



Test Report issued under the responsibility of:



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

Report Number..... : 191100636SHA-001

Date of issue..... : 2020-01-16

Total number of pages 179

Applicant's name GlobTek, Inc.

Address..... : 186 Veterans Dr. Northvale, NJ 07647 USA

Test specification:

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

Test procedure CB Scheme

Non-standard test method N/A

Test Report Form No. : IEC60950_1F

Test Report Form(s) Originator : SGS Fimko Ltd

Master TRF Dated 2014-02

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General disclaimer:

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

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Test item description :	ITE POWER SUPPLY
Trade Mark :	
Manufacturer	Same as applicant
Model/Type reference	GT*-****, GT*96600-*56*** (See page 9 for details)
Ratings	GT*-****: Input: 100-240V~, 50-60Hz, 1.5A; Output: 5-54VDC, Max. 65W GT*96600-*56***: Input: 100-240V~, 50-60Hz, 2.0A; Output: 56VDC, Max. 70W (See pages 10-11 for details)

Testing procedure and testing location:		
<input checked="" type="checkbox"/>	CB Testing Laboratory:	Intertek Testing Services Shanghai
Testing location/ address.....:		Building No. 86, 1198 Qinzhou Road (North) 200233 Shanghai CHINA
<input type="checkbox"/>	Associated CB Testing Laboratory:	N/A
Testing location/ address.....:		
Tested by (name + signature)		Albert Zhou (Engineer)
Approved by (name + signature)		Will Wang (Mandated Reviewer)
<input type="checkbox"/>	Testing procedure: TMP/CTF Stage 1:	N/A
Testing location/ address.....:		
Tested by (name + signature)		
Approved by (name + signature)		
<input type="checkbox"/>	Testing procedure: WMT/CTF Stage 2:	N/A
Testing location/ address.....:		
Tested by (name + signature)		
Witnessed by (name + signature)		
Approved by (name + signature)		
<input type="checkbox"/>	Testing procedure: SMT/CTF Stage 3 or 4:	N/A
Testing location/ address.....:		
Tested by (name + signature)		
Witnessed by (name + signature)		
Approved by (name + signature)		
Supervised by (name + signature)		

<p>List of Attachments (including a total number of pages in each attachment):</p> <p>Appendix No.1: Group and national differences for the CENELEC countries: from page 77 to page 94, total 18 pages;</p> <p>Appendix No.2: National differences for Singapore: from page 95 to page 96, total 2 pages;</p> <p>Appendix No.3: National differences for Japan: from page 97 to page 110, total 14 pages;</p> <p>Appendix No.4: National differences for China: from page 111 to page 118, total 8 pages;</p> <p>Appendix No.5: National differences for Australia and New Zealand: from page 119 to page 128, total 10 pages;</p> <p>Appendix No.6: National differences for Korea: page 129, total 1 page;</p> <p>Appendix No.7: National differences for USA: from page 130 to page 137, total 8 pages;</p> <p>Appendix No.8: Photos of product: from page 138 to page 179, total 42 pages;</p>	
<p>Summary of testing: From the result of our examination and tests in the submitted samples, conclude they comply with the requirements of the standard IEC 60950-1:2005 (Second Edition) + Am 1:2009 +Am 2:2013</p>	
<p>Tests performed (name of test and test clause):</p> <p>1.6.2 Input current test</p> <p>1.7.11 Marking durability test</p> <p>2.1.1.1 b Finger test</p> <p>2.1.1.1 c Pin test</p> <p>2.2.2 Voltage under Normal Conditions Test</p> <p>2.2.3 Voltage under Fault Conditions Test</p> <p>2.4 Limited current circuits Test</p> <p>2.5 Limited Power Sources Test</p> <p>2.9.2 Humidity conditioning test</p> <p>2.10.2 Determination of Working Voltage Test</p> <p>2.10.3 & 2.10.4 Clearances and Creepage Distances Measurement</p> <p>4.2.4 Mechanical strength – steady force test, 250 N</p> <p>4.2.6 Mechanical strength – drop test</p> <p>4.2.7 Mechanical strength – stress relief test</p> <p>4.5.2 Temperature test</p> <p>4.5.5 Ball pressure test</p> <p>5.1 Touch current test</p> <p>5.2 Electric strength test</p> <p>5.3 Abnormal operating and fault conditions test</p>	<p>Testing location:</p> <p>Intertek Testing Services Shanghai</p> <p>Building No. 86, 1198 Qinzhou Road (North)</p> <p>200233 Shanghai CHINA</p>

Summary of compliance with National Differences:

The test report covers group- and national differences for the CENELEC countries.

The national differences for Singapore and Japan have been checked according to IEC 60950-1 1st ed.

The national differences for China and Australia/New Zealand have been checked according to IEC 60950-1 2nd ed.

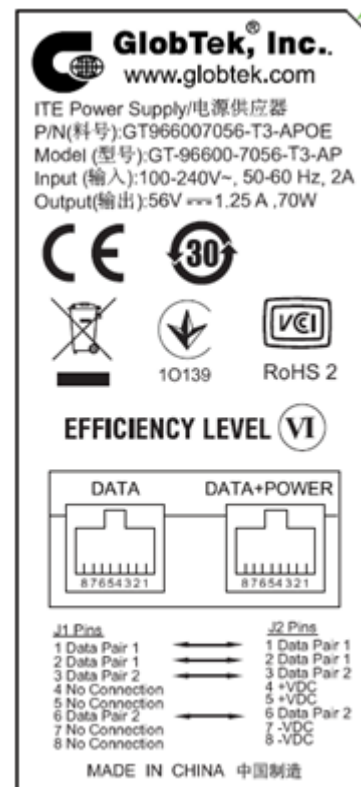
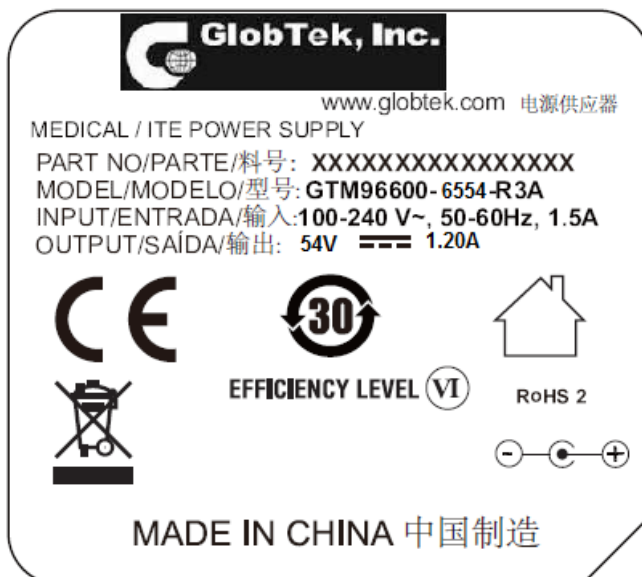
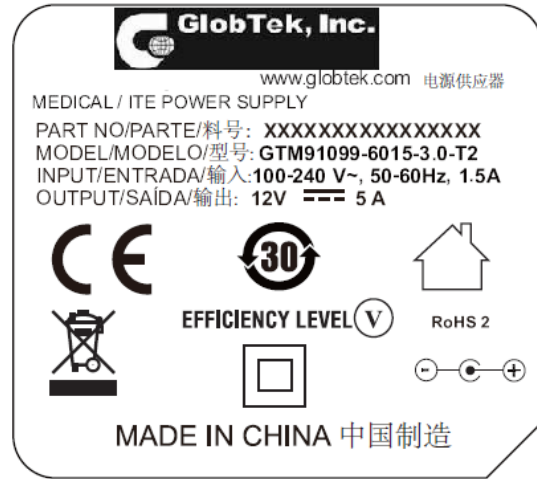
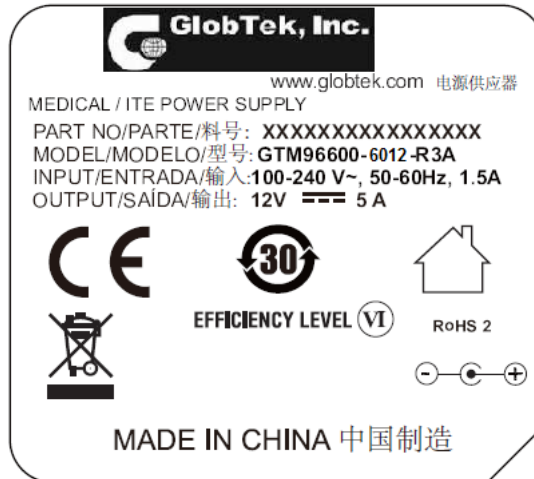
The national difference for Korea has been checked according to IEC 60950-1 2nd ed. + A1.

The national differences for USA and Canada have been checked according to IEC 60950-1 2nd ed. + A1 + A2.

☒ **The product fulfils the requirements of IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013 and EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2:2013.**

Copy of marking plate(representative):

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



Note: The above markings are the minimum requirements required by the safety standard. For the final production samples, the additional markings which do not give rise to misunderstanding may be added. Other models are with similar label as corresponding above models except different model name and output ratings.

Test item particulars.....:	
Equipment mobility.....:	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input checked="" type="checkbox"/> transportable <input type="checkbox"/> stationary <input checked="" type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
Connection to the mains.....:	<input checked="" type="checkbox"/> pluggable equipment <input checked="" type="checkbox"/> type A <input type="checkbox"/> type B <input type="checkbox"/> permanent connection <input checked="" type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input type="checkbox"/> not directly connected to the mains <input checked="" type="checkbox"/> Equipment is a PSU for building-in to be evaluated in the end product.
Operating condition.....:	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Access location	<input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other:
Mains supply tolerance (%) or absolute mains supply values	+10%/-10%
Tested for IT power systems	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
IT testing, phase-phase voltage (V)	120V or 230V
Class of equipment	<input checked="" type="checkbox"/> Class I <input checked="" type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified
Considered current rating of protective device as part of the building installation (A)	16A (20A for Noth America)
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class	IP40 (Except open frame)
Altitude during operation (m)	Max. 5000m
Altitude of test laboratory (m)	<100m
Mass of equipment (kg)	Max. 0.394Kg (For encapsulated type) Max. 0.162Kg (For open frame type) Max. 0.25Kg (For transportable type) Max.0.226Kg (For GT*96600-*56***)
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	2019-11-07
Date (s) of performance of tests	2019-11-07 to 2019-12-25

General remarks:	
<p>The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator. When determining for test conclusion, measurement uncertainty of tests has been considered. This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program. The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.</p>	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC60950:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies).....: <ol style="list-style-type: none"> 1. GlobTek (Suzhou) Co., Ltd Building 4, No. 76 JinLing East Road, Suzhou Industrial Park, Suzhou, JiangSu, 215021, China 2. GlobTek, Inc. 186 Veterans Dr. Northvale, NJ 07647 USA 	

General product information:

Product covered by this report is ITE power supply module. The power supplies which have an output current rating of 6A or less are all rated for Limited Power Source (LPS) application.

Desktop power supplies are provided with suitable external enclosure. The top and bottom parts of the enclosure are ultrasonic welded.

Open frame power supplies are without external enclosure. The external enclosure will be provided within the end product.

The products were tested to be suitable for connection to ≤ 16 A (IEC) and ≤ 20 A (USA) branch circuit in series. The unit is approved for TN mains star connections. The unit provides internally two fuses.

The power supplies are rated class I or class II or class II units may have an optional functional earth connection. Open frame and encapsulated class I power supplies shall be properly bonded to the main protective bonding termination in the end product.

The GT*91099-***** and GT*96600-***** have same enclosure with smooth surface or groove surface and PCB Layout size, the transformer models TF-series used in GT*96600-***** and models XF-series used in GT*91099-***** have the same primary windings but different with secondary windings and constructions (The TF-series used fly line).

The products are not intended to be used in maximum ambient temperature exceed of 40 °C

The products are not intended to use in environment which altitude exceed 5000m.

All the types are designed for continuous operation.

Model similarity:

GT**_*****

The 1st “*” part can be ‘M’ or ‘-’ or ‘H’ for market identification and not related to safety.

The 2nd “*” can be 91099 or 96600 for market identification

The 3rd “*” denotes the rated output wattage designation, which can be “01” to “65”, with interval of 1.

When the 2nd “*” = 91099

The 4th “*” denotes the standard rated output voltage designation, which can be “09”, “15”, “24”, “48”;

The 5th “*” is optional deviation, subtracted from standard output voltage, which can be “-0.01” to “-23.9” with interval of 0.01, or blank to indicate no voltage different.

The 4th “*” and 5th “*” together denote the output voltage, with a range of 5-48volts.

The 6th “*” =-T2 means desktop class II with C8 AC inlet

=-T2A means desktop class II with C18 AC inlet

=-T3 means desktop class I or class II with functional earth with C14 AC inlet

=-T3A means desktop class I or class II with functional earth with C6 AC inlet

=-F means Open Frame class I or class II with functional earth

=-FW means Open Frame class II

=-P2 means Encapsulated class II

=-P3 means Encapsulated class I or class II with functional earth

The last * denote any six character = 0-9 or A-Z or ()[] or – or blank for marketing purposes.

When the 2nd “*” = 96600

The 4th “*” denote the standard rated output voltage designation, which can be “05” to “54” or “5.0” to “54.0” in 0.1V increments.

The 5th “*” =Blank

The 6th “*” =-T2 means desktop class II with C8 AC inlet

=-T2A means desktop class II with C18 AC inlet

=-T3 means desktop class I or class II with functional earth with C14 AC inlet

=-T3A means desktop class I or class II with functional earth with C6 AC inlet

=-T2L means desktop class II with C8 AC inlet and housing with a DC jack

=-T2AL means desktop class II with C18 AC inlet and housing with a DC jack

=-T3L means desktop class I or class II with functional earth with C14 AC inlet and housing with a DC jack

=-T3AL means desktop class I or class II with functional earth with C6 AC inlet and housing with a DC jack

=-R2 means hybrid desktop housing class II with C8 AC inlet

=-R3A means hybrid desktop housing class I or class II with functional earth with C6 AC inlet

- =F means Open Frame class I or class II with functional earth
- =FW means Open Frame class II
- =P2 means Encapsulated class II
- =P3 means Encapsulated class I or class II with functional earth

The last * denote any six character = 0-9 or A-Z or ()[] or – or blank for marketing purposes.

GT*96600-*56***

The 1st “*” part can be ‘M’ or ‘-’ or ‘H’ for market identification and not related to safety.

The 2nd “*” denotes the rated output wattage designation, which can be “01” to “70”, with interval of 1.

The 3rd “*” =-T2 means desktop class II with C8 AC inlet

=-T2A means desktop class II with C18 AC inlet

=-T3 means desktop class I or class II with functional earth with C14 AC inlet

=-T3A means desktop class I or class II with functional earth with C6 AC inlet

The 4th “*” =-AP or -PP or -SP

-AP (with baby board) stands for Active POE

-PP (no baby board) stands for Passive POE

-SP (no baby board) stands for Simple POE

The last * denote any six character = 0-9 or A-Z or ()[] or – or blank for marketing purposes.

Alternate Rating:

For models GTM96600-2005-R2 / GTM96600-2005-R3A: output 5VDC, 4.0A at Tma=70 Deg.C;

For models GTM96600-2412-R2 / GTM96600-2412-R3A: output 12VDC, 2.0A at Tma=70 Deg.C;

For models GTM96600-2436-R2 / GTM96600-2436-R3A: output 36VDC, 0.66A at Tma=70 Deg.C;

For models GTM96600-2448-R2 / GTM96600-2448-R3A: output 48VDC, 0.5A at Tma=70 Deg.C;

For models GTM96600-2454-R2 / GTM96600-2454-R3A: output 54VDC, 0.44A at Tma=70 Deg.C;

For models GT-96600-7056-T3-AP/ GT-96600-7056-T2-AP: output 56VDC, 1.25A at Tma=40 Deg.C;

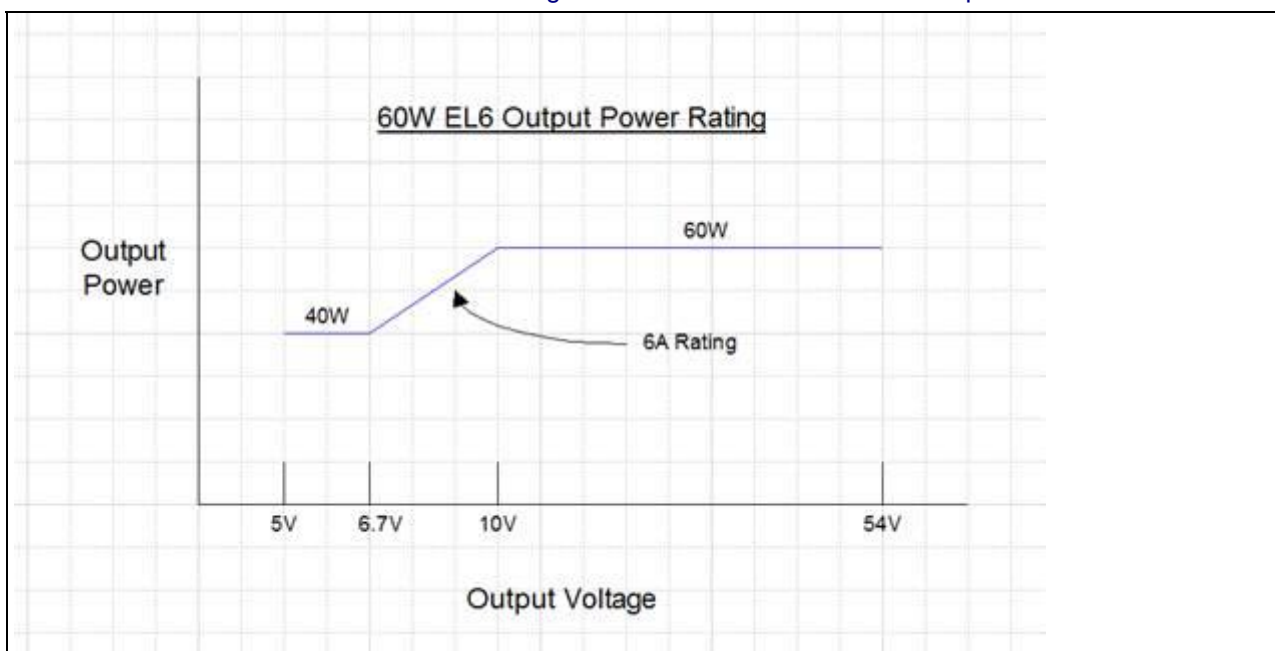
Model list:

GT*96600--T2/T2A/T3/T3A/T2L/T2AL/T3L/T3AL* Desktop models**

Model	Output Voltage	Max. output current	Max. output power
GT*96600-**-T2/T2A/T3/T3A/T2L/T2AL/T3L/T3AL*	5-6.7V	8A	40W
GT*96600-**-T2/T2A/T3/T3A/T2L/T2AL/T3L/T3AL*	6.8-11V	6A	60W
GT*96600-**-T2/T2A/T3/T3A/T2L/T2AL/T3L/T3AL*	11.1-54V	5.42A	65W

GT*96600-*-R2/R3A* External/Hybrid or Encapsulated models**

Model	Output Voltage	Max. output current	Max. output power
GT*96600-***-R2/R3A/P2/P3*	5-6.7V	8A	40W
GT*96600-***-R2/R3A/P2/P3*	6.8-11V	6A	60W
GT*96600-***-R2/R3A/P2/P3*	11.1-54V	5.42A	65W



GT*96600-*56-T2/T2A/T3/T3A-AP/PP/SP* Desktop models

GT*96600-*56-T2/T2A/T3/T3A-AP/PP/SP*	56V	1.25A	70W
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GT*91099-*-T2/T2A/T3/T3A/F/FW/P2/P3* External/Hybrid desktop or direct plug-in model or Open Frame or Encapsulated**

Model	Output Voltage	Max. output current	Max. output power
GT*91099-*09*-T2/T2A/T3/T3A/F/FW/P2/P3*	5-9V	6A	50W
GT*91099-*15*- T2/T2A/T3/T3A/F/FW/P2/P3*	9.1-15V	6A	60W
GT*91099-*24*- T2/T2A/T3/T3A/F/FW/P2/P3*	15.1-24V	4A	60W
GT*91099-*48*- T2/T2A/T3/T3A/F/FW/P2/P3*	24.1-48V	2.5A	60W

Note: For 91099 series, T2A model use C8 inlet.

Abbreviations used in the report:

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

Indicate used abbreviations (if any)



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

1	GENERAL		P
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1.5	Components		P
1.5.1	General		P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
1.5.2	Evaluation and testing of components		P
1.5.3	Thermal controls		N/A
1.5.4	Transformers		P
1.5.5	Interconnecting cables		N/A
1.5.6	Capacitors bridging insulation	Y1 capacitors according to IEC60384-14	P
1.5.7	Resistors bridging insulation		P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors		P
1.5.9.1	General	Surge suppressors comply with Annex Q.	P
1.5.9.2	Protection of VDRs		P
1.5.9.3	Bridging of functional insulation by a VDR		P
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A

1.6	Power interface		P
1.6.1	AC power distribution systems		P
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment		N/A
1.6.4	Neutral conductor		P

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

1.7	Marking and instructions		P
1.7.1	Power rating and identification markings		P
1.7.1.1	Power rating marking		P
	Multiple mains supply connections		N/A
	Rated voltage(s) or voltage range(s) (V)	100-240VAC	P
	Symbol for nature of supply, for d.c. only		N/A
	Rated frequency or rated frequency range (Hz)	50-60Hz	P
	Rated current (Ma or A)	1.5A or 2.0A	P
1.7.1.2	Identification markings		P
	Manufacturer's name or trade-mark or identification mark		P
	Model identification or type reference	GT**_***** and GT*96600-*56***	P
	Symbol for Class II equipment only	used for Class II model only. 	P
	Other markings and symbols	The additional marking does not give rise to misunderstandings	P
1.7.1.3	Use of graphical symbols		P
1.7.2	Safety instructions and marking		P
1.7.2.1	General		P
1.7.2.2	Disconnect devices	Applicant inlet.	P
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT power distribution systems		N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment		N/A
	Methods and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment		N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)	Fuse locations and markings are on PCB adjacent to fuse FS1 and FS2 or F1 and F2 (FS1, FS2 for GT*91099 series, F1, F2 for GT*96600 series, F1 for GT*96600-*56*** series)	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals	Class I models : the earth terminal is marked with standard earth symbol on the Inlet.	P
1.7.7.2	Terminals for a.c. mains supply conductors	The equipment is not permanently connected or provided with a nondetachable power supply cord.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors	Not intended for connection to DC mains.	N/A
1.7.8	Controls and indicators	For functional indication a LED lights when the equipment is operating.	P
1.7.8.1	Identification, location and marking		N/A
1.7.8.2	Colours		N/A
1.7.8.3	Symbols according to IEC 60417.....		N/A
1.7.8.4	Markings using figures		N/A
1.7.9	Isolation of multiple power sources		N/A
1.7.10	Thermostats and other regulating devices		N/A
1.7.11	Durability	The marking withstands required tests.	P
1.7.12	Removable parts		N/A
1.7.13	Replaceable batteries		N/A
	Language(s)		—
1.7.14	Equipment for restricted access locations.....		N/A
2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas		P
2.1.1.1	Access to energized parts		P
	Test by inspection	The concerned hazardous parts aren't accessible	P
	Test with test finger (Figure 2A)	The concerned hazardous parts aren't accessible	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Test with test pin (Figure 2B)	Hazardous live parts aren't accessible	P
	Test with test probe (Figure 2C)		N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V_{peak} or V_{rms}); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards	No energy hazard in output (see appended tables 2.1.1.5)	P
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment		P
	Measured voltage (V); time-constant (s)	(see appended table 2.1.1.7)	—
2.1.1.8	Energy hazards – d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply ...		N/A
	b) Internal battery connected to the d.c. mains supply ...		N/A
2.1.1.9	Audio amplifiers		N/A
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A

2.2	SELV circuits		P
2.2.1	General requirements	(see appended table 2.2)	P
2.2.2	Voltages under normal conditions (V)	(see appended table 2.2)	P
2.2.3	Voltages under fault conditions (V)	(see appended table 2.2 and 5.3)	P
2.2.4	Connection of SELV circuits to other circuits	SELV circuits are only connected to other SELV circuits.	P

2.3	TNV circuits		N/A
2.3.1	Limits	No TNV circuits	N/A
	Type of TNV circuits		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.3.2.4	Protection by other constructions		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed.....		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed.....		—
2.3.5	Test for operating voltages generated externally		N/A
2.4	Limited current circuits		P
2.4.1	General requirements	Measuring instrument D.1 in Annex D is used	P
2.4.2	Limit values	(see appended table 2.4)	P
	Frequency (Hz)	62.1kHz	—
	Measured current (Ma)	3mA max.	—
	Measured voltage (V)	6.0V max.	—
	Measured circuit capacitance (nF or μ F)	CY1, CY2: 2200pF or 1500pF (For GT*96600 series) CY1, CY2: 2200pF (For GT*91099 series) CY1: 2200pF (For GT*96600-*56*** series)	—
2.4.3	Connection of limited current circuits to other circuits		P
2.5	Limited power sources		P
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition		P
	Use of integrated circuit (IC) current limiters		—
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA).....	Max. 55.9V, Max. 1.57A, Max. 95.66W (see appended table 2.5)	—
	Current rating of overcurrent protective device (A) ..		—
2.6	Provisions for earthing and bonding		P
2.6.1	Protective earthing	Class I model series were checked.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.2	Functional earthing		P
	Use of symbol for functional earthing:	Fuction earting is separated from hazardous voltage by reinforced insulation.	P
2.6.3	Protective earthing and protective bonding conductors		P
2.6.3.1	General		P
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG:	Certified appliance inlet used.	—
2.6.3.3	Size of protective bonding conductors	The protective bonding complies with Clause 2.6.3.4. Relevant for class I units.	P
	Rated current (A), cross-sectional area (mm ²), AWG:		—
	Protective current rating (A), cross-sectional area (mm ²), AWG:		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min):	20mΩ, 0.8V, 40A, 2mins	P
2.6.3.5	Colour of insulation:	Green/yellow wiring is used.	P
2.6.4	Terminals		P
2.6.4.1	General		P
2.6.4.2	Protective earthing and bonding terminals		P
	Rated current (A), type, nominal thread diameter (mm):	Certified appliance inlet used.	—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		P
2.6.5	Integrity of protective earthing		P
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switches or fuses provided in earthing conductor.	P
2.6.5.3	Disconnection of protective earth	Certified appliance coupler is used.	P
2.6.5.4	Parts that can be removed by an operator	Certified appliance coupler	P
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		P
2.6.5.7	Screws for protective bonding		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A
2.7	Overcurrent and earth fault protection in primary circuits		P
2.7.1	Basic requirements		P
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7		P
2.7.3	Short-circuit backup protection		P
2.7.4	Number and location of protective devices :	Two fuses provided, line and neutral.	P
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel :		N/A
2.8	Safety interlocks		N/A
2.8.1	General principles	No safety interlock.	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm) :		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A
2.9	Electrical insulation		P
2.9.1	Properties of insulating materials		P
2.9.2	Humidity conditioning	120h	P
	Relative humidity (%), temperature (°C) :	93%, 40°C	—
2.9.3	Grade of insulation	Insulation is considered to be functional, reinforced or double insulation	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.9.4	Separation from hazardous voltages	Separated from hazardous voltage by reinforced or double insulation	P
	Method(s) used	Method 1	—

2.10	Clearances, creepage distances and distances through insulation		P
2.10.1	General		P
2.10.1.1	Frequency	Max. 123.6kHz	P
2.10.1.2	Pollution degrees	2	P
2.10.1.3	Reduced values for functional insulation		P
2.10.1.4	Intervening unconnected conductive parts		P
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage		P
2.10.2.1	General		P
2.10.2.2	RMS working voltage		P
2.10.2.3	Peak working voltage		P
2.10.3	Clearances		P
2.10.3.1	General		P
2.10.3.2	Mains transient voltages	2500V	P
	a) AC mains supply	100-240V	P
	b) Earthed d.c. mains supplies		N/A
	c) Unearthed d.c. mains supplies		N/A
	d) Battery operation		N/A
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.4	Clearances in secondary circuits	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply		P
2.10.3.7	Transients from d.c. mains supply		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems		N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network :		N/A
2.10.4	Creepage distances		P
2.10.4.1	General		P
2.10.4.2	Material group and comparative tracking index		P
	CTI tests	Material group IIIb is assumed to be used	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	P
2.10.5	Solid insulation		P
2.10.5.1	General		P
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		P
2.10.5.5.	Cemented joints		P
2.10.5.6	Thin sheet material – General		P
2.10.5.7	Separable thin sheet material		P
	Number of layers (pcs)	2 layers for insulation tape around transformer	—
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material – standard test procedure		N/A
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure	(see appended table 2.10.5)	P
	Electric strength test		—
2.10.5.11	Insulation in wound components		P
2.10.5.12	Wire in wound components	Approved TIW was used.	P
	Working voltage	See appended table 2.10.2.	P
	a) Basic insulation not under stress		N/A
	b) Basic, supplementary, reinforced insulation		P
	c) Compliance with Annex U		P
	Two wires in contact inside wound component; angle between 45° and 90°	Not in contact between primary winding and secondary winding. The insulating tape is provided to protect against mechanical stress	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage		N/A
	- Basic insulation not under stress		N/A
	- Supplementary, reinforced insulation		N/A
2.10.6	Construction of printed boards		P
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	P
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs)		N/A
2.10.7	Component external terminations		N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A
3	WIRING, CONNECTIONS AND SUPPLY		N/A
3.1	General		N/A
3.1.1	Current rating and overcurrent protection		N/A
3.1.2	Protection against mechanical damage		N/A
3.1.3	Securing of internal wiring		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.1.4	Insulation of conductors	(see appended table 5.2)	N/A
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections		N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors		N/A
	10 N pull test		N/A
3.1.10	Sleeving on wiring		N/A
3.2	Connection to a mains supply		P
3.2.1	Means of connection		P
3.2.1.1	Connection to an a.c. mains supply	Desk top units are provided with an appliance inlet. Open frame units are provided with approved connector (see list of safety critical components). For encapsulated units shall be this considered in the end product.	P
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections	Only one supply connection.	N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm)		—
3.2.4	Appliance inlets		P
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type		—
	Rated current (A), cross-sectional area (mm ²), AWG		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N)		—
	Longitudinal displacement (mm)		—

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Clause	Requirement + Test	Result - Remark	Verdict
3.2.7	Protection against mechanical damage	No sharp points or cutting edges on the equipment surfaces.	P
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g) :		—
	Radius of curvature of cord (mm) :		—
3.2.9	Supply wiring space		N/A
3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm ²) :		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm) :		—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A
3.4	Disconnection from the mains supply		P
3.4.1	General requirement		P
3.4.2	Disconnect devices	Desk-top: appliance inlet is considered as disconnect device. Encapsulated, open frame: Shall be considered in the end product.	P
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized	There is no parts remained with hazardous voltage or energy in the equipment when SMPS is separated form AC mains.	P
3.4.5	Switches in flexible cords		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.4.6	Number of poles – single-phase and d.c. equipment	Single-phase	P
3.4.7	Number of poles – three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		P
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A
3.5	Interconnection of equipment		P
3.5.1	General requirements		P
3.5.2	Types of interconnection circuits		P
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment		N/A
4	PHYSICAL REQUIREMENTS		P
4.1	Stability		P
	Angle of 10°	EUT with a mass less than 7kg.	N/A
	Test force (N)	Not a floor-standing unit.	N/A
4.2	Mechanical strength		P
4.2.1	General		P
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N		P
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N		P
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm)	1000mm	P
4.2.7	Stress relief test	After 7h at 95.0°C and cooling down to room temperature, no shrinkage, distortion or loosening of enclosure parts was noticeable on the unit.	P
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified		N/A
4.2.9	High pressure lamps		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.2.10	Wall or ceiling mounted equipment; force (N)		N/A
4.3	Design and construction		P
4.3.1	Edges and corners		P
4.3.2	Handles and manual controls; force (N)		N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts		P
4.3.5	Connection by plugs and sockets		P
4.3.6	Direct plug-in equipment	Not direct plug-in equipment.	N/A
	Torque		—
	Compliance with the relevant mains plug standard		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease		N/A
4.3.10	Dust, powders, liquids and gases		N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids		N/A
	Quantity of liquid (l)		N/A
	Flash point (°C)		N/A
4.3.13	Radiation		N/A
4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (Pa/kg)		—
	Measured high-voltage (Kv)		—
	Measured focus voltage (Kv)		—
	CRT markings		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.13.4	Human exposure to ultraviolet (UV) radiation		N/A
4.3.13.5	Lasers (including laser diodes) and LEDs	The visible LED indicators are diffuse type.	P
4.3.13.5.1	Lasers (including laser diodes)		N/A
	Laser class		—
4.3.13.5.2	Light emitting diodes (LEDs)		—
4.3.13.6	Other types		N/A

4.4	Protection against hazardous moving parts		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas		N/A
	Household and home/office document/media shredders		N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades		N/A
4.4.5.1	General		N/A
	Not considered to cause pain or injury. A).....		N/A
	Is considered to cause pain, not injury. B)		N/A
	Considered to cause injury. C)		N/A
4.4.5.2	Protection for users		N/A
	Use of symbol or warning		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning		N/A

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

4.6	Openings in enclosures		P
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Clause	Requirement + Test	Result - Remark	Verdict
4.6.1	Top and side openings	No openings in the enclosure.	P
	Dimensions (mm) :		—
4.6.2	Bottoms of fire enclosures	No openings in the enclosure..	P
	Construction of the bottom, dimensions (mm) .. :		—
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) :		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks) :		—

4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame		P
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	Enclosure of desk top units meets requirements for fire enclosure. Fire enclosure for open frame and encapsulated units must be considered in the end product.	P
4.7.2.1	Parts requiring a fire enclosure		P
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General		P
4.7.3.2	Materials for fire enclosures	The fire enclosure is minimum V-1 material.	P
4.7.3.3	Materials for components and other parts outside fire enclosures		P
4.7.3.4	Materials for components and other parts inside fire enclosures		P
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current		P
5.1.1	General	(see appended Table 5.1)	P
5.1.2	Configuration of equipment under test (EUT)		P
5.1.2.1	Single connection to an a.c. mains supply		P
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit		P
5.1.4	Application of measuring instrument	Measuring instrument D.1 in Annex D is used	P
5.1.5	Test procedure		P
5.1.6	Test measurements		P
	Supply voltage (V)	264	—
	Measured touch current (mA)	(see appended table 5.1)	—
	Max. allowed touch current (mA)	(see appended table 5.1)	—
	Measured protective conductor current (mA)		—
	Max. allowed protective conductor current (mA)....		—
5.1.7	Equipment with touch current exceeding 3,5 mA		N/A
5.1.7.1	General		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V)		—
	Measured touch current (Ma)		—
	Max. allowed touch current (Ma)		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.2	Electric strength		P
5.2.1	General	(see appended table 5.2)	P
5.2.2	Test procedure		P
5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors		N/A
5.3.3	Transformers	(see appended Annex C)	P
5.3.4	Functional insulation.....:	Method a) and c) used.	P
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE		N/A
5.3.7	Simulation of faults		P
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions		P
5.3.9.1	During the tests		P
5.3.9.2	After the tests		P
6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A
	Supply voltage (V)		—
	Current in the test circuit (Ma)		—
6.1.2.2	Exclusions		N/A
6.2	Protection of equipment users from overvoltages on telecommunication networks		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. output current (A)		—
	Current limiting method		—

7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N/A
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A
7.4.3	Impulse test		N/A

A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples		—
	Wall thickness (mm)		—
A.1.2	Conditioning of samples; temperature (°C)		N/A
A.1.3	Mounting of samples		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
A.2.1	Samples, material		—
	Wall thickness (mm)		—
A.2.2	Conditioning of samples; temperature (°C)		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C		—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.2.7	Alternative test acc. To IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		N/A
B.1	General requirements		N/A
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days)		—
	Electric strength test: test voltage (V)		—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V):		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V):		N/A
B.8	Test for motors with capacitors	(see appended table 5.3)	N/A
B.9	Test for three-phase motors	(see appended table 5.3)	N/A
B.10	Test for series motors		N/A
	Operating voltage (V):		—
C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		P
	Position:	T1	—
	Manufacturer:	(see appended table 1.5.1)	—
	Type:	(see appended table 1.5.1)	—
	Rated values:	(see appended table 1.5.1)	—
	Method of protection:	Protected by circuit	—
C.1	Overload test	(see appended table 5.3)	P
C.2	Insulation	(see appended tables 5.2 and C2)	P
	Protection from displacement of windings:	By insulation tape	P
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		P
D.1	Measuring instrument		P
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A

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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
K.3	Thermostat endurance test; operating voltage (V)		N/A
K.4	Temperature limiter endurance; operating voltage (V)		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A

L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		P
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment		P
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz)		—
M.3.1.2	Voltage (V)		—
M.3.1.3	Cadence; time (s), voltage (V)		—
M.3.1.4	Single fault current (Ma)		—
M.3.2	Tripping device and monitoring voltage		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V)		N/A

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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
P	ANNEX P, NORMATIVE REFERENCES		—
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		P
	- Preferred climatic categories	REFER TO LIST OF CRITICAL COMPONENTS.	P
	- Maximum continuous voltage	REFER TO LIST OF CRITICAL COMPONENTS.	P
	- Combination pulse current	REFER TO LIST OF CRITICAL COMPONENTS.	P
	Body of the VDR Test according to IEC60695-11-5.....		P
	Body of the VDR. Flammability class of material (min V-1).....	V-0	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
			—
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		P
		Approved TIW	—
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		P
V.1	Introduction		P
V.2	TN power distribution systems		P
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		P
W.1	Touch current from electronic circuits		P
W.1.1	Floating circuits		P
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		P
X.1	Determination of maximum input current		P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
X.2	Overload test procedure		P
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus		N/A
Y.2	Mounting of test samples		N/A
Y.3	Carbon-arc light-exposure apparatus		N/A
Y.4	Xenon-arc light exposure apparatus		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		P
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—
CC	ANNEX CC, Evaluation of integrated circuit (IC) current limiters		N/A
CC.1	General		N/A
CC.2	Test program 1.....		N/A
CC.3	Test program 2.....		N/A
CC.4	Test program 3.....		N/A
CC.5	Compliance.....		N/A
DD	ANNEX DD, Requirements for the mounting means of rack-mounted equipment		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N.....		N/A
DD.3	Mechanical strength test, 250N, including end stops.....		N/A
DD.4	Compliance.....		N/A
EE	ANNEX EE, Household and home/office document/media shredders		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols.....		N/A
	Information of user instructions, maintenance and/or servicing instructions.....		N/A
EE.3	Inadvertent reactivation test.....		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
EE.4	Disconnection of power to hazardous moving parts:		N/A
	Use of markings or symbols.....:		N/A
EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A):		N/A
	Test with wedge probe (Figure EE1 and EE2):		N/A

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

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ^{1, 2)}	
PCB	WALEX ELECTRONIC (WUXI) CO LTD	T2, T2A, T2B T4	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E154355	
Alt. use	DONGGUAN HE TONG ELECTRONICS CO LTD	CEM1 2V0 FR4	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E243157	
Alt. use	CHEERFUL ELECTRONIC (HK) LTD	02 03 03A	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E199724	
Alt. use	DONGGUAN DAYSUN ELECTRONIC CO LTD	DS2	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E251754	
Alt. use	SHANGHAI AREX PRECISION ELECTRONIC CO LTD	02V0 03V0 04V0	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60335-1 UL 796	Tested with appliance UL E186016	
Alt. use	BRITE PLUS ELECTRONICS (SUZHOU) CO LTD	DKV0-3A DGV0-3A	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E177671	
Alt. use	KUOTIANG ENT LTD	C-2 C-2A	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E227299	
Alt. use	SHENZHEN TONGCHUANGXI N ELECTRONICS CO LTD	TCX	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E250336	
Alt. use	PACIFIC WIN INDUSTRIAL LTD	PW-02 PW-03	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E228070	
Alt. use	YUANMAN PRINTED CIRCUIT CO LTD	1V0	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E74757	
Alt. use	SUZHOU XINKE ELECTRONICS CO LTD	XK-1, XK-2, XK-3	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E231590	

