SWASTIK ELECTRONICS TESTING CENTRE

ULR No. : TC757522000000191P

DOC No.	:	SETC22013005	Plot No-16, Mainapur Industrial Area, Ghaziabad, Uttar Pradesh 201003, Ghaziabad, Ghaziabad, Uttar Pradesh, India - 201003
Telephone	:	+91 9716966407	
FAX	:	-	
E-Mail	:	swastikelektroniks@gmail.com	
BO Code	:	NA	

Test REPORT AS PER : IS 13252 : Part 1 (2010)

QR Code/Barcode : 94088CRS

REPORT NO : SC22EPF00217_1 DATE : 28 Feb, 2022

PART A. PARTICULARS OF SAMPLE SUBMITTED

a) Customer Name & Address	:	Globtek (Suzhou) Co.,Ltd NO.76 JINLING EAST ROAD, SUZHOU INDISTRIAL PARK, CHINA, NA, China - 0
b) Nature of sample	:	-
c) Grade/Variety/Type/Class Size etc	:	NA
d) Declare values, if any	:	-
e) Batch No. & Date of Manufacture	:	/
f) Quantity	:	10
g) Date of Receipt	:	13 Jan, 2022
h) BIS Seal	:	Verified by Sample Cell
i) IO's Signature	:	Verified by Sample Cell
j) Any other Information / Expiry Date, If any	:	/
k) Date of Commencement of Testing	:	13 Jan, 2022
l) Date of Completion of Testing	:	28 Feb, 2022
m) Section Code	:	22EE460N
n) Section Report No.	:	22EE460N_1
o) Report Type	:	New
p) Reference Report No.	:	
q) Remarks	:	OK

Nikhil Tyagi
OIC SAMPLE CELL
(Authorized Signatory)
Authorized on: 28 Feb, 2022 17:57 PM

1. SWASTIK ELECTRONICS TESTING CENTRE

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PART B. SUPPLEMENTARY INFORMATION

1.	Reference to sampling procedure, wherever applicable.	Not Applicable
2.	Supporting documents for the measurements taken and results derived like graphs, table sketches and or photographs as appropriate to test report, if any.	Yes
3.	Deviation from the test methods as prescribed in relevant ISS/Work instruction, if any.	Not Applicable

Nitin Kumar
OIC Electrical
(Authorized Signatory)
Authorized on: 28 Feb, 2022 17:56 PM

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PART C. TEST RESULT

S.No.	Clause No Table No. Sl. No	Parameter - Method of test	Test Description	Min Limit	Max Limit	Unit	Result/ Observation
1	7.4	Insulation between primary circuits and cable distribution systems	Insulation between primary circuits and cable distribution systems	-	-	-	Equipment is not for connection to cable distribution systems
2	7.3	Protection of equipment users from overvoltages on the cable distribution system	Protection of equipment users from overvoltages on the cable distribution system	-	-	-	Equipment is not for connection to cable distribution systems
3	7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment	-	-	-	Equipment is not for connection to cable distribution systems
4	7.1	General	Connection to cable distribution systems	-	-	-	Equipment is not for connection to cable distribution systems
5	6.3	Protection of the telecommunication wiring system from overheating	Protection of the telecommunication wiring system from overheating	-	-	-	Equipment is not for connection to telecommunication wiring system
6	6.2	Protection of equipment users from overvoltages on networks telecommunication	Protection of equipment users from overvoltages on networks telecommunication	-	-	-	Equipment is not for connection to telecommunication networks
7	6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment	-	-	-	Equipment is not for connection to telecommunication networks
8	5.3	Abnormal operating and fault conditions	Abnormal operating and fault conditions test	-	-	-	Satisfactory See Clause no. 5.3 in attachment
9	5.2	Electric strength	To Check Insulation as per Clause 5.2,5.2.1,5.2.2	-	-	-	See Clause no. 5.2 in attachment
10	5.1	Touch current and protective conductor curren	Cl. 5.1	-	-	-	Within the limit See table 5.1.6 in attachment
11	4.7	Resistance to fire	Clause 4.7, 4.7.1, 4.7.2, 4.7.2.1, 4.7.2.2, 4.7.3, 4.7.3.1	-	-	-	Certified material used See Clause no. 4.7 in attachment
12	4.6	Openings in enclosures	Openings in enclosures	-	-	-	No openings
13	4.5	Thermal requirements	Temperature rise measurement Test	-	-	-	Within the limits See table no. 4.5 in attachment
14	4.4	Protection against hazardous moving parts	Protection against hazardous moving parts	-	-	-	No moving parts in the equipment

15	4.3	Design and construction	Design and construction	-	-	-	All edges and corners accessible to operator are rounded and smoothed See Clause no. 4.3 in attachment
16	4.2	Mechanical strength	Mechanical Strength Test	-	-	-	Equipment have adequate mechanical strength See Clause no. 4.2 in attachment
17	4.1	Stability	Clause 4.1 Stability	-	-	-	Mass <7Kg.
18	3.5	Interconnection of equipment	Clause 3.5, 3.5.1, 3.5.2, 3.5.4	-	-	-	SELV-SELV connection only
19	3.4	Disconnection from the mains supply	Appliance inlet is considered as disconnect device	-	-	-	Mains supply plug on power supply cord considered as disconnect device See Clause no. 3.4 in attachment
20	3.3	Wiring terminals for connection of external conductors	Wiring terminals for connection of external conductors	-	-	-	No wiring terminals
21	3.2	Connection to a mains supply	Clause 3.2: Connection to a mains supply	-	-	-	Certified Appliance inlet used See Clause no. 3.2 in attachment
22	3.1	General	Clause 3.0, 3.1.1, 3.1.2, 3.1.3	-	-	-	Adequate cross sectional areas on internal wiring See Clause no. 3.1 in attachment
23	2.10	Clearances, creepage distances and distances through insulation	Clause 2.10, 2.10.1.2, 2.10.1.3, 2.10.3, 2.10.3.4	-	-	-	Satisfactory See table 2.10.3 and 2.10.4 in attachment
24	2.9	Electrical insulation	Clause 2.9 Electrical insulation	-	-	-	See Clause no. 2.9 in attachment
25	2.8	Safety interlocks	Clause 2.8 Safety Interlocks-	-	-	-	No safety interlocks
26	2.7	Overcurrent and earth fault protection in primary circuits	Certified Fuse is provided for protection against short – circuits and overcurrent. The building installation consider as short-circuit backup protection.	-	-	-	See Clause no. 2.7 in attachment
27	2.6	Provisions for earthing and bonding	Clause 2.6 Provisions for earthing and bonding	-	-	-	Within the limit See table 2.6.3.4 in attachment
28	2.5	Limited power sources .	Limited power sources test perform on Secondary Li-ion battery pack	-	-	-	Within the limit See table 2.5 in attachment
29	2.4	Limited current circuits	Limited current circuits	-	-	-	Within the limit See table 2.4.2 in attachment
30	2.3	TNV circuits	TNV circuits	-	-	-	No TNV circuits
31	2.2	SELV circuits	Clause 2.2: SELV circuits	-	-	-	Within the limit See table 2.2.2 in attachment
32	2.1	Protection from electric shock and energy hazards	Clause 2.1: Protection from electric shock and energy hazards	-	-	-	Within the limit See table 2.1.1.5 in attachment

33	1.7	Markings and instructions	Clause: 1.7.11 (Durability) Rubbing the marking by hand for 15s with a piece of cloth soaked with water and again for 15 s with a piece of cloth soaked with petroleum spirit.	-	-	-	Markings were legible and durable after the test
34	1.6	Power interface .	Input current Measurement	-	-	-	Measured current within the specified limit See table 1.6.2 in attachment
35	1.5	Components	Addition of alternate certified switching power supply based on relevant documents provided by manufacturer	-	-	-	Verification of approvals with due correlation between the components used and the approval certificates submitted See table 1.5.1 in attachment

Nitin Kumar
OIC Electrical
(Authorized Signatory)
Authorized on: 28 Feb, 2022 17:56 PM

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PART D. REMARKS

Nitin Kumar
OIC Electrical
(Authorized Signatory)
Authorized on: 28 Feb, 2022 17:56 PM

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TEST REPORT

SUMMARY OF TEST REPORT NO: SETC22013005

ULR: TC757522000000191P **DATE: 28/02/2022**

(Number of Pages in Test Report: Page No. 1 to 122)

TEST FORMAT AS PER IS 13252 (Part 1): 2010 + A1: 2013 + A2: 2015/ IEC 60950-1: 2005 + A1:2009 + A2: 2013

1. **Name of the Manufacturer:** Globtek (Suzhou) Co.,Ltd
2. **Product:** ITE Power Supply (Power Adaptors for IT Equipment)
3. **Lead Model:** GTM96180-1848-T3, **Series Models:** GTM96180-1807-2.0-T3, GTM96180-1807-1.05-T3, GTM96180-1811-3.5-T3, GTM96180-1811-2.0-T3, GTM96180-1817.9-5.9-T3, GTM96180-1817.9-2.9-T3, GTM96180-1830-11.0-T3, GTM96180-1830-6.0-T3, GTM96180-1507-2.0-T3
4. **Model differences provided (if applicable):** Yes/~~No~~
5. **Model differences verified as per MEITY Guidelines for series formulation:** Yes/~~No~~
6. **Test Results:** Refer below

PART A: GENERAL

SL. NO.	TEST REQUIREMENT	TEST CODE	CLAUSE	VERDICT
1.	Components	EL 2100	1.5	P
2.	Power interface	EL 2101	1.6	P
3.	Markings and instructions	EL 2102	1.7	P

PART B: PROTECTION FROM HAZARDS

SL. NO.	TEST REQUIREMENT	TEST CODE	CLAUSE	VERDICT
1.	Protection from electric shock and energy hazards	EL 2103	2.1	P
2.	SELV circuits	EL 2104	2.2	P
3.	TNV circuits	EL 2105	2.3	N/A
4.	Limited current circuits	EL 2106	2.4	P
5.	Limited power source	EL 2107	2.5	P
6.	Provisions for earthing and bonding	EL 2108	2.6	P
7.	Overcurrent and earth fault protection in primary circuits	EL 2109	2.7	P
8.	Safety interlocks	EL 2110	2.8	N/A
9.	Electrical insulation	EL 2111	2.9	P
10.	Clearances, creepage distance and distances through insulation	EL 2112	2.10	P

Email : swastikelektroniks@gmail.com, info@swastiktestingcentre.com | Web : www.swastiktestingcentre.com

TEST REPORT

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PART C: WIRING, CONNECTIONS AND PHYSICAL REQUIREMENTS

SL. NO	TEST REQUIREMENT	TEST CODE	CLAUSE	VERDICT
1.	Wiring, connections and supply	EL 2113	3	P
2.	Connection to a mains supply	EL 2114	3.2	P
3.	Wiring terminals for connection of external conductors	EL 2115	3.3	N/A
4.	Disconnections from the main supply	EL 2116	3.4	P
5.	Interconnection of equipment	EL 2117	3.5	P
6.	Stability	EL 2118	4.1	N/A
7.	Mechanical strength	EL 2119	4.2	P
8.	Design and construction	EL 2120	4.3	P
9.	Protection against hazardous moving parts	EL 2121	4.4	N/A
10.	Thermal requirements	EL 2122	4.5	P
11.	Openings in enclosures	EL 2123	4.6	N/A
12.	Resistance to fire	EL 2124	4.7	P

PART D: ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS

SL. NO.	TEST REQUIREMENT	TEST CODE	CLAUSE	VERDICT
1.	Touch current and protective conductor current	EL 2125	5.1	P
2.	Electric strength	EL 2126	5.2	P
3.	Abnormal operating and fault conditions	EL 2127	5.3	P

PART E: CONNECTION TO TELECOMMUNICATION NETWORK AND CABLE DISTRIBUTION SYSTEM

SL. NO.	TEST REQUIREMENT	TEST CODE	CLAUSE	VERDICT
1.	Protection of telecommunication network service persons and users of other equipment connected to the network, from hazards in the equipment	EL 2128	6.1	N/A
2.	Protection of equipment users from overvoltages on telecommunication networks	EL 2129	6.2	N/A
3.	Protection of the telecommunication wiring system from overheating	EL 2130	6.3	N/A
4.	Connection to cable distribution systems	EL 2131	7	N/A

Address : Plot No.-16, Mainapur Industrial Area
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Contact No.: +91 9716966407, 9149209964

TEST REPORT

SUMMARY OF TEST REPORT NO: SETC22013005

ULR: TC757522000000191P **DATE: 28/02/2022**

GENERAL INFORMATION:

1. The conformity certificates of critical components are verified to ensure complete testing of apparatus under test and details regarding harmonized IEC standards (where IEC standards are not available) are also provided in the list of critical components.

2. All tests have been performed on "Model: **GTM96180-1848-T3**" only.

CONCLUSION:

1. Sample meets all relevant requirements of IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015/ IEC 60950-1: 2005 + A1:2009 + A2 : 2013
2. ~~Sample fails to meet the following test requirements.~~

I, hereby undertake that the verdict stated in the test reports for all the test matches with the test results. The sample meets all relevant requirements of IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015/ IEC 60950-1: 2005 + A1:2009 + A2 : 2013/ ~~does not meet the requirements~~. If any deviation found, suitable punitive action may be taken by BIS

SWASTIK ELECTRONICS TESTING CENTRE

Date: 28/02/2022 **(Signature of Authorized person with Stamp)**

SWASTIK
Electronics Testing Centre

SWASTIK ELECTRONICS TESTING CENTRE

Address : Plot No.-16, Mainapur Industrial Area
Ghaziabad, Uttar Pradesh 201003
Contact No.: +91 9716966407, 9149209964

TEST REPORT

Report No:	**SETC22013005**	**Issue Date :**	**28/02/2022**
ULR:	**TC757522000000191P**	**Page :**	**1 of 122**
Manufacturer:	**Globtek (Suzhou) Co.,Ltd** NO.76 JINLING EAST ROAD, SUZHOU INDISTRIAL PARK, CHINA		
Test Item :	**ITE Power Supply (Power Adaptors for IT Equipment)**		
Identification:	**Lead Model:** GTM96180-1848-T3 **Series Models:** GTM96180-1807-2.0-T3, GTM96180-1807-1.05-T3, GTM96180-1811-3.5-T3, GTM96180-1811-2.0-T3, GTM96180-1817.9-5.9-T3, GTM96180-1817.9-2.9-T3, GTM96180-1830-11.0-T3, GTM96180-1830-6.0-T3, GTM96180-1507-2.0-T3	**Serial No.:** Nil	
Receipt No:	8176831	**Date of Receipt**: 13/01/2022	
Testing Laboratory :	**SWASTIK ELECTRONICS TESTING CENTRE** Plot No-16, Mainapur Industrial Area, Ghaziabad Uttar Pradesh 201003		
Test Specifications:	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 + A1: 2009 + A2 : 2013		
Test Result :	The test item passed the test specification(s).		
Other Aspects :	1) This report consists of **122** pages 2) LIMS Encoded Code: **22EE460N**		

Tested By:	Approved By/Authorized Signatory:	Issued by:
VARUN/TESTING ENGINEER	NITIN KUMAR/TM	JAYNAND KUMAR PAL/QM
Date: 28/02/2022	Date: 28/02/2022	Date: 28/02/2022

SWASTIK
Electronics Testing Centre

SWASTIK ELECTRONICS TESTING CENTRE

Address : Plot No.-16, Mainapur Industrial Area
Ghaziabad, Uttar Pradesh 201003
Contact No.: +91 9716966407, 9149209964

TEST REPORT

Report No:	SETC22013005	Issue Date :	28/02/2022
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TEST REPORT
IS 13252 (Part 1): 2010 + A1: 2013+ A2: 2015 / IEC 60950-1: 2005 + A1: 2009 + A2: 2013
Information technology equipment – Safety – Part 1: General requirements
"Power Adaptor for IT Equipment"

Report Number:	SETC22013005
Date of Issue :	28/02/2022
Total Pages :	122
Testing Laboratory :	**SWASTIK ELECTRONICS TESTING CENTRE** Plot No-16, Mainapur Industrial Area, Ghaziabad Uttar Pradesh 201003
Manufacturer : Address :	**Globtek (Suzhou) Co.,Ltd** NO.76 JINLING EAST ROAD, SUZHOU INDISTRIAL PARK, CHINA
Test Specification : Standard :	 IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 + A1: 2009 + A2 : 2013
Test Procedure : Non Standard test method :	Compliance Report N/A
Test Report Form No : Test Report Form(s) Originator : Master TRF :	BIS_IT/PA_IS13252_V1.3 Bureau of Indian Standards 03/06/2016
Test Item description : Trade Mark :	**ITE Power Supply (Power Adaptors for IT Equipment)** **GlobTek, Inc.**
Model/Type reference :	**Lead Model:** GTM96180-1848-T3 **Series Models:** GTM96180-1807-2.0-T3, GTM96180-1807-1.05-T3, GTM96180-1811-3.5-T3, GTM96180-1811-2.0-T3, GTM96180-1817.9-5.9-T3, GTM96180-1817.9-2.9-T3, GTM96180-1830-11.0-T3, GTM96180-1830-6.0-T3, GTM96180-1507-2.0-T3
Ratings :	**INPUT:** 100-240V~, 50/60 Hz, 0.6A **OUTPUT:** 48.0V ⎓ 0.375A, 18.0W
Other Documents submitted :	Please refer to Table-List of Attachment at Page No. 17

Tested By:	Approved By/Authorized Signatory:	Issued by:
VARUN/TESTING ENGINEER	NITIN KUMAR/TM	JAYNAND KUMAR PAL/QM
Date: 28/02/2022	Date: 28/02/2022	Date: 28/02/2022

TEST REPORT

Report No.: SETC22013005	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Date: 28/02/2022
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Discipline: Electronics		Group: IT Equipment

Test Code	Description	Measurement/ testing	Total No. of tests	Total no. of applicable tests/ Req.	No. of tests/ Req. passed	Page No.
EL 2100	General Requirements	Components (Cl.1.5)	18	12	12	20-21
EL 2101	General Requirements	Power interface (Cl.1.6)	05	04	04	22
EL 2102	Marking Requirements	Marking & instructions(Cl.1.7)	39	20	20	23-25
EL 2103	Electrical safety	Protection from electric shock and energy hazards (Cl.2.1)	14	06	06	26-27
EL 2104	Electrical safety	SELV Circuits (Cl.2.2)	04	04	04	28
EL 2105	Electrical safety	TNV Circuits (Cl.2.3)	12	00	N/A	29
EL 2106	Electrical safety	Limited current circuits (Cl.2.4)	04	04	04	30
EL 2107	Electrical safety	Limited Power sources (Cl.2.5)	07	03	03	31
EL 2108	Electrical safety	Provisions for earthing and bonding (Cl.2.6)	19	15	15	32-33
EL 2109	Electrical safety	Overcurrent and earth fault protection in primary circuits (Cl.2.7)	07	07	07	34
EL 2110	Electrical safety	Safety Interlocks (Cl.2.8)	13	00	N/A	35
EL 2111	Electrical safety	Electrical Insulation (Cl.2.9)	05	05	05	36
EL 2112	Electrical safety	Clearances, Creepage distances and distances through insulation (Cl.2.10)	63	28	28	37-40
EL 2113	Wiring	Wiring, connections and supply (Cl.3)	11	08	08	41
EL 2114	Wiring	Connection to a main supply (Cl.3.2)	14	04	04	42-43
EL 2115	Wiring	Wiring terminals for connection of external conductors (Cl.3.3)	09	00	N/A	44
EL 2116	Wiring	Disconnection for the main supply (Cl.3.4)	12	05	05	45
EL 2117	Wiring	Interconnection of equipment (Cl.3.5)	05	03	03	46
EL 2118	Mechanical properties	Stability (Cl.4.1)	05	00	N/A	47
EL 2119	Mechanical properties	Mechanical strength (Cl.4.2)	13	06	06	48

