



Ref. Certif. No.

JPTUV-031412

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

Open frame switching power supply

Name and address of the applicant
Nom et adresse du demandeur

XP Power Limited
401 Commonwealth Drive,
Haw Par Technocentre, Lobby B, #02-02, 149598, Singapore

Name and address of the manufacturer
Nom et adresse du fabricant

XP Power Limited
401 Commonwealth Drive,
Haw Par Technocentre, Lobby B, #02-02, 149598, Singapore

Name and address of the factory
Nom et adresse de l'usine

No. 99, Din-Ping Road
Jui-Fang Industrial District, Jui-Fang, Taipei 224 Taiwan

Rating and principal characteristics
Valeurs nominales et caractéristiques principales

Input : AC 100-250V; 60/50Hz; 4.0A MAX.; Class I
Output: refer to the test report

Trade mark (if any)
Marque de fabrique (si elle existe)

XP

Model/type Ref.
Ref. de type

JPS250PSXXX
(XXX = 05, 12, 15, 24, 48, 05C, 12C, 15C, 24C, or 48C)

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

For model differences, refer to the test report.

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
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 une partie de ce Certificat

11019995 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



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: 23.03.2010


Signature:

Dipl.-Ing. W. Hsu



TEST REPORT	
IEC 60950-1: 2005 (2nd Edition) and/or EN 60950-1:2006 Information technology equipment – Safety – Part 1: General requirements	
Report Reference No.	11019995 001
Date of issue.....	19 March, 2010
Total number of pages.....	112
CB/CCA Testing Laboratory	TÜV Rheinland Taiwan Ltd., Taichung Laboratory
Address.....	10F, No. 219, Min Chuan Rd., Taichung 403, Taiwan
Applicant's name	XP Power Limited
Address.....	401 Commonwealth Drive, Haw Par Technocentre, Lobby B, #02-02, 149598, Singapore
Manufacturer's name	Same as applicant
Address.....	Same as applicant
Factory's name	See on page 7
Address.....	See on page 7
Test specification:	
Standard	<input checked="" type="checkbox"/> IEC 60950-1:2005 (2nd Edition) and/or <input checked="" type="checkbox"/> EN 60950-1:2006 + A11:2009
Test procedure.....	CB
Non-standard test method	N/A
Test Report Form No	IECEN60950_1C
Test Report Form(s) Originator	SGS Fimko Ltd
Master TRF	Dated 2007-06
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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.	
If this Test Report Form is used by non-CCA members, the CFG logo and the reference to the CCA Procedure shall be removed.	
This report is not valid as a CCA Test Report unless signed by an approved CCA Testing Laboratory and appended to a CCA Test Certificate issued by an NCB in accordance with CCA	
Test item description	Open frame switching power supply
Trade Mark	XP
Manufacturer.....	Same as applicant
Model/Type reference.....	JPS250PSXXX (XXX=05, 12, 15, 24, 48, 05C, 12C, 15C, 24C, or 48C)
Ratings.....	Input: 100-250V~, 60/50Hz, 4.0A MAX. Output: See on page 3



Testing procedure and testing location:	
<input checked="" type="checkbox"/> CB/CCA Testing Laboratory:	See page 1
Testing location/ address..... :	See page 1
<input type="checkbox"/> Associated CB Laboratory:	
Testing location/ address..... :	
Tested by (name + signature)	Frank Sun
Approved by (+ signature)	<i>Simon Yu</i> 
<input type="checkbox"/> Testing procedure: TMP	
Tested by (name + signature)	
Approved by (+ signature)	
Testing location/ address..... :	
<input type="checkbox"/> Testing procedure: WMT	
Tested by (name + signature)	
Witnessed by (+ signature)	
Approved by (+ signature)	
Testing location/ address..... :	
<input type="checkbox"/> Testing procedure: SMT	
Tested by (name + signature)	
Approved by (+ signature)	
Supervised by (+ signature)	
Testing location/ address..... :	
<input type="checkbox"/> Testing procedure: RMT	
Tested by (name + signature)	
Approved by (+ signature)	
Supervised by (+ signature)	
Testing location/ address..... :	