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	KUNSHAN CITY HUA SHENG CIRCUIT BOARD CO LTD	HS-S	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E229877
Alt. use	HUIZHOU SHUNJIA ELECTRONICS CO LTD	SJ-B	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E320884
Alt. use	SHANGHAI H- FAST ELECTRONICS CO LTD	411001, 211001	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E337862
Alt. use	JIANGXI ZHONG XIN HUA ELECTRONICS INDUSTRY CO LTD	ZXH-2 ZXH-3	Min. 1,6 mm thickness, min. V- 0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E331298
Fuse (FS1, FS2 or F1, F2) (FS2 or F2 is optional) (FS1, FS2 for GT*91099 series, F1, F2 for GT*96600 series, F1 for GT*96600- *56*** series)	Conquer Electronics Co., Ltd.	MST series	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017118 UL E82636
Alt. use	Ever Island Electric Co., Ltd. And Walter Electric	2010, ICP	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40018781 UL E220181
Alt. use	Bel Fuse Ltd.	RST-Serie(s)	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40011144 UL E20624
Alt. use	Cooper Bussmann LLC	SS-5	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40015513 UL E19180
Alt. use	Shenzhen Lanson Electronics Co. Ltd.	SMT	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40012592 UL E221465

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	Das & Sons International Ltd.	385T series	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40008524 UL E205718
Alt. use	Dongguan Better Electronics Technology Co., Ltd.	932	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40033369 UL E300003
Alt. use	Hollyland Company Limited	5ET	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40015669 UL E156471
Alt. use	Sunny East Enterprise Co. Ltd.	CFD-Serie(s)	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40030246 UL E133774
Alt. use	Conquer Electronics Co., Ltd.	MET series	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017157 UL E82636
Alt. use	Zhongshan Lanbao Electrical Appliances Co., Ltd.	RTI-10 Serie(s)	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017009 UL E213695
Y capacitor (CY1, CY2) (Optional) (CY1 and CY2 for GT*91099 and GT*96600 series; CY1 for GT*96600-*56*** series)	TDK-EPC Corporation, Capacitors Group Circuit Devices Business Group	CD	Y1, AC250V, max 2200pF, 25/085/21/B	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 138526 UL E37861
Alt. use	Success Electronics Co., Ltd.	SE	Y1, AC250V, or AC500V, max 2200pF, 40/125/56/C	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40037211 VDE 40020002 UL E114280
Alt. use	Success Electronics Co., Ltd.	SB	Y1, AC250V, max 2200pF, 40/125/56/C	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40037221 VDE 40020001 UL E114280

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	Murata Mfg. Co., Ltd.	KX	Y1, AC250V, max 2200pF, 25/125/21/B	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40002831 UL E37921
Alt. use	Walsin Technology Corp.	AH	Y1, AC250V, max 2200pF, 25/125/21/C	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40001804 UL E146544
Alt. use	JYA-NAY Co., Ltd.	JN	Y1, AC250V, max 2200pF, 25/125/21/C	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40001831 UL E201384
Alt. use	Haohua Electronic Co.	CT 7	Y1, AC250V, max 2200pF, 30/125/56/C	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40003902 UL E233106
Alt. use	Jyh Chung Electronic Co., Ltd.	JD	Y1, AC250V, max 2200pF, 40/085/21/C	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 137027 UL E187963
Alt. use	Jerro Electronics Corp.	JX-series	Y1, AC250V, max 2200pF, 40/125/21/C	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40032158 UL E333001
Alt. use	WELSON INDUSTRIAL CO LTD	WD	Y1, AC250V, max 2200pF, 55/125/21/C	IEC/EN 60384-14	VDE 40016157
X capacitor (CX1) (Optional)	Cheng Tung Industrial Co., Ltd.	CTX	Min. 300VAC, Max. 0.47μF, 110 °C, X1 or X2	IEC 60950-1 UL 60384-14 UL 1414	Tested with appliance UL E193049
Alt. use	Tenta Electric Industrial Co. Ltd.	MEX	Min. 250VAC, Max. 0.47μF, 40/100/21/B, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 119119 UL E222911
Alt. use	Joey Electronics (Dong Guan) Co., Ltd.	MPX	Min. 250VAC, Max. 0.47μF, 40/105/21/B, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40032481 UL E216807

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	Min. 250VAC, Max. 0.47μF, 40/100/21/C, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40015608 UL E183780
Alt. use	Yuan Yu Electronics Co. Ltd.	MPX	Min. 250VAC, Max. 0.47μF, 40/100/21/C, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40032392 UL E200119
Alt. use	Sinhua Electronics (Huzhou) Co., Ltd.	MPX	Min. 250VAC, Max. 0.47μF, 40/100/21/C, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40014686 UL E237560
Alt. use	Jiangsu Xinghua Huayu Electronics Co., Ltd.	MPX - Series	Min. 250VAC, Max. 0.47μF, 40/100/21/C, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40022417 UL E311166
Alt. use	Dain Electronics Co., Ltd.	MEX, MPX, NPX	Min. 250VAC, Max. 0.47μF, 40/100/21/C, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40018798 UL E147776
Alt. use	Shenzhen Jinghao Capacitor Co., Ltd.	CBB62B	Min. 250VAC, Max. 0.47μF, 40/110/56/B, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40018690 UL E252286
Alt. use	Foshan Shunde Chuang Ge Electronic Industrial Co., Ltd.	MKP-X2	Min. 250VAC, Max. 0.47μF, 40/105/21/B, X2	IEC/EN 60384-14	VDE 40008922
Alt. use	Okaya Electric Industries Co. LTD	RE-Series	Min. 250VAC, Max. 0.47μF, 55/100/56/C, X2	IEC/EN 60384-14	VDE 40028657
Alt. use	VISHAY Capacitors Belgium NV	F 1772	Min. 250VAC, Max. 0.47μF, 40/100/56/C, X2	IEC/EN 60384-14	VDE 40005095
Alt. use	Winday Electronic Industrial Co., Ltd.	MPX series	Min. 250VAC, Max. 0.47μF, 40/100/21/C, X2	IEC/EN 60384-14	VDE 40018071

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Photo coupler (U1 or U4) (U1 for GT*91099 series, U4 for GT*96600 series, U1 For GT*96600-*56*** series)	Everlight Electronics Co., Ltd.	EL817	Dti=0.5mm Int. , dcr=6.0mm EXT.dcr=7.7mm, thermal cycling test,110°C	IEC/EN 60747-5-2	VDE 132249
Alt. use	COSMO Electronics Corporation	K1010 / KP1010	Dti=0.6mm Int. , dcr=4.0mm EXT.dcr=5.0mm, thermal cycling test,115°C	IEC/EN 60747-5-2	VDE 101347
Alt. use	Lite-On Technology Corporation	LTV-817	Dti=0.8mm Int. , EXT.dcr=7.8mm, thermal cycling test,100°C	IEC/EN 60747-5-2	VDE 40015248
Alt. use	Fairchild Semiconductor Pte Ltd.	H11A817B / FOD817B	Insulation voltage: 850V; Transient overvoltage: 6000V; CTI175; Int. Cr/ Ext. Cr: ≥7,0/ 7,0 mm; 30/110/21	IEC/EN 60747-5-2	VDE 40026857
Alt. use	Sharp Corporation Electronic Components and Devices Group	PC817	Insulation voltage: 890V; Transient overvoltage: 9000V Int. Cr/ Ext. Cr: 7.62/ 7.62 mm; 30/100/21	IEC/EN 60747-5-2	VDE 40008087
Alt. use	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/EN 60747-5-2	VDE 40007240
Alt. use	Toshiba Corporation Semiconductor & Storage Products Company	TLP817F	Dti > 0.4mm, Ext cr > 8.0mm, Isolation 3000Vac min., 110°C min., Thermal cycling test	IEC/EN 60747-5-2	VDE 40021173

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Varistor MOV1 or MOV (Optional) (MOV/MOV1 for GT*91099 series, MOV1 for GT*96600 series and GT*96600-*56*** series)	Thinking Electronic Industrial Co., Ltd.	TVR10471K, TVR14471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 005944
Alt. use	Centra Science Corp.	10D471K, 14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 4008220
Alt. use	Success Electronics Co., Ltd.	SVR10D471K SVR14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40030401
Alt. use	Walsin Technology Co., Ltd.	14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40010090
Alt. use	Lien Shun Electronics Co., Ltd.	14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40005858
Alt. use	Ceramate Techn. Co., Ltd.	GNR10D471K GNR14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40031745
Alt. use	Brightking (Shenzhen) Co., Ltd.	14D471K 10D471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40027827
Alt. use	Joyin Co., Ltd.	JVR10N471K JVR14N471K	Max. Continuous voltage: min 300Vac(rms), 85°C, The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 005937
Appliance inlet CN1 Class I units (C6 type)	Zhejiang LECI Electronics Co., Ltd.	DB-6	2.5A, 250Vac	IEC/EN 60320-1	VDE 40032465
Alt. use	Rich Bay Co., Ltd.	R-30790	2.5A, 250Vac	IEC/EN 60320-1	VDE 40030381

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	Sun Fair Electric Wire & Cable (HK) Co. Ltd.	S-02	2.5A, 250Vac	IEC/EN 60320-1	VDE 40034448
Alt. use	TECX-UNIONS Technology Corporation	TU-333	2.5A, 250Vac	IEC/EN 60320-1	ENEC 00633
Alt. use	Rong Feng Industrial Co., Ltd.	RF-190	2.5A, 250Vac	IEC/EN 60320-1	VDE 40030379
Alt. use	Inalways Corporation	0724	2.5A, 250Vac	IEC/EN 60320-1	ENEC 2010080
Alt. use	Zhe Jiang Bei Er jia	ST-A04-002	2.5A, 250Vac	IEC/EN 60320-1	VDE 40016045
Alt. use	Shenzhen Delikang Electronics Technology Co. Ltd.	CDJ-2	2.5A, 250Vac	IEC/EN 60320-1	VDE 40015580
Appliance inlet CN1 Class I units (C14 type)	Zhejiang LECI Electronics Co., Ltd.	DB-14	10A, 250Vac	IEC/EN 60320-1	VDE 40032137
Alt. use	Rich Bay Co., Ltd.	R-301SN	10A, 250Vac	IEC/EN 60320-1	VDE 40030228
Alt. use	Sun Fair Electric Wire & Cable (HK)Co. Ltd.	S-03	10A, 250Vac	IEC/EN 60320-1	VDE 40034447
Alt. use	TECX-UNIONS Technology Corporation	TU-301-S, TU-301-SP	10A, 250Vac	IEC/EN 60320-1	ENEC 00647
Alt. use	Rong Feng Industrial Co., Ltd.	SS-120	10A, 250Vac	IEC/EN 60320-1	VDE 40028101
Alt. use	Inalways Corporation	0711	10A, 250Vac	IEC/EN 60320-1	ENEC 2010084
Alt. use	Zhe Jiang Bei Er jia	ST-A01-003J	10A, 250Vac	IEC/EN 60320-1	VDE 40013388
Appliance inlet CN1 Class II units (C8 type)	Zhejiang LECI Electronics Co., Ltd.	DB-8	2.5A, 250Vac	IEC/EN 60320-1	VDE 40032028
Alt. use	Rich Bay Co., Ltd.	R-201SN90	2.5A, 250Vac	IEC/EN 60320-1	VDE 40030384
Alt. use	Sun Fair Electric Wire & Cable (HK)Co. Ltd.	S-01	2.5A, 250Vac	IEC/EN 60320-1	VDE 40034449
Alt. use	TECX-UNIONS Technology Corporation	SO-222	2.5A, 250Vac	IEC/EN 60320-1	VDE 40043268

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
Alt. use	Rong Feng Industrial Co., Ltd.	RF-180	2.5A, 250Vac	IEC/EN 60320-1	VDE 40030168
Alt. use	Inalways Corporation	0721	2.5A, 250Vac	IEC/EN 60320-1	ENEC 2010087
Alt. use	Zhe Jiang Bei Er jia	ST-A03-005	2.5A, 250Vac	IEC/EN 60320-1	VDE 40014833
Alt. use	Shenzhen Delikang Electronics Technology Co. Ltd.	CDJ-8	2.5A, 250Vac	IEC/EN 60320-1	VDE 40025531
Appliance inlet CON1 Class II units (C18 type)	HCR ELECTRONICS CO., LTD	SK05	10A, 250Vac	IEC/EN 60320-1	ENEC (NO4018)
Alt. use	Rong Feng Industrial Co., Ltd.	SS-120	10A, 250Vac	IEC/EN 60320-1	VDE 40028101
Input connector CN1 (For open frame)	NELTRON INDUSTRIAL CO LTD	2114S	Min 240V; Min 1.5A; Flame class min. V-2;	IEC/EN 60950-1	Tested with appliance UL E144392
Alt. use	JOINT TECH ELECTRONIC INDUSTRIAL CO LTD	A7920 series A3960 series	Min 250V; Min 7A; Flame class min. V-2;	IEC/EN 60950-1	Tested with appliance UL E179987
Alt. use	ZHEJIANG HONGXING ELECTRICAL CO LTD	HX396XX-YYY series	Min 250V; Min 5A; Flame class min. V-2;	IEC/EN 60950-1	Tested with appliance UL E228500
Earthing wire for Class I model	KUNSHAN NEW ZHICHENG ELECTRONICS TECHNOLOGIES CO LTD	1015,1007, 1185, 3271, 3266, 1569	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E237831
Alt. use	ZHUANG SHAN CHUAN ELECTRICAL PRODUCTS (KUNSHAN) CO LTD	1015,1007, 1185,1569	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E333601
Alt. use	DONGGUAN CHUANTAI WIRE PRODUCTS CO LTD	1015,1007, 1185,1569	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E315628
Alt. use	YONG HAO ELECTRICAL INDUSTRY CO LTD	1015,1007, 1185,1569	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E240426

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
Alt. use	DONGGUAN GUNEETAL WIRE & CABLE CO LTD	1015,1007, 1185, 3271, 3266, 1569	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E204204
Alt. use	SHENG YU ENTERPRISE CO LTD	1015, 1007, 1185	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E219726
Alt. use	KUNSHAN XINGHONGMENG ELECTRONIC CO LTD	1015,1007, 1185, 3271, 3266, 1569	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E315421
Alt. use	SUZHOU YEMAO ELECTRONIC CO LTD	1015, 1007, 1185	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E353532
Connection wiring for encapsulated models	KUNSHAN NEW ZHICHENG ELECTRONICS TECHNOLOGIES CO LTD	1015, 1007, 2468, 2464, 1185	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E237831
Alt. use	Interchangeable	1015, 1007, 2468, 2464, 1185, SPT-1, SPT-2	Min. 20AWG, min. 300Vac, min. 80°C	IEC/EN 60950-1 UL 758	Tested with appliance UL approved
- Description:	Interchangeability based on specified rating.				
Output cord	Interchangeable	Interchangeable	Min. 24AWG, min. 300Vac, min. 80°C	IEC/EN 60950-1 UL 758	Tested with appliance UL approved
- Description:	Interchangeability based on specified rating.				
Bridge diode (BD1)	Interchangeable	Interchangeable	Min. 4A, Min. 600V, Size: 19.0x6.2x15.0mm	IEC/EN 60950-1	Tested with appliance UL approved
- Description:	Interchangeability based on specified dimensions due to mounting (including connections) and specified rating				
Heat-shrinkable tubing (Optional)	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR, RSFR-H, RSFR-HPF	600V, 125°C	IEC/EN 60950-1	Tested with appliance UL E203950
Alt. use	QIFURUI ELECTRONICS CO	QFR-h	600V, 125°C	IEC/EN 60950-1 UL 224	Tested within appliance UL E225897
Alt. use	DONGGUAN SALIPT CO LTD	SALIPT S-901-300 SALIPT S-901-600	Min. 300V, 125°C	IEC/EN 60950-1 UL 224	Tested within appliance UL E209436

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
Alt. use	GUANGZHOU KAIHENG ENTERPRISE GROUP	K-2 (+) K-2 (CB)	Min. 300V, 125°C	IEC/EN 60950-1 UL 224	Tested within appliance UL E214175
Alt. use	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-HFT	Min. 300V, 125°C	IEC/EN 60950-1 UL 224	Tested within appliance UL E180908
Electrolytic capacitor (C1, C3) (C1 for GT*91099 and GT*96600 series; C3 for GT*96600-*56*** series)	Interchangeable	Interchangeable	Min. 68uF, 400V, Size: 18mm diameter; 35mm length	IEC 60950-1	Tested with appliance
- Description:	Interchangeability based on specified dimensions due to mounting (including connections) and specified rating.				
Line filter LF1	GlobTek/HAOPUW EI/HEJIA	GTM91099-LF1 or LF019	Min. 200uH	IEC 60950-1	Tested with appliance
Line filter LF2	GlobTek/HAOPUW EI/HEJIA	NF00031	Min. 10mH	IEC 60950-1	Tested with appliance
Transformer (T1)	ENG / GlobTek / BOAM / HAOPUWEI	See attachment for details	Class B, with critical component listed below	IEC 60950-1	Tested with appliance
- Magnet wire	PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO LTD	UEWN/U (UL E201757)	MW28-C, 130°C	IEC 60950-1	Tested with appliance
Alt. use	PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO LTD	UEWS/U (UL E201757)	MW75-C, 130°C	IEC 60950-1	Tested with appliance
Alt. use	JUNG SHING WIRE CO LTD	UEW-4 (UL E174837)	MW75C, 130°C	IEC 60950-1	Tested with appliance
Alt. use	JUNG SHING WIRE CO LTD	UEY-2 (UL E174837)	MW28-C, 130°C	IEC 60950-1	Tested with appliance
Alt. use	JIANGSU HONGLIU MAGNET WIRE TECHNOLOGY CO LTD	2UEW/130 (UL E335065)	MW75-C, 130°C	IEC 60950-1	Tested with appliance

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	CHANGZHOU DAYANG WIRE & CABLE CO LTD	2UEW/130 (UL E158909)	MW75-C, 130°C	IEC 60950-1	Tested with appliance
Alt. use	WUXI JUFENG COMPOUND LINE CO LTD	2UEWB (UL E206882)	MW75#, 130°C	IEC 60950-1	Tested with appliance
Alt. use	JIANGSU DARTONG M & E CO LTD	UEW (UL E237377)	MW 75-C, 130°C	IEC 60950-1	Tested with appliance
Alt. use	SHANDONG SAINT ELECTRIC CO LTD	UEW/130 (UL E194410)	MW75#, 130°C	IEC 60950-1	Tested with appliance
Alt. use	ZHEJIANG LANGLI ELECTRIC EQUIPMENTS CO LTD	UEW (UL E222214)	MW 79#, 130°C	IEC 60950-1	Tested with appliance
-Triple-insulated wire (Secondary)	Great Leoflon Industrial Co., Ltd.	TRW (B) Serie(s)	Class B, reinforced insulation	IEC 60950-1 UL 2353 UL 60601-1	VDE 136581 UL E211989
- Alt. use	COSMOLINK CO. Ltd.	TIW-M Serie(s)	Class B, reinforced insulation	IEC 60950-1 UL 2353 UL 60601-1	VDE 138053 UL E213764
- Alt. use	Furukawa Electric Co., Ltd. Electronics & Automotive Systems Company Global Business Development Division	TEX-E	Class B, reinforced insulation	IEC 60950-1 UL 2353 UL 60601-1	VDE 006735 UL E206440
- Alt. use	TOTOKU ELECTRIC CO LTD	TIW-2	Reinforced insulation, rated 130° C (Class B)	UL 2353 UL60950-1 UL 60601-1	VDE 40005152 UL E249037
- Alt. use	E&B TECHNOLOGY CO LTD	E&B-XXXB E&B-XXXB-1	Reinforced insulation, Class B	IEC 60950-1 UL 2353 UL 60601-1	VDE 40023473 UL E315265
- Alt. use	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-TIW	Reinforced insulation, Class B	IEC 60950-1 UL 2353 UL 60601-1	Tested with appliance UL E249037
- Alt. use	SHENZHEN JIUDING NEW MATERIAL CO LTD	DTIW-B	Reinforced insulation, Class B	IEC 60950-1 UL 2353 UL 60601-1	VDE 40037495 UL E357999

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
-Bobbin	CHANG CHUN PLASTICS CO LTD	T375J T375HF	V-0, 150°C, thickness 0,45 mm min.	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E59481
- Alt. use	CHANG CHUN PLASTICS CO LTD	4130	V-0, 140°C, thickness 0,74 mm min.	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E59481
- Alt. use	SUMITOMO BAKELITE CO LTD	PM-9820	V-0, 150°C, thickness 0,45 mm min.	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E41429
- Alt. use	HITACHI CHEMICAL CO LTD	CP-J-8800	V-0, 150°C, thickness 0,45 mm min.	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E42956
-Insulating tape	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350F-1 1350T-1 44	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E17385
- Alt. use	BONDTEC PACIFIC CO LTD	370S	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E175868
- Alt. use	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ CT WF	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E165111
- Alt. use	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E246950
- Alt. use	CHANG SHU LIANG YI TAPE INDUSTRY CO LTD	LY-XX	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E246820
-PTFE tubing	GREAT HOLDING INDUSTRIAL CO LTD	TFT / TFS	Min. 300V, 200°C	IEC 60950-1	Tested with appliance UL E156256
-Alt. use	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	WF	600V, 200°C	IEC 60950-1	Tested with appliance UL E203950

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

-Alt. use	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-TT-T / CB-TT-S	Min. 300V, 200°C	IEC 60950-1	Tested with appliance UL E180908
Enclosure (all parts)	SABIC INNOVATIVE PLASTICS B V	SE1X, SE1	PPE+PS, Min. V-1, Min. thickness: 2.0mm, 105°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329
Alt. use	SABIC INNOVATIVE PLASTICS B V	SE100	PPE+PS, Min. V-1, Min. thickness: 2.0mm, 95°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329
Alt. use	SABIC INNOVATIVE PLASTICS B V	C2950	PC/ABS, Min. V-0, Min. thickness: 2.0mm, 85°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329
Alt. use	SABIC INNOVATIVE PLASTICS B V	CX7211 EXCY0098	PC/ABS, Min. V-1, Min. thickness: 2.0mm, 90°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329
Alt. use	SABIC INNOVATIVE PLASTICS B V	945 940	PC, Min. V-1, Min. thickness: 2.0mm, 120°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329
Alt. use	SABIC INNOVATIVE PLASTICS B V	HF500R	PC, V-0, Min. thickness: 2.0mm, 125°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329
Alt. use	TEIJIN CHEMICALS LTD	LN-1250P LN-1250G	PC, Min. V-0, Min. thickness: 2.0mm, 115°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E50075
Alt. use	CHI MEI CORPORATION	PA-765A	ABS, Min. V-0, Min. thickness: 2.0mm, 85°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E56070
Alt. use	CHI MEI CORPORATION	PC-540	PC/ABS, Min. V-0, Min. thickness: 2.0mm, 70°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E56070

Supplementary information:

1) **Provided evidence ensures the agreed level of compliance. See OD-CB2039.**

2) **This must be a certification mark showing compliance with an applicable IEC standard and National or Regional Differences.**

For all transformers under all manufacturers.

“interchangeable” components comply with IECEE OD file: od-g-2060_ed 1.1.

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

Attachment for transformer as below:

Product Model	Voltage range	Transformer model	Pri. Turns	Sec. Turns	Aux. Turns	Construction type
GT*96600 series	5V-8.9V	TF058	36T	3T	9T	2
	9V-15V	TF059	36T	4T	5T	
	15.1V-20V	TF063	36T	5T	5T	
	20.1V-28V	TF060	36T	7T	5T	
	28.1V-40V	TF064	36T	10T	5T	
	40.1V-54V	TF061	36T	13T	5T	
GT*96600-*56*** series	56V	TF072	36T	15T	5T	--
GT*91099 series	5V-9V	XF00794	45T	3T	8T	1
	9.1V-15V	XF00694	36T	5T	4T	
	15.1V-24V	XF00695	36T	6T	5T	
	24.1V-48V	XF00731	36T	13T	5T	
Note: Transformer used in model GT*96600 series and GT*91099 series have the same primary windings but different with the turns of secondary windings. The model name difference only distinguishes different article No.						

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

1.5.1	TABLE: Opto Electronic Devices		P
Manufacturer : See list of safety critical components.			
Type..... : See list of safety critical components.			
Separately tested : Approved optocouplers used. See list of safety critical components.			
Bridging insulation : Reinforced insulation			
External creepage distance..... : Approved optocouplers used. See list of safety critical components.			
Internal creepage distance : -*			
Distance through insulation : Approved optocouplers used. See list of safety critical components.			
Tested under the following conditions..... : R			
Input..... : -			
Output..... : -			
supplementary information			
* Compliance with thermal cycling test was checked on these parts.			

1.6.2	TABLE: Electrical data (in normal conditions)						P
Model: GTM96600-4005-R2							
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status	
90	0.8797	--	47.40	F1/F2	0.8797	Max Normal Load	
100	0.7861	1.5	46.90	F1/F2	0.7861	Max Normal Load	
240	0.3748	1.5	46.02	F1/F2	0.3748	Max Normal Load	
264	0.3423	--	46.11	F1/F2	0.3423	Max Normal Load	
Supplementary information:							

1.6.2	TABLE: Electrical data (in normal conditions)						P
Model: GTM91099-6015-3.0-T2							
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status	
90	1.2709	--	68.78	FS1/FS2	1.2709	Max Normal Load	
100	1.1126	1.5	67.53	FS1/FS2	1.1126	Max Normal Load	
240	0.5257	1.5	66.42	FS1/FS2	0.5257	Max Normal Load	
264	0.4759	--	66.48	FS1/FS2	0.4759	Max Normal Load	
Supplementary information:							

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

1.6.2	TABLE: Electrical data (in normal conditions)						P
Model: GTM96600-6512-R3A							
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status	
90	1.2457	--	74.12	F1/F2	1.2457	Max Normal Load	
100	1.1963	1.5	73.50	F1/F2	1.1963	Max Normal Load	
240	0.5709	1.5	70.88	F1/F2	0.5709	Max Normal Load	
264	0.4638	--	70.65	F1/F2	0.4638	Max Normal Load	
Supplementary information:							

1.6.2	TABLE: Electrical data (in normal conditions)					P
Model: GTM96600-6524-T3						
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
90	1.2645	--	75.23	F1/F2	1.2645	Max Normal Load
100	1.1874	1.5	74.77	F1/F2	1.1874	Max Normal Load
240	0.5821	1.5	72.34	F1/F2	0.5821	Max Normal Load
264	0.4735	--	72.16	F1/F2	0.4735	Max Normal Load
Supplementary information:						

1.6.2	TABLE: Electrical data (in normal conditions)					P
Model: GTM91099-6048-12.0-T2						
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
90	1.2492	--	67.62	FS1/FS2	1.2492	Max Normal Load
100	1.1037	1.5	66.90	FS1/FS2	1.1037	Max Normal Load
240	0.5228	1.5	65.92	FS1/FS2	0.5228	Max Normal Load
264	0.4758	--	66.18	FS1/FS2	0.4758	Max Normal Load
Supplementary information:						

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

1.6.2	TABLE: Electrical data (in normal conditions)						P
Model: GTM91099-6048-T2							
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status	
90	1.2333	--	67.11	FS1/FS2	1.2333	Max Normal Load	
100	1.0818	1.5	66.58	FS1/FS2	1.0818	Max Normal Load	
240	0.5194	1.5	65.69	FS1/FS2	0.5194	Max Normal Load	
264	0.4719	--	65.85	FS1/FS2	0.4719	Max Normal Load	
Supplementary information:							

1.6.2	TABLE: Electrical data (in normal conditions)					P
Model: GTM96600-6554-R3A						
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
90	1.2894	--	72.34	F1/F2	1.2894	Max Normal Load
100	1.1710	1.5	71.81	F1/F2	1.1710	Max Normal Load
240	0.5671	1.5	70.50	F1/F2	0.5671	Max Normal Load
264	0.5136	--	70.32	F1/F2	0.5136	Max Normal Load
Supplementary information:						

1.6.2	TABLE: Electrical data (in normal conditions)					P
Model: GT-96600-7056-T3-AP						
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
90	1.285	--	78.30	F1	1.285	Max Normal Load 50Hz
90	1.235	--	78.36	F1	1.235	Max Normal Load 60Hz
100	1.138	2.0	77.37	F1	1.138	Max Normal Load 50Hz
100	1.104	2.0	77.90	F1	1.104	Max Normal Load 60Hz
240	0.543	2.0	75.68	F1	0.543	Max Normal Load 50Hz
240	0.517	2.0	75.97	F1	0.517	Max Normal Load 60Hz
264	0.496	--	76.00	F1	0.496	Max Normal Load 50Hz
264	0.489	--	76.16	F1	0.489	Max Normal Load 60Hz
Supplementary information:						

IEC 60950-1				
Clause	Requirement + Test			Verdict
2.1.1.5 c) 1)	TABLE: max. V, A, VA test			P
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)
GTM96600-4005-R2				
5	8.0	5.090	9.977	51.8
GTM96600-6512-R3A				
12	5.42	12.028	7.577	82.5
GTM91099-6015-3.0-T2				
12	5.0	12.135	7.560	80.2
GTM96600-6524-T3				
24	2.71	24.374	3.453	89.5
GTM91099-6048-12.0-T2				
36	1.66	36.205	2.223	83.7
GTM91099-6048-T2				
48	1.25	48.073	1.724	88.8
GTM96600-6554-R3A				
54	1.20	53.865	1.660	94.7
GT-96600-7056-T3-AP				
56	1.25	55.9	1.57	95.66
supplementary information:				
The above measurements are the maximum values (max. V and max. A not obtained at the same time).				

2.1.1.7	TABLE: stored discharge on capacitors test		P
Model	Voltage	Comments	
GTM96600-6512-R3A	4V after 1s	Vpeak=372V, 37%* V peak = 137.64V	
GT-96600-7056-T3-AP	4V after 1s	Vpeak=356V, 37%* V peak = 131.72V	
Note(s): Overall capacity: 0.47μF (CX1=0.47μF)			

IEC 60950-1				
Clause	Requirement + Test		Result - Remark	Verdict
2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
GTM96600-4005-R2				
Transformer T1 (Pin A and Pin B)		32.5Vpk	--	SELV
GTM91099-6015-3.0-T2				
Transformer T1 (Pin A and Pin B)		38.5Vpk	--	SELV
GTM91099-6048-12.0-T2				
Transformer T1 (Pin A and Pin B)		71,2Vpk	--	Diode D3
Transformer T1 (Pin B and Pin D3 Cathode)		--	36.2Vdc	SELV
GTM96600-6048-R2				
Transformer T1 (Pin A and Pin B)		112,6Vpk	--	Diode D3
Transformer T1 (Pin B and D3 Cathode)		--	47.7Vdc	SELV
GTM96600-6554-R3A				
Transformer T1 (Pin A and Pin B)		135,8Vpk	--	Diode D3
Transformer T1 (Pin B and D3 Cathode)		--	54.1Vdc	SELV
GT-96600-7056-T3-AP				
Transformer T1 (Pin A and Pin B)		126Vpk	--	Diode D7
Transformer T1 (Pin 7 and Pin 12)		148Vpk	--	--
Transformer T1 (Pin B and D7 Cathode)		--	59.6Vdc	SELV
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
supplementary information:				

2.4.2	TABLE: limited current circuit measurement					P
Location		Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments
CY1 secondary to E		6.0	3.0	62.1	43.47	CY1=2200pF, tested with 2000 ohm non-inductive resistor.
supplementary information:						
Tested with 2000 ohm non-inductive resistor.						

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

2.5	TABLE: Limited power sources					P
Circuit output tested:						
Note: Measured Uoc (V) with all load circuits disconnected:						
Components	Uoc (V)	Isc (A)		VA		
		Meas.	Limit	Meas.	Limit	
GTM96600-2005-R2						
Output Oc	5.11	--	--	--	--	
Output OI	--	5.92	8	35.64	100	
Single fault: Primary current limitation disabled. (R16 short)	--	0	--	0	100	
GTM91099-6015-3.0-T2						
Output Oc	12.14	--	--	--	--	
Output OI	--	7.56	8	85.45	100	
Single fault: Primary current limitation disabled. (RS16 short)	--	0	8	0	100	
GTM91099-6048-12.0-T2						
Output Oc	36.21	--	--	--	--	
Output OI	--	2.22	4.16	60.23	100	
Single fault: Primary current limitation disabled. (RS16 short)	--	0	4.16	0	100	
GTM91099-6048-T2						
Output Oc	48.07	--	--	--	--	
Output OI	--	1.73	3.125	82.44	100	
Single fault: Primary current limitation disabled. (RS16 short)	--	0	3.125	0	100	
GTM96600-6554-R3A						
Output Oc	53.86	--	--	--	--	
Output OI	--	1.66	2.77	94.7	100	
Single fault: Primary current limitation disabled. (R16 short)	--	0	2.77	0	100	
GT-96600-7056-T3-AP						
Output Oc	55.9	--	--	--	--	

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Clause	Requirement + Test			Result - Remark	Verdict
Output OI	--	1.57	2.68	95.66	100
Single fault: Primary current limitation disabled. (R16 short)	--	0	2.68	0	100
supplementary information: Sc=Short circuit, Oc=Open circuit, Ol=over loaded					

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

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
GT*96600 series							
L to N before fuse(FI)	340	240	2.22*	2.92	2.4	2.92	
Two poles of fuse(FI)	340	240	2.22*	2.51	2.4	2.51	
Primary to functional earth (Class I)(RI)	340	240	5.92*	6.08	5.92**	6.08	
Live parts to accessible parts(RI)	404	248	5.92*	7.84	5.92**	7.84	
Primary circuits to secondary circuits(RI)	404	248	5.92*	6.61	5.92**	6.61	
Primary winding to secondary winding(RI)	404	248	5.92*	6.78	5.92**	6.78	
Secondary winding to core(RI)	404	248	5.92*	7.26	5.92**	7.26	
Core to secondary parts(RI)	404	248	5.92*	7.01	5.92**	7.01	
GT*91099 series							
L to N before fuse(FI)	340	240	2.22*	6.4	2.4	6.4	
Two poles of fuse(FI)	340	240	2.22*	3.3	2.4	3.3	
Primary to functional earth (Class I)(RI)	340	240	5.92*	6.08	5.92**	6.08	
Live parts to accessible parts(RI)	544	312	6.52*	6.64	6.52**	6.64	
Primary circuits to secondary circuits(RI)	544	312	6.52*	7.20	6.52**	7.20	
Primary winding to secondary winding(RI)	544	312	6.52*	6.78	6.52**	6.78	
Secondary winding to core(RI)	544	312	6.52*	6.96	6.52**	9.96	
Core to secondary parts(RI)	544	312	6.52*	9.90	6.52**	9.90	
Supplementary information:							
*Required value was multiplied by the factor 1,48 due to the maximum specified altitude of 5000m							
**Required creepage not less than required clearance							

IEC 60950-1							
Clause	Requirement + Test			Result - Remark			Verdict
2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:		U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
GT*96600-*56***							
L to N before fuse(FI)		340	240	2.22*	4.8	2.4	4.8
Two poles of fuse(FI)		340	240	2.22*	3.1	2.4	3.1
Primary to functional earth (Class I)(RI)		340	240	5.92*	6.2	5.92**	6.2
Live parts to Enclosure parts(RI)		340	240	5.92*	6.4	5.92**	6.4
CY1 Primary circuits to secondary circuits(RI)		340	240	5.92*	6.9	5.92*	6.9
U1 Primary circuits to secondary circuits(RI)		340	261	5.92*	7.2	5.92*	7.2
T1 Primary circuits to secondary circuits(RI)		516	294	6.52*	7.2	6.52*	7.2
Transformer Primary winding to secondary winding(RI)		516	294	6.52*	6.8	6.52**	6.8
Transformer Secondary winding to core(RI)		516	294	6.52*	7.2	6.52**	7.2
Core to secondary parts(RI)		516	294	6.52*	10.0	6.52**	10.0
Supplementary information:							
*Required value was multiplied by the factor 1,48 due to the maximum specified altitude of 5000m							
**Required creepage not less than required clearance							

2.10.5	TABLE: Distance through insulation measurements					P
Distance through insulation (DTI) at/of:		U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Plastic enclosure		544	312	3000	0.4	1.5
Bobbin		544	312	3000	0.4	0.45
Thin sheet material at/of:		U peak (V)	U rms (V)	Test voltage (V)	Required layers	Layers
Insulation tape around transformer		544	312	3000	3	3
Supplementary information:						

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Clause	Requirement + Test		Result - Remark	Verdict
4.5	TABLE: Thermal requirements			P
	Supply voltage (V)	90	264	—
	Ambient T _{min} (°C)	40	40	—
	Model	GTM96600-4005-R2		—
Maximum measured temperature T of part/at.....:		T (°C)		Allowe d T _{max} (°C)
T1 winding		103	94	110
T1 core		93	86	Ref
Output wire		53	51	80
U4		83	77	100
MOV1		78	70	85
CY1		80	75	125
CX1		86	72	100
PCB		95	93	130
Line filter LF1		73	64	110
Line filter LF2		90	78	110
Electrolytic capacitor C1		86	75	105
External enclosure		65	59	95
Internal enclosure		73	67	Ref
Inlet body		59	53	--
GTM91099-6015-3.0-T2				
T1 winding		104	91	110
T1 core		97	83	Ref
Output wire		54	51	80
U1		91	79	100
MOV		81	70	85
CY1		87	76	125
CX1		92	73	100
PCB		97	86	130
Line filter LF1		77	64	110
Line filter LF2		101	88	110
Electrolytic capacitor C1		96	81	105
External enclosure		69	65	95
Internal enclosure		79	68	Ref

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
Inlet body	68	64	--
Supplementary information:			

4.5	TABLE: Thermal requirements			P
	Supply voltage (V)	90	264	—
	Ambient T _{min} (°C)	40	40	—
	Model	GTM91099-6048-12.0-T2		—
Maximum measured temperature T of part/at.....:		T (°C)		Allowed T _{max} (°C)
T1 winding		86	82	110
T1 core		90	86	Ref
Output wire		57	56	80
U1		83	78	100
MOV		78	72	85
CY1		75	72	125
CX1		92	76	100
PCB		70	67	130
Line filter LF1		69	57	110
Line filter LF2		86	77	110
Electrolytic capacitor C1		81	72	105
External enclosure		69	66	95
Internal enclosure		74	68	Ref
Inlet body		62	56	--

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

4.5	TABLE: Thermal requirements			P
	Supply voltage (V)	90	264	—
	Ambient T _{min} (°C)	40	40	—
	Model	GTM96600-6512-R3A		—
T1 winding		109	97	110
T1 core		97	94	Ref
Output wire		58	56	80
U4		93	85	100
MOV1		80	73	85
CY1		92	80	125
CX1		93	78	100
PCB		104	91	130
Line filter LF1		86	69	110
Line filter LF2		105	92	110
Electrolytic capacitor C1		97	83	105
External enclosure		71	63	95
Internal enclosure		85	83	Ref
Inlet body		62	55	--
Supplementary information:				

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

4.5	TABLE: Thermal requirements			P
	Supply voltage (V)	90	264	—
	Ambient T _{min} (°C)	40	40	—
	Model	GTM96600-6524-T3		—
T1 winding		103	96	110
T1 core		95	90	Ref
Output wire		55	53	80
U4		89	82	100
MOV1		81	75	85
CY1		89	82	125
CX1		94	81	100
PCB		97	90	130
Line filter LF1		90	74	110
Line filter LF2		100	88	110
Electrolytic capacitor C1		100	87	105
External enclosure		69	65	95
Internal enclosure		84	80	Ref
Inlet body		65	58	--
Supplementary information:				

IEC 60950-1				
Clause	Requirement + Test		Result - Remark	Verdict
4.5	TABLE: Thermal requirements			P
	Supply voltage (V)	90	264	—
	Ambient T _{min} (°C)	40	40	—
	Model	GTM96600-6554-R3A		—
Maximum measured temperature T of part/at.....:		T (°C)		Allowed T _{max} (°C)
T1 winding		102	94	110
T1 core		98	89	Ref
Output wire		56	53	80
U4		85	77	100
MOV1		80	67	85
CY1		86	77	125
CX1		88	70	100
PCB		73	69	130
Line filter LF1		77	69	110
Line filter LF2		95	86	110
Electrolytic capacitor C1		90	81	105
External enclosure		67	61	95
Internal enclosure		82	71	Ref
Inlet body		66	56	--

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.5	TABLE: Thermal requirements		P
	Supply voltage (V)	90 264	—
	Ambient T _{min} (°C)	40 40	—
	Model	GT-96600-7056-T3-AP	—
Maximum measured temperature T of part/at.....:		T (°C)	Allowed T _{max} (°C)
AC inlet		62.9 53.9	--
PE wire		86.4 73.4	Ref
PCB under BD1		115.9 86.5	130
Line chock of LF2 winding		106.2 78.3	110
X-capacior CX1		87.5 70.9	85
Line cock of LF1 winding		78.0 64.0	110
MOV1		70.8 59.6	85
E-capacitor C3		97.2 82.2	105
PCB under Q1		116.5 104.5	130
Y-capacitor CY1		108.1 98.5	125
T1 winding		106.7 105.3	110
T1 core		104.9 100.1	Ref.
Opto-coulpur U1		84.0 76.2	100
PCB under D7		109.6 103.2	130
E-capacitor C12		95.3 89.1	105
Line chock of LF3 winding		82.0 76.9	110
E-capacitor C14		87.3 82.3	105
E-capacitor C16		74.5 70.4	105
Y-capacitor CY3		57.8 55.1	125
Enclosure inside near T1		88.7 82.1	120
Enclosure outside near T1		85.3 80.5	95

IEC 60950-1				
Clause	Requirement + Test		Result - Remark	Verdict
4.5	TABLE: Thermal requirements			P
	Supply voltage (V)	90	264	—
	Ambient T _{min} (°C)	70	70	—
	Model	GTM96600-2005-R2		—
Maximum measured temperature T of part/at.....:		T (°C)		Allowe d T _{max} (°C)
T1 winding		84	84	110
T1 core		86	86	Ref
Output wire		73	72	80
U4		81	81	100
MOV1		77	76	85
CY1		79	79	125
CX1		78	76	100
PCB		83	83	130
Line filter LF1		65	54	110
Line filter LF2		76	67	110
Electrolytic capacitor C1		86	75	105
External enclosure		74	74	95
Internal enclosure		76	76	Ref
Inlet body		74	73	--
GTM96600-2412-R2				
T1 winding		94	89	110
T1 core		96	90	Ref
Output wire		74	73	80
U4		84	81	100
MOV1		83	80	85
CY1		85	81	125
CX1		84	79	100
PCB		84	81	130
Line filter LF1		81	69	110
Line filter LF2		90	78	110
Electrolytic capacitor C1		88	76	105
External enclosure		75	74	95
Internal enclosure		80	77	Ref

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
Inlet body	74	73	--
Supplementary information:			

4.5	TABLE: Thermal requirements			P
	Supply voltage (V)	90	264	—
	Ambient T _{min} (°C)	70	70	—
	Model	GTM96600-2436-R2		—
Maximum measured temperature T of part/at.....:		T (°C)		Allowed T _{max} (°C)
T1 winding		101	98	110
T1 core		106	103	Ref
Output wire		74	73	80
U4		88	85	100
MOV1		83	77	85
CY1		90	88	125
CX1		87	82	100
PCB		92	89	130
Line filter LF1		88	73	110
Line filter LF2		95	80	110
Electrolytic capacitor C1		90	82	105
External enclosure		80	79	95
Internal enclosure		87	84	Ref
Inlet body		79	77	--

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Thermal requirements			P
	Supply voltage (V)	90	264	—
	Ambient T _{min} (°C)	70	70	—
	Model	GTM96600-2448-R2		—
T1 winding		83	85	110
T1 core		86	88	Ref
Output wire		72	72	80
U4		79	80	100
MOV1		80	81	85
CY1		78	79	125
CX1		80	80	100
PCB		76	77	130
Line filter LF1		70	57	110
Line filter LF2		79	63	110
Electrolytic capacitor C1		84	78	105
External enclosure		74	75	95
Internal enclosure		77	78	Ref
Inlet body		74	73	--
Supplementary information:				

IEC 60950-1				
Clause	Requirement + Test		Result - Remark	Verdict
4.5	TABLE: Thermal requirements			P
	Supply voltage (V)	90	264	—
	Ambient T _{min} (°C)	70	70	—
	Model	GTM96600-2454-R2		—
Maximum measured temperature T of part/at.....:		T (°C)		Allowed T _{max} (°C)
T1 winding		82	84	110
T1 core		84	87	Ref
Output wire		73	72	80
U4		78	79	100
MOV1		79	79	85
CY1		75	76	125
CX1		80	80	100
PCB		74	75	130
Line filter LF1		72	61	110
Line filter LF2		76	65	110
Electrolytic capacitor C1		79	73	105
External enclosure		74	74	95
Internal enclosure		76	77	Ref
Inlet body		77	77	--

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Clause	Requirement + Test	Result - Remark	Verdict

4.5.5	TABLE: Ball pressure test of thermoplastic parts			P
	Allowed impression diameter (mm):	≤ 2 mm		—
Part		Test temperature (°C)	Impression diameter (mm)	
Supplementary information: Approved materials are used. Refer to list of safety critical components.				