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TEST REPORT

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EL 2120	Mechanical properties	Design and construction (Cl.4.3)	25	04	04	49-50
EL 2121	Mechanical properties	Protection against hazardous moving parts (Cl.4.4)	14	00	N/A	51
EL 2122	Thermal Properties	Thermal requirements (Cl.4.5)	06	06	06	52
EL 2123	Mechanical properties	Openings in Enclosures (Cl.4.6)	18	00	N/A	53-54
EL 2124	Fire Safety	Resistance to fire (Cl.4.7)	25	10	10	55-59
EL 2125	Insulating properties	Electrical requirements and simulated abnormal conditions(Cl.5),5.1	20	10	10	60-61
EL 2126	Insulating properties	Electric Strength (Cl.5.2)	03	03	03	62
EL 2127	Insulating properties	Abnormal operating and fault conditions (Cl.5.3)	11	07	07	63
EL 2128	Communicating connection	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment (Cl.6.1)	04	00	N/A	64-65
EL 2129	Communicating connection	Protection of equipment users from overvoltages on telecommunication networks (Cl.6.2)	06	00	N/A	66
EL 2130	Communicating connection	Protection of the telecommunication wiring system from overheating (Cl.6.3)	05	00	N/A	67-68
EL 2131	Connection to cable distribution systems	Connection to cable distribution systems (Cl.7)	08	00	N/A	69
EL 2132	Fire safety	Tests for resistance to heat and fire (Annex A)	20	02	02	70-71
EL 2133	Insulating properties	Motor tests under abnormal conditions (Annex B)	19	00	N/A	72-73
EL 2134	Electrical Safety	Transformers (Annex C)	03	03	03	74
EL 2135	Insulating properties	Measuring Instruments For Touch-Current Tests (Annex D)	03	02	02	75

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EL 2136	Thermal Properties	Temperature Rise Of A Winding(Annex E)	01	00	N/A	76
EL 2137	Electrical safety	Measurement Of Clearances And Creepage Distances (Annex F)	01	01	01	77
EL 2138	Electrical safety	Alternative Method For Determining Minimum Clearances(Annex G)	17	00	N/A	78-79
EL 2139	Radiation Safety	Ionizing Radiation (Annex H)	01	00	N/A	80
EL 2140	Electrical Safety	Table of electrochemical potentials (Annex J)	01	01	01	81
EL 2141	General Requirements	Thermal controls (Annex K)	07	00	N/A	82
EL 2142	General Requirements	Normal load conditions for some types of electrical business equipment (Annex L)	08	02	02	83
EL 2143	Electrical Safety	Criteria for telephone ringing signals(Annex M)	13	00	N/A	84
EL 2144	Electrical safety	Impulse Test Generators (Annex N)	03	00	N/A	85
EL 2145	General Requirements	Normative References (Annex P)	01	00	N/A	86
EL 2146	General Requirements	Voltage dependent resistors (VDRs) (Annex Q)	03	03	03	87
EL 2147	General Requirements	Examples Of Requirements For Quality Control Programmes(Annex R)	03	00	N/A	88
EL 2148	General Requirements	Procedure For Impulse Testing (Annex S)	04	00	N/A	89
EL 2149	Protection against Ingress of water	Guidance On Protection Against Ingress Of Water (Annex T)	01	00	N/A	90
EL 2150	Wiring	Insulated Winding Wires For Use Without Interleaved Insulation (Annex U)	17	00	N/A	91
EL 2151	Electrical Safety	Ac Power Distribution Systems(Annex V)	05	03	03	92
EL 2152	Electrical Safety	Summation Of Touch Currents (Annex W)	08	00	N/A	93
EL 2153	Electrical Safety	Maximum Heating Effect In Transformer Tests(Annex X)	03	00	N/A	94

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EL 2154	Radiation safety	Ultraviolet light conditioning test (Annex Y)	05	00	N/A	95
EL 2155	Electrical Safety	Overvoltage Categories (Annex Z)	01	01	01	96
EL 2156	Mechanical Properties	Mandrel Test (Annex AA)	01	00	N/A	97
EL 2158	Electrical Safety	Evaluation Of Integrated Circuit (IC) Current Limiters (Annex CC)	06	00	N/A	98
EL 2159	Mechanical properties	Requirements For The Mounting Means Of Rack-Mounted Equipment (Annex DD)	04	00	N/A	99
EL 2160	Electrical Safety	Household And Home/Office Document/Media Shredders (Annex EE)	06	00	N/A	100

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested.

Varun

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(Approving Authority)

TEST REPORT

Report No.: SETC22013005	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Date: 28/02/2022
ULR: TC757522000000191P	IEC 60950-1: 2005 + A1:2009 + A2 : 2013	Page: 7 of 122
Discipline: Electronics		Group: IT Equipment

Copy of marking plate:

MARKING PLATE OF LEAD MODEL

TRF No. BIS_IT/PA_IS13252_V1.3

TEST REPORT

Report No.: SETC22013005	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Date: 28/02/2022
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Discipline: Electronics		Group: IT Equipment

MARKING PLATE OF SERIES MODEL

TRF No. BIS_IT/PA_IS13252_V1.3

TEST REPORT

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Table – List of Attachments

Attachment No.	Attachment Description	No. of pages in Attachment
Attachment	Photo Document	122

General remarks:

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

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

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..... : 13/01/2022

Date(s) of performance of tests..... : 13/01/2022 to 28/02/2022

Laboratory conditions.....:

Ambient Temperature..... : (25 ± 3)°C

Ambient Humidity..... : <70% Rh

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Test item particulars ..... :	**ITE Power Supply (Power Adaptors for IT Equipment)**
Equipment mobility ..... :	☒ movable ☐ hand-held ☒ transportable ☐ stationary ☐ for building-in ☐ direct plug-in
Connection to the mains..... :	☒ pluggable equipment ☒ type A ☐ type B ☐ permanent connection ☒ detachable power supply cord ☐ non-detachable power supply cord ☐ not directly connected to the mains
Operating condition ..... :	☒ continuous ☐ rated operating / resting time:
Access location ..... :	☒ operator accessible ☐ restricted access location
Over voltage category (OVC) ..... :	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other:
Mains supply tolerance (%) or absolute mains supply values ..... :	-10%, +6%
Class of equipment ..... :	☒ Class I ☐ Class II ☐ Class III ☐ Not classified
Considered current rating of protective device as a part of the building installation (A) ..... :	16A (For India)
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
IP protection class ..... :	IPX0
Altitude during operation (m) ..... :	Up to 5000
Altitude of test laboratory (m) ..... :	< 1000
Mass of equipment (kg) ..... :	0.160 Kg.

Abbreviations that may be used throughout this test report:

PE/PB ..... :	protective earth/protective bonding	Pri ..... :	primary
CB..... :	circuit breaker	sec..... :	secondary
(SW)PS..... :	(switching) power supply	gnd..... :	ground
HV..... :	high voltage	I/O..... :	input/output
PCB ..... :	printed circuit (wiring) board	ii.....:	installation instruction
TIW.....:	triple insulated wire	PSU.....:	Power Supply Unit

B/I .....: built-in application (compliance shall be guarantee in host equipment)

F/B/S/R : Functional/Basic/Supplementary/Reinforced Insulation

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General product information:

1) Application details / Description of the product:

The equipment under test is **"ITE Power Supply (Power Adaptors for IT Equipment)"**.

MODEL: GTM96180-1848-T3

INPUT: 100-240V~, 50/60 Hz, 0.6A

OUTPUT: 48.0V ⎓ 0.375A, 18.0W

The manufacturer had provided EUT and also provided alternate sample of Transformer (T1) which is to be added in alternate as tested within Equipment.
The manufacturer also provided all the technical details as well as the specifications of alternate samples.
The EUT was tested with alternate samples in the manner as mentioned below and reported accordingly under table 1.6.2 & 4.5

Condition	Transformer Model	Manufacture name
Condition 1	TF046	WUXI HAOPUWEI ELECTRONICS CO.,LTD
Condition 2	TF045	WUXI HAOPUWEI ELECTRONICS CO.,LTD
Condition 3	TF044	WUXI HAOPUWEI ELECTRONICS CO.,LTD
Condition 4	TF043	WUXI HAOPUWEI ELECTRONICS CO.,LTD
Condition 5	TF042	WUXI HAOPUWEI ELECTRONICS CO.,LTD

Max. specified ambient temperature (°C): 40°C

2) Similarities.....: Same rated input voltage, Same class of construction, Same mains PCB design layout and transformer

3) Differences between the models.....: Model, Output Voltage, Output Current and Output Wattage

Model	Output Voltage	Output Current	Output Wattage
GTM96180-1848-T3	**48.0Vdc**	**0.375A**	**18.0W**
GTM96180-1807-2.0-T3	5.0Vdc	3.6A	18.0W
GTM96180-1807-1.05-T3	5.95Vdc	3.0A	18.0W
GTM96180-1811-3.5-T3	7.5Vdc	2.4A	18.0W
GTM96180-1811-2.0-T3	9.0Vdc	2.0A	18.0W
GTM96180-1817.9-5.9-T3	12.0Vdc	1.5A	18.0W
GTM96180-1817.9-2.9-T3	15.0Vdc	1.2A	18.0W
GTM96180-1830-11.0-T3	19.0Vdc	0.94A	18.0W
GTM96180-1830-6.0-T3	24.0Vdc	0.75A	18.0W
GTM96180-1507-2.0-T3	5.0Vdc	3.0A	15.0W

Model No. tested with-in the family series .: GTM96180-1848-T3

4) Options:
The equipment was tested without any optional accessory installed. Hence, this report does not cover parameters that are influenced by the installation of optional accessory that might affect safety in the meaning of this standard.

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Tests relating to General Requirements

EL 2100 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.5	Components*	EL 2100-00	Verification of approvals with due correlation between the components used and the approval certificates submitted (See table 1.5.1)	P
1.5.1	General:	EL 2100-01	See below	P
	Components shall be complying with IEC 60950-1 or relevant component standard.		Complied	P
	Components and subassemblies approved for IEC 62368-1 can be considered as complying with this standard		Complied	P
1.5.2	Evaluation and testing of components	EL 2100-02	Component certified to IEC standard and/or their harmonized standards are used within their ratings (See table 1.5.1)	P
1.5.3	Thermal controls	EL 2100-03	No thermal controls used	N/A
1.5.4	Transformers	EL 2100-04	See annex C	P
1.5.5	Interconnecting cables*	EL 2100-05	Suitable internal wire used	P
1.5.6	Capacitors bridging insulation *	EL 2100-06	Capacitors used in acccdordance with their rating and complied with subclasses of IEC 60384-14 (See table 1.5.1)	P
1.5.7	Resistors bridging insulation	EL 2100-07	No such resistors used	N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation*	EL 2100-08	See above Cl. No. 1.5.7	N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	EL 2100-09	See above Cl. No. 1.5.7	N/A
1.5.7.3	Resistors bridging double insulation or reinforced insulation between the a.c. mains supply and circuits connected to an antenna or coaxial cable	EL 2100-10	See above Cl. No. 1.5.7	N/A
1.5.8	Components in equipment for IT power distribution systems*	EL 2100-11	Not for IT power distribution systems	N/A

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Tests relating to General Requirements **EL 2100 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.5.9	Surge suppressors	EL 2100-12	See below	P
1.5.9.1	General*	EL 2100-13	Certified Varistor (MOV1) used (See table 1.5.1)	P
1.5.9.2	Protection of VDRs*	EL 2100-14	Certified Fuse (F1, F2) used for protection of Certified Varistor (MOV1)	P
1.5.9.3	Bridging of functional insulation by a VDR*	EL 2100-15	Certified Varistor (MOV1) used for functional insulation	P
1.5.9.4	Bridging of basic insulation by a VDR*	EL 2100-16	No such construction	N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR*	EL 2100-17	No such construction	N/A

*-Total number of Requirements to be observed / inspected = 10
Total No of applicable Requirement = 06
No of Requirements for which the sample passed = 06

Total number of tests to be conducted = 08
Total No of applicable Tests = 04
No. of tests for which the sample passed = 04

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested

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Tests relating to Electrical Safety

EL 2101 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.6	Power interface*	EL 2101-00		P
1.6.1	AC power distribution systems*	EL 2101-01	TN power distribution systems	P
1.6.2	Input current	EL 2101-02	See table 1.6.2	P
1.6.3	Voltage limit of hand-held equipment*	EL 2101-03	Not a hand- held equipment	N/A
1.6.4	Neutral conductor *	EL 2101-04	The neutral conductor is insulated from the body throughout the equipment	P

*-Total number of Requirements to be observed / inspected = 04
Total No of applicable Requirement = 03
No of Requirements for which the sample passed = 03

Total number of tests to be conducted = 01
Total No of applicable Tests = 01
No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested

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Tests relating to Marking Requirements

EL 2102 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.7	Marking and instructions*	EL 2102-00		P
1.7.1	Power rating and identification markings		See below	P
1.7.1.1	Power rating marking*	EL 2102-01	See below	P
	Rated voltage(s) or voltage ranges(s) (V)*.	EL 2102-02	100-240V~	P
	Multiple mains supply connections*.	EL 2102-03	No such multiple mains supply connections	N/A
	Symbol for nature of supply, for d.c. only*:	EL 2102-04	No such symbol used	N/A
	Rated frequency or rated frequency range (Hz) *:	EL 2102-05	50/60Hz	P
	Rated current (mA or A)*:	EL 2102-06	0.6A	P
1.7.1.2	Identification markings*	EL 2102-07	See below	P
	Manufacturer's name or trade-mark or identification mark *:	EL 2102-08	GlobTek®, Inc..	P
	Model identification or type reference *:	EL 2102-09	**Lead Model:** GTM96180-1848-T3 **Series Models:** See copy of marking plate	P
	Symbol for Class II equipment only* :	EL 2102-10	Class I equipment	N/A
	Other markings and symbols*:	EL 2102-11	Other markings and symbols does not give rise to misunderstanding	P
1.7.1.3	Use of graphical symbols*	EL 2102-12	Graphical symbols used	P
1.7.2	Safety instructions and marking*	EL 2102-13	See below	P
1.7.2.1	General	EL 2102-14	Instructions manual provided	P
1.7.2.2	Disconnect devices*	EL 2102-15	Mains supply plug on power supply cord considered as disconnect device	P
1.7.2.3	Overcurrent protective devices*	EL 2102-16	Pluggable equipment type A	N/A
1.7.2.4	IT power distribution systems*	EL 2102-17	Not connected to IT power distribution system	N/A
1.7.2.5	Operator access with a tool*	EL 2102-18	No tool is required	N/A
1.7.2.6	Ozone*	EL 2102-19	Ozone not produced	N/A

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Tests relating to Marking Requirements

EL 2102 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.7.3	Short duty cycles*	EL 2102-20	Equipment intended for continuous operation	N/A
1.7.4	Supply voltage adjustment*	EL 2102-21	No supply voltage adjustment	N/A
1.7.5	Power outlets on the equipment*	EL 2102-22	No standard power outlets	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) Fuse(s) shall clearly and adequately marked with fuse number and rating*.	EL 2102-23	Certified fuse (F1, F2) used (See table 1.5.1)	P
1.7.7	Wiring terminals	EL 2102-24	See below	P
1.7.7.1	Protective earthing and bonding terminals*	EL 2102-25	Complied	P
1.7.7.2	Terminals for a.c. mains supply conductors*	EL 2102-26	Not a permanently connected equipment	N/A
1.7.7.3	Terminals for d.c. mains supply conductors*	EL 2102-27	No dc mains supply	N/A
1.7.8	Controls and indicators	EL 2102-28	See below Cl. No. 1.7.8.1 to 1.7.8.4	P
1.7.8.1	Identification, location and marking *:	EL 2102-29	Functions of controls affecting safety are obvious regardless of language	P
1.7.8.2	Colours*	EL 2102-30	Colour used for functional indicator only	P
1.7.8.3	Symbols according to IEC 60417*:	EL 2102-31	No such symbol used	N/A
1.7.8.4	Markings using figures* :	EL 2102-32	No such equipment	N/A
1.7.9	Isolation of multiple power sources*	EL 2102-33	No multiple power source	N/A
1.7.10	Thermostats and other regulating devices*	EL 2102-34	No thermostat or other regulating device used	N/A
1.7.11	Durability	EL 2102-35	Marking is legible and durable after test	P
1.7.12	Removable parts*	EL 2102-36	No such removable parts	N/A
1.7.13	Replaceable batteries*	EL 2102-37	No battery used	N/A
	Language(s)		See above	N/A

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Tests relating to Marking Requirements **EL 2102 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.7.14	Equipment for restricted access locations*	EL 2102-38	Equipment is not intended for installation in restricted access location	N/A

*-Total number of Requirements to be observed / inspected = 35

Total No of applicable Requirement = 16

No of Requirements for which the sample passed = 16

Total number of tests to be conducted = 04

Total No of applicable Tests = 04

No. of tests for which the sample passed = 04

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested

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Tests relating to Electrical Safety

EL 2103 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.1	Protection from electric shock and energy hazards*	EL 2103-00		P
2.1.1	Protection in operator access areas*	EL 2103-01	Complies	P
2.1.1.1	Access to energized parts	EL 2103-02	Complies	P
	Test by inspection :		No hazardous parts are accessible to user	P
	Test with test finger (Figure 2A)		No access with test finger to any parts	P
	Test with test pin (Figure 2B):		The test pin cannot touch bare hazardous parts	P
	Test with test probe (Figure 2C)		No TNV circuits	N/A
2.1.1.2	Battery compartments *	EL 2103-03	No battery compartment	N/A
2.1.1.3	Access to ELV wiring	EL 2103-04	No ELV wiring	N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		See above Cl. No. 2.1.1.3	N/A
2.1.1.4	Access to hazardous voltage circuit wiring	EL 2103-05	No access to hazardous voltage circuit wiring	N/A
2.1.1.5	Energy hazards :	EL 2103-06	No hazardous energy level (See table 2.1.1.5)	P
2.1.1.6	Manual controls	EL 2103-07	No such controls	N/A
2.1.1.7	Discharge of capacitors in equipment		See below	P
	Measured voltage (V); time-constant (s):	EL 2103-08	See table 2.1.1.7	P
2.1.1.8	Energy hazards – d.c. mains supply		No dc mains supply	N/A
	a) Capacitor connected to the d.c. mains supply :	EL 2103-09	See above Cl. No. 2.1.1.8	N/A
	b) Internal battery connected to the d.c. mains supply :	EL 2103-10	See above Cl. No. 2.1.1.8	N/A
2.1.1.9	Audio amplifiers to be tested according to IEC 60065, cl. 9.1.1.:	EL 2103-11	No such equipment	N/A
2.1.2	Protection in service access areas	EL 2103-12	Unintentional contact with hazardous bare parts during service operation is not likely	P
2.1.3	Protection in restricted access locations	EL 2103-13	Not for restricted access locations	N/A

