Test Report issued under the responsibility of:

TÜVRheinland®
Precisely Right.

TEST REPORT

IEC 60950-1

Information technology equipment – Safety – Part 1: General requirements

Report Number. ..... :	31581397.003
Date of issue ..... :	June 12, 2015
Total number of pages ..... :	93 pages
Applicant's name ..... :	Channel Well Technology Co., Ltd.
Address ..... :	No. 222, Sec. 2, Nankan Rd., Lujhu Township, Taoyuan Hsien, 33855 Taiwan
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

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

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 CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description ..... :	AC Adaptor
Trade Mark ..... :	**1).** CWT **2).** GEC
Manufacturer ..... :	Same as applicant
Model/Type reference ..... :	**1a).** KPL-xy (x = 040, 050, 060, 065; y = F, G, V, H, I, W, J, K, L, N, Q, R, M) **1b).** KPL-xy (x = 048, 066; y = F) **1c).** KPL-xy-VI (x = 040, 048, 050, 060, 065, 066; y = F, G, V, H, I, W, J, K, L, N, Q, R, M, S) **2)** GPA-XX-YY (XX = 40, 48, 50, 60, 65, 66; YY=12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 24, 48)
Ratings ..... :	AC input: 100-240V, 1.7A, 50/60Hz DC output: please refer to model list table for details

Model List Table:

- **KPL-xy**
  - x represents the output wattage; x = 040, 050, 060, 065
  - y represents the output voltage; y = F, G, V, H, I, W, J, K, L, N, Q, R, M
- **KPL-xy**
  - x represents the output wattage; x = 048, 066
  - y represents the output voltage; y = F
- **KPL-xy-VI**
  - x represents the output wattage; x = 040, 048, 050, 060, 065, 066
  - y represents the output voltage; y = F, G, V, H, I, W, J, K, L, N, Q, R, M, S

x = O/P Wattage (W)	y = O/P Voltage	DC Output Voltage (V)	AC Input Voltage (VAC)	AC Input Current (A)	AC Input Frequency (Hz)
40, 48, 50, 60, 65, 66	F	12	100-240	1.7	50/60
40, 50, 60	G	13	100-240	1.7	50/60
40, 50, 60	V	14	100-240	1.7	50/60
40, 50, 60	H	15	100-240	1.7	50/60
40, 50, 60	I	16	100-240	1.7	50/60
40, 50, 60	W	17	100-240	1.7	50/60
40, 50, 65	J	18	100-240	1.7	50/60
40, 50, 60, 65	K	19	100-240	1.7	50/60
40, 50, 65	L	20	100-240	1.7	50/60
40, 50, 65	N	21	100-240	1.7	50/60
40, 50, 65	Q	22	100-240	1.7	50/60
40, 50, 65	R	23	100-240	1.7	50/60
40, 50, 60, 65	M	24	100-240	1.7	50/60
50, 60, 65	S	48	100-240	1.7	50/60

O/P Voltage (y =)	O/P Voltage (V)	DC Output Voltage @ O/P Wattage 40W	DC Output Voltage @ O/P Wattage 48W	DC Output Voltage @ O/P Wattage 50W	DC Output Voltage @ O/P Wattage 60W	DC Output Voltage @ O/P Wattage 65W	DC Output Voltage @ O/P Wattage 66W
F	12	3.33	4.00	4.17	5.00	5.42	5.50
G	13	3.08	---	3.85	4.62	---	---
V	14	2.86	---	3.57	4.29	---	---
H	15	2.67	---	3.33	4.00	---	---
I	16	2.50	---	3.13	3.75	---	---
W	17	2.35	---	2.94	3.53	---	---
J	18	2.22	---	2.78	---	3.61	---
K	19	2.11	---	2.63	3.16	3.42	---
L	20	2.00	---	2.50	---	3.25	---
N	21	1.90	---	2.38	---	3.10	---
Q	22	1.82	---	2.27	---	2.95	---
R	23	1.74	---	2.17	---	2.83	---
M	24	1.67	---	2.08	2.50	2.71	---
S	48	---	---	1.04	1.25	1.35	---

Note:

- **Model: KPL-xy (for x=040, 050, 060, 065; y= F, G, V, H, I, W, J, K, L, N, Q, R, M)**
  i. PCB with fuse: FUSE1 (Efficiency Level V)
  ii. Working Ambient Temperature: 40°C
  iii. Efficiency Level V
- **Model: KPL-xy (for x=48, 66; y=F)**
  i. PCB with fuses: F1 and F2
  ii. Working Ambient Temperature: 45°C for x= 048 and y= F
  iii. Working Ambient Temperature: 40°C for x= 066 and y= F
  iv. (Efficiency Level VI)
- **Model: KPL-xy-VI (for x=040, 050, 060, 065; y= F, G, V, H, I, W, J, K, L, N, Q, R, M,S)**
  i. PCB with fuses: F1 and F2
  ii. Working Ambient Temperature: 45°C for x= 40, 48, 50, 60 and y= all
  iii. Working Ambient Temperature: 40°C for x= 65, 66 and y= all
  iv. (Efficiency Level VI)

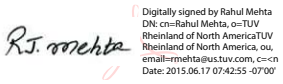
- **GPA-XX-YY**
  - XX represents the output wattage; XX = 40, 48, 50, 60, 65, 66
  - YY represents the output voltage; YY = 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 48

XX = O/P Wattage (W)	YY = DC O/P Voltage (V)	AC Input Voltage (VAC)	AC Input Current (A)	AC Input Frequency (Hz)
40, 48, 50, 60, 65, 66	12	100-240	1.7	50/60
40, 50, 60	13	100-240	1.7	50/60
40, 50, 60	14	100-240	1.7	50/60
40, 50, 60	15	100-240	1.7	50/60
40, 50, 60	16	100-240	1.7	50/60
40, 50, 60	17	100-240	1.7	50/60
40, 50, 65	18	100-240	1.7	50/60
40, 50, 60, 65	19	100-240	1.7	50/60
40, 50, 65	20	100-240	1.7	50/60
40, 50, 65	21	100-240	1.7	50/60
40, 50, 65	22	100-240	1.7	50/60
40, 50, 65	23	100-240	1.7	50/60
40, 50, 60, 65	24	100-240	1.7	50/60
50, 60, 65	48	100-240	1.7	50/60

O/P Voltage (V)	DC Output Voltage @ O/P Wattage 40W	DC Output Voltage @ O/P Wattage 48W	DC Output Voltage @ O/P Wattage 50W	DC Output Voltage @ O/P Wattage 60W	DC Output Voltage @ O/P Wattage 65W	DC Output Voltage @ O/P Wattage 66W
12	3.33	4.00	4.17	5.00	5.42	5.50
13	3.08	---	3.85	4.62	---	---
14	2.86	---	3.57	4.29	---	---
15	2.67	---	3.33	4.00	---	---
16	2.50	---	3.13	3.75	---	---
17	2.35	---	2.94	3.53	---	---
18	2.22	---	2.78	---	3.61	---
19	2.11	---	2.63	3.16	3.42	---
20	2.00	---	2.50	---	3.25	---
21	1.90	---	2.38	---	3.10	---
22	1.82	---	2.27	---	2.95	---
23	1.74	---	2.17	---	2.83	---
24	1.67	---	2.08	2.50	2.71	---
48	---	---	1.04	1.25	1.35	---

Note:

- GPA-XX-YY
  - i. PCB with fuses: F1 and F2
  - ii. Working Ambient Temperature: 45°C for XX= 40, 48, 50, 60 and YY= all
  - iii. Working Ambient Temperature: 40°C for XX= 65, 66 and YY= all
  - iv. Efficiency Level VI

Testing procedure and testing location:			
☒	**CB Testing Laboratory:**	TUV Rheinland of North America, Inc.	
Testing location/ address.....:		1279 Quarry Lane, Ste. A, Pleasanton, CA 94566 USA	
☐	**Associated CB Testing Laboratory:**		
Testing location/ address.....:			
Tested by (name + signature).....:		**Jameel Armstrong**	
Approved by (name + signature).....:		**Rahul Mehta**	 Digitally signed by Rahul Mehta DN: cn=Rahul Mehta, o=TUV Rheinland of North AmericaTUV Rheinland of North America, ou, email=rmehta@us.tuv.com, c=cn Date: 2015.06.17 07:42:55 -07'00'
☐	**Testing procedure: TMP/CTF Stage 1:**		
Testing location/ address.....:			
Tested by (name + signature).....:			
Approved by (name + signature).....:			
☐	**Testing procedure: WMT/CTF Stage 2:**		
Testing location/ address.....:			
Tested by (name + signature).....:			
Witnessed by (name + signature).....:			
Approved by (name + signature).....:			
☐	**Testing procedure: SMT/CTF Stage 3 or 4:**		
Testing location/ address.....:			
Tested by (name + signature).....:			
Witnessed by (name + signature).....:			
Approved by (name + signature).....:			
Supervised by (name + signature).....:			

List of Attachments (including a total number of pages in each attachment):

- Attachment 1 – National Differences (17 pages)
- Attachment 2 – Photos (11 pages)
- Attachment 3 – Transformer specification (16 pages)
- Attachment 4 – Schematic diagram (2 pages)
- Attachment 5 – PCB Artwork (2 pages)
- Attachment 6 – Mechanical drawings (11 pages)
- Attachment 7 – CB Certificate (2 pages)

Note 1: Total number of pages in each attachment is indicated in individual attachment.

Note 2: Magnetic specification, circuit diagrams, and PCB Artworks are proprietary and can be provided by the manufacturer upon request.

Summary of testing:

Evaluation and test data was taken from the TÜV Rheinland (Shanghai) CB report 15077081 001. This report also covers the evaluation and testing of an alternate PCB construction (PCB with fuses: F1 and F2). The Model List Table explains the differences PCB constructions.

Tests performed (name of test and test clause):

15077081 001

1.6.2	Input current
1.7.11	Durability
2.1.1.1	Access of energized parts
2.1.1.5	Energy hazards
2.1.1.7	Discharge of capacitors in equipment
2.2.2	Voltages under normal conditions
2.2.3	Voltages under fault conditions
2.4.2	Limit values – Limited current circuits
2.5	Limited power source
2.6.3.4	Resistance of earthing conductors
2.9.2	Humidity conditioning – Electrical insulation
2.10.2	Determination of working voltage
2.10.5.10	Thin sheet material – alternative test
3.1.9	Termination of conductors
4.2.2	Steady force test, 10N
4.2.4	Steady force test, 250N
4.2.5	Impact test
4.2.6	Drop test
4.2.7	Stress relief test
4.5.2	Temperature test
5.1.6	Touch current and protective conductor current
5.2	Electric strength
5.3	Abnormal operating and fault conditions
Annex C	Transformers

31581397.001

1.6.2	Input current
2.1.1.1	Access of energized parts
2.1.1.5	Energy hazards
2.1.1.7	Discharge of capacitors in equipment

Testing location:

TUV Rheinland of North America, Inc.

1279 Quarry Lane, Ste. A, Pleasanton, CA 94566 USA

2.2.2	Voltages under normal conditions
2.2.3	Voltages under fault conditions
2.4.2	Limit values – Limited current circuits
2.5	Limited power source
2.6.3.4	Resistance of earthing conductors
2.9.2	Humidity conditioning – Electrical insulation
2.10.2	Determination of working voltage
2.10.5.10	Thin sheet material – alternative test
3.1.9	Termination of conductors
4.2.2	Steady force test, 10N
4.5.2	Temperature test
5.1.6	Touch current and protective conductor current
5.2	Electric strength
5.3	Abnormal operating and fault conditions
Annex C	Transformers

31581397.003

No Testing

Summary of compliance with National Differences:

Summary of compliance with National Differences to IEC 60950-1:2005+A1:2009+A2:2013 (for explanation of codes see below):

List of countries addressed: AT, DK, IT, SE, GB, US

Explanation of used codes: AT = Austria, DK = Denmark, IT = Italy, SE = Sweden, GB = United Kingdom, US = USA

Summary of compliance with National Differences to IEC 60950-1:2005+A1:2009 (for explanation of codes see below):

List of countries addressed: KR

Explanation of used codes: KR= Republic of Korea

Summary of compliance with National Differences to IEC 60950:1999 (for explanation of codes see below):

List of countries addressed: CN.

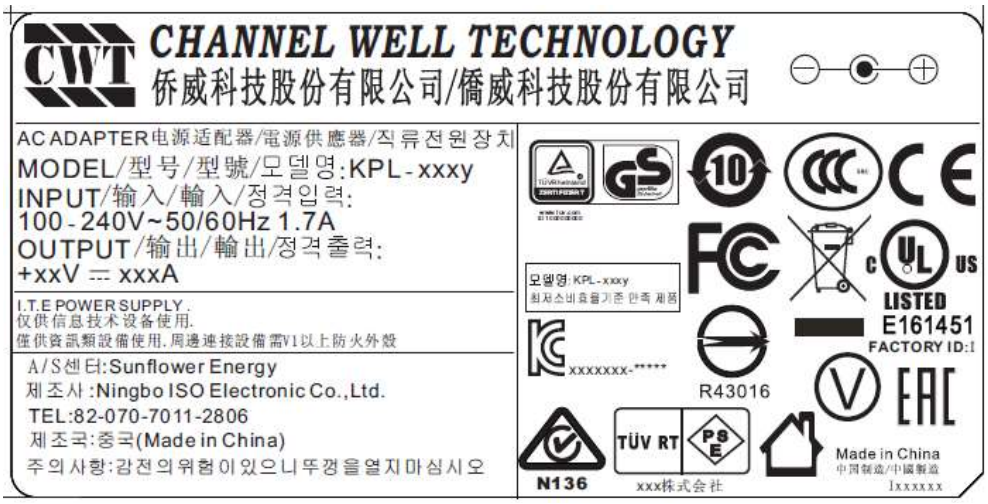
Explanation of used codes: CN=China.

All country differences listed in the CB Bulletin are covered by common Modifications, Special National Conditions, National Deviations and National Requirements noted follows except for the following countries which are documented in Country Differences.

☒ **The product fulfils the requirements of IEC 60950-1:2005 + Am 1:2009 + Am 2:2013 and EN60950-1:2006+A11+A1+A12+A2**

Copy of marking plate:

The marking plate of KPL-xy (Efficiency Level V)



The marking plate of KPL-xy (Efficiency Level VI)

The marking plate of KPL-xy-VI (Efficiency Level VI)

Test item particulars.....:	
Equipment mobility.....:	[X] movable [] hand-held [X] transportable [] stationary [] for building-in [] direct plug-in
Connection to the mains.....:	[X] pluggable equipment [X] type A [] type B [] permanent connection [X] detachable power supply cord [] non-detachable power supply cord [] not directly connected to the mains
Operating condition.....:	[X] continuous [] rated operating / resting time:
Access location .....:	[X] operator accessible [] restricted access location
Over voltage category (OVC) .....:	[] OVC I [X] OVC II [] OVC III [] OVC IV [] other:
Mains supply tolerance (%) or absolute mains supply values .....:	±10%
Tested for IT power systems .....:	[X] Yes [] No
IT testing, phase-phase voltage (V) .....:	
Class of equipment .....:	[X] Class I [] Class II [] Class III [] Not classified
Considered current rating of protective device as part of the building installation (A) .....:	16 (20 for US/CSA)
Pollution degree (PD) .....:	[] PD 1 [x] PD 2 [] PD 3
IP protection class .....:	IPX0 for indoor use only
Altitude during operation (m) .....:	5000m
Altitude of test laboratory (m) .....:	Sea level
Mass of equipment (kg) .....:	Approx. 0.24Kg for output power 40-50W models Approx. 0.27Kg for output power 60-66W models

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 .....:	December 30, 2014 (15077081 001) April 16, 2015 (31581397.001) **N/A (31581397.003)**
Date (s) of performance of tests.....:	December 30, 2014 (15077081 001) April 16, 2015 – May 19, 2015 (31581397.001) **N/A (31581397.003)**
General remarks:	

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.
"(See Attachment #)" refers to additional information appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

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 Product from each factory has been provided ..... :	☐ **Yes** ☒ **Not applicable**

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

Name and address of factory (ies) ..... : Channel Well Technology (Guangzhou) Co., Ltd.
Bld. B, Eastern Hi-Tech Industrial Base, Zengjiang Street, Zengcheng, Guangzhou, Guangdong 51330, P.R. China

General product information:

31581397.001

Product Description:

- The EUTs are desktop type, switching mode, AC input adaptor for the use in information technology equipment.
- All models are similar except for the type designation, output rating, different transformer (T1):
  PQ-2620-12 or PQ-2620-12-VI applied for output voltage 12V-16V
  PQ-2620-17 applied for output voltage 17V-24V
  PQ-2620-48 applied for output voltage 48V
  and also the rating of components for different output voltage and wattage.
- The Adaptor's bottom enclosure is secured to top enclosure by ultrasonic welding.
- New model (KPL-xy-VI) with 48V output (50W, 60W and 65W), and 12V output (48W and 66W) were added. PCB was modified to include two fuses (F1 and F2). When TVS1 is not present, F1 (6.3A/250V) will be replaced by a jumper wire.

  Unless otherwise specified, throughout this report, the tests were performed on selected models under the ambient temperature at around +25 °C and on an open bench table:

  T1 (PQ-2620-12-VI): KPL-066F (highest output current), KPL-060I (highest output voltage)

  T1 (PS-2620-17): KPL-065J (highest output current), KPL-065M (highest output voltage)

  T1 (PQ-2620-48): KPL-065S (highest output current and voltage)
- The altitude during operation is 5000 meter

- Working Ambient Temperature: 45°C for x= 40, 48, 50, 60 and y= all
- Working Ambient Temperature: 40°C for x= 65, 66 and y= all
- The Product under test was loaded to the maximum of the rated output for the worst working condition.
- The Product under test was pre-production samples without serial number assigned.
- Evaluation and test data was taken from the CB report# 15077081 001.

Engineering Considerations:

- The Product (PCB with fuse: FUSE1) was submitted and tested for use at maximum ambient temperature (Tma): 40°C
- The Product (PCB with fuses: F1 and F2) was submitted and tested for use at maximum ambient temperature (Tma): 45°C for x= 40, 48, 50, 60 and y= all; 40°C for x= 65, 66 and y= all
- The means of connection to the mains supply is Pluggable Type A.
- The Product is intended for use in the following power systems: TN/IT (for Norway).
- The Product disconnect device is considered to be: appliance inlet.
- The following transformers are provided (see subclause 1.5.4):

- Double/Reinforced insulation: T1

- The following capacitors bridging insulation (see subclause 1.5.6):
  - Double/Reinforced insulation: CY1
  - Across mains conductors: CX1
  - Functional insulation: other than above mentioned
- The following resistors bridging insulation (see subclause 1.5.7):
  - Across mains conductors: R2, R3, R4, and R5.
  - Functional insulation: other than above mentioned.
- The following solid insulation are provided (see subclause 2.10.5)
  - Reinforced insulation: Enclosure, IC1, and Insulation sheet between secondary EMI shielding and PCB solder side (PCB with fuse: FUSE1).
  - Reinforced insulation: Enclosure, and IC1 (PCB with fuse: F1 and F2).
  - Basic insulation: Insulation sheet between the EMI shielding and PCB solder side (PCB with fuse: FUSE1).
- The following parts consist of the protective earthing (see subclause 2.6):
  - Protective bonding conductor: AC inlet
- The following parts are protective earthing terminals (see subclause 2.6.4):
  - Earth pin of Inlet
- The following parts are protective bonding terminals (see subclause 2.6.4):
  - Solder PIN of the EMI shielding plate (PCB with fuse: FUSE1)

Additional Information:

- The label in copy of marking plate is a draft of an artwork pending approval by National Certification bodies and it shall not be affixed to the product prior to such approval.
- Some components are pre-certified, which have been evaluated according to the relevant requirements of IEC 60950-1, are employed in this product. Their suitability of use has been checked according to subclause 1.5.1 and 1.5.2.

Marking and Instructions:

- Fuse identification (subclause 1.7.6): FUSE1=T4.0AL, 250V (PCB with fuse: FUSE1)
- Fuse identification (subclause 1.7.6): F1=T6.3AL, 250V, F2=3.15AL, 250V (PCB with fuses: F1 and F2)

Definition of Variable(s):

KPL-xy (x can be 040, 048, 050, 060, 065, or 066 to represent the output wattage; y can be F, G, V, H, I, W, J, K, L, N, Q, R, M, or S to represent the output voltage).

Variable	Range of variable	Content
X	040, 048, 050, 060, 065, 066	040=40W, 048=48W, 050=50W, 060=60W, 065=65W, 066=66W
Y	F, G, V, H, I, W, J, K, L, N, Q, R, M, S	F=12V, G=13V, V=14V, H=15V, I=16V, W=17V, J=18V, K=19V, L=20V, N=21V, Q=22V, R=23V, M=24V, S=48V

31581397.003

This report is the second amendment to the original CB report 31581397.001. This report also covers the following:

- **Addition of the Model List Table for model GPA-XX-YY.**
- **Changing the model variables from 'GPA-XX-YY (XX = 040, 048, 050, 060, 065, 066; YY = F, G, V, H, I, W, J, K, L, N, Q, R, M, S)' to 'GPA-XX-YY (XX = 40, 48, 50, 60, 65, 66; YY=12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 24, 48)'.**
- **Administrative corrections to the critical components list.**

Abbreviations used in the report:

- normal conditions	**N.C**.	- single fault conditions	**S.F.C**
- functional insulation	**OP**	- 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
1.5	**Components**		P
1.5.1	General	See below	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	All safety critical components are certified. All components are used within their specified rating, plastic materials, PCBs and wiring materials are UL listed, non-certified components were tested according to this standard.	P
1.5.3	Thermal controls		N/A
1.5.4	Transformers	Transformers complied with the relevant requirements	P
1.5.5	Interconnecting cables	Interconnection cables comply with the relevant requirements	P
1.5.6	Capacitors bridging insulation	Capacitors used in accordance with their rating and complied with subclasses of IEC 60384-14 with at least 21 days damp heat test. The accessible circuit complied with the requirement of Limited Current Circuit in 2.4 after electric strength testing of the insulation with the bridging capacitors in place.	P
1.5.7	Resistors bridging insulation	See below	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	Resistors bridging functional insulation only.	P
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
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	See appended table 1.5.1.	P
1.5.9	Surge suppressors	See below	P
1.5.9.1	General	Approved varistor (optional) comply with Annex Q used in primary circuit.	P
1.5.9.2	Protection of VDRs	A fuse is connected in series with the VDR	P
1.5.9.3	Bridging of functional insulation by a VDR	Approved varistor locate between mains lines	P
1.5.9.4	Bridging of basic insulation by a VDR		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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	Considered	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	The neutral is not identified in the product. Basic insulation for rated voltage between earthd parts and primary phases.	P
1.7	**Marking and instructions**		P
1.7.1	Power rating and identification markings	The power rating marking is provided and is readily visible in operator access area.	P
1.7.1.1	Power rating marking	See copy of marking plate.	P
	Multiple mains supply connections.....:	Only mains supply connection provided.	N/A
	Rated voltage(s) or voltage range(s) (V) .....:	See copy of marking plate.	P
	Symbol for nature of supply, for d.c. only.....:	Mains from AC source.	N/A
	Rated frequency or rated frequency range (Hz) ....:	See copy of marking plate.	P
	Rated current (mA or A) .....:	See copy of marking plate.	P
1.7.1.2	Identification markings	See below.	P
	Manufacturer's name or trade-mark or identification mark .....:	See copy of marking plate.	P
	Model identification or type reference .....:	See copy of marking plate.	P
	Symbol for Class II equipment only .....:		N/A
	Other markings and symbols .....:	Other markings and symbols do not give rise to misunderstanding.	P
1.7.1.3	Use of graphical symbols	Graphical symbols placed on the equipment in accordance with IEC 60417.	P
1.7.2	Safety instructions and marking	See below.	P
1.7.2.1	General	User's manual is available.	P
1.7.2.2	Disconnect devices		P
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT power distribution systems	See General product information – Engineering considerations	P
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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) .....:	See General product information -Markings and Instructions	P
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals ....:		N/A
1.7.7.2	Terminals for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators	LED used for indicator function only.	P
1.7.8.1	Identification, location and marking ....:		N/A
1.7.8.2	Colours ....:	Green	P
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 plate has no curling and is not able to be removed easily.	P
1.7.12	Removable parts	The required marking is not placed on removable parts. Misleading is not likely.	P
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	See below.	P
2.1.1.1	Access to energized parts	Compliance of protection against contact with hazardous energized parts checked.	P
	Test by inspection .....:	Complied.	P
	Test with test finger (Figure 2A) .....:	See above.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Test with test pin (Figure 2B) .....:	See above.	P
	Test with test probe (Figure 2C) .....:	No TNV circuits provided.	N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards .....:	(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	See below.	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 below	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)	P
2.2.4	Connection of SELV circuits to other circuits .....:	Complied with 2.2.2 and 2.2.3 (See also 1.5.7, 2.3.2.1 b) and 2.4.3).	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
2.3.2.4	Protection by other constructions ..... :		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed..... :	No TNV circuits	—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.3.4	Connection of TNV circuits to other circuits	No TNV 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	The limits of 2.4.2 were not exceeded under normal operating condition. No single fault necessary.	P
2.4.2	Limit values	See below.	P
	Frequency (Hz) .....:	(see appended table 2.4.2)	—
	Measured current (mA).....:	(see appended table 2.4.2)	—
	Measured voltage (V) .....:	(see appended table 2.4.2)	—
	Measured circuit capacitance (nF or µF).....:	(see appended table 2.4.2)	—
2.4.3	Connection of limited current circuits to other circuits	The limits of 2.4.2 were not exceeded.	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	(see appended table 2.5)	P
	Use of integrated circuit (IC) current limiters	(See Annex CC)	P
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :	(see appended table 2.5)	—
	Current rating of overcurrent protective device (A) .:		—
2.6	**Provisions for earthing and bonding**		P
2.6.1	Protective earthing	The PE pin of inlet connected to one green/yellow wire then connected to PCB board reliably. EMI shielding connect to PCB board (Protective bonding) reliably.	P
2.6.2	Functional earthing	Secondary functional earthing is separated to primary by reinforced or double insulation and protective bonding conductor. No green/yellow wire used at secondary.	P
	Use of symbol for functional earthing .....:		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.3	Protective earthing and protective bonding conductors	See below.	P
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm^2), AWG ..... :		—
2.6.3.3	Size of protective bonding conductors	Complied with the minimum sizes in table 3B. See 2.6.3.4	P
	Rated current (A), cross-sectional area (mm^2), AWG ..... :		—
	Protective current rating (A), cross-sectional area (mm^2), AWG ..... :		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min) ..... :	(see appended table 2.6.3.4)	P
2.6.3.5	Colour of insulation ..... :	Green-and yellow	P
2.6.4	Terminals	See below.	P
2.6.4.1	General	Appliance inlet used, which is considered as protective earthing terminal.	P
2.6.4.2	Protective earthing and bonding terminals		P
	Rated current (A), type, nominal thread diameter (mm) ..... :		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	The protective bonding conductor is connected to the approved appliance inlet.	P
2.6.5	Integrity of protective earthing	See below.	P
2.6.5.1	Interconnection of equipment	This unit has it own earthing connection. Any other units connected via the DC output connector shall provide SELV only.	P
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switch or overcurrent protective device in protective earthing or bonding conductor.	P
2.6.5.3	Disconnection of protective earth	It is not possible to disconnect earth without disconnecting mains as an appliance inlet is used.	P
2.6.5.4	Parts that can be removed by an operator	Appliance coupler used.	P
2.6.5.5	Parts removed during servicing	Appliance coupler used.	P
2.6.5.6	Corrosion resistance	All part comprising the connections are plated and metal to metal which comply with annex J.	P
2.6.5.7	Screws for protective bonding		N/A

IEC 60950-1			
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	The equipment relies on fuse or circuit breaker of the wall outlet protection of the building installation in regard to L to N short-circuits. Over current protection is provided by the built-in current fuse.	P
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7	Considered.	P
2.7.3	Short-circuit backup protection	The building installation is considered as providing short-circuit backup protection.	P
2.7.4	Number and location of protective devices ..... :	**The protective device (PCB with fuse: FUSE1) or (PCB with fuses: F1 and F2) is located adequately therefore able to interrupt the overcurrent flowing in any possible fault current path.**	**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 Interlocks	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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.9	**Electrical insulation**		P
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic materials are not used.	P
2.9.2	Humidity conditioning	Tested for 120 hrs.	P
	Relative humidity (%), temperature (°C) ..... :	95%,40°C (PCB with FUSE1) **95%,45°C (PCB with F1, F2)**	—
2.9.3	Grade of insulation	Double, reinforced or functional insulation.	P
2.9.4	Separation from hazardous voltages	See below.	P
	Method(s) used ..... :	Method 1.	—

2.10	**Clearances, creepage distances and distances through insulation**		P
2.10.1	General	See below.	P
2.10.1.1	Frequency .....:	Considered.	P
2.10.1.2	Pollution degrees .....:	2	P
2.10.1.3	Reduced values for functional insulation	See 5.3.4.	P
2.10.1.4	Intervening unconnected conductive parts	Complied.	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	See below.	P
2.10.2.1	General	Considered.	P
2.10.2.2	RMS working voltage	(see appended table 2.10.2)	P
2.10.2.3	Peak working voltage	(see appended table 2.10.2)	P
2.10.3	Clearances	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.1	General	For altitude 5000 meter, per Table A.2 of IEC60664-1, factor 1.48 used for minimum spacing requirements.	P
2.10.3.2	Mains transient voltages	See below.	P
	a) AC mains supply .....:	2500Vpk considered.	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		N/A
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply .....:		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.7	Transients from d.c. mains supply .....:		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....:		N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply .....:		N/A
	For a d.c. mains supply .....:		N/A
	b) Transients from a telecommunication network :		N/A
2.10.4	Creepage distances	See below.	P
2.10.4.1	General	Considered.	P
2.10.4.2	Material group and comparative tracking index	Material group IIIb assumed.	P
	CTI tests .....:	100	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	P
2.10.5	Solid insulation	Complied with 2.10.5.2.	P
2.10.5.1	General	See below.	P
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation	Complied with 2.10.5.2 and 2.10.10.	P
2.10.5.4	Semiconductor devices		N/A
2.10.5.5.	Cemented joints	(see appended table 2.10.3, 2.10.4, and appended table 1.5.1)	P
2.10.5.6	Thin sheet material – General	Considered.	P
2.10.5.7	Separable thin sheet material	Thin sheet material in form of polyester tape used on primary heat-sinks (PCB with FUSE1) and T1.	P
	Number of layers (pcs) .....:	2 layers used.	—
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	Electric strength test applied to each layer.	P
	Electric strength test	(see appended table 2.10.5)	—
2.10.5.11	Insulation in wound components	See below.	P
2.10.5.12	Wire in wound components	Reinforced insulation.	P
	Working voltage .....:	(see appended table 2.10.2)	P
	a) Basic insulation not under stress .....:		N/A
	b) Basic, supplementary, reinforced insulation .....:		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	c) Compliance with Annex U .....:	Complied with annex U.	P
	Two wires in contact inside wound component; angle between 45° and 90° .....:	Insulating tape and tube provided.	P
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		P
	Working voltage .....:	(see appended table 2.10.2)	P
	- Basic insulation not under stress .....:		N/A
	- Supplementary, reinforced insulation .....:	Complied with 2.10.5.6.	P
2.10.6	Construction of printed boards	See below.	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	(see appended table 2.10.3 and 2.10.4)	P
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	Certified photocoupler sources used. See appended table 1.5.1.	P
2.10.10	Test for Pollution Degree 1 environment and insulating compound	Certified photocoupler sources used. See appended table 1.5.1.	P
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts	Certified photocoupler sources used. See appended table 1.5.1.	P
3	**WIRING, CONNECTIONS AND SUPPLY**		P
3.1	**General**		P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.1.1	Current rating and overcurrent protection	Internal wires are UL recognized, PVC insulated, rated VW-1, 300 V, min. 80 °C, having gauge suitable for current intended to be carried. The internal wires are suitable to carry the intended current of the equipment.	P
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges and heatsinks which could damage the insulation and cause hazard.	P
3.1.3	Securing of internal wiring	The wires are secured by soldering with additional glue so that a loosening of the terminal connection is unlikely.	P
3.1.4	Insulation of conductors	The insulation of the individual conductors is suitable for the application and the working voltage. For the insulation materials see sub-clause 3.1.1.	P
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	See below.	P
	10 N pull test	The clearance and creepage distances are not reduced under required in 2.10.	P
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		P
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm) ..... :		—
3.2.4	Appliance inlets	The appliance inlet complies with IEC 60320-1. The connector of the power cord can be inserted without difficulties and does not support the unit.	P
3.2.5	Power supply cords		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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) ..... :		—
3.2.7	Protection against mechanical damage	No sharp points or cutting edges within or on the surface of the equipment or at the inlet opening or inlet bushing.	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		