Summary of testing:

Tests performed (name of test and test clause):

- Load condition used during testing as below:
 - I. Output rating:
 - O/P: 1. 5Vdc/36A for model JPS250PS05, JPS250PS05C
 - 12Vdc/17A for model JPS250PS12, JPS250PS12C
 - 15Vdc/13.5A for model JPS250PS15, JPS250PS15C
 - 24Vdc/8.5A for model JPS250PS24, JPS250PS24C
 - 48Vdc/4.3A for model JPS250PS48, JPS250PS48C
 - O/P: 2. 5Vdc/45A for model JPS250PS05, JPS250PS05C
 - 12Vdc/21A for model JPS250PS12, JPS250PS12C
 - 15Vdc/17A for model JPS250PS15, JPS250PS15C
 - 24Vdc/10.5A for model JPS250PS24, JPS250PS24C
 - 48Vdc/5.2A for model JPS250PS48, JPS250PS48C
 - O/P: 3. 5Vdc/22.5A for model JPS250PS05, JPS250PS05C
 - 12Vdc/10.5A for model JPS250PS12, JPS250PS12C
 - 15Vdc/8.5A for model JPS250PS15, JPS250PS15C
 - 24Vdc/5.25A for model JPS250PS24, JPS250PS24C
 - 48Vdc/2.6A for model JPS250PS48, JPS250PS48C
 - II. Special:
 - Models JPS250PS05, JPS250PS05C are provided external with 18 CFM forced cooling when loaded 5Vdc/45A (225W).
 - Models JPS250PS12, JPS250PS12C are provided external with 18 CFM forced cooling when loaded 12Vdc/21A (250W).
 - Models JPS250PS15, JPS250PS15C are provided external with 18 CFM forced cooling when loaded 15Vdc/17A (250W).
 - Models JPS250PS24, JPS250PS24C are provided external with 18 CFM forced cooling when loaded 24Vdc/10.5A (250W).
 - Models JPS250PS48, JPS250PS48C are provided external with 18 CFM forced cooling when loaded 48Vdc/5.2A (250W).
- Test samples without serial numbers.
- The maximum ambient temperature is 50°C for O/P 1 and O/P 2.
The maximum ambient temperature is 70°C for O/P 3.

Testing location:

All tests as described in Test Case and Measurement Sections were performed at the laboratory described on page 2.

Summary of compliance with National Differences:

For IEC 60950-1:2005 (2nd Edition) and EN 60950-1:2006 + A11:2009

EU Group Differences, EU Special National Conditions, EU A-Deviations, AT, AU, CA, CH, DE, DK, FI, FR, GB, IT, KR, NL, NO, PL, SE, SI, US.

For IEC 60950-1:2001 / EN 60950-1:2001 + A11:2004

(All CB members countries listed in CB Bulletin No. 112A, dated December 2006)

AR, AU, AT, BE, CA, CH, CN, CZ, DE, DK, FI, FR, GB, GR, HU, IL, IN, IT, KE, KR, MY, NL, NO, PL, SE, SG, SI, SK, US

Explanation of used codes: AR=Argentina, AT=Austria, AU=Australia, BE=Belgium, CA=Canada, CH=Switzerland, CN=China, CZ=Czech Republic, DE=Germany, DK=Denmark, FI=Finland, FR=France, GB=United Kingdom, GR=Greece, HU=Hungary, IL=Israel, IN=India, IT=Italy, KE=Kenya, KR=Korea, MY=Malaysia, NL=The Netherlands, NO=Norway, PL=Poland, SE=Sweden, SG=Singapore, SI=Slovenia, SK=Slovakia, US=United States of America.

All country difference 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 Difference.

Additionally, the National Differences for AR, AU, AT, BE, CA, CH, CN, CZ, DE, DK, FI, FR, GB, GR, HU, IL, IN, IT, KE, KR, MY, NL, NO, PL, SE, SG, SI, SK, US have been tested according IEC 60950-1:2001 for customer required.