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*-Total number of Requirements to be observed / inspected	= 03
Total No of applicable Requirement	= 02
No of Requirements for which the sample passed	= 02
Total number of tests to be conducted	= 11
Total No of applicable Tests	= 04
No. of tests for which the sample passed	= 04

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

Vasu

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Tests relating to Electrical Safety

EL 2104 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.2	SELV circuits*	EL 2104-00		P
2.2.2	Voltages under normal conditions	EL 2104-01	Within SELV limit under normal operating conditions (See table 2.2.2)	P
2.2.3	Voltages under fault conditions	EL 2104-02	Within SELV limit under fault conditions (See table 2.2.3)	P
2.2.4	Connection of SELV circuits to other circuits* :	EL 2104-03	Complied	P

*-Total number of Requirements to be observed / inspected = 02

Total No of applicable Requirement = 02

No of Requirements for which the sample passed = 02

Total number of tests to be conducted = 02

Total No of applicable Tests = 02

No. of tests for which the sample passed = 02

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Electrical Safety

EL 2105 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.3	TNV circuits*	EL 2105-00	No TNV circuits	N/A
2.3.1	Type of TNV circuits: TNV-1 / TNV-2 / TNV-3	EL 2105-01	See above Cl. No. 2.3	N/A
	a) Limits of TNV-1:	EL 2105-02	See above Cl. No. 2.3	N/A
	b) Limits of TNV-2 or TNV-3: Continuous voltages, combination of AC and DC values, are such that : $\frac{U_{ac}}{71} + \frac{U_{dc}}{120} \leq 1$	EL 2105-03	See above Cl. No. 2.3	N/A
2.3.2	Separation from other circuits and from accessible parts*	EL 2105-04	See above Cl. No. 2.3	N/A
2.3.2.1	General Requirements	EL 2105-05	See above Cl. No. 2.3	N/A
2.3.2.2	Protection by basic insulation	EL 2105-06	See above Cl. No. 2.3	N/A
2.3.2.3	Protection by earthing	EL 2105-07	See above Cl. No. 2.3	N/A
2.3.2.4	Protection by other constructions :	EL 2105-08	See above Cl. No. 2.3	N/A
2.3.3	Separation from hazardous voltages	EL 2105-09	See above Cl. No. 2.3	N/A
2.3.4	Connection of TNV circuits to other circuits	EL 2105-10	See above Cl. No. 2.3	N/A
2.3.5	Test for operating voltages generated externally	EL 2105-11	See above Cl. No. 2.3	N/A

*-Total number of Requirements to be observed / inspected = 02
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 10
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested.

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Tests relating to Electrical Safety **EL 2106 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.4	Limited current circuits *	EL 2106-00		P
2.4.1	General requirements *	EL 2106-01	See table 2.4.2	P
2.4.2	Limit values	EL 2106-02	See table 2.4.2	P
2.4.3	Connection of limited current circuits to other circuits*	EL 2106-03	Complied with requirement of Cl. No. 2.4.1	P

*-Total number of Requirements to be observed / inspected = 03
Total No of applicable Requirement = 03
No of Requirements for which the sample passed = 03

Total number of tests to be conducted = 01
Total No of applicable Tests = 01
No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Electrical Safety

EL 2107 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.5	Limited power sources *	EL 2107-00	See below	P
	a) Inherently limited output	EL 2107-01	No inherently limited output	N/A
	b) Impedance limited output	EL 2107-02	No impedance limited output	N/A
	c) Regulating network limited output under normal operating and single fault condition Use of integrated circuit (IC) current limiters	EL 2107-03	See table 2.5	P
	d) Overcurrent protective device limited output	EL 2107-04	No such overcurrent protective device limited output	N/A
	Max. output voltage (V), Max. output current (A), Max. apparent power (VA)	EL 2107-05	See table 2.5	P
	Current rating of overcurrent protective device (A)	EL 2107-06	No such overcurrent protective device used	N/A

*-Total number of Requirements to be observed / inspected = 01
Total No of applicable Requirement = 01
No of Requirements for which the sample passed = 01

Total number of tests to be conducted = 06
Total No of applicable Tests = 02
No. of tests for which the sample passed = 02

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Electrical Safety

EL 2108 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.6	Provisions for earthing and bonding*	EL 2108-00		P
2.6.1	Protective earthing	EL 2108-01	Earth pin of AC inlet considered as main protective earthing terminal	P
2.6.2	Functional earthing : The Functional earthing either separated from hazardous voltages by double or reinforced insulation or by protectively earthed screen or conductive part separated by at least basic insulation, or safely connected to Protective Bonding Conductor.*	EL 2108-02	Functional earthing is separated to primary by reinforced or double insulation.	P
	Use of symbol for functional earthing:*	EL 2108-03		P
2.6.3	Protective earthing and protective bonding conductors*	EL 2108-04	See below	P
2.6.3.2	Size of protective earthing conductors	EL 2108-05	Certified power supply cord set used (See table 1.5.1)	P
	Rated current (A), cross-sectional area (mm^2),		See above	P
2.6.3.3	Size of protective bonding conductors	EL 2108-06	See below	P
	Protective current Rating (A), cross-sectional area (mm2)		Complies with Cl. No. 2.6.3.4	P
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min):	EL 2108-07	See table 2.6.3.4	P
2.6.3.5	Colour of insulation*:	EL 2108-08	Certified power supply cord set used (See table 1.5.1)	P
2.6.4	Terminals		Certified Appliance inlet used (See table 1.5.1)	P
2.6.4.2	Protective earthing and bonding terminals : Rated current(A), Type, Nominal thread diameter (mm)	EL 2108-09	Earthing pin of AC inlet is regarded as the main protective earhing terminal	P

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2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors*	EL 2108-10	Complied	P
2.6.5	Integrity of protective earthing*		In compliance	P
2.6.5.1	Interconnection of equipment*	EL 2108-11	No such construction	N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors*	EL 2108-12	No fuse and switch in earthing conductors and protective bonding conductors	P
2.6.5.3	Disconnection of protective earth*	EL 2108-13	It is not possible to disconnect protective earth without disconnecting mains	P
2.6.5.4	Parts that can be removed by an operator*	EL 2108-14	No operator removable parts with protective earth connection	P
2.6.5.5	Parts removed during servicing*	EL 2108-15	Protective earhing cannot be removed in way which impair safety	P
2.6.5.6	Corrosion resistance*	EL 2108-16	See annex J	P
2.6.5.7	Screws for protective bonding*	EL 2108-17	No such thread cutting or space thread screwed connection used for bonding connection	N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system*	EL 2108-18	No telecommunication or cable distribution system	N/A

*-Total number of Requirements to be observed / inspected = 14
Total No of applicable Requirement = 10
No of Requirements for which the sample passed = 10

Total number of tests to be conducted = 05
Total No of applicable Tests = 05
No. of tests for which the sample passed = 05

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Electrical Safety — **EL 2109 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.7	Overcurrent and earth fault protection in primary circuits*	EL 2109-00		P
2.7.1	Basic requirements: Protection in primary circuits against overcurrents, short-circuits and earth faults shall be provided, either as an integral part of the equipment or as part of building installation.	EL 2109-01	The equipment relies on fuse (F1, F2) A build-in fuse provided as an overcurrent protection device	P
	If pluggable equipment Type B or permanently connected equipment relies on protective device external to the equipment for protection, the equipment installation Instructions shall so state and shall also specify the requirements for short-circuit protection or overcurrent protection or, where necessary, for both.		Pluggable equipment type A	N/A
2.7.2	Faults not simulated in 5.3.7* need not be fitted as an integral part of the equipment	EL 2109-02	No such protection as integral part of the equipment	P
2.7.3	Short-circuit backup protection	EL 2109-03	Certified fuse (F1, F2) used for this purpose	P
2.7.4	Number and location of protective devices :	EL 2109-04	Certified fuse (F1) used in line & Fuse (F2) used in neutral	P
2.7.5	Protection by several devices*	EL 2109-05	Complied	P
2.7.6	Warning to service personnel* :	EL 2109-06	Warning provided	P

*-Total number of Requirements to be observed / inspected = 04
Total No of applicable Requirement = 04
No of Requirements for which the sample passed = 04

Total number of tests to be conducted = 03
Total No of applicable Tests = 03
No. of tests for which the sample passed = 03

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Electrical Safety

EL 2110 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.8	Safety Interlocks*	EL 2110-00	No safety interlocks	N/A
2.8.1	General principles*	EL 2110-01	See above Cl. No. 2.8	N/A
2.8.2	Protection requirements	EL 2110-02	See above Cl. No. 2.8	N/A
2.8.3	Inadvertent reactivation	EL 2110-03	See above Cl. No. 2.8	N/A
2.8.4	Fail-safe operation	EL 2110-04	See above Cl. No. 2.8	N/A
2.8.5	Moving parts	EL 2110-05		N/A
2.8.6	Overriding*	EL 2110-06	See above Cl. No. 2.8	N/A
2.8.7	Switches, relays and their related circuits	EL 2110-07		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits`	EL 2110-08	See above Cl. No. 2.8	N/A
2.8.7.2	Overload test	EL 2110-09	See above Cl. No. 2.8	N/A
2.8.7.3	Endurance test	EL 2110-10	See above Cl. No. 2.8	N/A
2.8.7.4	Electric strength test	EL 2110-11	See above Cl. No. 2.8	N/A
2.8.8	Mechanical actuators	EL 2110-12	See above Cl. No. 2.8	N/A

*-Total number of Requirements to be observed / inspected = 03
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 10
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Electrical Safety

EL 2111 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.9	Electrical insulation*	EL 2111-00		P
2.9.1	Properties of insulating materials*	EL 2111-01	Natural rubber, materials containing asbestos and hygroscopic materials are not used	P
2.9.2	Humidity conditioning	EL 2111-02	See below	P
	Relative Humidity : 93 ±3 %, Temperature: t at 40 ± 2°C Duration : 120 hours		Relative humidity:(93±3)%RH Temperature:(40±2)°C Tested for 120 hours	P
2.9.3	Grade of insulation*	EL 2111-03	Adequate grade of insulation used	P
2.9.4	Separation from hazardous voltages*	EL 2111-04	See below	P
	Method(s) used		Method 1(b) used	P

*-Total number of Requirements to be observed / inspected = 04
Total No of applicable Requirement = 04
No of Requirements for which the sample passed = 04

Total number of tests to be conducted = 01
Total No of applicable Tests = 01
No. of tests for which the sample passed = 01

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Tests relating to Electrical Safety

EL 2112 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.10	Clearances, creepage distances and distances through Insulation*	EL 2112-00		P
2.10.1.1	Frequency *	EL 2112-01	Complied	P
2.10.1.2	Pollution degrees*	EL 2112-02	Pollution degree 2	P
2.10.1.3	Reduced values for functional insulation	EL 2112-03	Functional insulations complies with requirements of Cl. No. 5.3.4(c)	P
2.10.1.4	Intervening unconnected conductive parts	EL 2112-04	Complied	P
2.10.1.5	Insulation with varying dimensions	EL 2112-05	No such transformer	N/A
2.10.1.6	Special separation requirements	EL 2112-06	Special separation is not used or required	N/A
2.10.1.7	Insulation in circuits generating starting pulses	EL 2112-07	No such circuits	N/A
2.10.2	Determination of working voltage	EL 2112-08	See table 2.10.2	P
2.10.2.2	RMS working voltage	EL 2112-09	See table 2.10.2	P
2.10.2.3	Peak working voltage	EL 2112-10	See table 2.10.2	P
2.10.3	Clearances	EL 2112-11	See below Cl. No. 2.10.3.2 to 2.10.3.9	P
2.10.3.1	General	EL 2112-12		P
2.10.3.2	Mains transient voltages*		See below	P
	a) AC mains supply * :	EL 2112-13	Overvoltage category II, mains transient voltage 2500Vpeak	P
	b) Earthed d.c. mains supplies*	EL 2112-14	No dc mains supply	N/A
	c) Unearthed d.c. mains supplies* :	EL 2112-15	No dc mains supply	N/A
	d) Battery operation* :	EL 2112-16	No battery used	N/A
2.10.3.3	Clearances in primary circuits	EL 2112-17	See table 2.10.3 and 2.10.4	P
2.10.3.4	Clearances in secondary circuits	EL 2112-18	Complies with Cl. No. 5.3.4(c)	P
2.10.3.5	Clearances in circuits having starting pulses	EL 2112-19	No such circuits	N/A
2.10.3.6	Transients from a.c. mains supply :	EL 2112-20	Considered mains transient voltage 1500Vpeak	P
2.10.3.7	Transients from d.c. mains supply :	EL 2112-21	No dc mains supply	N/A

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2.10.3.8	Transients from telecommunication networks and cable distribution systems	EL 2112-22	No telecommunication network and cable distribution systems	N/A
2.10.3.9	Measurement of transient voltages			N/A
	a) Transients from a mains supply	EL 2112-23		N/A
	For an a.c. mains supply			N/A
	For a d.c. mains supply			N/A
	b) Transients from a telecommunication network	EL 2112-24		N/A
2.10.4	Creepage distances*	EL 2112-25	See below Cl. No. 2.10.4.2 to 2.10.4.3	P
2.10.4.1	General	EL 2112-26		P
2.10.4.2	Material group and comparative tracking index : CTI tests*	EL 2112-27	Material group IIIb assumed	P
2.10.4.3	Minimum creepage distances	EL 2112-28	See table 2.10.3 and 2.10.4	P
2.10.5	Solid insulation	EL 2112-29	See below	P
2.10.5.1	General	EL 2112-30		P
2.10.5.2	Distances through insulation	EL 2112-31	See table 2.10.5	P
2.10.5.3	Insulating compound as solid insulation	EL 2112-32	No such components used	N/A
2.10.5.4	Semiconductor devices	EL 2112-33		N/A
2.10.5.5.	Cemented joints	EL 2112-34	No cemented joints	N/A
2.10.5.6	Thin sheet material – General	EL 2112-35	Considered	P
2.10.5.7	Separable thin sheet material	EL 2112-36	See table 2.10.5	P
2.10.5.8	Non-separable thin sheet material	EL 2112-37	Separable thin sheet material used	N/A
2.10.5.9	Thin sheet material – standard test procedure	EL 2112-38	Alternative test procedure used	N/A
	Electric strength test as per Cl.5.2.2		See above Cl. No. 2.10.5.9	N/A
2.10.5.10	Thin sheet material – alternative test procedure	EL 2112-39	Electric strength test applied on each layer of the insulation tape	P
	Electric strength test as per Cl.5.2.2		See table 5.2	P
2.10.5.11	Insulation in wound components	EL 2112-40	Electric strength test applied on Transformer	P
2.10.5.12	Wire in wound components		Certified triple insulated wire used	P

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	If Peak Working voltage >71 V		Working voltage exceeded 71V peak	P
	a) Basic insulation not under stress	EL 2112-41	No such insulation	N/A
	b) Basic, supplementary, reinforced insulation	EL 2112-42	Reinforced insulation used	P
	c) Compliance with Annex U	EL 2112-43		N/A
	d) Where two winding wires in contact inside wound component; angle between 45° and 90°	EL 2112-44	Physical separation in the form of insulation sheet material or tube to relieve mechanical strength at the crossover point	P
2.10.5.13	Wire with solvent-based enamel in wound components		No such wound component used	N/A
	a) Electric strength test (Type test as per Cl.5.2.2)	EL 2112-45	See above Cl. No. 2.10.5.13	N/A
	b) Electric Strength test (Routine test as per Cl.5.2.2)	EL 2112-46	See above Cl. No. 2.10.5.13	N/A
2.10.5.14	Additional insulation in wound components		No such wound components	N/A
	If Peak Working Voltage >71V		See above Cl. No. 2.10.5.14	N/A
	a) Basic insulation not under stress	EL 2112-47	See above Cl. No. 2.10.5.14	N/A
	b) Supplementary, reinforced insulation	EL 2112-48	See above Cl. No. 2.10.5.14	N/A
2.10.6	Construction of printed boards*		Uncoated printed board used	P
2.10.6.1	Uncoated printed boards	EL 2112-49	See table 2.10.3 and 2.10.4	P
2.10.6.2	Coated printed boards	EL 2112-50	Not used	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	EL 2112-51	No such construction	N/A
2.10.6.4	Insulation between conductors on different surfaces of a printed board*		See above Cl. No. 2.10.6.3	N/A
	a) Minimum Thickness of insulation: 0.4mm or	EL 2112-52	See above Cl. No. 2.10.6.3	N/A
	b) Confirm with one of the specification and pass the relevant tests as per Table 2R	EL 2112-53	See above Cl. No. 2.10.6.3	N/A
2.10.7	Component external terminations	EL 2112-54	No external termination used	N/A

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2.10.8	Tests on coated printed boards and coated components		Uncoated printed board used	N/A
2.10.8.1	Sample preparation and preliminary inspection*	EL 2112-55	See above Cl. No. 2.10.8	N/A
2.10.8.2	Thermal conditioning	EL 2112-56	See above Cl. No. 2.10.8	N/A
2.10.8.3	Electric strength test	EL 2112-57	See above Cl. No. 2.10.8	N/A
2.10.8.4	Abrasion resistance test	EL 2112-58	See above Cl. No. 2.10.8	N/A
2.10.9	Thermal cycling	EL 2112-59		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound	EL 2112-60	Pollution degree 2	N/A
2.10.11	Tests for semiconductor devices and cemented joints	EL 2112-61		N/A
2.10.12	Enclosed and sealed parts	EL 2112-62	No enclosed and sealed parts	N/A

*-Total number of Requirements to be observed / inspected = 10
Total No of applicable Requirement = 06
No of Requirements for which the sample passed = 06

Total number of tests to be conducted = 53
Total No of applicable Tests = 22
No. of tests for which the sample passed = 22

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested

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Tests relating to Wiring

EL 2113 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.0	Wiring, connections and supply*	EL 2113-00	See below	P
3.1.1	Current rating and overcurrent protection	EL 2113-01	Adequate cross sectional areas on internal wiring	P
3.1.2	Protection against mechanical damage*	EL 2113-02	Wire ways are smooth and free from sharp edges	P
3.1.3	Securing of internal wiring*	EL 2113-03	The wires are positioned in such a manner that prevent from excessive strain.There is no possibilities of loosening of terminal connection and damage of conductor insulation	P
3.1.4	Insulation of conductors	EL 2113-04	Insulation on internal conductors is considered to be of adequate quality and suitable for the application	P
3.1.5	Beads and ceramic insulators	EL 2113-05	No beads and ceramic insulators	N/A
3.1.6	Screws for electrical contact pressure*	EL 2113-06	No such screw used	N/A
3.1.7	Insulating materials in electrical connections*	EL 2113-07	All current carrying connections made by metal to metal	P
3.1.8	Self-tapping and spaced thread screws*	EL 2113-08	Self tapping and spaced thread screws not used	N/A
3.1.9	Termination of conductors : 10 N pull test	EL 2113-09	After test,Terminations cannot become displaced so that clearance and creepage distance did not reduced	P
3.1.10	Sleeving on wiring*	EL 2113-10	Complies	P

*-Total number of Requirements to be observed / inspected = 07
Total No of applicable Requirement = 05
No of Requirements for which the sample passed = 05

Total number of tests to be conducted = 04
Total No of applicable Tests = 03
No. of tests for which the sample passed = 03

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested.