4.7	TABLE: Resistance to fire					P
	Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
	--	--	--	--	--	--
Supplementary information: Approved materials are used. Refer to list of safety critical components.						

5.1	TABLE: touch current measurement			P
Measured between:		Measured (mA)	Limit (mA)	Comments/conditions
L/N to enclosure(with metal foil)		0.078	0.25	--
L/N to output		0.085	0.25	--
Main to PE		0.24	3.5	--
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
Primary circuit to body (RI)		AC	3000	No
Primary circuit to functional earth		AC	3000	No
Primary circuit to secondary circuit (RI)		AC	3000	No
L and N (FS1 or F1)		AC	1500	No
Primary winding to secondary winding of T1 (RI)		AC	3000	No
Secondary winding to core (RI)		AC	3000	No
Insulation tape around transformer per layer		AC	3000	No
Primary and secondary of Y1 capacitor		DC	4242	No
Supplementary information:				

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	
5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C)				25, if no else specified	—
	Power source for EUT: Manufacturer, model/type, output rating				--	—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
GT**-**** series						
Output (5V series)	OL	264	1h	F1/F2	0.383A	Load to 8.402A, EUT protected immediately, no hazards. Temperature recorded: T1 winding = 93°C Enclosure: 52°C
Output (12V)	OL	264	2h	F1/F2	0.578A	Load to 5.752A, EUT protected immediately, no hazards. Temperature recorded: T1 winding = 112°C Enclosure: 74°C
Output (24V)	OL	264	2h	F1/F2	0.617A	Load to 3.023A, EUT protected immediately, no hazards. Temperature recorded: T1 winding = 118°C Enclosure: 77°C
Output (54V series)	OL	264	1h	F1/F2	0.689A	Load to 1.589A, EUT protected immediately, no hazards. Temperature recorded: T1 winding = 106°C Enclosure: 70°C
Output	SC	90/264	10mins	F1/F2	0	EUT protected immediately, no hazards
C4	SC	90/264	10mins	F1/F2	0	EUT protected immediately, no hazards
Q1 pinD-S	SC	90/264	<1s	F1/F2	10*	EUT shut down immediately, fuse opened, repeat 10 times, no hazards
Q1 pinG-S	SC	90/264	10mins	F1/F2	0	EUT protected immediately, no hazards
D4	SC	90/264	10mins	F1/F2	0	EUT protected immediately, no hazards
R1	SC	90/264	10mins	F1/F2	0	EUT protected immediately, no hazards

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Clause	Requirement + Test				Result - Remark	Verdict
T1 pin1-3	SC	90/264	<2mins	F1/F2	10*	EUT shut down, fuse opened, repeat 10 times, no hazards
T1 pinA-B	SC	90/264	10mins	F1/F2	0	EUT protected immediately, no hazards
C1	SC	90/264	<1s	F1/F2	10*	EUT shut down immediately, fuse opened, repeat 10 times, no hazards
BD1	SC	90/264	<1s	F1/F2	10*	EUT shut down immediately, fuse opened, repeat 10 times, no hazards
Supplementary information: "Sc" means short-circuited test, "OI" means overload test, "Oc" means open-circuited test; "Uoc" means output voltage without load.						

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C)				25, if no else specified	—
	Power source for EUT: Manufacturer, model/type, output rating				--	—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
GT-96600-7056-T3-AP						
BD1	Sc	90/264	<1s	F1	--	Fuse opened immediately, no hazard.
C3	Sc	90/264	<1s	F1	--	Fuse opened immediately, no hazard.
U2 pin 1-2	Sc	90/264	10mins	F1	0.038	Unit shutdown immediately, recoverable, no hazard.
U1 pin 1-6	Sc	90/264	10mins	F1	0.038	Unit shutdown immediately, unrecoverable, U2 and Q1 damage no hazard.
R17	Sc	90/264	10mins	F1	0.038	Unit shutdown immediately, recoverable, no hazard.
T1 pin 1-3	Sc	90/264	<1s	F1	--	Fuse opened immediately, Q1 damage no hazard.
T1 pin 4-5	Sc	90/264	<1s	F1	--	Fuse opened immediately, Q1 damage no hazard.
T1 pin A-B	Sc	90/264	<1s	F1	--	Fuse opened immediately, no hazard.
T1 pin 7-12	Sc	90/264	10mins	F1	0.038	Unit shutdown immediately, recoverable, no hazard.

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	
C8	Sc	90/264	10mins	F1	0.011	Unit shutdown immediately, recoverable, no hazard.
D7	Sc	90/264	10mins	F1	0.011	Unit shutdown immediately, recoverable, no hazard.
Output	Sc	90/264	10mins	F1	0.015	Unit shutdown immediately, recoverable, no hazard.
Output	OI	264	8h38min	F1	Max. 0.573A	Load to 1.57A, EUT protected immediately, no hazards. Temperature recorded: T1 winding = 122.3°C Enclosure: 83.3°C
Supplementary information: "Sc" means short-circuited test, "OI" means overload test, "Oc" means open-circuited test; "Uoc" means output voltage without load.						

C.2		TABLE: transformers						P
Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)	
T1	Reinforced (Sec. – core)	544	312	3000	6.52	6.52	Triple insulated winding comply with Annex U	
T1	Reinforced (Pri. – Sec.)	544	312	3000	6.52	6.52	Triple insulated winding comply with Annex U	
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers	
T1	Reinforced (Sec. – core)			3000	6.8	6.8	2	
T1	Reinforced (Pri. – Sec.)			3000	7.2	7.2	2	
supplementary information:								

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ATTACHMENT TO TEST REPORT IEC 60950-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Information technology equipment – Safety –	
Part 1: General requirements	
Differences according to	EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013
Attachment Form No.	EU_GD_IEC60950_1E
Attachment Originator	SGS Fimko Ltd
Master Attachment.....	Date 2013-09
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EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 – CENELEC COMMON MODIFICATIONS

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test		Verdict
	Clauses, subclauses, notes, tables and figures which are additional to those in IEC60950-1 and it's amendmets are prefixed "Z"		P
Contents	Add the following annexes:		P
	Annex ZA (normative)	Normative references to international publications with their corresponding European publications	
(A2:2013)	Annex ZB (normative)	Special national conditions	
	Annex ZD (informative)	IEC and CENELEC code designations for flexible cords	
General	Delete all the "country" notes in the reference document (IEC 60950-1:2005) according to the following list:		P
	1.4.8 Note 2	1.5.1 Note 2 & 3	
	1.5.8 Note 2	1.5.9.4 Note	
	2.2.3 Note	2.2.4 Note	
	2.3.2.1 Note 2	2.3.4 Note 2	
	2.7.1 Note	2.10.3.2 Note 2	
	3.2.1.1 Note	3.2.4 Note 3.	
	4.3.6 Note 1 & 2	4.7 Note 4	
	4.7.3.1 Note 2	5.1.7.1 Note 3 & 4	
	6 Note 2 & 5	6.1.2.1 Note 2	
	6.2.2 Note	6.2.2.1 Note 2	
	7.1 Note 3	7.2 Note	
	G.2.1 Note 2	Annex H Note 2	
General (A1:2010)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list:		P
	1.5.7.1 Note	6.1.2.1 Note 2	
	6.2.2.1 Note 2	EE.3 Note	
General (A2:2013)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A2:2013) according to the following list:		P
	2.7.1 Note *	2.10.3.1 Note 2	
	6.2.2. Note		
* Note of secretary: Text of Common Modification remains unchanged.			

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.1.1 (A1:2010)	Replace the text of NOTE 3 by the following. NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.		P
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.		N/A
(A12:2011)	In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010		N/A
1.5.1 (Added info*)	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC. New Directive 2011/65/11 *		P
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.		N/A
1.7.2.1 (A12:2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.		N/A
	Zx Protection against excessive sound pressure from personal music players		N/A

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>Zx.1 General</p> <p>This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players.</p> <p>A personal music player is a portable equipment <input type="checkbox"/> for personal use, that:</p> <ul style="list-style-type: none"> <input type="checkbox"/> is designed to allow the user to listen to recorded or broadcast sound or video; and <input type="checkbox"/> primarily uses headphones or earphones that can be worn in or on or around the ears; and <input type="checkbox"/> allows the user to walk around while in use. <p>NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment.</p> <p>A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause.</p> <p>The requirements in this sub-clause are valid for music or video mode only.</p> <p>The requirements do not apply:</p> <ul style="list-style-type: none"> <input type="checkbox"/> while the personal music player is connected to an external amplifier; or <input type="checkbox"/> while the headphones or earphones are not used. <p>NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player.</p> <p>The requirements do not apply to:</p> <ul style="list-style-type: none"> <input type="checkbox"/> hearing aid equipment and professional equipment; <p>NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.</p>		N/A
	<p><input type="checkbox"/> analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015.</p> <p>NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies.</p> <p>For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.</p>		N/A


Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>Zx.2 Equipment requirements No safety provision is required for equipment that complies with the following:</p> <p><input type="checkbox"/> equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed “programme simulation noise” as described in EN 50332-1; and</p> <p><input type="checkbox"/> a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” as described in EN 50332-1.</p> <p>NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx.</p> <p>All other equipment shall:</p> <p>a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and</p> <p>b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and</p>		N/A

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and</p> <p>NOTE 2 Examples of means include visual or audible signals. Action from the user is always required.</p> <p>NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off.</p> <p>d) have a warning as specified in Zx.3; and</p> <p>e) not exceed the following:</p> <ol style="list-style-type: none"> 1) equipment provided as a package (player with its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and 2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1. <p>For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song.</p> <p>NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA.</p> <p>For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.</p>		N/A

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

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

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>Zx.4.2 Wired listening devices with digital input</p> <p>With any playing device playing the fixed “programme simulation noise” described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA.</p> <p>This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.).</p> <p>NOTE An example of a wired listening device with digital input is a USB headphone.</p>		N/A
	<p>Zx.4.3 Wireless listening devices</p> <p>In wireless mode:</p> <p><input type="checkbox"/> with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and</p> <p><input type="checkbox"/> respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and</p> <p><input type="checkbox"/> with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA.</p> <p>NOTE An example of a wireless listening device is a Bluetooth headphone.</p>		N/A
	<p>Zx.5 Measurement methods</p> <p>Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s.</p> <p>NOTE Test method for wireless equipment provided without listening device should be defined.</p>		N/A

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)												
Clause	Requirement + Test	Result - Remark	Verdict									
2.7.1	<p>Replace the subclause as follows:</p> <p>Basic requirements</p> <p>To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):</p> <p>a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment;</p> <p>b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;</p>		P									
	<p>c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.</p> <p>If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>		P									
2.7.2	This subclause has been declared 'void'.		N/A									
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N/A									
3.2.5.1	<p>Replace "60245 IEC 53" by "H05 RR-F";</p> <p>"60227 IEC 52" by "H03 VV-F or H03 VVH2-F";</p> <p>"60227 IEC 53" by "H05 VV-F or H05 VVH2-F2".</p> <p>In Table 3B, replace the first four lines by the following:</p> <table><tr><td>Up to and including 6 </td><td>0,75 ^{a)} </td><td>Over 6</td></tr><tr><td>up to and including 10 </td><td>(0,75) ^{b)} 1,0 </td><td>Over 10</td></tr><tr><td>up to and including 16 </td><td>(1,0) ^{c)} 1,5 </td><td></td></tr></table> <p>In the conditions applicable to Table 3B delete the words "in some countries" in condition ^{a)}.</p> <p>In NOTE 1, applicable to Table 3B, delete the second sentence.</p>	Up to and including 6	0,75 ^{a)}	Over 6	up to and including 10	(0,75) ^{b)} 1,0	Over 10	up to and including 16	(1,0) ^{c)} 1,5			N/A
Up to and including 6	0,75 ^{a)}	Over 6										
up to and including 10	(0,75) ^{b)} 1,0	Over 10										
up to and including 16	(1,0) ^{c)} 1,5											
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		N/A									

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 1,5 to 2,5 1,5 to 4 Delete the fifth line: conductor sizes for 13 to 16 A		N/A
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to: 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation).		N/A
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.		N/A
Bibliography	Additional EN standards.		—

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	—
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ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In Denmark , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		N/A
1.2.13.14 (A11:2009)	In Norway and Sweden , for requirements see 1.7.2.1 and 7.3 of this annex.		N/A

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.7.1 (A11:2009)	In Finland, Norway and Sweden , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.8	In Norway , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A
1.5.9.4	In Finland, Norway and Sweden , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

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

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

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

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5 (A2:2013)	<p>In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011.</p> <p>For class I equipment the following Standard Sheets are applicable: DK 1-3a, DK 1-1c, DK 1-1d, DK 1-5a or DK 1-7a, with the exception for STATIONARY EQUIPMENT where the socket-outlets shall be in accordance with Standard Sheet DK 1-1b, DK 1-1c, DK 1-1d or DK 1-5a.</p> <p>Socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance with DS 60884-2-D1 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with by DS 60884-2-D1 Standard Sheet DKA 1-3a or DKA 1-3b.</p> <p>Justification the Heavy Current Regulations, 6c</p>		N/A
2.2.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.2	In Finland, Norway and Sweden there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.6.3.3	In the United Kingdom , the current rating of the circuit shall be taken as 13 A, not 16 A.		N/A
2.7.1	In the United Kingdom , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.		N/A
2.10.5.13	In Finland, Norway and Sweden , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A
3.2.1.1	<p>In Switzerland, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets:</p> <p>SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A</p>		N/A

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

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

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

<p align="center">ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)</p>			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1 (A2:2013)	<p>In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</p> <p>If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.</p> <p>Justification the Heavy Current Regulations, 6c</p>		N/A
3.2.1.1	<p>In Spain, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994.</p> <p>Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994.</p> <p>If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.</p>		N/A
3.2.1.1	<p>In the United Kingdom, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations.</p> <p>NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>		N/A

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

<p style="text-align: center;">ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)</p>			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In Ireland , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.		N/A
3.2.4	In Switzerland , for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the United Kingdom , a power supply cord with conductor of 1,25 mm ² is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the United Kingdom , the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm ² to 1,5 mm ² nominal cross-sectional area.		N/A
4.3.6	In the United Kingdom , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A
4.3.6	In Ireland , DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.		N/A

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

<p align="center">ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)</p>			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	<p>In Finland, Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment:</p> <ul style="list-style-type: none"> • STATIONARY PLUGGABLE EQUIPMENT TYPE A that is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT. 		N/A
6.1.2.1 (A1:2010)	<p>In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>Alternatively for components, there is no distance through insulation requirements for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. 		N/A

Appendix No.1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES


<p align="center">ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)</p>			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b).</p> <p>It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14: - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14. 		N/A
6.1.2.2	<p>In Finland, Norway and Sweden, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.</p>		N/A
7.2	<p>In Finland, Norway and Sweden, for requirements see 6.1.2.1 and 6.1.2.2 of this annex.</p> <p>The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.</p>		N/A
7.3 (A11:2009)	<p>In Norway and Sweden, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.</p>		N/A

APPENDIX NO.2	National differences for Singapore			IEC 60950-1, 1st edition
The following is the national differences in accordance with safety authority website www.safety.org.sg/ , ref. Singapore Consumer Protection (Safety Requirements) - Information booklet - chapter 7 (page 23 - 26). Based on information by Singapore NCB – PSB Corp.				
7 SAFETY AUTHORITY’S REQUIREMENTS				
The Safety Authority monitors the safety of the controlled goods sold in Singapore by investigating all complaints, incidents and accidents reported to the authority. Experiences gained are translated into the Safety Authority’s Requirements. These requirements are to be fulfilled in addition to the applicable safety standards.				
Applicable to all electrical products				
No	Item	Requirement	Result - Remark	Verdict
2	Controlled Goods incorporated with additional function	The additional function must be tested to its applicable safety standard.		P
3	All appliances	All appliances must be tested to 230 VAC.	The voltage range includes 230Vac.	P
4	Voltage selector (voltage mis-match test)	Appliance fitted with voltage selector shall be tested as follows: Connect appliance to 230 VAC mains with voltage selector switch to settings not suitable for operation at 230 VAC.	No voltage selector.	N/A
5	Tropical condition test	All appliances (with tropical test requirements in applicable Standards) shall comply with the tropical condition test as stated in the relevant IEC Standards.		P
6	Class I appliances (3-pin mains plug)	All Class I appliances must be fitted with 3-pin mains plugs complied with SS 145/SS 472 that are registered with the Safety Authority.		N/A
7	Class II appliances (mains plug)	a) All Class II appliances must be fitted with 2-pin mains plug (Appendix T) complied with EN 50075. b) Class II appliances that are fitted with 3-pin mains plugs must use plugs that are complied with SS 145 and registered with the Safety Authority.		P
8	Appliances rated ≥ 3 kW or connected to fixed wiring	Electric appliance ≥ 3kW must be connected to fixed wiring. All connection to fixed wiring must be in accordance with Code of Practice CP5.	Not exceed 3kW.	N/A
9	Detachable power cord set (consists of mains plug, mains cord and appliance connector)	Detachable power cord set must be listed in the test report critical component list.		N/A


No	Item	Requirement	Result - Remark	Verdict
10	Circuit diagrams	Circuit diagrams must be indicated with component's values for products tested to IEC 60065 and IEC 60950-1.		P
11	Circuit diagrams of electronic modules in electrical appliances	Circuit diagrams of the electronic modules in the electrical appliances must be provided.		P
12	Controlled goods likely to be treated as toy by children	Controlled goods, having an enclosure, which is shaped and decorated so that it is likely to be treated as a toy by children, shall not be accepted for certification and registration.	The shape and function are not considered for toy.	N/A
Applicable to AC adaptor				
14	3-pin AC adaptor (Appendix V)	Test report showing that the 3-pin complied with sub-clauses 12.1 & 12.3 of SS 246 must be submitted.		N/A
15	2-pin AC adaptor (Appendix V)	The 2-pin (Appendix T) shall comply with EN 50075	See the appendix page.	P
16	Detachable power supply cord set not supplied by Registered Supplier	Registered Supplier who is not supplying the detachable power supply cord set together with the AC Adaptor must provide written instruction to its customer on the type of approved detachable power cord set to use.		N/A
Applicable to computer products				
17	CD/DVD ROM (used in personal computer)	Test certificate showing that CD/DVD ROM has complied with IEC 825 must be provided.	No CD/DVD ROM provided.	N/A
18	Modem Card (used in personal computer)	Modem card incorporated in the personal computer must be tested at set level (sub-clauses 5.1& 6 of IEC 60950-1) or at component level.	No modem card provided.	N/A
Applicable to plasma/LCD display monitor				
37	Plasma/LCD display monitor with TV tuner	Plasma/LCD display monitor tested to IEC 60950-1 would require additional test to clauses 9 (related to antenna only), 10.1, 10.2, 10.3 and 12.5 of IEC 60065.	No TV tuner.	N/A

ATTACHMENT TO TEST REPORT IEC 60950-1 with A1: 2009 and A2:2013 JAPAN NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to: J60950-1 (H29)			
Attachment Form No.....: JP_ND_IEC60950_1F			
Attachment Originator: JQA			
Master Attachment.....: 2017-11			
Copyright © 2017 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			
	National Differences		
1.2.4.1	Add the following new notes. Note: Even if the equipment is designed as Class I, the equipment is regarded as CLASS 0I EQUIPMENT (see 1.2.4.3A) when 2-pin adaptor with earthing lead wire or cord set having 2-pin plug with earthing lead wire is provided or recommended.		N/A
1.2.4.3A	Add the following new clause. 1.2.4.3A CLASS 0I EQUIPMENT Equipment having attachment plug without earthing blade, where protection against electric shock is achieved by: <ul style="list-style-type: none"> - using BASIC INSULATION, and - providing either of the following a) or b) in order to connect those conductive parts that might assume a HAZARDOUS VOLTAGES in the event of BASIC INSULATION fault to the PROTECTIVE EARTHING CONDUCTOR in the building wiring. <ul style="list-style-type: none"> a) Provision of 2-pin plug with earthing lead including the condition of that 2-pin adaptor with earthing lead wire is provided or recommended. b) Provision of an independent earthing terminal, when 2-core mains cord (without earthing conductor) is used. Note – CLASS 0I EQUIPMENT may have a part constructed with Double Insulation or Reinforced Insulation.		N/A

1.3.2	<p>Add the following notes after the first paragraph:</p> <p>Note 1 Transportable or similar equipment that are relocated frequently for intended usage should not be designed as Class I or CLASS 0I EQUIPMENT unless it is intended to be installed by service personnel.</p> <p>Note 2 Considering wiring circumstance in Japan, equipment intended to be installed where the provision for earthing connection is unlikely should not be designed as Class I or CLASS 0I EQUIPMENT unless it is intended to be installed by service personnel.</p>		N/A
1.5.1	<p>Replace the first paragraph with the follows:</p> <p>Where safety is involved, components shall comply either with the requirements of this standard, with the safety aspects of the relevant JIS component standard, or IEC component standards, or components shall have equivalent to or better properties than these.</p> <p>Replace Note 1 with the following:</p> <p>Note 1 Components complying with the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.</p> <p>Note 2 JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope.</p> <p>Add the following after the last paragraph:</p> <p>For an appliance connector that is able to fit with appliance inlet compatible with the standard sheet of IEC 60320-1 or JIS C 8283-1, the size of the connector shall comply with relevant standard sheet of IEC 60320-1 or JIS C 8283-1. A power supply cord set complying with JIS C 8286 is regarded to comply with this requirement.</p> <p>Note 3 A power supply cord set provided with appliance connector that is able to fit with appliance inlet compatible with the standard sheet of IEC 60320-1 or JIS C 8283-1 should comply with JIS C 8286.</p>		P
1.5.2	<p>Add the following Note 2 after the 4th dashed paragraph:</p> <p>Note 2 See 1.7.5A when Type C.14 appliance coupler rated 10 A per JIS C 8283-1 is used with an equipment rated not more than 125 V and rated more than 10 A.</p>		N/A
1.5.5	<p>Add the following Note after the last paragraph:</p> <p>NOTE An interconnection cord sets provided with interconnecting coupler for mains supply complying with JIS C 8283-2-2 should comply with JIS C 8286.</p>		N/A
1.5.9.1	<p>Add the following in the last of NOTE 1.</p> <p>Gas discharge tube connected in series with VDR may be used.</p>		N/A

1.7	Replace EE.2 and EE.4 with the following: JA.1 Shredder warning JA.3 Shredder power disconnection		P
1.7.1.2	Replace first and second dashed paragraphs with the followings: - manufacturer's or responsible company's name or trade-mark or identification mark; - manufacturer's or responsible company's model identification or type reference;		N/A
1.7.2.1	Add the following after the second paragraph. Instruction or equipment marking regarding safety shall be written in Japanese unless otherwise permitted in this standard.		N/A
1.7.2.5	Replace the last sentence with the following: An acceptable marking for an electric shock hazard is  (6.2.4 of JIS S 0101).		N/A
1.7.5	Replace the second paragraph with the following. Socket-outlets conforming to JISC8282-1 are examples of standard power supply outlets.		N/A
1.7.5A	Add the following new clause after 1.7.5. 1.7.5A Power supply cord set If appliance coupler according to IEC60320-1, C.14(rated current: 10A) is used in equipment whose rated voltage is less than 125V and rated current is over 10A, the following instruction or equivalent shall be described in the operating instruction. " Use only designated cord set attached in this equipment" <i>Example in Japanese:</i> "この機器に同梱(梱)した指定の電源コードセットだけを使用して下さい。" If appliance coupler is used for connection to the mains and if the cord set is not provided within the package for the equipment, suitable information regarding to the cord set shall be described in the operating instruction Note Since the combination of appliance inlet with earthing pin and two-core cord set (without earthing conductor) is special, the cord set should be attached in the equipment and the operating <i>instruction should provide the information that the cord set is exclusively used with the equipment and not allowed to use with other equipment.</i>		N/A

1.7.14A	<p>Add the following new clause after 1.7.14.</p> <p>1.7.14A Marking for CLASS 0I EQUIPMENT</p> <p>For CLASS 0I EQUIPMENT, the following or equivalent instructions shall be marked.</p> <ul style="list-style-type: none"> - the following instruction shall be marked on the mains plug or on the visible place of the main body <p>"Provide an earthing connection"</p> <p><i>Example in Japanese:</i></p> <p>"必ず接地接続を行ってください。"</p> <ul style="list-style-type: none"> - the following instruction shall be marked on the visible place of the main body or written in the operating instructions: <p>"Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains."</p> <p><i>Example in Japanese:</i></p> <p>接地接続は必ず、電源プラグを電源につなぐ前に行ってください。 また、接地接続を外す場合は、必ず電源プラグを電源から切り離してから行ってください。</p>		N/A
1.7.14B	<p>Add the following new clause after 1.7.14A</p> <p>1.7.14B Protective earthing conductor used for CLASS 0I EQUIPMENT</p> <p>For CLASS 0I EQUIPMENT provided with independent main protective earthing terminal, where the cord for the protective earthing connection is not provided within the package for the equipment, the suitable information for the protective earthing connection shall be provided in the operating instruction. (See 2.6.3.2)</p>		N/A
2.1.1.1	<p>Replace item b) of 2.1.1.1 with the following.</p> <p>b) A test with the test finger, Figure 2A, which shall not contact parts described above when applied to openings in the ENCLOSURES after removal of parts that can be detached by an OPERATOR, including fuseholders, and with OPERATOR access doors and covers open. It is permitted to leave lamps in place for this test. Connectors that can be separated by an OPERATOR, other than those complying with JIS C 8303 or JIS C 8285 or IEC 60309 series or JIS C 8283 series or IEC 60320 series, shall also be tested during disconnection. But even if the connector does not comply with these standards, the one having equivalent to or better performance need not be tested during disconnection.</p> <p>Note 4 Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.</p>		N/A

2.5	Replace "IEC 60730-1" with "JIS C 9730-1" (in item b)).		N/A
2.6.2	<p>Delete the following line.</p> <p>• the symbol , IEC 60417-5018 (2011-07);</p>		N/A
2.6.3.2	<p>Add the following after the first paragraph.</p> <p>However where the single core conductor is used for protective earthing lead or earthing cord for CLASS 0I EQUIPMENT, either of the following condition shall be met.</p> <ul style="list-style-type: none"> - Use of annealed copper wire with 1.6 mm diameter or corrosion-inhibiting metal wire having equivalent to or more strength and thickness. - Single core cord or single core cab tire cable with 1.25 mm² or more cross-sectional area 		N/A
2.6.3.5	<p>Add the following after the first paragraph.</p> <p>However this requirement does not apply to internal conductor of the cord set that is covered by the sheath of mains cord and is formed together with mains plug and appliance connector.</p>		N/A
2.6.4.2	<p>Replace the first paragraph with the following.</p> <p>Equipment required to have protective earthing shall have a main protective earthing terminal.</p> <p>For equipment with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal.</p> <p>However, for CLASS 0I EQUIPMENT provided with the separate main protective earthing terminal other than appliance inlet, the separate main protective earthing terminal may be treated as mains protective earthing terminal.</p>		N/A
2.6.5.4	<p>Replace the first sentence with the following.</p> <p>Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:</p> <p>Add the following after last paragraph:</p> <p>Note For CLASS 0I EQUIPMENT, 1.7.14A is applied instead of this requirement.</p>		N/A


2.6.5.8A	<p>Add the following new clause after 2.6.5.8</p> <p>2.6.5.8A Earthing of CLASS 0I EQUIPMENT</p> <p>Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V.</p> <p>For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip.</p> <p>CLASS 0I EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external location where easily visible.</p>		N/A
2.7.6	Replace "ISO 3864, No. 5036" with "6.2.4 of JIS S 0101".		N/A
2.10.3.1	<p>Replace the 8th paragraph with the following</p> <p>The above minimum CLEARANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, or even if it does not comply with the above standards but the one having equivalent to or better performance and dimension which comply with JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2.</p> <p>Note Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.</p>		N/A
2.10.3.2 Table 2J	In Japan, the value of the main power supply transient voltage for the nominal ac main power supply voltage of 100 V is determined by applying the row of AC main power supply voltage 150 V.		N/A
2.10.4.3	<p>Replace the 6th paragraph with the following</p> <p>The above minimum CREEPAGE DISTANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, or even if it does not comply with the above standards but the one having equivalent to or better performance and dimension which comply with JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2.</p> <p>Note Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.</p>		N/A
2.10.9	Replace "1.4.5" in the third paragraph with "1.4.12".		N/A
3.2.3	<p>Add the following after the third paragraph.</p> <p>Table 3A applies when cables complying JIS C 3662 series of standards or JIS C 3663 series of standards are used. In case of other cables, cable entries shall be so designed that the cable could be fitted in a conduit.</p>		N/A

3.2.4	Add the following as 4th dashed paragraph. - be so constructed that mechanical stress shall not transmit to the soldering part of inlet terminal during insertion or removal of the connector except that the body of the inlet is secured and is secured not only soldering.		N/A
3.2.5.1	Add the following after Note 3: Note 4 In Japan, mains cords having equivalent to or better electro-mechanical and fire safety performance as above and complying with Appendix 1 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance can be used. Replace the paragraph after Note 3 with the following. For equipment required to have protective earthing, a PROTECTIVE EARTHING CONDUCTOR shall be included in the MAINS SUPPLY cord except for CLASS 0I EQUIPMENT having separate protective earthing conductor from mains cord. Add the following after the second paragraph after Note 3: Note 5 For the cross-sectional area of mains cord described in Note 4, relevant Japanese wiring regulation can be applied.		N/A
3.2.5A	Add the following new clause after 3.2.5 3.2.5A AC mains plug Mains plug for PLUGGABLE EQUIPMENT TYPE A shall comply with JIS C 8282-1 or equivalent to or better performance. Power supply cord set complying with JIS C 8286 is regarded to meet the requirements. Mains plug with fuse link for PLUGGABLE EQUIPMENT TYPE A shall comply with JIS C 8282-2-1 or equivalent to or better performance. Note Mains plug complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.		N/A
3.3.4 Table 3D	Add the following note to Table 3D: Note For cables other than those complying with JIS C 3662 series of standards or JIS C 3663 series of standards, the terminals shall be suitable for the size of the intended cables.		N/A
3.3.7	Add the following after the first sentence: This requirement is not applicable to the external earthing terminal of CLASS 0I EQUIPMENT.		N/A

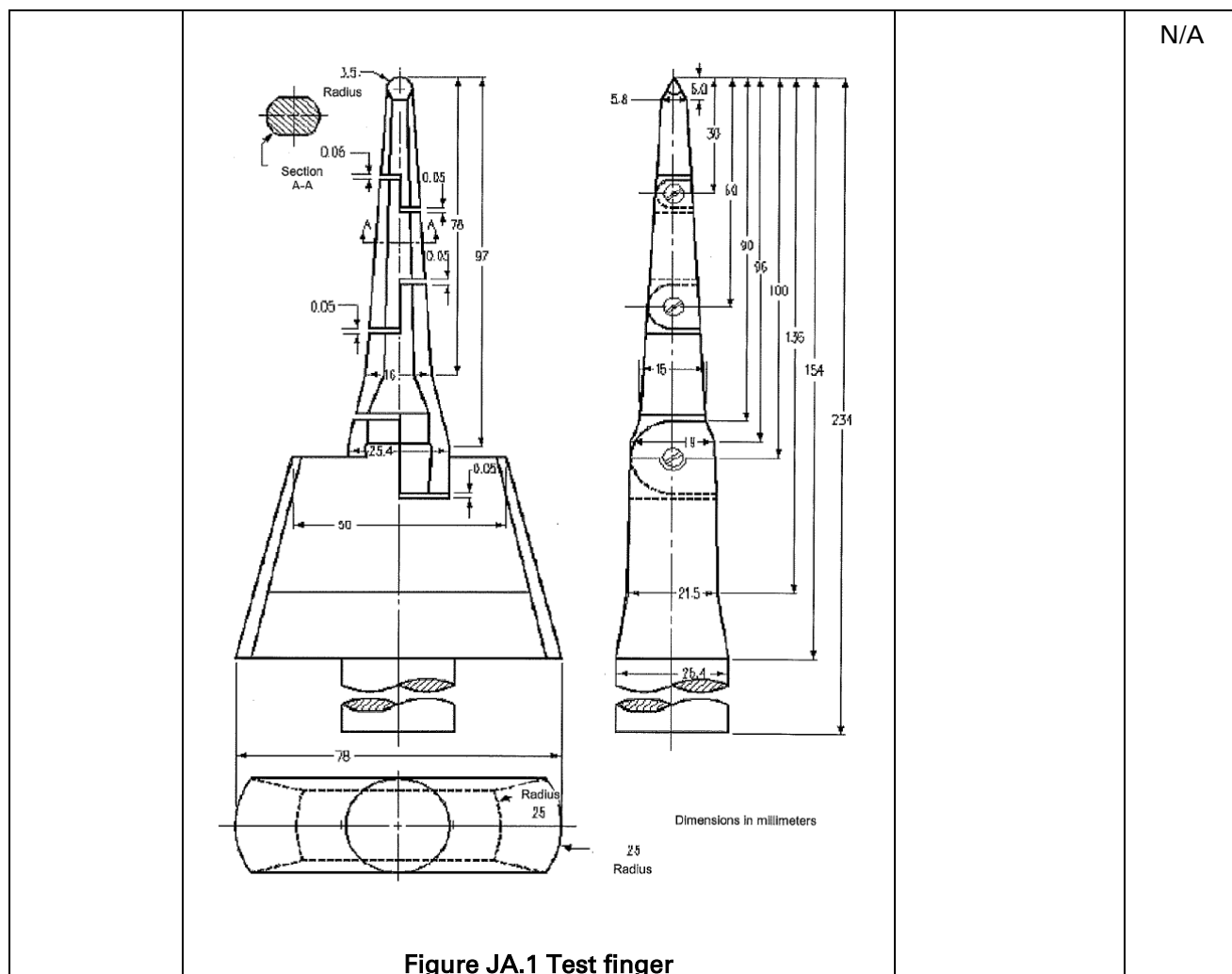
4.2.8	Add the following after the first paragraph: Note Intrinsically protected picture tube is required to comply with JIS C 6965 in clause 18 of JIS C 6065. No intrinsically protected picture tube which is out of scope of JIS C 6965 is required to test according to sub-clause 18.2 of JIS C 6065.		N/A
4.3.4	Add the following after the first sentence: This requirement also applies to those connections in CLASS 0I EQUIPMENT, where CLEARANCE or CREEPAGE DISTANCES over BASIC INSULATION would be reduced to less than the values specified in 2.10.		N/A
4.3.5	Replace the first dashed paragraph with the following. Within a manufacturer's unit or system, plugs and sockets likely to be used by the OPERATOR or by a SERVICE PERSON shall not be employed in a manner likely to create a hazard due to misconnection. In particular, connectors complying with IEC 60320/JIS C 8283 series of standards or JIS C 8303 or JIS C 8358 shall not be used for SELV CIRCUITS or TNV CIRCUITS. Keying, location or, in the case of connectors accessible only to a SERVICE PERSON, clear markings are permitted to meet the requirement.		N/A
4.3.6	Replace the 1st paragraph with the following DIRECT PLUG-IN EQUIPMENT shall not impose undue stress on the socket-outlet. The mains plug part shall comply with the standard for the relevant mains plug. (see 3.2.5A)		N/A
4.4.2	Replace the paragraph with the following: HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall also comply with Annex JA.		N/A
4.5.3	Add the following note to footnote b) of Table 4B: NOTE In case no data for the material is available, Appendix 4, 1. (1). b. 3 of the Interpretation on the Ministerial Ordinance stipulating Technical Specifications for Electrical Appliances is regarded as maximum temperature limit of the material.		N/A
5.1.3	Add a note after the first paragraph as follows: Note – Attention should be drawn to that majority of three-phase power system in Japan is of delta connection, and therefore, in that case, test is conducted using the test circuit from IEC 60990, figure 13.		N/A

