift to 40.0	23.6	Shift to 40.0	—
	Ambient T_{max} (°C) .....:	24.0		24.0		—
	Tma (°C) .....:	40.0		40.0		—
Maximum measured temperature T of part/at:		T (°C)				Allowed T_{max} (°C)
Ambient		23.8	40.0	23.8	40.0	--
CON1		34.8	51.0	33.9	50.1	115
C1		30.1	46.3	29.6	45.8	100
L1 winding		63.1	79.3	60.2	76.4	130
C2		38.6	54.8	37.3	53.5	125
C4		37.9	54.1	37.0	53.2	100
PCB under QD		63.5	79.7	60.6	76.8	130
C5		42.8	59.0	41.5	57.7	105
C6		44.1	60.3	42.8	59.0	105
PCB under Q1		46.3	62.5	44.2	60.4	130
T2 winding		45.3	61.5	43.6	59.8	130
T1 winding		42.7	58.9	41.6	57.8	110
T3 winding		81.3	97.5	78.6	94.8	110
T3 core		68.7	84.9	66.8	83.0	110
L2 winding		72.2	88.4	70.1	86.3	130
PCB under D9		58.7	74.9	56.8	73.0	130
Internal wire		32.0	48.2	31.2	47.4	80
C22		32.9	49.1	32.4	48.6	105
PCB under U1		40.2	56.4	38.6	54.8	130
	Supply voltage (V) .....:	180Va.c.		264Va.c.		—
	Ambient T_{min} (°C) .....:	23.6	Shift to 40.0	23.6	Shift to 40.0	—
	Ambient T_{max} (°C) .....:	24.0		24.0		—
	Tma (°C) .....:	40.0		40.0		—

Maximum measured temperature T of part/at:	T (°C)				Allowed T_{max} (°C)
Ambient	23.8	40.0	23.6	40.0	--
CON1	38.6	55.0	37.4	53.8	115
C1	33.5	49.9	32.9	49.3	100
L1 winding	88.9	105.3	87.6	104.0	130
C2	45.2	61.6	43.9	60.3	125
C4	45.8	62.2	44.1	60.5	100
PCB under QD	80.2	96.6	78.8	95.2	130
C5	48.3	64.7	46.8	63.2	105
C6	47.6	64.0	46.3	62.7	105
PCB under Q1	48.2	64.6	47.1	63.5	130
T2 winding	48.4	64.8	47.2	63.6	130
T1 winding	44.3	60.7	43.7	60.1	110
T3 winding	86.8	103.2	84.4	100.8	110
T3 core	70.0	86.4	68.3	84.7	110
L2 winding	73.4	89.8	71.1	87.5	130
PCB under D9	60.8	77.2	59.2	75.6	130
Internal wire	33.9	50.3	33.3	49.7	80
C22	33.6	50.0	33.0	49.4	105
PCB under U1	41.3	57.7	40.8	57.2	130

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

Supplementary information:

1. Tma: 40 °C
2. # output load: 36Vdc 10A; * output load: 48Vdc 10A

Note 1: Tma should be considered as directed by appliable requirement

Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9)

5.4.1.10.2	**TABLE: Vicat softening temperature of thermoplastics**	N/A
Penetration (mm) .....:	.....	—

Object/ Part No./Material	Manufacturer/trademark	T softening (°C)

supplementary information:		

5.4.1.10.3	TABLE: Ball pressure test of thermoplastics		P
Allowed impression diameter (mm) ..... :		≤ 2 mm	—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)
AC connector (CON1): type: BRTB825 (1)	SHENZHEN CONNECTION ELECTRONIC CO LTD	125	1.1
AC connector (CON1): type: DG38*oo	DEGSON ELECTRONICS CO LTD	125	1.0
Supplementary information:			

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance						N/A
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz)[1]	Required cl (mm)	cl (mm)[2]	Required[3] cr (mm)	cr (mm)
--	--	--	--	--	--	--	--
Supplementary information: Considered in end system.							