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Tests relating to Wiring

EL 2114 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.2	Connection to a mains supply*	EL 2114-00		P
3.2.1	Means of connection		See below	P
3.2.1.1	Connection to an a.c. mains supply*	EL 2114-01	Certified Appliance inlet used	P
	As per IS 13252 (Part 1): 2010 Cl.No.3.2.1.1, Note: It is a legal requirement to provide a plug that complies with the national wiring rules		ISI marked plug used with Certified power supply cord set (See table 1.5.1)	P
3.2.1.2	Connection to a d.c. mains supply*	EL 2114-02	Not connected to dc mains	N/A
3.2.2	Multiple supply connections	EL 2114-03	No multiple supply connections	N/A
3.2.3	Permanently connected equipment	EL 2114-04	Not a permanently connected equipment	N/A
3.2.4	Appliance inlets: Are so Located that parts at hazardous voltage are not accessible during insertion or removal of the connector, connector can be inserted without difficulty and after insertion of the connector, the equipment is not supported by the connector for any position of normal use on a flat surface (appliance inlets complying with IEC 60309 or IEC 60320 considered to comply with this requirement.	EL 2114-05	Certified appliance inlet used (See table 1.5.1)	P
3.2.5	Power supply cords		See below	P
3.2.5.1	AC power supply cords*	EL 2114-06	Certified power supply cord set used (See table 1.5.1)	P
	Rated current (A), cross-sectional area (mm²), AWG		See above Cl. No. 3.2.5.1	P
3.2.5.2	DC power supply cords*	EL 2114-07	Not connected to dc mains	N/A
3.2.6	Cord anchorages and strain relief		Appliance inlet provided	N/A
	Mass of the equipment: Pull Force (N):	EL 2114-08	See above Cl. No. 3.2.6	N/A

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	b) Longitudinal displacement: 2 mm (Max)	EL 2114-09	See above Cl. No. 3.2.6	N/A
3.2.7	Protection against mechanical damage	EL 2114-10	Appliance inlet provided	N/A
3.2.8	Cord guards		Detachable power supply cord set used	N/A
	a) Diameter or minor dimension D (mm) : Test mass (g) :	EL 2114-11	See above Cl. No. 3.2.8	N/A
	b) Radius of curvature of cord : 1.5 D (Min)	EL 2114-12	See above Cl. No. 3.2.8	N/A
3.2.9	Supply wiring space	EL 2114-13	See above Cl. No. 3.2.8	N/A

*-Total number of Requirements to be observed / inspected = 05
Total No of applicable Requirement = 03
No of Requirements for which the sample passed = 03

Total number of tests to be conducted = 09
Total No of applicable Tests = 01
No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Wiring

EL 2115 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.3	Wiring terminals for connection of external conductors*	EL 2115-00	No wiring terminals	N/A
3.3.1	Wiring terminals*	EL 2115-01	See above Cl. No. 3.3	N/A
3.3.2	Connection of non-detachable power supply cords	EL 2115-02	See above Cl. No. 3.3	N/A
3.3.3	Screw terminals*	EL 2115-03	See above Cl. No. 3.3	N/A
3.3.4	Conductor sizes to be connected	EL 2115-04	See above Cl. No. 3.3	N/A
	Rated current (A), cord/cable type, cross-sectional area (mm2)		See above Cl. No. 3.3	N/A
3.3.5	Wiring terminal sizes	EL 2115-05	See above Cl. No. 3.3	N/A
	Rated current (A), type, nominal thread diameter (mm)		See above Cl. No. 3.3	N/A
3.3.6	Wiring terminal design	EL 2115-06	See above Cl. No. 3.3	N/A
3.3.7	Grouping of wiring terminals*	EL 2115-07	See above Cl. No. 3.3	N/A
3.3.8	Stranded wire	EL 2115-08	See above Cl. No. 3.3	N/A

*-Total number of Requirements to be observed / inspected = 04
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 05
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested

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Tests relating to Wiring

EL 2116 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.4	Disconnection from the mains supply*	EL 2116-00		P
3.4.1	General Requirement A disconnect device or devices shall be provided to disconnect the equipment from the mains supply for servicing.	EL 2116-01	See below	P
3.4.2	Disconnect devices*	EL 2116-02	Mains supply plug on power supply cord considered as disconnect device	P
3.4.3	Permanently connected equipment*	EL 2116-03	Not a permanently connected equipment	N/A
3.4.4	Parts which remain energized*	EL 2116-04	No parts remain energized	N/A
3.4.5	Switches in flexible cords*	EL 2116-05	No switches in flexible cords	N/A
3.4.6	Number of poles - single-phase and d.c. equipment*	EL 2116-06	Disconnect device disconnects both poles simultaneously	P
3.4.7	Number of poles - three-phase equipment*	EL 2116-07	Single phase equipment	N/A
3.4.8	Switches as disconnect devices*	EL 2116-08	No such switches used	N/A
3.4.9	Plugs as disconnect devices*	EL 2116-09	Mains supply plug on power supply cord considered as disconnect device	P
3.4.10	Interconnected equipment*	EL 2116-10	No such equipment	N/A
3.4.11	Multiple power sources*	EL 2116-11	No multiple power sources	N/A

*-Total number of Requirements to be observed / inspected = 11
Total No of applicable Requirement = 04
No of Requirements for which the sample passed = 04

Total number of tests to be conducted = 01
Total No of applicable Tests = 01
No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Wiring

EL 2117 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.5	Interconnection of equipment*	EL 2117-00		P
3.5.1	General requirements*	EL 2117-01	See below	P
3.5.2	Types of interconnection circuits*	EL 2117-02	SELV-SELV connection only	P
3.5.3	ELV circuits as interconnection circuits *	EL 2117-03	No ELV circuits	N/A
3.5.4	Data ports for additional equipment	EL 2117-04	No data ports for additional equipment	N/A

*-Total number of Requirements to be observed / inspected = 04
Total No of applicable Requirement = 03
No of Requirements for which the sample passed = 03

Total number of tests to be conducted = 01
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Mechanical Properties **EL 2118 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4	PHYSICAL REQUIREMENTS*	EL 2118-00		P
4.1	Stability	EL 2118-01	See below	N/A
	a) A unit having a mass of 7 kg or more shall not fall over when tilted to an angle of 10° from its normal upright position. Alternatively, the unit is placed in its intended position of use on a plane, inclined at an angle of 10° to the horizontal, and then rotated slowly through an angle of 360° about its normal vertical axis.	EL 2118-02	Mass <7Kg.	N/A
	b) A floor-standing unit having a mass of 25 kg or more shall not fall over when a force equal to 20 % of the weight of the unit, but not more than 250 N, is applied in any direction except upwards, at a height not exceeding 2 m from the floor.	EL 2118-03	No such equipment	N/A
	c) A floor-standing unit shall not fall over when a constant downward force of 800 N is applied at the point of maximum moment to any horizontal surface of at least 125 mm by at least 200 mm, at a height up to 1 m from the floor.	EL 2118-04	No such equipment	N/A

*-Total number of Requirements to be observed / inspected = 01
Total No of applicable Requirement = 01
No of Requirements for which the sample passed = 01

Total number of tests to be conducted = 04
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Mechanical Properties **EL 2119 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.2	Mechanical Strength	EL 2119-00		P
4.2.1	General	EL 2119-01	See below	P
4.2.2	Steady force test, 10 N	EL 2119-02	Force applied on components. Result: No damage, no hazards	P
4.2.3	Steady force test, 30 N	EL 2119-03	No such parts	N/A
4.2.4	Steady force test, 250 N	EL 2119-04	Force applied on each side of the enclosure. Result: No damage, no hazards	P
4.2.5	Impact test	EL 2119-05	Transportable equipment	N/A
	a) Fall test as per Fig. 4A	EL 2119-06	See above Cl. No. 4.2.5	N/A
	b) Swing test as per Fig. 4A	EL 2119-07	See above Cl. No. 4.2.5	N/A
4.2.6	Drop test; height (mm) :	EL 2119-08	Dropped three times from a height of 1000mm Result: No damage, no hazards	P
4.2.7	Stress relief test	EL 2119-09	Test performed at 70°C for 7 hours, no deformation of enclosure	P
4.2.8	Cathode Ray Tubes	EL 2119-10	No cathode ray tubes used	N/A
4.2.9	High Pressure Lamps*	EL 2119-11	No high pressure lamps	N/A
4.2.10	Wall or ceiling mounted equipment; force(N)	EL 2119-12	Not a wall or ceiling mounted equipment	N/A

*-Total number of Requirements to be observed / inspected = 01
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 12
Total No of applicable Tests = 06
No. of tests for which the sample passed = 06

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Mechanical Properties

EL 2120 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.3	Design and Construction*	EL 2120-00		P
4.3.1	Edges and corners*	EL 2120-01	All edges and corners accessible to operator are rounded and smoothed	P
4.3.2	Handles and manual controls; force (N):	EL 2120-02	Handles and manual controls are not used	N/A
4.3.3	Adjustable controls	EL 2120-03	No such controls used	N/A
4.3.4	Securing of parts	EL 2120-04	Internal parts are well secured against mechanical stresses occurring in normal use	P
4.3.5	Connections by Plugs and Sockets*	EL 2120-05	No misconnection likely to create hazard	P
4.3.6	Direct plug-in equipment	EL 2120-06	Not a direct plug-in equipment	N/A
	Torque	EL 2120-07	See above Cl. No. 4.3.6	N/A
	Compliance with the relevant mains plug standard	EL 2120-08	See above Cl. No. 4.3.6	N/A
4.3.7	Heating elements in earthed equipment*	EL 2120-09	No heating elements in the equipment	N/A
4.3.8	Batteries Portable secondary sealed cells and batteries (other than button) containing alkaline or other non-acid electrolyte shall comply with IEC 62133		No battery used	N/A
	a) Overcharging of a rechargeable battery	EL 2120-10	See above Cl. No. 4.3.8	N/A
	b) Unintentional charging of a non-rechargeable battery	EL 2120-11	See above Cl. No. 4.3.8	N/A
	c) Reverse charging of a rechargeable battery	EL 2120-12	See above Cl. No. 4.3.8	N/A
	d) Excessive discharging rate for any battery	EL 2120-13	See above Cl. No. 4.3.8	N/A
	e) Electric strength as per Cl.5.3.9.2	EL 2120-14	See above Cl. No. 4.3.8	N/A
4.3.9	Oil & grease*	EL 2120-15	Oil and grease are not used	N/A
4.3.10	Dust, powders, liquids and gases	EL 2120-16		N/A

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4.3.11	Containers for liquids or gases	EL 2120-17	No liquids or gases	N/A
4.3.12	Flammable liquids	EL 2120-18		N/A
4.3.13	Radiation			N/A
4.3.13.2	Ionizing radiation	EL 2120-19		N/A
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	EL 2120-20		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation	EL 2120-21		N/A
4.3.13.5	Lasers (including laser diodes) and LED's:			N/A
4.3.13.5.1	Lasers (including laser diodes) For laser see IEC 60825-1, respective part as applicable.	EL 2120-22		N/A
	Laser class			N/A
4.3.13.5.2	Light emitting diodes (LED's)	EL 2120-23		N/A
4.3.13.6	Other types*	EL 2120-24		N/A

*-Total number of Requirements to be observed / inspected = 06
Total No of applicable Requirement = 03
No of Requirements for which the sample passed = 03

Total number of tests to be conducted = 19
Total No of applicable Tests = 01
No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Mechanical Properties **EL 2121 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.4	Protection against hazardous moving parts	EL 2121-00	No moving parts in the equipment	N/A
4.4.1	General	EL 2121-01	See above Cl. No. 4.4	N/A
4.4.2	Protection in operator access areas	EL 2121-02	See above Cl. No. 4.4	N/A
4.4.3	Protection in restricted access locations *	EL 2121-03	See above Cl. No. 4.4	N/A
4.4.4	Protection in service access areas*	EL 2121-04	See above Cl. No. 4.4	N/A
4.4.5	Protection against moving fan blades	EL 2121-05	See above Cl. No. 4.4	N/A
4.4.5.1	General*	EL 2121-06	See above Cl. No. 4.4	N/A
	Not considered likely to cause pain or injury. a).....:	EL 2121-07	See above Cl. No. 4.4	N/A
	Is considered likely to cause pain, not injury. b)	EL 2121-08	See above Cl. No. 4.4	N/A
	Considered likely to cause injury. c).....:	EL 2121-09	See above Cl. No. 4.4	N/A
4.4.5.2	Protection for users*	EL 2121-10	See above Cl. No. 4.4	N/A
	Use of symbol or warning*	EL 2121-11	See above Cl. No. 4.4	N/A
4.4.5.3	Protection for service persons*	EL 2121-12	See above Cl. No. 4.4	N/A
	Use of symbol or warning *	EL 2121-13	See above Cl. No. 4.4	N/A

*-Total number of Requirements to be observed / inspected = 07
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 07
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TRF No. BIS_IT/PA_IS13252_V1.3

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Tests relating to Thermal Properties

EL 2122 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.5	Thermal Requirements*	EL 2122-00		P
4.5.1	General	EL 2122-01	See below	P
4.5.2	Temperature tests	EL 2122-02	See table 4.5	P
4.5.3	Temperature limits for materials*	EL 2122-03	See table 4.5	P
4.5.4	Touch temperature limits*	EL 2122-04	See table 4.5	P
4.5.5	Resistance to abnormal heat	EL 2122-05	Certified material used	P

*-Total number of Requirements to be observed / inspected = 03
Total No of applicable Requirement = 03
No of Requirements for which the sample passed = 03

Total number of tests to be conducted = 03
Total No of applicable Tests = 03
No. of tests for which the sample passed = 03

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Mechanical Properties

EL 2123 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.6	Openings in enclosures*	EL 2123-00	No openings	N/A
4.6.1	Top and side openings	EL 2123-01	See above Cl. No. 4.6	N/A
	Dimensions (mm) :		See above Cl. No. 4.6	N/A
4.6.2	Bottoms of fire enclosures :	EL 2123-02		N/A
	Construction of the bottom, dimensions (mm) :			N/A
4.6.3	Doors or covers in fire enclosures*	EL 2123-03	Doors or covers are not used	N/A
4.6.4	Openings in transportable equipment	EL 2123-04	No openings	N/A
4.6.4.1	Constructional design measures	EL 2123-05	See above Cl. No. 4.6.4	N/A
	Dimensions (mm)		See above Cl. No. 4.6.4	N/A
4.6.4.2	Evaluation measures for larger openings	EL 2123-06	See above Cl. No. 4.6.4	N/A
4.6.4.3	Use of metallized parts	EL 2123-07	No metallized parts	N/A
4.6.5	Adhesives for constructional purposes: Compliance is checked by examination of the construction and of the available data. If such data is not available, compliance is checked by the following tests.	EL 2123-08	No adhesive parts	N/A
	a)Temperature Conditioning at : 100 °C ± 2 °C for one week; or 90 °C ± 2 °C for three weeks; or 82 °C ± 2 °C for eight weeks.	EL 2123-09	See above Cl. No. 4.6.5	N/A
	After temperature conditioning b) Leave the sample between 20°C to 30°C for 1 hour	EL 2123-10	See above Cl. No. 4.6.5	N/A
	c) Place the sample at - 40°C±2°C for 4 hours	EL 2123-11	See above Cl. No. 4.6.5	N/A

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	d) Remove and allow the sample to come to any convenient temperature between 20 °C and 30 °C for 8 h;	EL 2123-12	See above Cl. No. 4.6.5	N/A
	e) Place the sample in a cabinet at 91 % to 95 % relative humidity for 72 h;	EL 2123-13	See above Cl. No. 4.6.5	N/A
	f) Remove the sample and leave it at any convenient temperature between 20 °C and 30 °C for 1 h;	EL 2123-14	See above Cl. No. 4.6.5	N/A
	g) Place the sample in an oven at the temperature used for the temperature conditioning for 4 h;	EL 2123-15	See above Cl. No. 4.6.5	N/A
	h) Remove the sample and allow it to reach any convenient temperature between 20 °C; and 30 °C for 8 h.	EL 2123-16	See above Cl. No. 4.6.5	N/A
	i) The sample is then immediately subjected to the tests of Cl.4.2 as applicable.	EL 2123-17	See above Cl. No. 4.6.5	N/A

*-Total number of Requirements to be observed / inspected = 02
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 16
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Fire Safety

EL 2124 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.7	Resistance to fire*	EL 2124-00		P
4.7.1	Reducing the risk of ignition and spread of flame		See below	P
	Method 1, selection and application of components wiring and materials OR	EL 2124-01	Method 1 used (see table 1.5.1)	P
	Method 2, application of all of simulated fault condition tests	EL 2124-02	Method 2 not used	N/A
4.7.2	Conditions for a fire enclosure*		See below	P
4.7.2.1	Parts requiring a fire enclosure*	EL 2124-03	The fire enclosure is required to cover all parts	P
4.7.2.2	Parts not requiring a fire enclosure	EL 2124-04	See above Cl. No. 4.7.2.1	N/A
4.7.3	Materials*	EL 2124-05	See below	P
4.7.3.1	General*	EL 2124-06	Components and materials have adequate flammability classification. (see table 1.5.1)	P
	a)Class of material used*	EL 2124-07	See above Cl. No. 4.7.3.1	P
	b) Where HB40 CLASS MATERIAL, HB75 CLASS MATERIAL or HBF CLASS FOAMED MATERIAL, is required, material passing the glow-wire test at 550 °C according to IEC 60695-2-11 is acceptable as an alternative.	EL 2124-08	No such class material used	N/A
	c) Where it is not practical to protect components against overheating under fault conditions, the components shall be mounted on V-1 CLASS MATERIAL. Additionally, such components shall be separated from material of a class lower than V-1 CLASS MATERIAL by at least 13 mm of air, or by a solid barrier of V-1 CLASS MATERIAL.	EL 2124-09	Components are mounted on V-0 class material	P
4.7.3.2	Materials for fire enclosures		See below	P