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

3.4	**Disconnection from the mains supply**		P
3.4.1	General requirement	Disconnect device provided.	P
3.4.2	Disconnect devices	See General product information.	P
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized	When appliance inlet is disconnected no remaining parts with hazardous voltage in the equipment.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment	The appliance inlet or power plug disconnect both poles simultaneously.	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		N/A
3.4.10	Interconnected equipment	Interconnection to other devices via SELV and LCC output only.	P
3.4.11	Multiple power sources		N/A
3.5	**Interconnection of equipment**		P
3.5.1	General requirements	Conformance to 2.2 is continued.	P
3.5.2	Types of interconnection circuits ..... :	Interconnection circuits of SELV, LCC through secondary output connector.	P
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection circuit.	N/A
3.5.4	Data ports for additional equipment		N/A
4	**PHYSICAL REQUIREMENTS**		P
4.1	**Stability**		N/A
	Angle of 10°		N/A
	Test force (N) .....:		N/A
4.2	**Mechanical strength**		P
4.2.1	General	After the following tests, the sample continues to comply the relevant requirements.	P
	Rack-mounted equipment.	(see Annex DD)	N/A
4.2.2	Steady force test, 10 N	10 N applied to all components other than enclosure.	
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N	250 N applied to all shape and material of outer enclosure. No energy or other hazards. Force applied at: - side (near transformer) - side (near inlet) - side (near output cable)	P
4.2.5	Impact test		P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Fall test	No hazard as result from steel ball fall test at all shape and material of external enclosure. Impact applied at: - side (near transformer) - side (near inlet) - side (near output cable)	P
	Swing test		P
4.2.6	Drop test; height (mm) .....:	The EUT has been subjected to 3 drops from 1 m height on a hard wooden surface for all shape and material of enclosure. Impact applied at: - side (near transformer) - side (near inlet) - side (near output cable)	P
4.2.7	Stress relief test	Test performed for all shape and material of enclosure material at 100 °C for 7 hrs. No damage of the enclosure.	P
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified .....:		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N) .....:		N/A
4.3	**Design and construction**		P
4.3.1	Edges and corners	All edges or corners accessible to operator are rounded and smoothed.	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	No loosen.	P
4.3.5	Connection by plugs and sockets	No misconnection likely.	P
4.3.6	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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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	No radiation is generated inside the equipment. The energy of the indicator LED is far below the limit for Class 1 LED products.	P
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
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....:		N/A
4.3.13.5	Lasers (including laser diodes) and LEDs	The energy of the indicator LED is far below the limit for Class 1 LED products.	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	No hazardous moving parts	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	No hazardous moving parts	N/A
	Not considered to cause pain or injury. a)……:		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Is considered to cause pain, not injury. b) ……...:		N/A
	Considered to cause injury. c) ……:		N/A
4.4.5.2	Protection for users	No hazardous moving parts	N/A
	Use of symbol or warning ……..:		N/A
4.4.5.3	Protection for service persons	No hazardous moving parts	N/A
	Use of symbol or warning ……..:		N/A
4.5	**Thermal requirements**		P
4.5.1	General	No exceeding temperature.	P
4.5.2	Temperature tests	(see appended table 4.5)	P
	Normal load condition per Annex L ..... :	(See Annex L)	—
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 ..... :	Phenolic type bobbin used in T1 which is accepted without test.	P
4.6	**Openings in enclosures**		P
4.6.1	Top and side openings	See below.	P
	Dimensions (mm) ..... :	No opening.	—
4.6.2	Bottoms of fire enclosures	See below.	P
	Construction of the bottomm, dimensions (mm) .. :	No opening.	—
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment	See below.	P
4.6.4.1	Constructional design measures		P
	Dimensions (mm) ..... :	No opening.	—
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	See below.	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	See below.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.2.1	Parts requiring a fire enclosure	Following parts require a fire enclosure: • Components in primary circuits • Components having unenclosed arcing parts in circuit at hazardous voltage / energy level. • Insulating wiring. The fire enclosure is required.	P
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General	Those components are mounted on V-1 or better material PCB and covered by fire enclosure.	P
4.7.3.2	Materials for fire enclosures	See appended table 1.5.1.	P
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	The material is made of V-2 or better material.	P
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		**P**
5.1	**Touch current and protective conductor current**		P
5.1.1	General	See sub-clauses 5.1.2 to 5.1.6.	P
5.1.2	Configuration of equipment under test (EUT)	See below.	P
5.1.2.1	Single connection to an a.c. mains supply	Single connection provided.	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	Test circuit in Figure 5A used.	P
5.1.4	Application of measuring instrument	Measuring instruments as in annex D used.	P
5.1.5	Test procedure	(see appended table 5.1.6)	P
5.1.6	Test measurements	(see appended table 5.1.6)	P
	Supply voltage (V) .....:	(see appended table 5.1.6)	—
	Measured touch current (mA) .....:	(see appended table 5.1.6)	—
	Max. allowed touch current (mA) .....:	(see appended table 5.1.6)	—
	Measured protective conductor current (mA) .....:		—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	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
5.2	**Electric strength**		P
5.2.1	General	(see appended table 5.2)	P
5.2.2	Test procedure	Table 5B used.	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.....:	Functional insulation complied with the requirements c).	P
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE .....:		N/A
5.3.7	Simulation of faults	Complied.	P
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	See below.	P
5.3.9.1	During the tests	No fire propagated beyond the equipment, no molten metal and no deformation of enclosure.	P
5.3.9.2	After the tests	Electric strength test made.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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	No TNV circuits	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	No TNV circuits	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
6.3	**Protection of the telecommunication wiring system from overheating**		N/A
	Max. output current (A) .....:	No TNV circuits	—
	Current limiting method .....:		—
7	**CONNECTION TO CABLE DISTRIBUTION SYSTEMS**		N/A
7.1	**General**	No cable distribution systems	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**		P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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)**		P
A.2.1	Samples, material.....:		—
	Wall thickness (mm) .....:		—
A.2.2	Conditioning of samples; temperature (°C) .....:		N/A
A.2.3	Mounting of samples .....:		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C .....:		—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s) .....:		—
	Sample 2 burning time (s) .....:		—
	Sample 3 burning time (s) .....:		—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s) .....:		—
	Sample 2 burning time (s) .....:		—
	Sample 3 burning time (s) .....:		—
A.3	**Hot flaming oil test (see 4.6.2)**		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

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

B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)**		N/A
B.1	**General requirements**	No motors used	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) .....:		—
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**		N/A
B.9	**Test for three-phase motors**		N/A
B.10	**Test for series motors**		N/A
	Operating voltage (V) .....:		—

C	**ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		P
	Position .....:	Refer to appended table 1.5.1	—
	Manufacturer .....:	Refer to appended table 1.5.1	—
	Type .....:	Refer to appended table 1.5.1	—
	Rated values .....:	Refer to appended table 1.5.1	—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Method of protection ..... :	Overcurrent protection by circuit.	—
C.1	**Overload test**	(see appended table 5.3)	P
C.2	**Insulation**	(see appended tables 5.2)	P
	Protection from displacement of windings ..... :	(see appended tables C2)	P
D	**ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)**		P
D.1	**Measuring instrument**	Figure D.1 used.	P
D.2	**Alternative measuring instrument**		N/A
E	**ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)**		N/A
F	**ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)**		P
G	**ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		N/A
G.1	**Clearances**	Alternative method not used	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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	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 .....:	Complied	—
K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)**		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V) .....:		N/A
K.3	Thermostat endurance test; operating voltage (V) .....:		N/A
K.4	Temperature limiter endurance; operating voltage (V) .....:		N/A
K.5	Thermal cut-out reliability		N/A
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	See “Summary of testing”.	P
M	**ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	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) .....:		—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.3.2	Tripping device and monitoring voltage .....:		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) .....:		N/A
N	**ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)**		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	**ANNEX P, NORMATIVE REFERENCES**		—
Q	**ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)**		P
	- Preferred climatic categories .....:	(see appended table 1.5.1)	P
	- Maximum continuous voltage .....:	(see appended table 1.5.1)	P
	- Combination pulse current .....:	(see appended table 1.5.1)	P
	Body of the VDR Test according to IEC60695-11-5.....:	Certified VDR used.	N/A
	Body of the VDR. Flammability class of material (min V-1).....:	Certified VDR used.	N/A
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
			—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		P
		Approved sources of winding material for T1 used. Details see table 1.5.1.	—
V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)**		P
V.1	Introduction	Considered	P
V.2	TN power distribution systems	Considered	P
W	**ANNEX W, SUMMATION OF TOUCH CURRENTS**		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	**ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)**		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A
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**		P
CC.1	General	Approved IC used. (see appended table 1.5.1)	P
CC.2	Test program 1……:		N/A

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

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])
Plastic Enclosure	SABIC Innovative Plastics Japan LLC	SE1X	V-1 or better, 105 °C, thickness 1.5mm min.	UL 94	UL
Alternative	Teijin Chemicals Plastic Compounds Shanghai Ltd	LN-1250G	V-0 or better, 115 °C, thickness 1.5mm min.	UL 94	UL
Alternative	SABIC Innovative Plastics Japan LLC	940	V-0 or better, 120°C, thickness 1.5 mm min.	UL94	UL
PCB	Walex Electronic (Wuxi) Co Ltd	T4	V-1 or better, min. 130 °C	UL 94, UL 796	UL

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

Alternative	Kingboard Laminates Holdings Ltd.	KB-5150	V-1 or better, min. 130 °C	UL 94, UL 796	UL
Alternative	Huizhou Times Dragon Technology Co., Ltd.	SDJL-1,SDJL-2	V-1 or better, min. 130 °C	UL 94, UL 796	UL
Alternative	Huizhou Hosond PCB Co., Ltd.	HSD-DS, HSD-ML	V-1 or better, min. 130 °C	UL 94, UL 796	UL
Alternative	NIPPON (BOLUO) Electronics Co., Ltd.	D2	V-1 or better, min. 130 °C	UL 94, UL 796	UL
Alternative	Dong Guan New Energy Printed Circuit Board Co., Ltd.	NE1000, NE2000, NE4000, NE5000, NE5000A	V-1 or better, min. 130 °C	UL 94, UL 796	UL
Alternative	Jia He Electronic Ltd	B1,D1	V-1 or better, min. 130 °C	UL 94, UL 796	UL
Alternative	Guangdong Chaohua Technology Co., Ltd.	C-104	V-1 or better, min. 130 °C	UL 94, UL 796	UL
Alternative	Suichuan The Speed of Light Electronics Co., Ltd.	GS-001,GS-002	V-1 or better, min. 130 °C	UL 94, UL 796	UL
Alternative	Meizhou Taihua Printed Circuit Board Co., Ltd.	TH-1, TH-2	V-1 or better, min. 130 °C	UL 94, UL 796	UL
Alternative	Huizhou APL Electronic Co., Ltd.	APL-1, APL-2	V-1 or better, min. 130 °C	UL 94, UL 796	UL
Alternative	Dongguan City Top Star Circuit Co., Ltd	TS-01, TS-02	V-1 or better, min. 130 °C	UL 94, UL 796	UL
Alternative	Cheung Hung Technology International Ltd	CH-D, CH-M	V-1 or better, min. 130 °C	UL 94, UL 796	UL
Appliance Inlet (CON1)	Tecx-Unions Technology Corporation	TU-301-SP	10 A, 250 Vac, 70 °C	IEC/EN 60320-1+A1, ANSI/UL 498	VDE, UL
Alternative	Tecx-Unions Technology Corporation	TU-333	2.5 A, 250 Vac, 70 °C	IEC/EN 60320-1+A1, ANSI/UL 498	VDE, UL
Alternative	Rong Feng Industrial Co., Ltd.	RF-190	2.5 A, 250 Vac, 70 °C	IEC/EN 60320-1+A1, ANSI/UL 498	VDE, UL
Alternative	Rong Feng Industrial Co., Ltd.	SS-120	10 A, 250 Vac, 70 °C	IEC/EN 60320-1+A1, ANSI/UL 498	VDE, UL

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

Alternative	Rich Bay Co., Ltd.	R-30790	2.5 A, 250 Vac, 70 °C	IEC/EN 60320-1+A1, ANSI/UL 498	VDE, UL
Alternative	Rich Bay Co., Ltd.	R-301SN	10 A, 250 Vac, 70 °C	IEC/EN 60320-1+A1, ANSI/UL 498	VDE, UL
Alternative	Zhe Jiang Bei Er Jia Electronic Co., Ltd.	ST-A01-003J	10 A, 250 Vac, 70 °C	IEC/EN 60320-1+A1, ANSI/UL 498	VDE, UL
Alternative	Zhe Jiang Bei Er Jia Electronic Co., Ltd.	ST-A04-002	2.5 A, 250 Vac, 70 °C	IEC/EN 60320-1+A1, ANSI/UL 498	VDE, UL
Fuse (Fuse1)	XC Electronics (Shenzhen) Corp. Ltd.	4T	T4.0AL, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	XC Electronics (Shenzhen) Corp. Ltd.	5TE	T4.0AL, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Ever Island Electric Co., Ltd. and Walter Electric	2010	T4.0AL, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Conquer Electronics Co., Ltd.	PTU	T4.0AL, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Conquer Electronics Co., Ltd.	MST	T4.0AL, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Littelfuse, Inc. Wickmann-Werke	392	T4.0AL, 250 Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Walter Electronic Co. Ltd.	ICP	T4.0A, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Fuse (F1) (Optional)	XC Electronics (Shenzhen) Corp. Ltd.	4T	T6.3AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	XC Electronics (Shenzhen) Corp. Ltd.	5TE	T6.3AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Ever Island Electric Co., Ltd. and Walter Electric	2010	T6.3AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL

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

Alternative	Conquer Electronics Co., Ltd.	PTU	T6.3AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Conquer Electronics Co., Ltd.	MST	T6.3AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Littelfuse, Inc. Wickmann-Werke	392	T6.3AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Walter Electronic Co. Ltd.	ICP	T6.3AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Fuse (F2)	XC Electronics (Shenzhen) Corp. Ltd.	4T	T3.15AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	XC Electronics (Shenzhen) Corp. Ltd.	5TE	T3.15AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Ever Island Electric Co., Ltd. and Walter Electric	2010	T3.15AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Conquer Electronics Co., Ltd.	PTU	T3.15AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Conquer Electronics Co., Ltd.	MST	T3.15AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Littelfuse, Inc. Wickmann-Werke	392	T3.15AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Alternative	Walter Electronic Co. Ltd.	ICP	T3.15AL, 250Vac	IEC/EN 60127-1, IEC/EN 60127-3, ANSI/UL 248-1, ANSI/UL 248-14	VDE, UL
Varistor (TVS1) (Optional)	Thinking Electronic Industrial Co., Ltd.	TVR14471	Rated 300 Vac, 470 Vdc, Max. 4500 A, 85 °C	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, ANSI/UL 1449	VDE, UL
Alternative	Thinking Electronic Industrial Co., Ltd.	TVR14561	Rated 350 Vac, 560 Vac, Max. 4500 A, 85 °C	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, ANSI/UL 1449	VDE, UL

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

Alternative	Thinking Electronic Industrial Co., Ltd.	TVR14681	Rated 420 Vac, 680 Vac, Max. 4500 A, 85 °C	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, ANSI/UL 1449	VDE, UL
Alternative	Nanjing Jocol Electronics Technology Co., Ltd.	TUR14D471K	Rated 300 Vac, 470 Vdc, Max. 4500 A, 85 °C	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, ANSI/UL 1449	VDE, UL
Alternative	Nanjing Jocol Electronics Technology Co., Ltd.	TUR14D561	Rated 350 Vac, 560 Vdc, Max. 4500 A, 85 °C	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, ANSI/UL 1449	VDE, UL
Alternative	Nanjing Jocol Electronics Technology Co., Ltd.	TUR14D681	Rated 420 Vac, 680 Vdc, Max. 4500 A, 85 °C	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, ANSI/UL 1449	VDE, UL
Alternative	Success Electronics Co., Ltd.	SVR14D471K	Rated 300 Vac, 470 Vdc, Max. 4500 A, 85 °C	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, ANSI/UL 1449	VDE, UL
Alternative	Success Electronics Co., Ltd.	SVR14D561K	Rated 350 Vac, 560 Vdc, Max. 4500 A, 85 °C	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, ANSI/UL 1449	VDE, UL
Alternative	Success Electronics Co., Ltd.	SVR14D681K	Rated 420 Vac, 680 Vdc, Max. 4500 A, 85 °C	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, ANSI/UL 1449	VDE, UL
X-Capacitor (CX1) (X1 or X2 type) (Optional)	Okaya Electric Industries Co., Ltd.	LE	Max. 0.47 °F, min. 250 Vac, 100 °C	IEC/EN 60384-14: 2005, UL 1414	ENEC, UL
Alternative	Jenn Fu Electronics Corporation	MPX	Max. 0.47 °F, min. 250 Vac, 100 °C	IEC/EN 60384-14: 2005, UL 1414	VDE, UL
Alternative	Europtronic (Taiwan) Ind. Corp.	MPX2	Max. 0.47 °F, min. 250 Vac, 100 °C	IEC/EN 60384-14: 2005, UL 1414	VDE, UL
Alternative	Ultra Tech Xiphi Enterprise Co., Ltd.	HQX	Max. 0.47 °F, min. 250 Vac, 100 °C	IEC/EN 60384-14: 2005, UL 1414	VDE, UL
Alternative	Hua Jung Components Co., Ltd.	MKP	Max. 0.47 °F, min. 250 Vac, 100 °C	IEC/EN 60384-14: 2005, UL 1414	ENEC, UL
Alternative	Arcotronics Italia S.P.A	R.46	Max. 0.47 °F, min. 250 Vac, 100 °C	IEC/EN 60384-14: 2005, UL 1414	ENEC, UL
Bleeder Resistor (R2,R3,R4,R5) (for PCB with fuse: FUSE1)	Tzaiyuan Enterprise Co., Ltd	SMD	2.2MΩ 1/4 W, SMD type	IEC/EN 60950-1	Tested with appliance
Alternative	Tai Electronic Co.,Ltd	SMD	2.2MΩ 1/4 W, SMD type	IEC/EN 60950-1	Tested with appliance

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

Alternative	Giant Chip Technology Co., Ltd	SMD	2.2MΩ 1/4 W, SMD type	IEC/EN 60950-1	Tested with appliance
Bleeder Resistor (R2,R3,R4,R5) (for PCB with fuse: F1, F2)	Tzaiyuan Enterprise Co., Ltd	SMD	3.0MΩ or 3.9MΩ 1/4 W, SMD type	IEC/EN 60950-1	Tested with appliance
Alternative	Tai Electronic Co.,Ltd	SMD	3.0MΩ or 3.9MΩ 1/4 W, SMD type	IEC/EN 60950-1	Tested with appliance
Alternative	Giant Chip Technology Co., Ltd	SMD	3.0MΩ or 3.9MΩ 1/4 W, SMD type	IEC/EN 60950-1	Tested with appliance
Bridging Capacitor (CY1) (Y1 type) (Optional)	TDK Corporation	CD	Max. 2200 pF, min. 250 Vac, 125 °C	IEC/EN 60384-14: 2005, UL 1414	VDE, UL
Alternative	Walsin Technology Corp.	AH	Max. 2200 pF, min. 250 Vac, 125 °C	IEC/EN 60384-14: 2005, UL 1414	VDE, UL
Alternative	Success Electronics Co., Ltd.	SB	Max. 2200 pF, min. 250 Vac, 125 °C	IEC/EN 60384-14: 2005, UL 1414	VDE, UL
Alternative	Success Electronics Co., Ltd.	SE	Max. 2200 pF, min. 250 Vac, 125 °C	IEC/EN 60384-14: 2005, UL 1414	VDE, UL
Alternative	Xiangtai Electronics Co., Ltd.	YO	Max. 2200 pF, min. 250 Vac, 125 °C	IEC/EN 60384-14: 2005, UL 1414	VDE, UL
Alternative	JYA-NAY Co., Ltd.	JN	Max. 2200 pF, min. 250 Vac, 125 °C	IEC/EN 60384-14: 2005, UL 1414	VDE, UL
Bridge Diode (BD1)	**Zowie**	**GBL, GBU**	**Min. 2 A, min. 600 V**	**IEC/EN 60950-1**	**Tested with appliance**
Alternative	**Shen zhenJU-Topvessel**	**GBL**	**Min. 2 A, min. 600 V**	**IEC/EN 60950-1**	**Tested with appliance**
Alternative	**Diodes**	**KBP**	**Min. 2 A, min. 600 V**	**IEC/EN 60950-1**	**Tested with appliance**
Alternative	**Liteon**	**GBL, KBP, GBU, GBJ**	**Min. 2 A, min. 600 V**	**IEC/EN 60950-1**	**Tested with appliance**
Alternative	**Willas**	**GBL**	**Min. 2 A, min. 600 V**	**IEC/EN 60950-1**	**Tested with appliance**
Alternative	**SEP**	**GBU, KBJ, RS**	**Min. 2 A, min. 600 V**	**IEC/EN 60950-1**	**Tested with appliance**
Alternative	**Panjit**	**GBL, GBU**	**Min. 2 A, min. 600 V**	**IEC/EN 60950-1**	**Tested with appliance**
Alternative	**TSC**	**UR**	**Min. 2 A, min. 600 V**	**IEC/EN 60950-1**	**Tested with appliance**
Ripple Capacitor (C2) (for PCB with fuse: FUSE1)	**Kuan kun Electronic enterprise Co., Ltd**	**SK**	**68-120 uF, min. 400 V, min. 105 °C**	IEC/EN 60950-1	Tested with appliance

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

Alternative	**NCC**	**KMQ, SMQ SMG, KMG**	**68-120 uF, min. 400 V, min. 105 °C**	IEC/EN 60950-1	Tested with appliance
Alternative	**Man Yue Electronics Co., Ltd**	**KM**	**68-120 uF, min. 400 V, min. 105 °C**	IEC/EN 60950-1	Tested with appliance
Ripple Capacitor (C2) (for PCB with fuse: F1, F2)	**Kuan kun Electronic enterprise Co., Ltd**	**SK**	**68-120 uF, min. 400 V, min. 105 °C**	IEC/EN 60950-1	Tested with appliance
Alternative	**NCC**	**KMQ, SMQ SMG, KMG**	**68-120 uF, min. 400 V, min. 105 °C**	IEC/EN 60950-1	Tested with appliance
Alternative	**Man Yue Electronics Co., Ltd**	**KM**	**68-150 uF, min. 400 V, min. 105 °C**	IEC/EN 60950-1	Tested with appliance
Transistor (Q1)	**WINSEMI Electronics Co., Ltd**	**WFF**	Min. 4.5 A, min. 600 V	IEC/EN 60950-1	Tested with appliance
Alternative	**NEC**	**3SK, 2SK**	Min. 4.5 A, min. 600 V	IEC/EN 60950-1	Tested with appliance
Alternative	**ON Semiconductor**	**NDF,**	Min. 4.5 A, min. 600 V	IEC/EN 60950-1	Tested with appliance
Alternative	**Fairchild**	**FQPF**	Min. 4.5 A, min. 600 V	IEC/EN 60950-1	Tested with appliance
Alternative	**Toshiba Corporation Semiconductor**	**2SK, TK, K**	Min. 4.5 A, min. 600 V	IEC/EN 60950-1	Tested with appliance
Current Sensor Resistor (R9, R15, R16, R18, R23) (for PCB with fuse: FUSE1)	Tzaiyuan Enterprise Co., Ltd	SMD	Min. 1.8 Ω, min. 1/4 W, SMD type	IEC/EN 60950-1	Tested with appliance
Alternative	Tai Electronic Co.,Ltd	SMD	Min. 1.8 Ω, min. 1/4 W, SMD type	IEC/EN 60950-1	Tested with appliance
Alternative	Giant Chip Technology Co., Ltd	SMD	Min. 1.8 Ω, min. 1/4 W, SMD type	IEC/EN 60950-1	Tested with appliance
Current Sensor Resistor (R9, R15, R16, R18, R23) (for PCB with fuse: F1, F2)	Tzaiyuan Enterprise Co., Ltd	SMD	Min. 1.5 Ω, min. 1/4 W, SMD type	IEC/EN 60950-1	Tested with appliance
Alternative	Tai Electronic Co.,Ltd	SMD	Min. 1.5 Ω, min. 1/4 W, SMD type	IEC/EN 60950-1	Tested with appliance
Alternative	Giant Chip Technology Co., Ltd	SMD	Min. 1.5 Ω, min. 1/4 W, SMD type	IEC/EN 60950-1	Tested with appliance

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

Line Choke (LF1) (Optional)	Sunycore Electronics Co., Ltd.	T18*10*7	130 °C	IEC/EN 60950-1	Tested with appliance
Alternative	Channel Well Technology Co., Ltd.	T18*10*7	130 °C	IEC/EN 60950-1	Tested with appliance
Line Choke (LF2) (Optional)	Sunycore Electronics Co., Ltd.	T10*6*5+C	130 °C	IEC/EN 60950-1	Tested with appliance
Alternative	Channel Well Technology Co., Ltd.	T10*6*5+C	130 °C	IEC/EN 60950-1	Tested with appliance
Transformer (T1) (for O/P 12-16 V) (for PCB with fuse: FUSE1)	Channel Well Technology Co., Ltd.	PQ-2620-12	Class B (GH-130)	IEC/EN 60950-1	Tested with appliance
Transformer (T1) (for O/P 12-16 V) (for PCB with fuse: F1, F2)	Channel Well Technology Co., Ltd.	PQ-2620-12-VI	Class B (GH-130)	IEC/EN 60950-1	Tested with appliance
Transformer (T1) (for O/P 17-24 V)	Channel Well Technology Co., Ltd.	PQ-2620-17	Class B (GH-130)	IEC/EN 60950-1	Tested with appliance
Transformer (T1) (for O/P 48 V)	Channel Well Technology Co., Ltd.	PQ-2620-48	Class B (GH-130)	IEC/EN 60950-1	Tested with appliance
Bobbin (for T1)	Chang Chun Palstics Co., Ltd.	T375J	Phenolics, 150 °C, V-0	UL94	UL
Triple insulated wire (for T1 secondary winding)	Great Leoflon Industrial Co., Ltd.	TRW(B)	130 °C	IEC/EN 60950-1, UL 2353	VDE, UL
Sleeving (for T1)	Great Holding Industrial Co., Ltd.	TFL	200 °C, VW-1	UL 224	UL
Optocoupler (IC1)	Lite-On Technology Corporation	LTV-817	Dti ≥ 0.4 mm, Int. cr > 4.0 mm, Ext. cr = 8.0mm, 110 °C	DIN EN 60747-5-2, IEC/EN 60950-1, UL 1577	VDE, Fimko, UL
Alternative	Cosmo Electronics Corporation	K1010	Dti = 0.5 mm, Int. cr = 5.3 mm, Ext. cr = 8.0mm, 110 °C	DIN EN 60747-5-2, IEC/EN 60950-1, UL 1577	VDE, Fimko, UL
Alternative	Toshiba Corp. Semiconductor	TLP781/TL781F	Dti = 0.5 mm, Int. cr = 6.0 mm, Ext. cr = 7.7mm, 110 °C	DIN EN 60747-5-2, IEC/EN 60950-1, UL 1577	VDE, Fimko, UL
Alternative	Everlight Electronics Co Ltd	EL817	Dti = 0.5 mm, Int. cr = 6.0 mm, Ext. cr = 7.7mm, 110 °C	DIN EN 60747-5-2, IEC/EN 60950-1, UL 1577	VDE, Fimko, UL

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

Alternative	Fairchild Semiconductor	FOD817	Dti ≥ 0.4 mm, Int. cr ≥ 5.0 mm, Ext. cr ≥ 7.0mm, 110 °C	DIN EN 60747-5-2, IEC/EN 60950-1, UL 1577	VDE, Fimko, UL
Alternative	Sharp Corp Electronic Components And Devices Group	PC817	Dti = 0,7 mm, Int. cr = 5,0 mm, Ext. cr =8,0mm. 110℃	DIN EN 60747-5-2, IEC/EN 60950-1, UL 1577	VDE, UL
Alternative	Sharp Corp Electronic Components And Devices Group	PC123	Dti = 0,7 mm, Int. cr = 5,0 mm, Ext. cr =8,0mm. 110℃	DIN EN 60747-5-2, IEC/EN 60950-1, UL 1577	VDE, UL
Insulator sheet (for PCB with fuse: FUSE1)	ITW Electronics Components/ Products (Shanghai) Co., Ltd.	FORMEX GK-17	V-1 or better, thickness 0.43 mm min.	UL 510	UL
Alternative	YI-HSN Plastech Co Ltd.	YIMEX PP-17	V-1 or better, thickness 0.43 mm min.	UL 510	UL
Output cable	Xinfeng Kangxin Enterprise Co., Ltd.	SPT-1	16 or 18AWG, 300V, 80°C min, VW-1	UL 758	UL
Alternative	Channel Well Technology Co., Ltd.	1185	16 or 18AWG, 300V, 80°C min, VW-1	UL 758	UL
Alternative	Channel Well Technology Co., Ltd.	10748	16 or 18AWG, 300V, 80°C min, VW-1	UL 758	UL
Alternative	Channel Well Technology Co., Ltd.	2468	16 or 18AWG, 300V, 80°C min, VW-1	UL 758	UL
Alternative	Channel Well Technology Co., Ltd.	2464	16 or 18AWG, 300V, 80°C min, VW-1	UL 758	UL
Thermal pad for C2 (for 60W, 65W, and 66W models)	Pioneer Material Precision Tech	PMP-P-300	V-2 or better	UL 94	UL
Rubber pad (under PCB)	Inaoc Corp.	CR4505	HF-1 or better	UL 94	UL

Supplementary information:

1. An asterisk indicates a mark that assures the agreed level of surveillance.
2. In Optocoupler technical data column, where “di” means distance through insulation, “int.” means internal creepage distance, “ext.” means external creepage distance.

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

1.5.1	TABLE: Opto Electronic Devices	P

Manufacturer ..... :	1). Lite-On 2). Cosmo 3). Toshiba 4). Everlight 5). Fairchild 6). Sharp 7). Sharp
Type..... :	1). LTV-817 2). K1010 3). TLP781/TL781F 4). EL817 5). FOD817 6). PC817 7). PC123
Separately tested ..... :	Approved device not tested
Bridging insulation ..... :	See Above
External creepage distance..... :	See Above
Internal creepage distance ..... :	See Above
Distance through insulation ..... :	See Above
Tested under the following conditions..... :	See Above
Input..... :	See Above
Output..... :	See Above

Supplementary information:

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

1.6.2	**TABLE: Electrical data (in normal conditions)** **(PCB with fuses: F1, F2)** **(31581397.001)**					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Model: KPL-060I-VI (16Vdc / 3.75A)						
90	1.387	--	68.77	F1, F2	6.3A, 3.15A	Full load, 60Hz
100	1.291	1.7	68.25	F1, F2	6.3A, 3.15A	Full load, 60Hz
240	0.740	1.7	66.69	F1, F2	6.3A, 3.15A	Full load, 50Hz
264	0.700	--	67.02	F1, F2	6.3A, 3.15A	Full load, 50Hz
Model: KPL-066F-VI (12Vdc / 5.5A)						
90	1.522	--	76.34	F1, F2	6.3A, 3.15A	Full load, 60Hz
100	1.41	1.7	76.22	F1, F2	6.3A, 3.15A	Full load, 60Hz
240	0.82	1.7	74.04	F1, F2	6.3A, 3.15A	Full load, 50Hz
264	0.763	--	75.00	F1, F2	6.3A, 3.15A	Full load, 50Hz
Model: KPL-065J-VI (18Vdc / 3.61A)						
90	1.491	--	75.03	F1, F2	6.3A, 3.15A	Full load, 60Hz
100	1.375	1.7	74.35	F1, F2	6.3A, 3.15A	Full load, 60Hz
240	0.797	1.7	73.05	F1, F2	6.3A, 3.15A	Full load, 50Hz
264	0.745	--	73.47	F1, F2	6.3A, 3.15A	Full load, 50Hz
Model: KPL-065M-VI (24Vdc / 2.71A)						
90	1.485	--	75.45	F1, F2	6.3A, 3.15A	Full load, 60Hz
100	1.380	1.7	74.45	F1, F2	6.3A, 3.15A	Full load, 60Hz
240	0.796	1.7	72.33	F1, F2	6.3A, 3.15A	Full load, 50Hz
264	0.746	--	72.63	F1, F2	6.3A, 3.15A	Full load, 50Hz
Model: KPL-065S-VI (48Vdc / 1.35A)						
90	1.440	--	72.06	F1, F2	6.3A, 3.15A	Full load, 60Hz
100	1.335	1.7	71.50	F1, F2	6.3A, 3.15A	Full load, 60Hz
240	0.775	1.7	69.74	F1, F2	6.3A, 3.15A	Full load, 50Hz
264	0.726	--	70.06	F1, F2	6.3A, 3.15A	Full load, 50Hz
Supplementary information: The steady state input current did not exceed the rated current at the rated voltage under the maximum normal load.						