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage		N/A
	Overvoltage Category (OV):		--
	Pollution Degree:		--
Clearance distanced between:	Required withstand voltage	Required cl (mm)	Measured cl (mm)
--	--	--	--
Supplementary information: Considered in end system.			

5.4.2.4	TABLE: Clearances based on electric strength test			N/A
Test voltage applied between:		Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No
Supplementary information:				

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements	N/A

Distance through insulation di at/of:	Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)
Supplementary information:					

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:	Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No	
Functional:				
--	--	--	--	
Basic/supplementary:				
L/N to accessible enclosure	DC	2500	No	
Mylar sheet &	DC	2500	No	
Reinforced:				
--	--	--	--	
Routine Tests:				
--	--	--	--	
Supplementary information: & Test repeated for all alternate materials listed in table 4.1.2.				

5.5.2.2	TABLE: Stored discharge on capacitors				P
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification
264Vac, 60Hz	L to N	N	off	4	ES1
264Vac, 60Hz	L to N	S (R1 Open)	off	8	ES1
264Vac, 60Hz	L to N	S (QD Open)	off	78	ES1

Supplementary information:

X-capacitors installed for testing are: C1=C4=0.47uF

☐ bleeding resistor rating: R1=820Kohm

☐ ICX:

Notes:

A. Test Location:

Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth

B. Operating condition abbreviations:

N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition

5.6.6.2	TABLE: Resistance of protective conductors and terminations				P
Accessible part		Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)
PE to enclosure		40	2	0.453	0.0136
Supplementary information:					

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		P
Supply voltage ..... :		264Vac	—
Location		Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)
Measured to protective earthing terminal		1	0.68
		2*	
		3	
		4	
		5	
		6	
		8	

Supplementary Information:

Notes:
[1] Supply voltage is the anticipated maximum Touch Voltage
[2] Earthed neutral conductor [Voltage differences less than 1% or more]
[3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3
[4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable.
[5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.

6.2.2	Table: Electrical power sources (PS) measurements for classification				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s*)	PS Classification
All circuits	264Vac	Power (W) :	--	--	PS3# (declared)
		V_A (V) :	--	--	
		I_A (A) :	--	--	

Supplementary Information:
(*) Measurement taken only when limits at 3 seconds exceed PS1 limits
(#) not classified per clause 6.2.2, so considered as PS3 and PIS

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)	P

Location	Open circuit voltage After 3 s (Vp)	Measured r.m.s current (Irms)	Calculated value (V_p x I_{rms})	Arcing PIS? Yes / No
All circuits	--	--	--	Yes (declared)

Supplementary information:

An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (Vp) and normal operating condition rms current (Irms) is greater than 15.

The input terminal and all primary circuits and secondary circuits inside the enclosure were considered as arcing PIS.

6.2.3.2	**Table: Determination of Potential Ignition Sources (Resistive PIS)**				P
Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured wattage or VA During first 30 s (W / VA)	Measured wattage or VA After 30 s (W / VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No
All circuits	--	--	--	--	Yes # (declared)

Supplementary Information:
(#) not classified per clause 6.2.2, so considered as PS3 and PIS

A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter.

If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification.

A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, or (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.

Assumption: The input terminal and all primary circuits and secondary circuits inside the enclosure were considered as resistive PIS.

8.5.5	**TABLE: High Pressure Lamp**	N/A
Description	Values	Energy Source Classification
Lamp type ..... :		—
Manufacturer ..... :		—
Cat no. ..... :		—
Pressure (cold) (MPa)..... :		MS_
Pressure (operating) (MPa) ..... :		MS_
Operating time (minutes)..... :		—
Explosion method..... :		—
Max particle length escaping enclosure (mm)..... :		MS_
Max particle length beyond 1 m (mm) ..... :		MS_
Overall result .....:		
Supplementary information:		