5.1.6	Replace Table 5A. as follows				P
	Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. ^a	Maximum PROTECTIVE CONDUCTOR CURRENT	
	ALL equipment	Accessible parts and circuits not connected to protective earth ^b	0,25	-	
	HAND-HELD	Main protective earthing terminal of CLASS I EQUIPMENT	0,75	-	
		Main protective earthing terminal of CLASS 0 I EQUIPMENT	0,5	-	
	MOVABLE (other than HAND_HELD, but including TRANSPORTABLE EQUIPMENT)	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	-	
		Main protective earthing terminal of CLASS 0 I EQUIPMENT	1.0	-	
	STATIONARY, PLUGGABLE TYPE A	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	-	
		Main protective earthing terminal of CLASS 0 I EQUIPMENT	1,0	-	
	ALL other STATIONARY EQUIPMENT - not subject to the conditions of 5.1.7 - subject to the conditions of 5.1.7	Main protective earthing terminal of CLASS I EQUIPMENT	3.5 -	- 5 % of input current	
		Main protective earthing terminal of CLASS 0 I EQUIPMENT	1.0 -	- -	
	a If peak values of TOUCH CURRENT are measured, the maximum values are obtained by multiplying the r.m.s.values in the table by 1,414. b Some unearthed accessible parts are covered in 1.5.6 and 1.5.7 and the requirements of 2.4 apply. These may be different from those in 5.1.6.				
Annex G	Replace the paragraph before Table G.2 with the following The above minimum CLEARANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, and 1.5.1 of this standard in which dimension is comply with JIS C 8283 series, JIS C 8303 or IEC 60309-2.				N/A
Annex V V.1	Replace “3.1.2” in the first line of V.1 with “312” in the first line.				N/A

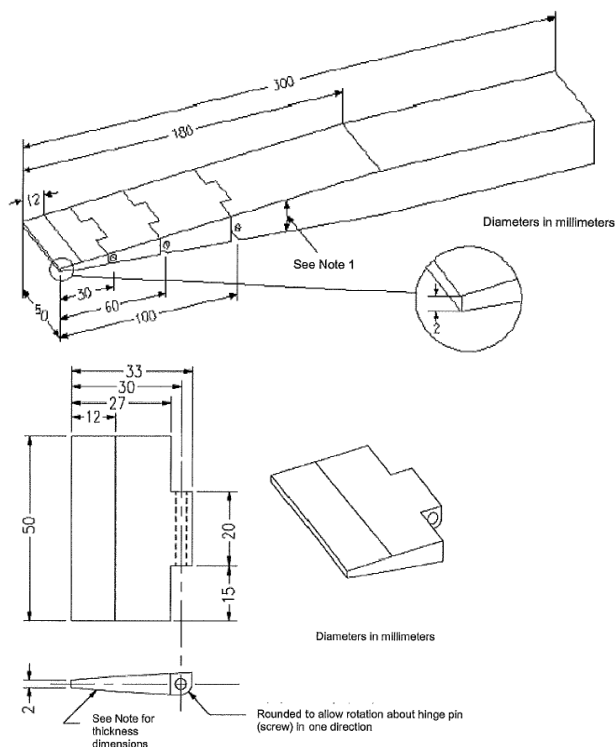
Annex W W.1	Replace the third sentence in the first paragraph with the following: Floating circuits can exist in CLASS I EQUIPMENT, CLASS 0I EQUIPMENT and earthed circuits can exist in CLASS II EQUIPMENT.		N/A
Annex BB	This annex is not applicable.		N/A
Annex CC CC.2	Replace the third dashed paragraph with the following: - 10 000 cycles of turning enable on and off with the input connected to a capacitor rated 425 uF \pm 10 uF and shorting the output;		N/A
CC.3	Add note at end of CC.3: Note: The fast blow fuse should be the one complying with JIS C 6575-2.		N/A
CC.4	Replace the 2nd dashed paragraph with the following: - 10 000 cycles of turning enable on and off with a 100 $\Omega \pm$ 5 Ω resistor and a 425 uF \pm 10 uF capacitor in parallel with the output; Replace the 4th dashed paragraph with the following: - 10 000 cycles of turning enable on and off with the input connected to a capacitor rated 425 uF \pm 10 uF and shorting the output; Replace the 5th dashed paragraph with the following: -10 000 cycles of turning the input pin on and off with a capacitor rated 425 uF \pm 10 uF connected to the input supply while keeping enable active and shorting the output; Replace the 6th dashed paragraph with the following: -10 000 cycles of turning the input pin on and off with an ferrite-core inductor having 350 mH \pm 10 mH inductance at 1 kHz and less than 1 Ω d.c. resistance connected to the input supply and return while keeping enable active and shorting the output; Replace the 10th dashed paragraph with the following: -3 cycles of exposing the device (not energized) to 70 $^{\circ}$ C \pm 2 $^{\circ}$ C for 24 h; followed by at least 1 h at room ambient; followed by at least 3 h at -30 $^{\circ}$ C \pm 2 $^{\circ}$ C; followed by 3 h at room ambient; Replace the 11th dashed paragraph with the following: -10 cycles of exposing the device (while energized) to 50 $^{\circ}$ C \pm 2 $^{\circ}$ C for 10 min; followed by 10 min at 0 $^{\circ}$ C \pm 2 $^{\circ}$ C with a 5 min period of transition from one state to the other;		N/A

Annex EE	<p>Replace Annex EE with the following Annex JA.</p> <p style="text-align: center;">Annex JA (normative) Document shredding machines</p> <p>HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall additionally comply with the requirements of this annex.</p> <p>JA.1 Markings and instructions</p> <p>The symbol  (JIS S 0101:2000, 6.2.1) and the following precautions for use shall be marked on readily visible part adjacent to document feed opening. The marking shall be clearly legible, permanent, and easily discernible; 子供が使用することによって、傷害などの危害が発生するおそれがある。; (that use by infants/children may cause a hazard of injury etc.) 文書投入口に手を触れることによって、細断機構に引き込まれるおそれがある。; (that a hand can be drawn into the mechanical section for shredding when touching the document-slot) 文書投入口に衣類が触れることによって、細断機構に引き込まれるおそれがある。; ; (that clothing can be drawn into the mechanical section for shredding when touching the document-slot) 文書投入口に髪の毛が触れることによって、細断機構に引き込まれるおそれがある。; ; (that hairs can be drawn into the mechanical section for shredding when touching the document-slot) - in case of equipment incorporating a commutator motor, 可燃性ガスを噴射することによって引火又は爆発するおそれがある。 (that equipment may catch fire or explode by spraying of flammable gas.)</p> <p>JA.2 Inadvertent reactivation</p> <p>Any safety interlock that can be operated by means of the test finger, Figure JA.1, is considered to be likely to cause inadvertent reactivation of the hazard. Compliance is checked by inspection and, where necessary, by a test with the test finger, Figure JA.1.</p> <p>JA.3 Disconnection from the mains supply</p> <p>Document shredding machines shall incorporate an isolating switch complying with sub-clause 3.4.2 as the device disconnecting the power of hazardous moving parts. For this switch, two-position (single-use) switch or</p>		N/A
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	<p>multi-position (multifunction) switch (e.g., slide switch) may be used.</p> <p>If two-position switch, the positions for "ON" and "OFF" shall be indicated in accordance with sub-clause 1.7.8. If multi-position switch, the position for "OFF" shall be indicated in accordance with sub-clause 1.7.8 and other positions shall be indicated with proper terms or symbols. Compliance is checked by inspection.</p>		
	<p>JA.4 Protection against hazardous moving parts</p> <p>Any warning shall not be used instead of the structure for preventing access to hazardous moving parts. Document shredding machines shall comply with the following requirements.</p> <p>Insert the test finger, Figure JA.1, into all openings in MECHANICAL ENCLOSURES without applying appreciable force. It shall not be possible to touch hazardous moving parts with the test finger. This consideration applies to all sides of MECHANICAL ENCLOSURES when the equipment is mounted as intended. Before testing with the test finger, remove the parts detachable without a tool.</p> <p>Insert the wedge-probe, Figure JA.2, into the document-slot. And, against all directions of openings, if straight-cutting type, a force of 45 N shall apply to the probe, and 90 N if cross-cutting type. In this case, the weight of the probe is to be factored into the overall applied force. Before testing with the wedge-probe, remove the parts detachable without a tool. It shall not be possible to touch any hazardous moving parts, including the shredding roller or the mechanical section for shedding, with the probe.</p>		N/A



N/A



(Details of the tip of wedge)

Distance from the tip (mm)	Thickness of probe (mm)
0	2
12	4
180	24

Note 1 - The thickness of the probe varies linearly, with slope changes at the respective points shown in the table.



Note 2 -The allowable dimensional tolerance of the probe is;

for ≤ 25 mm: ± 0.13 mm

for > 25 mm: ± 0.3 mm.

Figure JA.2 Wedge-probe

APPENDIX No.4	National differences for China IEC 60950-1, 2nd edition		—
1.1.2	GB 4943.1-2011 applies to equipment for use at altitudes not exceeding 5000m above sea level, primarily in regions with moderate or tropical climates. Amend the third dashed paragraph of 1.1.2 as: — — equipment intended to be used in vehicles, on board ships or aircraft, at altitudes greater than 5000m;	Altitude: <5000 m	N/A
1.4.5	After the third paragraph, add a paragraph: If the equipment is intended for direct connection to an AC mains supply, the tolerances on RATED VOLTAGE shall be taken as +10%,-10% unless a wider tolerance is declared by the manufacturer. The first dash paragraph "-the RATED VOLTAGE is 230V single-phase or 400V three-phase, in which case the tolerance shall be taken as +10% and -10%" of IEC 60950-1:2005 is deleted in GB 4943.1-2011		P
1.4.12.1	Tma in clause 1.4.12.1 amended as: Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 35 °C, whichever is greater. Add note 1: For equipment not to be operated at tropical climatic conditions, Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 25 °C, whichever is greater. Add note 2: For equipment is to be operated at 2000m-5000m above sea level, its temperature test conditions and temperature limits are under consideration.		P
1.5. 2	Add a note behind the first break off section in Clause 1.5.2: A component used shall comply with related requirements corresponding altitude of 5000m.		N/A
1.7	Add one paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.	It shall be checked for proper certificate of these countries' certification before products are sold in the market.	N/A



Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	<p>Based on the AC mains supply of China, the RATED VOLTAGE should be 220V (single phase) or 380V (three-phases) for single rated voltage, for RATED VOLTAGE RANGE, it should cover 220V or 380V (three-phases), for multiple RATED VOLTAGES, one of them should be 220V or 380V (three-phases) and set on 220V or 380V (three-phases) when manufactured.</p> <p>And the RATED FREQUENCY or RATED FREQUENCY RANGE should be 50Hz or include 50Hz.</p>		P
1.7.2.1	<p>Add requirements of warning for equipment intended to be used at altitudes not exceeding 2000m or at non-tropical climate regions:</p> <p>For equipment intended to be used at altitude not exceeding 2000m, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place.</p> <p>"Only used at altitude not exceeding 2000m."</p>  <p>For equipment intended to be used in not-tropical climate regions, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place.</p> <p>"Only used in not-tropical climate regions."</p>  <p>If only the symbol used, the explanation of the symbol shall be contained in the instruction manual.</p> <p>The above statements shall be given in a language acceptable to the regions where the apparatus is intended to be used.</p>	<p>Altitude: <5000 m</p> <p>The marking label shall be checked for proper certificate of these countries' certification before products are sold in the market.</p>	N/A

2.7.1	<p>Amended the first paragraph as:</p> <p>Protection in PRIMARY CIRCUITS against overcurrent short-circuits and earth faults shall be provided as an integral part of the equipment except special provisions. And the protective device shall meet the requirement of Clause 5.3.</p> <p>Delete note of Clause 2.7.1.</p>		P
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Clause	Requirement + Test	Result - Remark	Verdict
2.9.2	<p>First section of Clause 2.9.2 amended as two sections:</p> <p>Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 120 h in a cabinet or room containing air with ambient temperature 40 ± 2 °C and a relative humidity of (93 ± 3) %. During this conditioning the component or subassembly is not energized.</p> <p>For equipment not to be operated at tropical climatic conditions, Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of (93 ± 3) %. The temperature of the air, at all places where samples can be located, is maintained within 2 °C of any convenient value between 20 °C and 30 °C such that condensation does not occur.</p> <p>Due to pretreatment of equipment operated at high altitude area is humidity conditioning withstand hot shock, specific requirements are to be considered.</p> <p>Add note: For equipment to be operated at 2000 m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered.</p>		P
2.10.3.1	<p>Amend the third paragraph of Clause 2.10.3.1 to be:</p> <p>These requirements apply for equipment to be operated up to 2000 m above sea level. For equipment to be operated at more than 2000 m above sea level and up to 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0.1 mm increment.</p>	Altitude: <5000 m.	N/A
2.10.3.3& 2.10.3.4	Add "(applicable for altitude up to 2000m)" in header of Table 2K、2L and 2M.		N/A

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

Annex BB (informative)	Amended as : The differences between Chinese national standards GB 4943.1-2011 and GB 4943-2001.		N/A
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Clause	Requirement + Test	Result - Remark	Verdict
Annex DD (normative)	<p>Added annex DD: Instructions for the new safety warning labels.</p> <p>DD.1 Altitude warning label</p>  <p>Meaning of the label: Evaluation for apparatus only based on altitude not exceeding 2000m, therefore it's the only operating condition applied for the equipment .There may be some potential safety hazard if the equipment is used at altitude above 2000m.</p> <p>DD.2 Climate warning label</p>  <p>Meaning of the label: Evaluation for apparatus only based on temperate climate condition, therefor it's the only operating condition applied for the equipment .There may be some potential safety hazard if the equipment is used in tropical climate region.</p>	It shall be checked for proper certificate of these countries' certification before products are sold in the market.	N/A
Annex EE (informative)	<p>Added annex EE:</p> <p>Illustration relative to safety explanation in normative Chinese, Tibetan, Mongolian, Zhuang Language and Uighu.</p>	It shall be checked for proper certificate of these countries' certification before products are sold in the market.	N/A
Other amendments	<p>In accordance with the relevant CTL decisions and the amendments of IEC 60950-1, the specific requirements or mistakes in IEC standard are corrected or editorially modified in this part, Including clause 1.7, 2.1.1.7, 2.9.2, Table 2H, Figure 2H, F.8, F.9, M.3 and Annex U.</p>		P

Clause	Requirement + Test	Result - Remark	Verdict
Quoting standards and reference documents	<p>The principles of quoting and referring to other standards in Annex P and reference documents of IEC 60950-1 are as follows:</p> <p>If the date of the reference document is given, only that edition applies, excluding any subsequent corrigenda and amendments. However, parties to agreements based on this part are encouraged to investigate the possibility of applying the most recent editions of the reference documents. For undated references, the latest edition of the referenced document applies, including any corrigenda and amendments.</p> <p>For the usage of international standards in Chinese national standards and industry standards is various, in the aim of achieving easy operation and based on the requirements of GB/T 1.1 and GB/T 20000.2, when quoting an entire international standard in the normative quoting files and reference documents of Annex P of this part, the principles of quotation are as follows:</p> <ul style="list-style-type: none"> - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted; - If the date of the national standard or industry standard is not given, the latest edition of the standard applies; - The national standard or industry standard number, corresponding international standard number and the consistency level code should be identified in parentheses behind the listed national standard or industry standard. <p>When quoting several chapters or clauses of the international standard, the principles of quotation are as follows:</p> <ul style="list-style-type: none"> - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted. 		P
	<p>Meanwhile, in order to retain the relevant information on international standards, informative annex CC is increased, which gives the table about the comparison of the normative quoting files and reference documents in IEC 60950-1:2005 and GB 4943.1-2011.</p>		P

APPENDIX ZZ VARIATIONS TO IEC 60950-1, ED. 2.2 (2013) FOR AUSTRALIA AND NEW ZEALAND	
Differences according to.....:	AS/NZS 60950.1:2015

ZZ1 INTRODUCTION

This Appendix sets out variations and additional requirements to cover issues which have not been addressed by the International Standard. These variations indicate national variations for purposes of the IECEE CB System and will be published in the IECEE CB Bulletin.

ZZ2 VARIATIONS

The following variations apply to the source text.

1.2	After definition 'PERSON, SERVICE' , insert the following new definition: POTENTIAL IGNITION SOURCE 1.2.12.201		P
1.2.12.201	After Clause 1.2.12.15, insert the following new clause: 1.2.12.201 POTENTIAL IGNITION SOURCE Possible fault which can start a fire if the open-circuit voltage measured across an interruption or faulty contact exceeds a value of 50 V (peak) a.c. or d.c. and the product of the peak value of this voltage and the measured r.m.s. current under normal operating conditions exceeds 15 VA. Such a faulty contact or interruption in an electrical connection includes those which may occur in CONDUCTIVE PATTERNS on PRINTED BOARDS. NOTE 1 An electronic protection circuit may be used to prevent such a fault from becoming a POTENTIAL IGNITION SOURCE. NOTE 2 This definition is from AS/NZS 60065:2012, Clause 2.8.11.		P
1.5.1	<ol style="list-style-type: none"> First paragraph, insert the following text after the words 'IEC component standard' : 'or the relevant Australian/New Zealand Standard.' In the NOTE, insert the following text after the word 'standard': 'or an Australian/New Zealand Standard' Second paragraph, delete the words 'without further evaluation'. 		P

1.5.2	<div>1. First paragraph, insert the following text after the word 'standard': 'or an Australian/New Zealand Standard.'</div> <div>2. First paragraph, second dash item, second line, insert the following text after the word 'standard' : 'or an Australian/New Zealand Standard.'</div> <div>3. First paragraph, second dash item, last line, Insert the following text after the word 'standard' : 'or an Australian/New Zealand Standard.'</div>		P																	
1.7.1.3	<div>Delete existing text and replace with the following:</div> <div>Graphical symbols placed on the equipment as a requirement of this standard, shall be in accordance with IEC 60417 or ISO 3864-2 or ISO 7000, if available. In the absence of suitable symbols, the manufacturer may design specific graphical symbols.</div> <div>Symbols as required by this standard placed on the equipment shall be explained in the user manual.</div>		P																	
2.9.2	Second paragraph, delete the word 'designated' .		P																	
3.2.5.1 Table 3B	<div>Modify Table 3B as follows:</div> <div>1. Delete the first four rows and replace with the following:</div> <table><tr><th rowspan="2">RATED CURRENT of equipment A</th><th colspan="2">Minimum conductor sizes</th></tr><tr><th>Nominal cross-sectional area mm²</th><th>AWG or kcmil [cross-sectional area in mm²] see Note 2</th></tr><tr><td>Over 0.2 up to and including 3</td><td>0,5 ^a</td><td>18 [0,8]</td></tr><tr><td>Over 3 up to and including 7.5</td><td>0,75</td><td>16 [1,3]</td></tr><tr><td>Over 7.5 up to and including 10</td><td>(0,75) ^b 1,00</td><td>16 [1,3]</td></tr><tr><td>Over 10 up to and including 16</td><td>(1,0) ^c 1,5</td><td>14 [2]</td></tr></table> <div>2. Delete NOTE 1 and renumber existing NOTE 2 as 'NOTE' .</div> <div>3. Delete Footnote ^a and replace with the following:</div> <div>^a This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the entry to the plug does not exceed 2 m (0,5 mm² three-core supply flexible cords are not permitted; see AS/NZS 3191).</div>	RATED CURRENT of equipment A	Minimum conductor sizes		Nominal cross-sectional area mm²	AWG or kcmil [cross-sectional area in mm²] see Note 2	Over 0.2 up to and including 3	0,5 ^a	18 [0,8]	Over 3 up to and including 7.5	0,75	16 [1,3]	Over 7.5 up to and including 10	(0,75) ^b 1,00	16 [1,3]	Over 10 up to and including 16	(1,0) ^c 1,5	14 [2]		N/A
RATED CURRENT of equipment A	Minimum conductor sizes																			
	Nominal cross-sectional area mm²	AWG or kcmil [cross-sectional area in mm²] see Note 2																		
Over 0.2 up to and including 3	0,5 ^a	18 [0,8]																		
Over 3 up to and including 7.5	0,75	16 [1,3]																		
Over 7.5 up to and including 10	(0,75) ^b 1,00	16 [1,3]																		
Over 10 up to and including 16	(1,0) ^c 1,5	14 [2]																		

4.1.201	After Clause 4.1, insert new Clause 4.1.201 as follows: 4.1.201 Display devices used for television purposes Display devices which may be used for television purposes, with a mass of 7 kg or more, shall comply with the requirements for stability and mechanical hazards, including the additional stability requirements for television receivers, specified in AS/NZS 60065.		N/A
4.3.6	Delete the third paragraph and replace with the following: <i>Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flatpin socket-outlet complying with AS/NZS 3112 shall comply with the requirements in AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets.</i>		N/A
4.3.8	Eighth paragraph, insert the following new note after the first dash item: NOTE 6.201 In cases where the voltage source is provided by power from an unassociated power source, consideration should be given to the effects of possible single fault conditions in the unassociated equipment. If the power source is unknown then it should be assumed that the maximum limit of SELV may be applied to the source input under assumed single fault conditions in the source when assessing the charging circuit in the equipment under test.		N/A
4.3.8.201	After Clause 4.3.8, add the following new clause as follows: 4.3.8.201 Products containing coin/button cell batteries and batteries designated R1 The requirements of AS/NZS 60065:2012 Amendment 1:2015, Clause 14.10.201 apply for this Clause.		N/A
4.3.13.5.1	1. Delete the first paragraph and replace with the following: Except as permitted below, equipment shall be classified and labelled according to IEC 60825-1 or AS/NZS 60825.1, IEC 60825-2 or AS/NZS 60825.2 and IEC 60825-12, as applicable. 2. Third paragraph, first sentence, after 'IEC 60825-1' , insert the following text: or AS/NZS 60825.1 3. Fourth paragraph, after 'IEC 60825-1' , insert the following text: or AS/NZS 60825.1		N/A
4.7	At the end of Clause 4.7, insert the following text: 'For alternate tests refer to Clause 4.7.201.'		P

4.7.201	After Clause 4.7.3.6, add new Clauses as follows: 4.7.201 Resistance to fire – Alternative tests		N/A
4.7.201.1	<p>4.7.201.1 General</p> <p>Parts of non-metallic material shall be resistant to ignition and spread of fire.</p> <p>This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames from inside the apparatus, or the following:</p> <p>(a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1mm in width regardless of length.</p> <p>(b) The following parts which would contribute negligible fuel to a fire:</p> <ul style="list-style-type: none"> - small mechanical parts, the mass of which does not exceed 4g, such as mounting parts, gears, cams, belts and bearings; - small electrical components, such as capacitors with a volume not exceeding 1,750 mm³, integrated circuits, transistors and optocoupler packages, if these components are mounted on material of flammability category V-1, or better, according to AS/NZS 60695.11.10. <p>NOTE In considering how to minimize propagation of fire and what 'small parts' are, account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating the fire from one part to another.</p> <p>Compliance shall be checked by the tests of 4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5.</p> <p>For the base material of printed boards, compliance shall be checked by the test of 4.7.201.5.</p> <p>The tests shall be carried out on parts of non-metallic material which have been removed from the apparatus. When the glow-wire test is carried out, the parts shall be placed in the same orientation as they would be in normal use.</p> <p>These tests are not carried out on internal wiring.</p>		N/A

4.7.201.2	<p>4.7.201.2 Testing of non-metallic materials</p> <p>Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550 °C.</p> <p>Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glow-wire test shall be not carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part.</p>		N/A
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4.7.201.3	<p>4.7.201.3 Testing of insulating materials</p> <p>Parts of insulating material supporting POTENTIAL IGNITION SOURCES shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750 °C.</p> <p>The test shall be also carried out on other parts of insulating material which are within a distance of 3 mm of the connection.</p> <p>NOTE Contacts in components such as switch contacts are considered to be connections.</p> <p>For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test. However, parts shielded by a barrier which meets the needle-flame test shall not be tested.</p> <p>The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications:</p> <table><tr><th>Clause of AS/NZS 60695.11.5</th><th>Change</th></tr><tr><td colspan="2">9 Test procedure</td></tr><tr><td>9.2 Application of needleflame</td><td>Replace the first paragraph with: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. If possible the flame shall be applied at least 10 mm from a corner Replace the second paragraph with: The duration of application of the test flame shall be 30 s ±1 s.</td></tr><tr><td>9.3 Number of test specimens</td><td>Replace with: The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.</td></tr><tr><td>11 Evaluation of test results</td><td>Replace with: The duration of burning (t_b) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.</td></tr></table>	Clause of AS/NZS 60695.11.5	Change	9 Test procedure		9.2 Application of needleflame	Replace the first paragraph with: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. If possible the flame shall be applied at least 10 mm from a corner Replace the second paragraph with: The duration of application of the test flame shall be 30 s ±1 s.	9.3 Number of test specimens	Replace with: The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.	11 Evaluation of test results	Replace with: The duration of burning (t _b) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.		N/A
Clause of AS/NZS 60695.11.5	Change												
9 Test procedure													
9.2 Application of needleflame	Replace the first paragraph with: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. If possible the flame shall be applied at least 10 mm from a corner Replace the second paragraph with: The duration of application of the test flame shall be 30 s ±1 s.												
9.3 Number of test specimens	Replace with: The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.												
11 Evaluation of test results	Replace with: The duration of burning (t _b) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.												

	parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10, provided that the sample tested was not thicker than the relevant part.		
4.7.201.4	<p>4.7.201.4 Testing in the event of non-extinguishing material</p> <p>If parts, other than enclosures, do not withstand the glow wire tests of 4.7.201.3, by failure to extinguish within 30 s after the removal of the glowwire tip, the needle-flame test detailed in 4.7.201.3 shall be made on all parts of non-metallic material which are within a distance of 50 mm or which are likely to be impinged upon by flame during the tests of 4.7.201.3. Parts shielded by a separate barrier which meets the needle-flame test need not be tested.</p> <p>NOTE 1 If the enclosure does not withstand the glow-wire test the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing.</p> <p>NOTE 2 If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the equipment, the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing.</p> <p>NOTE 3 Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting, in contact with, or in close proximity to, connections.</p>		N/A

4.7.201.5	<p>4.7.201.5 Testing of printed boards</p> <p>The base material of printed boards shall be subjected to the needle-flame test of Clause 4.7.201.3. The flame shall be applied to the edge of the board where the heat sink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge, consisting of broken perforations, unless the edge is less than 3 mm from a POTENTIAL IGNITION SOURCE.</p> <p>The test is not carried out if the —</p> <ul style="list-style-type: none"> - Printed board does not carry any POTENTIAL IGNITION SOURCE; - Base material of printed boards, on which the available apparent power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category V-1 or better according to AS/NZS 60695.11.10, or the printed boards are protected by an enclosure meeting the flammability category V-0 according to AS/NZS 60695.11.10, or made of metal, having openings only for connecting wires which fill the openings completely; or - Base material of printed boards, on which the available apparatus power at a connection exceeds 15 VA operating at a voltage exceeding 400 V (peak) a.c. or d.c. under normal operating conditions, and base material of printed boards supporting spark gaps which provides protection against overvoltages, is of flammability category V-0 according to AS/NZS 60695.11.10 or the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely. <p>Compliance shall be determined using the smallest thickness of the material.</p> <p>NOTE Available apparent power is the maximum apparent power which can be drawn from the supplying circuit through a resistive load whose value is chosen to maximise the apparent power for more than 2 min when the circuit supplied is disconnected.</p>		N/A
6.2.2	<p>For Australia only, delete the first paragraph and Note, and replace with the following:</p> <p>In Australia only, compliance with 6.2.2 shall be checked by the tests of both 6.2.2.1 and 6.2.2.2.</p>	No TNV.	N/A

6.2.2.1	<p>For Australia only, delete the first paragraph including the Notes, and replace with the following:</p> <p><i>In Australia only, the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator reference 1 of Table N.1. The interval between successive impulses is 60 s and the initial voltage, U_c, is:</i></p> <p><i>(i) for 6.2.1 a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and</i></p> <p><i>(ii) for 6.2.1 b) and 6.2.1 c): 1.5 kV.</i></p> <p>NOTE 201 The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines.</p> <p>NOTE 202 The value of 2.5 kV for 6.2.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.</p>	No TNV.	N/A
6.2.2.2	<p>For Australia only, delete the second paragraph including the Note, and replace with the following:</p> <p><i>In Australia only, the a.c. test voltage is:</i></p> <p><i>(i) for 6.2.1 a): 3 kV; and</i></p> <p><i>(ii) for 6.2.1 b) and 6.2.1 c): 1.5 kV.</i></p> <p>NOTE 201 Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used.</p> <p>NOTE 202 The 3 kV and 1.5 kV values have been determined considering the low frequency induced voltages from the power supply distribution system.</p>	No TNV.	N/A
7.3	<p>Add the following before the first paragraph:</p> <p>Equipment providing functions that fall only within the scope of AS/NZS 60065 and that incorporate a PSTN interface, are not required to comply with this Clause where the only ports provided on the equipment, in addition to a coaxial cable connection and a PSTN interface, are audio or video ports and analogue or data ports not intended to be used for telecommunications purposes.</p>	No cable distribution systems.	N/A
Annex P	<p>Add the following Normative References:</p> <p>AS/NZS 3191, Electric flexible cords</p> <p>AS/NZS 3112, Approval and test specification—Plugs and socket-outlets</p>		P

Index	<p>1. Insert the following between 'asbestos, not to be used as insulation' and 'attitude see orientation':</p> <p>AS/NZS 3112.....4.3.6</p> <p>AS/NZS 3191 3.2.5.1 (Table 3B)</p> <p>AS/NZS 60064.....4.1.201</p> <p>AS/NZS60695.2.11 4.7.201.2, 4.7.201.3</p> <p>AS/NZS 60695.11.104.7.201.1, 4.7.201.5</p> <p>AS/NZS 60695.11.5.....4.7.201.3</p> <p>AS/NZS 60825.1.....4.3.13.5.1</p> <p>AS/NZS 60825.2.....4.3.13.5.1</p> <p>2. Insert the following between 'positive temperature coefficient (PTC) device' and 'powder':</p> <p>Potential ignition source1.2.201, 4.7.201.3, 4.7.201.5</p>		P
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APPENDIX No.6	National differences for Korea IEC 60950-1, 2nd edition; Am 1:2009		—
1.5.101	Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305).	To be evaluated when submitted for the national approval.	—
8	EMC The apparatus shall comply with the relevant CISPR standards.	To be evaluated when submitted for the national approval.	—

ATTACHMENT TO TEST REPORT IEC 60950-1 with A1: 2009 and A2:2013 U.S.A. NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements	
Differences according to	UL 60950-1-07(Second Edition) + A1: 2011 + A2: 2014
Attachment Form No.....	US_ND_IEC60950_1F
Attachment Originator	UL
Master Attachment.....	Date 2014-07
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USA - Differences to IEC 60950-1:2005, Second Edition			P
1.1	Equipment able to be installed in accordance with the National Electrical Code ANSI/NFPA 70		P
1.1.1	Equipment able to be installed in accordance with ANSI/NFPA 75 and NEC Art. 645 unless intended for use outside of computer room and provided with such instructions.		P
1.1.2	Equipment in wire-line communication facilities serving high-voltage electric power stations operating at greater than 1kV are excluded.		N/A
1.1.2	Equipment intended for outdoor use		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20 A.		P
1.5.1	All IEC standards for components identified in Annex P.1 replaced by the relevant requirements of UL component standards in Annex P.1.		P
1.5.1	All IEC standards for components identified in Annex P.2 alternatively satisfied by the relevant requirements of UL component standards		P
1.5.5	Interconnecting cables acceptable for the application regarding voltage, current, temperature, flammability, mechanical serviceability and the like.		N/A
1.5.5	For other than limited power and TNV circuits, the type of output circuit identified for output connector.		N/A
1.5.5	External cable assemblies that exceed 3.05 m in length to be types specified in the NEC		N/A
1.5.5	Detachable external interconnecting cables 3.05 m or less in length and provided with equipment marked to identify the responsible organization and the designation for the cable		N/A
1.5.5	Building wiring and cable for use in ducts, plenums and other air handling space subject to special requirements and excluded from scope.		N/A
1.5.5	Telephone line and extension cords and the like comply with UL 1863		N/A

Clause	Requirement + Test	Result - Remark	Verdict
1.6.1.2	Equipment intended for connection to a d.c. power (mains) distribution system subjected to special circuit classification requirements (e.g., TNV-2)		N/A
1.6.1.2	Earthing of d.c. powered equipment provided		N/A
1.7	Lamp replacement information indicated on lampholder in operator access area		N/A
1.7.1	Special marking format for equipment intended for use on a supply system with an earthed neutral and more than one phase conductor		N/A
1.7.1	Equipment voltage rating not higher than rating of the plug except under special conditions		P
1.7.6	Fuse replacement marking for operator accessible fuses		N/A
1.7.7	Identification of terminal connection of the equipment earthing conductor		N/A
1.7.7	Connectors and field wiring terminals for external Class 2 or Class 3 circuits provided with marking indicating minimum Class of wiring to be used.		N/A
1.7.7	Marking located adjacent to terminals and visible during wiring		N/A
2.1.1.1	Bare TNV conductive parts protected by a cover are exempt if instructions include directions for disconnection of TNV prior to removal of the cover		N/A
2.3.1.b	Other telecommunication signaling systems than described in 2.3.1(b) are subject to M.4.		N/A
2.3.1.b	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vp or 60 V d.c., the max. current limit through a resistor ≥ 2000 Ohm with loads disconnected is 7.1 mA peak or 30 mA d.c. under normal conditions		N/A
2.3.1.b	Limits for measurements across 5000 Ohm resistor in the event of a single fault are replaced after 200 ms with the limits of M.3.1.4.		N/A
2.3.2.1	For a single fault, the limits of 2.2.3 apply to SELV circuits and accessible conductive parts.		N/A
2.3.2.4	Enamel coating on signal transformer winding wire allowed as an alternative to Basic insulation in specific telecommunication applications if subject to special construction requirements and testing		N/A
2.5	Overcurrent protection device required for Class 2 and Class 3 limiting according to the NEC, or for a Limited Power Source, not interchangeable with devices of higher ratings if operator replaceable		N/A

Clause	Requirement + Test	Result - Remark	Verdict
2.6	Equipment having receptacles for output a.c. power connectors generated from an internal separately derived source have the earthed (grounded) circuit conductor suitably bonded to earth.		N/A
2.6.3.3	For Pluggable Equipment Type A, if a) b) or c) are not applicable, the current rating of the circuit is taken as 20 A		N/A
2.6.3.4	Capacity of connection between earthing terminal and parts required to be earthed subject to special conditions based on the current rating of the circuit.		N/A
2.6.4.1	Field wiring terminals for earthing conductors suitable for wire sizes (gauge) used in US		N/A
2.7.1	Data for selection of special external branch circuit overcurrent devices marked on the equipment		N/A
2.7.1	Standard supply outlets protected by overcurrent device in accordance with the NEC		N/A
2.7.1	Overcurrent protection for individual transformers that distribute power to other units over branch circuit wiring		N/A
2.7.1	Additional requirements for overcurrent protection apply to equipment provided with panelboards		N/A
2.7.1	Non-motor-operated equipment requiring special overcurrent protective device marked with device rating.		N/A
2.10.5.12	Multi-layer winding wire subject to UL component wire requirements in addition to 2.10.5.12 and Annex U.	Approved TIW used.	P
3.1.1	Permissible combinations of internal wiring/external cable sizes for overcurrent & short circuit protection		N/A
3.1.1	All interconnecting cables protected against overcurrent and short circuit.		N/A
3.2	Wiring methods permit connection of equipment to primary power supply in accordance with the NEC		P
3.2.1	Permitted use for flexible cords and plugs.		N/A
3.2.1	Flexible cords provided with attachment plug rated 125% of equipment current rating.		N/A
3.2.1	Any Class II equipment provided with 15 or 20 A standard supply outlets, Edison-base lampholders or single pole disconnect device provided with a polarized type attachment plug.		N/A
3.2.1.2	Equipment intended for connection to DC mains supply power systems complies with special wiring requirements		N/A

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

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

Clause	Requirement + Test	Result - Remark	Verdict
4.3.2	Loading test for equipment with handle(s) used to support more than 9 kg		N/A
4.3.6	In addition to the IEC requirements, Direct Plug-in Equipment complies with UL 1310		N/A
4.3.12	The max. quantity of flammable liquid stored in equipment per ANSI/NFPA 30 (Table NAE.6)		N/A
4.3.12	Equipment using replenishable liquids marked to indicate type of liquid to be used.		N/A
4.3.13.2	Equipment that produces x-radiation and does not comply with 4.3.12 under all conditions of servicing marked to indicate the presence of radiation		N/A
4.3.13.5	Requirements contained in the applicable national codes apply to lasers (21 CFR 1040).		N/A
4.7	Automated information storage equipment intended to contain more than 0.76 m ³ of combustible media requires provision for automatic sprinklers or a gaseous agent extinguishing system.		N/A
4.7.3.1	Equipment for use in environmental air space other than ducts or plenums provided with metal enclosure or with non-metallic enclosure having adequate fire-resistance and low smoke producing characteristics (according to UL 2043). Equipment for installation in space used for environmental air, described in Sec. 300-22(c) of the NEC, provided with instructions indicating suitability for installation		N/A
4.7.3.1	Flame spread rating for external surface of combustible material with exposed area greater than 0.93 m ² or a single dimension greater than 1.8 m; 50 or less for computer room applications or 200 or less for other applications.		N/A
4.7.3.4	Wire marked "VW-1" or "FT-1" considered equivalent.		P
5.1.8.2	Special earthing provisions and instructions for equipment with high touch current due to telecommunication network connections.		N/A
5.1.8.3	Touch current due to ringing voltage for equipment containing telecommunication network leads.		N/A
5.3.7	Overloading of SELV connectors and printed wiring board receptacles accessible to the operator.		P
5.3.7	Tests interrupted by opening of a component repeated two additional times.		P
5.3.9.1	Test interrupted by opening of wire or trace subject to certain conditions.		N/A
6	Specialized instructions for telephones that may be connected to a telecommunications network		N/A

Clause	Requirement + Test	Result - Remark	Verdict
6	Marking identifying function of telecommunication type connectors not used for connection to a telecommunication network.		N/A
6.3	Equipment remotely powered over telecommunication wiring systems provided with specialized markings adjacent to the connection.		N/A
6.3	Overcurrent protection incorporated into equipment to provide power over telecommunication wiring system not interchangeable with devices of higher ratings if operator replaceable.		N/A
6.4	Additional requirements for equipment connected to a telecommunication network using cable subject to overvoltage from power line failures		N/A
6.4	Where 26 AWG line cord required by Fig. 6C, either the cord is provided with the equipment or described in the safety instructions.		N/A
7	Equipment associated with the cable distribution system may need to be subjected to applicable parts of Chapter 8 of the NEC.		N/A
H	Ionizing radiation measurements made under single fault conditions according to 21 CFR 1020		N/A
M.2	Continuous ringing signals evaluated to Method A subjected to special accessibility considerations.		N/A
M.4	Special requirements for message waiting and similar telecommunications signals.		N/A
NAC	Equipment for use with a generic secondary protector marked with suitable instructions.		N/A
NAC	Equipment marked with suitable instructions if for use with a specific primary or secondary protector		N/A
NAD	Acoustic pressure from an ear piece for short and long duration disturbances		N/A
NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements		N/A
NAF	Household/Home Office Document Shredders		N/A
NAF.1.7	Markings and instructions alert the user to key safety considerations related to use of shredders, including not intended to be used by children, avoid touching document feed opening, avoid clothes and hair entanglement, and avoid aerosol products.		N/A
NAF.2.8.3	Safety interlock cannot be inadvertently activated by the articulated accessibility probe		N/A

Clause	Requirement + Test	Result - Remark	Verdict
NAF.3.4	Provided with an isolating switch complying with 3.4.2, including 3 mm contact gap, with appropriate markings associated with the switch.		N/A
NAF.4.4	Hazardous moving parts are not accessible, as determined using the articulated accessibility probe and the accessibility probe/wedge		N/A