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

1.6.2	TABLE: Electrical data (in normal conditions) (PCB with fuse: FUSE1) (15077081.001)					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Model: KPL-060I (14Vdc / 4.29A)						
90	1.263	--	69.3	FUSE1	4A	Full load, 50Hz
90	1.276	--	69.3	FUSE1	4A	Full load, 60Hz
100	1.157	1.7	68.6	FUSE1	4A	Full load, 50Hz
100	1.169	1.7	68.8	FUSE1	4A	Full load, 60Hz
240	0.532	1.7	67.5	FUSE1	4A	Full load, 50Hz
240	0.525	1.7	67.5	FUSE1	4A	Full load, 60Hz
254.4	0.509	--	67.4	FUSE1	4A	Full load, 50Hz
254.4	0.502	--	67.4	FUSE1	4A	Full load, 60Hz
264	0.494	--	67.2	FUSE1	4A	Full load, 50Hz
264	0.488	--	67.3	FUSE1	4A	Full load, 60Hz
Model: KPL-065F (12Vdc / 5.42A)						
90	1.359	--	75.3	FUSE1	4A	Full load, 50Hz
90	1.371	--	75.2	FUSE1	4A	Full load, 60Hz
100	1.241	1.7	74.4	FUSE1	4A	Full load, 50Hz
100	1.253	1.7	74.5	FUSE1	4A	Full load, 60Hz
240	0.572	1.7	73.2	FUSE1	4A	Full load, 50Hz
240	0.563	1.7	73.2	FUSE1	4A	Full load, 60Hz
254.4	0.546	--	73.0	FUSE1	4A	Full load, 50Hz
254.4	0.538	--	73.0	FUSE1	4A	Full load, 60Hz
264	0.531	--	73.0	FUSE1	4A	Full load, 50Hz
264	0.524	--	73.0	FUSE1	4A	Full load, 60Hz
Model: KPL-065J (18Vdc / 3.61A)						
90	1.356	--	75.4	FUSE1	4A	Full load, 50Hz
90	1.369	--	75.3	FUSE1	4A	Full load, 60Hz
100	1.237	1.7	74.5	FUSE1	4A	Full load, 50Hz
100	1.252	1.7	74.6	FUSE1	4A	Full load, 60Hz
240	0.572	1.7	73.3	FUSE1	4A	Full load, 50Hz
240	0.565	1.7	73.4	FUSE1	4A	Full load, 60Hz
254.4	0.549	--	73.3	FUSE1	4A	Full load, 50Hz
254.4	0.542	--	73.5	FUSE1	4A	Full load, 60Hz
264	0.534	--	73.4	FUSE1	4A	Full load, 50Hz
264	0.528	--	73.5	FUSE1	4A	Full load, 60Hz
Model: KPL-065M (24Vdc / 2.71A)						
90	1.333	--	73.7	FUSE1	4A	Full load, 50Hz
90	1.347	--	73.7	FUSE1	4A	Full load, 60Hz
100	1.223	1.7	72.8	FUSE1	4A	Full load, 50Hz
100	1.234	1.7	73.1	FUSE1	4A	Full load, 60Hz

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

240	0.560	1.7	71.2	FUSE1	4A	Full load, 50Hz
240	0.551	1.7	71.3	FUSE1	4A	Full load, 60Hz
254.4	0.537	--	71.5	FUSE1	4A	Full load, 50Hz
254.4	0.529	--	71.5	FUSE1	4A	Full load, 60Hz
264	0.524	--	72.1	FUSE1	4A	Full load, 50Hz
264	0.518	--	72.3	FUSE1	4A	Full load, 60Hz

Supplementary information:
The steady state input current did not exceed the rated current at the rated voltage by more than 10 percent under maximum normal load.

2.1.1.5 c) 1)	**TABLE: max. V, A, VA test** **(PCB with fuses: F1, F2)** **(31581397.001)**	P

Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)
Model: KPL-060I-VI				
16.0	3.75	16.18	5.64	88.55 (15.70 x 5.64)
Model: KPL-066F-VI				
12.0	5.50	12.22	7.25	85.11 (11.74 x 7.25)
Model: KPL-065J-VI				
18.0	3.61	18.37	4.41	79.38 (18.00 x 4.41)
Model: KPL-065M-VI				
24.0	2.71	24.67	3.91	95.13 (24.33 x 3.91)
Model: KPL-065S-VI				
48.0	1.35	47.96	1.99	95.09 (47.78 x 1.99)

Supplementary information:
Test voltage: 240Vac, 60Hz

2.1.1.5 c) 1)	**TABLE: max. V, A, VA test** **(PCB with fuse: FUSE1)** **(15077081.001)**	P

Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)
Model: KPL-060I				
16.0	3.75	16.03	5.83	91.7 (15.73 x 5.83)
Model: KPL-065F				
12.0	5.42	12.08	7.46	87.9 (11.78 x 7.46)
Model: KPL-065J				
18.0	3.61	18.03	4.52	81.2 (17.96 x 4.52)
Model: KPL-065M				
24.0	2.71	24.02	3.20	76.3 (23.84 x 3.20)

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

Supplementary information: Test voltage: 240Vac, 60Hz

2.1.1.5 c) 2)	**TABLE: stored energy**	N/A

Capacitance C (µF)	Voltage U (V)	Energy E (J)

Supplementary information:
$E = 0.5CU^2 \times 10^{-6}$

2.1.1.7	**TABLE: Discharge test** **(PCB with fuses: F1, F2)** **(31581397.001)**	P

Condition	τcalculated (s)	τmeasured (s)	t u → 0V (s)	Comments
Line to Neutral	1.287	0.456	--	Vpk=340, 37% of Vpk=126V

Supplementary information:
Test voltage: 240 Vac, 50 Hz
Overall capacitance: 0.47 µF
Bleeder resistor: 3.9 MΩ
R1 removed

2.1.1.7	**TABLE: Discharge test** **(PCB with fuse: FUSE1)** **(15077081.001)**	P

Condition	τcalculated (s)	τmeasured (s)	t u → 0V (s)	Comments
Line to Neutral	1.034	0.31	--	Vpk=373, 37% of Vpk=139V

Supplementary information:
Test voltage: 264 Vac, 60 Hz
Overall capacitance: 0.47 µF
Bleeder resistor: 2.2 MΩ

2.2	**TABLE: evaluation of voltage limiting components in SELV circuits** **(PCB with fuses: F1, F2)** **(31581397.001)**	P

Component (measured between)	max. voltage (V) (normal operation)	Voltage Limiting Components

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

	V peak	V d.c.	
Model: KPL-060I-VI			
T1 Pin 8, 9 - Pin 11, 12	40.4	--	
T1 After D3/D6 to Pin 8, 9	--	16.2	D3/D6
T1 After C15 to Pin 8, 9	32.4	--	C15
Model: KPL-066F-VI			
T1 Pin 8, 9 - Pin 11, 12	40.4	--	
T1 After D3/D6 to Pin 8, 9	--	12.2	D3/D6
T1 After C15 to Pin 8, 9	26.4	--	C15
Model: KPL-065J-VI			
T1 Pin 8, 9 - Pin 11, 12	63.2	--	
T1 After D3/D6 to Pin 8, 9	--	18.5	D3/D6
T1 After C15 to Pin 8, 9	36.4	--	C15
Model: KPL-065M-VI			
T1 Pin 8, 9 - Pin 11, 12	67.2	--	
T1 After D3/D6 to Pin 8, 9	--	24.6	D3/D6
T1 After C15 to Pin 8, 9	43.6	--	C15
Model: KPL-065S-VI			
T1 Pin 8, 9 - Pin 11, 12	131	--	
T1 After D3/D6 to Pin 8, 9	--	47.5	D3/D6
T1 After C15 to Pin 8, 9	50.4	--	C15
Supplementary information: Test voltage: 240 Vac, 50Hz			

Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)
Model: KPL-060I-VI	
D3/D6 shorted	0
C15 shorted	16.2
R41/R42 shorted	16.2
Model: KPL-066F-VI	
D3/D6 shorted	0
C15 shorted	12.2
R41/R42 shorted	12.2
Model: KPL-065J-VI	
D3/D6 shorted	0
C15 shorted	18.37
R41/R42 shorted	18.37
Model: KPL-065M-VI	
D3/D6 shorted	0
C15 shorted	24.6
R41/R42 shorted	24.6
Model: KPL-065S-VI	

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

D3/D6 shorted	0
C15 shorted	47.9
R41/R42 shorted	47..9
Supplementary information: Test voltage: 240 Vac, 50Hz	

2.2	**TABLE: evaluation of voltage limiting components in SELV circuits** **(PCB with fuse: FUSE1)** **(15077081.001)**	P

Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V peak	V d.c.	
Model: KPL-060I			
T1 Pin 8, 9 - Pin 11, 12	44.0	--	
T1 After D3 to Pin 8, 9	--	14.0	D3
T1 After C15 to Pin 8, 9	37.2	--	C15
Model: KPL-065F			
T1 Pin 8, 9 - Pin 11, 12	62.0	--	
T1 After D3 to Pin 8, 9	--	12.0	D3
T1 After C15 to Pin 8, 9	38.4	--	C15
Model: KPL-065J			
T1 Pin 8, 9 - Pin 11, 12	71.0	--	
T1 After D3 to Pin 8, 9	--	17.9	D3
T1 After C15 to Pin 8, 9	54.4	--	R41 & R42
Model: KPL-065M			
T1 Pin 8, 9 - Pin 11, 12	69.0	--	
T1 After D3 to Pin 8, 9	--	24.0	D3
T1 After C15 to Pin 8, 9	66.1	--	R41 & R42

Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)
Model: KPL-060I	
D3 shorted	0
C15 shorted	15.97
Model: KPL-065F	
D3 shorted	0
C15 shorted	11.87
Model: KPL-065J	
D3 shorted	0
C15 shorted	18.03
Model: KPL-065M	
D3 shorted	0
C15 shorted	23.86

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

Supplementary information:
Test voltage: 240 Vac, 50Hz

2.4.2	**TABLE: Limited current circuit measurement (PCB with fuses: F1, F2) (31581397.001)**	P

Location	Voltage (V)	Current (A)	Freq. (KHz)	Limit (mA)	Comments
CY1 secondary pin to Earth	0.33	0.17	60	0.7	CY1 = 2200uF

supplementary information:
Test voltage: 264 Vac, 60Hz

2.4.2	**TABLE: Limited current circuit measurement (PCB with fuse: FUSE1) (15077081.001)**	P

Location	Voltage (V)	Current (A)	Freq. (KHz)	Limit (mA)	Comments
CY1 secondary pin to Earth	0.33	0.17	60	0.7	CY1 = 2200uF

Supplementary information:
Test voltage: 264 Vac, 60Hz

2.5	**TABLE: Limited power sources (PCB with fuses: F1, F2) (31581397.001)**	P

Circuit output tested:

Note: Measured Uoc (V) with all load circuits disconnected:

Components	Test condition (Single fault)	Uoc (V)	I_{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
Model: KPL-060I-VI						
	Normal	16.18	5.56	8	89.96	100
R9	Sc	0	0	8	0	100
R9	Oc	16.18	4.41	8	69.77	100
IC1(A)	Sc	0	0	8	0	100
IC1(B)	Sc	0	0	8	0	100
IC1(A)	Oc	0	0	8	0	100
IC1(B)	Oc	0	0	8	0	100

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

Model: KPL-066F-VI						
	Normal	12.24	7.20	8	84.96	100
R9	Sc	0	0	8	0	100
R9	Oc	12.23	6.07	8	71.75	100
IC1(A)	Sc	0	0	8	0	100
IC1(B)	Sc	0	0	8	0	100
IC1(A)	Oc	0	0	8	0	100
IC1(B)	Oc	0	0	8	0	100
Model: KPL-065J-VI						
	Normal	18.377	4.40	8	79.20	100
R9	Sc	0	0	8	0	100
R9	Oc	18.32	3.43	8	61.74	100
IC1(A)	Sc	0	0	8	0	100
IC1(B)	Sc	0	0	8	0	100
IC1(A)	Oc	0	0	8	0	100
IC1(B)	Oc	0	0	8	0	100
Model: KPL-065M-VI						
	Normal	24.66	3.93	8	95.5	100
R9	Sc	0	0	8	0	100
R9	Oc	24.67	2.81	8	68.76	100
IC1(A)	Sc	0	0	8	0	100
IC1(B)	Sc	0	0	8	0	100
IC1(A)	Oc	0	0	8	0	100
IC1(B)	Oc	0	0	8	0	100
Model: KPL-065S-VI						
	Normal	47.900	1.98	8	94.44	100
R9	Sc	0	0	8	0	100
R9	Oc	47.85	1.29	8	61.56	100
IC1(A)	Sc	0	0	8	0	100
IC1(B)	Sc	0	0	8	0	100
IC1(A)	Oc	0	0	8	0	100
Supplementary information: Sc=Short circuit, Oc=Open circuit						

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

2.5	**TABLE: Limited power sources** **(PCB with fuse: FUSE1)** **(15077081.001)**	P

Circuit output tested:

Note: Measured Uoc (V) with all load circuits disconnected:

Components	Test condition (Single fault)	Uoc (V)	I_{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
Model: KPL-060I						
	Normal	15.72	5.83	8	91.65	100
R9	Sc	0.00	0.00	8	0.00	100
IC1(A)	Sc	0.00	0.00	8	0.00	100
IC1(B)	Sc	0.00	0.00	8	0.00	100
IC1(A)	Oc	0.00	0.00	8	0.00	100
IC1(B)	Oc	0.00	0.00	8	0.00	100
Model: KPL-065F						
	Normal	12.08	7.46	8	87.88	100
R9	Sc	0.00	0.00	8	0.00	100
IC1(A)	Sc	0.00	0.00	8	0.00	100
IC1(B)	Sc	0.00	0.00	8	0.00	100
IC1(A)	Oc	0.00	0.00	8	0.00	100
IC1(B)	Oc	0.00	0.00	8	0.00	100
Model: KPL-065J						
	Normal	18.03	4.52	8	81.18	100
R9	Sc	0.00	0.00	8	0.00	100
IC1(A)	Sc	0.00	0.00	8	0.00	100
IC1(B)	Sc	0.00	0.00	8	0.00	100
IC1(A)	Oc	0.00	0.00	8	0.00	100
IC1(B)	Oc	0.00	0.00	8	0.00	100
Model: KPL-065M						
	Normal	24.02	3.20	8	76.26	100
R9	Sc	0.00	0.00	8	0.00	100
IC1(A)	Sc	0.00	0.00	8	0.00	100
IC1(B)	Sc	0.00	0.00	8	0.00	100
IC1(A)	Oc	0.00	0.00	8	0.00	100
IC1(B)	Oc	0.00	0.00	8	0.00	100

Supplementary information:

Sc=Short circuit, Oc=Open circuit

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

2.6.3.4	**Table: Resistance of earthing measurement** **(PCB with fuses: F1, F2)** **(31581397.001)**	P

Location	Resistance measured (mΩ)	Comments
Earth Pin of AC Inlet to PCB Trace (CY1 secondary pin)	6	32A, 2 minutes, Vdrop: 0.18V
Earth Pin of AC Inlet to PCB Trace (CY1 secondary pin)	9	40A, 2 minutes, Vdrop: 0.35V
Supplementary information:		

2.6.3.4	**Table: Resistance of earthing measurement** **(PCB with fuse: FUSE1)** **(15077081.001)**	P

Location	Resistance measured (mΩ)	Comments
Earth Pin of AC Inlet to PCB Trace (CY1 secondary pin)	8	32A, 2 minutes, Vdrop: 0.26V
Earth Pin of AC Inlet to PCB Trace (CY1 secondary pin)	10	40A, 2 minutes, Vdrop: 0.40V
Supplementary information:		

2.10.2	**Table: working voltage measurement** **(PCB with fuses: F1, F2)** **(31581397.001)**	P

Location		RMS voltage (V)	Peak voltage (V)	Comments
Model: KPL-060I-VI				
T1 Pin 1	T1 Pin 8, 9	139	172	
T1 Pin 1	T1 Pin 11, 12	170	194	
T1 Pin 3	T1 Pin 8, 9	269	280	
T1 Pin 3	T1 Pin 11, 12	273	318	
T1 Pin 4	T1 Pin 8, 9	170	224	
T1 Pin 4	T1 Pin 11, 12	158	182	
T1 Pin 6	**T1 Pin 8, 9**	**317**	**510**	**Max. Vpk & Vrms**
T1 Pin 6	T1 Pin 11, 12	317	490	
CY1 Pin 1	CY1 Pin 2	136	176	
IC1 Pin 1	IC1 Pin 3	150	190	
IC1 Pin 1	IC1 Pin 4	154	188	
IC1 Pin 2	IC1 Pin 3	155	188	
IC1 Pin 2	IC1 Pin 4	154	186	

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

Model: KPL-066F-VI				
T1 Pin 1	T1 Pin 8, 9	116	172	
T1 Pin 1	T1 Pin 11, 12	141	184	
T1 Pin 3	T1 Pin 8, 9	236	282	
T1 Pin 3	T1 Pin 11, 12	277	322	
T1 Pin 4	T1 Pin 8, 9	162	220	
T1 Pin 4	T1 Pin 11, 12	117	180	
T1 Pin 6	**T1 Pin 8, 9**	**288**	**490**	**Max. Vpk & Vrms**
T1 Pin 6	T1 Pin 11, 12	274	472	
CY1 Pin 1	CY1 Pin 2	117	174	
IC1 Pin 1	IC1 Pin 3	180	196	
IC1 Pin 1	IC1 Pin 4	139	198	
IC1 Pin 2	IC1 Pin 3	184	200	
IC1 Pin 2	IC1 Pin 4	174	196	
Model: KPL-065J-VI				
T1 Pin 1	T1 Pin 8, 9	116	172	
T1 Pin 1	T1 Pin 11, 12	153	190	
T1 Pin 3	T1 Pin 8, 9	247	280	
T1 Pin 3	T1 Pin 11, 12	264	334	
T1 Pin 4	T1 Pin 8, 9	146	216	
T1 Pin 4	T1 Pin 11, 12	121	184	
T1 Pin 6	**T1 Pin 8, 9**	**312**	**442**	**Max. Vpk & Vrms**
T1 Pin 6	T1 Pin 11, 12	304	416	
CY1 Pin 1	CY1 Pin 2	117	174	
IC1 Pin 1	IC1 Pin 3	148	204	
IC1 Pin 1	IC1 Pin 4	194	208	
IC1 Pin 2	IC1 Pin 3	189	206	
IC1 Pin 2	IC1 Pin 4	143	200	
Model: KPL-065M-VI				
T1 Pin 1	T1 Pin 8, 9	137	174	
T1 Pin 1	T1 Pin 11, 12	169	200	
T1 Pin 3	T1 Pin 8, 9	266	276	
T1 Pin 3	T1 Pin 11, 12	261	332	
T1 Pin 4	T1 Pin 8, 9	163	214	
T1 Pin 4	T1 Pin 11, 12	168	184	
T1 Pin 6	**T1 Pin 8, 9**	**338**	**468**	**Max. Vpk & Vrms**
T1 Pin 6	T1 Pin 11, 12	320	436	
CY1 Pin 1	CY1 Pin 2	141	176	
IC1 Pin 1	IC1 Pin 3	165	198	
IC1 Pin 1	IC1 Pin 4	161	194	
IC1 Pin 2	IC1 Pin 3	156	198	
IC1 Pin 2	IC1 Pin 4	162	194	

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

Model: KPL-065S-VI				
T1 Pin 1	T1 Pin 8, 9	137	172	
T1 Pin 1	T1 Pin 11, 12	177	226	
T1 Pin 3	T1 Pin 8, 9	258	270	
T1 Pin 3	T1 Pin 11, 12	270	390	
T1 Pin 4	T1 Pin 8, 9	165	216	
T1 Pin 4	T1 Pin 11, 12	162	204	
T1 Pin 6	**T1 Pin 8, 9**	**328**	**466**	**Max. Vpk & Vrms**
T1 Pin 6	T1 Pin 11, 12	293	406	
CY1 Pin 1	CY1 Pin 2	134	176	
IC1 Pin 1	IC1 Pin 3	165	218	
IC1 Pin 1	IC1 Pin 4	191	214	
IC1 Pin 2	IC1 Pin 3	207	224	
IC1 Pin 2	IC1 Pin 4	192	202	
Supplementary information: Test voltage: 240 Vac, 60Hz				

2.10.2	**Table: working voltage measurement** **(PCB with fuse: FUSE1)** **(15077081.001)**	P

Location		RMS voltage (V)	Peak voltage (V)	Comments
Model: KPL-060I				
T1 Pin 1	T1 Pin 8, 9	172	344	
T1 Pin 1	T1 Pin 11, 12	173	360	
T1 Pin 3	T1 Pin 8, 9	245	348	
T1 Pin 3	T1 Pin 11, 12	246	384	
T1 Pin 4	T1 Pin 8, 9	173	392	
T1 Pin 4	T1 Pin 11, 12	171	352	
T1 Pin 6	**T1 Pin 8, 9**	**317**	**556**	**Max. Vpk & Vrms**
T1 Pin 6	T1 Pin 11, 12	304	532	
CY1 Pin 1	CY1 Pin 2	171	344	
IC1 Pin 1	IC1 Pin 3	180	360	
IC1 Pin 1	IC1 Pin 4	184	364	
IC1 Pin 2	IC1 Pin 3	182	360	
IC1 Pin 2	IC1 Pin 4	180	358	
Model: KPL-065F				
T1 Pin 1	T1 Pin 8, 9	170	340	
T1 Pin 1	T1 Pin 11, 12	171	352	
T1 Pin 3	T1 Pin 8, 9	346	346	
T1 Pin 3	T1 Pin 11, 12	248	386	

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

T1 Pin 4	T1 Pin 8, 9	172	390	
T1 Pin 4	T1 Pin 11, 12	170	358	
T1 Pin 6	**T1 Pin 8, 9**	**316**	**532**	**Max. Vpk & Vrms**
T1 Pin 6	T1 Pin 11, 12	304	512	
CY1 Pin 1	CY1 Pin 2	172	344	
IC1 Pin 1	IC1 Pin 3	180	350	
IC1 Pin 1	IC1 Pin 4	180	356	
IC1 Pin 2	IC1 Pin 3	172	358	
IC1 Pin 2	IC1 Pin 4	176	358	
Model: KPL-065J				
T1 Pin 1	T1 Pin 8, 9	170	340	
T1 Pin 1	T1 Pin 11, 12	174	360	
T1 Pin 3	T1 Pin 8, 9	246	348	
T1 Pin 3	T1 Pin 11, 12	248	406	
T1 Pin 4	T1 Pin 8, 9	172	380	
T1 Pin 4	T1 Pin 11, 12	171	354	
T1 Pin 6	**T1 Pin 8, 9**	**316**	**512**	**Max. Vpk & Vrms**
T1 Pin 6	T1 Pin 11, 12	304	492	
CY1 Pin 1	CY1 Pin 2	171	344	
IC1 Pin 1	IC1 Pin 3	183	360	
IC1 Pin 1	IC1 Pin 4	181	356	
IC1 Pin 2	IC1 Pin 3	181	362	
IC1 Pin 2	IC1 Pin 4	180	366	
Model: KPL-065M				
T1 Pin 1	T1 Pin 8, 9	172	344	
T1 Pin 1	T1 Pin 11, 12	176	372	
T1 Pin 3	T1 Pin 8, 9	244	348	
T1 Pin 3	T1 Pin 11, 12	248	412	
T1 Pin 4	T1 Pin 8, 9	174	388	
T1 Pin 4	T1 Pin 11, 12	172	356	
T1 Pin 6	**T1 Pin 8, 9**	**324**	**540**	**Max. Vpk & Vrms**
T1 Pin 6	T1 Pin 11, 12	302	520	
CY1 Pin 1	CY1 Pin 2	172	348	
IC1 Pin 1	IC1 Pin 3	188	368	
IC1 Pin 1	IC1 Pin 4	185	364	
IC1 Pin 2	IC1 Pin 3	186	364	
IC1 Pin 2	IC1 Pin 4	184	360	
Supplementary information: Test voltage: 240 Vac, 60Hz				

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

2.10.3 and 2.10.4	**TABLE: Clearance and creepage distance measurements (PCB with fuses: F1, F2) (31581397.001)**					P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Functional:						
L/N before fuse	420	250	2.22	3.2	2.5	3.2
Basic/supplementary:						
LF1 to inlet GND pin (with 10N)	420	250	2.96	5.2	2.96	5.3
Reinforced:						
C5 (with 10N) to D3 heat-sink	420	250	5.92	7.60	5.92	7.60
T1 top heat-sink to C6 or C7	510	338	6.68	7.60	6.76	7.60
T1 top heat-sink to D3 heat-sink	510	338	6.68	9.30	6.76	9.30
Q1 heat-sink to CY1 secondary leg	420	250	5.92	6.50	5.92	6.50
Under CY1	420	250	5.92	7.80	5.92	7.80
Under IC1	420	250	5.92	7.00	5.92	7.00
Under T1	510	338	6.68	7.80	6.76	7.80

Supplementary information:
1. The specified maximum altitude of operation by the manufacturer for this product is 5000 meters. Therefore, the altitude correction factor for clearance is calculated and used with linear interpolation 1.48 according to IEC 60664-1 Table A.2
2. Output cable is fixed in PCB reliable by solder pins and glue.
3. Glued components (safety relevant): T1 top heat-sink, C2, C5 and output cable.
4. For clearance and creepage did not describe above are far larger than limit above.

2.10.3 and 2.10.4	**TABLE: Clearance and creepage distance measurements (PCB with fuse: FUSE1) (15077081.001)**					P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Functional:						
L/N before fuse	420	250	2.22	3.2	2.5	3.2
Trace under fuse	420	250	2.22	2.6	2.5	2.6
Basic/supplementary:						
Primary components to Earth	420	250	2.96	See below	2.96	See below
LF1 to inlet GND pin (with 10N)	420	250	2.96	3.8	2.96	5.2

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

EMI shielding to primary component/trace	420	250	2.96	7.0	2.96	7.0
Reinforced:						
Primary components (with 10N) to secondary components (with 10N)	420	250	5.92	See below	5.92	See below
T1 top heat-sink to C6 or C7	**556**	**324**	**6.52**	**7.0**	**6.8**	**--**
T1 top heat-sink to external enclosure surface	556	324	6.52	7.0	6.8	7.0
Q1 heat-sink to CY1 secondary leg	420	250	5.92	6.4	5.92	6.4
Primary trace to secondary trace	420	250	5.92	See below	5.92	See below
trace N to trace of D3 heatsink	420	250	5.92	6.7	5.92	6.7
Under CY1	420	250	5.92	6.7	5.92	6.7
Under IC1	420	250	5.92	7.0	5.92	7.0
Under T1	556	324	6.52	7.0	6.8	7.0
Secondary EMI shielding to primary component/trace	420	250	5.92	7.0	5.92	7.0

Supplementary information:

1. Functional insulation shorted, see 5.3.4.
2. Output cable is fixed in PCB reliable by solder pins and glue.
3. The clearance insulation distance of primary components to enclosure surface with mechanical construction is kept at least 5.0 mm.
4. Glued components (safety relevant): FUSE1, T1 top heat-sink, C2, C18 and output cable.
5. One insulator sheet is place between PCB and EMI shielding to keep sufficient creepage and clearance distance for reinforced insulation request.
6. There is two layers of insulation tape was fixed on D3 heat-sink and Q1 heat-sink to keep sufficient creepage and clearance distance for reinforced insulation request.
7. For clearance and creepage did not describe above are far larger than limit above.

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

2.10.5	**TABLE: Distance through insulation measurements** **(PCB with fuses: F1, F2)** **(31581397.001)**	P

Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Enclosure (reinforced insulation)	420	250	AC3000	0.4	1)
Photo coupler (reinforced insulation)	420	250	AC3000	0.4	1)

Supplementary information:
1). See appended table 1.5.1

2.10.5	**TABLE: Distance through insulation measurements** **(PCB with fuse: FUSE1)** **(15077081.001)**	P

Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Enclosure (reinforced insulation)	420	250	AC3000	0.4	1)
Photo coupler (reinforced insulation)	420	250	AC3000	0.4	1)
Insulator sheet (reinforced insulation)	420	250	AC3000	0.4	1)

Supplementary information:
1). See appended table 1.5.1

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

4.3.8	**TABLE: Batteries**								N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available									N/A
Is it possible to install the battery in a reverse polarity position?									N/A
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition									
Max. current during fault condition									
Test results:									Verdict
- Chemical leaks									N/A
- Explosion of the battery									N/A
- Emission of flame or expulsion of molten metal									N/A
- Electric strength tests of equipment after completion of tests									N/A
Supplementary information:									

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

4.3.8	TABLE: Batteries	N/A
Battery category ..... :	(Lithium, NiMh, NiCad, Lithium Ion …)	
Manufacturer ..... :		
Type / model..... :		
Voltage ..... :		
Capacity..... :	mAh	
Tested and Certified by (incl. Ref. No.) ..... :		
Circuit protection diagram:		

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

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

4.5	**TABLE: Thermal requirements (PCB with fuses: F1, F2) (31581397.001)**					P
	Supply voltage (V) ..... :	90V	264V	90V	264V	—
	Ambient T_{min} (°C) ..... :	--	--			—
	Ambient T_{max} (°C)..... :	--	--			—
Maximum temperature T of part/at……:		T (°C)				Allowed T_{max} (°C)
Model: KPL-060I-VI position:		**Label down**		**Label up**		
AC Inlet (70°C)		63.2	57.4	63.7	57.4	70
CX1 body (100°C)		68.5	61.8	68.4	61.9	100
LF1 coil (130°C)		99.2	75.3	98.8	75.2	130
LF2 coil (130°C)		82.6	68.1	83.0	68.6	130
PCB near BD1 (130°C)		98.2	82.0	97.8	81.7	130
C2 body (105°C)		86.7	76.7	86.5	76.9	105
T1 coil (Class B)		88.1	85.1	87.0	84.3	110
T1 core (Class B)		77.2	76.1	75.9	75.4	110
PCB under T1 (130°C)		82.1	81.5	81.1	81.3	130
CY1 body (125°C)		78.8	73.3	75.9	71.0	125
IC1 body (110C)		75.9	72.4	76.3	74.0	110
PCB near Q1 (130°C)		94.4	83.3	94.3	83.1	130
PCB near D3 (130C)		92.6	93.7	90.9	92.7	130
C6 body (105°C)		86.3	86.9	85.1	86.6	105
C7 body (105°C)		81.7	81.9	80.9	81.6	105
Internal plastic enclosure above T1		72.7	70.0	71.5	69.2	--.
External plastic enclosure above T1 (95°C)		63.6	62.6	62.9	61.7	95
Output cord (80°C)		47.0	47.6	47.2	47.4	80
Ambient		45.0	45.0	45.0	45.0	--
Model: KPL-050F-VI position:		**Label down**		**Label up**		
AC Inlet (70°C)		62.2	55.8	62.3	56.1	70
CX1 body (100°C)		64.0	57.6	63.1	56.9	100
LF1 coil (130°C)		97.3	72.6	93.9	72.9	130
LF2 coil (130°C)		80.8	65.9	80.3	66.2	130
PCB near BD1 (130°C)		97.3	80.1	98.0	80.2	130
C2 body (105°C)		93.8	78.9	94.0	79.0	105
T1 coil (Class B)		94.0	91.2	94.7	91.5	110
T1 core (Class B)		88.2	89.9	90.5	90.2	110
PCB under T1 (130°C)		87.4	85.8	87.8	86.1	130
CY1 body (125°C)		82.9	78.5	84.1	79.6	125
IC1 body (110C)		77.7	74.3	79.1	76.0	110
PCB near Q1 (130°C)		93.5	83.9	94.1	84.3	130
PCB near D3 (130C)		92.5	91.1	93.0	91.5	130
C6 body (105°C)		89.4	87.9	89.7	88.2	105

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

C7 body (105°C)	84.3	82.6	84.8	82.9	105
Internal plastic enclosure above T1	70.7	70.0	70.8	70.2	--.
External plastic enclosure above T1 (95°C)	64.0	63.4	65.0	64.4	95
Output cord (80°C)	49.9	49.2	49.8	49.6	80
Ambient	45.0	45.0	45.0	45.0	--
Model: KPL-060F-VI position:	**Label down**		**Label up**		
AC Inlet (70°C)	68.2	57.5	68.4	58.2	70
CX1 body (100°C)	76.5	63.3	74.8	62.9	100
LF1 coil (130°C)	112.2	76.6	111.7	77.4	130
LF2 coil (130°C)	94.1	69.7	94.0	70.3	130
PCB near BD1 (130°C)	105.4	79.1	105.6	79.9	130
C2 body (105°C)	94.7	76.4	93.8	76.7	105
T1 coil (Class B)	98.8	87.8	98.2	88.5	110
T1 core (Class B)	87.4	78.3	86.6	79.0	110
PCB under T1 (130°C)	91.9	83.3	91.3	83.9	130
CY1 body (125°C)	88.0	75.9	89.0	77.4	125
IC1 body (110C)	84.5	76.0	83.0	75.7	110
PCB near Q1 (130°C)	100.3	81.0	101.0	82.0	130
PCB near D3 (130C)	100.3	94.0	99.7	93.9	130
C6 body (105°C)	97.2	90.8	97.4	91.4	105
C7 body (105°C)	92.9	85.9	93.1	86.7	105
Internal plastic enclosure above T1	80.8	70.6	80.8	71.8	--.
External plastic enclosure above T1 (95°C)	72.4	64.6	73.1	66.3	95
Output cord (80°C)	52.9	50.9	54.0	52.6	80
Ambient	45.0	45.0	45.0	45.0	--
Model: KPL-066F-VI position:	**Label down**		**Label up**		
AC Inlet (70°C)	65.6	55.6	66.2	56.4	70
CX1 body (100°C)	71.8	60.1	72.4	60.9	100
LF1 coil (130°C)	105.1	75.7	106.7	76.8	130
LF2 coil (130°C)	91.0	68.2	93.0	69.3	130
PCB near BD1 (130°C)	97.6	76.5	98.6	77.2	130
C2 body (105°C)	93.0	76.3	94.3	77.3	105
T1 coil (Class B)	93.2	83.6	95.6	85.6	110
T1 core (Class B)	85.1	76.7	87.7	78.6	110
PCB under T1 (130°C)	87.6	80.3	89.4	81.8	130
CY1 body (125°C)	82.8	74.3	85.3	76.2	125
IC1 body (110C)	79.7	72.2	82.6	74.8	110
PCB near Q1 (130°C)	92.4	80.0	94.5	82.4	130
PCB near D3 (130C)	100.3	94.1	103.4	96.4	130
C6 body (105°C)	98.2	91.6	101.1	93.8	105
C7 body (105°C)	92.1	85.5	95.0	87.8	105
Internal plastic enclosure above T1	82.4	71.9	85.0	73.9	--.