For National Differences see corresponding Attachment.

Copy of marking plate:



Copy of marking plate:



For alternate o/p ratings refer to test report pages 3

The above label is draft of an artwork for marking plate pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.

Test item particulars	
Equipment mobility	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input checked="" type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
Connection to the mains.....	<input type="checkbox"/> pluggable equipment <input type="checkbox"/> permanent connection <input type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input type="checkbox"/> not directly connected to the mains
Operating condition	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Access location	<input type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other:
Mains supply tolerance (%) or absolute mains supply values	± 10
Tested for IT power systems	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
IT testing, phase-phase voltage (V)	230V for Norway
Class of equipment	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified
Considered current rating (A)	20
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class	IPX0
Altitude during operation (m)	Less than 2000
Altitude of test laboratory (m)	Less than 2000
Mass of equipment (kg)	0.72
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	March, 2010
Date(s) of performance of tests	March, 2010
General remarks:	
<p>The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.</p> <p>Note: This TRF includes EN Group Differences together with National Differences and Special National Conditions, if any. All Differences are located in the Appendix to the main body of this TRF.</p> <p>Throughout this report a point is used as the decimal separator.</p>	



General product information: The equipment is a switching mode power supply (open frame building-in type) for the use in information technology equipment. The variable XXX stands for 05, 12, 15, 24, 48, 05C, 12C, 24C, or 48C to indicate different transformer (T1), output ratings and secondary circuit designation. The unit incorporates power factor (PFC) board according the defination with or without "C" by model name. There is no further safety impact according which power factor (PFC) board will be used.		
Other comments: <u>Factory:</u> No. 99, Din-Ping Rd., Jui-Fang Industrial District, Jui-Fang, Taipei 224, Taiwan The manufacturer's declaration, that the samples tested represent the products from each factory, is available.		
<u>Definition of variable(s):</u>		
Variable:	Range of variable:	Content:
XXX	05, 12, 15, 24, 48, 05C, 12C, 24C, or 48C	Different output rating
<u>Attachments to this Test Report:</u> - Photo Documentation - National Differences - Measurement Section		

IEC**IECEE
CB
SCHEME**

Ref. Certif. No.

JPTUV-031412-A1

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEMESYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC**CB TEST CERTIFICATE
CERTIFICAT D'ESSAI OC**Product
Produit

Open frame switching power supply

Name and address of the applicant
Nom et adresse du demandeurXP Power Limited
401 Commonwealth Drive,
Haw Par Technocentre, Lobby B, #02-02, 149598, SingaporeName and address of the manufacturer
Nom et adresse du fabricantXP Power Limited
401 Commonwealth Drive,
Haw Par Technocentre, Lobby B, #02-02, 149598, SingaporeName and address of the factory
Nom et adresse de l'usineNo. 99, Din-Ping Road
Jui-Fang Industrial District, Jui-Fang, Taipei 224 TaiwanRating and principal characteristics
Valeurs nominales et caractéristiques principalesInput : AC 100-250V; 60/50Hz; 4.0A MAX.; Class I
Output: refer to the test reportTrade mark (if any)
Marque de fabrique (si elle existe)

XP

Model/type Ref.
Ref. de typeJPS250PSXXX
(XXX = 05, 12, 15, 24, 48, 05C, 12C, 15C, 24C, or 48C)Additional information (if necessary)
Information complémentaire (si nécessaire)For model differences, refer to the test report.
Re-issue of JPTUV-031412 dated 23.03.2010,
due to non-technical change.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 laIEC 60950-1:2005
National differences see test reportAs 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 une partie de ce Certificat

11019995 002

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de CertificationTÜV 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: 08.04.2010

Signature:

Dipl.-Ing. W. Hsu

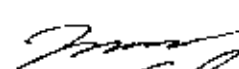
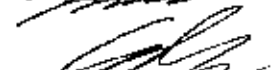