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	a) For MOVABLE EQUIPMENT having a total mass not exceeding 18 kg, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of V-1 CLASS MATERIAL or shall pass the test of Clause A.2.	EL 2124-10	Certified material used (see table 1.5.1)	P
	b) For MOVABLE EQUIPMENT having a total mass exceeding 18 kg and for all STATIONARY EQUIPMENT, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of 5VB CLASS MATERIAL or shall pass the test of Clause A.1.	EL 2124-11	Mass of the equipment <18kg	N/A
	c) Materials for components that fill an opening in a FIRE ENCLOSURE, and that are intended to be mounted in this opening shall : be of V-1 CLASS MATERIAL; or pass the tests of Clause A.2; or comply with the flammability requirements of the relevant IEC component standard	EL 2124-12	No such openings	N/A
	d) Plastic materials of a FIRE ENCLOSURE shall be located more than 13 mm through air from arcing parts such as unenclosed commutators and unenclosed switch contacts.	EL 2124-13	No such arcing parts	N/A

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	e)Plastic materials of a FIRE ENCLOSURE located less than 13mm through air from non-arcing parts which, under any condition of normal or abnormal operation,could attain a temperature sufficient to ignite the material, shall be capable of passing the test of IEC 60695-2-20. The average time to ignition of the samples shall be not less than 15sec. If the sample melts through without igniting, the time at which this occurs is not considered to be the time to ignition.	EL 2124-14	No such construction	N/A
4.7.3.3	Materials for components and other parts outside fire enclosures *		No materials for components and other parts outside fire enclosure	N/A
	a) Materials shall be of : – HB75 CLASS MATERIAL if the thinnest significant thickness of this material is < 3 mm, or – HB40 CLASS MATERIAL if the thinnest significant thickness of this material is ≥ 3 mm, or – HBF CLASS FOAMED MATERIAL.*	EL 2124-15	See above Cl. No. 4.7.3.3	N/A
	b) Connectors shall comply with one of the following: – be made of V-2 CLASS MATERIAL; or – pass the tests of Clause A.2; or – comply with the flammability requirements of the relevant IEC component standard; or – be mounted on V-1 CLASS MATERIAL and be of a small size; or – be located in a SECONDARY CIRCUIT supplied by a power source that is limited to a maximum of 15 VA (see 1.4.11) under normal operating conditions and after a single fault in the equipment (see 1.4.14).	EL 2124-16	See above Cl. No. 4.7.3.3	N/A

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4.7.3.4	Materials for components and other parts inside fire enclosures		See below	P
	a) Inside FIRE ENCLOSURES, materials for components and other parts shall comply with one of the following: – be of V-2 CLASS MATERIAL or HF-2 CLASS FOAMED MATERIAL; or – pass the flammability test described in Clause A.2; or – meet the flammability requirements of a relevant IEC component standard that includes such requirements.	EL 2124-17	Certified material used (See table 1.5.1)	P
	Requirements for voltage dependent resistors (VDR's) are in Annex Q.*	EL 2124-18	See Annex Q	P
4.7.3.5	Materials for air filter assemblies : Air filter assemblies shall be constructed of V-2 CLASS MATERIAL, or HF-2 CLASS FOAMED MATERIAL.	EL 2124-19	No air filter assemblies	N/A
4.7.3.6	Materials used in high-voltage components		No high voltage components used	N/A
	a) High-voltage components operating at peak-to-peak voltages exceeding 4 kV shall either be of V-2 CLASS MATERIAL, or HF-2 CLASS FOAMED MATERIAL, or comply with 14.4 of IEC 60065 or pass the needle flame test according to IEC 60695-11-5.	EL 2124-20	See above Cl. No. 4.7.3.6	N/A
	b) Compliance is checked by inspection of the equipment and material data sheets and, if necessary, by – the tests for V-2 CLASS MATERIAL or HF-2 CLASS FOAMED MATERIAL; or – the test described in 14.4 of IEC 60065; or – the needle flame test according to IEC 60695-11-5.	EL 2124-21	See above Cl. No. 4.7.3.6	N/A

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	c) In addition to above, the following details apply, referring to clauses of IEC 60695-11-5: Clause 7 - Severities	EL 2124-22	See above Cl. No. 4.7.3.6	N/A
	Clause 8 - Conditioning	EL 2124-23	See above Cl. No. 4.7.3.6	N/A
	Clause 11 - Evaluation of test results	EL 2124-24	See above Cl. No. 4.7.3.6	N/A

*-Total number of Requirements to be observed / inspected = 07

Total No of applicable Requirement = 06

No of Requirements for which the sample passed = 06

Total number of tests to be conducted = 18

Total No of applicable Tests = 04

No. of tests for which the sample passed = 04

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested

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Tests relating to Insulating Properties

EL 2125 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
5.0	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS*	EL 2125-00		P
5.1	Touch current and protective conductor current*	EL 2125-01	See below	P
5.1.2	Configuration of equipment under test (EUT)*	EL 2125-02	See below Cl. No. 5.1.2.1	P
5.1.2.1	Single connection to an a.c. mains supply*	EL 2125-03	The EUT has only one mains connections	P
5.1.2.2	Redundant multiple connections to an a.c. mains supply*	EL 2125-04	No multiple connections	N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply	EL 2125-05	See above Cl. No. 5.1.2.2	N/A
5.1.3	Test circuit	EL 2125-06	As per figure 5A	P
5.1.4	Application of measuring instrument	EL 2125-07	Tested using figure D.1 measuring instrument of Annex D	P
5.1.5	Test procedure	EL 2125-08	Complies	P
5.1.6	Test measurements		See below	P
	a) r.m.s value of voltage, U2 measured using the instrument as per Fig. D.1 or r.m.s value of current measured using the instrument as per Fig. D.2 Alternatively, peak value of voltage, U2, is measured using the measuring instrument described in Clause D.1	EL 2125-09	See table 5.1.6	P
	b) Measured touch current (mA):	EL 2125-10	See table 5.1.6	P
	c) Calculated value of TOUCH CURRENT (mA) = U2 / 500	EL 2125-11	See table 5.1.6	P
	d) Measured protective conductor current(mA)	EL 2125-12		N/A
	e) Max. protective conductor current =5% of Input current	EL 2125-13	Touch current less than 3.5mA	N/A
5.1.7	Equipment with touch current exceeding 3.5 mA	EL 2125-14	Touch current less than 3.5mA	N/A

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5.1.7.1	General	EL 2125-15	See below	N/A
5.1.7.2	Simultaneous multiple connections to the supply	EL 2125-16	No multiple connections	N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	EL 2125-17	No telecommunication networks	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system	EL 2125-18	See above Cl. No. 5.1.8	N/A
	Supply voltage (V)		See above Cl. No. 5.1.8	N/A
	Measured touch current (mA)		See above Cl. No. 5.1.8	N/A
	Max. allowed touch current (mA)		See above Cl. No. 5.1.8	N/A
5.1.8.2	Summation of touch currents from telecommunication networks	EL 2125-19	See above Cl. No. 5.1.8	N/A
	a) EUT with earthed telecommunication ports :		See above Cl. No. 5.1.8	N/A
	b) EUT whose telecommunication ports have no reference to protective earth		See above Cl. No. 5.1.8	N/A

*-Total number of Requirements to be observed / inspected = 05
Total No of applicable Requirement = 04
No of Requirements for which the sample passed = 04

Total number of tests to be conducted = 15
Total No of applicable Tests = 06
No. of tests for which the sample passed = 06

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Insulating Properties

EL 2126 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
5.2	Electric strength*	EL 2126-00		P
5.2.1	General*	EL 2126-01	See below	P
5.2.2	Test procedure		Table 5B used	P
	The test voltages for electric strength for the appropriate grade of insulation [FUNCTIONAL INSULATION if required by 5.3.4 b), BASIC INSULATION, SUPPLEMENTARY INSULATION or REINFORCED INSULATION] are as specified in either: – Table 5B using the PEAK WORKING VOLTAGE (U), as determined in 2.10.2; or – Table 5C using the REQUIRED WITHSTAND VOLTAGE, as determined in G.4.	EL 2126-02	See table 5.2	P

*-Total number of Requirements to be observed / inspected = 02
Total No of applicable Requirement = 02
No of Requirements for which the sample passed = 02

Total number of tests to be conducted = 01
Total No of applicable Tests = 01
No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested

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Tests relating to Insulating Properties

EL 2127 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
5.3	Abnormal operating and fault conditions	EL 2127-00		P
5.3.1	Protection against overload and abnormal operation	EL 2127-01	See table 5.3	P
5.3.2	Motors	EL 2127-02	No motors used	N/A
5.3.3	Transformers	EL 2127-03	See annex C	P
5.3.4	Functional insulation:	EL 2127-04	Complies with Cl. No. 5.3.4c)	P
5.3.5	Electromechanical components	EL 2127-05	No such components used	N/A
5.3.6	Audio amplifiers in ITE :	EL 2127-06	Not used	N/A
5.3.7	Simulation of faults	EL 2127-07	See table 5.3	P
5.3.8	Unattended equipment	EL 2127-08	No such equipment	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions*		See below	P
5.3.9.1	During the tests	EL 2127-09	No fire occurred, no molten metal emitted and no distortion of enclosure	P
5.3.9.2	After the tests	EL 2127-10	No breakdown occurred	P

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 11

Total No of applicable Tests = 07

No. of tests for which the sample passed = 07

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested.

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Tests relating to Communicating Connection

EL 2128 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment	EL 2128-00	Equipment is not for connection to telecommunication networks	N/A
6.1.1	Protection from hazardous voltages	EL 2128-01	See above Cl. No. 6.1	N/A
6.1.2	Separation of the telecommunication network from earth*		See above Cl. No. 6.1	N/A
6.1.2.1	Requirements: - Surge suppressors that bridge the insulation shall have a minimum rated operating voltage Uop of Uop =Upeak + Δusp + Δusa Where Upeak is 360V or 180V Δusp is the maximum increase of the rated operating voltage due to variations in component production(If not specified by the manufacturer, shall be taken as 10% of the rated operating voltage of the component) Δusa is the maximum increase of the rated operating voltage due to the component ageing over the expected life of the equipment(If not specified by the manufacturer, shall be taken as 10% of the rated operating voltage of the component) -Insulation is subjected to electric strength test according to 5.2.2. The a.c test voltage is 1.5kV or 1.0kV - Components bridging the insulation that are left in place during electric strength testing shall not be damaged. There shall be no breakdown of insulation during electric strength testing.	EL 2128-02	See above Cl. No. 6.1	N/A
6.1.2.2	Exclusions	EL 2128-03	See above Cl. No. 6.1	N/A

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Total No of applicable Requirement	= 00
No of Requirements for which the sample passed	= N/A
Total number of tests to be conducted	= 04
Total No of applicable Tests	= 00
No. of tests for which the sample passed	= N/A

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Tests relating to Communicating Connection

EL 2129 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
6.2	Protection of equipment users from overvoltages on telecommunication networks*	EL 2129-00	Equipment is not for connection to telecommunication networks	N/A
6.2.1	Separation requirements	EL 2129-01	See above Cl. No. 6.2	N/A
6.2.2	Electric strength test procedure	EL 2129-02	See above Cl. No. 6.2	N/A
6.2.2.1	Impulse test	EL 2129-03	See above Cl. No. 6.2	N/A
6.2.2.2	Steady-state test	EL 2129-04	See above Cl. No. 6.2	N/A
6.2.2.3	Compliance criteria	EL 2129-05	See above Cl. No. 6.2	N/A

*-Total number of Requirements to be observed / inspected = 01
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 05
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

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Tests relating to Communicating Connection **EL 2130 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
6.3	Protection of the telecommunication wiring system from overheating	EL 2130-00	Equipment is not for connection to telecommunication wiring system	N/A
	a)If current limiting is due to the inherent impedance of the power source, the output current into any resistive load, including a short-circuit, is measured. The current limit shall not be exceeded after 60 s of test. Max. output current (A) :	EL 2130-01	See above Cl. No. 6.3	N/A
	b) If current limiting is provided by an overcurrent protective device having a specified time/current characteristic: – the time/current characteristic shall show that a current equal to 110 % of the current limit will be interrupted within 60 min; and	EL 2130-02	See above Cl. No. 6.3	N/A
	c) the output current into any resistive load, including a short-circuit, with the overcurrent protective device bypassed, measured after 60 s of test, shall not exceed 1 000/U, where U is the output voltage measured in accordance with 1.4.5 with all load circuits disconnected.	EL 2130-03	See above Cl. No. 6.3	N/A

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	d) If current limiting is provided by an overcurrent protective device that does not have a specified time/current characteristic: – the output current into any resistive load, including a short-circuit, shall not exceed the current limit after 60 s of test; and – the output current into any resistive load, including a short-circuit, with the overcurrent protective device bypassed, measured after 60 s of test, shall not exceed 1 000/U, where U is the output voltage measured in accordance with 1.4.5 with all load circuits disconnected.	EL 2130-04	See above Cl. No. 6.3	N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 05

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Connection to cable distribution system **EL 2131 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
7	Connection to cable distribution systems*	EL 2131-00	Equipment is not for connection to cable distribution systems	N/A
7.1	General requirements*	EL 2131-01	See above Cl. No. 7	N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment	EL 2131-02	See above Cl. No. 7	N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system	EL 2131-03	See above Cl. No. 7	N/A
7.4	Insulation between primary circuits and cable distribution systems	EL 2131-04	See above Cl. No. 7	N/A
7.4.1	General	EL 2131-05	See above Cl. No. 7	N/A
7.4.2	Voltage surge test	EL 2131-06	See above Cl. No. 7	N/A
7.4.3	Impulse test	EL 2131-07	See above Cl. No. 7	N/A

*-Total number of Requirements to be observed / inspected = 02
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 06
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Fire Safety

EL 2132 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE	EL 2132-00		P
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)	EL 2132-01	Mass<18kg	N/A
A.1.1	Samples:	EL 2132-02	See above Cl. No. A.1	N/A
	Wall thickness (mm):		See above Cl. No. A.1	N/A
A.1.2	Conditioning of samples; temperature (°C) :	EL 2132-03	See above Cl. No. A.1	N/A
A.1.3	Mounting of samples :	EL 2132-04	See above Cl. No. A.1	N/A
A.1.4	Test flame (see IEC 60695-11-3)	EL 2132-05	See above Cl. No. A.1	N/A
	Flame A, B, C or D :		See above Cl. No. A.1	N/A
A.1.5	Test procedure	EL 2132-06	See above Cl. No. A.1	N/A
A.1.6	Compliance criteria	EL 2132-07	See above Cl. No. A.1	N/A
	Sample 1 burning time (s):		See above Cl. No. A.1	N/A
	Sample 2 burning time (s):		See above Cl. No. A.1	N/A
	Sample 3 burning time (s):		See above Cl. No. A.1	N/A
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)	EL 2132-08	Certified materials used (see table 1.5.1)	P
A.2.1	Samples, material:	EL 2132-09	See above Cl. No. A.2	N/A
	Wall thickness (mm):		See above Cl. No. A.2	N/A
A.2.2	Conditioning of samples; temperature (°C) :	EL 2132-10	See above Cl. No. A.2	N/A
A.2.3	Mounting of samples :	EL 2132-11	See above Cl. No. A.2	N/A
A.2.4	Test flame (see IEC 60695-11-4)	EL 2132-12	See above Cl. No. A.2	N/A

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Discipline: Electronics		Group: IT Equipment

Tests relating to Fire Safety

EL 2132 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
	Flame A, B or C :		See above Cl. No. A.2	N/A
A.2.5	Test procedure	EL 2132-13	See above Cl. No. A.2	N/A
A.2.6	Compliance criteria	EL 2132-14	See above Cl. No. A.2	N/A
	Sample 1 burning time (s):		See above Cl. No. A.2	N/A
	Sample 2 burning time (s):		See above Cl. No. A.2	N/A
	Sample 3 burning time (s):		See above Cl. No. A.2	N/A
A.2.7	Alternative test acc. To IEC 60695-11-5, cl. 5 and 9	EL 2132-15	See above Cl. No. A.2	N/A
	Sample 1 burning time (s):		See above Cl. No. A.2	N/A
	Sample 2 burning time (s):		See above Cl. No. A.2	N/A
	Sample 3 burning time (s):		See above Cl. No. A.2	N/A
A.3	Hot flaming oil test (see 4.6.2)	EL 2132-16		N/A
A.3.1	Mounting of samples	EL 2132-17		N/A
A.3.2	Test procedure	EL 2132-18		N/A
A.3.3	Compliance criterion	EL 2132-19		N/A

*-Total number of Requirements to be observed / inspected = 00
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 20
Total No of applicable Tests = 02
No. of tests for which the sample passed = 02

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TEST REPORT

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Tests relating to Insulating Properties

EL 2133 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)	EL 2133-00	No motor used	N/A
B.1	General requirements	EL 2133-01	See above Cl. No. B	N/A
	Position :		See above Cl. No. B	N/A
	Manufacturer :		See above Cl. No. B	N/A
	Type :		See above Cl. No. B	N/A
	Rated values :		See above Cl. No. B	N/A
B.2	Test conditions	EL 2133-02	See above Cl. No. B	N/A
B.3	Maximum temperatures	EL 2133-03	See above Cl. No. B	N/A
B.4	Running overload test	EL 2133-04	See above Cl. No. B	N/A
B.5	Locked-rotor overload test	EL 2133-05	See above Cl. No. B	N/A
	Test duration (days):		See above Cl. No. B	N/A
	Electric strength test: test voltage (V) :		See above Cl. No. B	N/A
B.6	Running overload test for d.c. motors in secondary circuits	EL 2133-06	See above Cl. No. B	N/A
B.6.1	General	EL 2133-07	See above Cl. No. B	N/A
B.6.2	Test procedure	EL 2133-08	See above Cl. No. B	N/A
B.6.3	Alternative test procedure	EL 2133-09	See above Cl. No. B	N/A
B.6.4	Electric strength test; test voltage (V):	EL 2133-10	See above Cl. No. B	N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits	EL 2133-11	See above Cl. No. B	N/A
B.7.1	General	EL 2133-12	See above Cl. No. B	N/A
B.7.2	Test procedure	EL 2133-13	See above Cl. No. B	N/A
B.7.3	Alternative test procedure	EL 2133-14	See above Cl. No. B	N/A
B.7.4	Electric strength test; test voltage (V) :	EL 2133-15	See above Cl. No. B	N/A
B.8	Test for motors with capacitors	EL 2133-16	See above Cl. No. B	N/A

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B.9	Test for three-phase motors	EL 2133-17	See above Cl. No. B	N/A
B.10	Test for series motors	EL 2133-18	See above Cl. No. B	N/A
	Operating voltage (V) :		See above Cl. No. B	N/A

*-Total number of Requirements to be observed / inspected = 00
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 19
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TEST REPORT

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Tests relating to Electrical Safety