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

External plastic enclosure above T1 (95°C)	68.3	62.1	72.5	65.7	95
Output cord (80°C)	46.6	45.8	48.1	47.0	80
Ambient	40.0	40.0	40.0	40.0	--
Model: KPL-065J-VI position:	**Label down**		**Label up**		
AC Inlet (70°C)	68.5	58.6	68.7	59.1	70
CX1 body (100°C)	69.5	59.3	71.2	60.6	100
LF1 coil (130°C)	108.5	76.8	106.4	77.7	130
LF2 coil (130°C)	91.2	68.4	92.3	69.8	130
PCB near BD1 (130°C)	106.1	82.7	103.7	83.2	130
C2 body (105°C)	86.8	73.0	87.8	74.5	105
T1 coil (Class B)	92.3	84.7	92.7	86.1	110
T1 core (Class B)	82.0	76.1	83.1	77.4	110
PCB under T1 (130°C)	85.9	80.7	87.3	82.3	130
CY1 body (125°C)	90.2	81.4	90.6	82.0	125
IC1 body (110C)	75.6	69.8	80.4	74.6	110
PCB near Q1 (130°C)	103.0	90.6	102.8	90.9	130
PCB near D3 (130C)	93.1	90.0	95.8	93.0	130
C6 body (105°C)	90.6	87.2	93.0	89.5	105
C7 body (105°C)	85.6	81.1	87.0	82.8	105
Internal plastic enclosure above T1	76.1	69.6	77.7	71.4	--.
External plastic enclosure above T1 (95°C)	63.2	59.4	65.5	61.9	95
Output cord (80°C)	43.8	44.1	47.9	47.2	80
Ambient	40.0	40.0	40.0	40.0	--
Model: KPL-065M-VI position:	**Label down**		**Label up**		
AC Inlet (70°C)	65.2	56.3	65.9	56.3	70
CX1 body (100°C)	70.9	60.5	70.7	60.0	100
LF1 coil (130°C)	101.9	73.0	101.3	72.8	130
LF2 coil (130°C)	90.0	67.5	90.7	67.6	130
PCB near BD1 (130°C)	102.7	77.1	103.0	76.9	130
C2 body (105°C)	90.6	74.1	90.6	73.8	105
T1 coil (Class B)	85.5	81.1	85.7	80.9	110
T1 core (Class B)	76.2	73.0	76.2	72.8	110
PCB under T1 (130°C)	80.2	77.0	80.4	77.0	130
CY1 body (125°C)	79.6	70.6	82.4	72.1	125
IC1 body (110C)	73.6	68.3	73.3	68.2	110
PCB near Q1 (130°C)	96.1	77.8	96.9	77.9	130
PCB near D3 (130C)	84.5	82.9	83.8	82.1	130
C6 body (105°C)	82.5	80.6	82.0	79.9	105
C7 body (105°C)	78.3	75.9	78.0	75.5	105
Internal plastic enclosure above T1	71.6	67.1	71.8	66.9	--.
External plastic enclosure above T1 (95°C)	63.9	60.8	61.3	60.4	95
Output cord (80°C)	47.9	47.3	48.6	48.0	80

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

Ambient	45.0	45.0	45.0	45.0	--
Model: KPL-065S-VI position:	**Label down**		**Label up**		
AC Inlet (70°C)	67.8	58.7	68.7	58.8	70
CX1 body (100°C)	70.8	60.8	71.1	61.0	100
LF1 coil (130°C)	102.6	76.3	104.4	76.3	130
LF2 coil (130°C)	89.7	68.7	89.6	68.8	130
PCB near BD1 (130°C)	102.4	80.5	104.2	80.6	130
C2 body (105°C)	87.8	73.9	88.9	73.8	105
T1 coil (Class B)	92.5	84.9	93.4	84.6	110
T1 core (Class B)	82.4	76.6	83.6	76.4	110
PCB under T1 (130°C)	83.8	77.5	83.8	76.8	130
CY1 body (125°C)	85.2	75.2	85.3	74.6	125
IC1 body (110C)	76.6	67.1	75.1	66.5	110
PCB near Q1 (130°C)	97.9	82.1	99.7	81.9	130
PCB near D3 (130C)	83.8	74.0	82.6	72.6	130
C6 body (105°C)	79.3	71.1	78.5	69.6	105
C7 body (105°C)	77.3	69.4	76.4	68.2	105
Internal plastic enclosure above T1	77.2	70.2	78.2	70.0	--
External plastic enclosure above T1 (95°C)	68.9	64.2	69.8	63.6	95
Output cord (80°C)	49.1	47.7	48.0	47.0	80
Ambient	45.0	45.0	45.0	45.0	--

Supplementary information:

- The temperatures were measured under the maximum rated output defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above.
- With a maximum ambient temperature of +45°C as declared by the manufacturer.
- Winding components (providing safety isolation):
  - Class (B) Tmax = 120°C - 10°C= 110°C

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

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

Supplementary information:						
4.5	**TABLE: Thermal requirements (PCB with fuse: FUSE1) (15077081.001)**					P
	Supply voltage (V) ..... :	90V	264V	90V	264V	—
	Ambient T_{min} (°C) ..... :	--	--			—
	Ambient T_{max} (°C) ..... :	--	--			—
Maximum temperature T of part/at……:		T (°C)				Allowed T_{max} (°C)
Model: KPL-050F test position:		**Label down**		**Label up**		
AC Inlet (70°C)		67.2	62.1	67.5	64.0	70
CX1 body (100°C)		79.7	75.1	84.7	79.8	100
LF1 coil (130°C)		96.4	78.2	98.7	80.9	130
LF2 coil (130°C)		94.2	79.4	96.6	81.8	130
PCB near BD1 (130°C)		106.0	85.4	106.0	85.8	130
C2 body (105°C)		101.2	88.4	101.7	92.0	105
T1 coil (Class B)		104.1	101.5	107.8	104.7	110
T1 core (Class B)		100.3	98.3	104.6	100.2	110
PCB under T1 (130°C)		97.5	93.1	96.5	92.6	130
CY1 body (125°C)		91.6	86.1	93.9	88.8	125
IC1 body (110C)		91.6	88.7	95.5	92.7	110
PCB near Q1 (130°C)		111.3	95.6	110.8	95.9	130
PCB near D3 (130C)		94.6	92.9	100.1	98.4	130
C6 body (105°C)		92.8	91.5	97.3	96.1	105
C7 body (105°C)		90.6	89.1	93.7	92.4	105
Internal plastic enclosure above T1		74.3	74.2	90.0	89.7	--.
External plastic enclosure above T1 (95°C)		66.9	66.7	85.1	84.7	95
Output cord (80°C)		52.6	51.8	52.7	52.4	80
Ambient		40.1	40.0	40.1	40.1	--
Model: KPL-050M test position:		**Label down**		**Label up**		
AC Inlet (70°C)		52.7	50.1	51.6	49.5	70
CX1 body (100°C)		61.9	59.2	62.2	59.6	100
LF1 coil (130°C)		79.2	67.7	78.0	67.2	130
LF2 coil (130°C)		70.4	63.5	70.0	63.4	130
PCB near BD1 (130°C)		81.3	69.0	81.7	69.0	130
C2 body (105°C)		80.3	73.1	79.4	72.7	105
T1 coil (Class B)		83.3	82.0	82.9	81.8	110
T1 core (Class B)		78.9	77.8	79.3	78.4	110
PCB under T1 (130°C)		81.3	80.7	78.5	78.0	130
CY1 body (125°C)		81.3	77.2	79.8	76.1	125
IC1 body (110C)		75.9	73.2	75.9	73.5	110
PCB near Q1 (130°C)		90.5	79.7	88.3	78.2	130
PCB near D3 (130C)		67.1	65.5	64.9	63.2	130

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

C6 body (105°C)	67.6	68.9	70.4	71.8	105
C7 body (105°C)	69.3	70.6	70.8	72.3	105
Internal plastic enclosure above T1	69.7	70.4	73.8	74.7	--.
External plastic enclosure above T1 (95°C)	59.0	59.7	66.1	66.7	95
Output cord (80°C)	45.6	45.6	42.6	42.5	80
Ambient	40.2	40.0	40.1	40.1	--
Model: KPL-060I test position:	**Label down**		**Label up**		
AC Inlet (70°C)	54.6	51.5	55.3	52.1	70
CX1 body (100°C)	74.4	68.6	75.8	69.7	100
LF1 coil (130°C)	92.1	75.0	91.8	74.8	130
LF2 coil (130°C)	80.9	69.9	80.9	69.9	130
PCB near BD1 (130°C)	98.5	79.3	97.2	78.2	130
C2 body (105°C)	85.8	76.5	87.3	77.8	105
T1 coil (Class B)	88.0	86.3	90.3	88.3	110
T1 core (Class B)	83.8	82.5	87.0	85.4	110
PCB under T1 (130°C)	83.2	80.4	79.8	77.3	130
CY1 body (125°C)	79.0	76.0	79.2	76.0	125
IC1 body (110C)	95.2	91.9	95.4	92.5	110
PCB near Q1 (130°C)	114.8	101.4	113.6	100.9	130
PCB near D3 (130C)	104.4	102.2	105.9	103.8	130
C6 body (105°C)	97.3	95.6	99.2	97.6	105
C7 body (105°C)	92.3	90.5	93.5	91.8	105
Internal plastic enclosure above T1	72.1	69.6	76.7	74.2	--.
External plastic enclosure above T1 (95°C)	70.0	67.9	83.0	80.2	95
Output cord (80°C)	51.8	51.0	52.7	52.5	80
Ambient	40.1	40.0	40.1	40.1	--
Model: KPL-065F test position:	**Label down**		**Label up**		
AC Inlet (70°C)	57.6	53.3	53.3	49.6	70
CX1 body (100°C)	84.3	73.8	82.9	72.6	100
LF1 coil (130°C)	94.5	75.1	94.5	75.9	130
LF2 coil (130°C)	88.5	72.6	86.5	71.5	130
PCB near BD1 (130°C)	93.7	75.0	95.3	77.0	130
C2 body (105°C)	95.8	79.7	95.6	80.1	105
T1 coil (Class B)	100.8	89.2	101.1	88.7	110
T1 core (Class B)	96.8	87.4	96.2	84.9	110
PCB under T1 (130°C)	93.3	83.8	90.5	80.5	130
CY1 body (125°C)	89.3	78.2	89.8	78.5	125
IC1 body (110C)	94.3	84.6	93.2	83.7	110
PCB near Q1 (130°C)	99.7	81.7	101.7	83.7	130
PCB near D3 (130C)	98.1	89.6	98.1	89.2	130
C6 body (105°C)	96.9	89.3	97.4	88.8	105
C7 body (105°C)	91.0	83.8	92.3	83.8	105

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

Internal plastic enclosure above T1	80.4	70.0	83.9	73.0	--.
External plastic enclosure above T1 (95°C)	69.0	61.4	73.9	65.5	95
Output cord (80°C)	50.1	48.5	53.5	51.3	80
Ambient	40.0	40.0	40.4	40.1	--
Model: KPL-065J test position:	**Label down**		**Label up**		
AC Inlet (70°C)	63.0	58.1	67.1	61.5	70
CX1 body (100°C)	75.3	71.7	79.3	73.2	100
LF1 coil (130°C)	96.1	81.1	100.8	83.1	130
LF2 coil (130°C)	84.3	75.1	89.6	77.1	130
PCB near BD1 (130°C)	92.2	81.8	98.3	84.6	130
C2 body (105°C)	81.9	76.8	89.4	80.4	105
T1 coil (Class B)	93.4	90.0	99.7	92.3	110
T1 core (Class B)	83.4	81.5	91.3	84.7	110
PCB under T1 (130°C)	85.4	83.0	89.8	83.7	130
CY1 body (125°C)	88.7	84.6	93.8	86.3	125
IC1 body (110C)	84.4	82.6	87.9	82.4	110
PCB near Q1 (130°C)	106.6	97.9	113.4	101.2	130
PCB near D3 (130C)	89.1	88.8	92.7	88.7	130
C6 body (105°C)	83.7	84.4	88.5	85.0	105
C7 body (105°C)	82.2	82.4	85.7	81.7	105
Internal plastic enclosure above T1	69.1	68.2	75.9	71.5	--.
External plastic enclosure above T1 (95°C)	65.8	66.5	78.0	73.0	95
Output cord (80°C)	49.4	50.4	49.2	47.8	80
Ambient	40.0	40.0	40.4	40.1	--
Model: KPL-065M test position:	**Label down**		**Label up**		
AC Inlet (70°C)	54.1	50.7	59.2	53.5	70
CX1 body (100°C)	69.2	64.3	72.7	65.3	100
LF1 coil (130°C)	83.0	67.5	89.1	69.5	130
LF2 coil (130°C)	76.6	65.4	81.5	66.6	130
PCB near BD1 (130°C)	87.8	69.8	93.2	71.6	130
C2 body (105°C)	77.6	69.5	83.6	71.8	105
T1 coil (Class B)	81.9	78.2	87.2	80.3	110
T1 core (Class B)	75.9	73.5	81.8	76.5	110
PCB under T1 (130°C)	81.1	76.9	79.6	73.3	130
CY1 body (125°C)	77.7	72.4	82.0	73.9	125
IC1 body (110C)	77.8	74.5	78.9	73.9	110
PCB near Q1 (130°C)	90.7	75.9	95.3	77.5	130
PCB near D3 (130C)	80.1	78.5	82.2	78.9	130
C6 body (105°C)	74.9	73.9	78.4	75.2	105
C7 body (105°C)	72.2	70.6	75.8	72.0	105
Internal plastic enclosure above T1	67.0	63.3	72.3	66.1	--
External plastic enclosure above T1 (95°C)	58.0	56.1	69.7	64.5	95

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

Output cord (80°C)	45.9	45.9	45.4	45.0	80
Ambient	40.0	40.0	40.0	40.1	--

Supplementary information:

- The temperatures were measured under the maximum rated output defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above.
- With a maximum ambient temperature of +40°C as declared by the manufacturer.
- Winding components (providing safety isolation):
  - Class (B) Tmax = 120°C - 10°C= 110°C

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

Supplementary information:

4.5.5	TABLE: Ball pressure test of thermoplastic parts		N/A
	Allowed impression diameter (mm) .....:	≤ 2 mm	—

Part	Test temperature (°C)	Impression diameter (mm)

Supplementary information:

4.6.1, 4.6.2	TABLE: Enclosure opening measurements	P

Location	Size (mm)	Comments
Top	--	No opening
Flank side	--	No opening
Bottom	--	No opening

Supplementary information:

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

4.7	TABLE: Resistance to fire				P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
Enclosure	1)	1)	1)	1)	1)
PCB	1)	1)	1)	1)	1)
Supplementary information: 1) see appended table 1.5.1					

5.1	TABLE: touch current measurement		P
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions
L to terminal A	0.17	0.25	Output terminals, switch “e” closed
N to terminal A	0.17	0.25	Output terminals, switch “e” closed
L to terminal A	0.01	0.25	To enclosure with foil, switch “e” closed
N to terminal A	0.01	0.25	To enclosure with foil, switch “e” closed
supplementary information: Test voltage: 264 Vac, 60 Hz See appended table 1.5.1			

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
Basic/supplementary:				
L to N (fuse opened)		AC	1500	No
Unit: primary to earth		AC	1828	No
Reinforced:				
Unit: primary to secondary (PB removed)		AC	3000	No
Unit: Primary and enclosure (with metal foil)		AC	3000	No
T1: primary to secondary		AC	3000	No
T1: Secondary to core		AC	3000	No
One layer of insulation tape		AC	3000	No
Insulator sheet (for PCB with fuse: FUSE1 only)		AC	3000	No
Supplementary information:				

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

5.3	**TABLE: Fault condition tests** **(PCB with fuses: F1, F2)** **(31581397.001)**		P
	Ambient temperature (°C) .....:	25 °C if no other specified.	—
	Power source for EUT: Manufacturer, model/type, output rating .....:	--	—

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Model: KPL-060I-VI						
Output	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Output	o-l	240V	6 hrs 34 mins	F1, F2	0.928	Unit shut down. IP(IC3) CT(Max. temp: T1 coil=83.0 °C, T1 core=71.8 °C, Ambient=25.8°C) Max overload current 4.7 A NC, NT, NB. No hazards
LF1 Pin 1-2	s-c	240V	<1 sec	F1, F2	-	F1,F2 opened immediately NC, NT, NB. No hazards
LF2 Pin 1-2	s-c	240V	<1 sec	F1, F2	-	F1,F2 opened immediately NC, NT, NB. No hazards
BD1 Pin 2-3	s-c	240V	<1 sec	F1, F2	-	F1,F2 opened immediately CD(BD1) NC, NT, NB. No hazards
C2	s-c	240V	<1 sec	F1, F2	-	F1， F2 opened immediately NC, NT, NB. No hazards
Q1 Pin G-S	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards.
Q1 Pin S-D	s-c	240V	<1 sec	F1, F2	-	Fuse opened immediately CD(BD1, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards
Q1 Pin G-D	s-c	240V	<1 sec	F1, F2	-	Fuse opened immediately CD(BD1, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards
R6	o-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
R23	s-c	240V	<1 sec	F1, F2	-	Fuse opened immediately CD(Q1, BD1) NC, NT, NB. No hazards
D2	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards

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

D3	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 1-2	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 3-4	s-c	240V	10mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 1	o-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 3	o-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC3 Pin 1-5	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
IC3 Pin 2-5	s-c	240V	<1 sec	F1, F2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 3-5	s-c	240V	<1 sec	F1, F2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 4-5	s-c	240V	<1 sec	F1, F2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 6-5	s-c	240V	<1 sec	F1, F2	-	Fuse opened immediately CD(IC3, BD1, Q1, R9, R15, R16, R18, R23) NC, NT, NB. No hazards
T1 Pin 1-4	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
T1 Pin 3-6	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
T1 Pin 8, 9 – 11, 12	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Model: KPL-066F-VI						
Output	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Output	o-l	240V	17Hours 25mins	F1, F2	1.01	CT(Max. temp: T1 coil=100.8C, T1 core=87.3C, Ambient=26.5C) Max overload current 7.16 A NC, NT, NB. No hazards
LF1 Pin 1-2	s-c	240V	<1 sec	F1, F2	--	F1, F2 opened immediately NC, NT, NB. No hazards
LF2 Pin 1-2	s-c	240V	<1 sec	F1, F2	--	F1, F2 opened immediately NC, NT, NB. No hazards
BD1 Pin 2-3	s-c	240V	<1 sec	F1, F2	--	F1, F2 opened immediately CD (BD1) NC, NT, NB. No hazards

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

C2	s-c	240V	<1 sec	F1, F2	--	F1, F2 opened immediately NC, NT, NB. No hazards
Q1 Pin G-S	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards.
Q1 Pin S-D	s-c	240V	<1 sec	F1, F2	--	F1, F2 opened immediately CD(BD1, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards
Q1 Pin G-D	s-c	240V	<1 sec	F1, F2	--	F1, F2 opened immediately CD(BD1, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards
R6	o-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
R23	s-c	240V	<1 sec	F1, F2	-	F1, F2 opened immediately CD(Q1, BD1) NC, NT, NB. No hazards
D2	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
D3 D6	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 1-2	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 3-4	s-c	240V	10mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 1	o-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 3	o-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC3 Pin 1-5	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
IC3 Pin 2-5	s-c	240V	<1 sec	F1, F2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 3-5	s-c	240V	<1 sec	F1, F2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 4-5	s-c	240V	<1 sec	F1, F2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 6-5	s-c	240V	<1 sec	F1, F2	-	Fuse opened immediately CD (IC3, BD1, Q1, R9, R15, R16, R18, R23), NC, NT, NB. No hazards
T1 Pin 1-4	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards

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

T1 Pin 3-6	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
T1 Pin 8, 9 – 11, 12	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Model: KPL-065J-VI						
Output	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Output	o-l	240V	18Hour	F1, F2	0.983	CT (Max. temp: T1 coil=86.2 °C, T1 core=72.6 °C, Ambient=25.1°C) Max overload current 4.5 A NC, NT, NB. No hazards
LF1 Pin 1-2	s-c	240V	<1 sec	F1, F2	-	F1,F2 opened immediately NC, NT, NB. No hazards
LF2 Pin 1-2	s-c	240V	<1 sec	F1, F2	-	F1,F2 opened immediately NC, NT, NB. No hazards
BD1 Pin 2-3	s-c	240V	<1 sec	F1, F2	-	F1,F2 opened immediately CD (BD1) NC, NT, NB. No hazards
C2	s-c	240V	<1 sec	F1, F2	-	F1， F2 opened immediately NC, NT, NB. No hazards
Q1 Pin G-S	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards.
Q1 Pin S-D	s-c	240V	<1 sec	F1, F2	-	Fuse opened immediately CD(BD1, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards
Q1 Pin G-D	s-c	240V	<1 sec	F1, F2	-	Fuse opened immediately CD(BD1, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards
R6	o-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
R23	s-c	240V	<1 sec	F1, F2	-	Fuse opened immediately CD(Q1, BD1) NC, NT, NB. No hazards
D2	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
D3	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 1-2	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 3-4	s-c	240V	10mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards

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

IC1 Pin 1	o-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 3	o-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC3 Pin 1-5	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
IC3 Pin 2-5	s-c	240V	<1 sec	F1, F2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 3-5	s-c	240V	<1 sec	F1, F2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 4-5	s-c	240V	<1 sec	F1, F2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 6-5	s-c	240V	<1 sec	F1, F2	-	Fuse opened immediately CD(IC3, BD1, Q1, R9, R15, R16, R18, R23) NC, NT, NB. No hazards
T1 Pin 1-4	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
T1 Pin 3-6	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
T1 Pin 8, 9 – 11, 12	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Model: KPL-065M-VI						
Output	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Output	o-l	240V	12 hrs 38 mins	F1, F2	1.067	CT (Max. temp: T1 coil=112.9 °C, T1 core=100.3 °C, Ambient=22.8°C) Max overload current 3.41 A NC, NT, NB. No hazards
LF1 Pin 1-2	s-c	240V	<1 sec	F1, F2	-	F1,F2 opened immediately NC, NT, NB. No hazards
LF2 Pin 1-2	s-c	240V	<1 sec	F1, F2	-	F1,F2 opened immediately NC, NT, NB. No hazards
BD1 Pin 2-3	s-c	240V	<1 sec	F1, F2	-	F1,F2 opened immediately CD(BD1) NC, NT, NB. No hazards
C2	s-c	240V	<1 sec	F1, F2	-	F1， F2 opened immediately NC, NT, NB. No hazards
Q1 Pin G-S	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards.

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

Q1 Pin S-D	s-c	240V	<1 sec	F1, F2	-	Fuse opened immediately CD(BD1, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards
Q1 Pin G-D	s-c	240V	<1 sec	F1, F2	-	Fuse opened immediately CD(BD1, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards
R6	o-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
R23	s-c	240V	<1 sec	F1, F2	-	Fuse opened immediately CD(Q1, BD1) NC, NT, NB. No hazards
D2	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
D3 D6	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 1-2	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 3-4	s-c	240V	10mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 1	o-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 3	o-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC3 Pin 1-5	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
IC3 Pin 2-5	s-c	240V	<1 sec	F1, F2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 3-5	s-c	240V	<1 sec	F1, F2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 4-5	s-c	240V	<1 sec	F1, F2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 6-5	s-c	240V	<1 sec	F1, F2	-	Fuse opened immediately CD(IC3, BD1, Q1, R9, R15, R16, R18, R23) NC, NT, NB. No hazards
T1 Pin 1-4	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
T1 Pin 3-6	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
T1 Pin 8, 9 – 11, 12	s-c	240V	10 mins	F1, F2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Model: KPL-065S-VI						

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

Output	s-c	240V	10 mins	Fuse 1 Fuse 2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Output	o-l	240V	12Hour46mins	Fuse 1 Fuse 2	0.974	CT(Max. temp: T1 coil=81.2 °C, T1 core=72.2 °C, Ambient=26.2°C) Max overload current 1.6 A NC, NT, NB. No hazards
LF1 Pin 1-2	s-c	240V	<1 sec	Fuse 1 Fuse 2	-	F1,F2 opened immediately NC, NT, NB. No hazards
LF2 Pin 1-2	s-c	240V	<1 sec	Fuse 1 Fuse 2	-	F1,F2 opened immediately NC, NT, NB. No hazards
BD1 Pin 2-3	s-c	240V	<1 sec	Fuse 1 Fuse 2	-	F1,F2 opened immediately CD(BD1) NC, NT, NB. No hazards
C2	s-c	240V	<1 sec	Fuse 1 Fuse 2	-	F1，F2 opened immediately NC, NT, NB. No hazards
Q1 Pin G-S	s-c	240V	10 mins	Fuse 1 Fuse 2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards.
Q1 Pin S-D	s-c	240V	<1 sec	Fuse 1 Fuse 2	-	Fuse opened immediately CD(BD1, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards
Q1 Pin G-D	s-c	240V	<1 sec	Fuse 1 Fuse 2	-	Fuse opened immediately CD(BD1, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards
R6	o-c	240V	10 mins	Fuse 1 Fuse 2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
R23	s-c	240V	<1 sec	Fuse 1 Fuse 2	-	Fuse opened immediately CD(Q1, BD1) NC, NT, NB. No hazards
D2	s-c	240V	10 mins	Fuse 1 Fuse 2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
D3	s-c	240V	10 mins	Fuse 1 Fuse 2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 1-2	s-c	240V	10 mins	Fuse 1 Fuse 2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 3-4	s-c	240V	10mins	Fuse 1 Fuse 2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 1	o-c	240V	10 mins	Fuse 1 Fuse 2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 3	o-c	240V	10 mins	Fuse 1 Fuse 2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards

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

IC3 Pin 1-5	s-c	240V	10 mins	Fuse 1 Fuse 2	0.024	Unit shut down. IP(IC3) NC, NT, NB. No hazards
IC3 Pin 2-5	s-c	240V	<1 sec	Fuse 1 Fuse 2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 3-5	s-c	240V	<1 sec	Fuse 1 Fuse 2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 4-5	s-c	240V	<1 sec	Fuse 1 Fuse 2	-	RT*, CD(IC3) NC, NT, NB. No hazards
IC3 Pin 6-5	s-c	240V	<1 sec	Fuse 1 Fuse 2	-	Fuse opened immediately CD(IC3, BD1, Q1, R9, R15, R16, R18, R23) NC, NT, NB. No hazards
T1 Pin 1-4	s-c	240V	10 mins	Fuse 1 Fuse 2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
T1 Pin 3-6	s-c	240V	10 mins	Fuse 1 Fuse 2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards
T1 Pin 8, 9 – 11, 12	s-c	240V	10 mins	Fuse 1 Fuse 2	0.024	Unit shut down. IP(IC3) NC, NT, NB, No hazards

Supplementary information:

1) For fuse opened conditions, same result came out for each source of fuse.
2) In fault column, where s-c=short-circuited and o-l=overload, o-c = open circuit.
3) Test items where components were damaged were repeated twice with same outcome.
4) Maximum temperatures limitation of safety isolation transformers based on a test temperature of 25 °C:
   Class B: Tmax = 175°C – (45-25)°C = 155°C.
5) In Observation column:
   IP = Internal protection operated (component indicated), CT = Constant temperatures were obtained,
   TW = Transformer winding opened, CD = Components damaged (damaged components indicated),
   NB = No indication of dielectric breakdown, YB = Dielectric breakdown (time and location indicated),
   NC = Cheesecloth remained intact, YC = Cheesecloth charred or flamed,
   NT = Tissue paper remained intact, YT = Tissue paper charred or flamed,
   RT* = Tested three times with same result obtained.

5.3	**TABLE: Fault condition tests** **(PCB with fuse: FUSE1)** **(15077081.001)**					P
	Ambient temperature (°C) .....:				25 °C if no other specified.	—
	Power source for EUT: Manufacturer, model/type, output rating .....:				--	—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Model: KPL-065F						
LF1 Pin 1-2	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately NC, NT, NB. No hazards

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

LF2 Pin 1-2	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately NC, NT, NB. No hazards
BD1 Pin 2-3	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately CD(BD1) NC, NT, NB. No hazards
C2	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately CD(BD1) NC, NT, NB. No hazards
Q1 Pin G-S	s-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB. No hazards.
Q1 Pin S-D	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately CD(BD1, C2, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards
Q1 Pin G-D	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately CD(BD1, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards
R6	o-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB. No hazards
R23	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately CD(Q1, BD1) NC, NT, NB. No hazards
D2	s-c	240V	10 mins	Fuse 1	0.084	Unit shut down. IP(IC3) NC, NT, NB. No hazards
D3	s-c	240V	10 mins	Fuse 1	0.136	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 1-2	s-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 3-4	s-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 1	o-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC1 Pin 3	o-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC3 Pin 1-5	s-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC3 Pin 2-5	s-c	240V	<1 sec	Fuse 1	--	RT*, CD(IC3) NC, NT, NB, No hazards.
IC3 Pin 3-5	s-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB, No hazards
IC3 Pin 4-5	s-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB, No hazards

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

IC3 Pin 6-5	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately CD(IC3, BD1, Q1, R9, R15, R16, R18, R23), NC, NT, NB. No hazards
T1 Pin 1-4	s-c	240V	10 mins	Fuse 1	0.121	Unit shut down. IP(IC3) NC, NT, NB, No hazards
T1 Pin 3-6	s-c	240V	10 mins	Fuse 1	0.200	Unit shut down. IP(IC3) NC, NT, NB, No hazards
T1 Pin 8, 9 – 11, 12	s-c	240V	10 mins	Fuse 1	0.200	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Model: KPL-065M						
LF1	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately NC, NT, NB. No hazards.
LF2	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately NC, NT, NB. No hazards.
BD1 Pin 2-3	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately CD(BD1) NC, NT, NB. No hazards.
C2	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately CD(BD1) NC, NT, NB. No hazards.
Q1 Pin G-S	s-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB. No hazards.
Q1 Pin S-D	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately CD(BD1, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards.
Q1 Pin G-D	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately CD(BD1, R9, R15, R16, R18, R23, Q1) NC, NT, NB. No hazards.
R6	o-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB. No hazards
R23	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately CD(Q1, BD1) NC, NT, NB. No hazards.
D2	s-c	240V	10 mins	Fuse 1	0.080	Unit shut down. IP(IC3) NC, NT, NB. No hazards
D3	s-c	240V	10 mins	Fuse 1	0.138	Unit shut down. IP(IC3) NC, NT, NB. No hazards
IC1 Pin 1-2	s-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB. No hazards
IC1 Pin 3-4	s-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB. No hazards

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

IC1 Pin 1	o-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB. No hazards
IC1 Pin 3	o-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB. No hazards
IC3 Pin 1-5	s-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB. No hazards
IC3 Pin 2-5	s-c	240V	<1 sec	Fuse 1	--	RT*, CD(IC3) NC, NT, NB, No hazards.
IC3 Pin 3-5	s-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB. No hazards
IC3 Pin 4-5	s-c	240V	10 mins	Fuse 1	0.025	Unit shut down. IP(IC3) NC, NT, NB. No hazards
IC3 Pin 6-5	s-c	240V	<1 sec	Fuse 1	--	Fuse opened immediately. CD(IC3, BD1, Q1, R9, R15, R16, R18, R23) NC, NT, NB, No hazards
T1 Pin 1-4	s-c	240V	10 mins	Fuse 1	0.132	Unit shut down. IP(IC3) NC, NT, NB. No hazards
T1 Pin 3-6	s-c	240V	10 mins	Fuse 1	0.118	Unit shut down. IP(IC3) NC, NT, NB. No hazards
T1 Pin 8, 9 – 11, 12	s-c	240V	10 mins	Fuse 1	0.142	Unit shut down. IP(IC3) NC, NT, NB. No hazards
Model: KPL-050F						
Output	s-c	240V	10 mins	Fuse1	0.102	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Output	o-l	240V	8 hrs 1min	Fuse1	0.101	Unit shut down. IP(IC3) CT(Max. temp: T1 coil=115.7 °C, T1 core=109.6 °C, Ambient=24.7 °C) Max overload current 6.0 A NC, NT, NB. No hazards
Model: KPL-050M						
Output	s-c	240V	10 mins	Fuse1	0.081	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Output	o-l	240V	8 hrs 50 mins	Fuse1	0.080	Unit shut down. IP(IC3) CT(Max. temp: T1 coil=97.1 °C, T1 core=90.5 °C, Ambient=24.7 °C) Max overload current 3.35 A NC, NT, NB. No hazards
Model: KPL-065F						

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

Output	s-c	240V	10 mins	Fuse1	0.108	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Output	o-l	240V	9 hrs 47 mins	Fuse1	0.106	Unit shut down. IP(IC3) CT(Max. temp: T1 coil=101.1 °C, T1 core=98.7 °C, Ambient=24.9 °C) Max overload current 6.95 A NC, NT, NB. No hazards
Model: KPL-060I						
Output	s-c	240V	10 mins	Fuse1	0.100	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Output	o-l	240V	6 hrs 43 mins	Fuse1	0.100	Unit shut down. IP(IC3) CT(Max. temp: T1 coil=91.5 °C, T1 core=86.9 °C, Ambient=24.3 °C) Max overload current 5.60 A NC, NT, NB. No hazards
Model: KPL-065J						
Output	s-c	240V	10 mins	Fuse1	0.076	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Output	o-l	240V	9 hrs 6 mins	Fuse1	0.086	Unit shut down. IP(IC3) CT(Max. temp: T1 coil=94.8 °C, T1 core=87.3 °C, Ambient=24.3 °C) Max overload current 4.55 A NC, NT, NB. No hazards
Model: KPL-065M						
Output	s-c	240V	10 mins	Fuse1	0.092	Unit shut down. IP(IC3) NC, NT, NB, No hazards
Output	o-l	240V	6 hrs 22 mins	Fuse1	0.096	Unit shut down. IP(IC3) CT(Max. temp: T1 coil=85.0 °C, T1 core=79.5 °C, Ambient=24.0 °C) Max overload current 3.1 A NC, NT, NB. No hazards.