B.2.5	TABLE: Input test						P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
90V/50 Hz	6.70	--	406.5	--	F1	6.70	Output load: 36Vdc 10A
90V/60 Hz	6.82	--	406.8	--	F1	6.82	Output load: 36Vdc 10A
100V/50 Hz	6.24	7	407.6	--	F1	6.24	Output load: 36Vdc 10A
100V/60 Hz	6.36	7	407.8	--	F1	6.36	Output load: 36Vdc 10A
120V/50 Hz	5.18	7	408.3	--	F1	5.18	Output load: 36Vdc 10A
120V/60 Hz	5.28	7	408.5	--	F1	5.28	Output load: 36Vdc 10A
132V/50 Hz	4.65	--	407.9	--	F1	4.65	Output load: 36Vdc 10A
132V/60 Hz	4.78	--	407.6	--	F1	4.78	Output load: 36Vdc 10A
180V/50 Hz	4.50	--	528.2	--	F1	4.50	Output load: 48Vdc 10A
180V/60 Hz	4.45	--	528.4	--	F1	4.45	Output load: 48Vdc 10A
200V/50 Hz	4.10	4	526.8	--	F1	4.10	Output load: 48Vdc 10A
200V/60 Hz	4.02	4	526.9	--	F1	4.02	Output load: 48Vdc 10A
240V/50 Hz	3.58	4	524.3	--	F1	3.58	Output load: 48Vdc 10A
240V/60 Hz	3.50	4	524.5	--	F1	3.50	Output load: 48Vdc 10A
264V/50 Hz	3.24	--	523.3	--	F1	3.24	Output load: 48Vdc 10A
264V/60 Hz	3.16	--	523.6	--	F1	3.16	Output load: 48Vdc 10A
Supplementary information:							

B.3	TABLE: Abnormal operating condition tests	P

Ambient temperature (°C) .....:	23.6-24.0°C	—
Power source for EUT: Manufacturer, model/type, output rating .....:	See marking.	—

Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Output	Overload	264V	246 mins	F1	3.24A to 3.64A to 3.86A to 0.40A	--	PCB under QD: 103.6°C, T1 winding: 66.8°C, T3 winding: 115.8°C, T3 core: 111.9°C, PCB under D9: 85.2°C, Ambient: 40.0°C.	The maximum loaded current was 12A and ran for thermal equilibrium under it. Over 12.5A unit shut down. No damage, No hazards.
Transformer	Overload	264V	280 mins	F1	3.24A to 3.68A to 3.95A to 0.40A	--	PCB under QD: 105.4°C, T1 winding: 67.6°C, T3 winding: 117.4°C, T3 core: 112.6°C, PCB under D9: 87.6°C, Ambient: 40.0°C.	The maximum loaded current was 13.2A and ran for thermal equilibrium under it. Over 13.6A unit shut down. No damage, No hazards.
Vents	BL	264V	100 mins	F1	3.24A to 3.24A	--	PCB under QD: 100.4°C, T1 winding: 63.6°C, T3 winding: 112.4°C, T3 core: 106.6°C, PCB under D9: 83.6°C, Ambient: 40.0°C.	Normal working, No damage, No hazards.

B.3	TABLE: Abnormal operating condition tests							P
Ambient temperature (°C) .....:					23.6-24.0°C			—
Power source for EUT: Manufacturer, model/type, output rating .....:					See marking.			—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
DC Fan	BL	264V	48 mins	F1	3.24 to 0	--	PCB under QD: 126.4°C, T1 winding: 78.5°C, T3 winding: 135.4°C, T3 core: 128.6°C, PCB under D9: 108.5°C, Ambient: 40.0°C.	Q1 and Q2 damaged, repeat 2 times, a total of 3 times, consistent results, no damage, no hazards.
Voltage selector	Mismatch	264V	<1 s	F1	3.24 to 0	--	--	F1 opened immediately, no hazard.
Supplementary information: Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column "Abnormal/Fault." Specify if test condition by indicating "Abnormal" then the condition for a Clause B.3 test or "Single Fault" then the condition for Clause B.4. 1) SC: Short-circuited; OC: Open-circuited; OL: Overloaded; BL: Blocked.								