Test Report issued under the responsibility of:



TEST REPORT	
IEC 60950-1: 2005 (2nd Edition) and/or EN 60950-1:2006 Information technology equipment – Safety – Part 1: General requirements	
Report Reference No.....	11019995 002
Date of issue.....	8 April, 2010
Total number of pages.....	7
CB/CCA Testing Laboratory	TÜV Rheinland Taiwan Ltd., Taichung Laboratory
Address.....	10F, No. 219, Min Chuan Rd., Taichung 403, Taiwan
Applicant's name	XP Power Limited
Address.....	401 Commonwealth Drive, Haw Par Technocentre, Lobby B, #02-02, 149598, Singapore
Manufacturer's name	Same as applicant
Address.....	Same as applicant
Factory's name	See on page 5
Address.....	See on page 5
Test specification:	
Standard.....	<input checked="" type="checkbox"/> IEC 60950-1:2005 (2nd Edition) and/or <input checked="" type="checkbox"/> EN 60950-1:2006 + A11:2009
Test procedure.....	CB
Non-standard test method.....	N/A
Test Report Form No.	IECEN60950_1C
Test Report Form(s) Originator.....	SGS Finko Ltd
Master TRF.....	Dated 2007-06
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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.	
If this Test Report Form is used by non-CCA members, the CIG logo and the reference to the CCA Procedure shall be removed.	
This report is not valid as a CCA Test Report unless signed by an approved CCA Testing Laboratory and appended to a CCA Test Certificate issued by an NCB in accordance with CCA	
Test item description	Open frame switching power supply
Trade Mark.....	XP
Manufacturer.....	Same as applicant
Model/Type reference.....	JPS250PSXXX (XXX=05, 12, 15, 24, 48, 05C, 12C, 15C, 24C, or 48C)
Ratings.....	i/p: 100-250V~, 60/50Hz, 4.0A MAX. o/p: See original report 11019995 001



Testing procedure and testing location:	
<input checked="" type="checkbox"/> CB/CCA Testing Laboratory:	Refer to cover page
Testing location/ address.....:	Refer to cover page
<input type="checkbox"/> Associated CB Laboratory:	
Testing location/ address.....:	
Tested by (name + signature).....:	Frank Sun 
Approved by (+ signature).....:	Carol Y.M. Lee 
<input type="checkbox"/> Testing procedure: TMP	
Tested by (name + signature).....:	
Approved by (+ signature).....:	
Testing location/ address.....:	
<input type="checkbox"/> Testing procedure: WMT	
Tested by (name + signature).....:	
Witnessed by (+ signature).....:	
Approved by (+ signature).....:	
Testing location/ address.....:	
<input type="checkbox"/> Testing procedure: SMT	
Tested by (name + signature).....:	
Approved by (+ signature).....:	
Supervised by (+ signature).....:	
Testing location/ address.....:	
<input type="checkbox"/> Testing procedure: RMT	
Tested by (name + signature).....:	
Approved by (+ signature).....:	
Supervised by (+ signature).....:	
Testing location/ address.....:	

**Summary of testing:****Tests performed (name of test and test clause):**

- No testing need necessary.

Testing location:

- No testing need necessary.

Summary of compliance with National Differences:

For IEC 60950-1:2005 (2nd Edition) and EN 60950 1:2006 + A11:2009

EU Group Differences, EU Special National Conditions, EU A-Deviations, AT, AU, CA, CH, DE, DK, FI, FR, GB, IT, KR, NL, NO, PL, SE, SI, US.