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

Supplementary information:
1) For fuse opened conditions, same result came out for each source of fuse.
2) In fault column, where s-c=short-circuited and o-l=overload, o-c = open circuit.
3) Test items where components were damaged were repeated twice with same outcome.
4) Maximum temperatures limitation of safety isolation transformers based on a test temperature of 25 °C:
Class B: Tmax = 175°C – (40-25)°C = 160°C.
5) In Observation column,
IP = Internal protection operated (component indicated), CT = Constant temperatures were obtained, TW = Transformer winding opened, CD = Components damaged (damaged components indicated), NB = No indication of dielectric breakdown, YB = Dielectric breakdown (time and location indicated), NC = Cheesecloth remained intact, YC = Cheesecloth charred or flamed, NT = Tissue paper remained intact, YT = Tissue paper charred or flamed, RT* = Repeat three times as same result obtained.

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

C.2	**TABLE: Insulation of transformer:** **(PCB with fuses: F1, F2)** **(31581397.001)**		P
	Transformer part name …..……..:	T1	—
	Manufacturer ……..:	See appended table 1.5.1	—
	Type ……..:	PQ-2620-12-VI	—

Clearance (cl) and creepage distance (cr) at/of/between:	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)
Primary winding to secondary winding	510	338	3000Vac	6.68	6.76
Secondary winding to core	510	338	3000Vac	6.68	6.76
Primary winding to secondary pin	510	338	3000Vac	6.68	6.76
Core to Secondary pin	510	338	3000Vac	6.68	6.76

Loc. Tested insulation	Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm
Primary winding to secondary winding	3000Vac	See note 1	See note 1
Secondary winding to core	3000Vac	See note 1	See note 1
Primary winding to secondary pin	3000Vac	7.4	7.4
Core to Secondary pin	3000Vac	12	12

supplementary information:

1). Triple insulated wire was applied for secondary winding

C.2	**TABLE: Construction of transformer:**	P

Transformer
See attachments for transformer specifications.

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

C.2	**TABLE: Insulation of transformer:** **(PCB with fuses: F1, F2)** **(31581397.001)**		P
	Transformer part name …..……..:	T1	—
	Manufacturer ……..:	See appended table 1.5.1	—
	Type ……..:	PQ-2620-17	—

Clearance (cl) and creepage distance (cr) at/of/between:	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)
Primary winding to secondary winding	510	338	3000Vac	6.68	6.76
Secondary winding to core	510	338	3000Vac	6.68	6.76
Primary winding to secondary pin	510	338	3000Vac	6.68	6.76
Core to Secondary pin	510	338	3000Vac	6.68	6.76

Loc. Tested insulation	Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm
Primary winding to secondary winding	3000Vac	See note 1	See note 1
Secondary winding to core	3000Vac	See note 1	See note 1
Primary winding to secondary pin	3000Vac	7.4	7.4
Core to Secondary pin	3000Vac	12	12

supplementary information:

1). Triple insulated wire was applied for secondary winding

C.2	**TABLE: Construction of transformer:**	P

Transformer
See attachments for transformer specifications.

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

C.2	**TABLE: Insulation of transformer:** **(PCB with fuses: F1, F2)** **(31581397.001)**		P
	Transformer part name …...……..:	T1	—
	Manufacturer ……..:	See appended table 1.5.1	—
	Type ……..:	PQ-2620-48	—

Clearance (cl) and creepage distance (cr) at/of/between:	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)
Primary winding to secondary winding	510	338	3000Vac	6.68	6.76
Secondary winding to core	510	338	3000Vac	6.68	6.76
Primary winding to secondary pin	510	338	3000Vac	6.68	6.76
Core to Secondary pin	510	338	3000Vac	6.68	6.76

Loc. Tested insulation	Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm
Primary winding to secondary winding	3000Vac	See note 1	See note 1
Secondary winding to core	3000Vac	See note 1	See note 1
Primary winding to secondary pin	3000Vac	7.4	7.4
Core to Secondary pin	3000Vac	12	12

supplementary information:

1). Triple insulated wire was applied for secondary winding

C.2	**TABLE: Construction of transformer:**	P

Transformer
See attachments for transformer specifications.

C.2	**TABLE: Insulation of transformer:** **(PCB with fuse: FUSE1)** **(15077081.001)**		P
	Transformer part name …...……..:	T1	—
	Manufacturer ……..:	See appended table 1.5.1	—
	Type ……..:	PQ-2620-12	—

Clearance (cl) and creepage distance (cr) at/of/between:	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)
Primary winding to secondary winding	556	324	3000Vac	6.52	6.8

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

Secondary winding to core	556	324	3000Vac	6.52	6.8
Primary winding to secondary pin	556	324	3000Vac	6.52	6.8
Core to Secondary pin	556	324	3000Vac	6.52	6.8

Loc. Tested insulation	Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm
Primary winding to secondary winding	3000Vac	See note 1	See note 1
Secondary winding to core	3000Vac	See note 1	See note 1
Primary winding to secondary pin	3000Vac	7.4	7.4
Core to Secondary pin	3000Vac	12	12

supplementary information:

1). Triple insulated wire was applied for secondary winding

C.2	TABLE: Construction of transformer:	P

Transformer
See attachments for transformer specifications.

C.2	TABLE: Insulation of transformer: (PCB with fuse: FUSE1) (15077081.001)		P
	Transformer part name …..……..:	T1	—
	Manufacturer ……..:	See appended table 1.5.1	—
	Type ……..:	PQ-2620-17	—

Clearance (cl) and creepage distance (cr) at/of/between:	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)
Primary winding to secondary winding	556	324	3000Vac	6.52	6.8
Secondary winding to core	556	324	3000Vac	6.52	6.8
Primary winding to secondary pin	556	324	3000Vac	6.52	6.8
Core to Secondary pin	556	324	3000Vac	6.52	6.8

Loc. Tested insulation	Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm
Primary winding to secondary winding	3000Vac	See note 1	See note 1
Secondary winding to core	3000Vac	See note 1	See note 1
Primary winding to secondary pin	3000Vac	7.4	7.4
Core to Secondary pin	3000Vac	12	12

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

supplementary information:
1). Triple insulated wire was applied for secondary winding

C.2	TABLE: Construction of transformer:	P
Transformer See attachments for transformer specifications.		

List of test equipment used:

A completed list of used test equipment shall be provided in the Test Reports when a Manufacturer Testing Laboratory according to TMP/CTF stage 1 or WMT/CTF stage 2 procedure has been used.

Clause	Measurement / testing	Testing / measuring equipment / material used	Range used	Calibration date

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
DENMARK NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

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

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.	No supply cord with plug provided.	N/A
1.7.5	In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.	No supply cord with plug provided.	N/A
3.2.1.1	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.	No supply cord with plug provided.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
ITALY NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: EN 60950-1:2006/A2:2013

Annex ZA	Normative references to international publications with their corresponding European publications		P
Annex ZB	Special national conditions		--
1.7.2.1	In Denmark, Finland, Norway and Sweden, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Denmark: “Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.” In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway: “Apparatet må tilkoples jordet stikkontakt” In Sweden: “Apparaten skall anslutas till jordat uttag”	No supply cord with plug provided.	N/A
1.7.5	In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011. 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. 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. Justification the Heavy Current Regulations, 6c	No supply cord with plug provided.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If 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. Justification the Heavy Current Regulations, 6c	No supply cord with plug provided.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Annex ZD
(informative)

IEC and CENELEC code designations for flexible cords

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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
SWEDEN NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: SS-EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011

Various	Please see the EN version of the standard where the Swedish National and Special National Deviations are stated.	P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
US NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: UL 60950-1 Am.1; Am.2

Sub-Clause	National Condition		
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	EUT in compliance with requirements of IEC 60950-1. Overall acceptance shall be evaluated during national approval.	N/A
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC are required to have special construction features and identification markings.	No interconnecting cables	N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3- wire) require a special marking format for electrical ratings. A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."	Single-phase equipment	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with the NEC or CEC Part 1 shall be marked with the voltage rating and “Class 2” or equivalent. The marking shall be located adjacent to the terminals and shall be visible during wiring.	Not such an equipment	N/A
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.		N/A
2.6	Equipment with isolated ground (earthing) receptacles are required to comply with NEC 250.146(D) and CEC 10-112 and 10-906(8).		N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable. Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.	Overall acceptance has to be evaluated during the national approval process.	N/A
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.		N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length. Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 & 12 of the CEC.	No power supply cord provided.	N/A
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	See above	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0.		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).		N/A
3.3.5	First column of Table 3E revised to require “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration.”		N/A
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).	No motor control devices	N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.	No such device	N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.	Not such an equipment	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	No flammable liquids	N/A
4.3.13.5.1	Equipment with lasers is required to meet the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No lasers or LEDs	P
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	No such applicable	N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m^2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.	No such applicable	N/A
4.7.3.1	Non-metallic enclosures of equipment for use in spaces used for environmental air (plenums) are required to comply with UL 2043.	No such applicable	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex H	Equipment that produces ionizing radiation is required to comply with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	Not such an equipment	N/A

OTHER NATIONAL DIFFERENCES

Sub-Clause	National Condition		
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material requirements. These components include: attachment plugs, battery backup systems, battery packs, cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultracapacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, surge protective devices, tubing, vehicle battery adapters, wire connectors, and wire and cables.	Appropriately rated components	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as a SELV Circuit, a TNV-2 Circuit or a Hazardous Voltage Circuit depending on the maximum operating voltage of the supply. This maximum operating voltage shall include consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment.	No connection to DC mains	N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.	No TNV	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.	No TNV	N/A
2.6.2	Equipment with functional earthing is required to be marked with the functional earthing symbol (IEC 60417-6092).		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.	No CRT	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.	No handles provided	N/A
4.3.2	Equipment with handles is required to comply with special loading tests.		N/A
4.3.8	Battery packs for both portable and stationary applications are required to comply with special component requirements.	Not used	N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	Not such an equipment	N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are to be overloaded. During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary.	Complied. Refer to table 5.3 of IEC 60950-1 test report for details.	P
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.	No TNV	N/A
Annex EE	UL articulated accessibility probe (Fig EE.3) required for assessing accessibility to document/media shredders instead of the Figure 2A test finger.	Not such an equipment	N/A
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	No TNV	N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.	No TNV	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
KOREA NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....: K 60950-1

1.5.101	Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305)	No power supply cord provided.	N/A
8	EMC The apparatus shall comply with the relevant CISPR standards.	To be evaluated when submitted for national approval.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
CHINESE NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: GB4943.1-2011

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;	Up to 5000m.	P
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 leave, 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.	Up to 5000m.	P
1.7	Add one paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.	Should be considered during national approval.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	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. And the RATED FREQUENCY or RATED FREQUENCY RANGE should be 50Hz or include 50Hz.		P
1.7.2.1	Add requirements of warning for equipment intended to be used at altitudes not exceeding 2000m or at non-tropical climate regions: 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. "Only used at altitude not exceeding 2000m."  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. "Only used in not-tropical climate regions."  If only the symbol used, the explanation of the symbol shall be contained in the instruction manual. The above statements shall be given in a language acceptable to the regions where the apparatus is intended to be used.	Up to 5000m.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	Amended the first paragraph as: 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. Delete note of Clause 2.7.1.		P
2.9.2	First section of Clause 2.9.2 amended as two sections: 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℃and a relative humidity of (93±3)%. During this conditioning the component or subassembly is not energized. 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. Due to pretreatment of equipment operated at high altitude area is humidity conditioning withstand hot shock, specific requirements are to be considered. 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.	Refer to this report clause 2.9.2	P
2.10.3.1	Amend the third paragraph of Clause 2.10.3.1 to be: 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.	Up to 5000m.	P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.3& 2.10.3.4	Add "(applicable for altitude up to 2000m)" in header of Table 2K、2L and 2M.		P
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.	Up to 5000m.	P
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.	Appliance inlet equipment.	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.	No CRT used.	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.		N/A
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.	Up to 5000m.	P
Annex BB (informative)	Amended as : The differences between Chinese national standards GB 4943.1-2011 and GB 4943-2001.		P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DD (normative)	Added annex DD: Instructions for the new safety warning labels. DD.1 Altitude warning label  Meaning of the label: Evaluation for apparatus only based on altitude not exceeding 2000m, therefor 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 . DD.2 Climate warning label  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.	Up to 5000m.	N/A
Annex EE (informative)	Added annex EE: Illustration relative to safety explanation in normative Chinese、Tibetan、Mongolian、Zhuang Language and Uighu.	Should be considered during national approval.	N/A
Other amendments	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
Quoting standards and reference documents	The principles of quoting and referring to other standards in Annex P and reference documents of IEC 60950-1 are as follows: 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		P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	amendments. 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: - 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. When quoting several chapters or clauses of the international standard, the principles of quotation are as follows: - 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. 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.		

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

KPL Series front –top view

KPL Series rear-bottom view

Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level V)

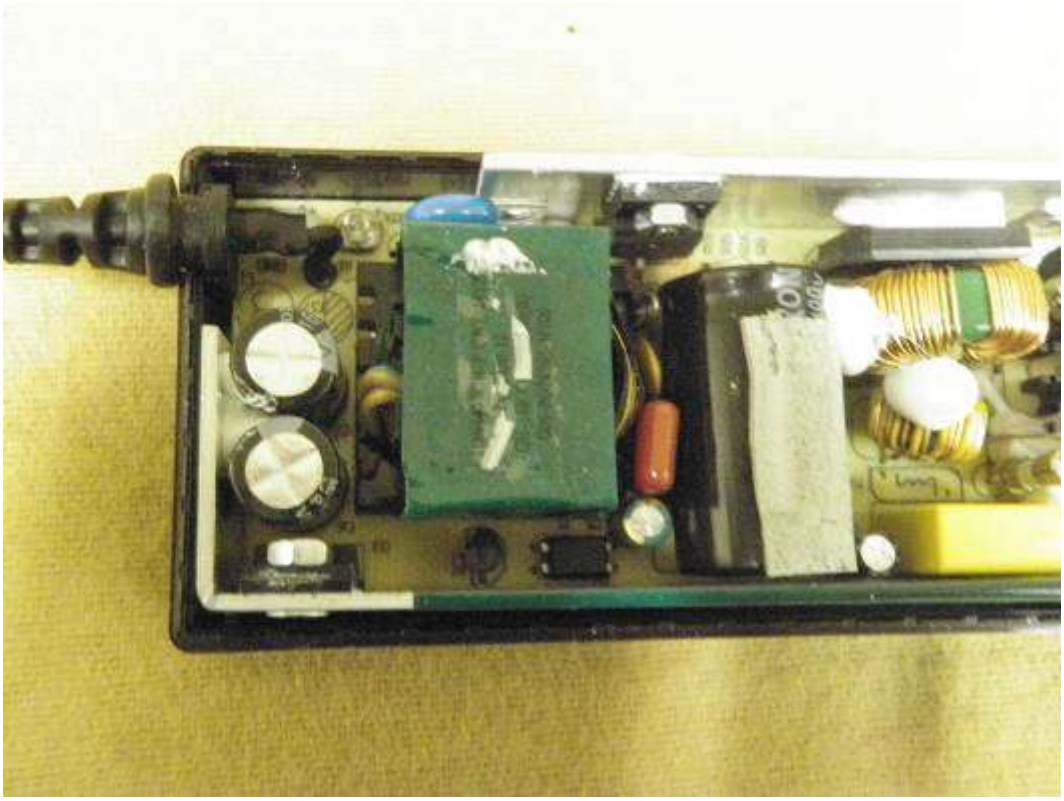
For PCB with fuse: FUSE1

For PCB with fuse: FUSE1

Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level V)

For PCB with fuse: FUSE1



For PCB with fuse: FUSE1

Product: AC Adaptor

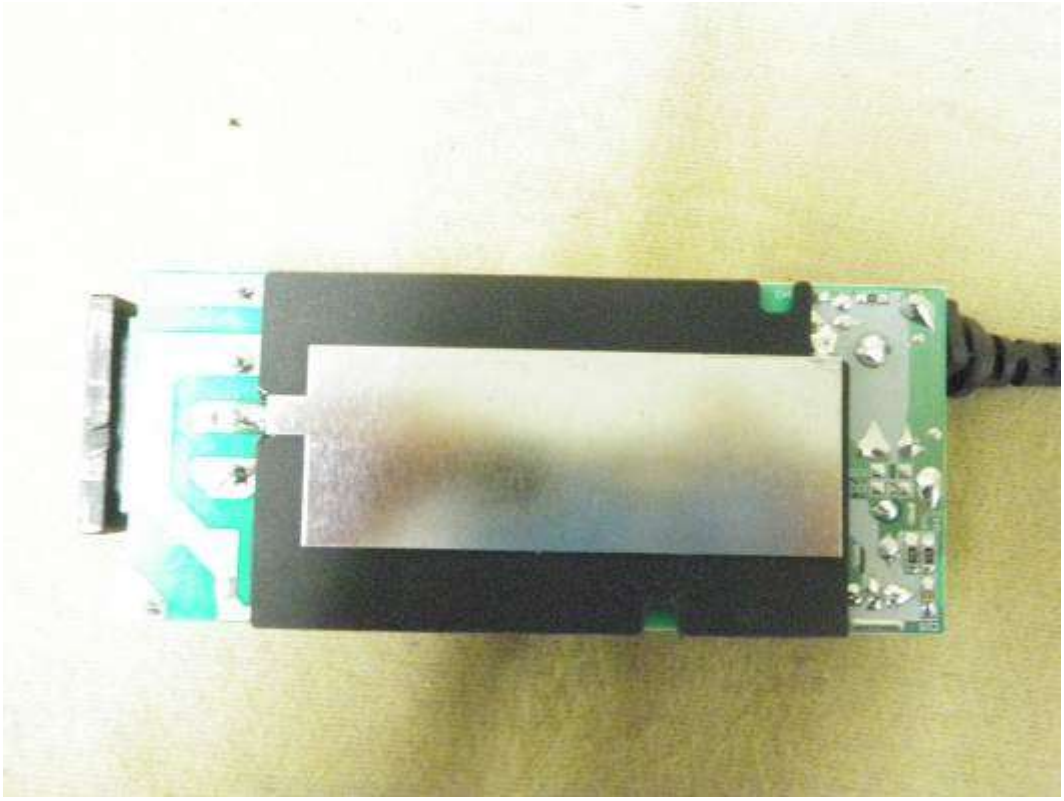
Type Designation: KPL-xy (Efficiency Level V)

For PCB with fuse: FUSE1

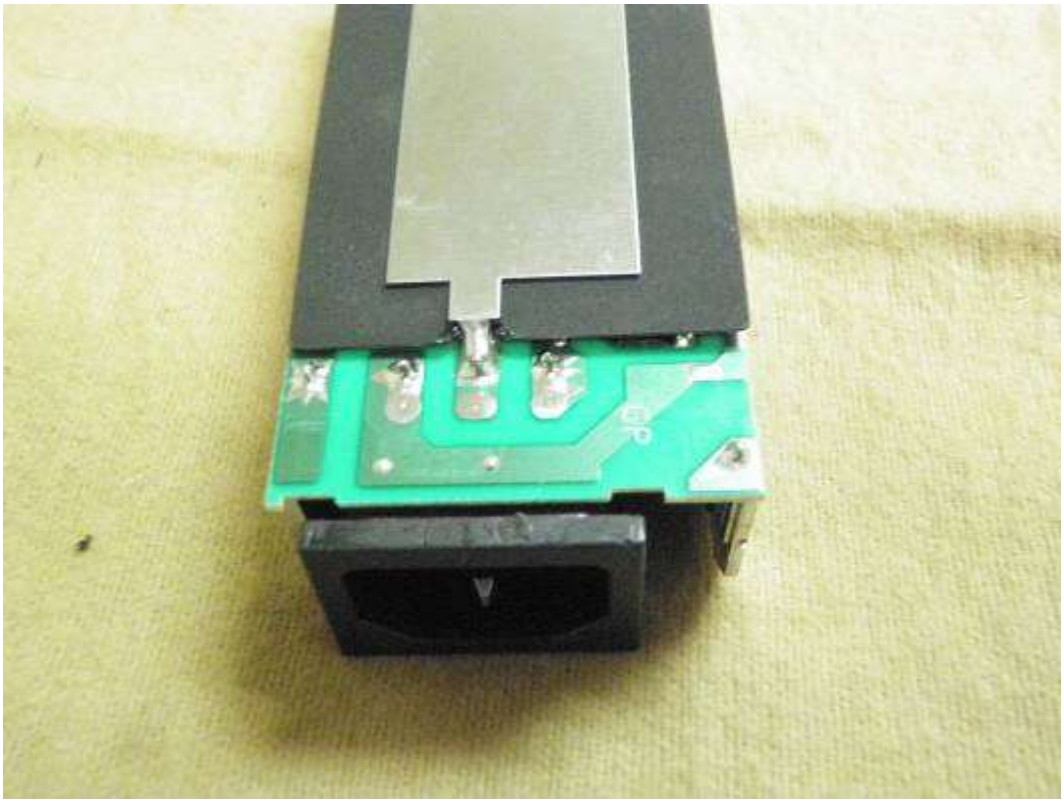
For PCB with fuse: FUSE1

Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level V)



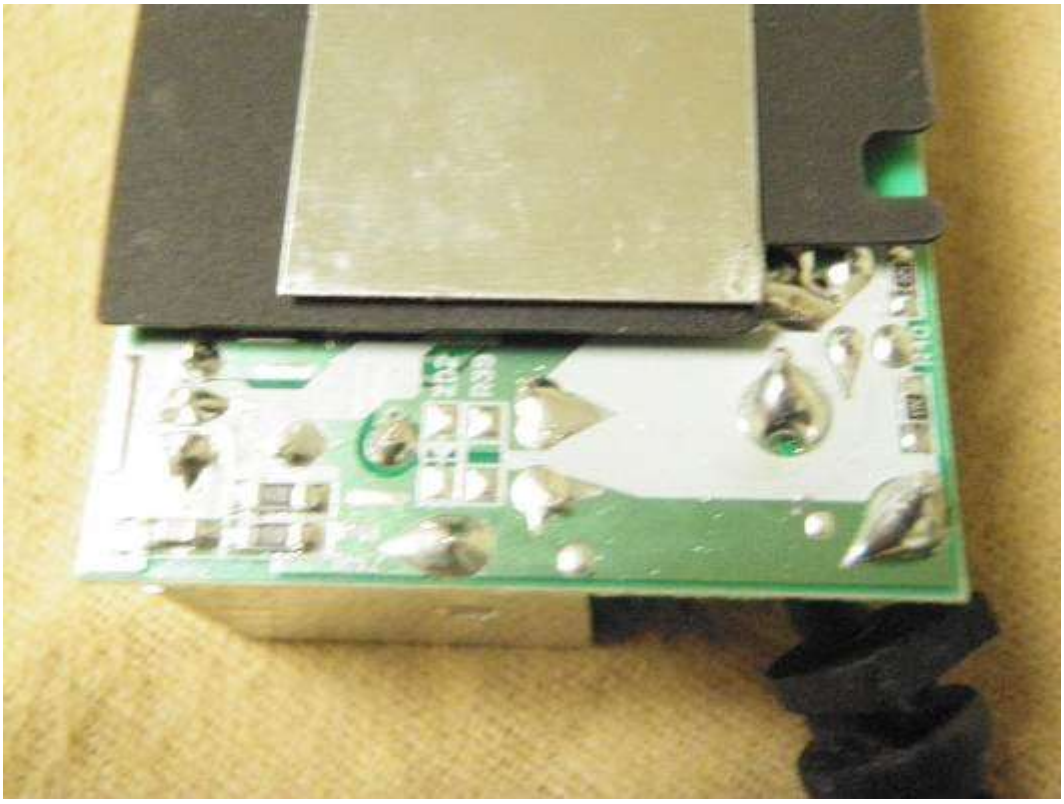
For PCB with fuse: FUSE1



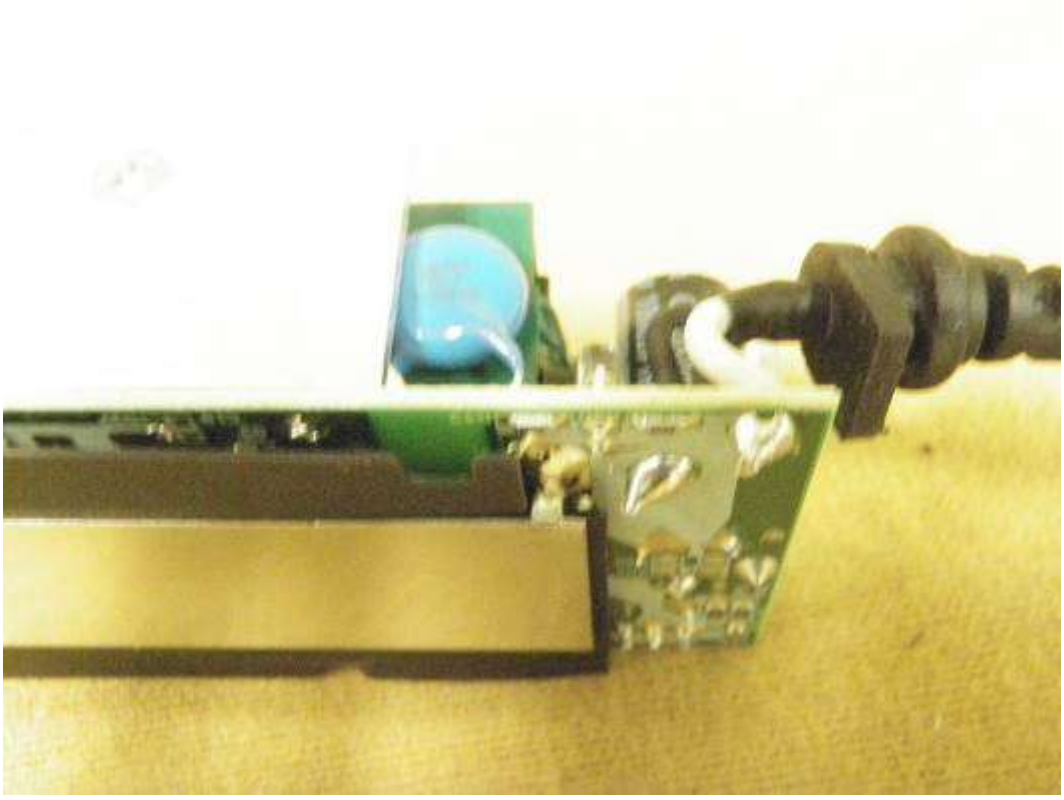
For PCB with fuse: FUSE1

Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level V)