B.4	TABLE: Fault condition tests							P
Ambient temperature (°C) .....:					See below			—
Power source for EUT: Manufacturer, model/type, output rating .....:					See marking.			—
Component No.	FaultCondition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
QD	SC	264	<1 s	F1	3.24 to 0	--	--	F1 opened immediately, no hazard.
C5	SC	264	<1 s	F1	3.24 to 0	--	--	F1 opened immediately, no hazard.
C6	SC	264	<1 s	F1	3.24 to 0	--	--	F1 opened immediately, no hazard.
Q1 pin D to S	SC	264	<1 s	F1	3.24 to 0	--	--	F1 opened immediately, no hazard.
Q1 pin D to G	SC	264	<1 s	F1	3.24 to 0	--	--	F1 opened immediately, no hazard.
Q1 pin S to G	SC	264	10 min	F1	3.24 to 0.50	--	--	Unit shut down immediately, No damaged, No hazard.

Q2 pin D to S	SC	264	<1 s	F1	3.24 to 0	--	--	F1 opened immediately, no hazard.
Q2 pin D to G	SC	264	<1 s	F1	3.24 to 0	--	--	F1 opened immediately, no hazard.
Q2 pin S to G	SC	264	10 min	F1	3.24 to 0.50	--	--	Unit shut down immediately, No damaged, No hazard.
T3 primary pin 1 to 2	OC	264	10 min	F1	3.24 to 0.50	--	--	Unit shut down immediately, No damaged, No hazard.
T3 primary pin 4 to 5	SC	264	10 min	F1	3.24 to 0.50	--	--	Unit shut down immediately, No damaged, No hazard.
T3 secondary pin 6 to 7	SC	264	10 min	F1	3.24 to 0.50	--	--	Unit shut down immediately, No damaged, No hazard.
D9	SC	264	10 min	F1	3.24 to 0.50	--	--	Unit shut down immediately, No damaged, No hazard.
Output	SC	264	10 min	F1	3.24 to 0.50	--	--	Unit shut down immediately, No damaged, No hazard.

Supplementary information:

1) SC: Short-circuited; OC: Open-circuited; OL: Overloaded; BL: Blocked.

2) The test result shown all safeguards remained effective and didn't lead to a single fault condition duringabnormal operating condition; In addition all safeguards complied with applicable requirements in thisstandard after restoration of normal operating conditions.

3) After each of the above tests, the EUT can pass the 5.4.9 Electric strength tests, no hazard.

Annex M	**TABLE: Batteries**	N/A
The tests of Annex M are applicable only when appropriate battery data is not available		N/A
Is it possible to install the battery in a reverse polarity position? ..... :		N/A

	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition	--	--	--	--	--	--	--	--	--
Max. current during fault conditionshort-circuitPin(B-,P-) in the battery protect circuit	--	--	--	--	--	--	--	--	--

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

Annex M	**TABLE: Batteries**	N/A
The tests of Annex M are applicable only when appropriate battery data is not available		N/A
Is it possible to install the battery in a reverse polarity position? ..... :		N/A

	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Supplementary information:									

Annex M.4	**Table: Additional safeguards for equipment containing secondary lithium batteries**				N/A
Battery/Cell No.	Test conditions	Measurements			Observation
		U	I (A)	Temp (°C)	
--	Normal	--	--	--	--
	Abnormal	--	--	--	--
	Single fault –SC/OC	--	--	--	--
Supplementary Information: N/A					

Battery identification	Charging at T_{lowest} (°C)	Observation	Charging at $T_{highest}$ (°C)	Observation
--	--	--	--	--
Supplementary Information:				

Annex **Q.1**	**TABLE: Circuits intended for interconnection with building wiring (LPS)**					N/A
Note: Measured UOC (V) with all load circuits disconnected:						
Output Circuit	Components	U_{oc} (V)	I_{sc}(A)		S (VA)	
			Meas.	Limit	Meas.	Limit
--	--	--	--	--	--	--
Supplementary Information: SC=Short circuit, OC=Open circuit						

T.2, T.3, T.4, T.5	**TABLE: Steady force test**				**P**
Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation
Internal components	--	--	10	5	Clearances and creepage distances still complied with the requirements of this standard

Supplementary information: N/A

T.6, T.9	TABLE: Impact tests			N/A
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation
--	--	--	--	--
--	--	--	--	--
Supplementary information:				