EL 2134 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)*	EL 2134-00		P
	Position :		See table 1.5.1	P
	Manufacturer :		See table 1.5.1	P
	Type :		See table 1.5.1	P
	Rated values :		See table 1.5.1	P
	Method of protection:		Overcurrent protection by circuit design	P
C.1	Overload test	EL 2134-01	See table 5.3	P
C.2	Insulation	EL 2134-02	See table 5.2 and C.2	P
	Protection from displacement of windings:		Windings mechanically secured and soldered to pins, insulations tapes and coil spacer tapes provided to avoid displacement	P

*-Total number of Requirements to be observed / inspected = 01
Total No of applicable Requirement = 01
No of Requirements for which the sample passed = 01

Total number of tests to be conducted = 02
Total No of applicable Tests = 02
No. of tests for which the sample passed = 02

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Discipline: Electronics		Group: IT Equipment

Tests relating to Insulating Properties

EL 2135 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)	EL 2135-00		P
D.1	Measuring instrument	EL 2135-01	Measuring instrument D.1 used	P
D.2	Alternative measuring instrument	EL 2135-02	Alternative measuring instrument not used	N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 03

Total No of applicable Tests = 02

No. of tests for which the sample passed = 02

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TEST REPORT

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Tests relating to Thermal Properties **EL 2136– V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)	EL2136-00		N/A

*-Total number of Requirements to be observed / inspected = 00
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 01
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested

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TEST REPORT

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Tests relating to Electrical Safety

EL 2137 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)	EL2137-00	Complies	P

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 01

Total No of applicable Tests = 01

No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TEST REPORT

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Tests relating to Electrical safety

EL 2138 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES	EL 2138-00	Alternative method not used	N/A
G.1	Clearances	EL 2138-01	See above Cl. No. G	N/A
G.1.1	General	EL 2138-02	See above Cl. No. G	N/A
G.1.2	Summary of the procedure for determining minimum clearances	EL 2138-03	See above Cl. No. G	N/A
G.2	Determination of mains transient voltage (V)	EL 2138-04	See above Cl. No. G	N/A
G.2.1	AC Mains supply	EL 2138-05	See above Cl. No. G	N/A
G.2.2	Earthed d.c. mains supplies	EL 2138-06	See above Cl. No. G	N/A
G.2.3	Unearthed d.c. mains supplies	EL 2138-07	See above Cl. No. G	N/A
G.2.4	Battery operation	EL 2138-08	See above Cl. No. G	N/A
G.3	Determination of telecommunication network transient voltage (V)	EL 2138-09	See above Cl. No. G	N/A
G.4	Determination of required withstand voltage (V)	EL 2138-10	See above Cl. No. G	N/A
G.4.1	Mains transients and internal repetitive peaks	EL 2138-11	See above Cl. No. G	N/A
G.4.2	Transients from telecommunication networks:	EL 2138-12	See above Cl. No. G	N/A
G.4.3	Combination of transients	EL 2138-13	See above Cl. No. G	N/A
G.4.4	Transients from cable distribution systems	EL 2138-14	See above Cl. No. G	N/A
G.5	Measurement of transient voltages (V)	EL 2138-15	See above Cl. No. G	N/A
	a) Transients from a mains supply		See above Cl. No. G	N/A
	For an a.c. mains supply		See above Cl. No. G	N/A
	For a d.c. mains supply		See above Cl. No. G	N/A
	b) Transients from a telecommunication network		See above Cl. No. G	N/A

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Discipline: Electronics		Group: IT Equipment

Tests relating to Electrical safety

EL 2138 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
G.6	Determination of minimum clearances	EL 2138-16	See above Cl. No. G	N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 17

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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SWASTIK ELECTRONICS TESTING CENTRE

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Tests relating to Radiation Safety **EL 2139 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
H	ANNEX H, IONIZING RADIATION (see 4.3.13)	EL 2139-00		N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 01

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Electrical Safety **EL 2140 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)*	EL 2140-00	No risk of corrosion	P
	Metal(s) used :		See above Cl. No. J	P

*-Total number of Requirements to be observed / inspected = 01
Total No of applicable Requirement = 01
No of Requirements for which the sample passed = 01

Total number of tests to be conducted = 00
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to General Requirement **EL 2141 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)*	EL 2141-00	No thermal controls	N/A
K.1	Making and breaking capacity	EL 2141-01	See above Cl. No. K	N/A
K.2	Thermostat reliability; operating voltage (V) :	EL 2141-02	See above Cl. No. K	N/A
K.3	Thermostat endurance test; operating voltage (V) :	EL 2141-03	See above Cl. No. K	N/A
K.4	Temperature limiter endurance; operating voltage (V) :	EL 2141-04	See above Cl. No. K	N/A
K.5	Thermal cut-out reliability	EL 2141-05	See above Cl. No. K	N/A
K.6	Stability of operation	EL 2141-06	See above Cl. No. K	N/A

*-Total number of Requirements to be observed / inspected = 01
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 06
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to General Requirement **EL 2142 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)*	EL 2142-00	See below	P
L.1	Typewriters*	EL 2142-01	See below Cl. No. L.7	N/A
L.2	Adding machines and cash registers*	EL 2142-02	See below Cl. No. L.7	N/A
L.3	Erasers*	EL 2142-03	See below Cl. No. L.7	N/A
L.4	Pencil sharpeners*	EL 2142-04	See below Cl. No. L.7	N/A
L.5	Duplicators and copy machines*	EL 2142-05	See below Cl. No. L.7	N/A
L.6	Motor-operated files*	EL 2142-06	See below Cl. No. L.7	N/A
L.7	Other business equipment*	EL 2142-07	Maximum normal load obtained by operating the equipment at rated output	P

*-Total number of Requirements to be observed / inspected = 08
Total No of applicable Requirement = 02
No of Requirements for which the sample passed = 02

Total number of tests to be conducted = 00
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TRF No. BIS_IT/PA_IS13252_V1.3

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Tests relating to Electrical Safety

EL 2143 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)	EL 2143-00	No telephone ringing signals used	N/A
M.1	Introduction*	EL 2143-01	See above Cl. No. M	N/A
M.2	Method A	EL 2143-02	See above Cl. No. M	N/A
M.3	Method B	EL 2143-03	See above Cl. No. M	N/A
M.3.1	Ringing signal	EL 2143-04	See above Cl. No. M	N/A
M.3.1.1	Frequency (Hz)	EL 2143-05	See above Cl. No. M	N/A
M.3.1.2	Voltage (V)	EL 2143-06	See above Cl. No. M	N/A
M.3.1.3	Cadence; time (s), voltage (V) ...	EL 2143-07	See above Cl. No. M	N/A
M.3.1.4	Single fault current (mA)	EL 2143-08	See above Cl. No. M	N/A
M.3.2	Tripping device and monitoring voltage	EL 2143-09	See above Cl. No. M	N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage	EL 2143-10	See above Cl. No. M	N/A
M.3.2.2	Tripping device	EL 2143-11	See above Cl. No. M	N/A
M.3.2.3	Monitoring voltage (V)	EL 2143-12	See above Cl. No. M	N/A

*-Total number of Requirements to be observed / inspected = 01
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 12
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TRF No. BIS_IT/PA_IS13252_V1.3

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Tests relating to Electrical safety

EL 2144 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)	EL 2144-00		N/A
N.1	ITU-T impulse test generators	EL 2144-01		N/A
N.2	IEC 60065 impulse test generator	EL 2144-02		N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 03

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to General Requirements **EL 2145– V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
P	ANNEX P, NORMATIVE REFERENCES	EL 2145-00		N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 01

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TEST REPORT

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Tests relating to General Requirements **EL 2146 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)	EL 2146-00	Certified Varistor (MOV1) used (See table 1.5.1)	P
	A VDR shall comply with iec 61051-2, whether a fire enclosure is provided or not, taking into account all of the following:		See above Cl. No. Q	P
	Preferred climatic categories Lower category temperature: -10°C Upper category temperature: +85°C Duration of damp Test, steady state test:21 days		See above Cl. No. Q	P
	b) Maximum continuous voltage: Atleast 1,25 times the rated voltage of the equipment or Atleast 1,25 times the upper voltage of the rated voltage range		See above Cl. No. Q	P
	c) Combination pulse :	EL 2146-01	See above Cl. No. Q	P
	d) Body of the VDR shall comply with Needle flame test according to IEC 60695-11-5 with the following test severities: duration of application of the test flame: 10 s after flame time: 5s [This test is not required if VDR complies with V-1 CLASS MATERIAL]	EL 2146-02	See above Cl. No. Q	P

*-Total number of Requirements to be observed / inspected = 00
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 03
Total No of applicable Tests = 03
No. of tests for which the sample passed = 03

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TRF No. BIS_IT/PA_IS13252_V1.3

TEST REPORT

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Tests relating to General Requirement **EL 2147– V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES*	EL 2147-00		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)*	EL 2147-01		N/A
R.2	Reduced clearances (see 2.10.3)*	EL 2147-02		N/A

*-Total number of Requirements to be observed / inspected = 03
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 00
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

SWASTIK ELECTRONICS TESTING CENTRE

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(Approving Authority)

TEST REPORT

Report No.: SETC22013005	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Date: 28/02/2022
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Tests relating to General Requirement **EL 2148 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)*	EL 2148-00		N/A
S.1	Test equipment*	EL 2148-01		N/A
S.2	Test procedure*	EL 2148-02		N/A
S.3	Examples of waveforms during impulse testing*	EL 2148-03		N/A

*-Total number of Requirements to be observed / inspected = 04
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 00
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested

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(Approving Authority)

TEST REPORT

Report No.: SETC22013005	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Date: 28/02/2022
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Discipline: Electronics		Group: IT Equipment

Tests relating to Protection against Ingress of water **EL 2149 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)	EL 2149-00	IPX0	N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 01

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TEST REPORT

Report No.: SETC22013005	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Date: 28/02/2022
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Discipline: Electronics		Group: IT Equipment

Tests relating to Wiring

EL 2150 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)	EL2150-00		N/A
U.1	General	EL2150-01		N/A
U.2	Type tests	EL2150-02		N/A
U.2.1	General	EL2150-03		N/A
U.2.2	Electric strength	EL2150-04		N/A
U.2.2.1	Solid round winding wire and stranded winding wires	EL2150-05		N/A
U.2.2.1.1	Wires with nominal conductor diameter upto and including 0.100mm	EL2150-06		N/A
U.2.2.1.2	Wires with nominal conductor diameter over 0.100mm and including 2.500mm	EL2150-07		N/A
U.2.2.1.3	Wires with nominal conductor diameter over 2.500mm	EL2150-08		N/A
U.2.2.2	Square or rectangular wires	EL2150-09		N/A
U.2.3	Flexibility and adherence	EL2150-10		N/A
U.2.4	Heat shock	EL2150-11		N/A
U.2.5	Retention of electric strength after bending	EL2150-12		N/A
U.3	Testing during manufacturing	EL2150-13		N/A
U.3.1	General	EL2150-14		N/A
U.3.2	Routine tests	EL2150-15		N/A
U.3.3	Sampling test	EL2150-16		N/A

*-Total number of Requirements to be observed / inspected = 00
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 17
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

Vaseem

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TRF No. BIS_IT/PA_IS13252_V1.3

Address : Plot No.-16, Mainapur Industrial Area
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TEST REPORT

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Tests relating to Electrical Safety

EL 2151 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1) *	EL 2151-00	TN power distribution systems used	P
V.1	Introduction*	EL 2151-01	See above Cl. No. V	P
V.2	TN power distribution systems	EL 2151-02	See above Cl. No. V	P
V.3	TT Power Distribution systems	EL 2151-03	See above Cl. No. V	N/A
V.4	IT Power Distribution systems	EL 2151-04	See above Cl. No. V	N/A

*-Total number of Requirements to be observed / inspected = 02

Total No of applicable Requirement = 02

No of Requirements for which the sample passed = 02

Total number of tests to be conducted = 03

Total No of applicable Tests = 01

No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TEST REPORT

Report No.: SETC22013005	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Date: 28/02/2022
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Tests relating to Electrical Safety **EL 2152 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
W	ANNEX W, SUMMATION OF TOUCH CURRENTS *	EL 2152-00	No such construction	N/A
W.1	Touch current from electronic circuits*	EL 2152-01	See above Cl. No. W	N/A
W.1.1	Floating circuits*	EL 2152-02	See above Cl. No. W	N/A
W.1.2	Earthed circuits*	EL 2152-03	See above Cl. No. W	N/A
W.2	Interconnection of several equipments*	EL 2152-04	See above Cl. No. W	N/A
W.2.1	Isolation*	EL 2152-05	See above Cl. No. W	N/A
W.2.2	Common return, isolated from earth*	EL 2152-06	See above Cl. No. W	N/A
W.2.3	Common return, connected to protective earth*	EL 2152-07	See above Cl. No. W	N/A

*-Total number of Requirements to be observed / inspected = 08
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 00
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested

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TEST REPORT

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Tests relating to Electrical Safety

EL 2153– V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)*	EL 2153-00		N/A
X.1	Determination of maximum input current*	EL 2153-01		N/A
X.2	Overload test procedure*	EL 2153-02		N/A

*-Total number of Requirements to be observed / inspected = 03

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 00

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TEST REPORT

Report No.: SETC22013005	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Date: 28/02/2022
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Tests relating to Radiation Safety **EL 2154– V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)	EL 2154-00		N/A
Y.1	Test apparatus	EL 2154-01		N/A
Y.2	Mounting of test samples	EL 2154-02		N/A
Y.3	Carbon-arc light-exposure apparatus	EL 2154-03		N/A
Y.4	Xenon-arc light exposure apparatus	EL 2154-04		N/A

*-Total number of Requirements to be observed / inspected = 00
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 05
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TEST REPORT

Report No.: SETC22013005	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Date: 28/02/2022
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Tests relating to Electrical Safety **EL 2155– V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)*	EL 2155-00	OVC II .	P

*-Total number of Requirements to be observed / inspected = 01

Total No of applicable Requirement = 01

No of Requirements for which the sample passed = 01

Total number of tests to be conducted = 00

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TEST REPORT

Report No.: SETC22013005	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Date: 28/02/2022
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Tests relating to Mechanical Properties **EL 2156 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)	EL 2156-00		N/A

*-Total number of Requirements to be observed / inspected = 00
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 01
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TEST REPORT

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Tests relating to Electrical Safety

EL 2158 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
CC	Evaluation of integrated circuit (IC) current limiters*	EL 2158-00	No integrated circuit current limiters used	N/A
CC.1	Integrated circuit (IC) current limiters*	EL 2158-01	See above Cl. No. CC	N/A
CC.2	Test program 1	EL 2158-02	See above Cl. No. CC	N/A
CC.3	Test program 2	EL 2158-03	See above Cl. No. CC	N/A
CC.4	Test program 3	EL 2158-04	See above Cl. No. CC	N/A
CC.5	Compliance	EL 2158-05	See above Cl. No. CC	N/A

*-Total number of Requirements to be observed / inspected = 02

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 04

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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TEST REPORT

Report No.: SETC22013005	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Date: 28/02/2022
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Discipline: Electronics		Group: IT Equipment

Tests relating to Mechanical Properties **EL 2159 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
DD	Requirements for the mounting means of rack-mounted equipment*	EL 2159-00	No such equipment	N/A
DD.1	General		See above Cl. No. DD	N/A
DD.2	Mechanical strength test, variable N.....:	EL 2159-01	See above Cl. No. DD	N/A
DD.3	Mechanical strength test, 250N, including end stops.....:	EL 2159-02	See above Cl. No. DD	N/A
DD.4	Compliance*.....:	EL 2159-03	See above Cl. No. DD	N/A

*-Total number of Requirements to be observed / inspected = 02
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 02
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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Tests relating to Mechanical Properties

EL 2160 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
EE	ANNEX EE, Household and home/office document/media shredders	EL 2160-00		N/A
EE.1	General			N/A
EE.2	Markings and instructions*	EL 2160-01		N/A
	Use of markings or symbols*.....:			N/A
	Information of user instructions, maintenance and/or servicing instructions*.....:			N/A
EE.3	Inadvertent reactivation test.....:	EL 2160-02		N/A
EE.4	Disconnection of power to hazardous moving parts*	EL 2160-03		N/A
	Use of markings or symbols*.....:			N/A
EE.5	Protection against hazardous moving parts			N/A
	Test with test finger (Figure 2A) .....:	EL 2160-04		N/A
	Test with wedge probe (Figure EE1 and EE2) .....:	EL 2160-05		N/A

*-Total number of Requirements to be observed / inspected = 02
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 04
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ failing in the requirement tested

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TRF No. BIS_IT/PA_IS13252_V1.3

TEST REPORT

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1.5.1	TABLE: List of components				P
Object/part no.	**Manufacturer/ trademark**	**Type/model**	**Technical data**	**Standard**	**Mark(s) of conformity[1].**
Plastic Enclosure	SABIC INNOVATIVE PLASTICS B V	945(GG)	V-0, 130°C, Min. thickness 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E45329
Alternate	SABIC INNOVATIVE PLASTICS B V	SE1	V-1, 110°C, Min. thickness 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E45329
Alternate	SABIC INNOVATIVE PLASTICS B V	SE1X(GG)(f1)	V-1, 110°C, Min. thickness 2.0mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E45329
Alternate	SABIC INNOVATIVE PLASTICS B V	SE100	V-1, 95°C, Min. thickness 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E45329
Alternate	SABIC INNOVATIVE PLASTICS B V	HF500R(f2)	V-0, 130°C, Min. thickness 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E45329
Alternate	SABIC INNOVATIVE PLASTICS B V	C2950	V-0, 85°C, Min. thickness 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E45329
Alternate	SABIC INNOVATIVE PLASTICS B V	CX7211(GG)	V-0, 90°C, Min. thickness 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E45329
Alternate	SABIC JAPAN L L C	945(GG)	V-0, 130°C, Min. thickness 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E207780
Alternate	SABIC JAPAN L L C	SE1	V-1, 110°C, Min. thickness 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E207780
Alternate	SABIC JAPAN L L C	SE1X(GG)(C)(f1)	V-1, 110°C, Min. thickness 2.0mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E207780
Alternate	SABIC JAPAN L L C	SE100	V-1, 95°C, Min. thickness 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E207780

