Test Report issued under the responsibility of:

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

Report Reference No ..... :	E346017-A8-CB-1
Date of issue ..... :	2018-01-03
Total number of pages ..... :	63
CB Testing Laboratory ..... :	UL International Singapore Pte Ltd
Address ..... :	20 Kian Teck Lane, #01-00PT, 627854 Singapore
Applicant's name ..... :	XP POWER LTD
Address ..... :	401 COMMONWEALTH DR HAW PAR TECHNOCENTRE LOBBY B, #02-02 SINGAPORE 149598 SINGAPORE
Test specification:	
Standard ..... :	IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC60950_1F
Test Report Form originator ..... :	SGS Fimko Ltd
Master TRF ..... :	Dated 2014-02

Copyright © 2014 Worldwide System for Conformity Testing and Certification of Electrotechnical Equipment and Components (IECEE), Geneva, Switzerland. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the IECEE is acknowledged as copyright owner and source of the material. IECEE takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

If this test Report 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 ..... :	Switching Power Supply
Trade Mark ..... :	
Manufacturer ..... :	XP POWER L L C 15641 RED HILL AVE SUITE 100 TUSTIN CA 92780 USA
Model/Type reference ..... :	VCE03USXX (where XX can be any number between 03 and 48 designating the output voltage), may also be provided with suffix "-P" optionally for open frame type.
Ratings ..... :	Input Rated: 100-277 Vac, 0.1 A, 50/60 Hz. Output Rated: VCE03US03: 3.3 Vdc (2.95 - 3.65 Vdc), 0.910 A max., 3W max.; VCE03US05: 5 Vdc (4.5 - 5.5 Vdc), 0.600 A max., 3W max.; VCE03US09: 9 Vdc (8.1 - 10 Vdc), 0.333 A max., 3W max.; VCE03US12: 12 Vdc (10.1 - 13.5 Vdc), 0.250 A max., 3W max.; VCE03US15: 15 Vdc (13.5 - 17 Vdc), 0.200 A max., 3W max.; VCE03US24: 24 Vdc (21.1 - 26 Vdc), 0.125 A max., 3W max.; VCE03US48: 48 Vdc (42.1 - 52 Vdc), 0.063 A max., 3W max.;

Testing procedure and testing location:		
[x]	**CB Testing Laboratory**	
	Testing location / address .....:	UL International Singapore Pte Ltd 20 Kian Teck Lane, #01-00PT, 627854 Singapore
[ ]	**Associated CB Test Laboratory**	
	Testing location / address .....:	
	Tested by (name + signature) .....:	Chai Ming Yuo, Project Handler
	Approved by (name + signature)....:	Jim Kao, Reviewer
[ ]	**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) .....:	
	Approved by (name + signature)....:	
	Supervised by (name + signature) .:	
[ ]	**Testing Procedure: RMT**	
	Testing location / address .....:	
	Tested by (name + signature) .....:	
	Approved by (name + signature)....:	
	Supervised by (name + signature) .:	

List of Attachments
National Differences (59 pages)
Enclosures (25 pages)
Summary Of Testing Unless otherwise indicated, all tests were conducted at UL International Singapore Pte Ltd 20 Kian Teck Lane, #01-00PT, 627854 Singapore.

Tests performed (name of test and test clause)	**Testing location / Comments**
Guide Information Page - Maximum Output Voltage,	

Current, and Volt Ampere Measurement (1.2.2.1)

Input: Single-Phase (1.6.2)

Durability of Marking (1.7.11)

Energy Hazard Measurements (2.1.1.5, 2.1.2, 1.2.8.10)

SELV Reliability Test Including Hazardous Voltage Measurements (2.2.2, 2.2.3, 2.2.4, Part 22 6.1)

Limited Current Circuit Measurement (2.4.1, 2.4.2)

Limited Power Source Measurements (2.5)

Humidity (2.9.1, 2.9.2, 5.2.2)

Determination of Working Voltage; Working Voltage Measurement (2.10.2)

Thin Sheet Material (2.10.5.9, 2.10.5.10, 2.10.5.6)

Transformer and Wire /Insulation Electric Strength (2.10.5.13)

Heating (4.5.1, 1.4.12, 1.4.13)

Electric Strength (5.2.2)

Component Failure (5.3.1, 5.3.4, 5.3.7)

Transformer Abnormal Operation (5.3.3, 5.3.7b, Annex C.1)

Summary of Compliance with National Differences:

Countries outside the CB Scheme membership may also accept this report.

List of countries addressed: AR, AT, AU, BE, BG, BY, CA, CH, CN, CS, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IE, IL, IN, IT, JP, KR, MY, NL, NO, NZ, PL, PT, RO, SA, SE, SG, SI, SK, UA, US, ZA

The product fulfills the requirements of: EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011 + A2:2013

Copy of Marking Plate - Refer to Enclosure titled Marking Plate for copy.