T.7	TABLE: Drop tests			N/A
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
Supplementary information: N/A				

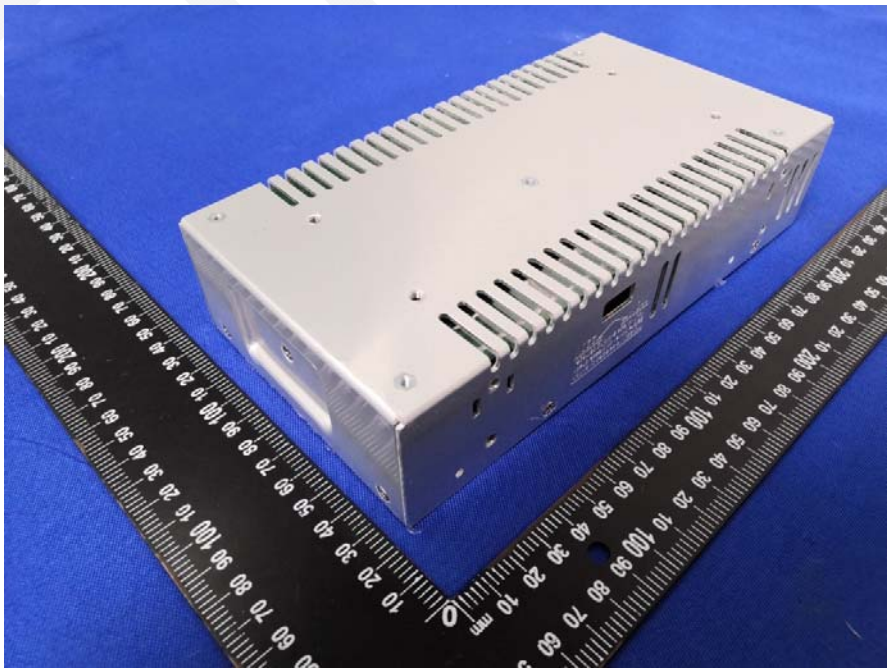
T.8	TABLE: Stress relief test			N/A	
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation
--	--	--	--	--	--
Supplementary information: N/A					