Appendix No.8: Photos of product

External view



External view



Appendix No.8: Photos of product

External view

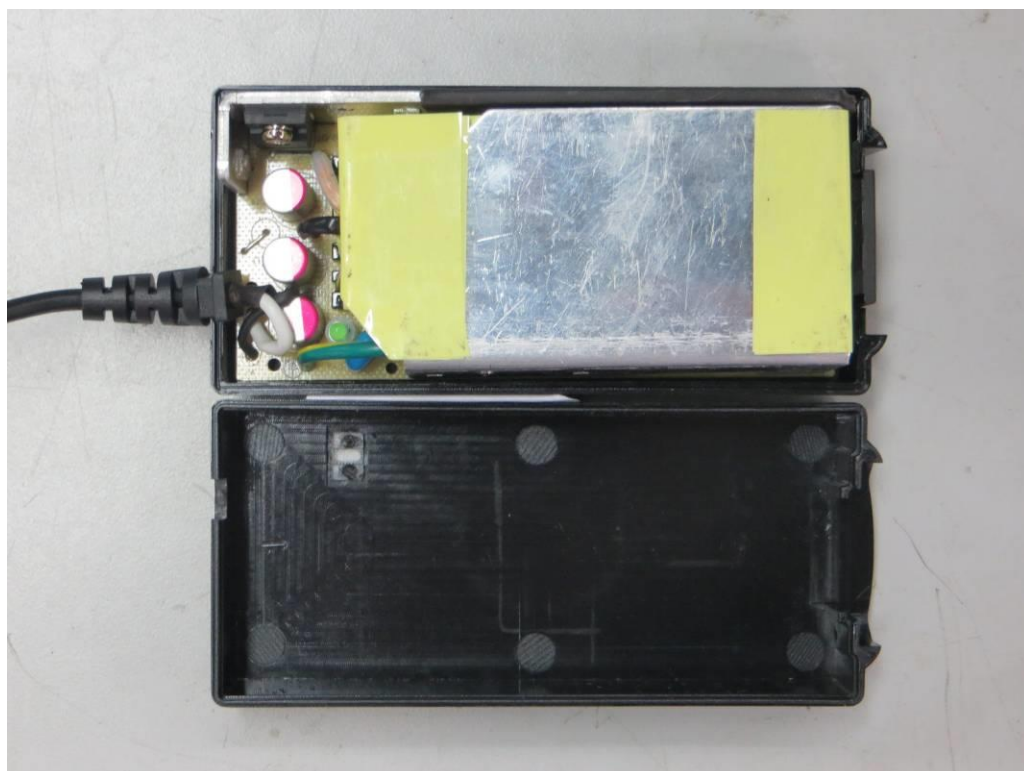


External view

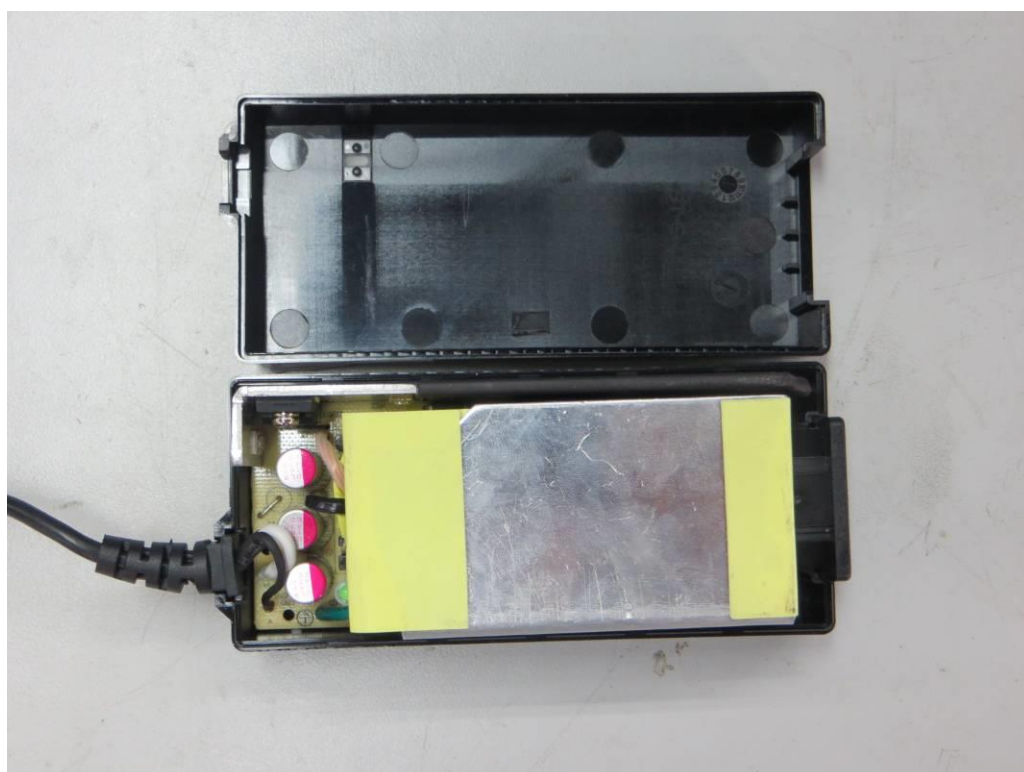


Appendix No.8: Photos of product

Internal view

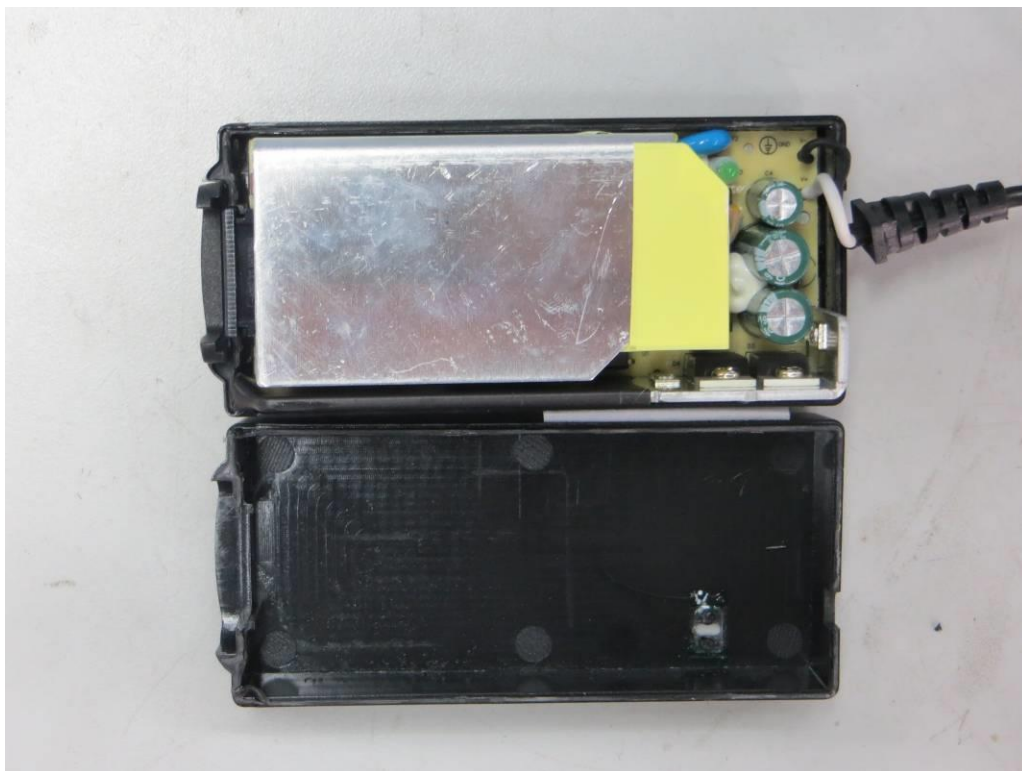


Internal view



Appendix No.8: Photos of product

Internal view



Internal view



Appendix No.8: Photos of product

Internal view

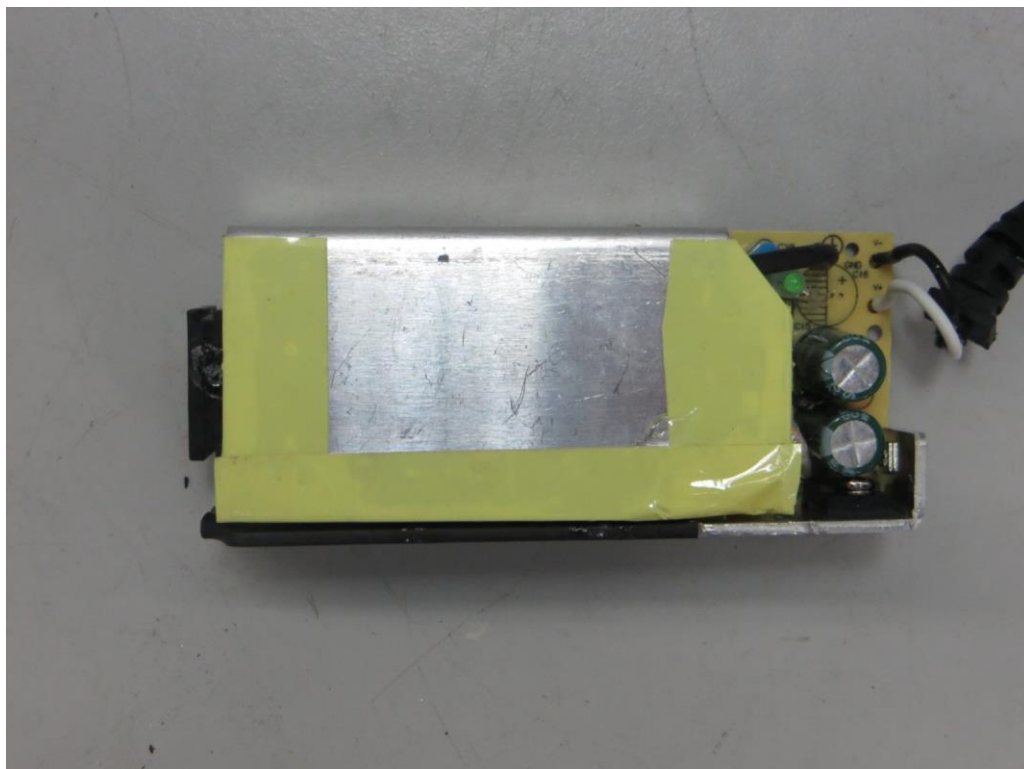


Internal view

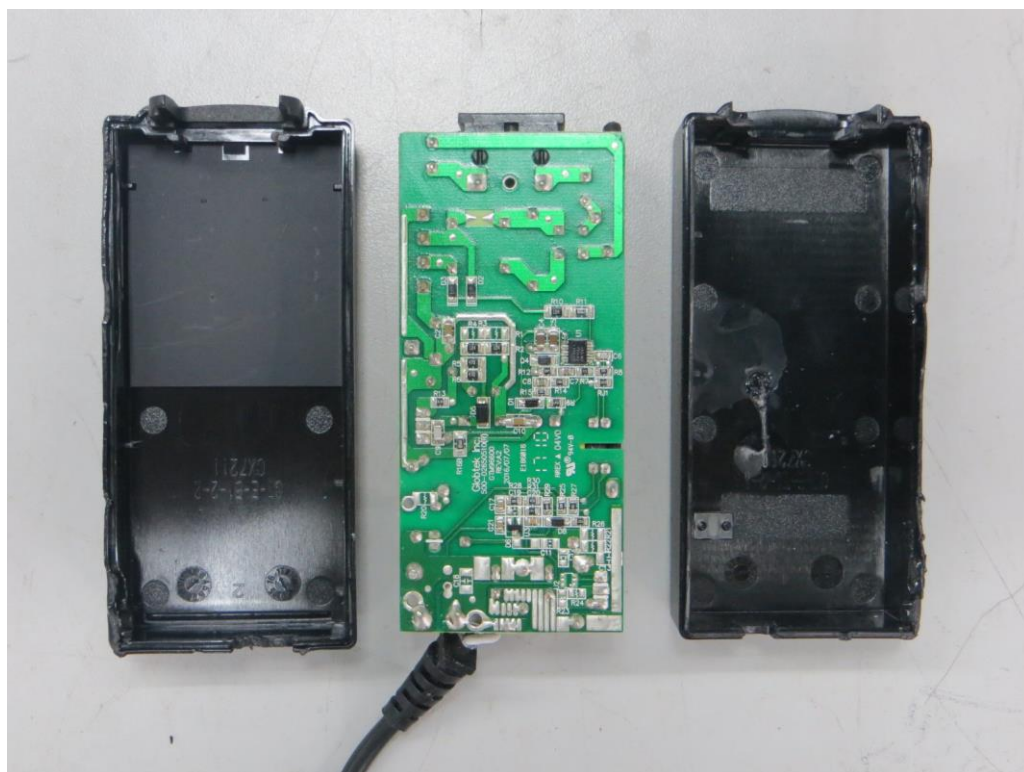


Appendix No.8: Photos of product

Internal view

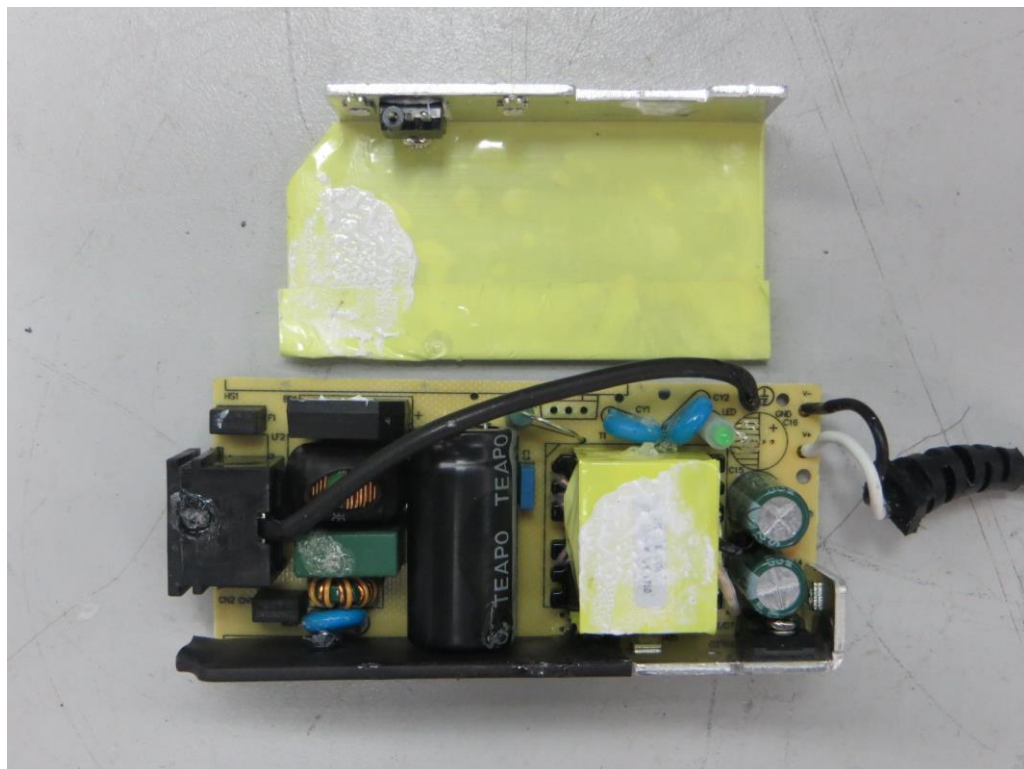


Internal view

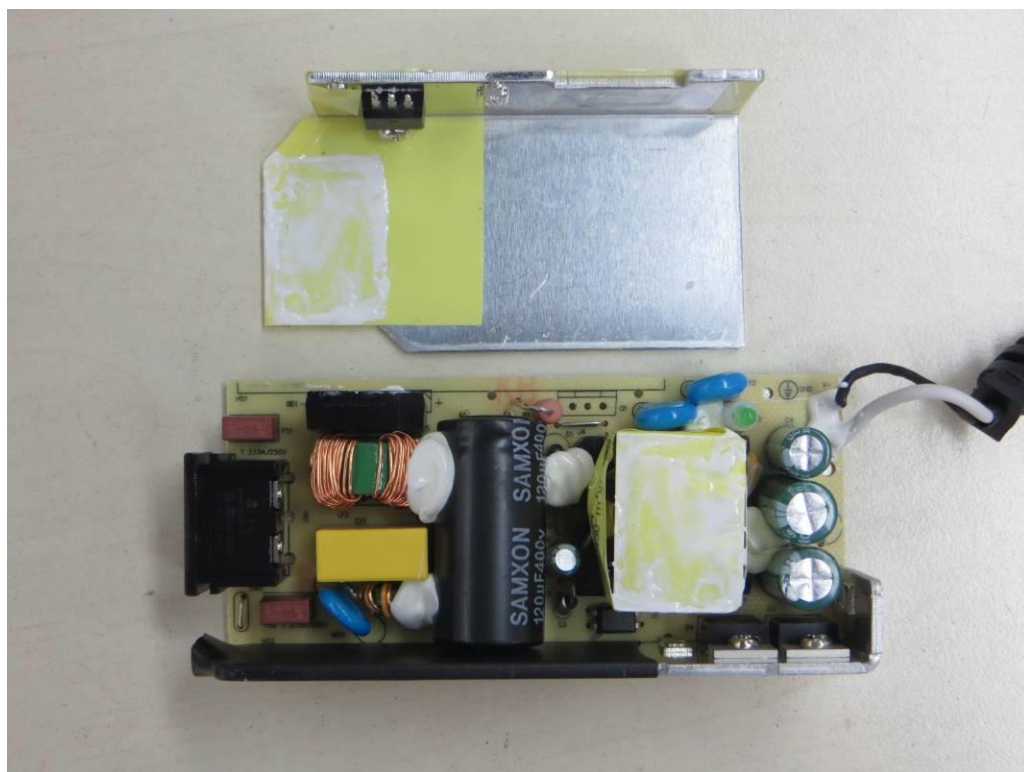


Appendix No.8: Photos of product

PCB (Class I)

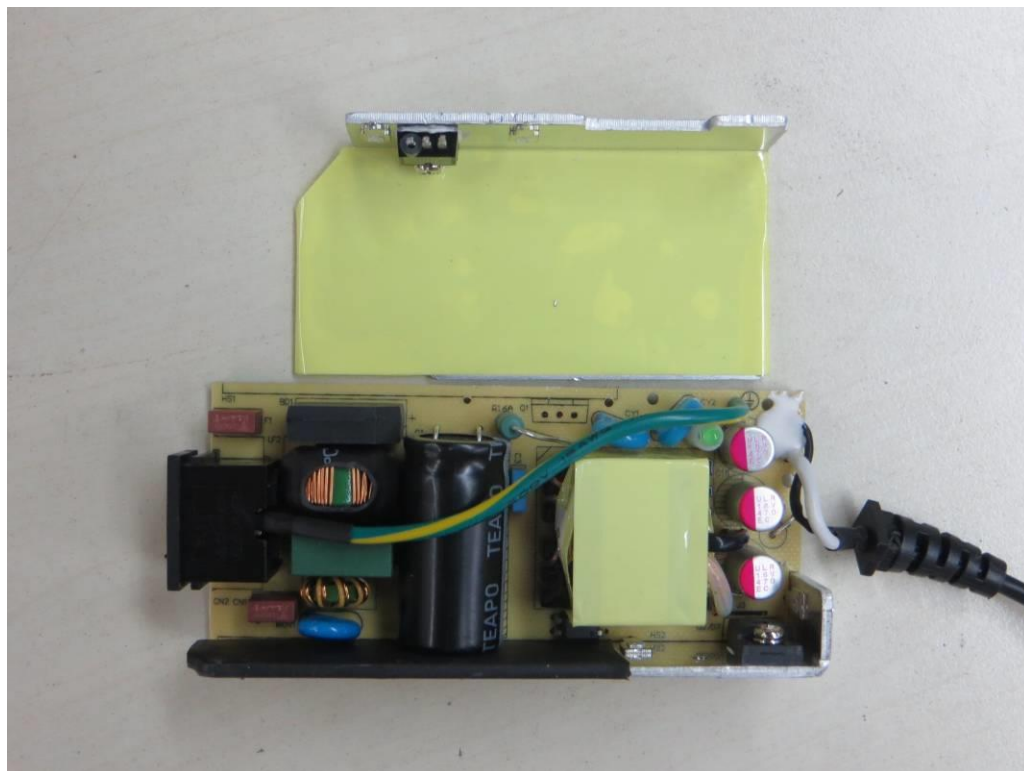


PCB (Class II)

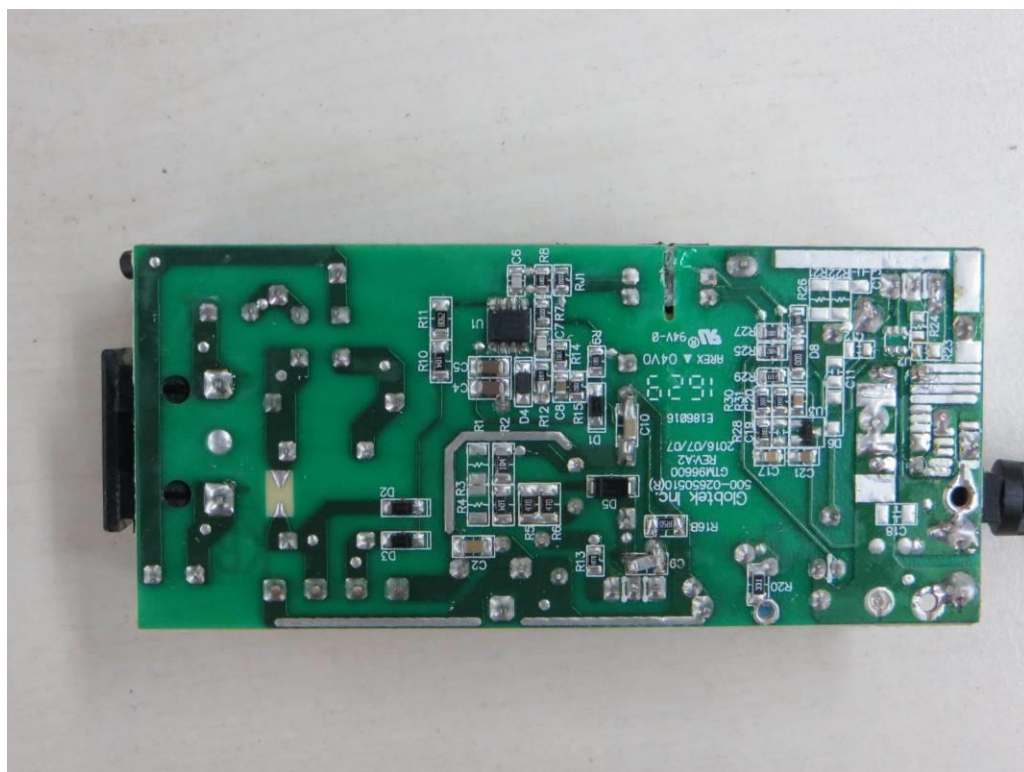


Appendix No.8: Photos of product

PCB (Class I)

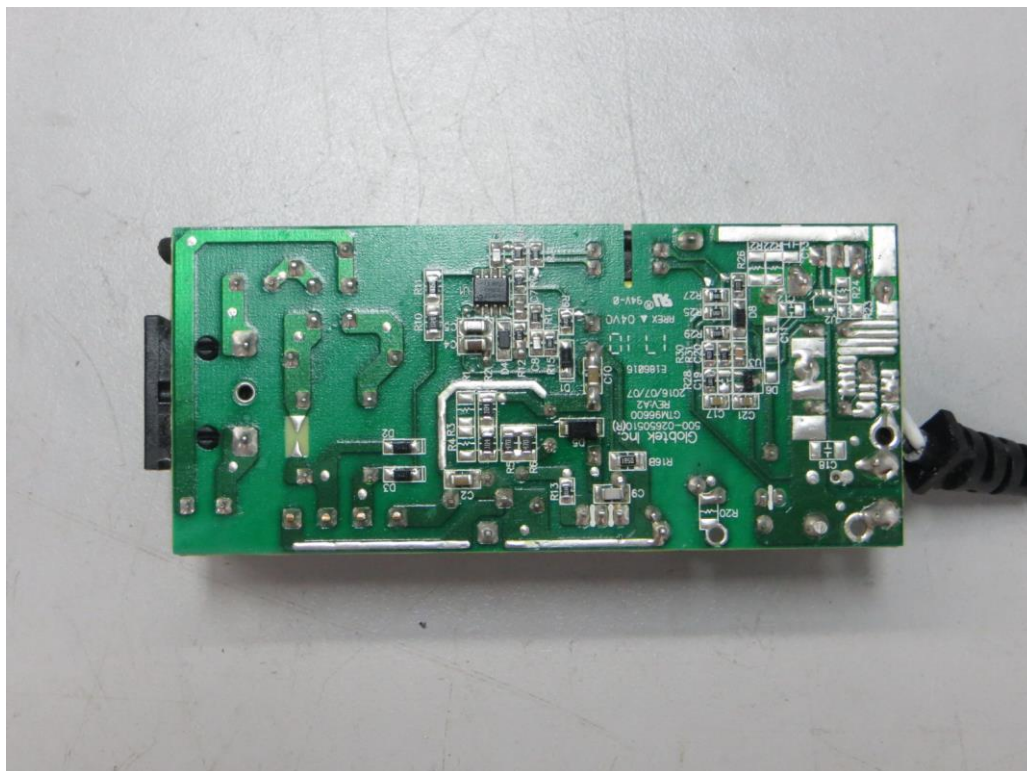


PCB (Class I and II)

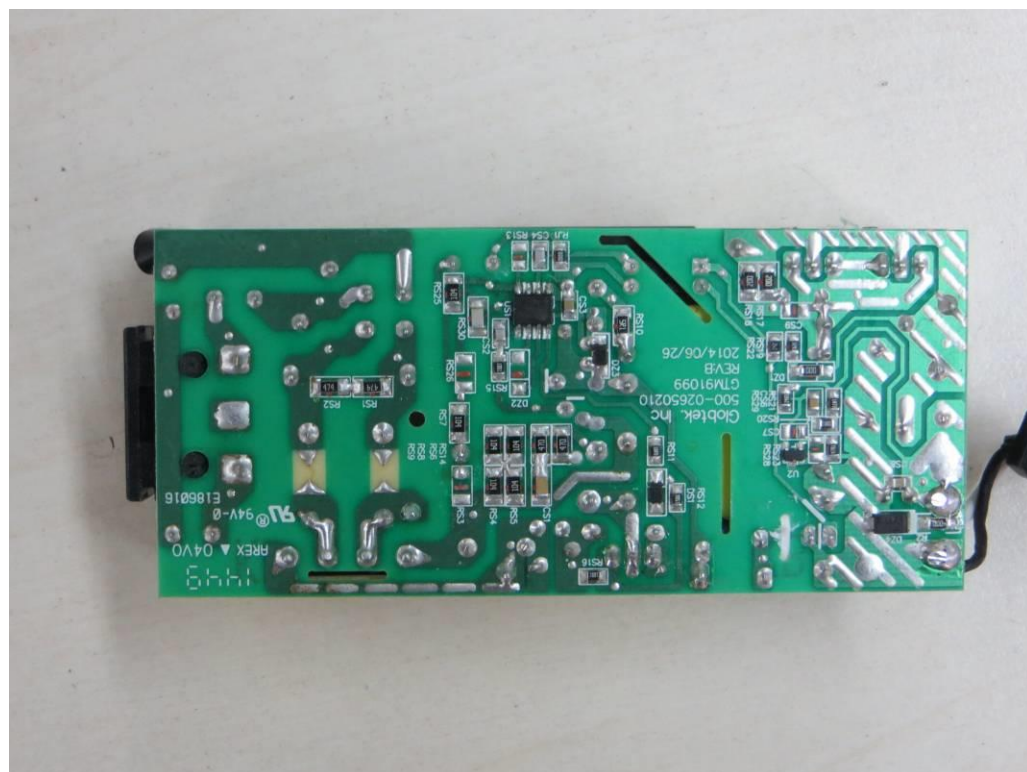


Appendix No.8: Photos of product

PCB (Class I and II)

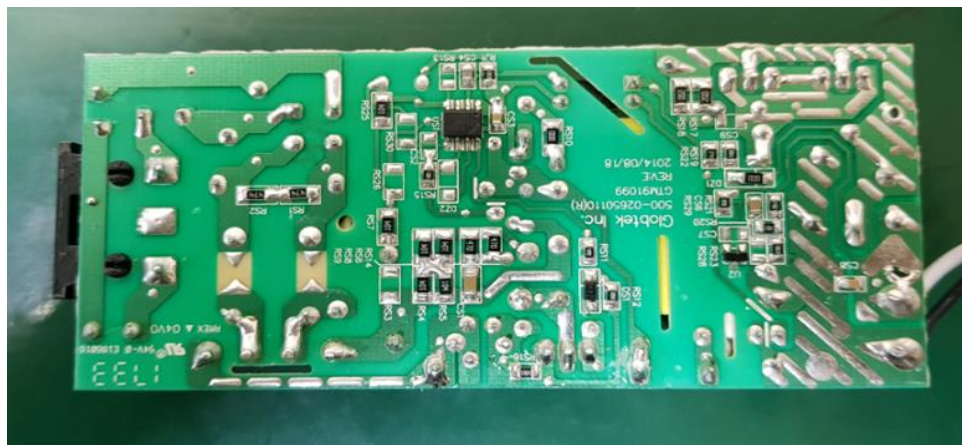


PCB (Class I and II)

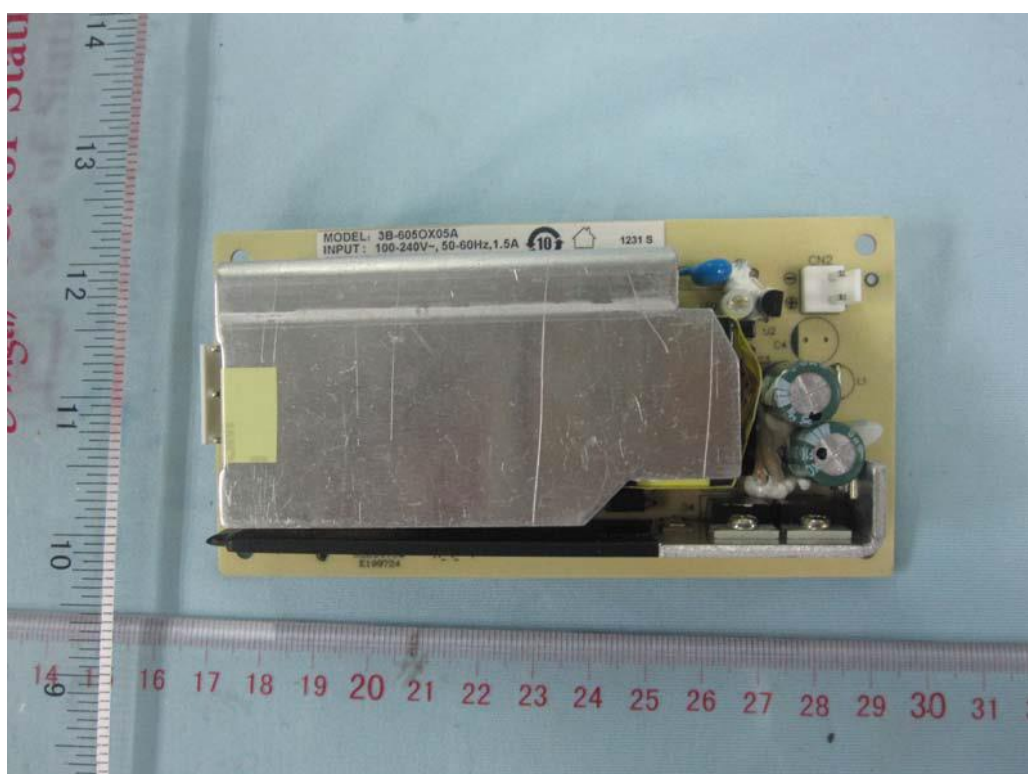


Appendix No.8: Photos of product

PCB (Class I and II)



Open frame (Class II)



Appendix No.8: Photos of product

Open frame (Class I)

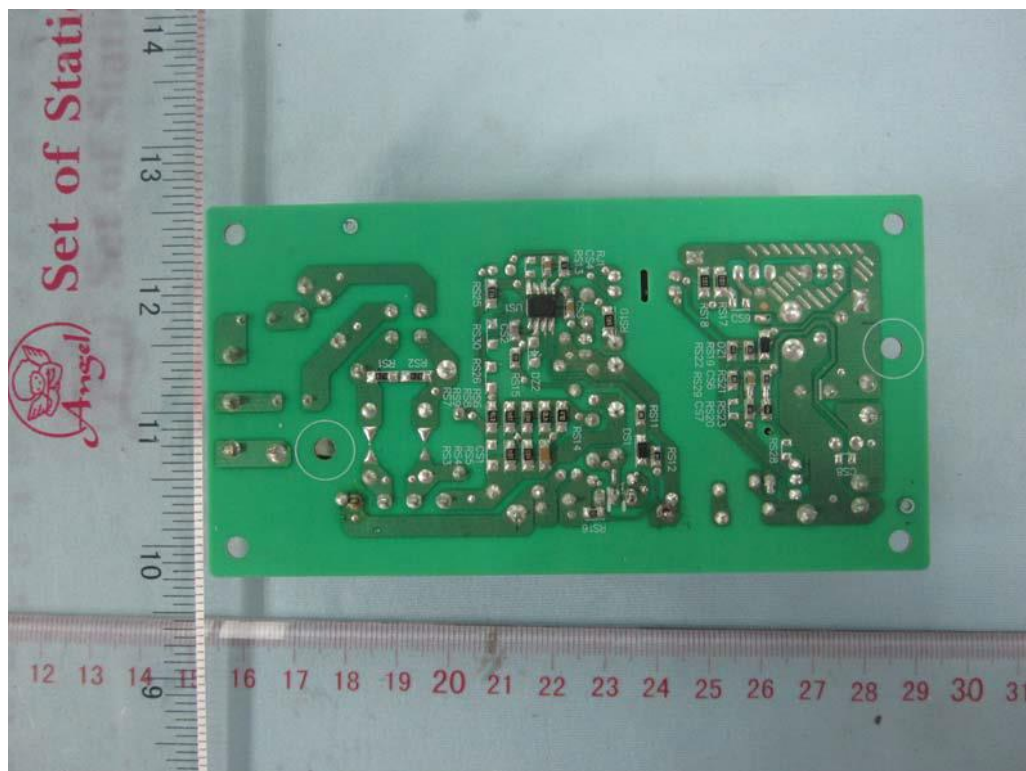


PCB



Appendix No.8: Photos of product

PCB (Class I and II)

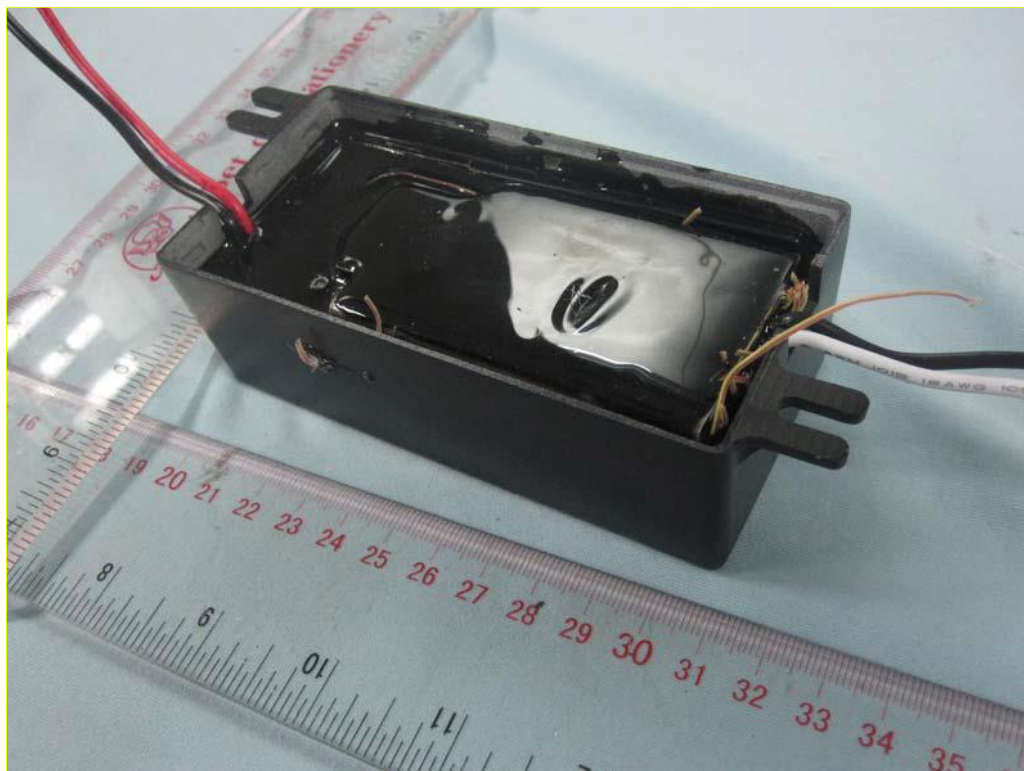


Encapsulated type

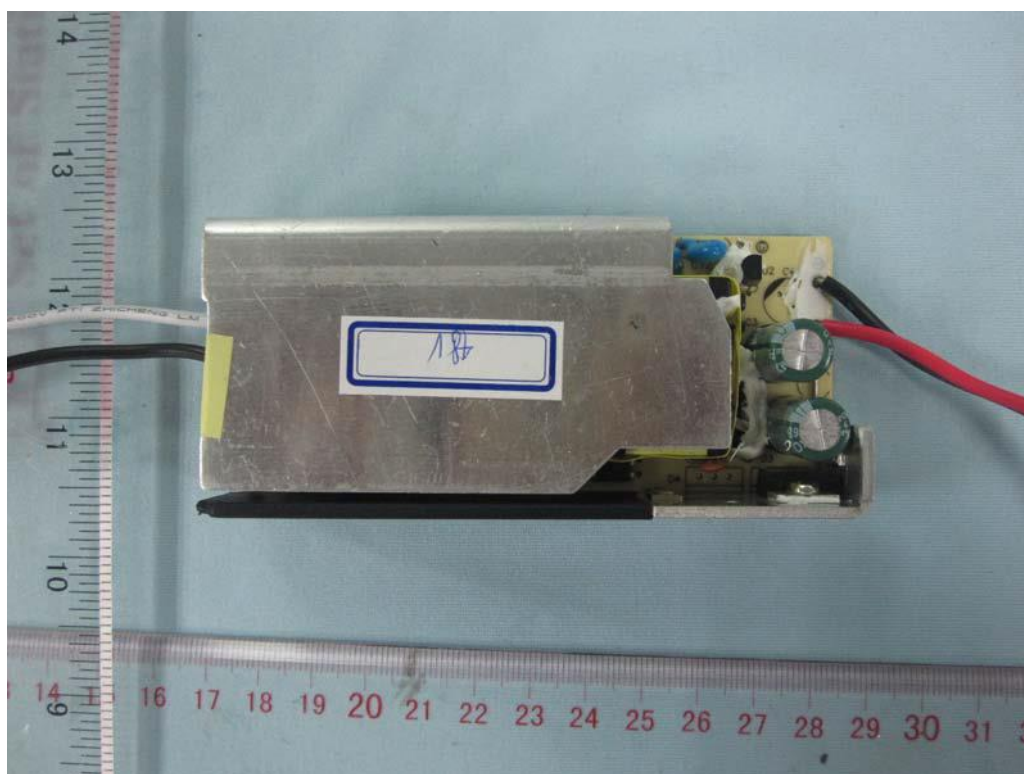


Appendix No.8: Photos of product

Encapsulated type

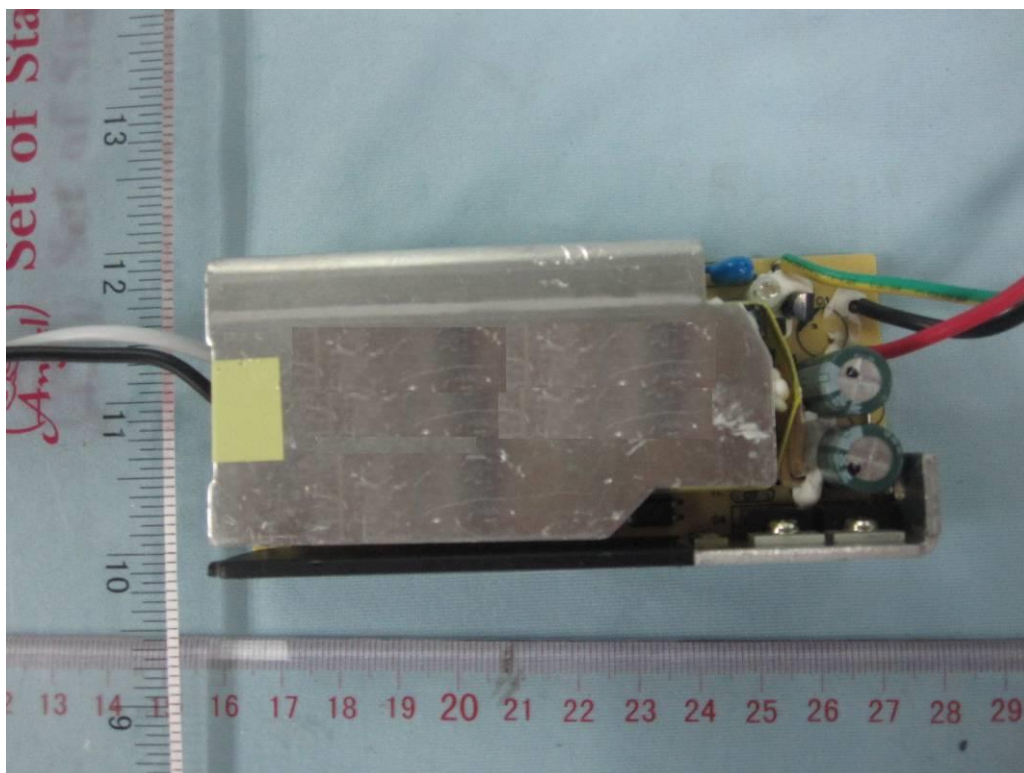


Internal view (Class II)

