

CERTIFICATE OF COMPLIANCE

Certificate Number 20151010-E127643
Report Reference E127643-A36-UL
Issue Date 2015-OCTOBER-10

Issued to: PHIHONG TECHNOLOGY CO LTD
568 Fu Xing 3rd Rd
Guishan District
Taoyuan
33383 TAIWAN

**This is to certify that
representative samples of**

POWER SUPPLIES, INFORMATION TECHNOLOGY
EQUIPMENT INCLUDING ELECTRICAL BUSINESS
EQUIPMENT

Switching Power Adapter, PSA15R-XXXyyy, PSA15A-
XXXyyy (where XXX can be 050, 060, 075, 090, 095, 120,
150, 240, 480; y can be any alphanumeric character or
blank), PSA15R-240(MOT), PSA15A-295(MOT), PSA15R-
295(MOT), PSAC12x-XXX (X= R or A; XXX= 120, 150, 240
or 480.).


Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 60950-1 and CAN/CSA C22.2 No. 60950-1-07 -
Information Technology Equipment - Safety - Part 1:
General Requirements

Additional Information: See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's
Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

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contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2007-03-27 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2007-03 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Listing
CCN:	QQGQ, QQGQ7 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
Product:	Switching Power Adapter
Model:	PSA15R-XXXyyy, PSA15A-XXXyyy (where XXX can be 050, 060, 075, 090, 095, 120, 150, 240, 480; y can be any alphanumeric character or blank), PSA15R-240(MOT), PSA15A-295(MOT), PSA15R-295(MOT), PSAC12x-XXX (X= R or A; XXX= 120, 150, 240 or 480.).
Rating:	Input: 100 - 240 V ac, 50-60 Hz, 0.5 A; Output: Models PSA15R-050yyy, PSA15A-050yyy: 5 Vdc, 3 A, Models PSA15R-060yyy, PSA15A-060yyy: 6 Vdc, 2.5 A, Models PSA15R-075yyy, PSA15A-075yyy: 7.5 Vdc, 2 A, Models PSA15R-090yyy, PSA15A-090yyy: 9 Vdc, 1.67 A, Models PSA15R-095yyy, PSA15A-095yyy: 9.5 Vdc, 1.4 A, Models PSA15R-120yyy, PSA15A-120yyy: 12 Vdc, 1.25 A, Models PSAC12R-120, PSAC12A-120: 12 Vdc, 1.0 A, Models PSA15R-150yyy, PSA15A-150yyy: 15 Vdc, 1 A. Models PSAC12R-150, PSAC12A-150: 15 Vdc, 0.8 A. Models PSA15R-240yyy, PSA15A-240yyy: 24 Vdc, 0.625 A. Models PSAC12R-240, PSAC12A-240: 24 Vdc, 0.5 A, Models PSA15R-480yyy, PSA15A-480yyy: 48 Vdc, 0.31 A, Models PSAC12R-480, PSAC12A-480: 48 Vdc, 0.25 A, Model PSA15R-240(MOT): 24 Vdc, 0.417 A, Input: 100 - 240 V ac, 50-60 Hz, 0.4 A; Output: Model PSA15R-295(MOT): 29.5 Vdc, 0.46 A, Model PSA15A-295(MOT): 29.5 Vdc, 0.46 A.
Applicant Name and Address:	PHIHONG TECHNOLOGY CO LTD 568 FU XING 3RD RD GUISHAN DISTRICT TAOYUAN 33383 TAIWAN

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

Issue Date: 2009-09-25
2015-10-07

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Report Reference #

E127643-A36-UL

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared by: Stephen Ho

Reviewed by: Eddie Chen

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

- A. Authorization - The Authorization page may include additional Factory Identification Code markings.
- B. Generic Inspection Instructions -
 - i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
 - ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
 - iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

Electronic Component mounted on PWB and housed in plastic enclosure.

Model Differences

1. See Enclosure-Miscellaneous for model differences.
2. Model PSA15R-480yyy are similar to original series except for employing the alternate transformer T1, manufactured by Pihong Technology Co., Ltd., P/N 26440150004, and uprating the output voltage to 48 V.
3. Model PSA15R-095yyy is similar to Model PSA15R-XXXyyy except for model designation and output rating.
4. Add new model name: PSA15R-240(MOT) which is similar to basic model PSA15R-240yyy except as follows:
 - a. Change the output current from 0.625A to 0.471A.
 - b. Change the operation temperature from 40 degree C to 60 degree C.
 - c. Add a LED on enclosure.
 - d. Slightly modify the enclosure which provides a hole for LED.
 - e. Slightly modify secondary circuit for LED.
 - f. Slightly modify PCB layout at secondary circuit for LED.
5. Add new model name: PSA15A-XXXyyy, is similar to Model PSA15R-XXXyyy except for change blades to non-detachable type.
6. Add new model names: PSA15A-295(MOT) and PSA15R-295(MOT) are similar to Model PSA15A-240(MOT), PSA15R-295(MOT) except for output rating, secondary components and transformer coil for secondary.

Models PSAC12x-XXX (x= R or A; XXX= 120, 150, 240 or 480.) are similar to original models except for different ratings in component C2, R4, R5, R6, R10, R15, R25.