List of Attachments

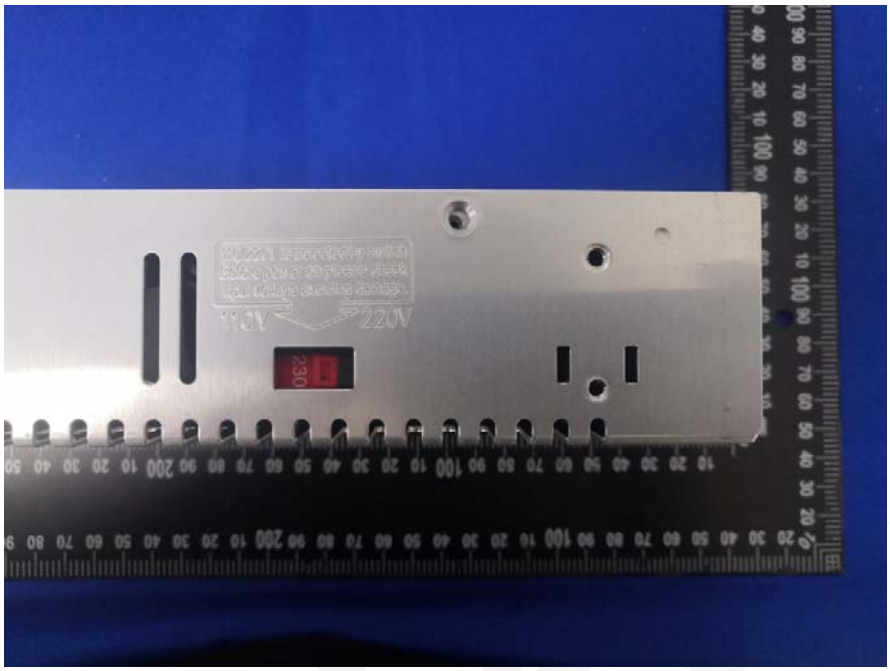
1 EUT Photographs

1.1 EUT- Overall View

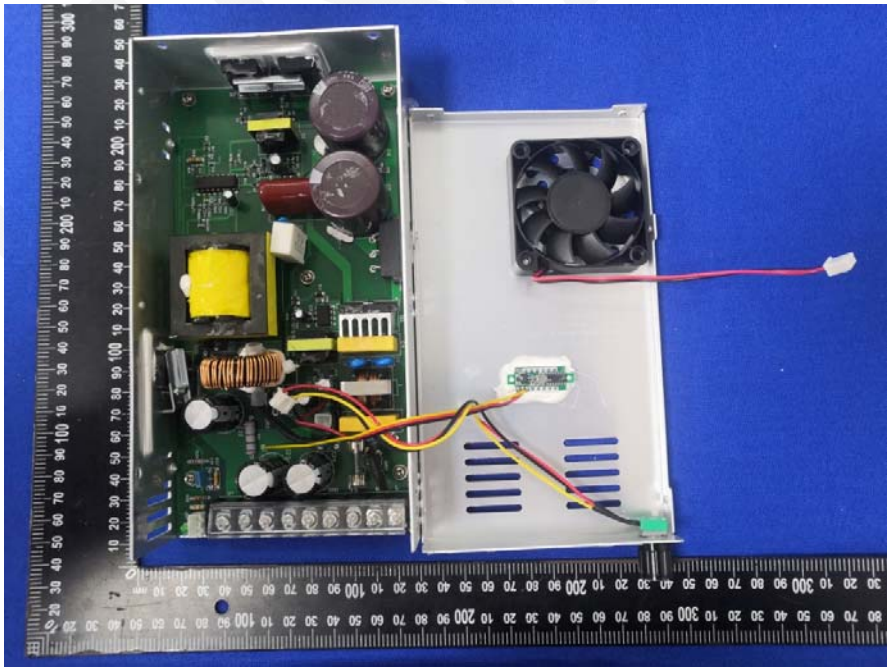
1.2 EUT- Overall View



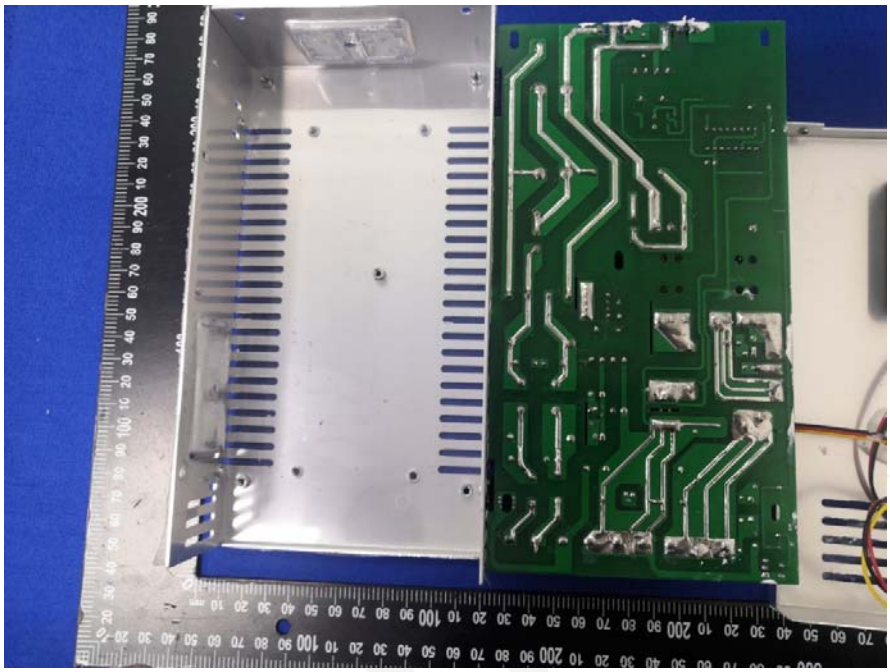