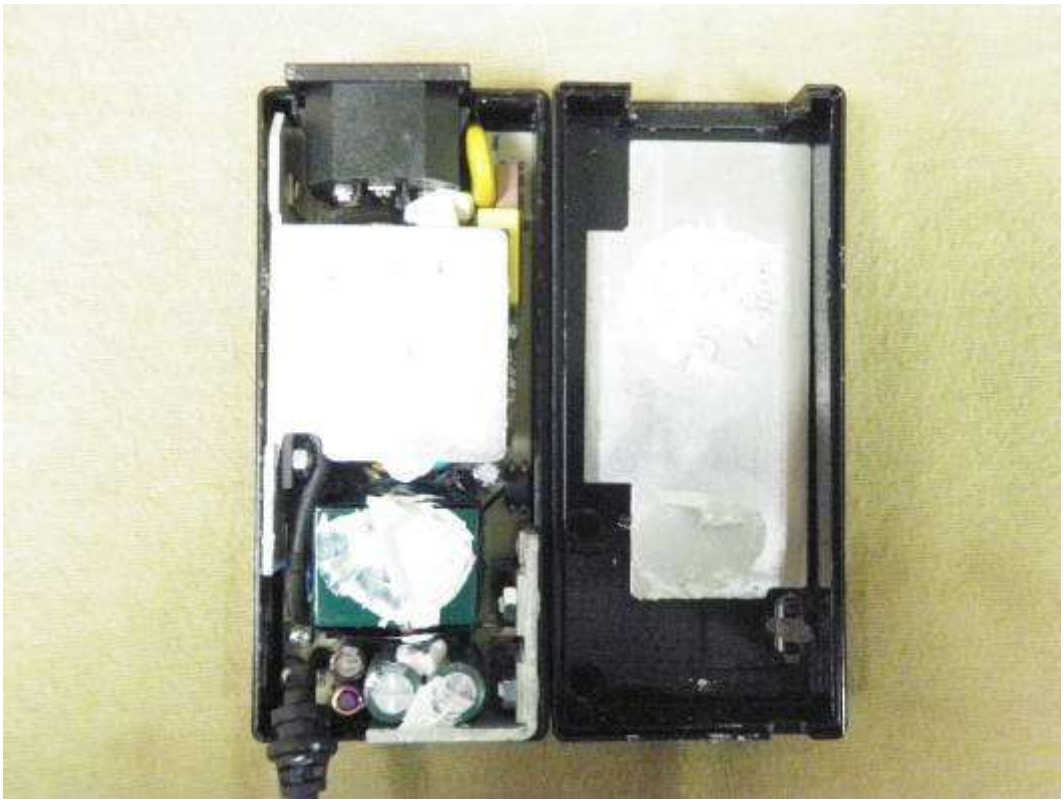
For PCB with fuse: FUSE1



For PCB with fuse: FUSE1

Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level VI) or KPL-xy-VI

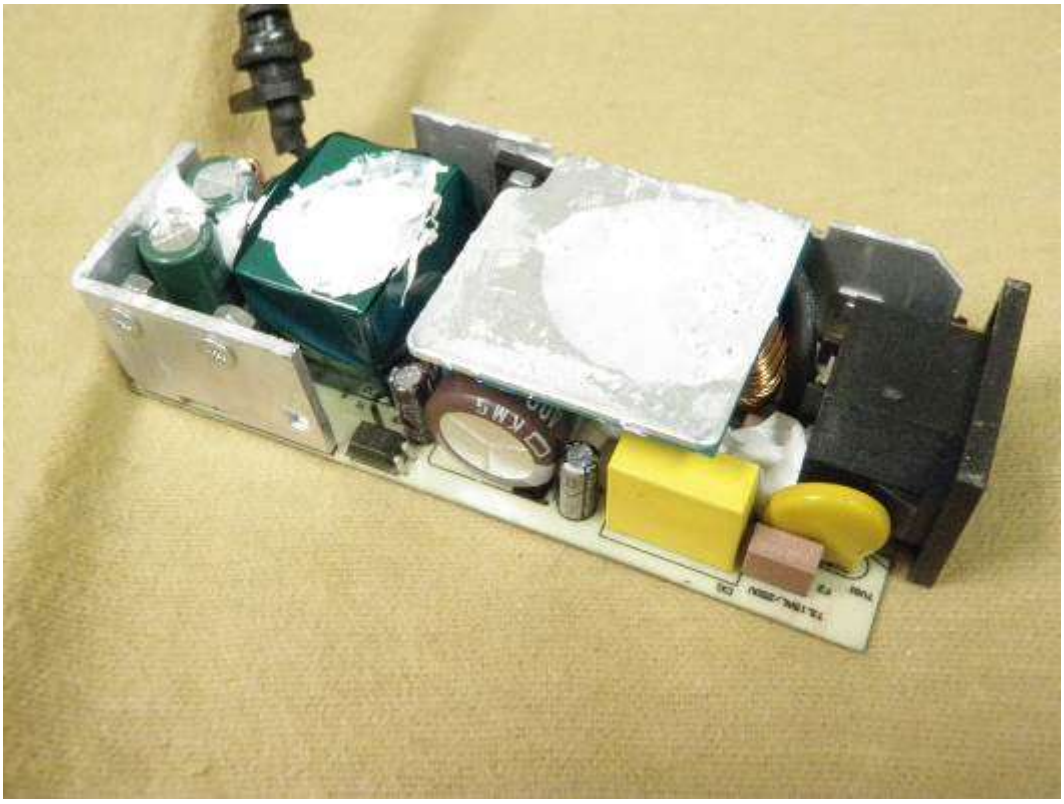


For PCB with fuses: F1 and F2

For PCB with fuses: F1 and F2

Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level VI) or KPL-xy-VI



For PCB with fuses: F1 and F2

For PCB with fuses: F1 and F2

Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level VI) or KPL-xy-VI

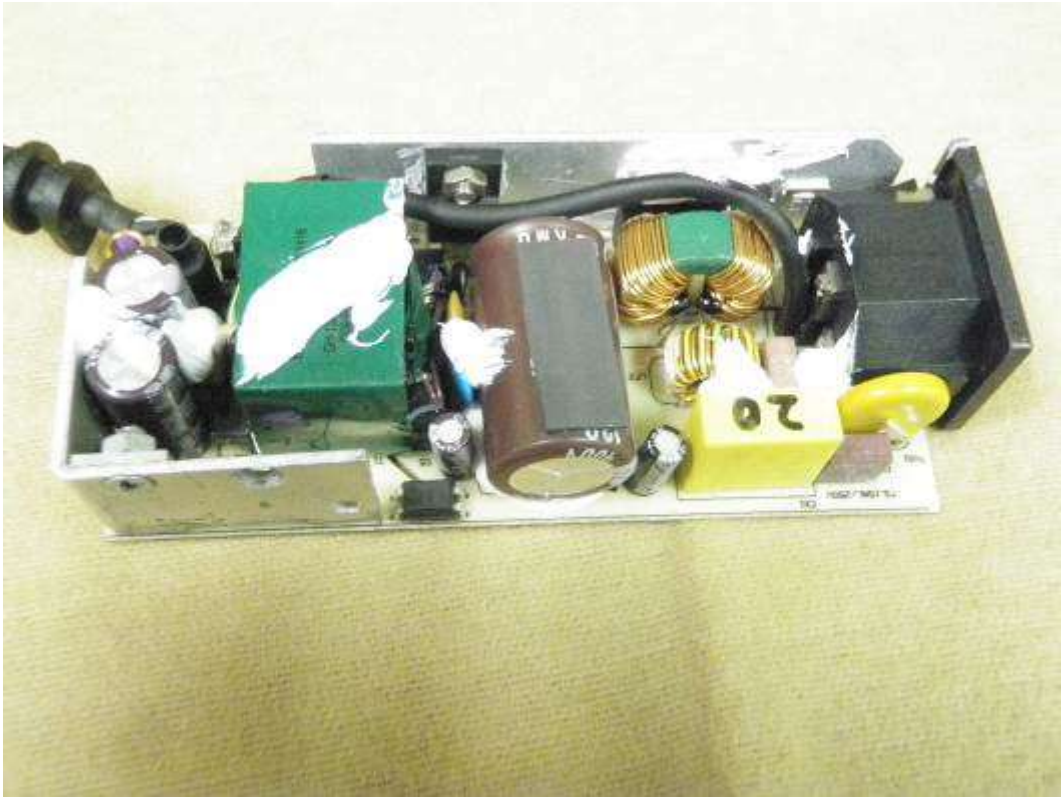
For PCB with fuses: F1 and F2

For PCB with fuses: F1 and F2

Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level VI) or KPL-xy-VI

For PCB with fuses: F1 and F2

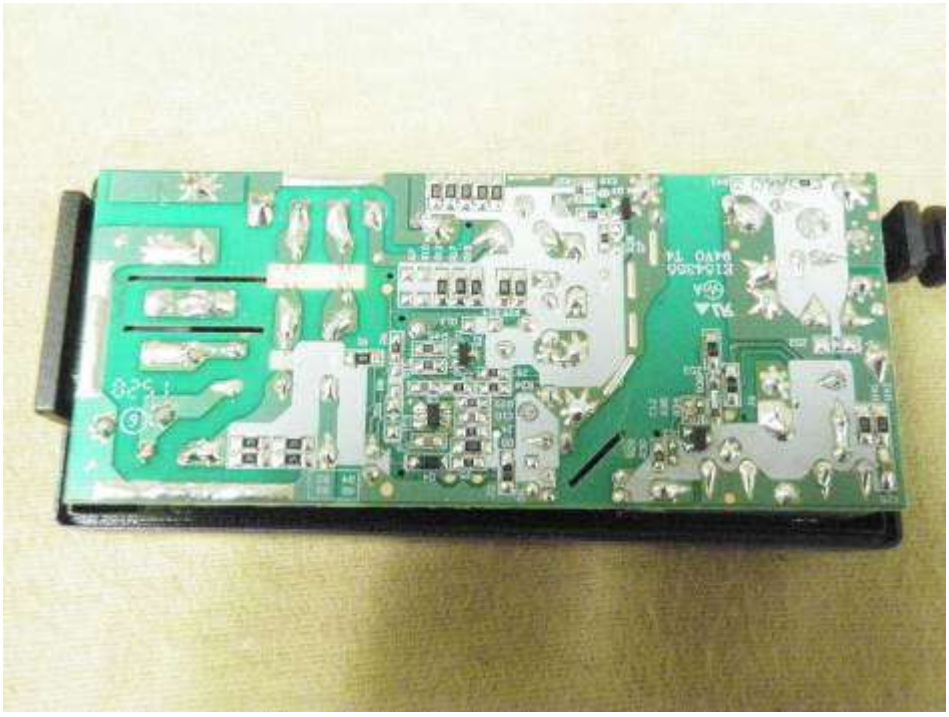


For PCB with fuses: F1 and F2

Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level VI) or KPL-xy-VI

For PCB with fuses: F1 and F2



For PCB with fuses: F1 and F2

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

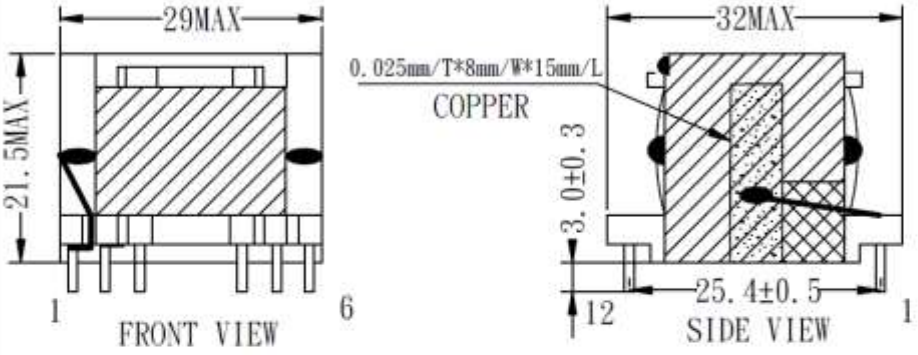
SHEET: 1 OF 4

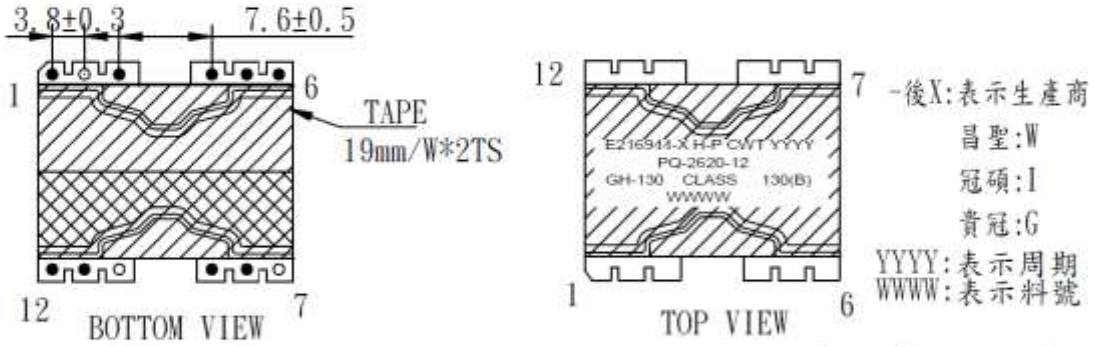
CUSTOMER: 冠 碩 MODEL: PQ-2620-12

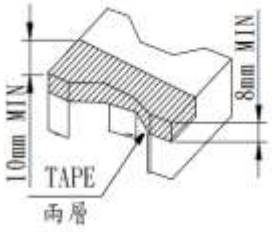
PART NO: G09-PQ26203-M100 OUR P/N:

REVISION: A ISSUE DATE: 2011-02-14

1. MECHANICAL DIMENSIONS: (UNIT :mm)







NOTE:

1. PIN2, 7, 10 NO, PIN5 CUT OFF1/2.
2. 底部磁芯加工PIN7-12(如圖所示).
3. 所有出入線需加TFL套管.
4. 側面貼自粘銅箔0.025mm/T*8mm/W*15mm/L, 引線為Φ0.3, 加TFL接於PIN1.
5. 研磨磁芯置於變壓器頂部, CORE TAPE:19mm/W*2TS(切口在側面).
6. 磁芯與磁芯結合處及磁芯與BOBBIN結合處, 共點膠五點固定(如圖所示).
7. 標籤貼於頂部, 字腳朝向PIN1-6側(如圖所示).

APPROVED BY	CHECKED BY	DRAWING BY
林宗財	丁俊德	張娟溪

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

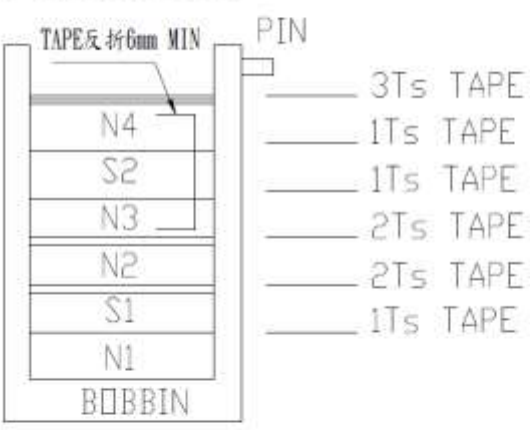
SHEET: 2 OF 4

CUSTOMER: 冠 碩 MODEL: PQ-2620-12

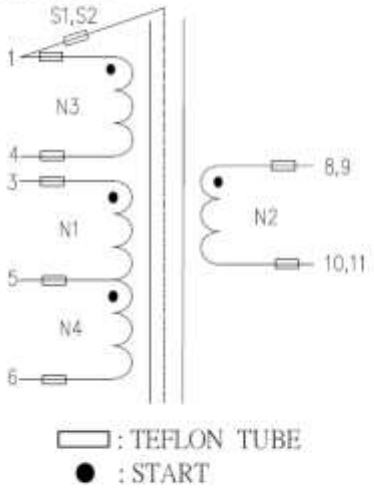
PART NO: G09-PQ26203-M100 OUR P/N:

REVISION: A ISSUE DATE: 2011-02-14

2. CONSTRUCTIONS:



3. SCHEMATIC:



4. WINDING DATA:

WINDING	WIRE SIZE	START	FINISH	TURNS	UL TAPE	TEFLON		NOTE
						ST	FI	
N1	2UEW Φ0.4mm*2P	3	5	18TS	1TS	V	V	
S1	0.025mm/T*8mm/W	1	-	1TS	2TS	V		
N2	TRW(B) Φ0.8mm*2P	8,9	11,12	4TS	2TS	V	V	
N3	2UEW Φ0.16mm*2P	1	4	5TS	1TS	V	V	疏繞
S2	0.025mm/T*8mm/W	1	-	1TS	1TS	V		
N4	2UEW Φ0.4mm*2P	5	6	18TS	3TS	V	V	

NOTE：

1. S1,S2銅箔須背膠,引線為Φ0.3mm.
2. 靠底部繞N3是需貼一塊膠帶,待N4繞完後反折6mm MIN.

APPROVED BY	CHECKED BY	DRAWING BY
林宗財	丁俊德	張娟溪

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

SHEET: 3 OF 4

CUSTOMER: 冠 碩 MODEL: PQ-2620-12

PART NO: G09-PQ26203-M100 OUR P/N:

REVISION: A ISSUE DATE: 2011-02-14

5. ELECTRICAL CHARACTERISTICS:(AT20℃ 65±5%RH)

(1). INDUCTANCE: AT 1KHz 0.25V
L(3-6): 670uH-730uH

(2). LEAKAGE INDUCTANCE: AT 60KHz 0.25V
LK(3-6): uH MAX (SEC SHORT)

(3). DC TESISTANCE:
DCR(3-6):195mΩ MAX
DCR(PIN1-CORE):50kΩ MAX

(4). HI-POT TEST :AC 50Hz OR 60Hz 5mA 3SEC
PRI -- SEC:3000V
SEC -- CORE:1500V
PRI -- CORE:1500V

(5). INSULATION RESISTANCE: DC500V
PRI--SEC: 100M OHMS MIN
SEC--CORE: 100M OHMS MIN
PRE--CORE: 100M OHMS MIN

APPROVED BY	CHECKED BY	DRAWING BY
林宗財	丁俊德	張娟溪

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

SHEET: 4 OF 4

CUSTOMER: 冠 碩 MODEL: PQ-2620-12

PART NO: G09-PQ26203-M100 OUR P/N:

REVISION: A ISSUE DATE: 2011-02-14

6. MATERIAL LIST:

NO	ITEM	MATERIAL	SUPPLIER	UL FILE NO
1	BOBBIN	PHENOLICS T375J 94V-0 150℃	CHANG CHUN PLASTICS CO.,LTD	E59481(S)
2	CORE	M2.3K	HAO BO ELECTRONICSSCIENE&TECHNILOGY CO.,LTD	-
		SSP-44	SHANGPENG	-
		PF-2L	CWGC	-
		3F3	FEROCXCUBE	-
		JF2	SPINEL	-
3	MAGNET WIRE	DD-NYU Polyurethane MW75 130℃	PACIFC-THAI ELECTRILWIRE&CADLE CO.,LTD	E84081
		TRW(B)	GREAT LEOFON INDUSTRIAL CO LTD	E211989
4	TAPE	CAT NO 1350-1 130℃	3M COMPANY ELECTRICAL MARKETS DIV (EMI)	E17385
		#PZ-280 130℃	HUIZHOU YAHUA STICKING TAPE CO.,LTD	E165111
		CAT NO 35660	SYMBIO INC	E50292(S)
5	COPPER	0.025mm/T	DONGGUAN ZHONGCHI METAL PRODUCT CO.,LTD	-
6	SLEEVING	TFL 200℃	GREAT HOLDING INDUSTRIAL CO.,LTD	E156256
7	VARNISH	V1380FC /1360FS	P D GEORGE	E75225
8	EPOXY	3300A/B	SUZHOU EATTO ELECTRONIC MATERIAL CO.LTD	E218090

APPROVED BY	CHECKED BY	DRAWING BY
林宗財	丁俊德	張娟溪

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

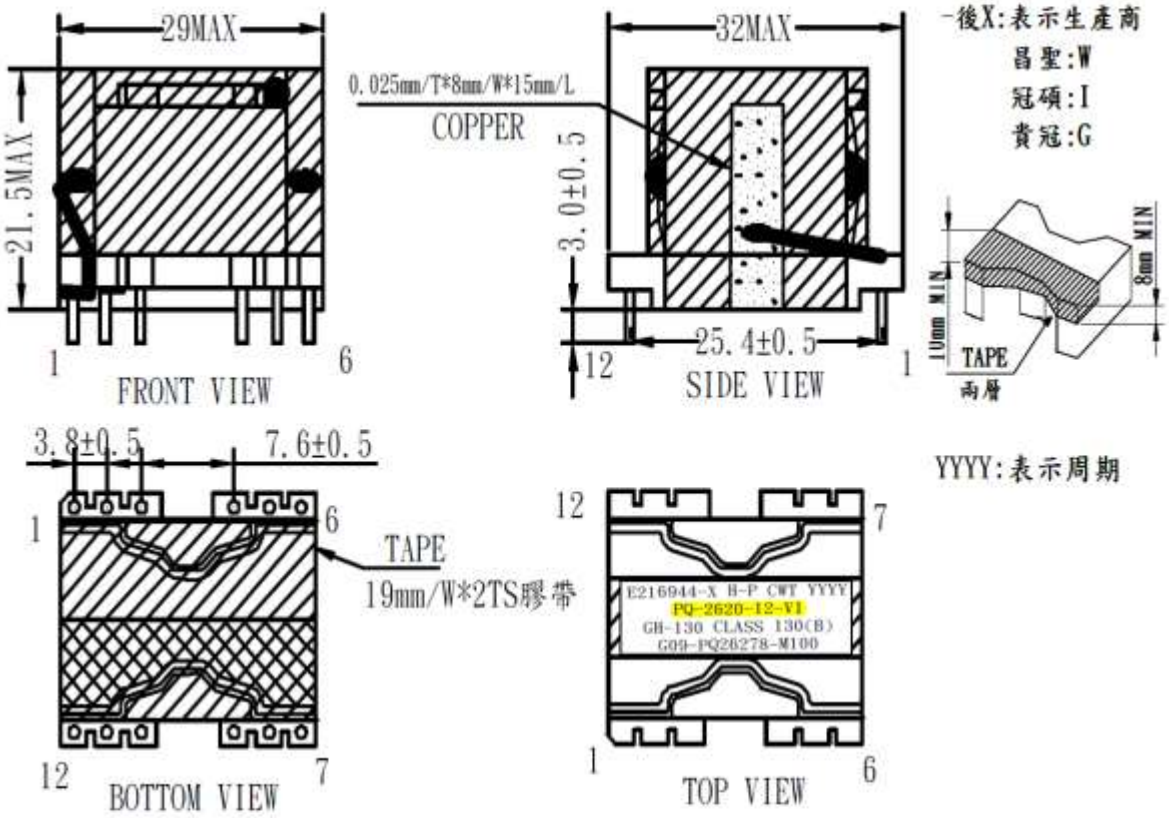
SHEET: 3 OF 6

CUSTOMER: 貴冠 TYPE: PQ-2620

PART NO: G09-PQ26278-M100 OUR P/N:

REVISION: A ISSUE DATE: 2015.5.12

1. MECHANICAL DIMENSIONS: (UNIT :mm)



NOTE:

1. PIN2, 7, 10 NO. PIN5 CUT OFF1/2.
2. 底部磁芯加工PIN7-12(如圖所示).
3. 所有出入線需加TFL套管.
4. 側面貼自粘銅箔0.025mm/T*8mm/W*15mm/L, 引線為Φ0.3, 加TFL接於PIN1.
5. 研磨磁芯置於變壓器頂部, CORE TAPE:19mm/W*2TS(切口在側面), 成品用15mm胶带沿線包方向包2TS.
6. 磁芯與磁芯結合處及磁芯與BOBBIN結合處, 共點膠五點固定(如圖所示).
7. 標籤貼於頂部, 字腳朝向PIN1-6側(如圖所示).

APPROVED BY	CHECKED BY	DRAWING BY
李俊良	彭小平	彭小平

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

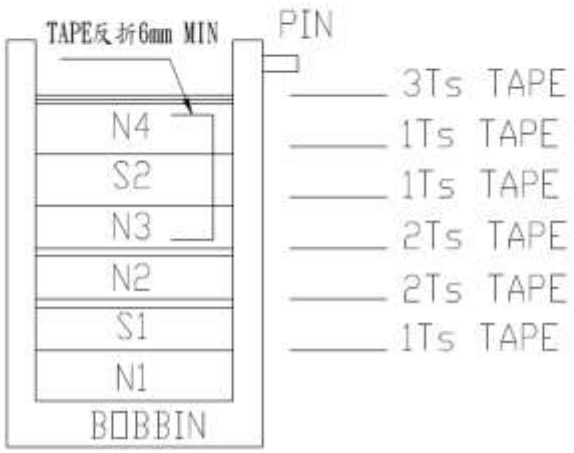
SHEET: 4 OF 6

CUSTOMER: 貴冠 TYPE: PQ-2620

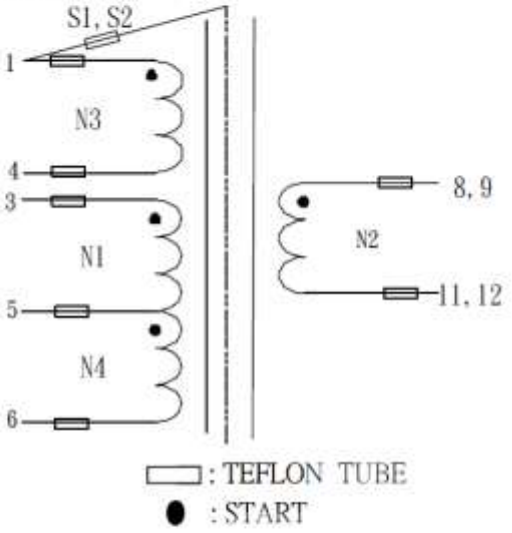
PART NO: G09-PQ26278-M100 OUR P/N:

REVISION: A ISSUE DATE: 2015.5.12

2. CONSTRUCTIONS:



3. SCHEMATIC:



4. WINDING DATA:

WINDING	WIRE SIZE	START	FINISH	TURNS	UL TAPE	TEFLON		NOTE
						ST	FI	
N1	丝包线 Φ0.1mm*25P	3	5	24TS	1TS	V	V	
S1	0.025mm/T*8mm/W	1	-	1TS	2TS	V		
N2	TRW(B) Φ0.8mm*2P	8,9	11,12	4TS	2TS	V	V	
N3	2UEW Φ0.16mm*2P	1	4	5TS	1TS	V	V	疏繞
S2	0.025mm/T*8mm/W	1	-	1TS	1TS	V		
N4	丝包线 Φ0.1mm*25P	5	6	11TS	3TS	V	V	

NOTE :

1. S1, S2銅箔須背膠, 引線為Φ0.3mm.
2. 靠底部繞N3是需貼一塊膠帶, 待N4繞完後反折6mm MIN.

APPROVED BY	CHECKED BY	DRAWING BY
李俊良	彭小平	彭小平

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

SHEET: 5 OF 6

CUSTOMER: 貴冠 TYPE: PQ-2620

PART NO: G09-PQ26278-M100 OUR P/N:

REVISION: A ISSUE DATE: 2015.5.12

5. ELECTRICAL CHARACTERISTICS:(AT20℃ 65±5%RH)

(1). INDUCTANCE: AT 10KHz 1.0V
L(3-6): 650uH +/- 5%

(2). LEAKAGE INDUCTANCE: AT 60KHz 0.25V
LK(3-6):12uH MAX (SEC SHORT)

(3). DC TESISTANCE:
DCR(3-6):195mΩ MAX
DCR(PIN1-CORE):50kΩ MAX

(4). HI-POT TEST :AC 50Hz OR 60Hz 5mA 3SEC
PRI -- SEC:3000V
SEC -- CORE:1500V
PRI -- CORE:1500V

(5). INSULATION RESISTANCE: DC500V
PRI--SEC: 100M OHMS MIN
SEC--CORE: 100M OHMS MIN
PRE--CORE: 100M OHMS MIN

APPROVED BY	CHECKED BY	DRAWING BY
李俊良	彭小平	彭小平

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

SHEET: 6 OF 6

CUSTOMER: 貴冠 TYPE: PQ-2620

PART NO: G09-PQ26278-M100 OUR P/N:

REVISION: A ISSUE DATE: 2015.5.12

6. MATERIAL LIST:

NO	ITEM	MATERIAL	SUPPLIER	UL FILE NO
1	BOBBIN	PHENOLICS T375J 94V-0 150℃	CHANG CHUN PLASTICS CO.,LTD	E59481(S)
2	CORE	M2.3K	HAO BO ELECTRONICSSCIENE&TECHNILOGY CO.,LTD	-
		SSP-44	SHANGPENG	-
		PF-2L	CWGC	-
		3F3	FEROCXCUBE	-
		JF2	SPINEL	-
3	MAGNET WIRE	DD-NYU Polyurethane MW75 130℃	PACIFC-THAI ELECTRILWIRE&CADLE CO.,LTD	E84081
		2UEW 130℃	SHENZHEN CHENGWEI INDUSTRY CO LTD	E227475
		TRW(B)	GREAT LEOFON INDUSTRIAL CO LTD	E211989
4	TAPE	CAT NO 1350-1 130℃	3M COMPANY ELECTRICAL MARKETS DIV (EMI)	E17385
		#PZ-280 130℃	HUIZHOU YAHUA STICKING TAPE CO.,LTD	E165111
		CAT NO 35660	SYMBIO INC	E50292(S)
5	COPPER	0.025mm/T	DONGGUAN ZHONGCHI METAL PRODUCT CO.,LTD	-
6	SLEEVING	TFL 200℃	GREAT HOLDING INDUSTRIAL CO.,LTD	E156256
7	VARNISH	V1380FC /1360FS	P D GEORGE	E75225
8	EPOXY	3300A/B	SUZHOU EATTO ELECTRONIC MATERIAL CO.LTD	E218090

APPROVED BY	CHECKED BY	DRAWING BY
李俊良	彭小平	彭小平

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

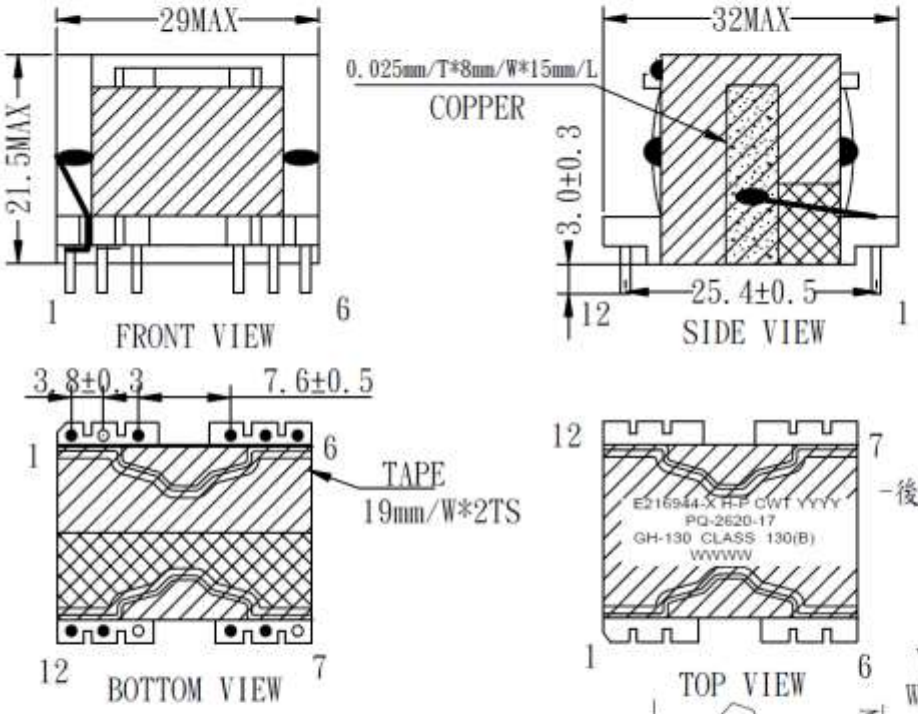
SHEET: 1 OF 4

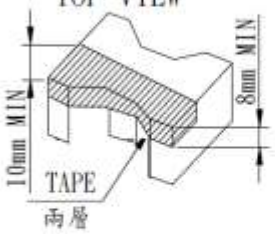
CUSTOMER: 冠 碩 MODEL: PQ-2620-17

PART NO: G09-PQ26205-M100 OUR P/N:

REVISION: A ISSUE DATE: 2011-02-14

1. MECHANICAL DIMENSIONS: (UNIT : mm)





NOTE:

1. PIN2, 7, 10 NO, PIN5 CUT OFF1/2.
2. 底部磁芯加工兩層TAPE, 放置PIN7-12(如圖所示).
3. 所有出入線需加TFL套管.
4. 側面貼自粘銅箔0.025mm/T*8mm/W*15mm/L, 引線為Φ0.3, 加TFL接於PIN1.
5. 研磨磁芯置於變壓器頂部, CORE TAPE:19mm/W*2TS(切口在側面).
6. 磁芯與磁芯結合處及磁芯與BOBBIN結合處, 共點膠五點固定(如圖所示).
7. 標籤貼於頂部, 字腳朝向PIN1-6側(如圖所示).

APPROVED BY	CHECKED BY	DRAWING BY
林宗財	丁俊德	張娟溪

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

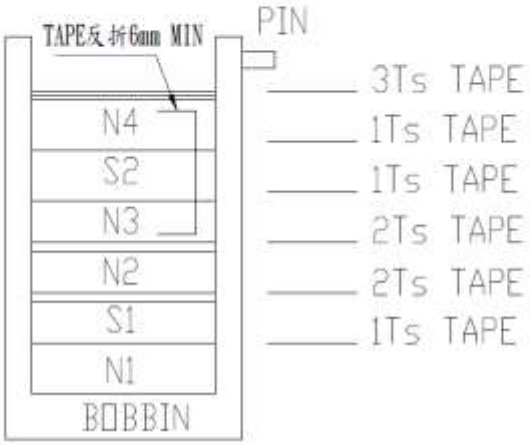
SHEET: 2 OF 4

CUSTOMER: 冠 碩 MODEL: PQ-2620-17

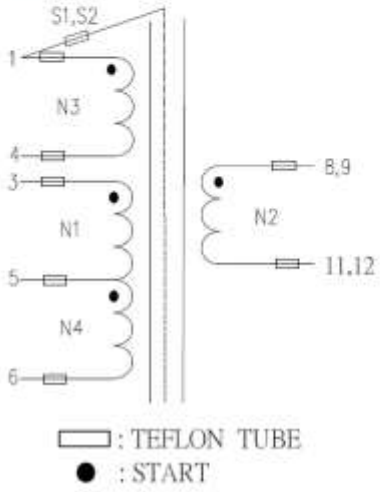
PART NO: G09-PQ26205-M100 OUR P/N:

REVISION: A ISSUE DATE: 2011-02-14

2. CONSTRUCTIONS:



3. SCHEMATIC:



4. WINDING DATA:

WINDING	WIRE SIZE	START	FINISH	TURNS	UL TAPE	TEFLON		NOTE
						ST	FI	
N1	2UEW Φ0.4mm*2P	3	5	20TS	1TS	V	V	
S1	0.025mm/T*8mm/W	1	-	1TS	2TS	V		
N2	TRW(B) Φ1.0mm	8,9	11,12	7TS	2TS	V	V	
N3	2UEW Φ0.16mm*2P	1	4	5TS	1TS	V	V	疏繞
S2	0.025mm/T*8mm/W	1	-	1TS	1TS	V		
N4	2UEW Φ0.4mm*2P	5	6	20TS	3TS	V	V	

NOTE :

1. S1, S2銅箔須背膠, 引線為Φ0.3mm.
2. 靠底部繞N3是需貼一塊膠帶, 待N4繞完後反折6mm MIN.

APPROVED BY	CHECKED BY	DRAWING BY
林宗財	丁俊德	張娟溪

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

SHEET: 3 OF 4

CUSTOMER: 冠 碩 MODEL: PQ-2620-17

PART NO: G09-PQ26205-M100 OUR P/N:

REVISION: A ISSUE DATE: 2011-02-14

5. ELECTRICAL CHARACTERISTICS:(AT20℃ 65±5%RH)

(1). INDUCTANCE: AT 1KHz 0.25V
L(3-6): 0.85mH±4%

(2). LEAKAGE INDUCTANCE: AT 60KHz 0.25V
LK(3-6): uH MAX (SEC SHORT)

(3). DC TESISTANCE:
DCR(3-6):200mΩ MAX
DCR(PIN1-CORE):50kΩ MAX

(4). HI-POT TEST :AC 50Hz OR 60Hz 5mA 3SEC
PRI -- SEC:3000V
SEC -- CORE:1500V
PRI -- CORE:1500V

(5). INSULATION RESISTANCE: DC500V
PRI--SEC: 100M OHMS MIN
SEC--CORE: 100M OHMS MIN
PRI--CORE: 100M OHMS MIN

APPROVED BY	CHECKED BY	DRAWING BY
林宗財	丁俊德	張娟溪

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

SHEET: 4 OF 4

CUSTOMER: 冠 碩 MODEL: PQ-2620-17

PART NO: G09-PQ26205-M100 OUR P/N:

REVISION: A ISSUE DATE: 2011-02-14

6. MATERIAL LIST:

NO	ITEM	MATERIAL	SUPPLIER	UL FILE NO
1	BOBBIN	PHENOLICS T375J 94V-0 150℃	CHANG CHUN PLASTICS CO.,LTD	E59481(S)
2	CORE	M2.3K	HAO BO	-
		SSP-44	SHANGPENG	-
		PF-2L	CWGC	-
		3F3	FEROCXCUBE	
		JF2	SPINEL	-
3	MAGNET WIRE	DD-NYU Polyurethane MW75 130℃	PACIFC-THAI ELECTRILWIRE&CADLE CO.,LTD	E84081
		TRW(B)	GREAT LEOFON INDUSTRIAL CO LTD	E211989
4	TAPE	CAT NO 1350-1 130℃	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	E17385
		#PZ-280 130℃	HUIZHOU YAHUA STICKING TAPE CO.,LTD	E165111
		CAT NO 35660	SYMBIO INC	E50292(S)
5	COPPER	0.025mm/T	DONGGUAN ZHONGCHI METAL PRODUCT CO.,LTD	-
6	SLEEVING	TFL 200℃	GREAT HOLDING INDUSTRIAL CO.,LTD	E156256
7	VARNISH	V1380FC /1360FS	P D GEORGE	E75225
8	EPOXY	3300A/B	SUZHOU EATTO ELECTRONIC MATERIAL CO.LTD	E218090

APPROVED BY	CHECKED BY	DRAWING BY
林宗財	丁俊德	張娟溪

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

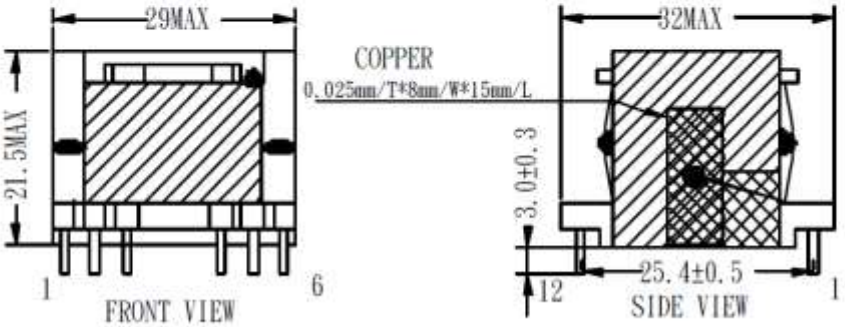
SHEET: 3 OF 6

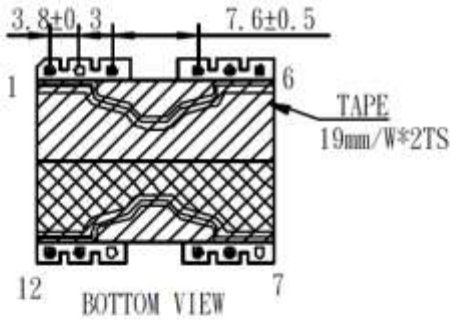
CUSTOMER: 貴冠 TYPE: PQ-2620

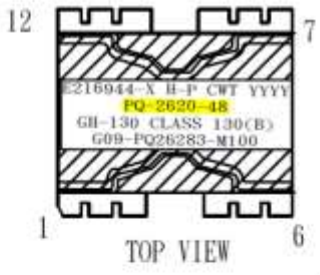
PART NO: G09-PQ26283-M100 OUR P/N:

REVISION: A ISSUE DATE: 2015.05.12

1. MECHANICAL DIMENSIONS: (UNIT :mm)







後X:表示生產商

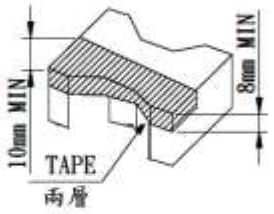
昌聖:W

冠碩:I

貴冠:G

YYYY:表示周期

WWWW:表示料號



NOTE:

1. PIN2, 7, 10 NO. PIN5 CUT OFF1/2.
2. 底部磁芯加工兩層TAPE, 放置PIN7-12(如圖所示).
3. 所有出入線需加TFL套管.
4. 側面貼自粘銅箔0.025mm/T*8mm/W*15mm/L, 引線為Φ0.3, 加TFL接於PIN1.
5. 研磨磁芯置於變壓器頂部, CORE TAPE:19mm/W*2TS(切口在側面).
6. 磁芯與磁芯結合處及磁芯與BOBBIN結合處, 共點膠五點固定(如圖所示).
7. 標籤貼於頂部, 字腳朝向PIN1-6側(如圖所示).