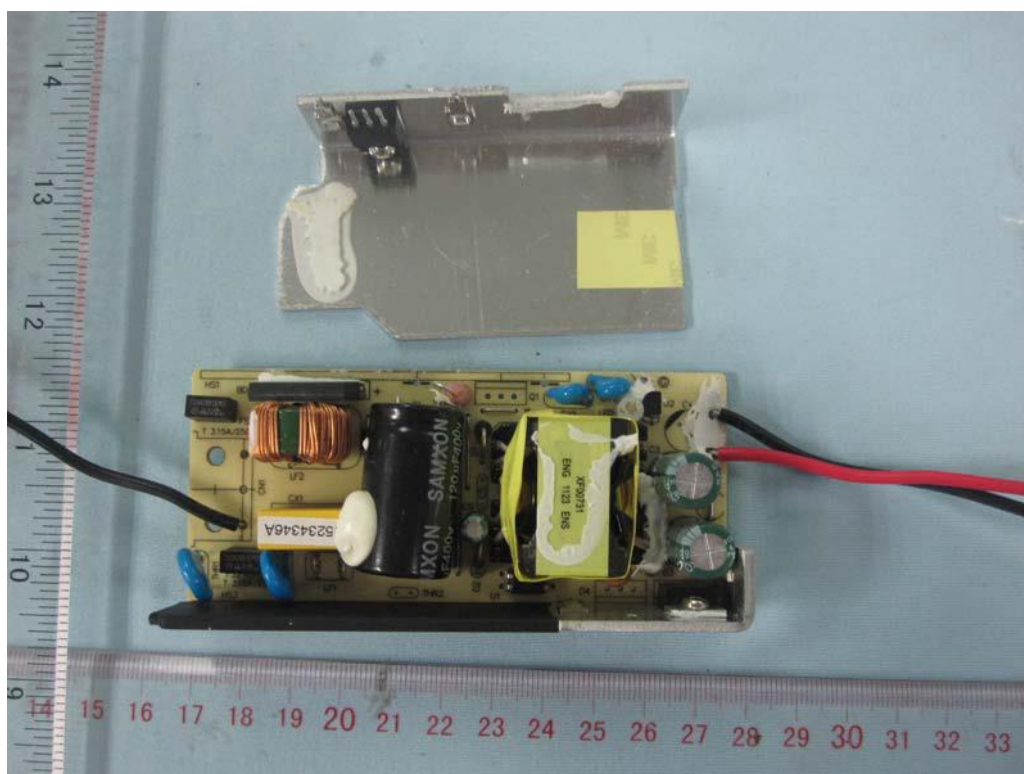


Appendix No.8: Photos of product

Internal view (Class I)

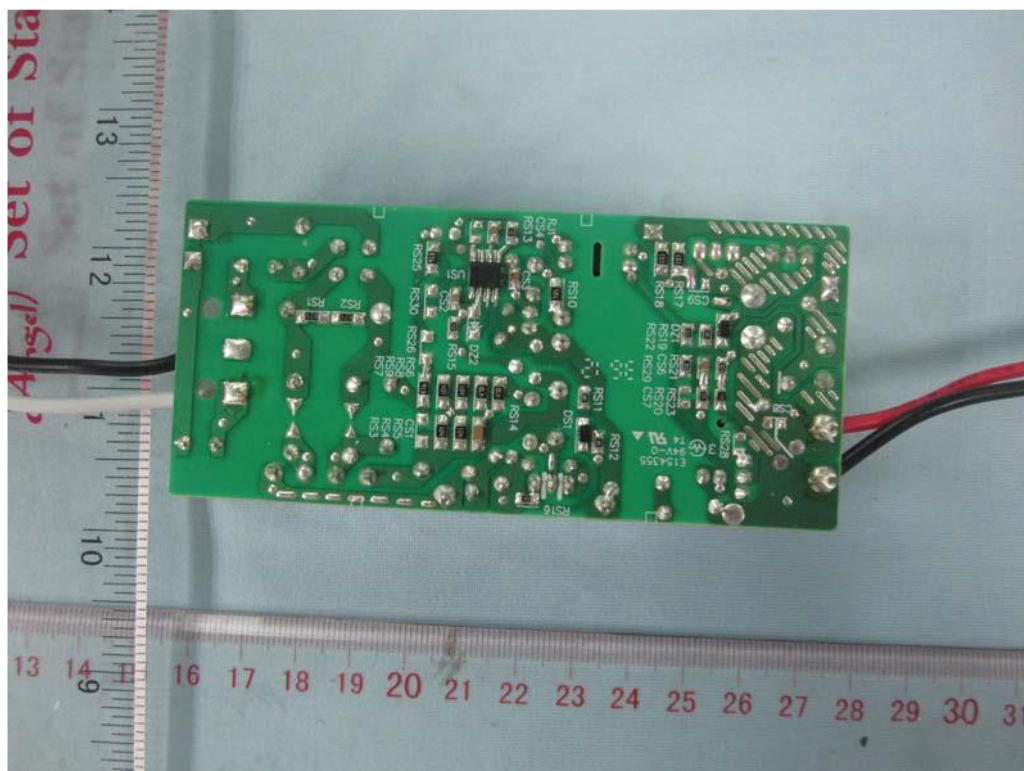


PCB

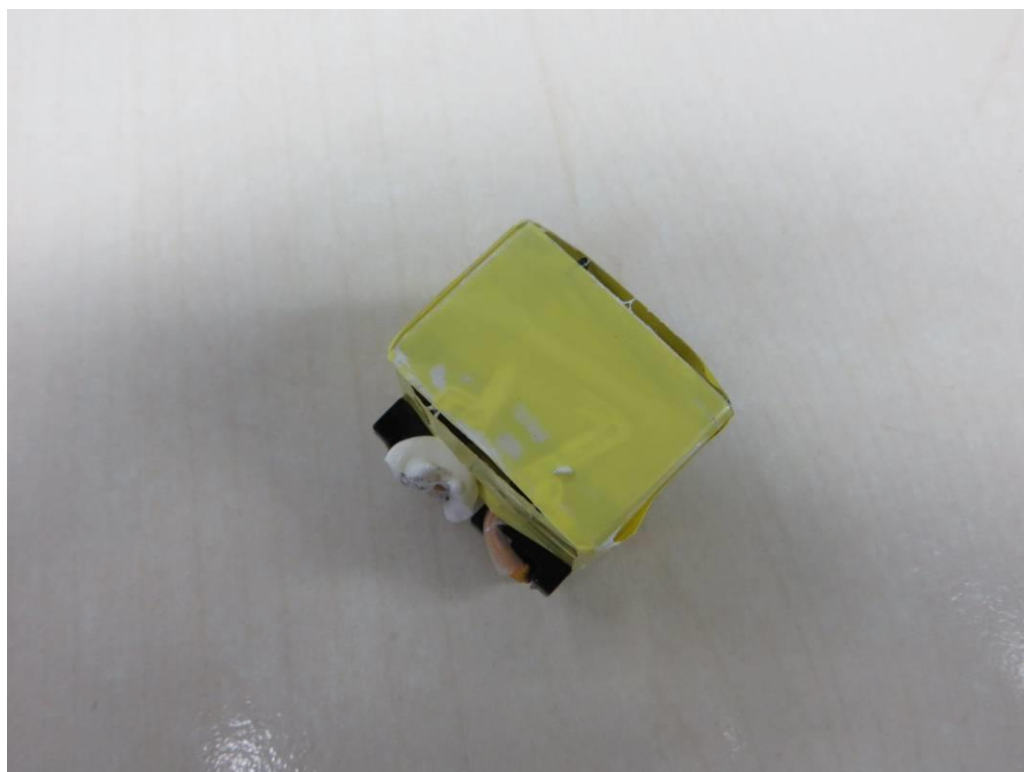


Appendix No.8: Photos of product

PCB

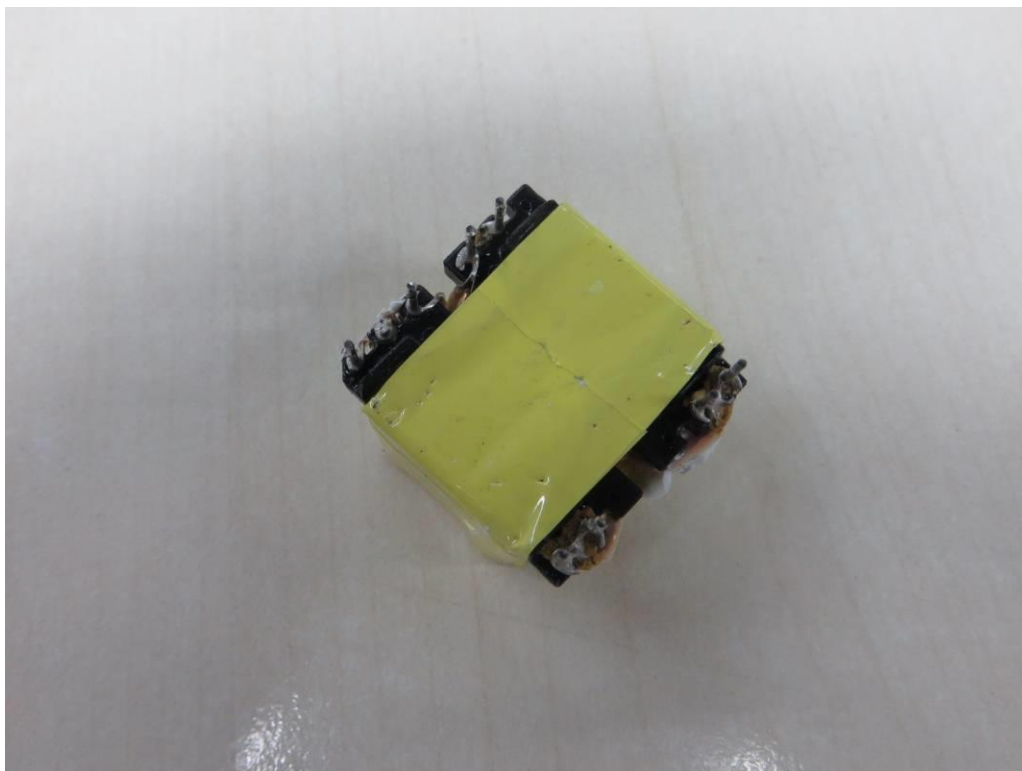


Transformer (Construction type 1)

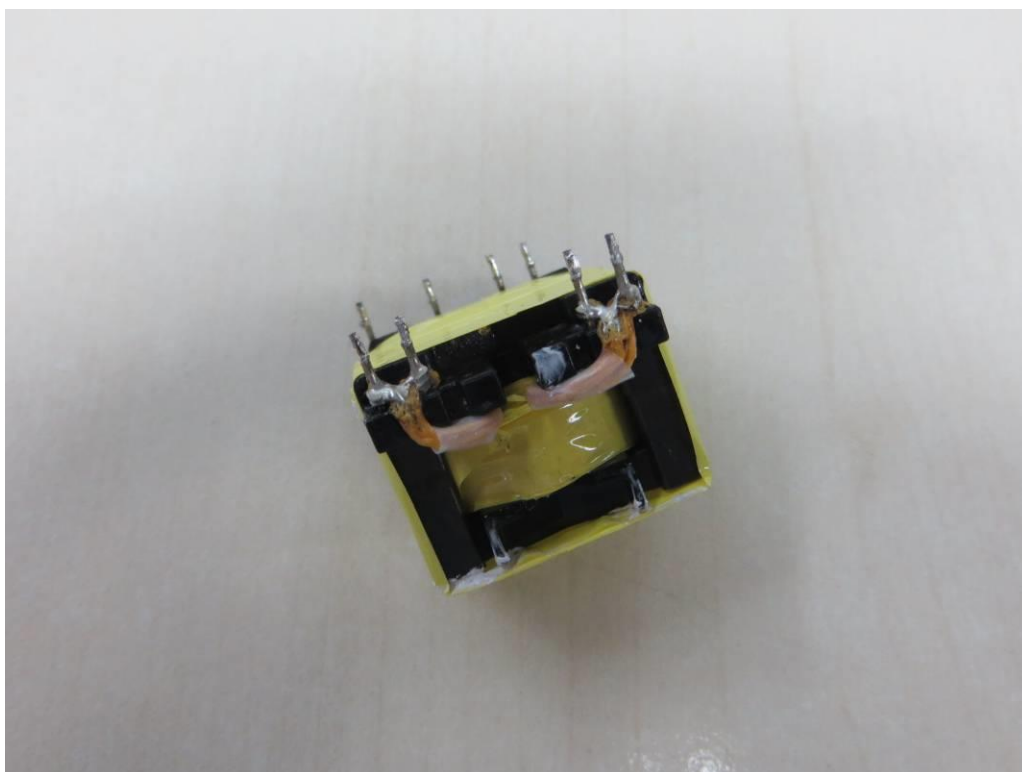


Appendix No.8: Photos of product

Transformer (Construction type 1)

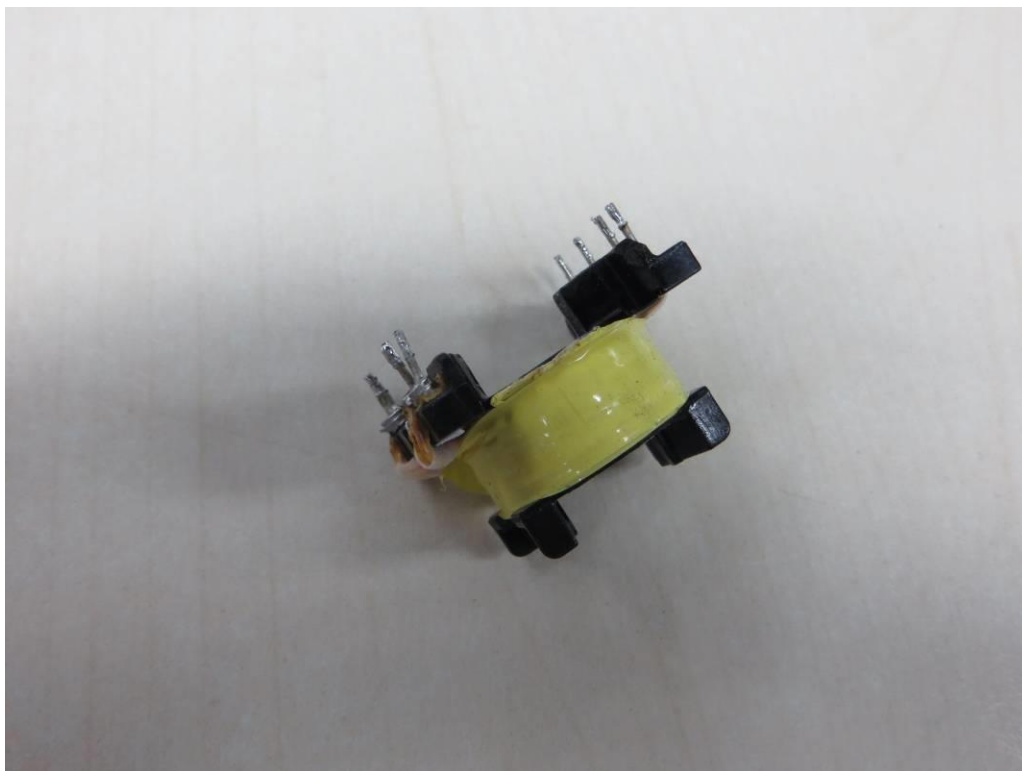


Transformer (Construction type 1)



Appendix No.8: Photos of product

Transformer (Construction type 1)

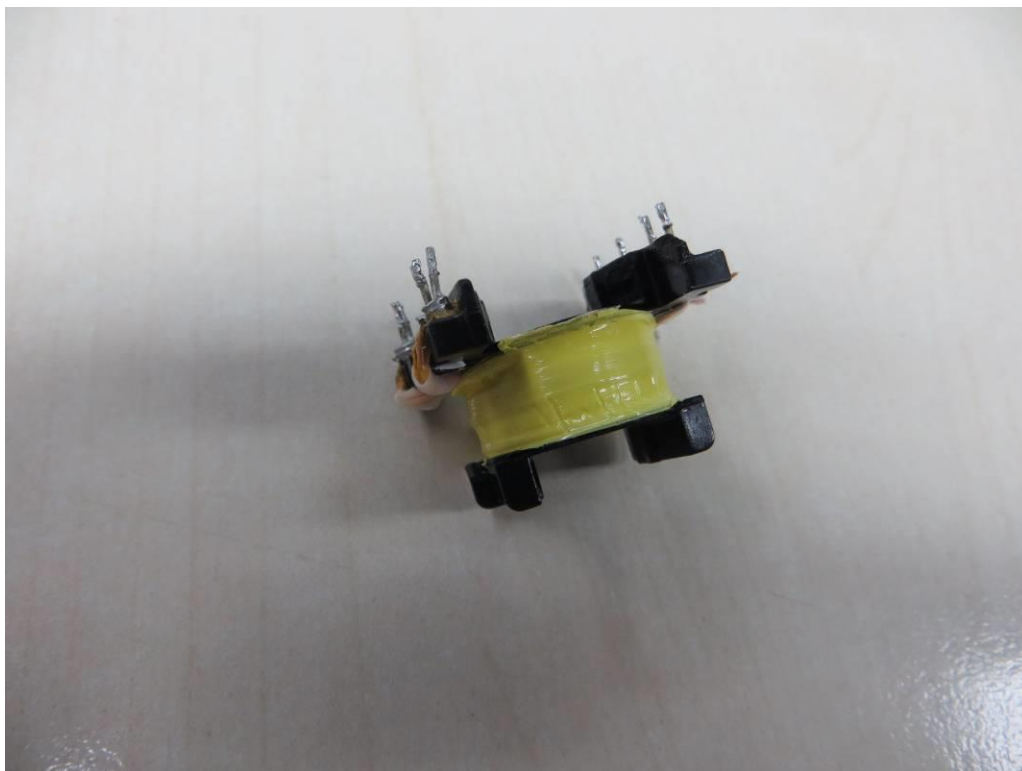


Transformer (Construction type 1)

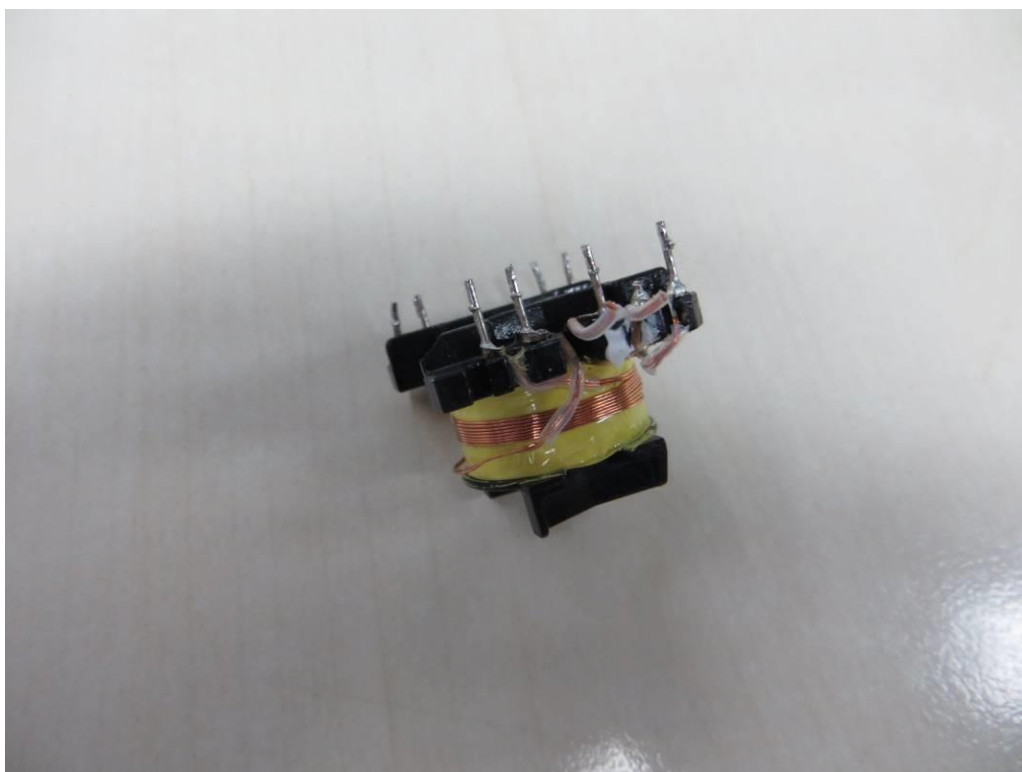


Appendix No.8: Photos of product

Transformer (Construction type 1)

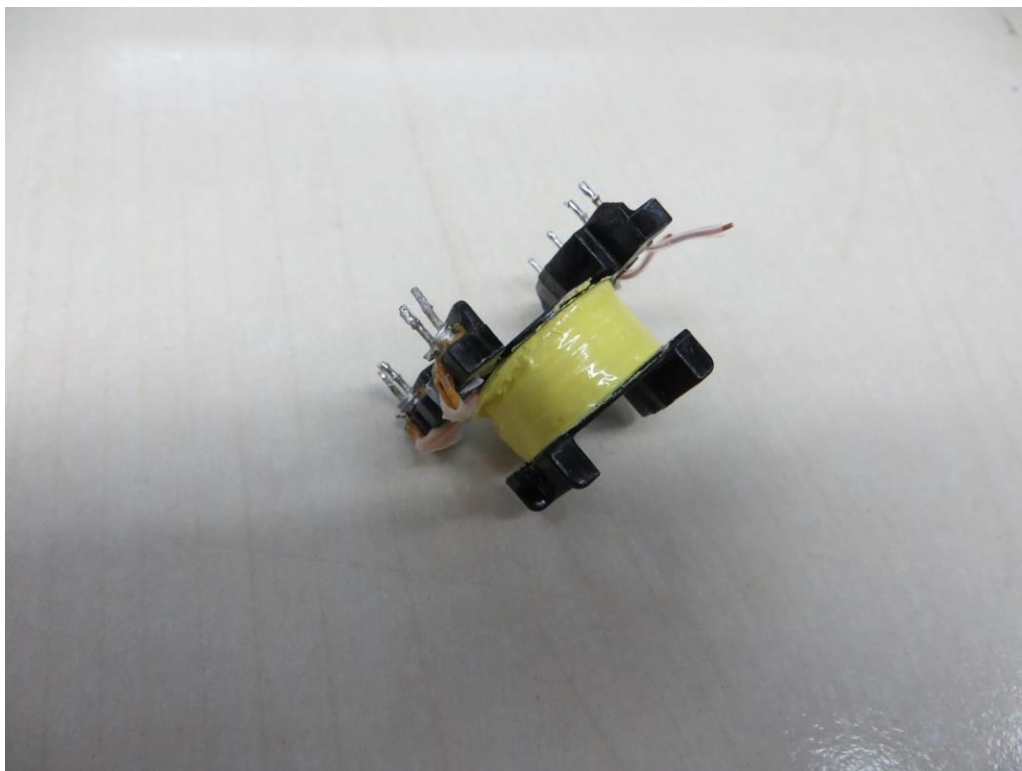


Transformer (Construction type 1)



Appendix No.8: Photos of product

Transformer (Construction type 1)

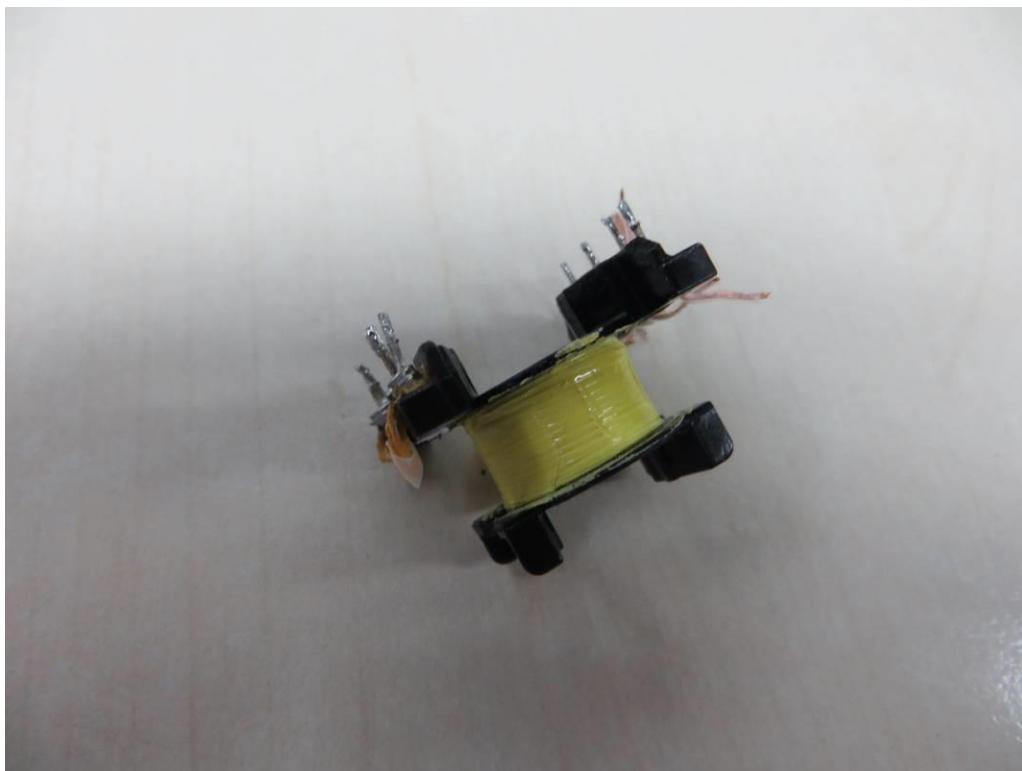


Transformer (Construction type 1)

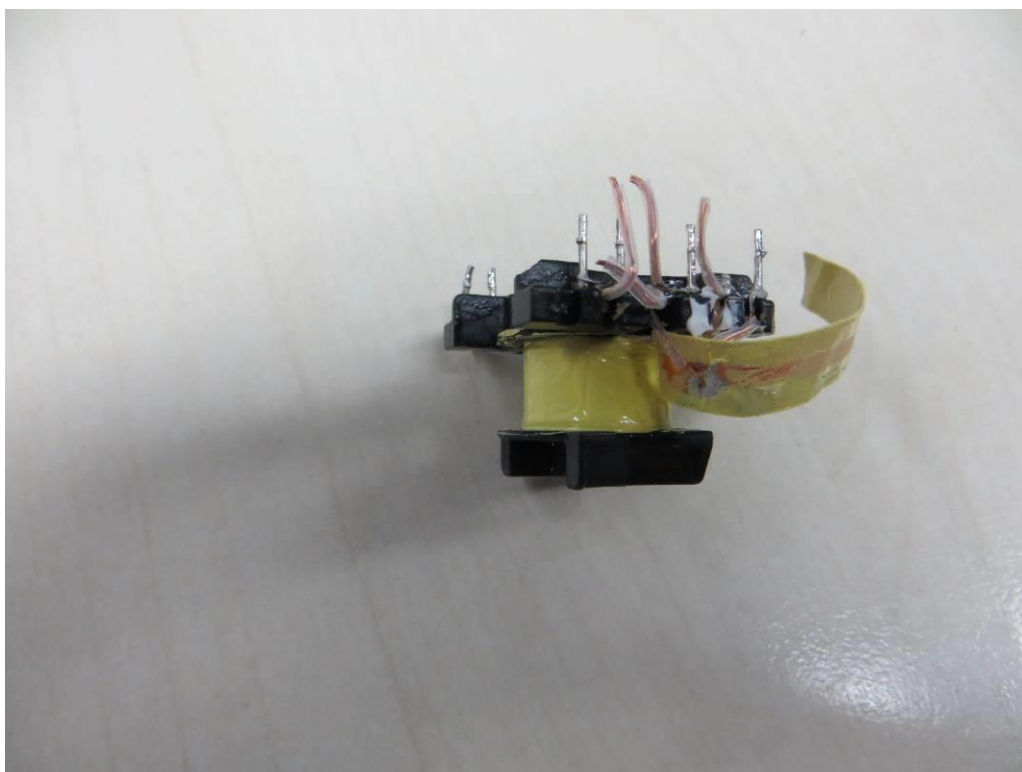


Appendix No.8: Photos of product

Transformer (Construction type 1)

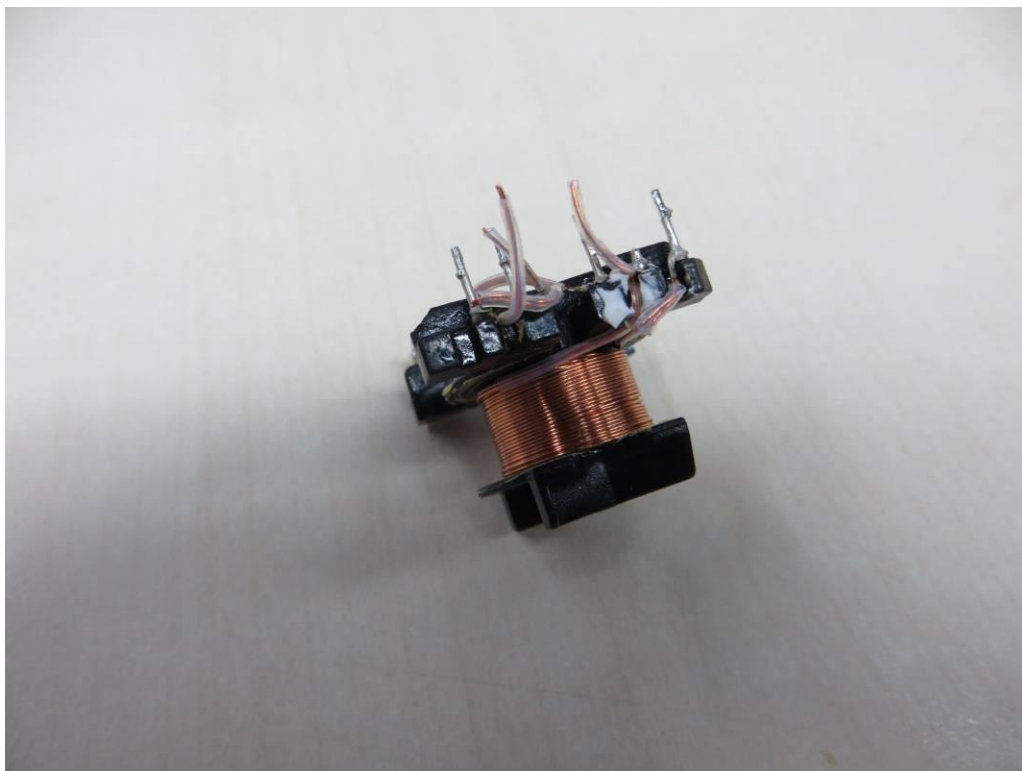


Transformer (Construction type 1)

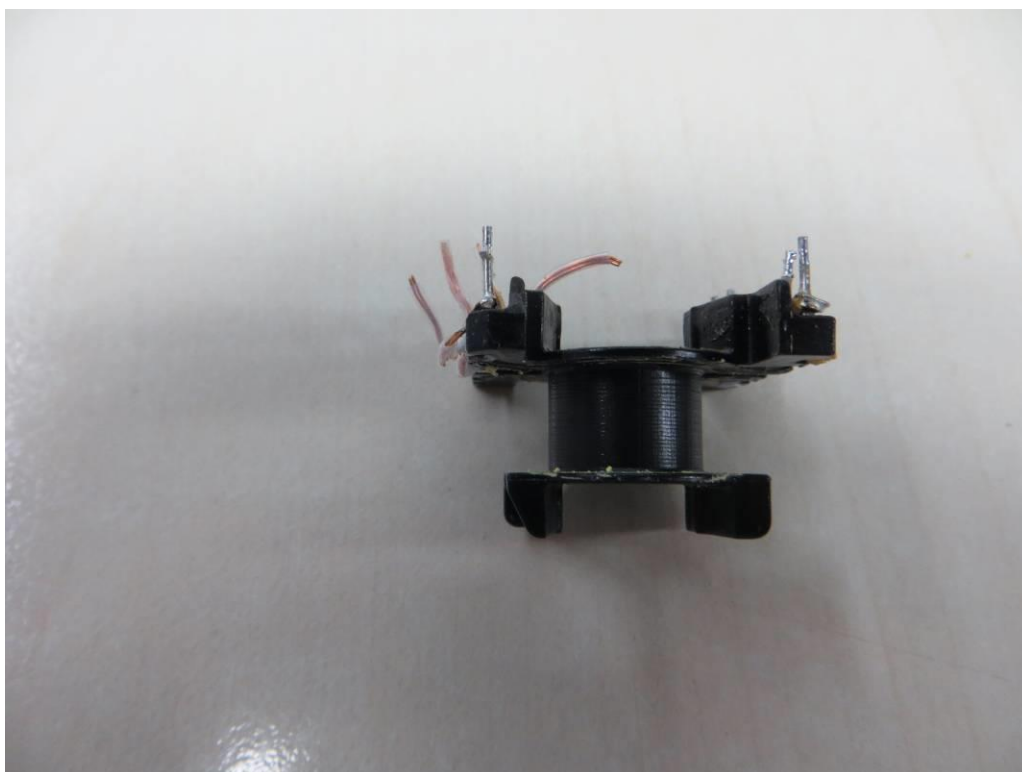


Appendix No.8: Photos of product

Transformer (Construction type 1)



Transformer (Construction type 1)

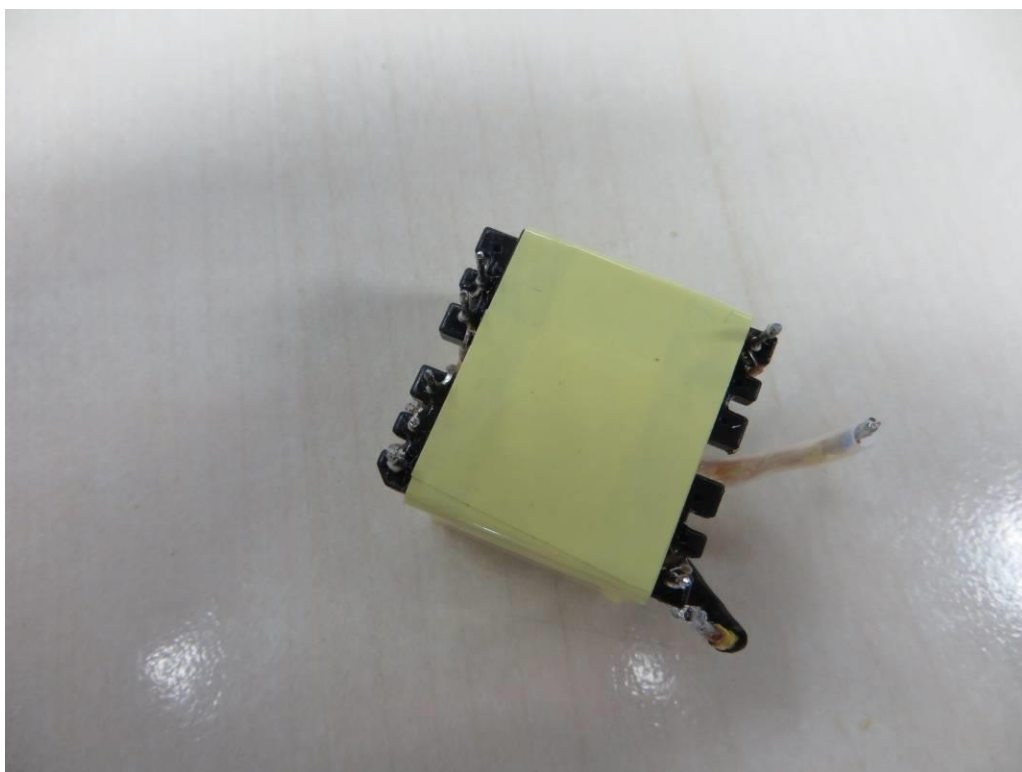


Appendix No.8: Photos of product

Transformer (Construction type 2)

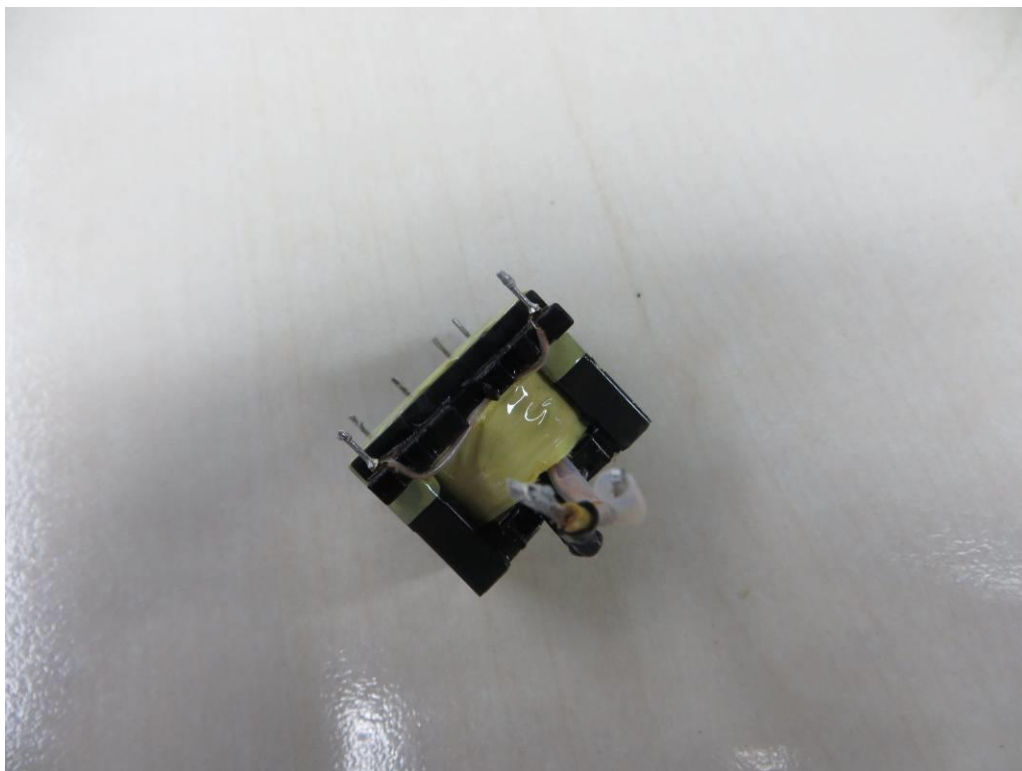


Transformer (Construction type 2)



Appendix No.8: Photos of product

Transformer (Construction type 2)

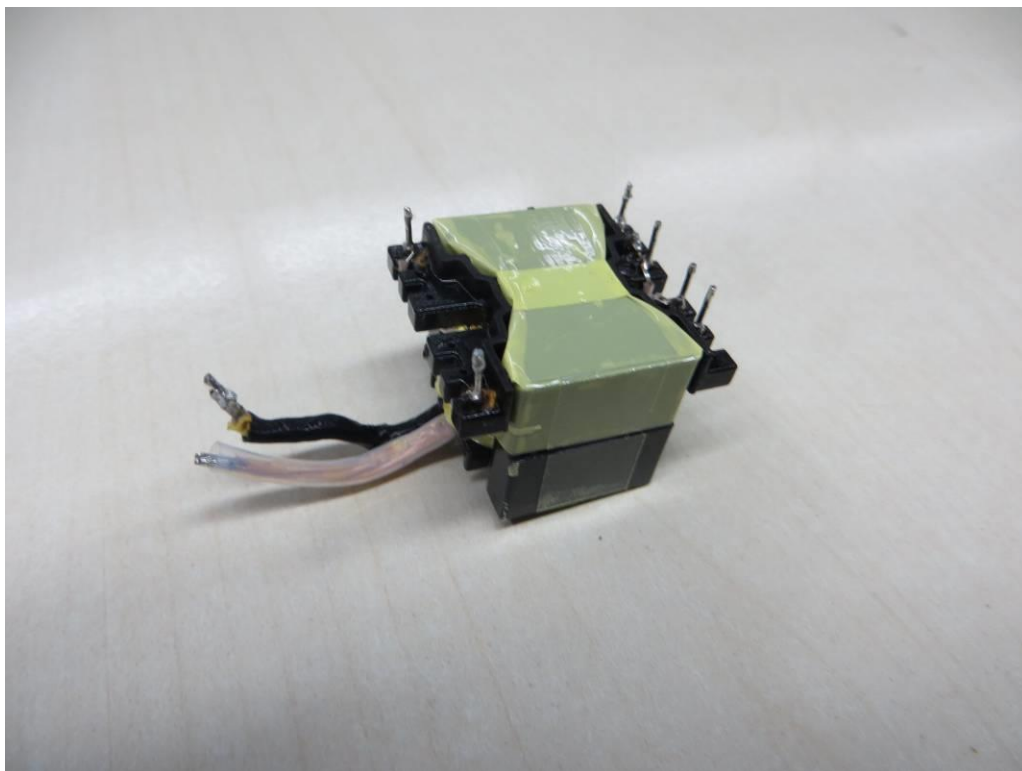


Transformer (Construction type 2)