1.3 EUT- Overall View



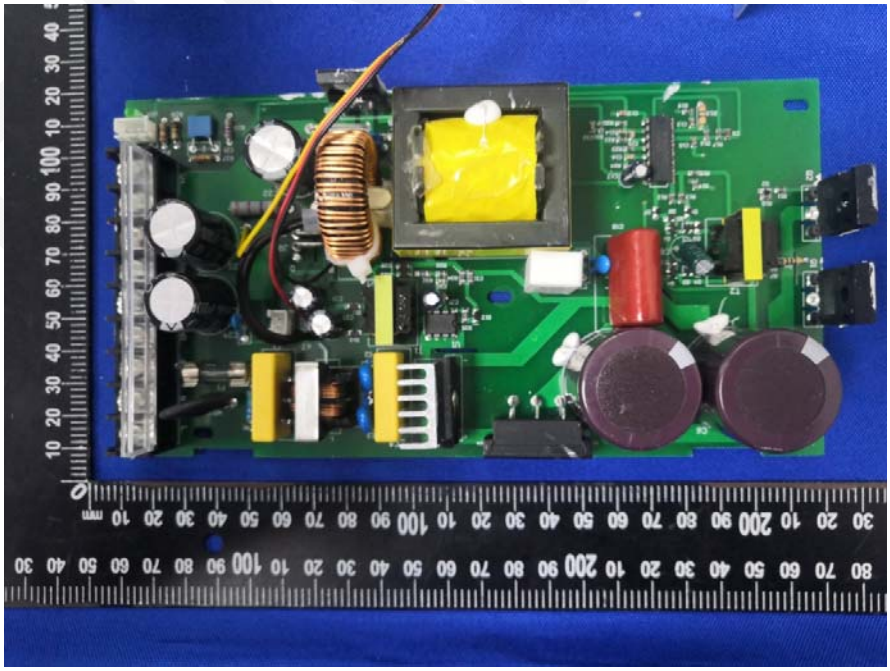
1.4 EUT- Uncover View 1



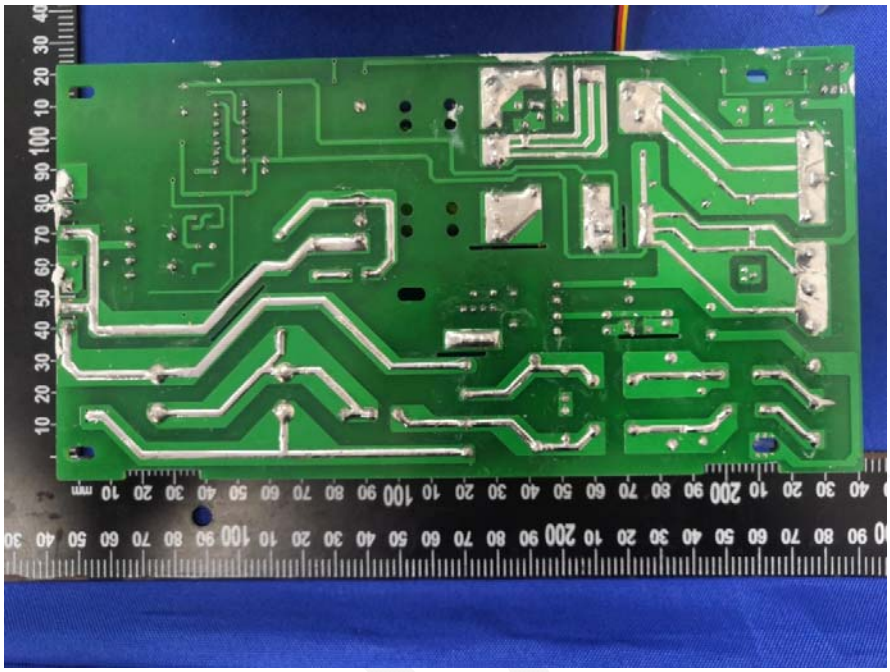
1.5 EUT- Uncover View 2



1.6 EUT-PCB Top View



1.7 EUT-PCB Bottom View



---END OF REPORT---