Test item particulars :	
Equipment mobility ..... :	for building-in
Connection to the mains ..... :	for building-in
Operating condition ..... :	continuous
Access location ..... :	for building-in
Over voltage category (OVC) ..... :	OVC II
Mains supply tolerance (%) or absolute mains supply values ..... :	+10%, -10%
Tested for IT power systems ..... :	No
IT testing, phase-phase voltage (V) ..... :	N/A
Class of equipment ..... :	Determined by end product
Considered current rating of protective device as part of the building installation (A) ..... :	20
Pollution degree (PD) ..... :	PD 2
IP protection class ..... :	IPX0
Altitude of operation (m) ..... :	5000
Altitude of test laboratory (m) ..... :	less than 2000 meters
Mass of equipment (kg) ..... :	25 g
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(s) of receipt of test item ..... :	2017-07-24
Date(s) of Performance of tests ..... :	2017-08-08 to 2017-12-14
General remarks:	
"(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report. Throughout this report a point is used as the decimal separator.	
Manufacturer's Declaration per Sub Clause 4.2.5 of IECEE 02:	Yes
The application for obtaining a CB Test Certificate includes more than one factory and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... When differences exist, they shall be identified in the General Product Information section.	
Name and address of Factory(ies):	DONGGUAN DONGCHENG ZHUSHAN CINCON ELECTRONICS FACTORY 1 JING XIANG RD DONGCHENG FOREIGN TRADE INDUSTRIAL PARK ZHUSHAN DONGCHENG DISTRICT DONGGUAN 523128 GUANGDONG CHINA

CINCON ELECTRONICS CO LTD
8-1 FU KUNG RD
FU HSING PARK
FU HSING HSIANG
CHANGHUA HSIEN
506 TAIWAN

GENERAL PRODUCT INFORMATION:

Report Summary

All applicable tests according to the referenced standard(s) have been carried out.

Product Description

The model covered in this report is a component power supply intended for use in Information Technology Equipment. It is an open frame or with enclosure power supply intended for building-in.

Model Differences

All models in the Model VCE03USXX Series are identical with exception to the Mains Transformer T1, and minor secondary components that allow for different output voltage ratings.

See below for Model Ratings Table Below:

Model output ratings as follows.
Model VCE03US03: Output Rated: 3.3 Vdc (2.95 - 3.65 Vdc), 910mA max, 3W max
Model VCE03US05: Output Rated: 5 Vdc(4.5 - 5.5 Vdc), 600mA max, 3W max
Model VCE03US09: Output Rated: 9 Vdc(8.1 - 10 Vdc), 333mA max, 3W max
Model VCE03US12: Output Rated: 12Vdc (10.1 - 13.5 Vdc), 250mA max, 3W max
Model VCE03US15: Output Rated: 15Vdc (13.5 - 17 Vdc), 200mA max, 3W max
Model VCE03US24: Output Rated: 24Vdc (21.1 - 26 Vdc), 125mA max, 3W max
Model VCE03US48: Output Rated: 48Vdc (42.1 - 52 Vdc), 63mA max, 3W max

Additional Information

The need for the additional testing and evaluation shall be determined in the end product investigation.

The nameplate markings provided as an Enclosure - Marking Plate are considered representative of the entire series.

The power supply series covered by this report employ Double/Reinforced Insulation between Primary and Secondary circuits.

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer’s specification of: 50 °C at 100% load; 70 °C at 50% load;
- The means of connection to the mains supply is: For Building In
- The product is intended for use on the following power systems: TN

- The product was investigated to the following additional standards: EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 (which includes all European national differences, including those specified in this test report).
- The following accessible locations (with circuit/schematic designation) are within a limited current circuit: Load side of CY1, CY2
- The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): All outputs
- According to IEC60664-1, Table A2, required Clearances have been adjusted by multiplying the clearance at sea level by a factor of 1.48 for operating at an altitude of 5000 meters. The correction factor is based on barometric pressure of 70kPa and Overvoltage Category II. If the calculated Clearance exceeded the Creepage, the Creepage was adjusted to the value of clearance. --

Engineering Conditions of Acceptability

When installed in an end-product, consideration must be given to the following:

- The following Production-Line tests are conducted for this product: Electric Strength
- The end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-SELV: 188.206 Vrms, 633.333 Vpk
- The following secondary output circuits are SELV: All outputs
- The following secondary output circuits are at non-hazardous energy levels: All outputs
- The following secondary output circuits are Limited Current Circuits: Load side of CY1, CY2
- The following secondary output circuits are supplied by a Limited Power Source: All outputs
- The power supply terminals and/or connectors are: Suitable for factory wiring only
- The maximum investigated branch circuit rating is: 20 A
- The investigated Pollution Degree is: 2
- The following input terminals/connectors must be connected to the end-product supply neutral: ACN
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJY2 insulation system with the indicated rating greater than Class A (105°C): T1 (Class B, 120 °C)
- The following end-product enclosures are required: Mechanical, Fire, Electrical
- Touch current to be considered during end-product evaluation. --
- Primary fuse shall be provided to this Switching Power Supply by the end-product having the rating: T1.0A/300Vac. --

Abbreviations used in the report:

- normal condition	N.C.	- single fault condition	S.F.C
- operational insulation	OP	- basic insulation	BI
- basic insulation between parts of opposite polarity:	BOP	- supplementary insulation	SI
- double insulation	DI	- reinforced insulation	RI

Indicate used abbreviations (if any)