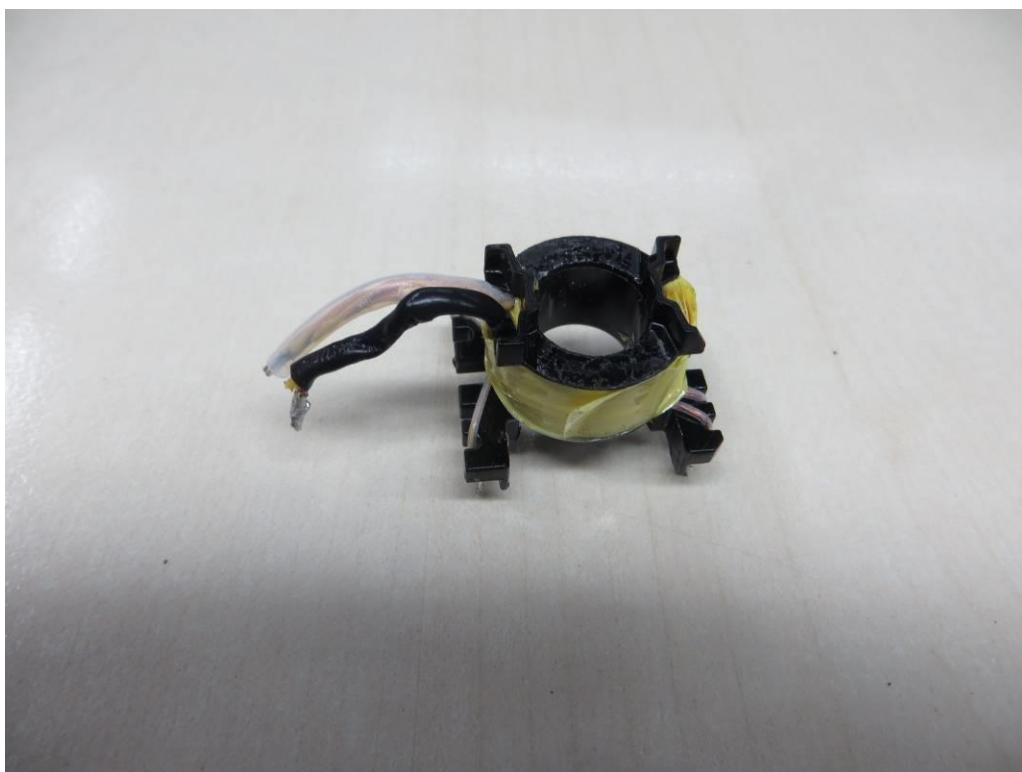


Appendix No.8: Photos of product

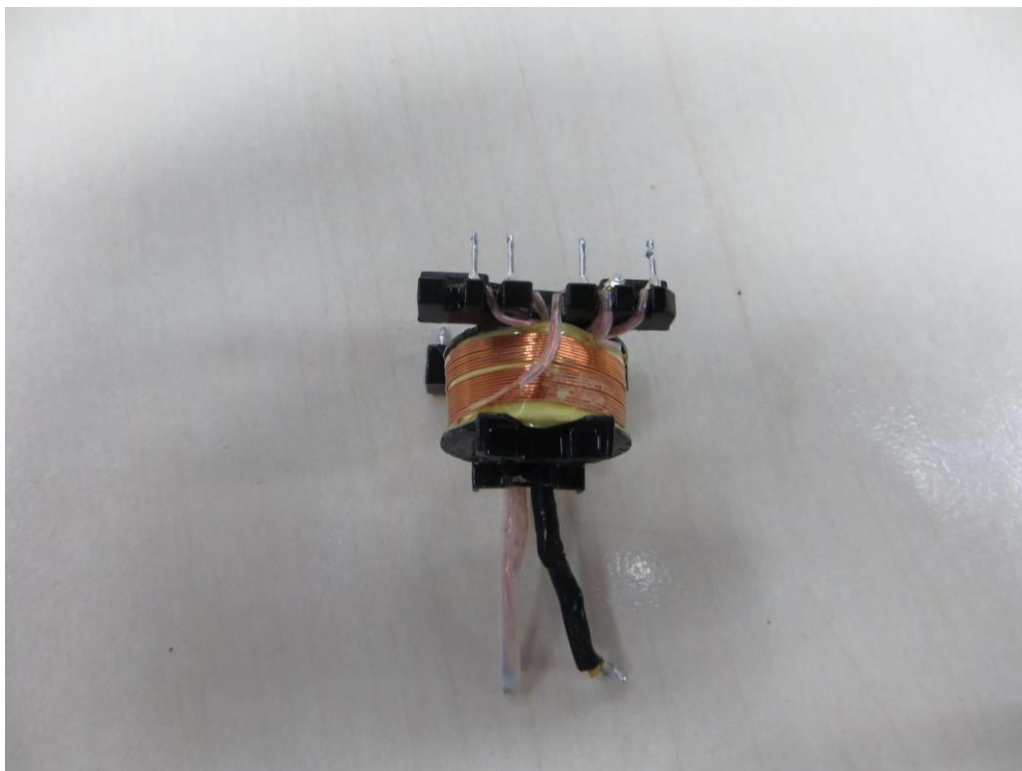
Transformer (Construction type 2)



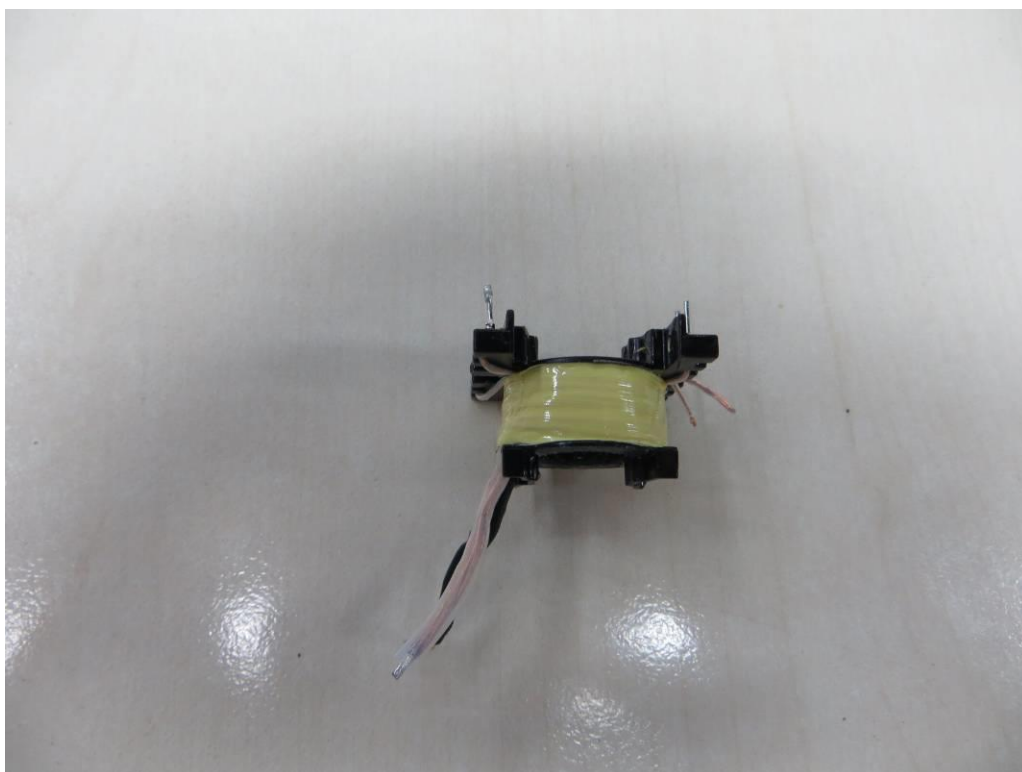
Transformer (Construction type 2)



Transformer (Construction type 2)

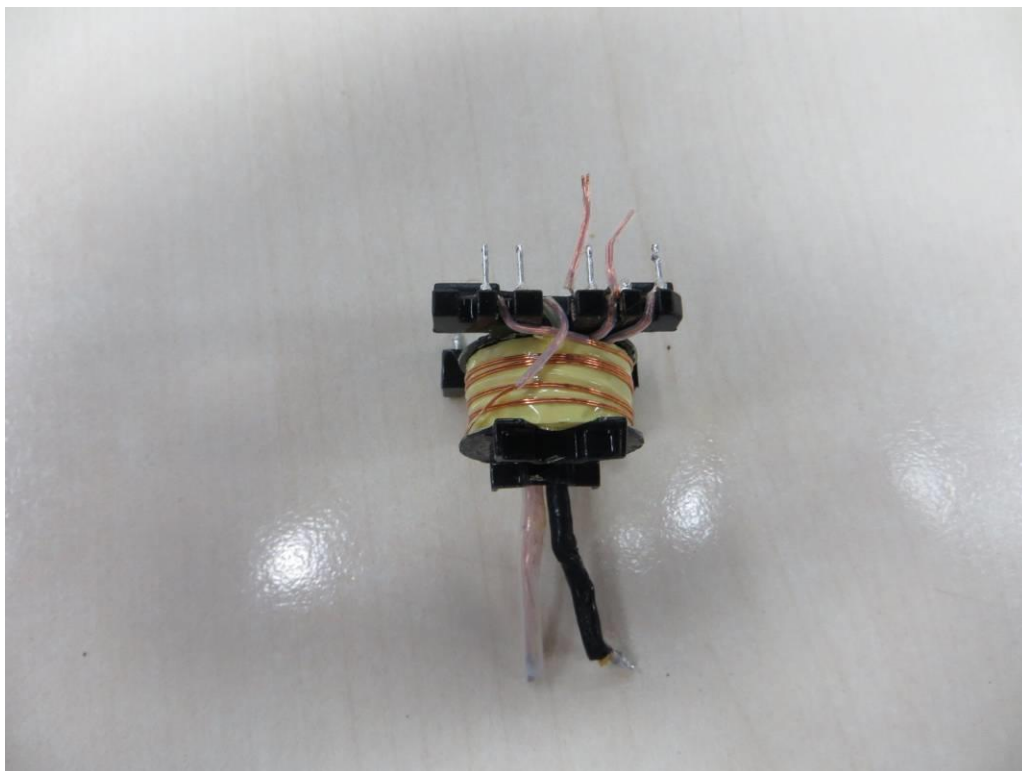


Transformer (Construction type 2)

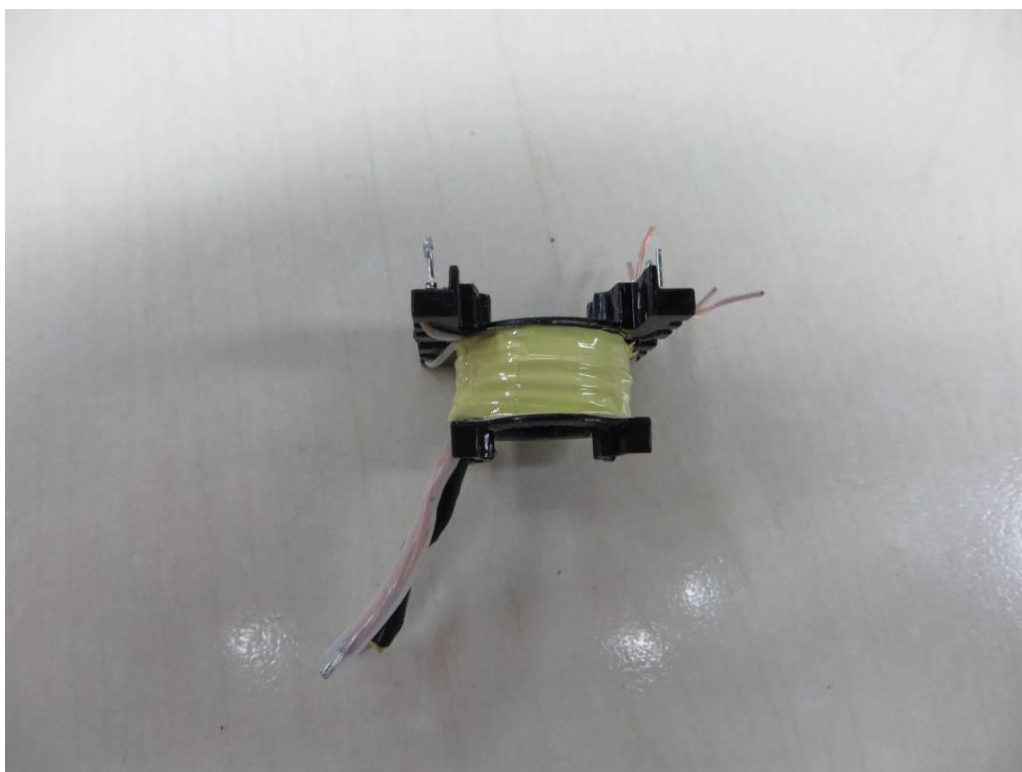


Appendix No.8: Photos of product

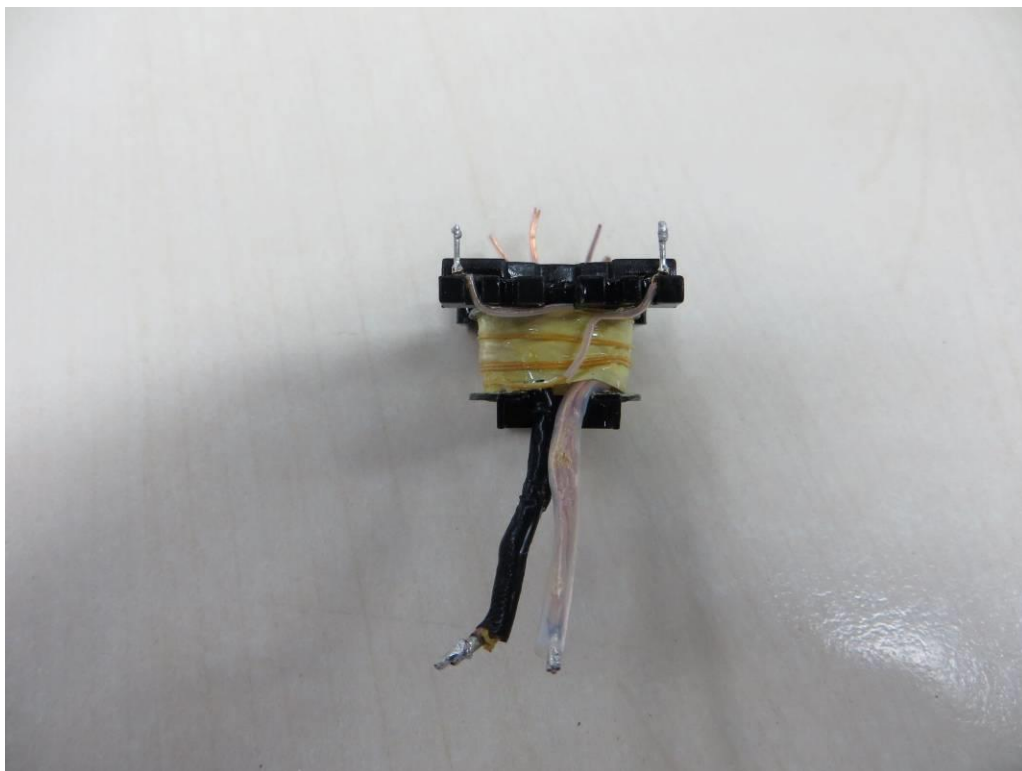
Transformer (Construction type 2)



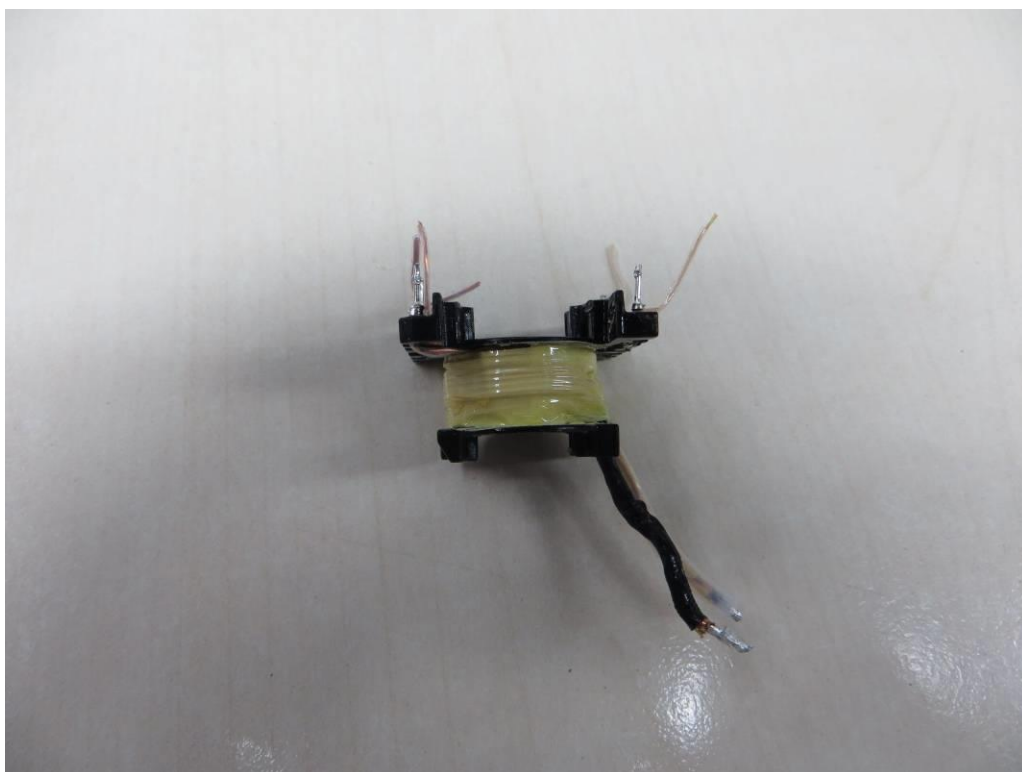
Transformer (Construction type 2)



Transformer (Construction type 2)

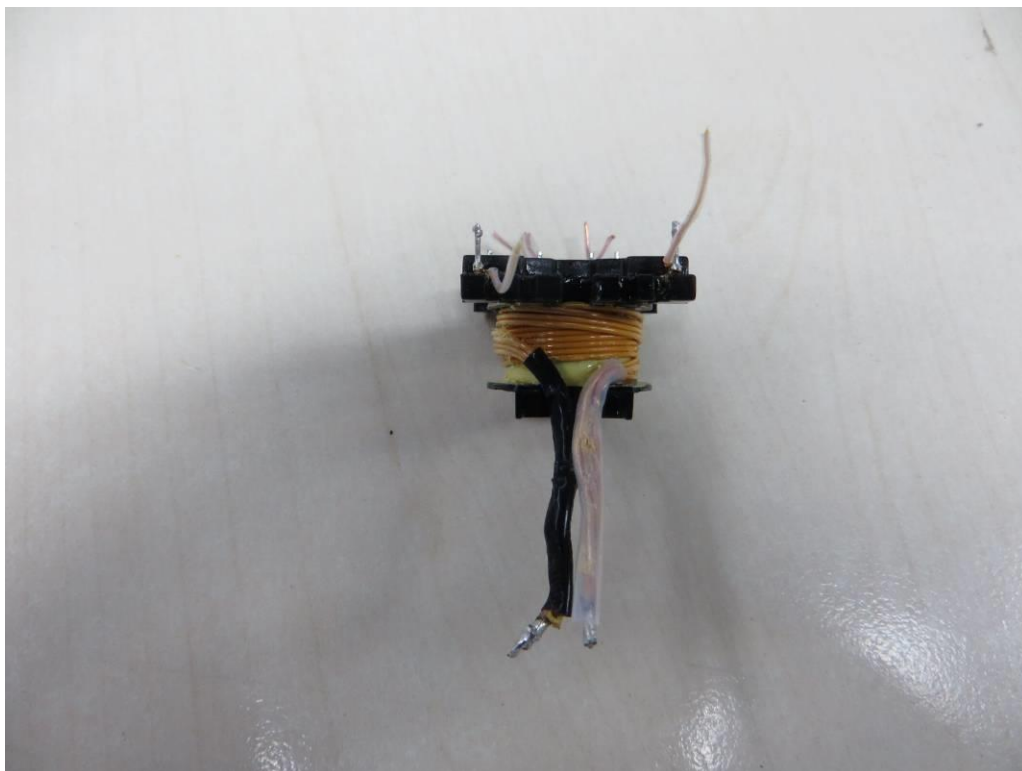


Transformer (Construction type 2)

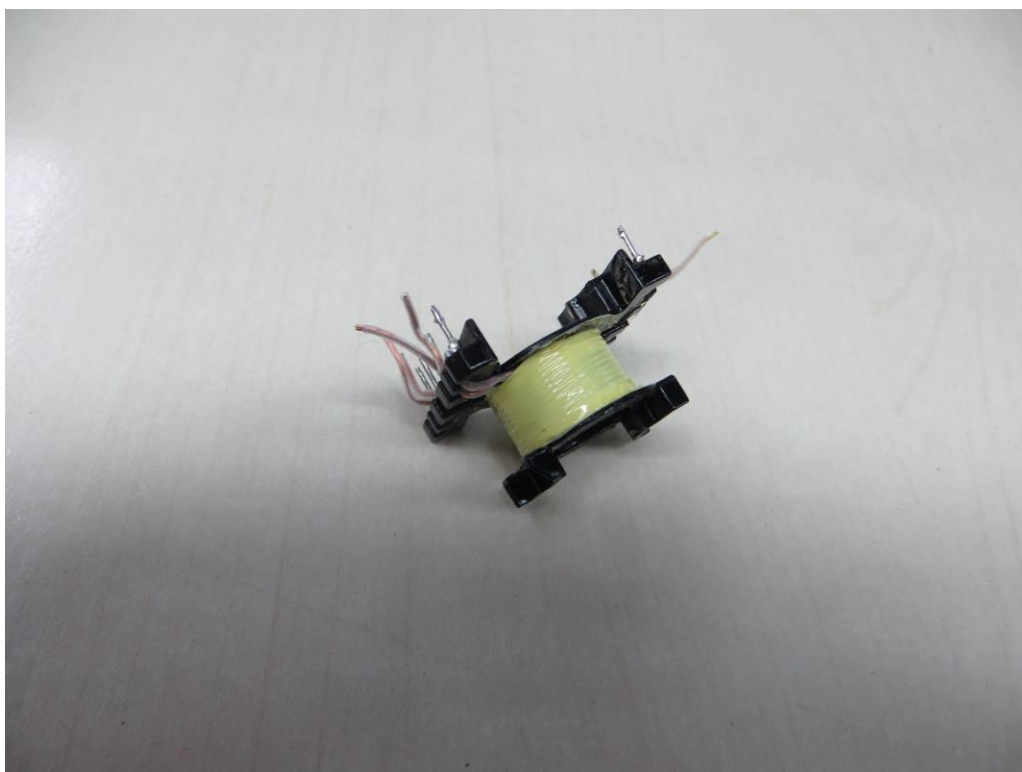


Appendix No.8: Photos of product

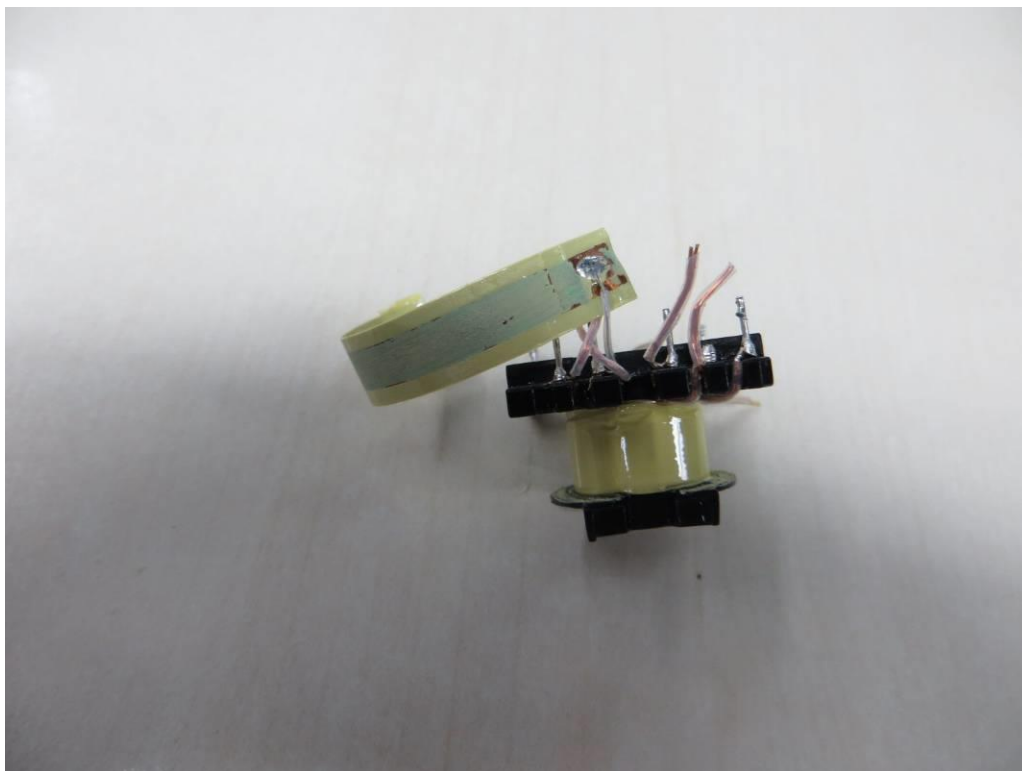
Transformer (Construction type 2)



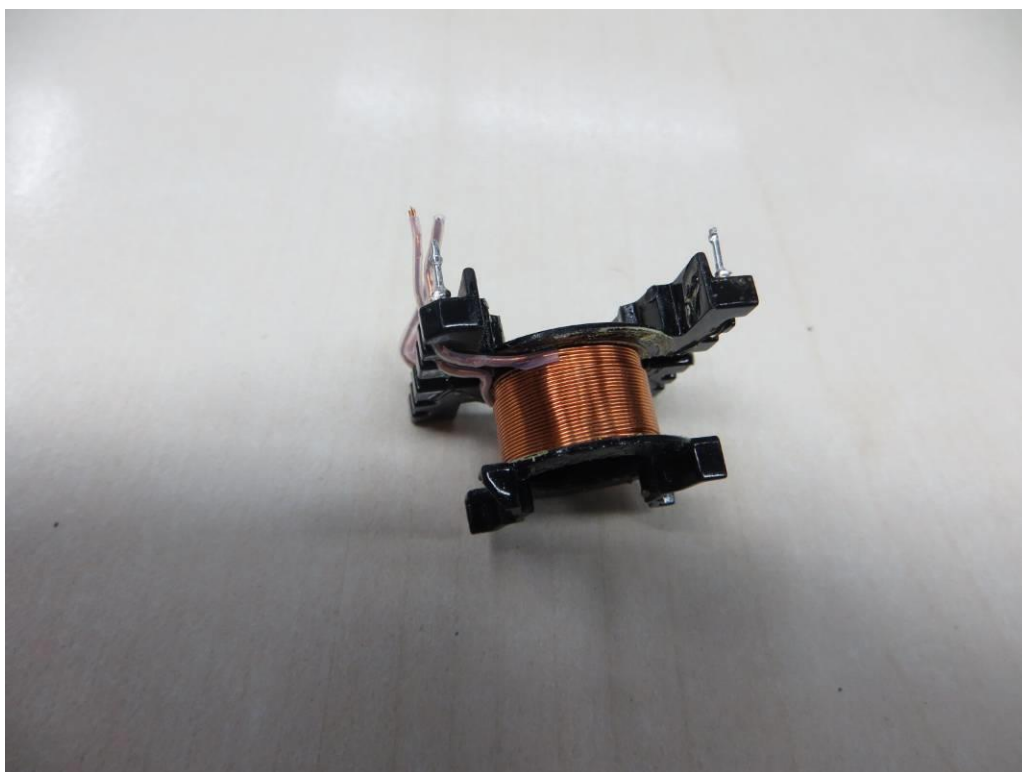
Transformer (Construction type 2)



Transformer (Construction type 2)

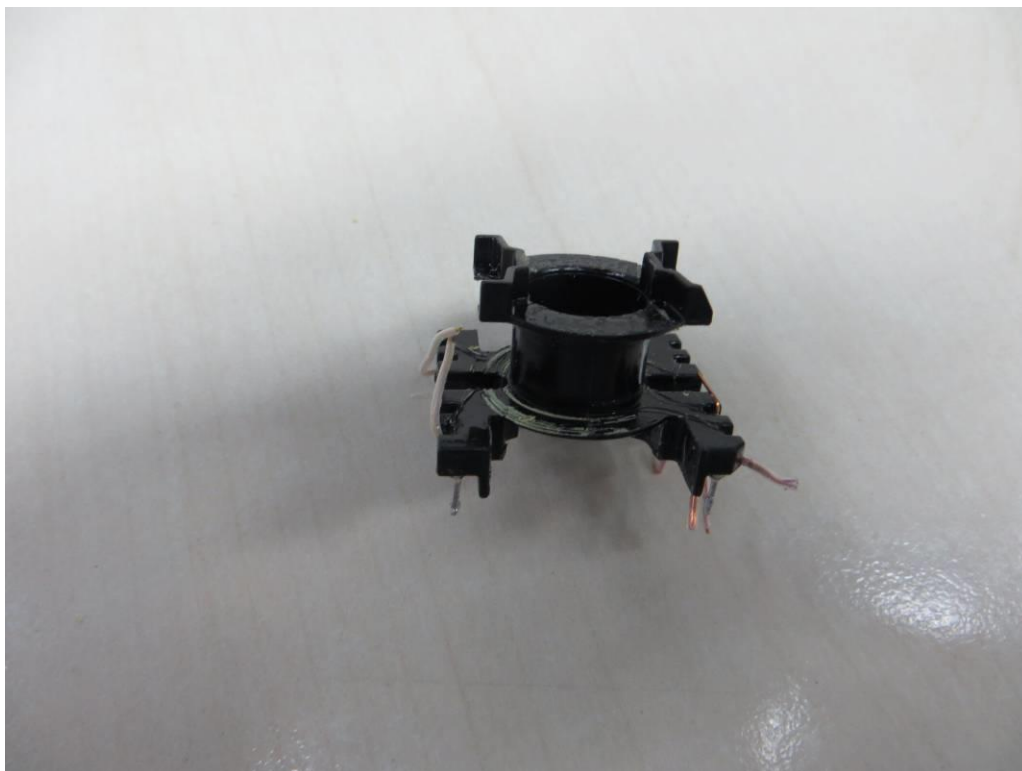


Transformer (Construction type 2)



Appendix No.8: Photos of product

Transformer (Construction type 2)



Appendix No.8: Photos of product

For GT*96600-*56*** (External view)



For GT*96600-*56*** (External view)

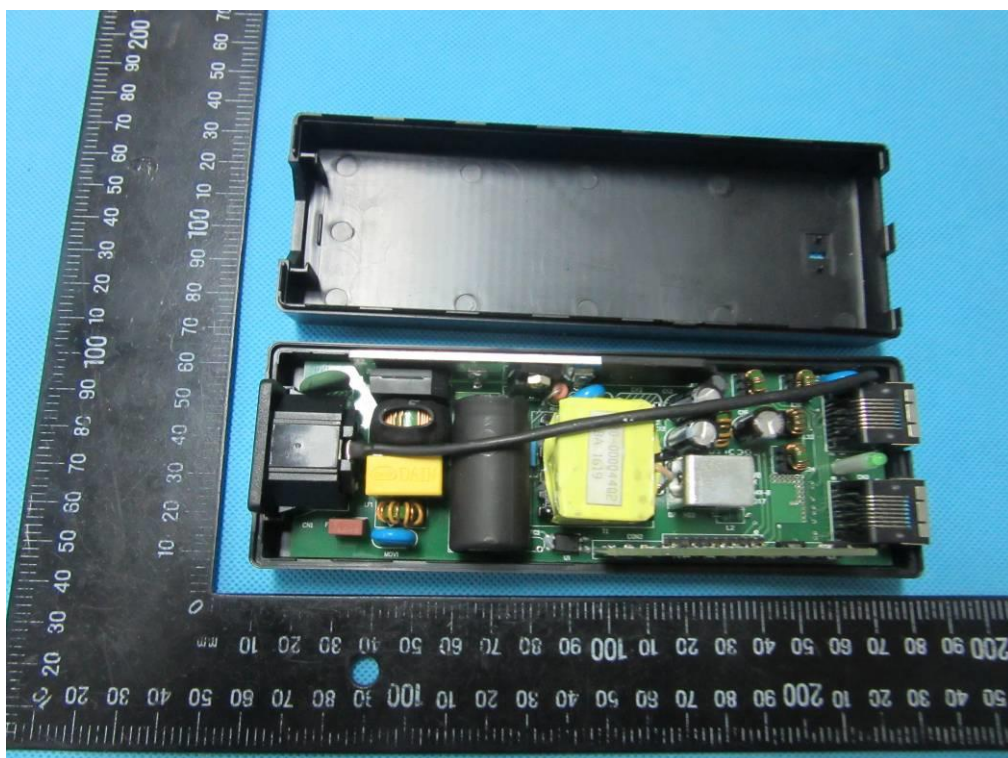


For GT*96600-*56*** (Enclosure with lug)

Appendix No.8: Photos of product

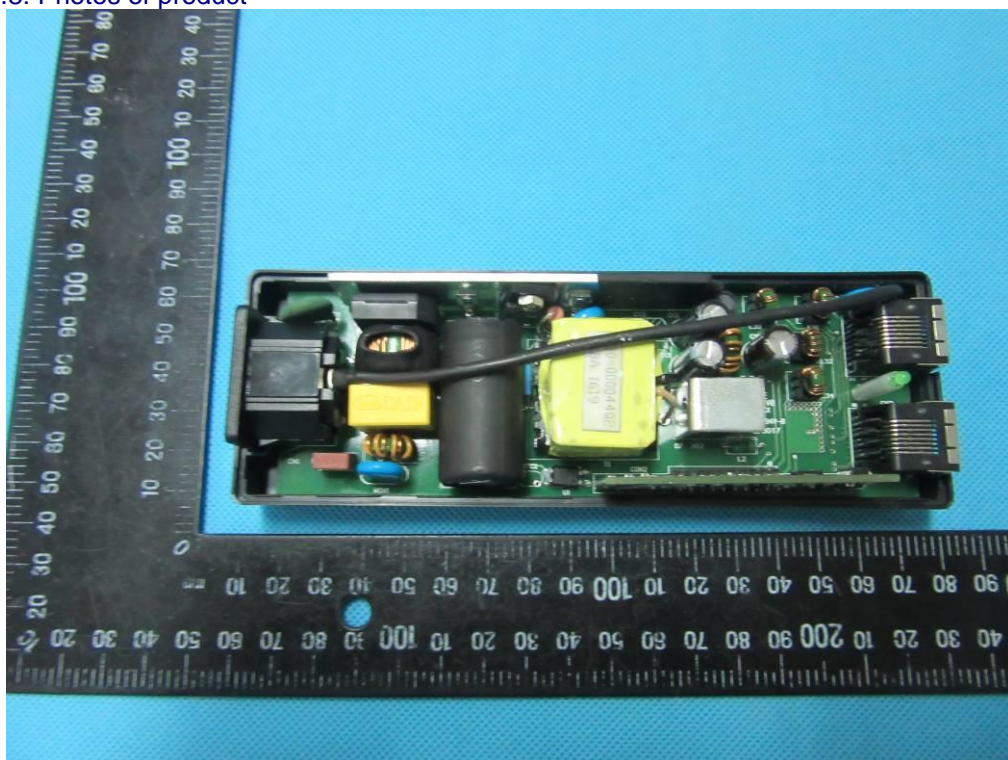


For GT*96600-*56*** (Internal view)

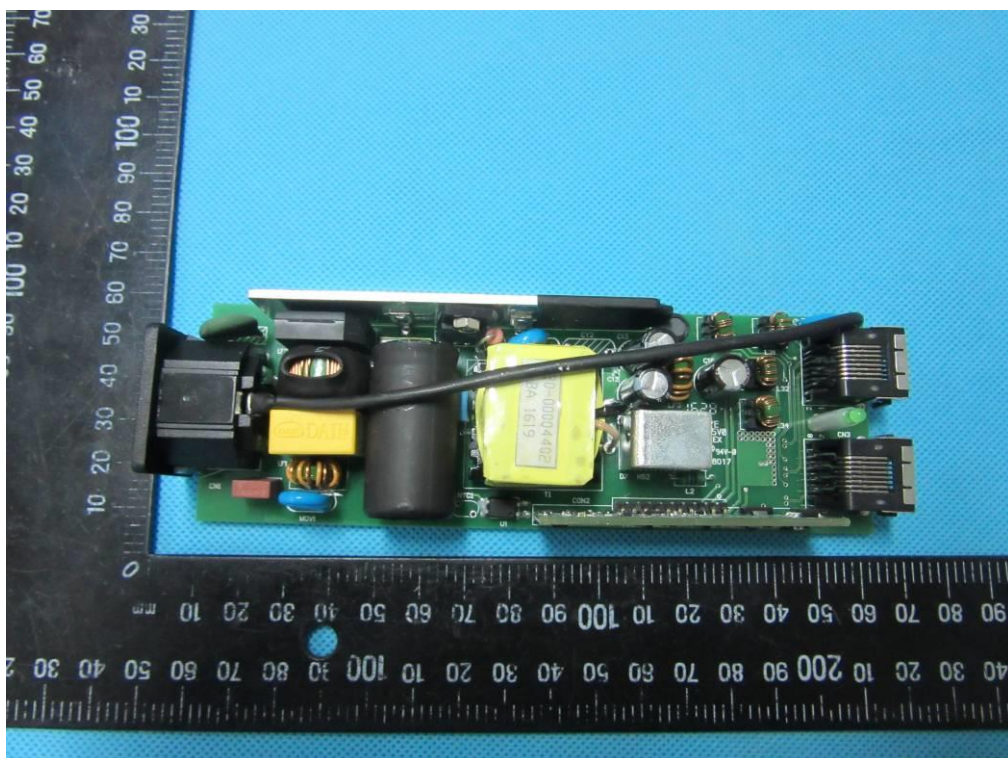


For GT*96600-*56*** (Internal view)

Appendix No.8: Photos of product

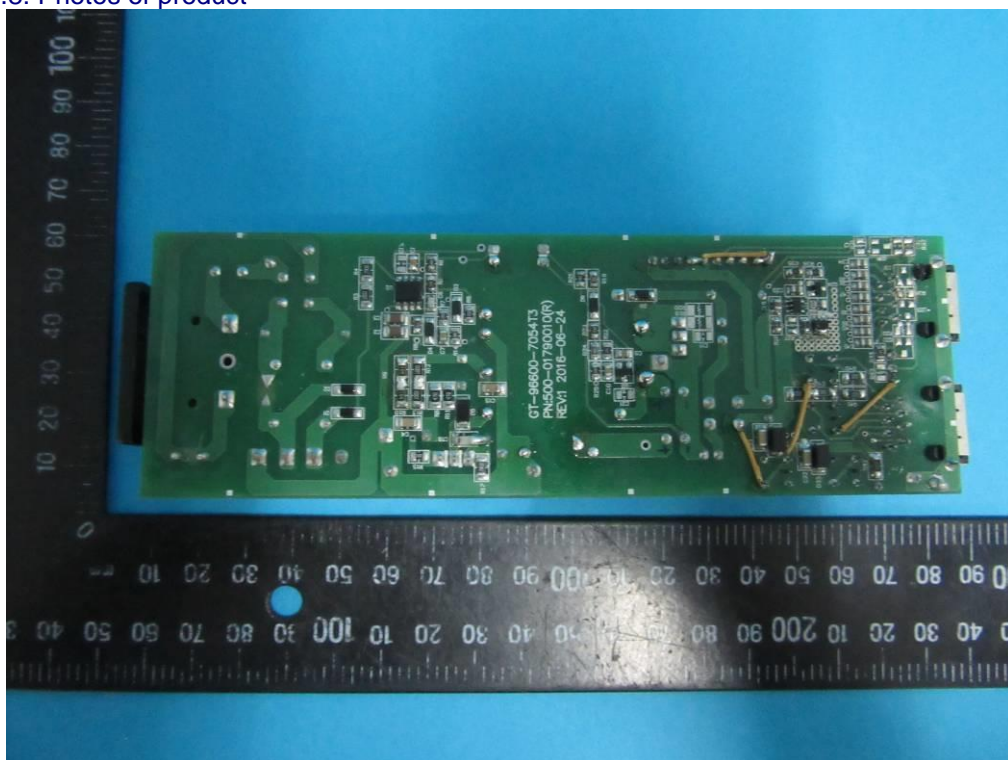


For GT*96600-*56*** (PCB)