Technical Considerations

- Equipment mobility : direct plug-in
- Connection to the mains : pluggable A
- Operating condition : continuous
- Access location : operator accessible
- Over voltage category (OVC) : OVC II
- Mains supply tolerance (%) or absolute mains supply values : +10%, -10%
- Tested for IT power systems : N/A

- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class II (double insulated)
- Considered current rating (A) : 20
- Pollution degree (PD) : PD 2
- IP protection class : IP 20
- Altitude of operation (m) : 3048
- Altitude of test laboratory (m) : Less than 2000 m
- Mass of equipment (kg) : 0.17 kg
- The product was submitted and evaluated for use at the maximum ambient temperature (T_{ma}) permitted by the manufacturer's specification of: 50 degree C for Models PSA15R-XXXyyy and PSA15A-XXXyyy, (where XXX can be 050, 060, 075, 090, 095, 120, 150, 240, 480), PSAC12x-XXX (x= R or A; XXX= 120, 150, 240 or 480.); 60 degree C for Model PSA15R-240(MOT), PSA15A-295(MOT) and PSA15R-295(MOT)
- The means of connection to the mains supply is: Pluggable A
- The product is intended for use on the following power systems: TN
- The equipment disconnect device is considered to be: Plug
- The product was investigated to the following additional standards: Blade was complied with UL 1310 requirements.
- The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): Output connector.
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual

Additional Information

Alternate transformer T1, manufactured by Pihong Technology Co., Ltd., P/N: 26440150004 and uprating the output voltage to 48 for Model PSA15R-480yyy on Project 04CA47062.

Alternate blades, non-detractable type, for Model PSA15A-XXXyyy under Project 06CA63159.

07CA53096: Alternate output rating (29.5 V, 0.46 A), secondary components (R12, R18, ZD1 and D8) and transformer coil for secondary (From diameter 0.25mm to 0.22mm and from 24 turns to 28 turns).

-E127643-A36-UL-3, Reissue (09CA43332):

Models PSA15A-295(MOT), PSA15R-295(MOT) employing the following revision:

- 1) Alternate Transformer (T1), manufactured by Pihong Technology Co., Ltd., P/N: 26440150023.
- 2) Change input current rating from 0.5 A to 0.4 A.

- Project 12CA56261, employing the alternate schematic (without D1 and D4, C2 rating modified to 47uF) for Model PSA15x-480yyy (x = R, A; y = any character or blank) only.


- Project number 4786627678, employed the alternate schematic and PWB layout, (1) R3 and R3A removed, (2) R25 and C16 added for Model PSA15A-XXXyyy and PSA15R-XXXyyy (where "XXX" can be 120, 150, 240, 480; y can be any alphanumeric character or blank).

Project 4787034909:

Power Adapter, Model PSA15R-XXXyyy Employing the Alternate (1) Adding Model PSAC12x-XXX (x=R or A; XXX = 120, 150, 240 or 480) (2) Adding sources for F1, C1 and Bleeder Resistor rating and Varnish of Transtormer T1 source.

Unless otherwise indicated, all Enclosures and Tests were based upon previous evaluation under the CB scheme. The CB Scheme Certificate, No. JPTUV-06602, JPTUV-06603, JPTUV-06604, JPTUV-06605 Dated 2015-09-1, and CB Scheme Certificate, No. JPTUV-06602-A1, Dated 2015-09-16, and CB Test Report, Ref No. 11042291 001, Dated 2015-09-08, and CB Test Report, Ref No. 11042291 002, Dated 2015-09-15 was prepared by TUV Rheinland Japan Ltd., located at Global Technology Assessment Center, 4-25-2 Kira-Yamata, Tsuzuki-ku, Yokohama 224-0021 Japan.

Markings and instructions

Clause Title	Marking or Instruction Details
Inter-connecting cables - External detachable	Listee's Name and Part number (Marking or Instruction)
Power rating - Ratings	Ratings (voltage, frequency/dc, current)
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number
Power rating - Class II symbol	Symbol for Class II construction  (60417-2-IEC-5172)
Fuses - Rating	Rated current and voltage and type located on or adjacent to fuse or fuseholder.
LPS	Marked "LPS" or "Limited Power Supply".

Special Instructions to UL Representative

- Inspect the transformer (T1) listed in PLTR tables per AA1.1- (C).
- When the tests are conducted at other location, inspect test record and specification sheet provided by the component manufacturer.
- Verify the specification sheet indicates 100% routine test specified in PLTR tables be conducted at the component manufacturer.

Production-Line Testing Requirements

Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.

Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
PSA15R-XXXyyy, PSA15A-XXXyyy (where XXX can be 050, 060, 075, 090, 095, 120, 150, 240, 480; y can be any alphanumeric character or blank), PSAC12x-XXX (X= R or A; XXX= 120, 150, 240 or 480.), PSA15R-240(MOT), PSA15A-295(MOT), PSA15R-295(MOT)	Transformer (T1)	N/A	Primary to Secondary	300 0	4242	1

Earthing Continuity Test Exemptions - This test is not required for the following models:

Electric Strength Test Exemptions - This test is not required for the following models:

Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:

Sample and Test Specifics for Follow-Up Tests at UL

Model	Component	Material	Test	Sample(s)	Test Specifics
N/A					