For IEC 60950-1:2001 / EN 60950-1:2001 + A11:2004

(All CB members countries listed in CB Bulletin No. 112A, dated December 2006)

AR, AU, AT, BE, CA, CH, CN, CZ, DE, DK, FI, FR, GB, GR, HU, IL, IN, IT, KE, KR, MY, NL, NO, PL, SE, SG, SI, SK, US

Explanation of used codes: AR=Argentina, AT=Austria, AU=Australia, BE=Belgium, CA=Canada, CH=Switzerland, CN=China, CZ=Czech Republic, DE=Germany, DK=Denmark, FI=Finland, FR=France, GB=United Kingdom, GR=Greece, HU=Hungary, IL=Israel, IN=India, IT=Italy, KE=Kenya, KR=Korea, MY=Malaysia, NL=The Netherlands, NO=Norway, PL=Poland, SE=Sweden, SG=Singapore, SI=Slovenia, SK=Slovakia, US=United States of America.

All country difference 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 Difference.

Additionally, the National Differences for AR, AU, AT, BE, CA, CH, CN, CZ, DE, DK, FI, FR, GB, GR, HU, IL, IN, IT, KE, KR, MY, NL, NO, PL, SE, SG, SI, SK, US have been tested according IEC 60950-1:2001 for customer required.



Test item particulars	
Equipment mobility	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input checked="" type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
Connection to the mains	<input type="checkbox"/> pluggable equipment <input type="checkbox"/> permanent connection <input type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input type="checkbox"/> not directly connected to the mains
Operating condition.....	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Access location	<input type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other:
Mains supply tolerance (%) or absolute mains supply values	- 10
Tested for IT power systems	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
IT testing, phase-phase voltage (V)	230V for Norway
Class of equipment	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified
Considered current rating (A)	20
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class	IPX0
Altitude during operation (m)	Less than 2000
Altitude of test laboratory (m)	Less than 2000
Mass of equipment (kg)	0.72
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.....	N/A
Date(s) of performance of tests.....	N/A
General remarks:	
The test results presented in this report relate only to the object tested This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.	
Note: This TRF includes EN Group Differences together with National Differences and Special National Conditions, if any. All Differences are located in the Appendix to the main body of this TRF.	
Throughout this report a point is used as the decimal separator.	

<p>General product information: <u>Description of change(s):</u> 1. Update transformer (T1) source for model JPS250PS12, JPS250PS12C in table 1.5.1.</p> <p>For the above described change(s) the following was considered to be necessary:</p>								
Change	Testing	Comments						
1.	<ul style="list-style-type: none"> N/A 	Typing lose in original report 11019995 001. See appended table 1.5.1 for update information.						
<p>Other comments: <u>Factory(ies):</u> See original report 11019995 001.</p> <p><u>Definition of variable(s):</u></p> <table border="1"> <thead> <tr> <th>Variable:</th> <th>Range of variable:</th> <th>Content:</th> </tr> </thead> <tbody> <tr> <td>XXX</td> <td>05, 12, 15, 24, 48, 05C, 12C, 24C, or 48C</td> <td>Different output rating</td> </tr> </tbody> </table>			Variable:	Range of variable:	Content:	XXX	05, 12, 15, 24, 48, 05C, 12C, 24C, or 48C	Different output rating
Variable:	Range of variable:	Content:						
XXX	05, 12, 15, 24, 48, 05C, 12C, 24C, or 48C	Different output rating						
<p><u>History of amendments and modifications:</u> Ref No. 11019995 001, dated March 19, 2010 (original test report) Ref No. 11019995 002, dated April 8, 2010 (amendment)</p>								

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

Open frame switching power supply

Name and address of the applicant
Nom et adresse du demandeur

XP Power Limited
401 Commonwealth Drive,
Haw Par Technocentre, Lobby B, #02-02, 149598, Singapore

Name and address of the manufacturer
Nom et adresse du fabricant

XP Power Limited
401 Commonwealth Drive,
Haw Par Technocentre, Lobby B, #02-02, 149598, Singapore

Name and address of the factory
Nom et adresse de l'usine

No. 99, Din-Ping Road
Jui-Fang Industrial District, Jui-Fang, Taipei 224 Taiwan

Rating and principal characteristics
Valeurs nominales et caractéristiques principales

Input : AC 100-250V; 60/50Hz; 4.0A MAX.; Class I
Output: refer to the test report

Trade mark (if any)
Marque de fabrique (si elle existe)

XP

Model/type Ref.
Ref. de type

JPS250PSXXX
(XXX = 05, 12, 15, 24, 48, 05C, 12C, 15C, 24C, or 48C)

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

For model differences, refer to the test report.
Re-issue of JPTUV-031412-A1 dated 08.04.2010,
due to first modification.