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Alternate	SABIC JAPAN L L C	C2950(GG)(C)	V-0, 85°C, Min. thickness 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E207780
Alternate	SABIC JAPAN L L C	CX7211(GG)	V-0, 90°C, Min. thickness 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E207780
Alternate	TEIJIN LIMITED RESIN AND PLASTIC	LN-1250G(#)(*)	V-0, 125°C, Min. thickness 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E50075
Appliance Inlet (CON1) (C14 type)	LECI Electronics Co., Ltd	DB-14	10A, 250V~	IEC 60320-1:2015/ AMD1:2018	VDE 40032137
Alternate	Rich Bay Co., Ltd.	R-301SN	10A, 250V~	IEC 60320-1:2015	VDE 40030228
Alternate	Sun Fair Electric Wire & Cable (HK) Co. Ltd.	S-03	10A, 250V~	IEC 60320-1:2015	VDE 40034447
Alternate	TECX-UNIONS TECHNOLOGY CORP	TU-301-S, TU-301-SP	10A, 250V~	EN 60320-1:2015 (Equivalent to IEC 60320-1) EN 60320-3:2014 (Equivalent to IEC 60320-3)	ENEC-01898
Alternate	Rong Feng Industrial Co., Ltd.	SS-120	10A, 250V~	IEC 60320-1:2015	VDE 40028101
Alternate	Inalways Corporation	0711	10A, 250V~	EN 60320-1:2001 + A1:2007 (Equivalent to IEC 60320-1)	ENEC/FI 2010084
Alternate	Zhe Jiang Bei Er Jia Electronic Co., Ltd.	ST-A01-003J	10A, 250V~	IEC 60320-1:2015/ AMD1:2018	VDE 40013388
Fuse (F1, F2)	CONQUER ELECTRONICS CO LTD	MST	T1.6A, 250V	UL 248-1 UL 248-14 (Equivalent to IEC 60127-1) IEC 60127-1:2006 /AMD1:2011 /AMD2:2015 IEC 60127-3:2015	UL E82636 VDE 40017118
Alternate	Conquer Electronics Co., Ltd.	MET	T1.6A, 250V	IEC 60127-1:2006 /AMD1:2011 /AMD2:2015 IEC 60127-3:2015	VDE 40017157

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Alternate	EVER ISLAND ELECTRIC CO LTD & WALTER ELECTRIC (UL) Suzhou Walter Electronic Co. Ltd. (VDE)	2010	T1.6A, 250V	UL 248-1 UL 248-14 (Equivalent to IEC 60127-1) IEC 60127-1:2006 /AMD1:2011 /AMD2:2015 IEC 60127-3:2015	UL E220181 VDE 40018781
Alternate	Bel Fuse Ltd.	RST	T1.6A, 250V	IEC 60127-1:2006 /AMD1:2011 /AMD2:2015 IEC 60127-3:2015	VDE 40011144
Alternate	Bel Fuse Ltd.	RSTA	T1.6A, 250V	IEC 60127-1:2006 /AMD1:2011 /AMD2:2015 IEC 60127-3:2015	VDE 40039089
Alternate	COOPER BUSSMANN LLC	SS-5	T1.6A, 250V	UL 248-1 UL 248-14 (Equivalent to IEC 60127-1) IEC 60127-1:2006 /AMD1:2011 /AMD2:2015 IEC 60127-3:2015	UL E19180 VDE 40015513
Alternate	Shenzhen Lanson Electronics Co. Ltd.	SMT	T1.6A, 250V	IEC 60127-1:2006 /AMD1:2011 /AMD2:2015 IEC 60127-3:2015	VDE 40012592
Alternate	DONGGUAN BETTER ELECTRONICS TECHNOLOGY CO LTD	932	T1.6A, 250V	UL 248-1 UL 248-14 (Equivalent to IEC 60127-1) IEC 60127-1:2006 /AMD1:2011 /AMD2:2015 IEC 60127-3:2015	UL E300003 VDE 40033369
Alternate	HOLLYLAND CO LTD (UL) Hollyland Company Limited (VDE)	5ET	T1.6A, 250V	UL 248-1 UL 248-14 (Equivalent to IEC 60127-1) IEC 60127-1:2006 /AMD1:2011 /AMD2:2015 IEC 60127-3:2015	UL E156471 VDE 40015669
Alternate	Sunny East Enterprise Co. Ltd.	CFD	T1.6A, 250V	IEC 60127-1:2006 /AMD1:2011 /AMD2:2015 IEC 60127-3:2015	VDE 40030246

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ULR: TC757522000000191P	IEC 60950-1: 2005 + A1:2009 + A2 : 2013	Page: 104 of 122
Discipline: Electronics		Group: IT Equipment

Alternate	ZHONG SHAN LANBAO ELECTRICAL APPLIANCES CO LTD	RTI-10	T1.6A, 250V	UL 248-1 UL 248-14 (Equivalent to IEC 60127-1) IEC 60127-1:2006 /AMD1:2011 /AMD2:2015 IEC 60127-3:2015	UL E213695 VDE 40017009
Varistor (MOV1) (Optional)	SUCCESS ELECTRONICS CO LTD	SVR10D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1:2007 IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2:1991	VDE 40030401
Alternate	SUCCESS ELECTRONICS CO LTD	SVR14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1:2007 IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2:1991	VDE 40030401
Alternate	Thinking Electronic Industrial Co., Ltd	TVR10471K, TVR14471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1:2007 IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2:1991	VDE 005944
Alternate	Centra Science Corp.	10D471K, 14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1:2007 IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2:1991	VDE 40008220
Alternate	Walsin Technology Corp.	VZ10D471K, VZ14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1:2007 IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2:1991	VDE 40010090
Alternate	BestBright Electronics Co. Ltd	10D471K, 14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1:2007 IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2:1991	VDE 40005858
Alternate	Ceramate Techn. Co., Ltd.	GNR10D471K GNR14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1:2007 IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2:1991	VDE 40031745
Alternate	Brightking (Shenzhen) Co., Ltd.	10D471K, 14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1:2007 IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2:1991	VDE 40027827

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Alternate	Joyin Co., Ltd.	10N471K, 14N471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1:2007 IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2:1991	VDE 005937
X-Capacitor (CX1) (Optional)	ULTRA TECH XIPHI ENTERPRISE CO LTD	HQX	0.22µF, 275 Vac, 110°C, X2 type	UL 60384-14 (Equivalent to IEC 60384-14) IEC 60384-14:2013 /AMD1:2016	UL E183780 VDE 40015608
Alternate	Cheng Tung Industrial Co Ltd	CTX	0.22µF, Min. 250 Vac, 100°C, X1 or X2 type	EN 60384-14:2013/ A1:2016 (Equivalent to IEC 60384-14)	ENEC-02671
Alternate	TENTA ELECTRIC INDUSTRIAL CO LTD	MEX	0.22µF, Min. 250 Vac, 100°C, X1 or X2 type	UL 60384-14 (Equivalent to IEC 60384-14) IEC 60384-14:2013 /AMD1:2016	UL E222911 VDE 119119
Alternate	JOEY ELECTRONICS (DONG GUAN) CO LTD	MPX	0.22µF, Min. 250 Vac, 110°C, X1 or X2 type	UL 60384-14 (Equivalent to IEC 60384-14) IEC 60384-14:2013 /AMD1:2016	UL E216807 VDE 40032481
Alternate	Sinhua Electronics (Huzhou) Co., Ltd	MPX	0.22µF, 300 Vac, 110°C, X1 type	IEC 60384-14:2013 /AMD1:2016	VDE 40014686
Alternate	Jiangsu Xinghua Huayu Electronics Co., Ltd.	MPX	0.22µF, 275 Vac, 100°C, X2 type	IEC 60384-14:2013 /AMD1:2016	VDE 40022417
Alternate	DAIN ELECTRONICS CO LTD	MEX, MPX, NPX	0.22µF, Min. 250 Vac, 100/110°C, X1 or X2 type	UL 60384-14 (Equivalent to IEC 60384-14) IEC 60384-14:2013 /AMD1:2016	UL E147776 VDE 40018798
Alternate	Shenzhen Jinghao Capacitor Co., Ltd.	CBB62B	0.22µF, Min. 250 Vac, 110°C, X2 type	IEC 60384-14:2013 /AMD1:2016	VDE 40018690
Bridging Y-Capacitor (CY1, CY2) (CY2 Optional)	SUCCESS ELECTRONICS CO LTD	SE	2200 pF, Min. 250 Vac, 125°C, Y1 type	UL 60384-14 (Equivalent to IEC 60384-14) IEC 60384-14:2013 /AMD1:2016	UL E114280 VDE 40037211

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Alternate	SUCCESS ELECTRONICS CO LTD	SB	2200 pF, Min. 250 Vac, 125°C, Y1 type	UL 60384-14 (Equivalent to IEC 60384-14) IEC 60384-14:2013 /AMD1:2016	UL E114280 VDE 40037221
Alternate	TDK CORPORATION	CD	2200 pF, Min. 250 Vac, 85/125°C, Y1 type	UL 60384-14 (Equivalent to IEC 60384-14) IEC 60384-14:2013 /AMD1:2016	UL E37861 VDE 40029780
Alternate	Murata Mfg. Co., Ltd.	KX	2200 pF, Min. 250 Vac, 125°C, Y1 type	UL 60384-14 (Equivalent to IEC 60384-14) IEC 60384-14:2013 /AMD1:2016	UL E37921 VDE 40002831
Alternate	Walsin Technology Corp	AH	2200 pF, Min. 250 Vac, 125°C, Y1 type	UL 60384-14 (Equivalent to IEC 60384-14) IEC 60384-14:2013 /AMD1:2016	UL E146544 VDE 40001804
Alternate	HAOHUA ELECTRONIC CO.	CT7	2200 pF, Min. 250 Vac, 125°C, Y1 type	UL 60384-14 (Equivalent to IEC 60384-14) IEC 60384-14:2013 /AMD1:2016	UL E233106 VDE 40003902
Alternate	Jyh Chung Electronic Co., Ltd.	JD	2200 pF, Min. 250 Vac, 85/125°C, Y1 type	IEC 60384-14:2013 /AMD1:2016	VDE 137027
Photo Coupler (U3)	Everlight Electronics Co., Ltd.	EL817	Dti=0.5mm Int. dcr=6.0mm EXT.dcr=7.7mm, thermal cycling test,110°C	IEC 60747-5-5: 2007/AMD1:2013	VDE 132249
Alternate	COSMO Electronics Corporation	K1010, KP1010	Dti=0.6mm Int. dcr=4.0mm EXT.dcr=5.0mm, thermal cycling test,115°C	EN 60747-5-5:2011 +A1:2015 (Equivalent to IEC 60747-5-5)	VDE 101347
Alternate	Lite-On Technology Corporation	LTV-817	Dti=0.8 mm, Ext. dcr=7.8mm, thermal cycling test,100°C	IEC 60747-5-5: 2007/AMD1:2013	VDE 40015248
Alternate	Fairchild Semiconductor Pte Ltd	H11A817B / FOD817B	Int. Cr/ Ext. Cr: ≥7.0mm; 30/110/21	IEC 60747-5-5: 2007/AMD1:2013	VDE 40026857

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Alternate	Sharp Corporation	PC817	Int. Cr/ Ext. Cr: 7.62mm; 30/100/21	IEC 60747-5-5: 2007/AMD1:2013	VDE 40008087
Alternate	Bright Led Electronics Corp.	BPC-817 (A; B; C; D; L), BPC-817 M, BPC-817 S	Dti=0.4mm Ext. dcr=7.0mm, thermal cycling test,100°C	IEC 60747-5-5: 2007/AMD1:2013	VDE 40007240
Alternate	Toshiba Electronic Devices & Storage Corporation	TLP781F	Dti > 0,4mm, Ext cr > 8,0mm, Thermal cycling test,110°C	IEC 60747-5-5: 2007/AMD1:2013	VDE 40021173
Line Filter (LF1)	WUXI HAOPUWEI ELECTRONICS CO.,LTD	NF00001D	130°C	IS13252 (Part1): 2010+ A1:2013 +A2:2015 /IEC 60950-1:2005 +A1: 2009+A2:2013	Tested within equipment
Bobbin	CHANG CHUN PLASTICS CO LTD	T375J	Phenolic, V-0, 150°C	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E59481
Alternate	CHANG CHUN PLASTICS CO LTD	T375HF	Phenolic, V-0, 150°C	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E59481
Magnet wire	NINGBO JINTIAN NEW MATERIAL CO LTD	2UEW/155	155°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E227047
Insulation Tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT	130°C	UL 510 (No equivalent IEC standard)	UL E165111
Varnish	SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD	T-4260(a)	130°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E228349
Transformer (T1)	WUXI HAOPUWEI ELECTRONICS CO.,LTD	TF046	Class B	IS13252(Part1): 2010+ A1:2013 +A2:2015 /IEC 60950-1:2005 +A1: 2009+A2:2013	Tested within equipment
Alternate	WUXI HAOPUWEI ELECTRONICS CO.,LTD	TF045	Class B	IS13252(Part1): 2010+ A1:2013 +A2:2015 /IEC 60950-1:2005 +A1: 2009+A2:2013	Tested within equipment

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Alternate	WUXI HAOPUWEI ELECTRONICS CO.,LTD	TF044	Class B	IS13252(Part1): 2010+ A1:2013 +A2:2015 /IEC 60950-1:2005 +A1: 2009+A2:2013	Tested within equipment
Alternate	WUXI HAOPUWEI ELECTRONICS CO.,LTD	TF043	Class B	IS13252(Part1): 2010+ A1:2013 +A2:2015 /IEC 60950-1:2005 +A1: 2009+A2:2013	Tested within equipment
Alternate	WUXI HAOPUWEI ELECTRONICS CO.,LTD	TF042	Class B	IS13252(Part1): 2010+ A1:2013 +A2:2015 /IEC 60950-1:2005 +A1: 2009+A2:2013	Tested within equipment
Bobbin	CHANG CHUN PLASTICS CO LTD	4130	V-0, 140°C	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E59481
Alternate	CHANG CHUN PLASTICS CO LTD	T375J, T375HF	V-0, 150°C	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E59481
Alternate	SUMITOMO BAKELITE CO LTD	PM-9820	V-0, 150°C	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E41429
Alternate	Showa Denko Materials Techno Service Co., Ltd.	CP-J-8800	V-0, 150°C	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E514814
Magnet wire	NINGBO JINTIAN NEW MATERIAL CO LTD	2UEW/130	130°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E227047
Alternate	WUXI JUFENG COMPOUND LINE CO LTD	2UEWB	130°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E206882
Triple insulated wire	GREAT LEOFLON INDUSTRIAL CO LTD	TRW(B)*	130°C	UL 2353 (Equivalent to applicable parts of IEC 60950-1) IEC 62368-1:2014	UL E211989 VDE 136581

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Alternate	KBI COSMOLINK CO.,LTD.	TIW-M	130°C	UL 2353 (Equivalent to applicable parts of IEC 60950-1) IEC 62368-1:2014	UL E213764 VDE 138053
Alternate	Furukawa Electric Co., Ltd.	TEX-E	130°C	UL 2353 (Equivalent to applicable parts of IEC 60950-1) IEC 62368-1:2014	UL E206440 VDE 006735
Alternate	SHENZHEN JIUDING NEW MATERIAL CO LTD	DTFW-B	130°C	UL 2353 (Equivalent to applicable parts of IEC 60950-1) IEC 62368-1:2014	UL E357999 VDE 40037495
Alternate	TOTOKU ELECTRIC CO LTD	TIW-2X$+	130°C	UL 2353 (Equivalent to applicable parts of IEC 60950-1)	UL E166483
Alternate	E&B TECHNOLOGY CO LTD	E&B-XXXB	130°C	UL 2353 (Equivalent to applicable parts of IEC 60950-1)	UL E315265
Insulation Tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT	130°C	UL 510 (No equivalent IEC standard)	UL E165111
Alternate	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT (b)(g), CT* (c)(g), PZ* (b)	130°C	UL 510 (No equivalent IEC standard)	UL E165111
Alternate	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350F-1 (b), 1350T-1, 44	130°C	UL 510 (No equivalent IEC standard)	UL E17385
Alternate	BONDTEC PACIFIC CO LTD	370S (b)	130°C	UL 510 (No equivalent IEC standard)	UL E175868
Alternate	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A (b)	130°C	UL 510 (No equivalent IEC standard)	UL E246950

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Alternate	CHANG SHU LIANG YI TAPE INDUSTRY CO LTD	LY-XX*	130°C	UL 510 (No equivalent IEC standard)	UL E246820
Varnish	SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD	T-4260(a)	130°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E228349
Tube	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	WF	600V, 200°C	UL 224 (No equivalent IEC standard)	UL E203950
Internal Earthing Wire	I-Sheng Electronics (KunShan) Co. Ltd	PVC insulated	0.75mm^2	IS 694: 2010	BIS CM/L-4035746
Alternate	Well Shin Electronic (Kunshan) Co. Ltd	PVC insulated	0.75mm^2	IS 694: 2010	BIS CM/L-4044848
Alternate	Dongguan Yung Li Co. Ltd	PVC insulated	0.75mm^2	IS 694: 2010	BIS CM/L-4041337
Sleeving on Internal wire	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR-H	600V, 125°C	UL 224 (No equivalent IEC standard)	UL E203950
Alternate	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR, RSFR-HPF	600V, 125°C	UL 224 (No equivalent IEC standard)	UL E203950
Alternate	QIFURUI ELECTRONICS CO	QFR-h	600V, 125°C	UL 224 (No equivalent IEC standard)	UL E225897
Alternate	DONGGUAN SALIPT CO LTD	SALIPT S-901-300, SALIPT S-901-600	Min. 300V, 125°C	UL 224 (No equivalent IEC standard)	UL E209436
Alternate	GUANGZHOU KAIHENG ENTERPRISE GROUP	K-2 (CB)	300V, 125°C	UL 224 (No equivalent IEC standard)	UL E214175

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Alternate	CHANGYUAN ELECTRONICS GROUP CO LTD	CB-HFT	Min. 300V, 125°C	UL 224 (No equivalent IEC standard)	UL E180908
PCB	DAFENG AREX ELECTRONICS TECHNOLOGY CO LTD	04V0	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E186016
Alternate	DAFENG AREX ELECTRONICS TECHNOLOGY CO LTD	02V0	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E186016
Alternate	WALEX ELECTRONIC (WUXI) CO LTD	T2, T2A, T2B, T4	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E154355
Alternate	GUANGDONG HETONG TECHNOLOGY CO LTD	CEM1, 2V0, FR4	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E243157
Alternate	CHEERFUL PLASTIC ELECTRONIC PRODUCTS	02, 03, 03A	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E199724
Alternate	DONGGUAN DAYSUN ELECTRONIC CO LTD	DS2	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E251754

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Alternate	SUZHOU CITY YILIHUA ELECTRONICS CO LTD	YLH-1	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E251781
Alternate	BRITE PLUS ELECTRONICS (SUZHOU) CO LTD	DKV0-3A, DGV0-3A	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E177671
Alternate	KUOTIANG ENT LTD	C-2, C-2A	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E227299
Alternate	SHENZHEN TONGCHUANGXIN ELECTRONICS CO LTD	TCX	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E250336
Alternate	PACIFIC WIN INDUSTRIAL LTD	PW-02, PW-03	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E228070
Alternate	YUANMAN PRINTED CIRCUIT CO LTD	1V0	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E74757

Alternate	GUANGDE XINKE ELECTRONICS CO LTD	XK-2	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E231590
Alternate	GUANGDE XINKE ELECTRONICS CO LTD	XK-1	V-1, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E231590
Alternate	JIANGSU DIFEIDA ELECTRONICS CO LTD	DFD-1	V-0, 130°C	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No equivalent IEC standard)	UL E213009
Power cord set					
Power Plug	Longwell Company Song Gang Factory	LP-67	10A, 250V~	IS 1293:2005	BIS CM/L-4009947
Alternate	I-Sheng Electronics (KunShan) Co. Ltd	SP-81A	10A, 250V~	IS 1293:2005	BIS CM/L-4035847
Alternate	U.K.B. Electronics Pvt. Ltd (Unit-1)	3 Pin Plug	6A, 250V~	IS 1293:2019	BIS CM/L-8746803
Alternate	Volex Cable Assembly (Shenzhen) Co. Ltd.,	IA6A3	10A, 250V~	IS 1293:2005	BIS CM/L-4100003853
Power Cord	Longwell Company Song Gang Factory	PVC insulated cable	3 X 0.75 mm^2, 1100V	IS 694 : 2010	BIS CM/L-4009846
Alternate	Longwell Company Song Gang Factory	PVC insulated cable	3 X 1.0 mm^2, 1100V	IS 694 : 2010	BIS CM/L-4009846
Alternate	I-Sheng Electronics (KunShan) Co. Ltd	PVC Insulated	3 X 0.75mm^2, 1100V	IS 694:2010	BIS CM/L-4035746

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Alternate	U.K.B. ELECTRONICS PVT LTD, (UNIT-II)	PVC Insulated	3 X 0.75mm^2, 1100V	IS 694:2010	BIS CM/L-3043841
Alternate	Fund Resources Electric Industry Co. Ltd. Shangang	PVC Insulated	3 X 0.75mm^2, 1100V	IS 694:2010	BIS CM/L-4035647
Connector	Longwell Company	LS-60	10A, 250V~	IEC 60320-1:2015	VDE 40029578
Alternate	Longwell Company	LS-60L	10A, 250V~	IEC 60320-1:2015	VDE 40029815
Alternate	Longwell Company	LS-13	10A, 250V~	IEC 60320-1:2015	VDE 40013742
Alternate	Longwell Company	LS-13L	10A, 250V~	IEC 60320-1:2015	VDE 40013739
Alternate	I-Sheng Electric Wire & Cable Co., Ltd.	IS-14	10A, 250V~	IEC 60320-1:2015	VDE 40037879
Alternate	Volex	V1625A	10A, 250V~	IEC 60320-1:2015	CB by VDE Ref. no. DE1-60443
Alternate	Kenic Electric Mfg. Co. Ltd.	KE-26	10A, 250V~	IEC 60320-1:2015/ AMD1:2018	VDE 40002259

Supplementary information:

1. Evidences provided by the manufacturer for the listed components are verified by us and the evidences are conforming to the requirements of the relevant standard.