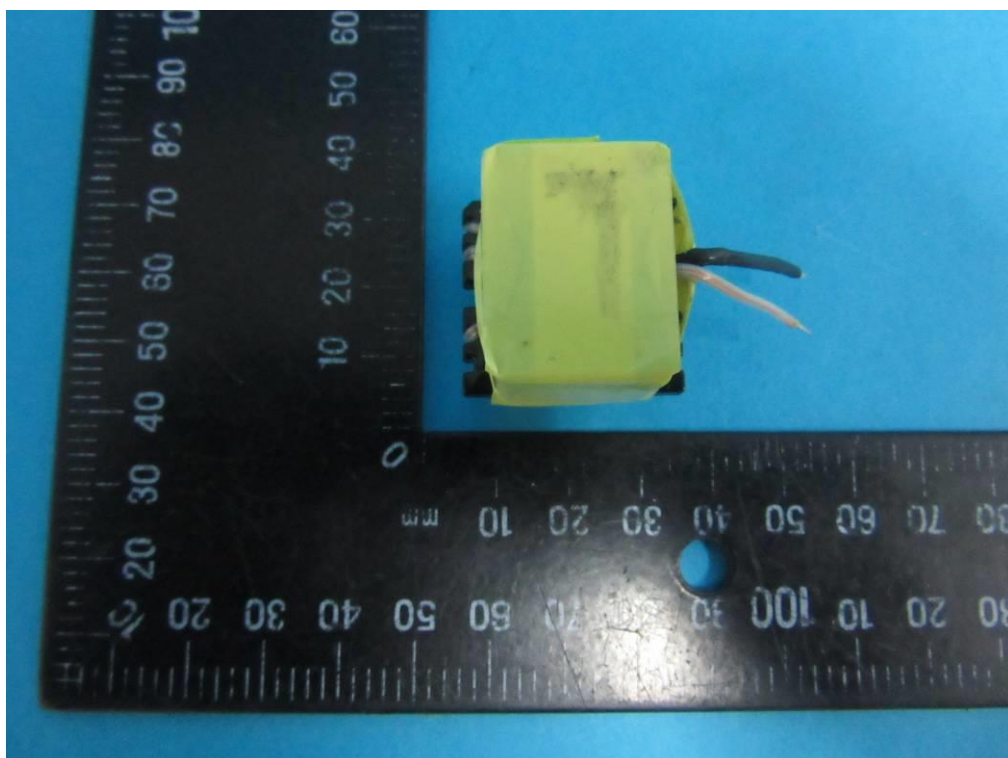


For GT*96600-*56*** (PCB)

Appendix No.8: Photos of product

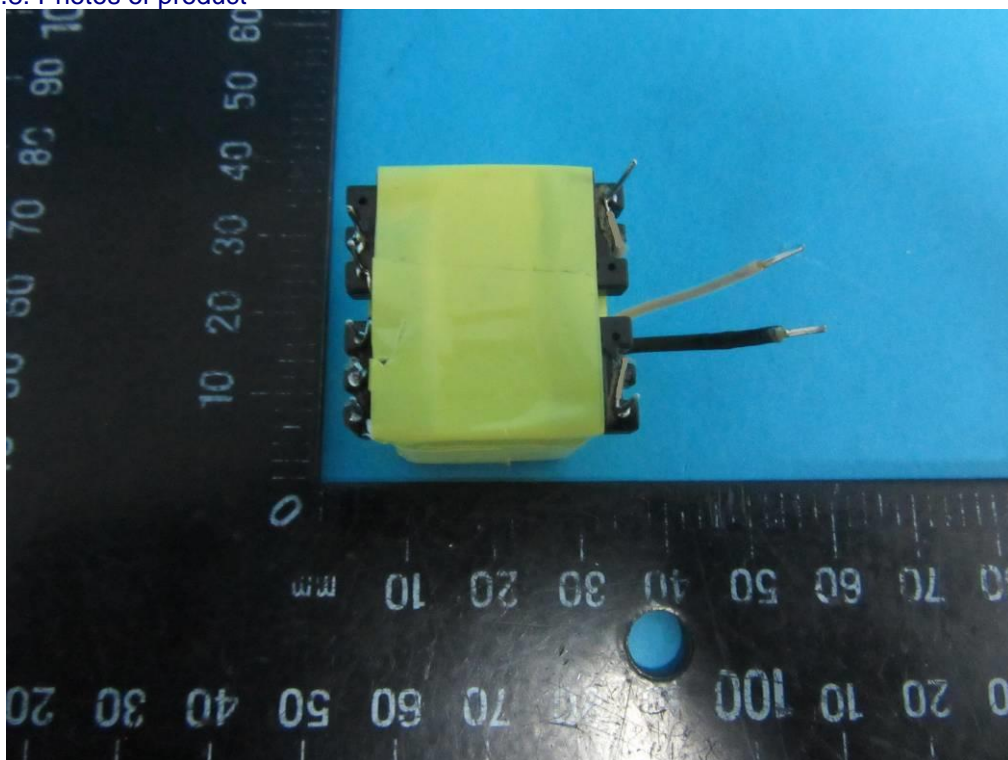


For GT*96600-*56*** (Transformer)

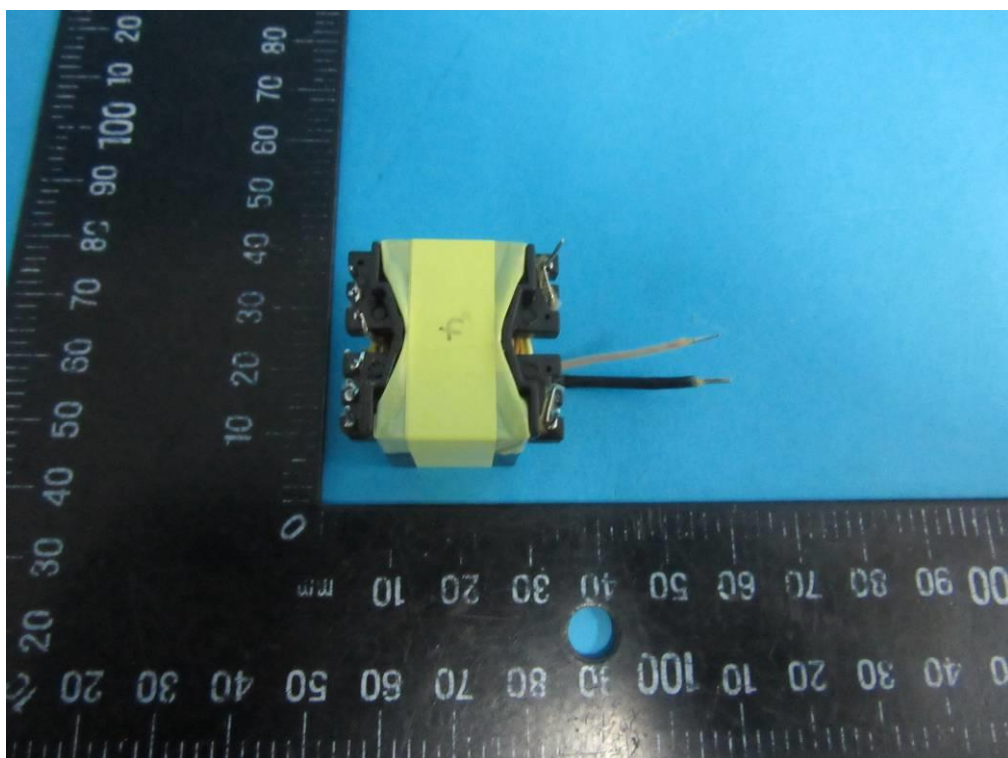


For GT*96600-*56*** (Transformer)

Appendix No.8: Photos of product

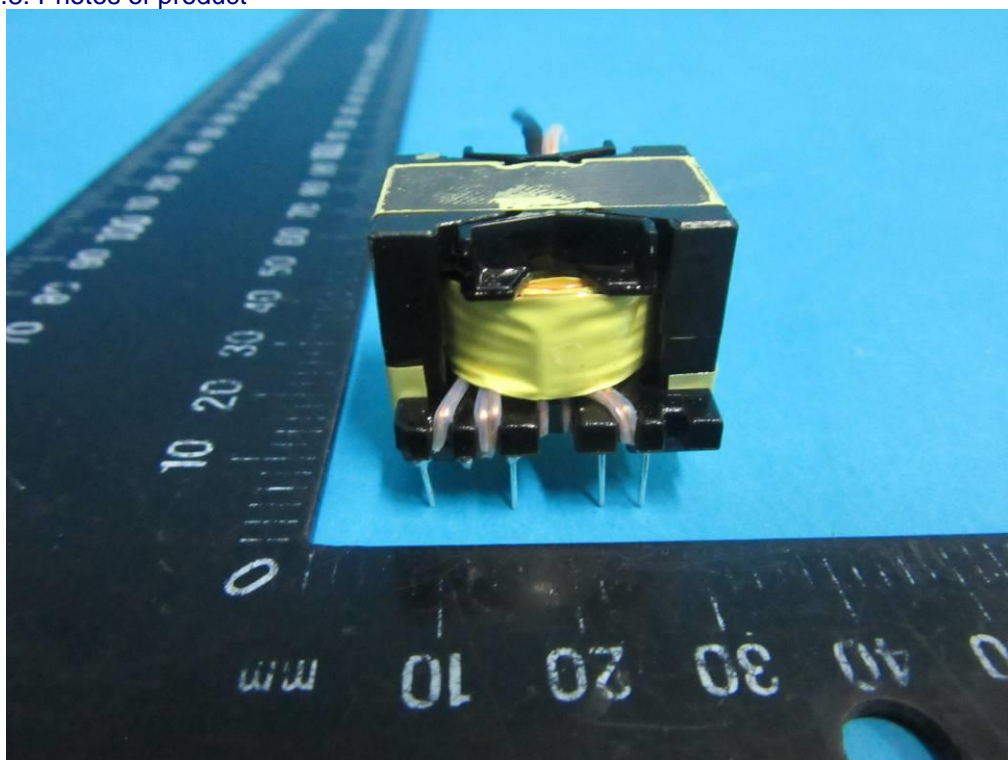


For GT*96600-*56*** (Transformer)

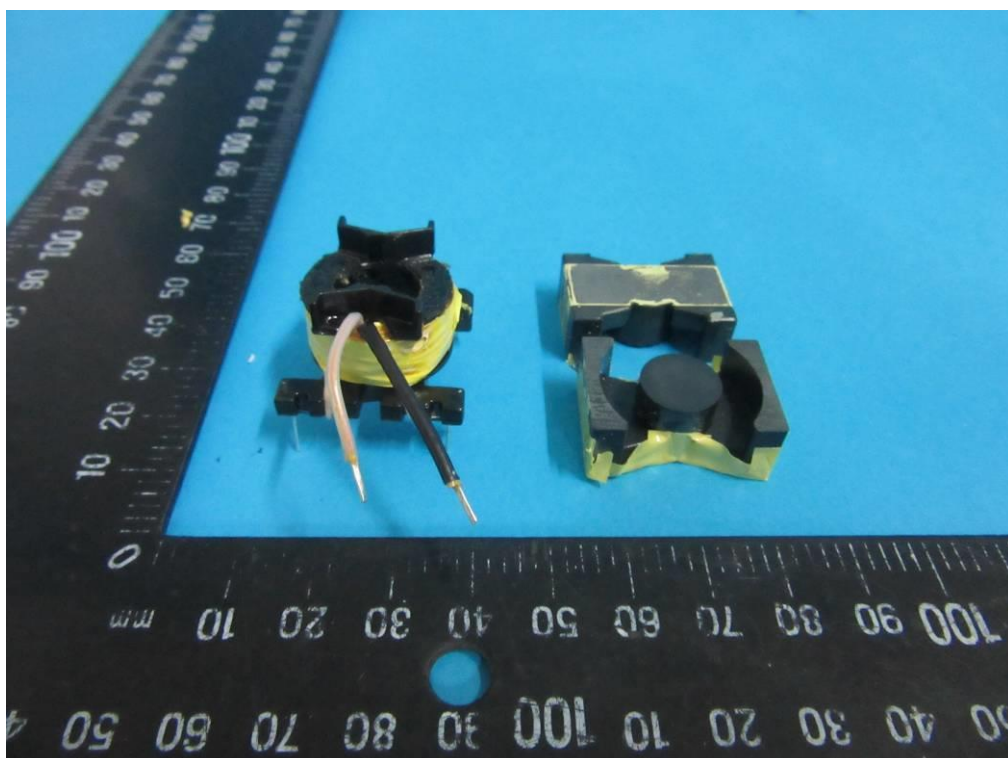


For GT*96600-*56*** (Transformer)

Appendix No.8: Photos of product

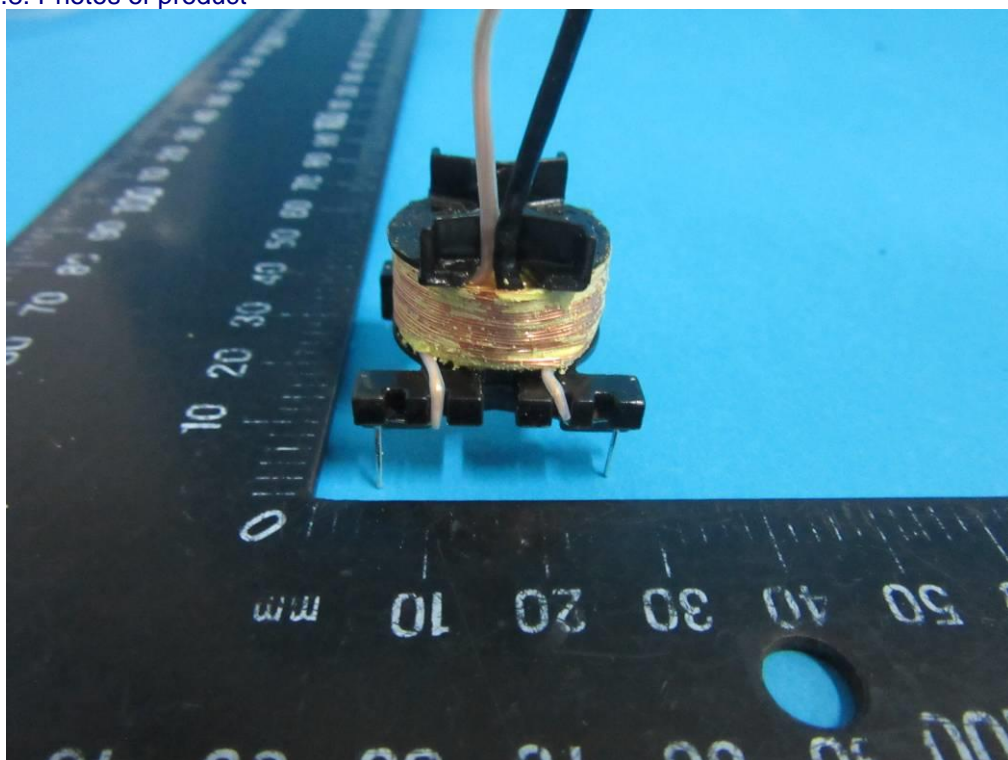


For GT*96600-*56*** (Transformer)

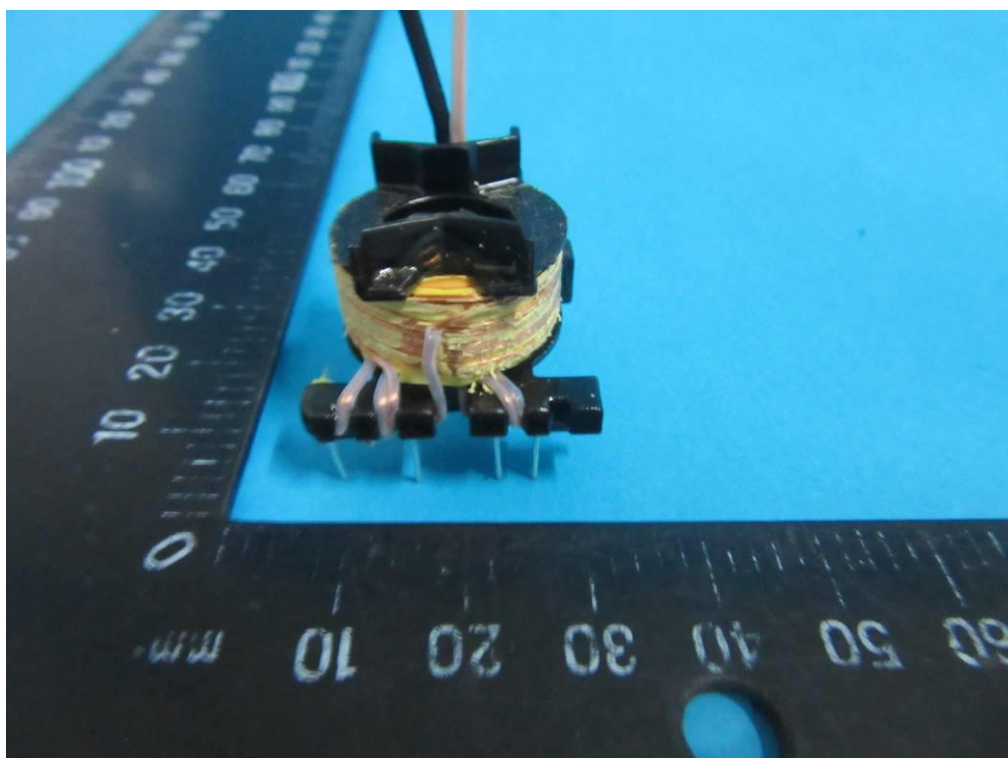


For GT*96600-*56*** (Transformer)

Appendix No.8: Photos of product

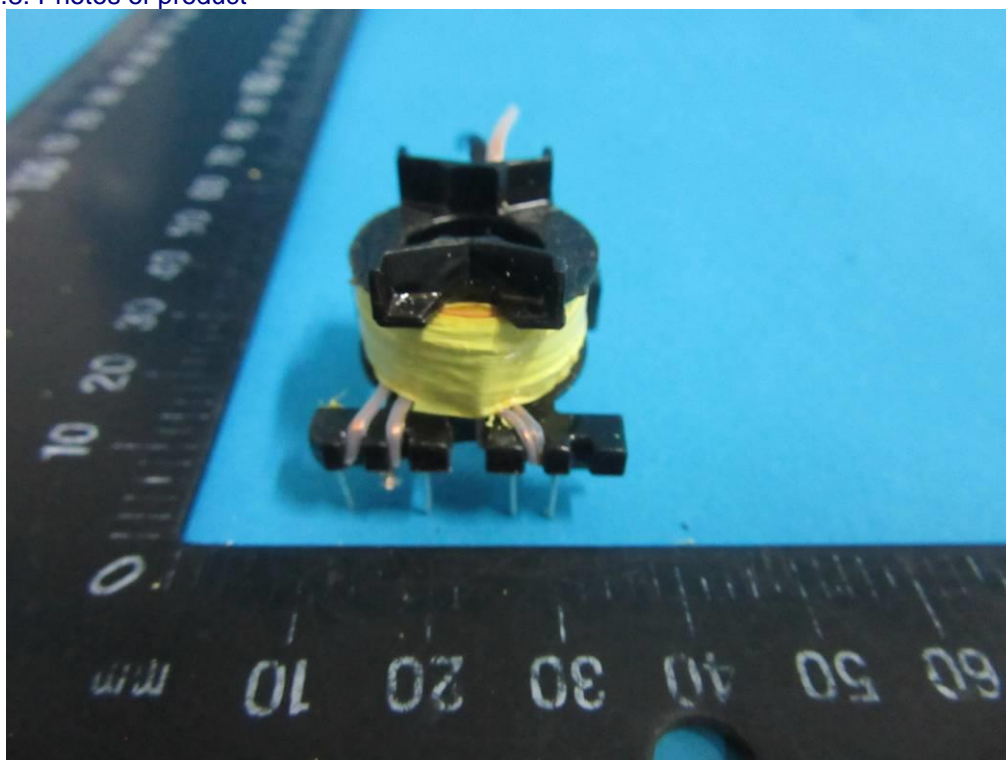


For GT*96600-*56*** (Transformer)

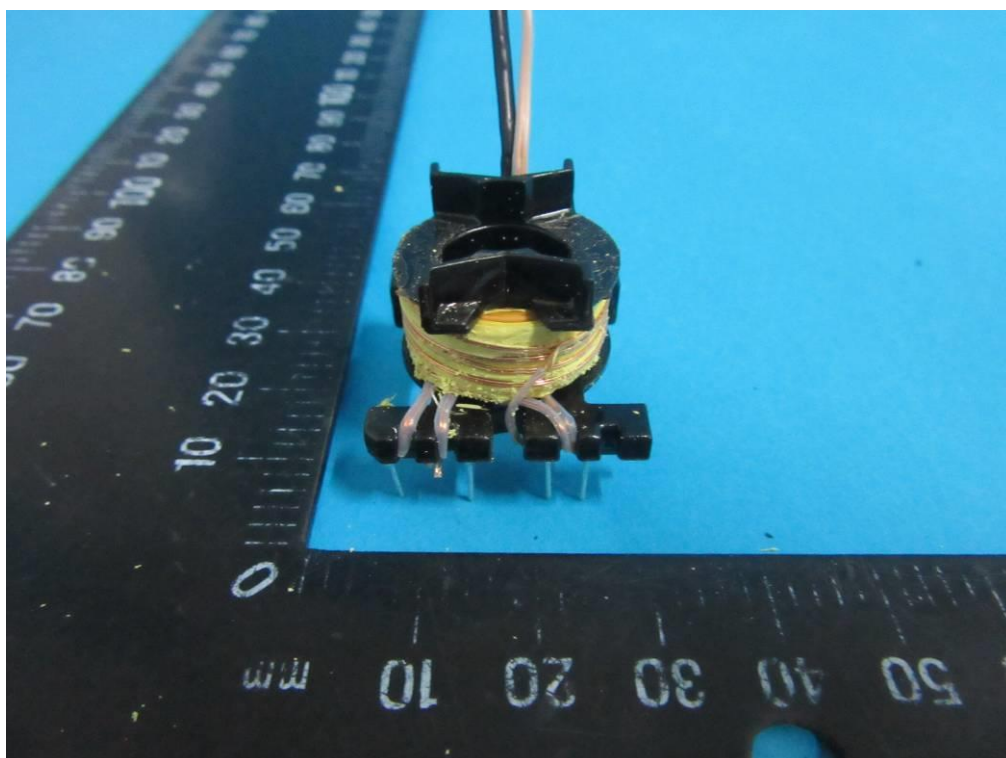


For GT*96600-*56*** (Transformer)

Appendix No.8: Photos of product

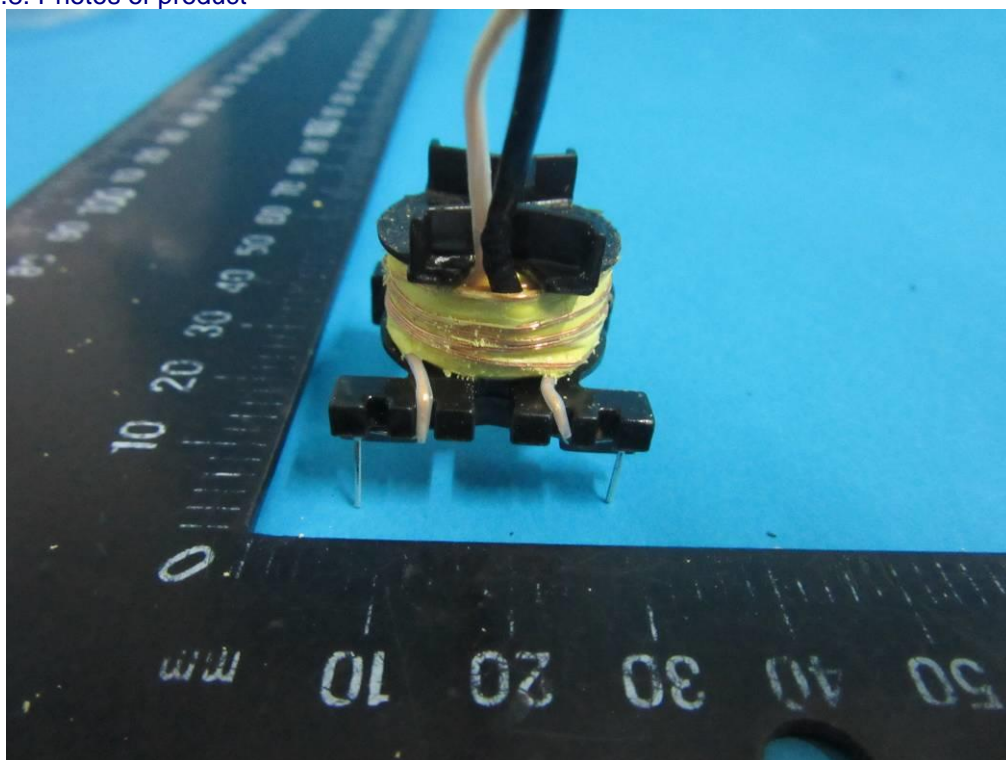


For GT*96600-*56*** (Transformer)

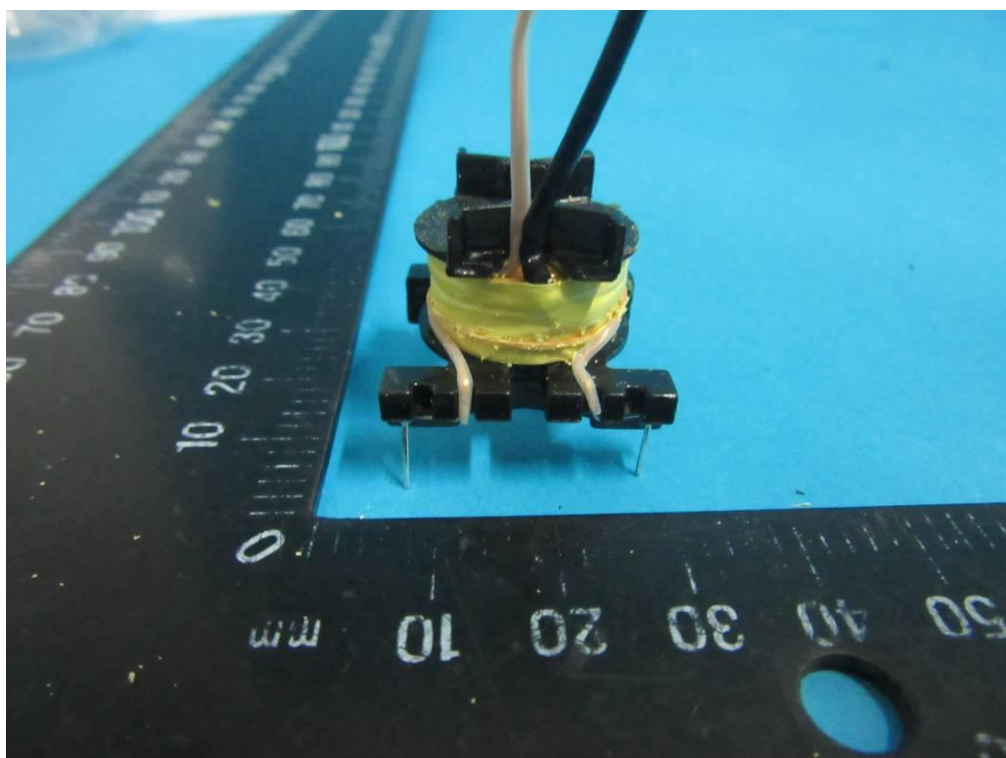


For GT*96600-*56*** (Transformer)

Appendix No.8: Photos of product

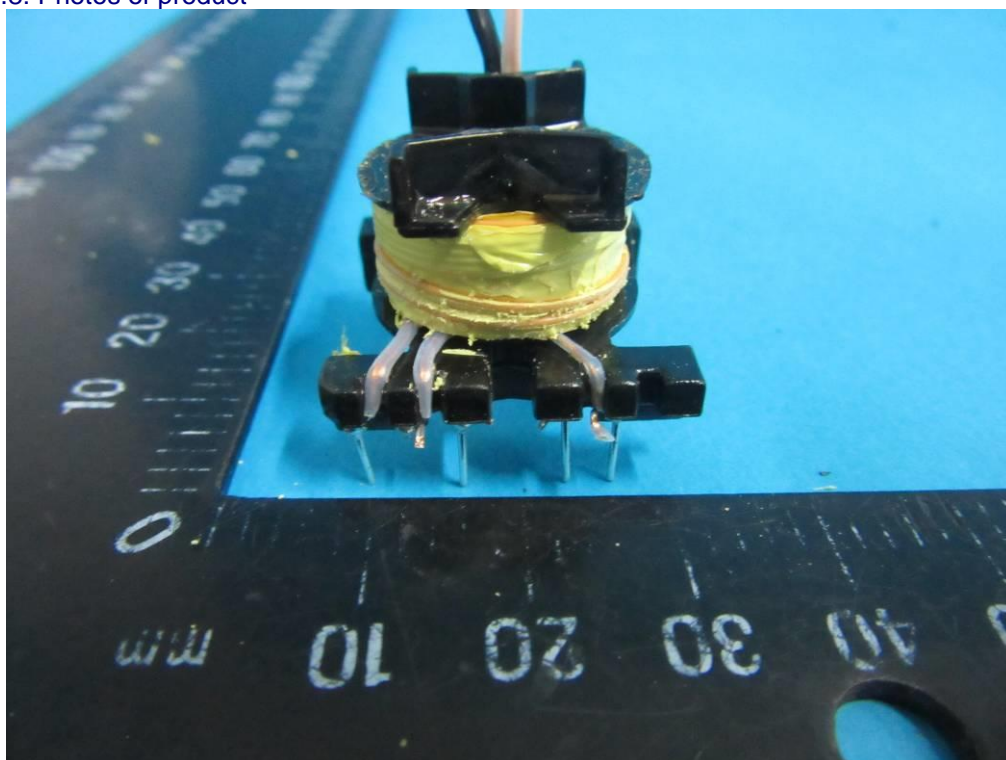


For GT*96600-*56*** (Transformer)

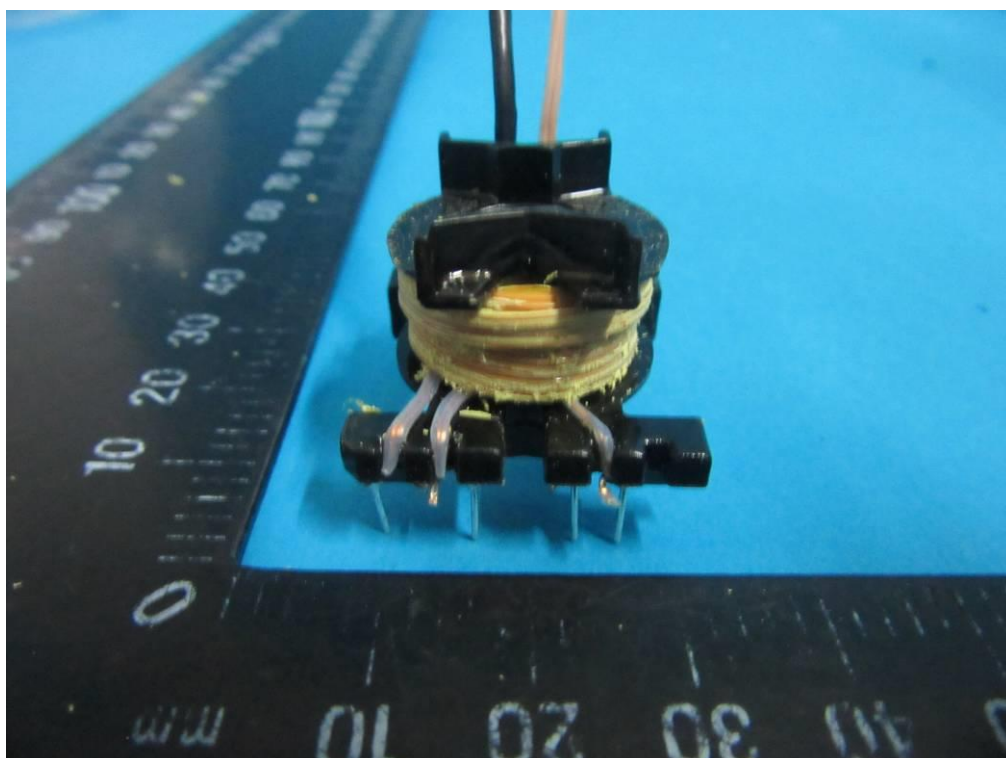


For GT*96600-*56*** (Transformer)

Appendix No.8: Photos of product

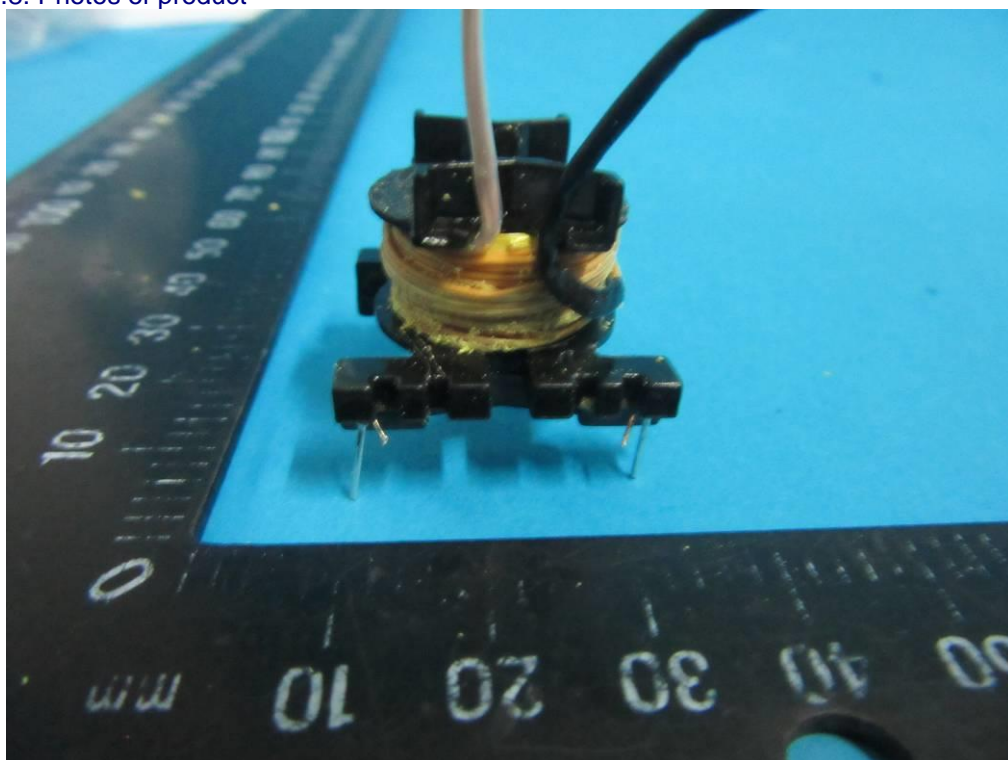


For GT*96600-*56*** (Transformer)

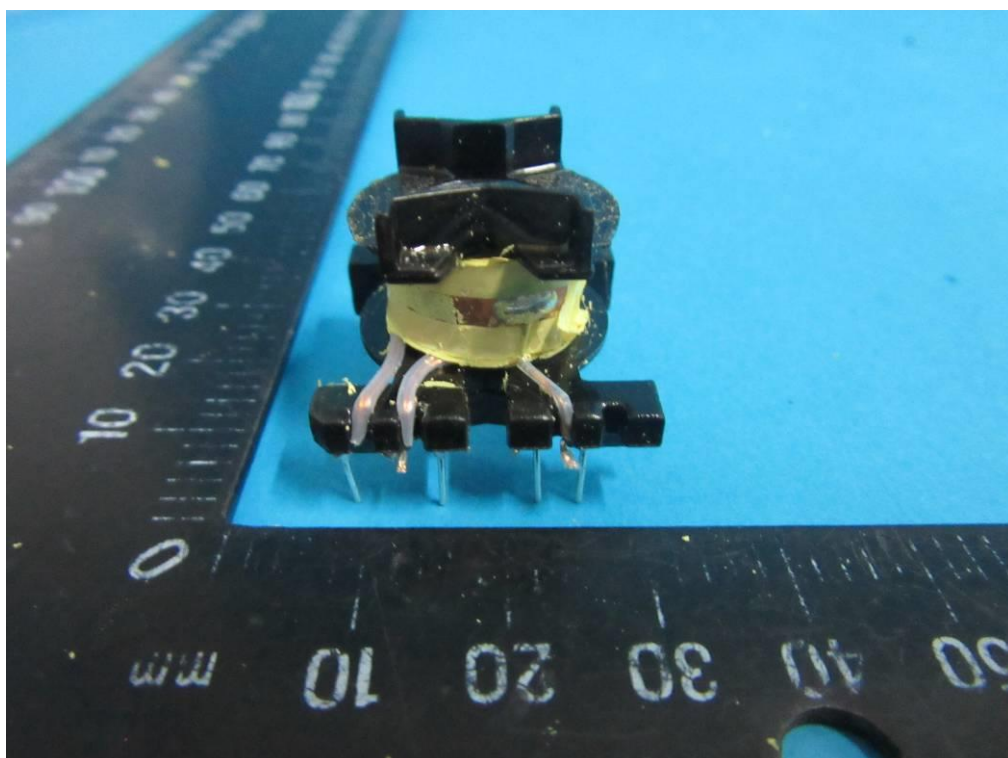


For GT*96600-*56*** (Transformer)

Appendix No.8: Photos of product

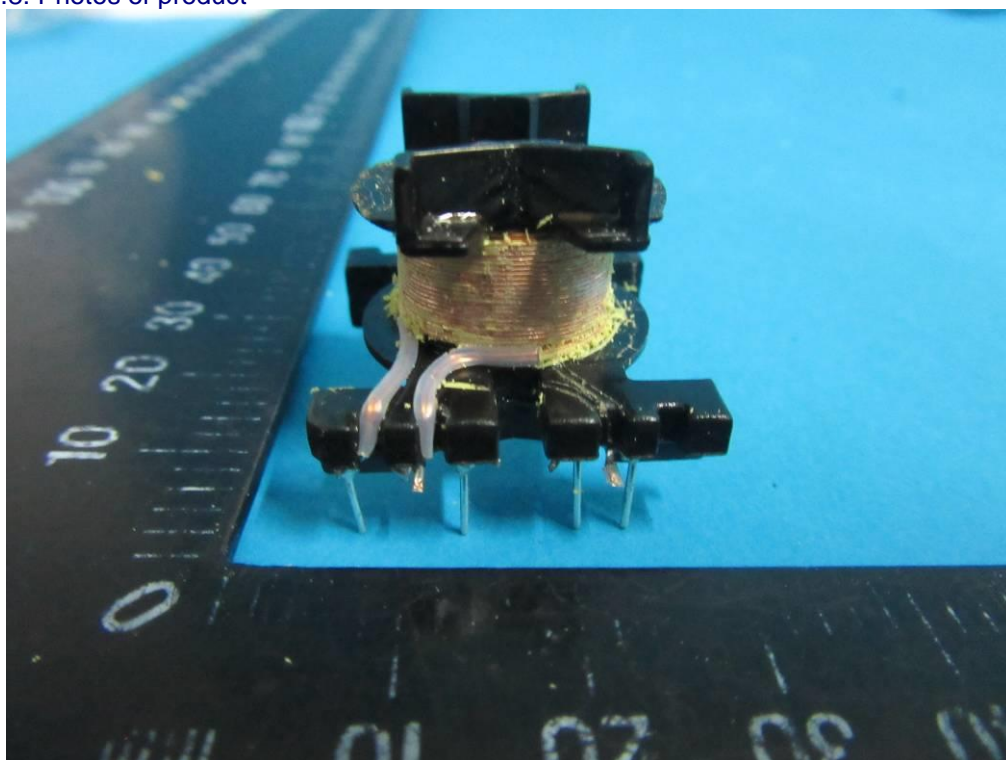


For GT*96600-*56*** (Transformer)



For GT*96600-*56*** (Transformer)

Appendix No.8: Photos of product



For GT*96600-*56*** (Transformer)