APPROVED BY	CHECKED BY	DRAWING BY
李俊良	楊景龍	張麗云

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

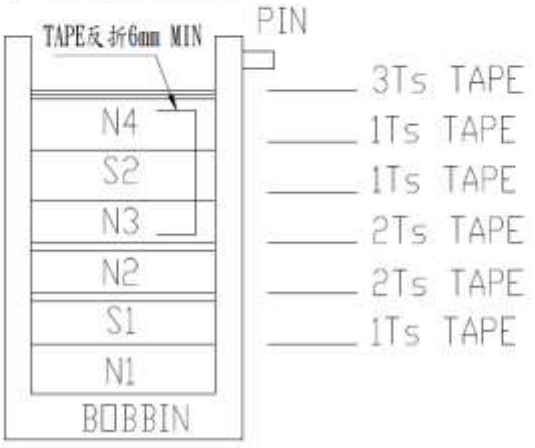
SHEET: 4 OF 6

CUSTOMER: 貴冠 TYPE: PQ-2620

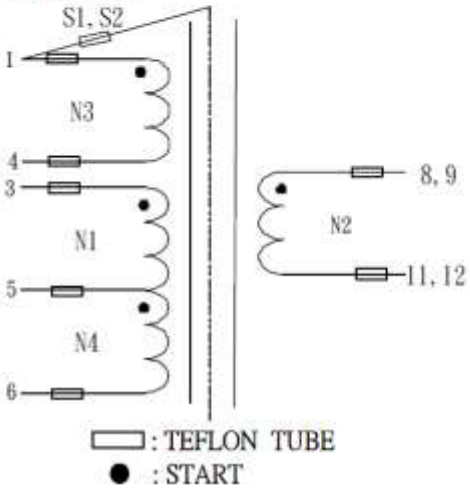
PART NO: G09-PQ26283-M100 OUR P/N:

REVISION: A ISSUE DATE: 2015.5.12

2. CONSTRUCTIONS:



3. SCHEMATIC:



4. WINDING DATA:

WINDING	WIRE SIZE	START	FINISH	TURNS	UL TAPE	TEFLON		NOTE
						ST	FI	
N1	2UEW Φ0.4mm*2P	3	5	20TS	1TS	V	V	
S1	0.025mm/T*8mm/W	1	-	1TS	2TS	V		
N2	TRW(B) Φ0.4mm*2P	8,9	11,12	14TS	2TS	V	V	
N3	2UEW Φ0.16mm*2P	1	4	5TS	1TS	V	V	疏繞
S2	0.025mm/T*8mm/W	1	-	1TS	1TS	V		
N4	2UEW Φ0.4mm*2P	5	6	20TS	3TS	V	V	

NOTE :

1. S1, S2銅箔須背膠, 引線為Φ0.3mm.
2. 靠底部繞N3是需貼一塊膠帶, 待N4繞完後反折6mm MIN.

APPROVED BY	CHECKED BY	DRAWING BY
李俊良	楊景龍	張麗云

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

SHEET: 5 OF 6

CUSTOMER: 貴冠 TYPE: PQ-2620

PART NO: G09-PQ26283-M100 OUR P/N:

REVISION: A ISSUE DATE: 2015.5.12

5. ELECTRICAL CHARACTERISTICS:(AT20℃ 65±5%RH)

(1). INDUCTANCE: AT 10KHz 0.25V
L(3-6): 0.85mH±5%

(2). LEAKAGE INDUCTANCE: AT 60KHz 0.25V
LK(3-6): 10 uH MAX (SEC SHORT)

(3). DC TESISTANCE:
DCR(3-6):200mΩ MAX
DCR(PIN1-CORE):50kΩ MAX

(4). HI-POT TEST :AC 50Hz OR 60Hz 5mA 3SEC
PRI -- SEC:3000V
SEC -- CORE:1500V
PRI -- CORE:1500V

(5). INSULATION RESISTANCE: DC500V
PRI--SEC: 100M OHMS MIN
SEC--CORE: 100M OHMS MIN
PRI--CORE: 100M OHMS MIN

APPROVED BY	CHECKED BY	DRAWING BY
李俊良	楊景龍	張麗云

Product: AC Adaptor

Type Designation: KPL-xy or KPL-xy=VI

SPECIFICATION FOR APPROVAL

SHEET: 6 OF 6

CUSTOMER: 貴冠 TYPE: PQ-2620

PART NO: G09-PQ26283-M100 OUR P/N:

REVISION: A ISSUE DATE: 2015.5.12

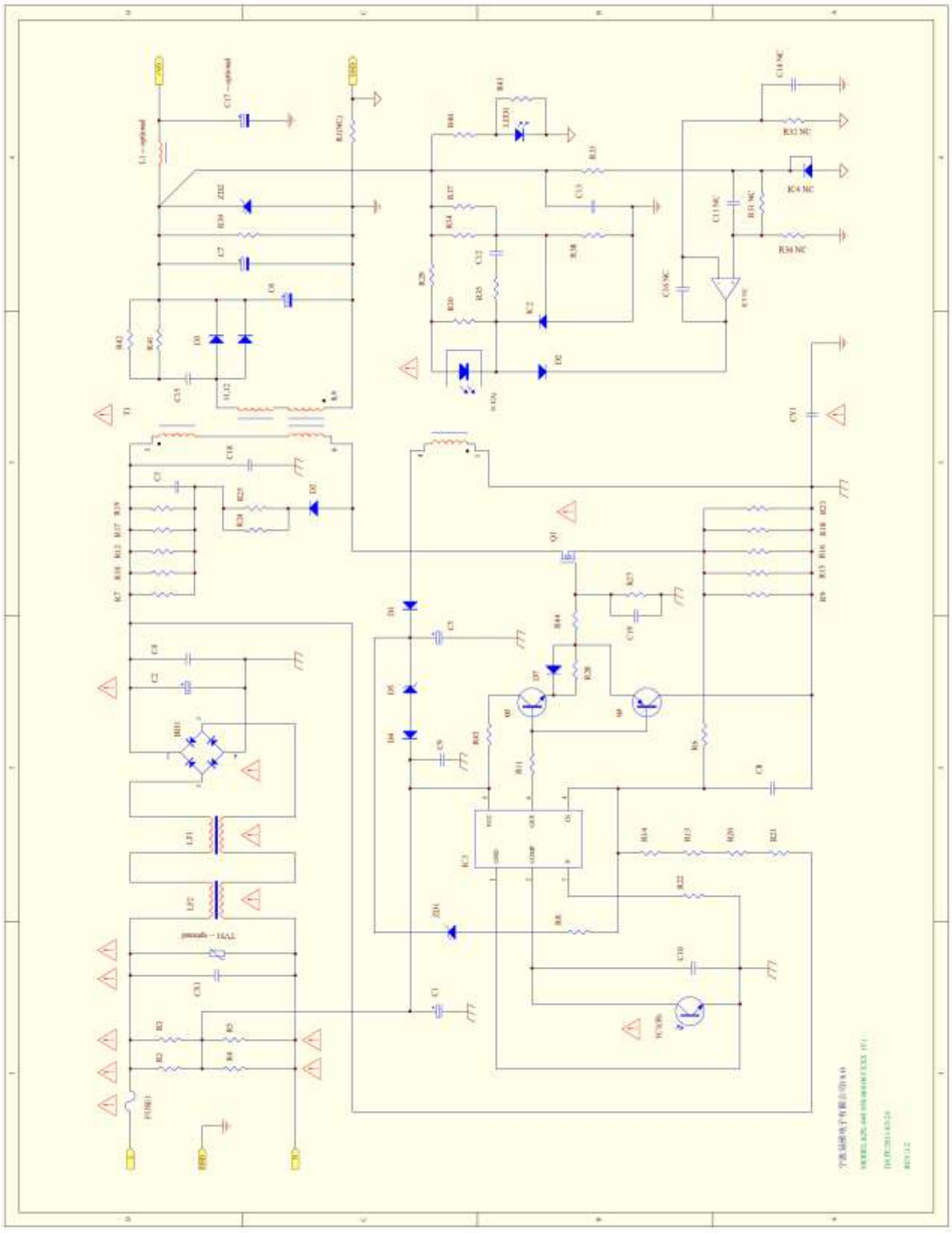
6. MATERIAL LIST:

NO	ITEM	MATERIAL	SUPPLIER	UL FILE NO
1	BOBBIN	PHENOLICS T375J 94V-0 150℃	CHANG CHUN PLASTICS CO.,LTD	E59481(S)
2	CORE	M2.3K	HAO BO	-
		SSP-44	SHANGPENG	-
		PF-2L	CWGC	-
		3F3	FEROCXCUBE	
		JF2	SPINEL	-
3	MAGNET WIRE	DD-NYU Polyurethane MW75 130℃	PACIFC-THAI ELECTRILWIRE&CADLE CO.,LTD	E84081
		2UEW 130℃	SHENZHEN CHENGWEI INDUSTRY CO LTD	E227475
		TRW(B)	GREAT LEOFON INDUSTRIAL CO LTD	E211989
4	TAPE	CAT NO 1350-1 130℃	3M COMPANY ELECTRICAL MARKETS DIV (EMI)	E17385
		#PZ-280 130℃	HUIZHOU YAHUA STICKING TAPE CO.,LTD	E165111
		CAT NO 35660	SYMBIO INC	E50292(S)
5	COPPER	0.025mm/T	DONGGUAN ZHONGCHI METAL PRODUCT CO.,LTD	-
6	SLEEVING	TFL 200℃	GREAT HOLDING INDUSTRIAL CO.,LTD	E156256
7	VARNISH	V1380FC /1360FS	P D GEORGE	E75225
8	EPOXY	3300A/B	SUZHOU EATTO ELECTRONIC MATERIAL CO.LTD	E218090

APPROVED BY	CHECKED BY	DRAWING BY
李俊良	楊景龍	張麗云

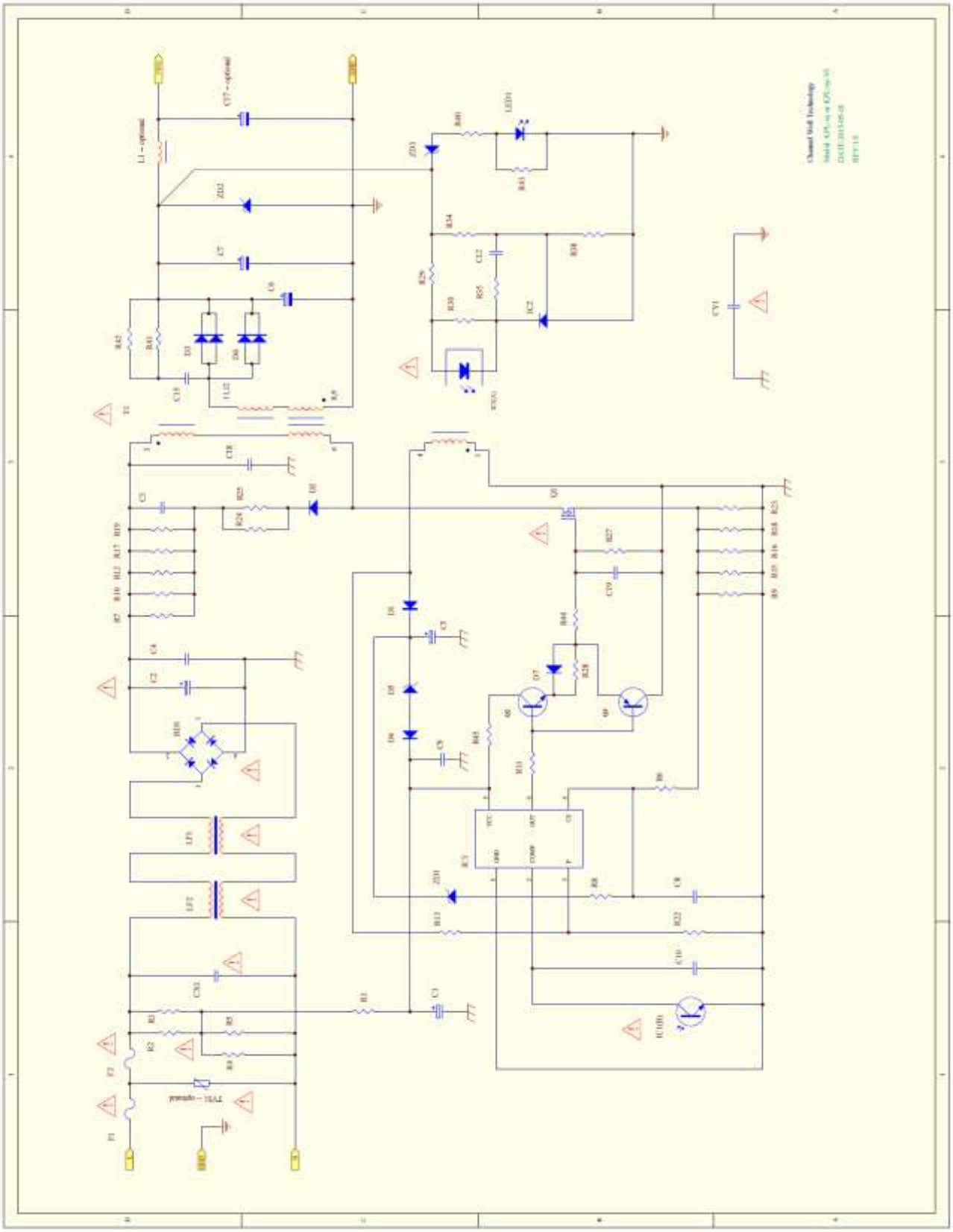
Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level V)



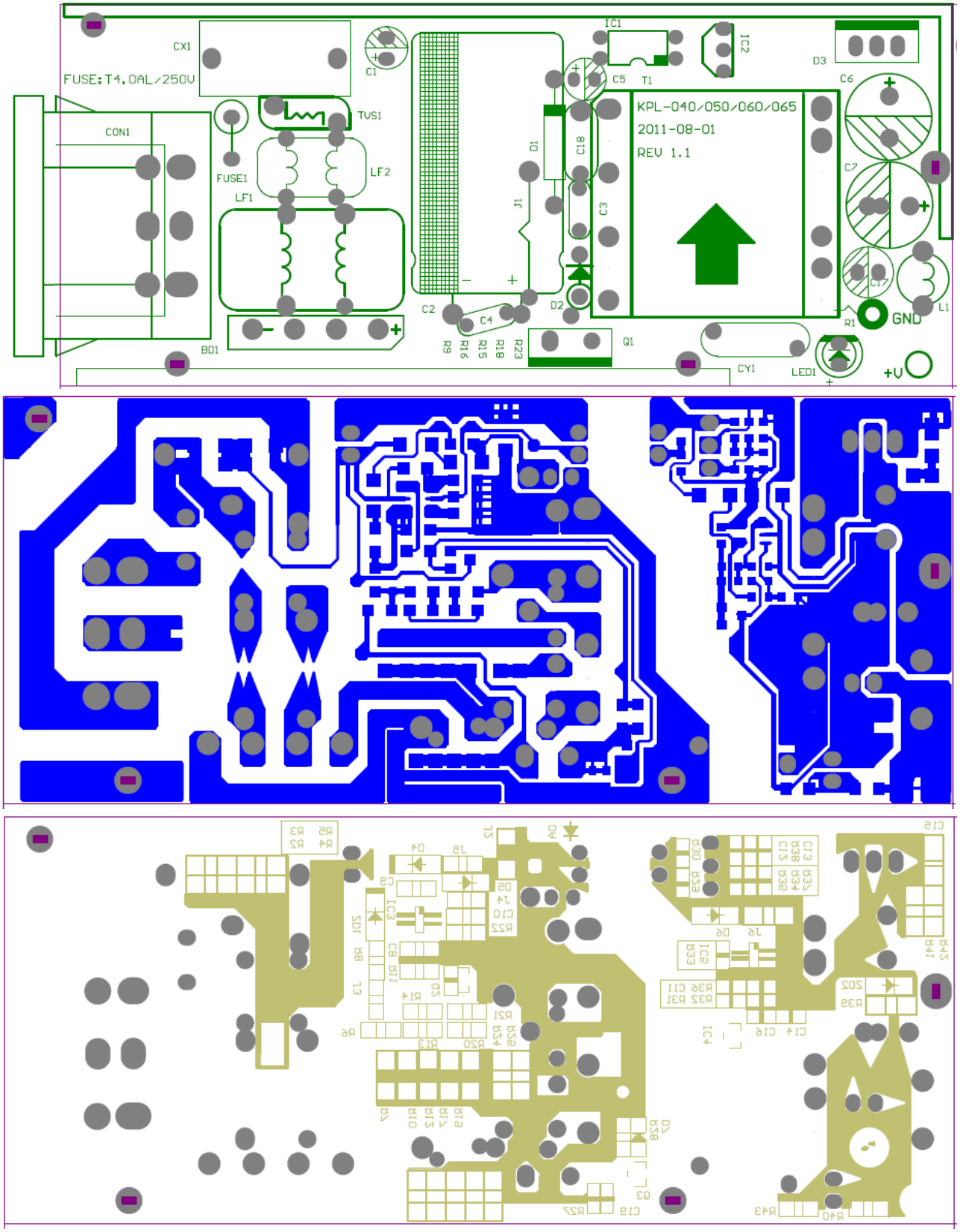
Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level VI) or KPL-xy-VI



Product: AC Adaptor

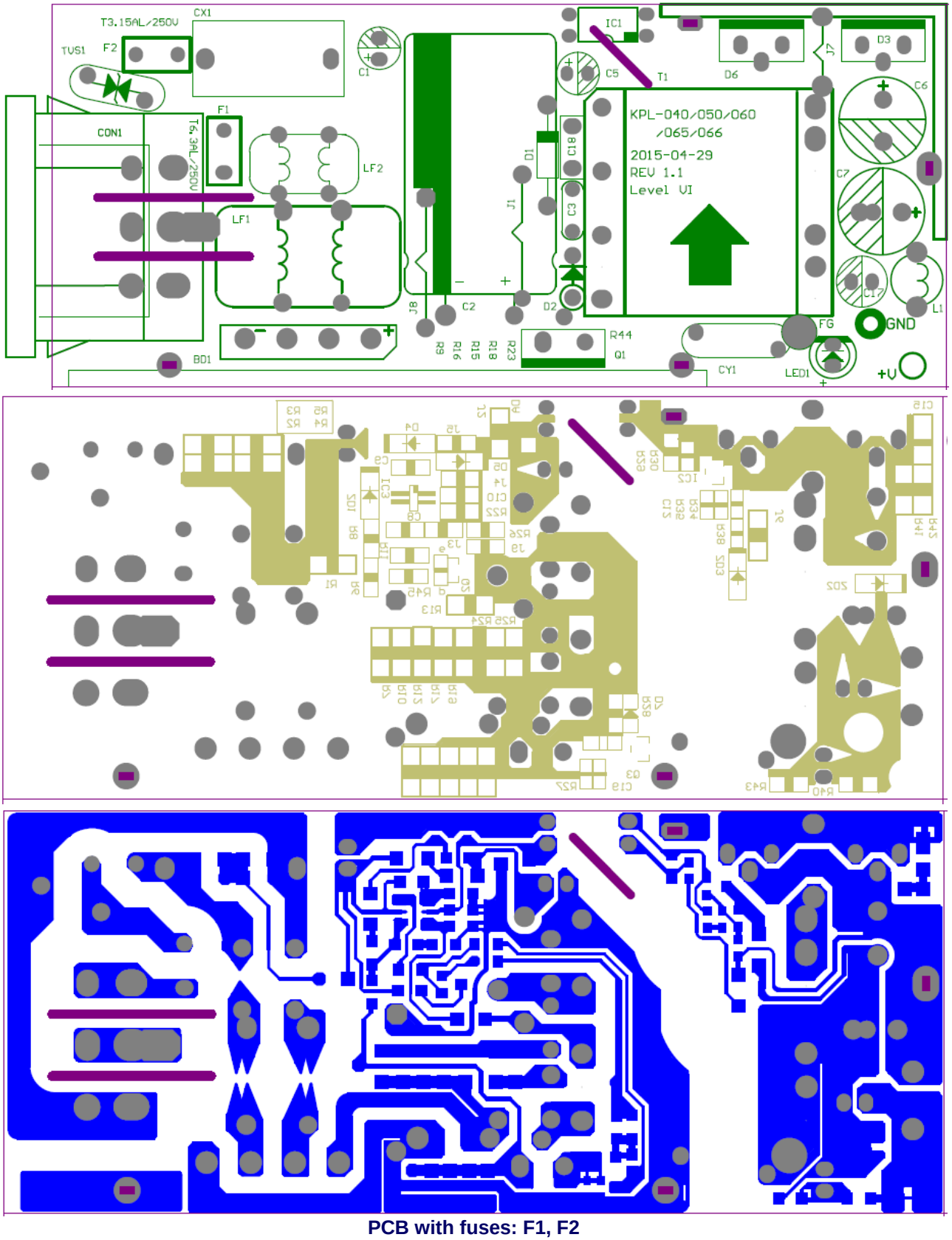
Type Designation: KPL-xy (Efficiency Level V)



PCB with fuse: FUSE1

Product: AC Adaptor

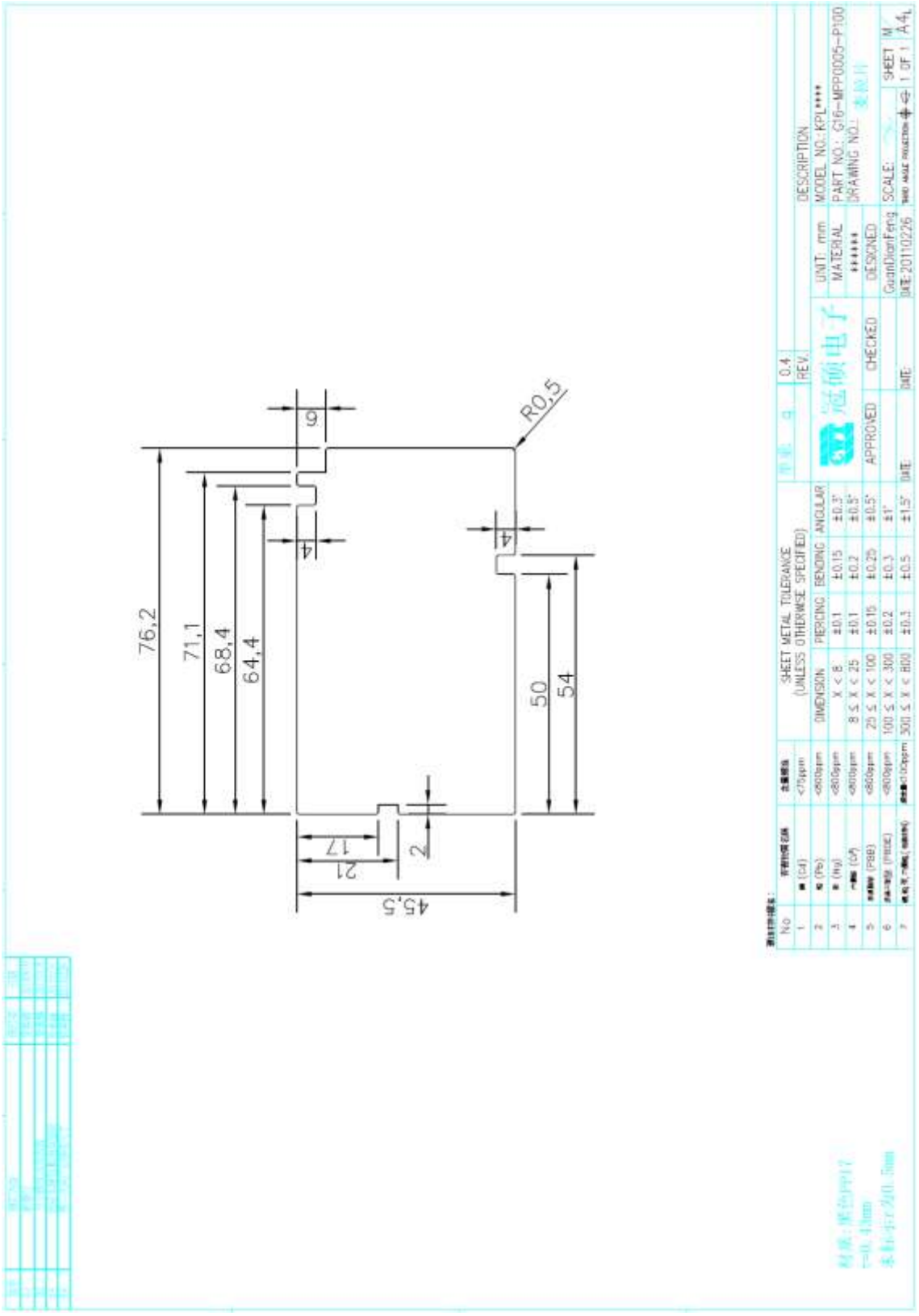
Type Designation: KPL-xy (Efficiency Level VI) or KPL-xy=VI



PCB with fuses: F1, F2

Product: AC Adaptor

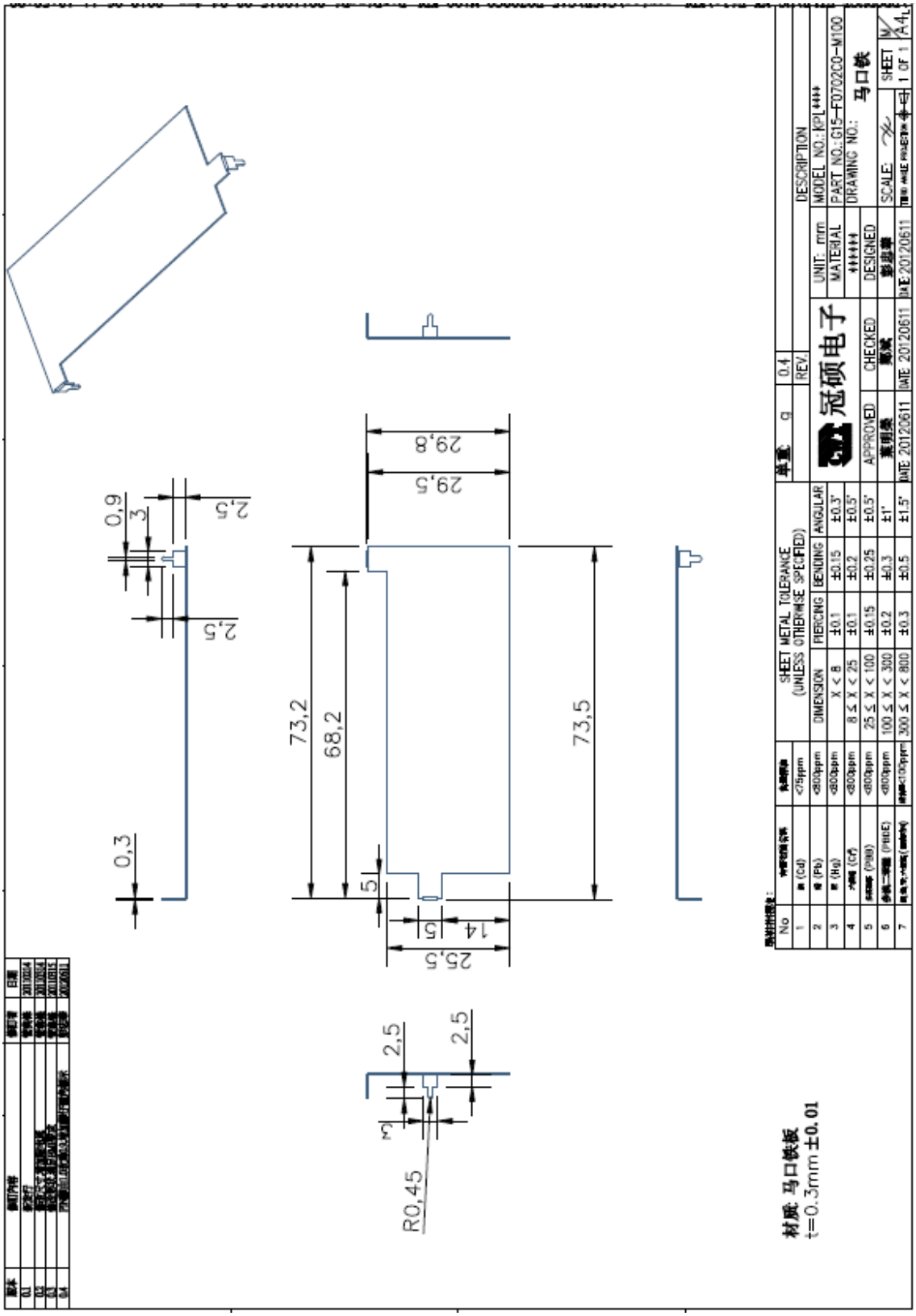
Type Designation: KPL-xy (Efficiency Level V)



Insulation sheet for PCB with fuse: FUSE1

Product: AC Adaptor

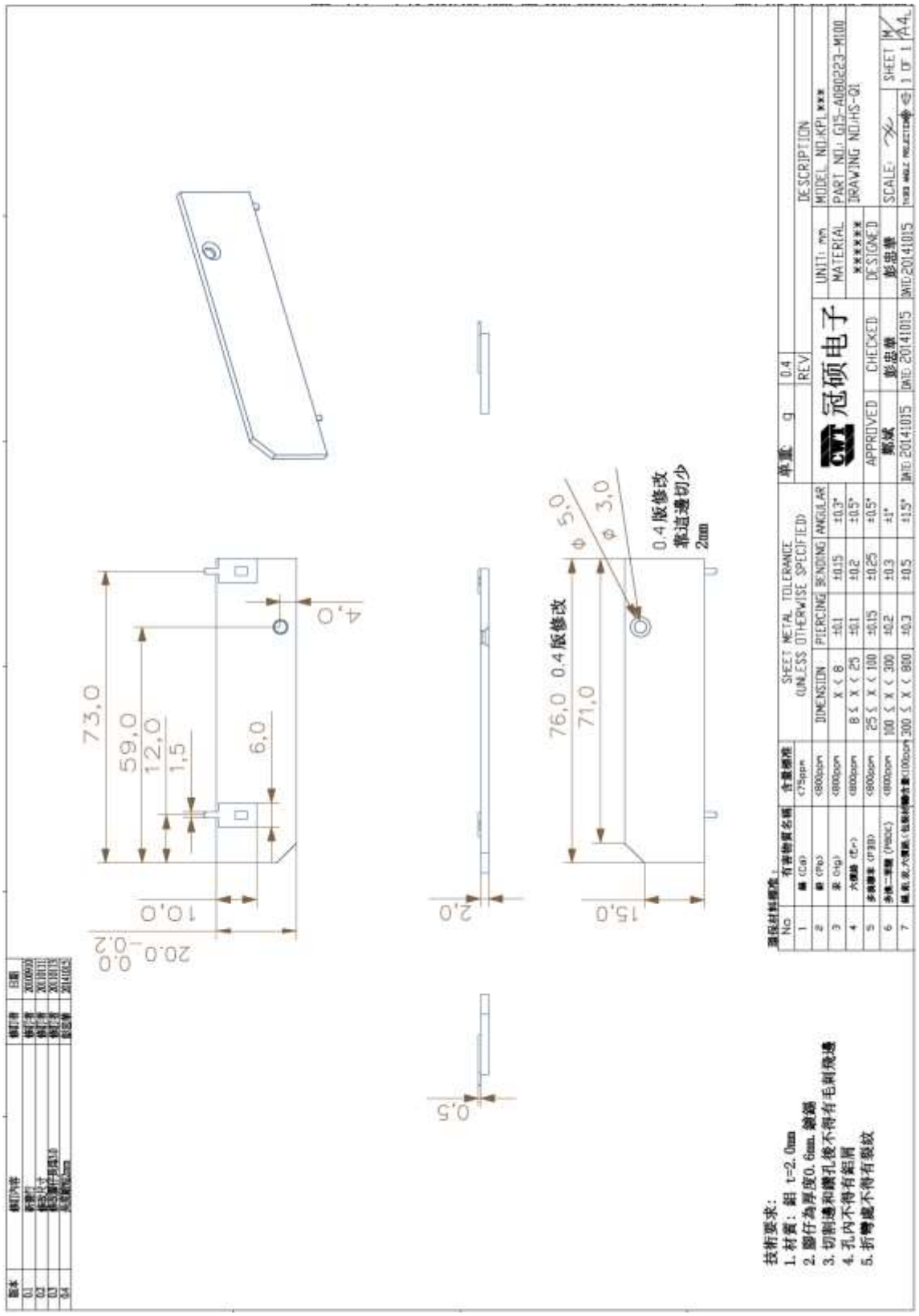
Type Designation: KPL-xy (Efficiency Level V)