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1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
90.0	0.394	--	21.37	F1, F2	0.394	Maximum normal load at 50 Hz (Condition 1)
100.0	0.364	0.6	21.14	F1, F2	0.364	
240.0	0.178	0.6	20.48	F1, F2	0.178	
254.4	0.168	--	20.41	F1, F2	0.168	
90.0	0.391	--	21.34	F1, F2	0.391	Maximum normal load at 50 Hz (Condition 2)
100.0	0.362	0.6	21.11	F1, F2	0.362	
240.0	0.177	0.6	20.46	F1, F2	0.177	
254.4	0.169	--	20.43	F1, F2	0.169	
90.0	0.393	--	21.38	F1, F2	0.393	Maximum normal load at 50 Hz (Condition 3)
100.0	0.366	0.6	21.14	F1, F2	0.366	
240.0	0.177	0.6	20.46	F1, F2	0.177	
254.4	0.165	--	20.39	F1, F2	0.165	
90.0	0.396	--	21.41	F1, F2	0.396	Maximum normal load at 50 Hz (Condition 4)
100.0	0.365	0.6	21.17	F1, F2	0.365	
240.0	0.177	0.6	20.49	F1, F2	0.177	
254.4	0.168	--	20.43	F1, F2	0.168	
90.0	0.391	--	21.37	F1, F2	0.391	Maximum normal load at 50 Hz (Condition 5)
100.0	0.363	0.6	21.12	F1, F2	0.363	
240.0	0.175	0.6	20.46	F1, F2	0.175	
254.4	0.166	--	20.39	F1, F2	0.166	
Supplementary information: *Conditon 1, 2, 3, 4 & 5 is described on page no. 19 of 122						

2.1.1.5	TABLE: Energy hazard measurement				P
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
48Vdc	0.375	48.432Vdc	0.485	23.393	
Supplementary information:					

2.1.1.7	TABLE: Discharge test			P
Condition	τ calculated (s)	τ measured (s)	t u→ 0V (s)	Comments
Fuse in	--	0.34	--	Line to neutral
Supplementary information: Uoc=340Vpeak, 37% of Uoc=126Vpeak, measured voltage after 1 sec.= 0V				

2.2.2	TABLE: SELV measurement (under normal conditions)			P
Transformer	Location	Voltage (max.) (V)		Voltage Limitation Component
		V peak	V d.c.	
T1	Pin A and Pin B	34	--	--
--	Output	--	48.432	--
Supplementary information:				

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2.2.3	TABLE: SELV measurement (under fault conditions)	P
Location	Voltage (max.) (V)	Comments
C12 (S-C)	0.0	Output shutdown immediately
Transformer (T1) Pin (A-B) (S-C)	0.0	Unit shutdown immediately
Supplementary information: (S-C)=short circuit		

2.4.2	TABLE: Limited current circuit measurement					P
Location	Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments	
Bridging Y-Capacitor (CY1)	2.28	1.14	2.18	1.526	2 KΩ resistor used	
Bridging Y-Capacitor (CY2)	2.24	1.12	2.18	1.526	2 KΩ resistor used	
Supplementary information:						

2.5	TABLE: Limited power source measurement		P
	Max. Limits	Measured	Verdict
According to Table 2B/2C (normal condition) Output (Uoc = 48.432Vdc)			
current (in A)	8	0.485	P
apparent power (in VA)	100	23.393	P
According to Table 2B/2C (single fault condition) R16 (S-C), Output = 0.0Vdc			
current (in A)	8	0.0	P
apparent power (in VA)	100	0.0	P
Supplementary information: S-C = Short-Circuit			

2.6.3.4	TABLE: Resistance of earthing measurement	P
Location	Resistance measured (Ω)	Comments
Appliance inlet Earthing pin to farthest earthed part	0.016	V1=0.14V, V2=0.66V, V2-V1=0.52V
Supplementary information: Tested current :32A and Test Time: 2 minutes		

<OR>

2.6.3.4	TABLE: Resistance of earthing measurement	N/A
Location	Voltage drop (V)	Comments
--	--	--
Supplementary information: Tested current 40A.		

2.10.2	Table: Working voltage measurement		P
Location	RMS voltage (V)	Peak voltage (V)	Comments
Line to Neutral	240	340	--
T1 (Pin 1 to Pin A)	196	282	--
T1 (Pin 1 to Pin B)	244	352	--
T1 (Pin 2 to Pin A)	112	166	--
T1 (Pin 2 to Pin B)	116	168	--
T1 (Pin 3 to Pin A)	148	212	--
T1 (Pin 3 to Pin B)	152	226	--
T1 (Pin 4 to Pin A)	168	242	--

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T1 (Pin 4 to Pin B)	172	254	--
T1 (Pin 5 to Pin A)	124	188	--
T1 (Pin 5 to Pin B)	132	192	--
Supplementary information:			

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements					P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Functional:						
Line to Neutral	340	240	2.3	5.88	2.5	5.88
Basic / supplementary:						
Line to Earth	340	240	3.0	4.06	3.0	4.06
Reinforced:						
Transformer (T1) (primary pin to secondary trace)	352	244	6.0	13.85	6.0	13.85
Supplementary information:						

2.10.5	TABLE: Distance through insulation measurements				P
Distance through insulation (DTI) at/of:	U peak (V)	U r.m.s. (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Basic:					
--	--	--	--	--	--
Supplementary:					
--	--	--	--	--	--
Reinforced:					
Insulation tape of transformer (T1)	352	244	3000	Min. 2 layers	2 layers
Supplementary information:					

4.3.8	TABLE: Batteries								N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available				No battery used					N/A
Is it possible to install the battery in a reverse polarity position?				See above					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 condition	--	--	--	--	--	--	--	--	--

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	--	--
Supplementary information: No battery used		

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4.5	TABLE: Temperature rise measurements	P

Temperatures were measured according cl. 1.4.5. Test in condition A and B at continuous normal operation as for power input measurements of table 1.6.2 resulted in highest temperature values.
Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of 40°C (T_{ma}) as specified by the manufacturer.

test voltage(s) (V): (Condition 1)	A: 90.0V, 50 Hz	B: 254.4V, 50 Hz
t_{amb1} (°C): A: 23°C B: 23°C	t_{amb2} (°C):	A: 23°C B: 23°C

Temperature of part/at: (measured with thermocouples)	Measured temperature rise at T_{amb}		Calculated temperature at T_{ma}		Allowed T_{max} (°C)
	A dT (K)	B dT (K)	A T (°C)	B T (°C)	
Transformer (T1) Coil	31	34	71	74	110
Line Filter (LF1) core	22	24	62	64	130
Plastic Enclosure (Top surface)	8	9	48	49	95
PCB near fuse (F1)	15	17	55	57	130

test voltage(s) (V): (Condition 2)	A: 90.0V, 50 Hz	B: 254.4V, 50 Hz
t_{amb1} (°C): A: 23°C B: 23°C	t_{amb2} (°C):	A: 23°C B: 23°C

Temperature of part/at: (measured with thermocouples)	Measured temperature rise at T_{amb}		Calculated temperature at T_{ma}		Allowed T_{max} (°C)
	A dT (K)	B dT (K)	A T (°C)	B T (°C)	
Transformer (T1) Core	33	36	73	76	120
Line Filter (LF1) core	23	25	63	65	130
Plastic Enclosure (Top surface)	9	10	49	50	95
PCB near fuse (F1)	16	18	56	58	130

test voltage(s) (V): (Condition 3)	A: 90.0V, 50 Hz	B: 254.4V, 50 Hz
t_{amb1} (°C): A: 23°C B: 23°C	t_{amb2} (°C):	A: 23°C B: 23°C

Temperature of part/at: (measured with thermocouples)	Measured temperature rise at T_{amb}		Calculated temperature at T_{ma}		Allowed T_{max} (°C)
	A dT (K)	B dT (K)	A T (°C)	B T (°C)	
Transformer (T1) Coil	32	35	72	75	110
Line Filter (LF1) core	22	24	62	64	130
Plastic Enclosure (Top surface)	8	9	48	49	95
PCB near fuse (F1)	16	17	56	57	130

test voltage(s) (V): (Condition 4)	A: 90.0V, 50 Hz	B: 254.4V, 50 Hz
t_{amb1} (°C): A: 23°C B: 23°C	t_{amb2} (°C):	A: 23°C B: 23°C

Temperature of part/at: (measured with thermocouples)	Measured temperature rise at T_{amb}		Calculated temperature at T_{ma}		Allowed T_{max} (°C)
	A dT (K)	B dT (K)	A T (°C)	B T (°C)	
Transformer (T1) Core	31	34	71	74	120
Line Filter (LF1) core	21	23	61	63	130
Plastic Enclosure (Top surface)	8	8	48	48	95
PCB near fuse (F1)	15	16	55	56	130

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test voltage(s) (V): (Condition 5)		A: 90.0V, 50 Hz		B: 254.4V, 50 Hz	
t_{amb1} (°C):	A: 23°C B: 23°C	t_{amb2} (°C):		A: 23°C B: 23°C	
Temperature of part/at: (measured with thermocouples)	Measured temperature rise at T_{amb}		Calculated temperature at T_{ma}		Allowed T_{max} (°C)
	A dT (K)	B dT (K)	A T (°C)	B T (°C)	
Transformer (T1) Coil	33	36	73	76	110
Line Filter (LF1) core	21	23	61	63	130
Plastic Enclosure (Top surface)	8	9	48	49	95
PCB near fuse (F1)	15	17	55	57	130
Supplementary information:					
Temperatures measured with winding resistance method: Not used					

temperature T of winding: (winding resistance method)	(V)	R_1 (Ω)	R_2 (Ω)	T (°C)	allowed T_{max} (°C)	insulation class
--	--	--	--	--	--	--

Supplementary information: *Conditon 1, 2, 3, 4 & 5 is described on page no. 19 of 122

4.5.5	TABLE: Ball pressure test of thermoplastic parts		P
	Allowed impression diameter (mm) .....:	≤ 2 mm	--
Part		Test temperature (°C)	Impression diameter (mm)
--		--	--
Supplementary information: Certified material used (See table 1.5.1)			

4.6.1, 4.6.2	Table: Enclosure opening measurements		N/A
Location		Size (mm)	Comments
--		--	--
Supplementary information: No opening			

4.7	Table: Resistance to fire					P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence	
--	--	--	--	--	--	
Supplementary information: Certified material used (See table 1.5.1)						

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5.1.6	TABLE: Touch current and protective conductor current measurement						P
	Test voltage (V) ..... :	AC 254.4V, 50 Hz					--
Measurement location (Terminal A connected to...)	Polarity (normal) [mA]		Polarity (reverse) [mA]		Limit (mA)	Comments	
	Switch: ON	Switch: OFF	Switch: ON	Switch: OFF			
Line /neutral to output connector	0.234	--	0.230	--	3.5	--	
Line /neutral to external enclosure wrapped with metal foil	0.036	--	0.032	--	0.25	--	
Supplementary information:							

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Functional:				
Line to Neutral (Fuse, F1 & F2 opened)		AC	1500	No
Basic / supplementary:				
Line to earth		AC	1500	No
Reinforced:				
Line/ Neutral to external plastic enclosure with metal foil wrapped		AC	3000	No
Transformer (T1) winding primary to secondary		AC	3000	No
Supplementary information:				

5.3	TABLE: Fault condition tests						P
	Ambient temperature (°C) ..... :					23°C	P
	Power source for EUT: Manufacturer, model/type, output rating :					See table 1.5.1	P
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation	
Resistor, R15	Short Circuit	254.4	2 minutes	F1, F2	--	Unit operated normally Result: No fire, No Hazards	
Transformer T1 (Pin A to Pin B)	Short Circuit	254.4	30 seconds	F1, F2	--	Unit shut down Result: No fire, No Hazards	
Output	Over load	90.0	1 hour 30 minutes	F1, F2	--	Unit operated normally Temperature on Transformer (T1) core: 69°C Result: No fire, No Hazards	
Supplementary information:							

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C.2	TABLE: Insulation of transformers (T1)		P
	Transformer part name..... :	See table 1.5.1	—
	Manufacturer..... :	See above	—
	Type..... :	See above	—

Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Primary /input winding and secondary/output winding (internal)	352	244	6.0	T.I.W	6.0	T.I.W
Primary/input winding and core (internal)			6.0	T.I.W	6.0	T.I.W
Secondary/output winding and core (internal)			6.0	T.I.W	6.0	T.I.W
Primary/input part and secondary/output part (external)			6.0	13.85	6.0	13.85
Primary/input part and core (external)			6.0	T.I.W	6.0	T.I.W
Primary/input part and secondary/output winding (external)			6.0	T.I.W	6.0	T.I.W
Secondary/output part and core (external)			6.0	T.I.W	6.0	T.I.W
Secondary/output part and primary/input winding (external)			6.0	13.85	6.0	13.85

Description of design:	
(a) Bobbin	
Primary/input pins..... :	1,2,3,4,5
Secondary/output pins..... :	A, B
Material (manufacturer, type, ratings) ..... :	See appended table 1.5.1
Thickness (mm)..... :	See appended table 1.5.1
(b) General	
Concentric windings on Bobbin/Core. Winding ends additionally fixed with tape, outer winding is secondary. Teflon tube on all winding exits are provided. Core is considered as primary. The distance insulation tape is 1.5mm min.	
Supplementary information: T.I.W= Triple insulated wire	

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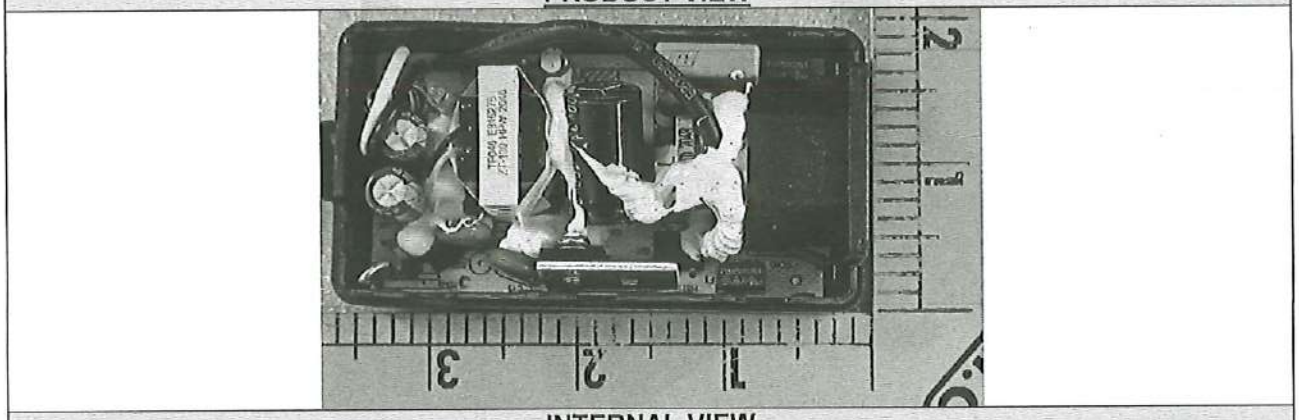
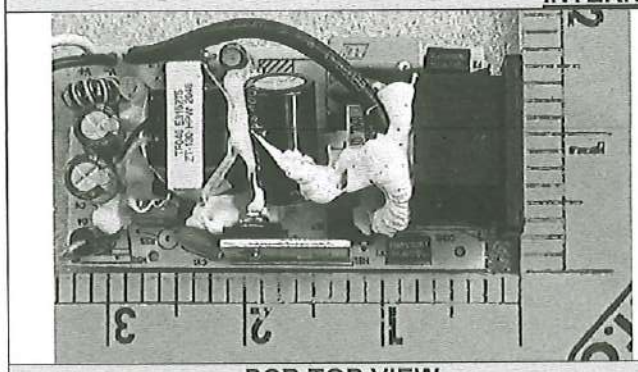
PHOTOGRAPH

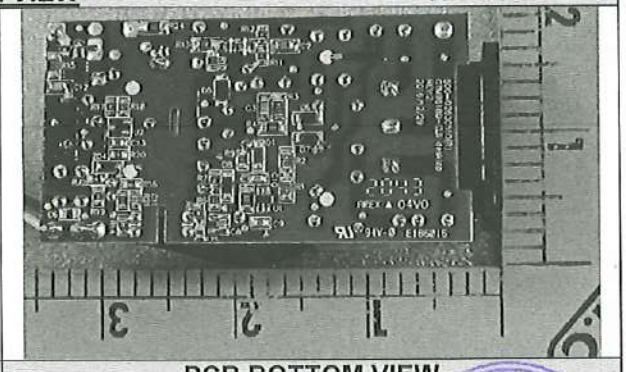
PRODUCT VIEW



INTERNAL VIEW



PCB TOP VIEW



PCB BOTTOM VIEW

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End of Report