EMI Shielding Plate for PCB with fuse: FUSE1

Product: AC Adaptor

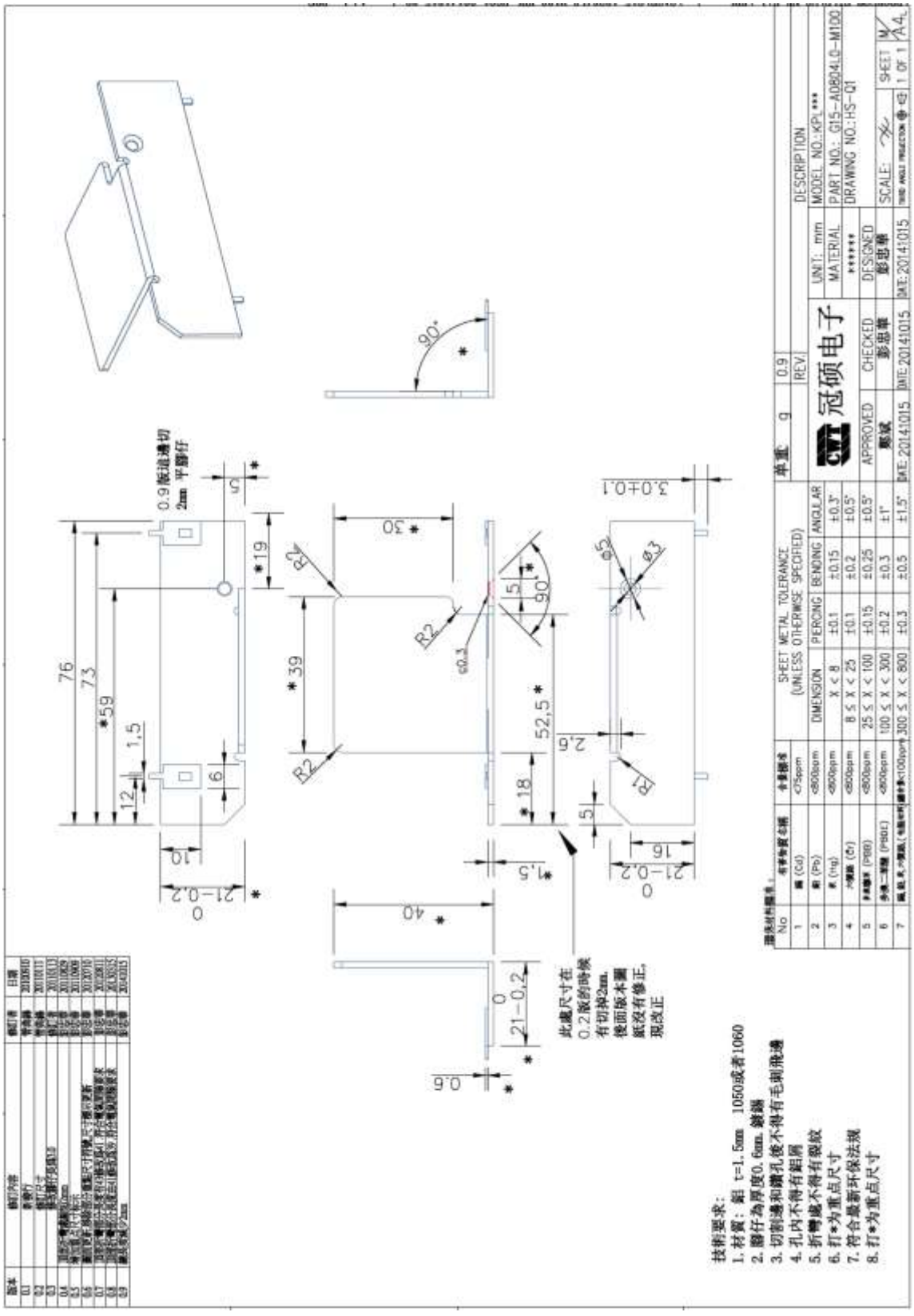
Type Designation: KPL-xy (Efficiency Level V)



Q1 Heatsink (for all models except x=65, 66; y=F)

Product: AC Adaptor

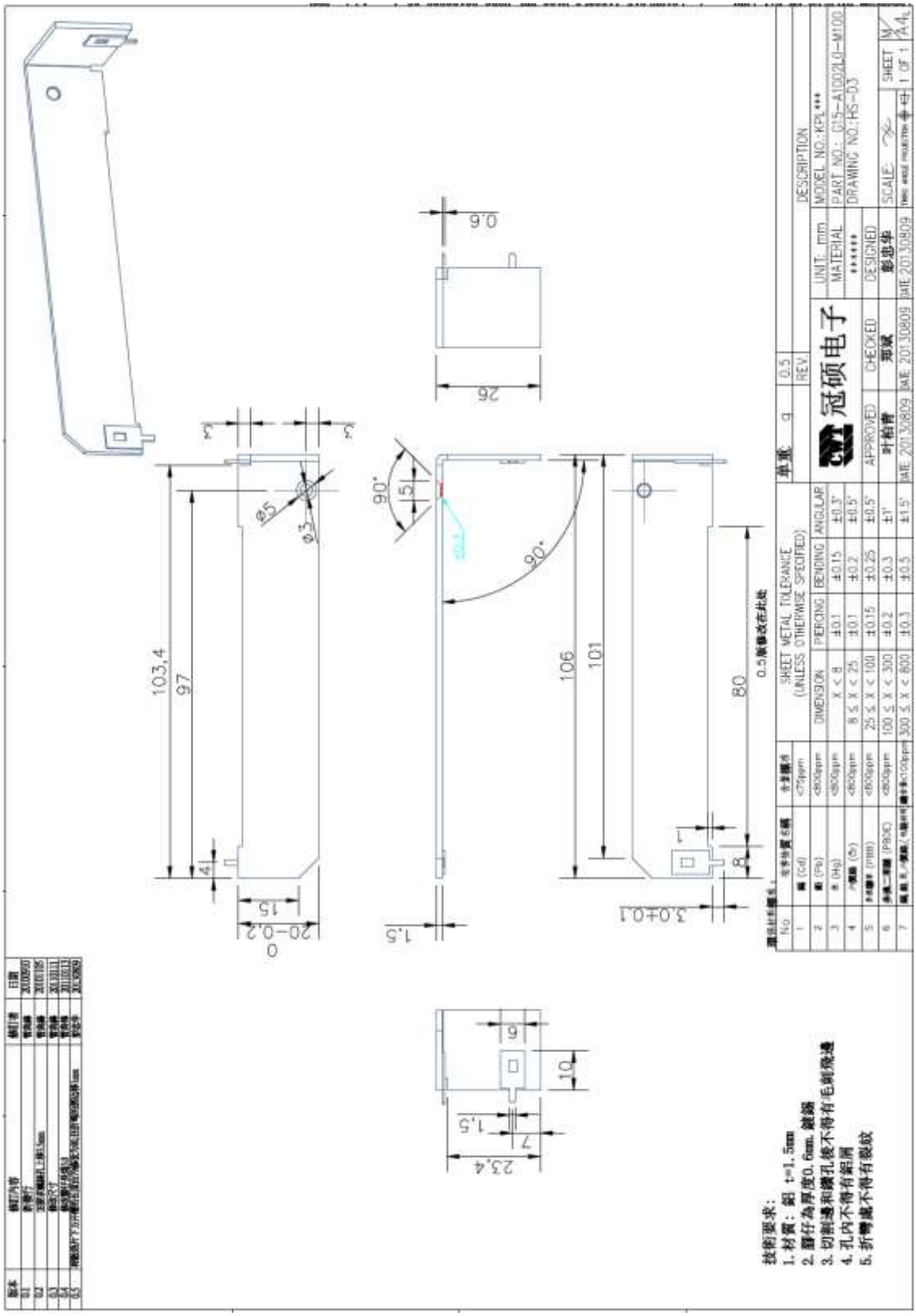
Type Designation: KPL-xy (Efficiency Level V)



Q1 Heatsink (for models x=65, 66; y=F)

Product: AC Adaptor

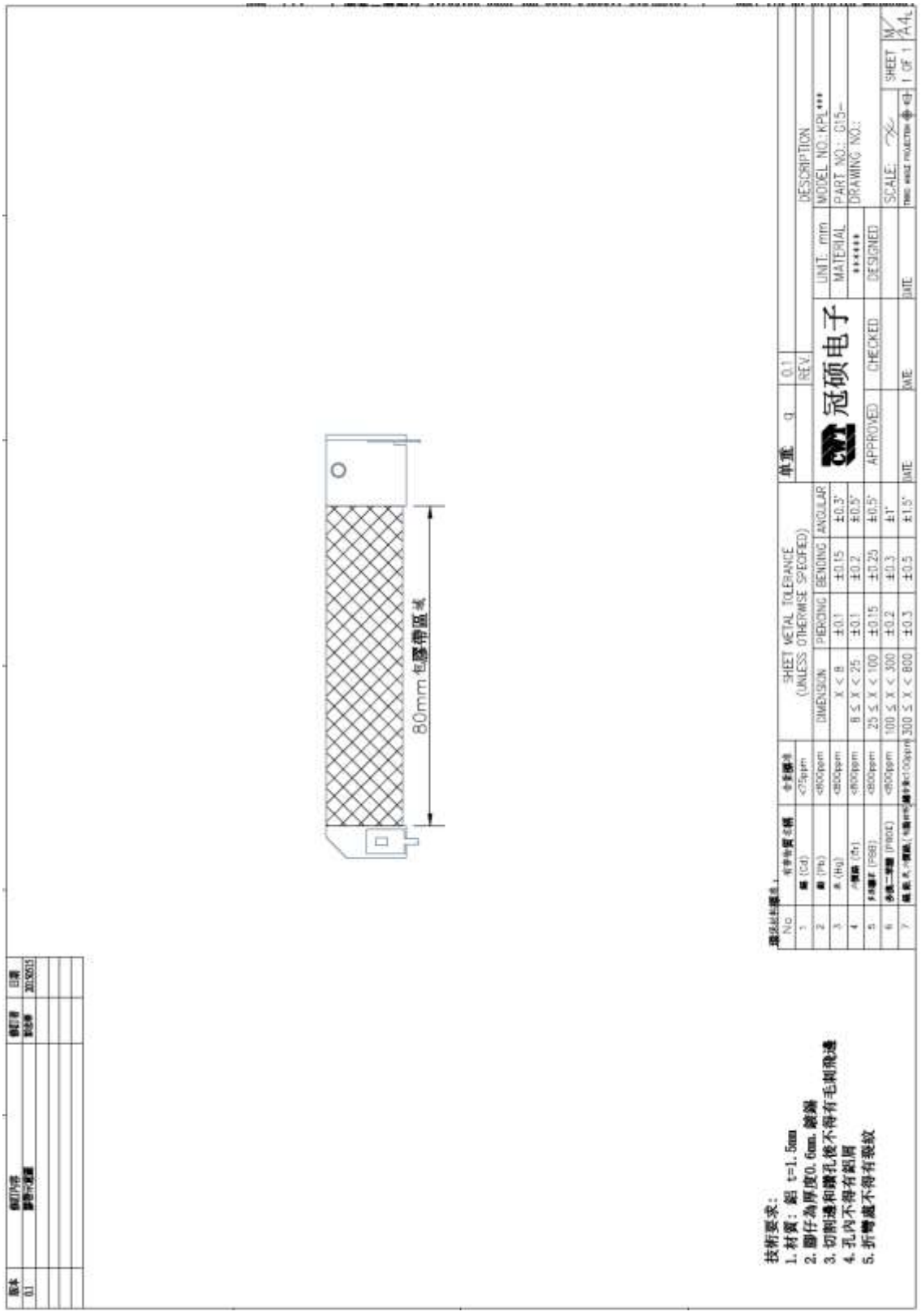
Type Designation: KPL-xy (Efficiency Level V)



D3 Heatsink for PCB with fuse: FUSE1

Product: AC Adaptor

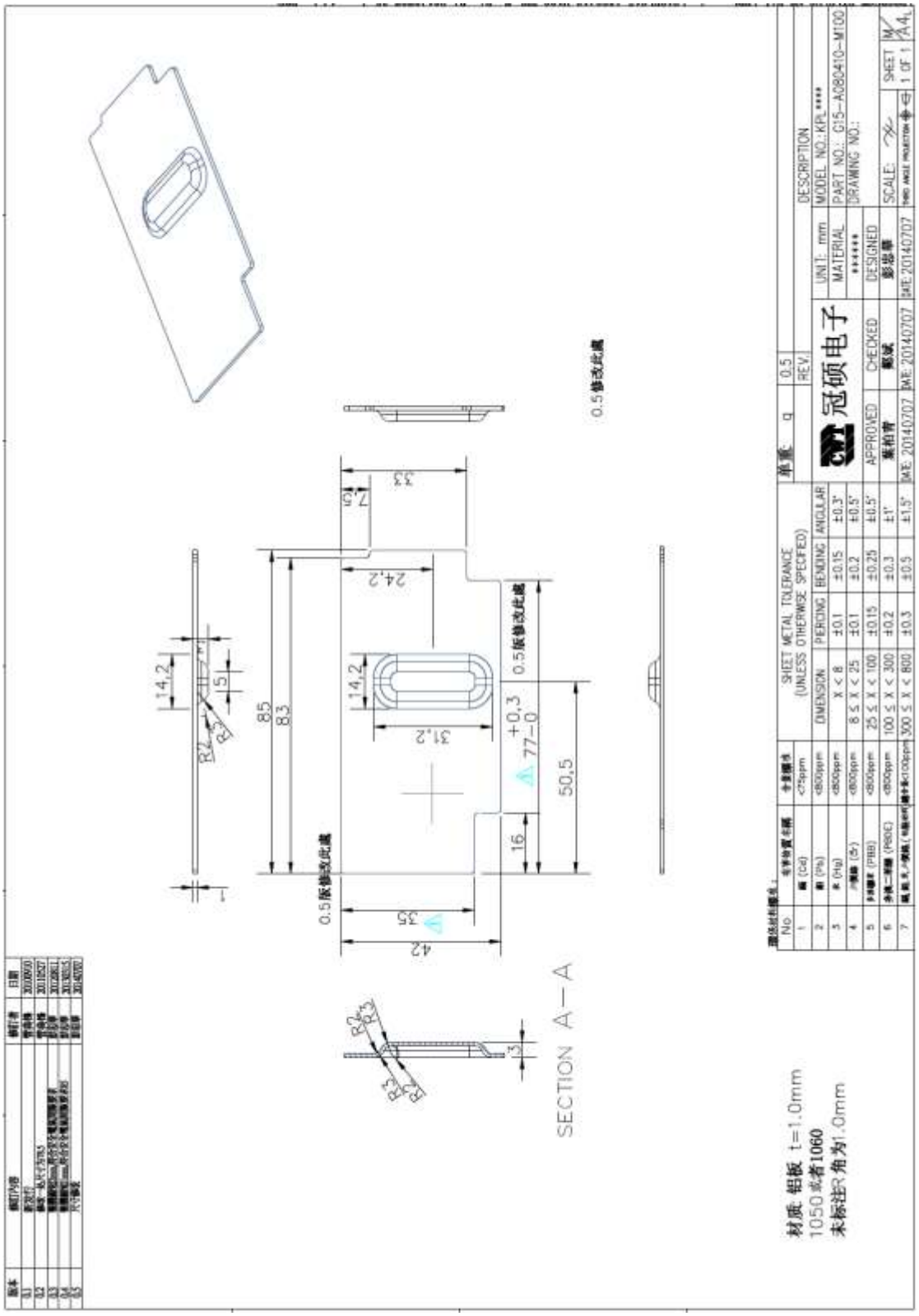
Type Designation: KPL-xy (Efficiency Level V)



D3 Heatsink for PCB with fuse: FUSE1

Product: AC Adaptor

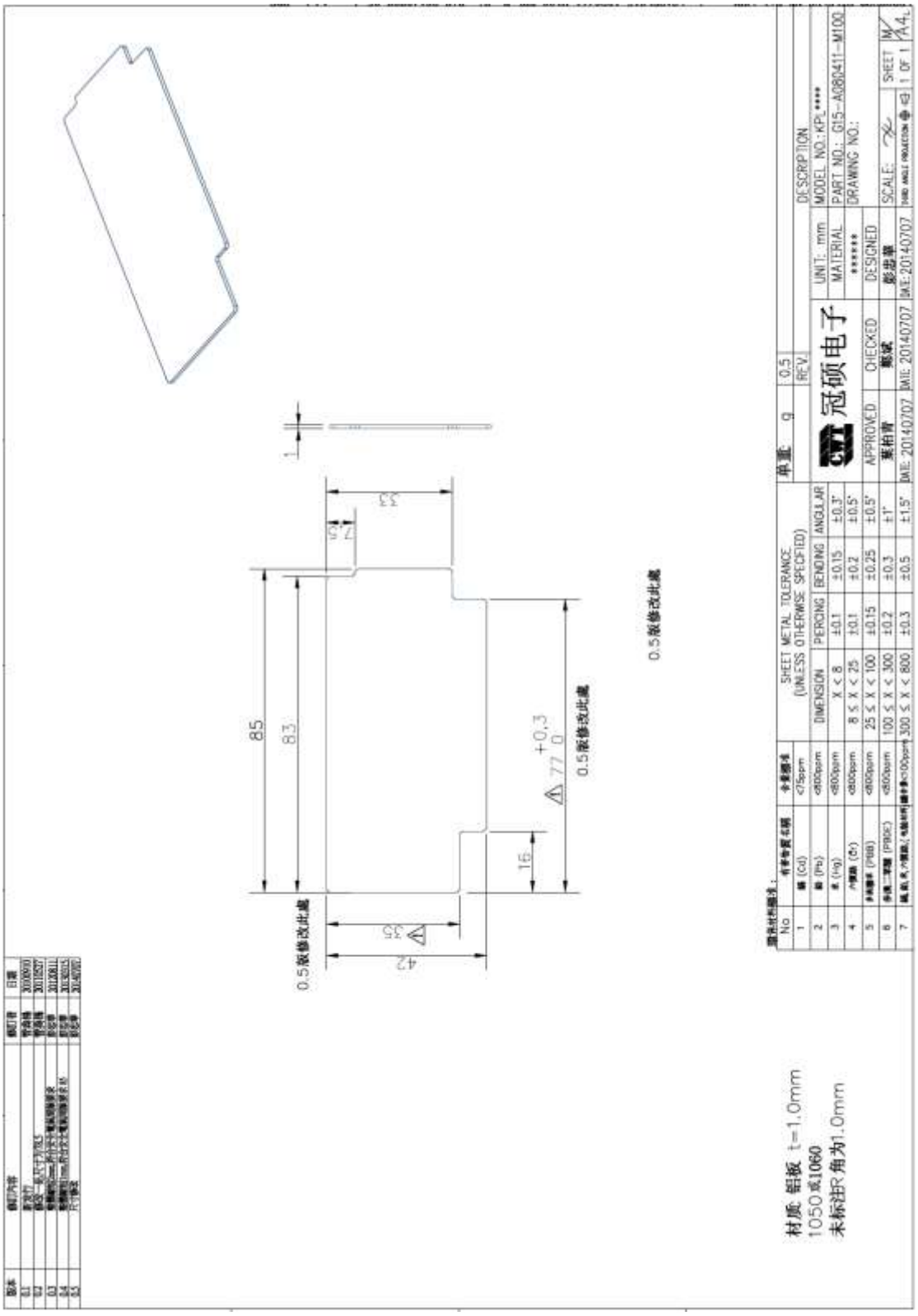
Type Designation: KPL-xy (Efficiency Level V)



Top Heatsink for PCB with fuse: FUSE1
For x=60, 65; y=all except x=65; y=F

Product: AC Adaptor

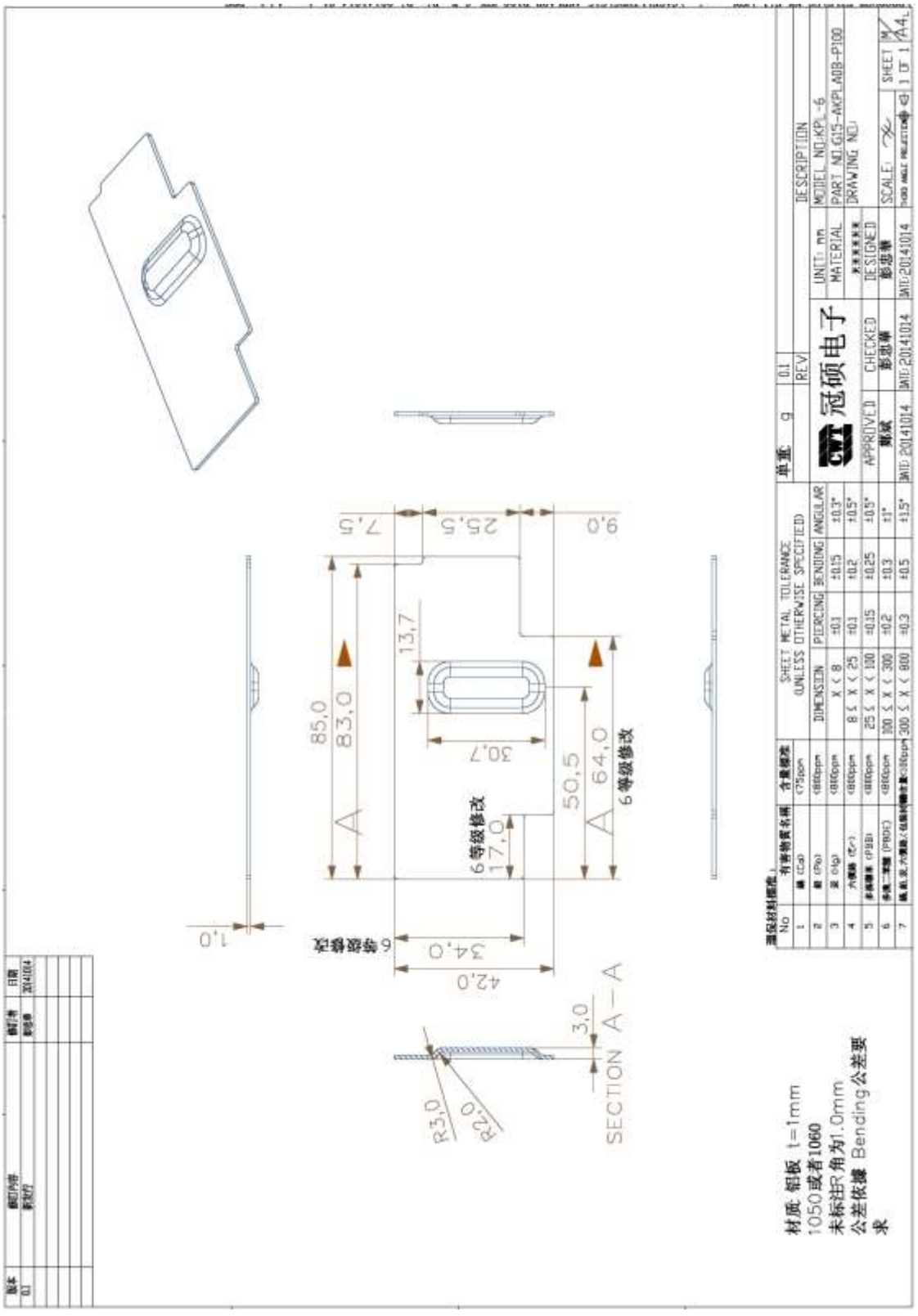
Type Designation: KPL-xy (Efficiency Level V)



Top Heatsink for PCB with fuse: FUSE1
For x=65; y= F

Product: AC Adaptor

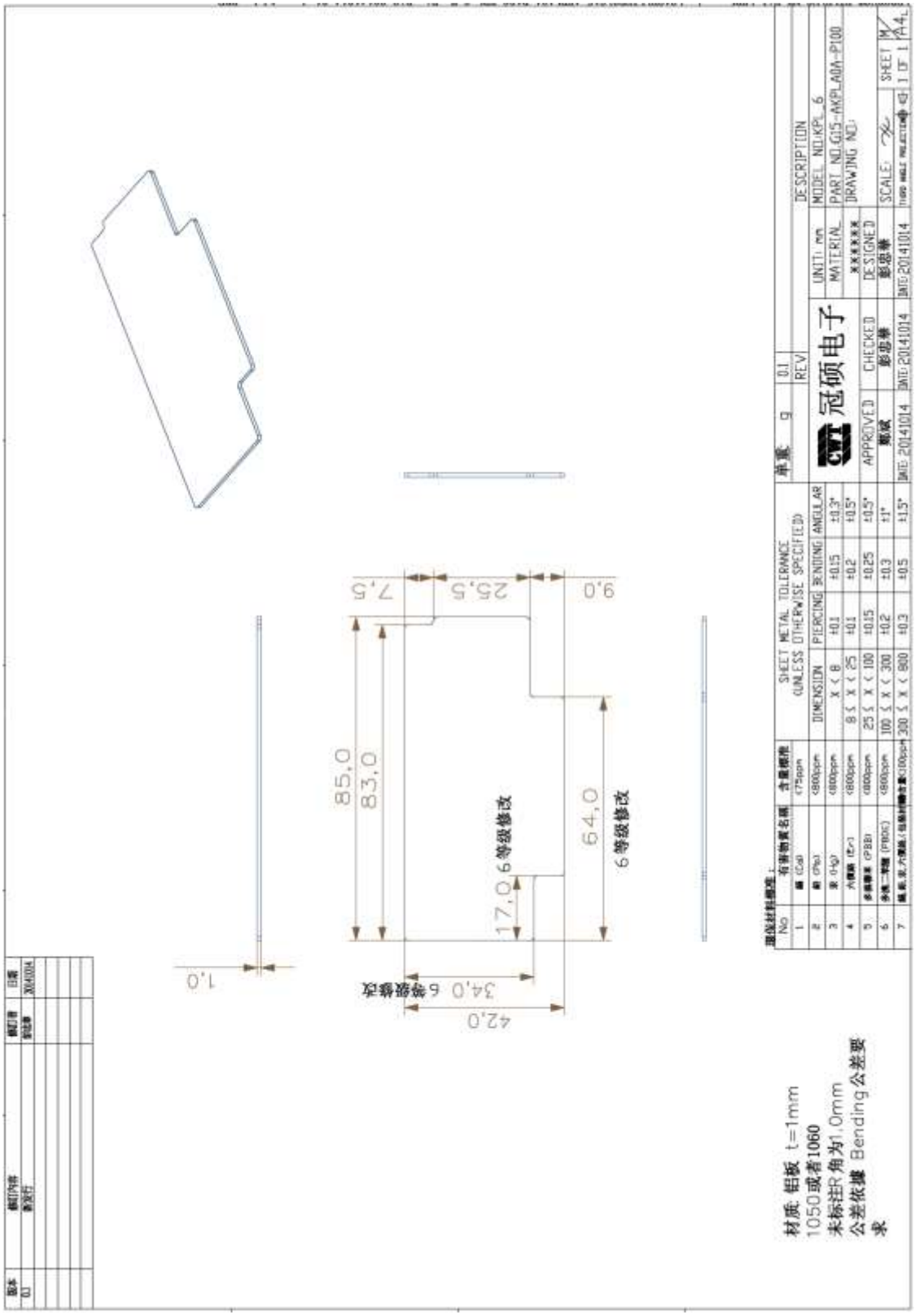
Type Designation: KPL-xy (Efficiency Level VI) or KPL-xy-VI



Top Heatsink for PCB with fuses: F1, F2
For x=60, 65; y=all except x=65, y=F

Product: AC Adaptor

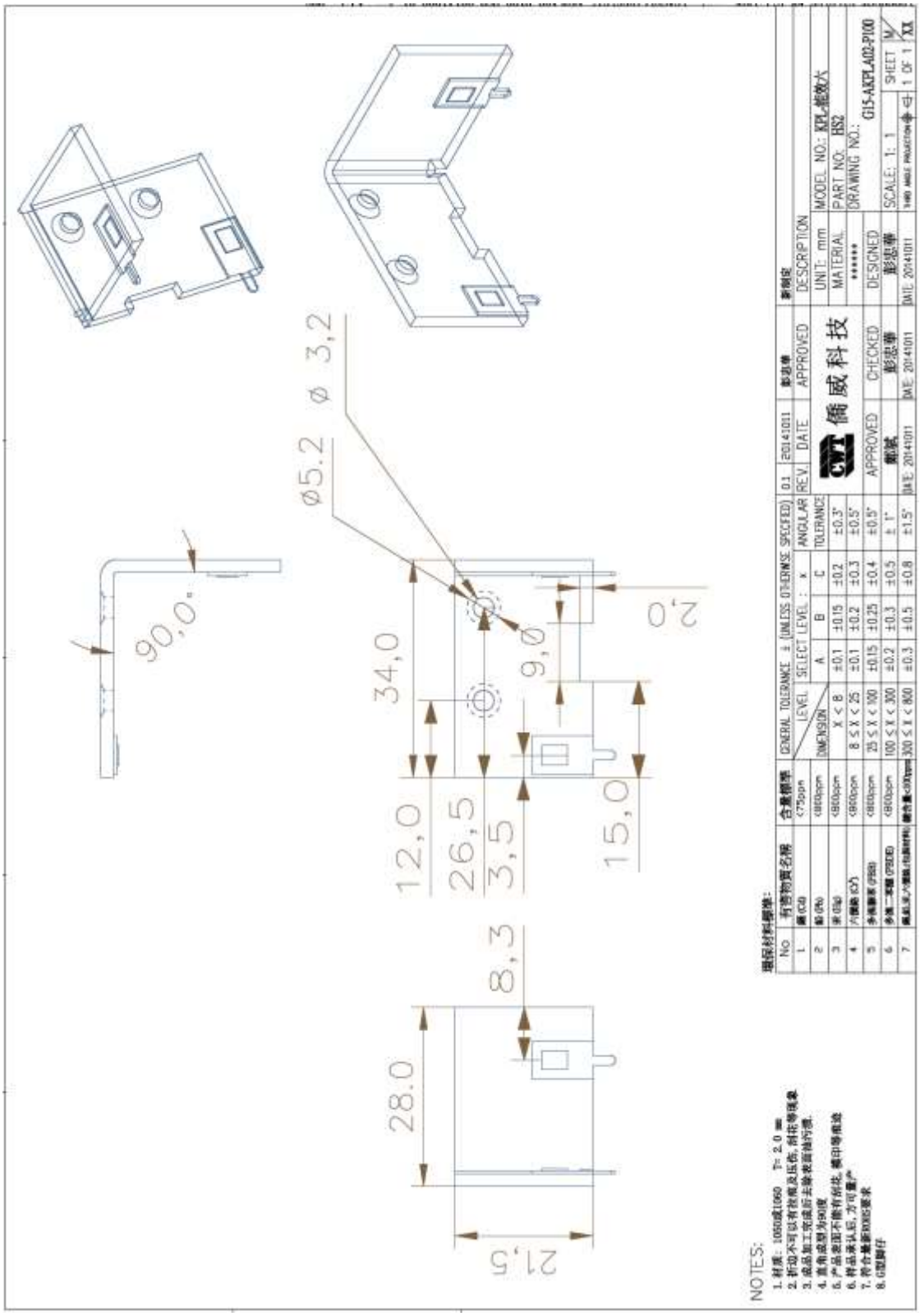
Type Designation: KPL-xy (Efficiency Level VI) or KPL-xy-VI



Top Heatsink for PCB with fuses: F1, F2
For x=65, 66; y= F

Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level VI) or KPL-xy-VI



D3, D6 Heatsink for PCB with fuses: F1, F2

Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level V)

IEC IECEE CB SCHEME

Ref. Certif. No.

JPTUV-060802

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product Produit	AC ADAPTER
Name and address of the applicant Nom et adresse du demandeur	Channel Well Technology Co., Ltd. No.222, Sec. 2, Nankan Rd., Lujhu Township, Taoyuan Hsien, 33855 Taiwan
Name and address of the manufacturer Nom et adresse du fabricant	Channel Well Technology Co., Ltd. No.222, Sec. 2, Nankan Rd., Lujhu Township, Taoyuan Hsien, 33855 Taiwan
Name and address of the factory Nom et adresse de l'usine	See additional page(s)
Ratings and principal characteristics Valeurs nominales et charactéristiques principales	AC input: 100-240 V, 1.7 A, 50/60 Hz, Class I DC output: refer to the test report.
Trademark (if any) Marque de fabrique (si elle existe)	CWT
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	N/A
Model / Type Ref. Ref. de type	KPL-xy (x can be 040, 050, 060 or 065, denotes for output power; y can be F, G, V, H, I, W, J, K, L, N, Q, R or M, denotes for output voltage) For model differences, refer to the test report.
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page)	
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60950-1:2005 + A1 + A2 National differences see test report
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	15077081 001

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification

TÜVRheinland®

TÜV Rheinland Japan Ltd.
Global Technology Assessment Center
4-25-2 Kita-Yamata, Tsuzuki-ku
Yokohama 224-0021 Japan
Phone + 81 45 914-3888
Fax + 81 45 914-3354
Mail: info@jpn.tuv.com
Web: www.tuv.com

Date: 09.01.2015

Signature: Löffler

Dipl.-Ing. D. Loeffler

Product: AC Adaptor

Type Designation: KPL-xy (Efficiency Level V)

IEC IECEE CB SCHEME

Ref. Certif. No.

JPTUV-060802

PAGE 2 OF 2

1. Ningbo Iso Electronic Co., Ltd.
   10, Chuang-ye Rd.,
   The West of Ningbo Free Trade Zone
   Ningbo, Zhejiang
   P.R. China

2. Channel Well Technology (Guangzhou)
   Co., Ltd.
   Bld. B, Eastern Hi-tech
   Industrial Base
   Zengjiang Street, Zengcheng, Guangzhou, Guangdong 511300, P.R. China

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

Report Ref. No.: 15077081 001

Date: 09.01.2015

Signature: Löffler

Dipl.-Ing. D. Loeffler