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
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 une partie de ce Certificat

11019995 003

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



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: 19.04.2010

Signature:

Dipl.-Ing. W. Hsu



Test Report issued under the responsibility of:



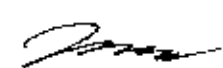
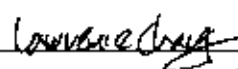

TEST REPORT	
IEC 60950-1: 2005 (2nd Edition) and/or EN 60950-1:2006 Information technology equipment – Safety – Part 1: General requirements	
Report Reference No.....	11019995 003
Date of issue.....	19 April 2010
Total number of pages.....	10
CB/CCA Testing Laboratory	TÜV Rheinland Taiwan Ltd., Taichung Laboratory
Address.....	10F, No. 219, Min Chuan Rd., Taichung 403, Taiwan
Applicant's name	XP Power Limited
Address.....	401 Commonwealth Drive, Haw Par Technocentre, Lobby B, #02-02, 149598, Singapore
Manufacturer's name	Same as applicant
Address.....	Same as applicant
Factory's name	See on page 5
Address.....	See on page 5
Test specification:	
Standard.....	<input checked="" type="checkbox"/> IEC 60950-1:2005 (2nd Edition) and/or <input checked="" type="checkbox"/> EN 60950-1:2006 + A11:2009
Test procedure.....	CB
Non-standard test method.....	N/A
Test Report Form No.	IECEN60950_1C
Test Report Form(s) Originator.....	SGS Fimko Ltd
Master TRF.....	Dated 2007-06
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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.	
If this Test Report Form is used by non-CCA members, the CIG logo and the reference to the CCA Procedure shall be removed.	
This report is not valid as a CCA Test Report unless signed by an approved CCA Testing Laboratory and appended to a CCA Test Certificate issued by an NCB in accordance with CCA	
Test item description	Open frame switching power supply
Trade Mark.....	XP
Manufacturer.....	Same as applicant
Model/Type reference.....	JPS250PSXXX (XXX=05, 12, 15, 24, 48, 05C, 12C, 15C, 24C, or 48C)
Ratings.....	i/p: 100-250V~, 60/50Hz, 4.0A MAX o/p: See original report 11019995 001



Testing procedure and testing location:

CB/CCA Testing Laboratory: Refer to cover page
 Testing location/ address.....: Refer to cover page

Associated CB Laboratory:
 Testing location/ address

Tested by (name + signature).....: Frank Sun 
 Approved by (+ signature).....:  

Testing procedure: TMP
 Tested by (name + signature).....:
 Approved by (+ signature).....:
 Testing location/ address.....:

Testing procedure: WMT
 Tested by (name + signature).....:
 Witnessed by (+ signature).....:
 Approved by (+ signature).....:
 Testing location/ address.....:

Testing procedure: SMT
 Tested by (name - signature).....:
 Approved by (- signature).....:
 Supervised by (+ signature).....:
 Testing location/ address.....:

Testing procedure: RMT
 Tested by (name + signature).....:
 Approved by (+ signature).....:
 Supervised by (+ signature).....:
 Testing location/ address.....:

Summary of testing:	
Tests performed (name of test and test clause): - The test samples were pre-production without serial numbers.	Testing location: - All tests as described in Test Case and Measurement Sections were performed at the laboratory described on page 2.
Summary of compliance with National Differences:	
<p>For <u>IEC 60950-1:2005 (2nd Edition) and EN 60950-1:2006 + A11:2009</u> EU Group Differences, EU Special National Conditions, EU A-Deviations, AT, AU, CA, CH, DE, DK, FI, FR, GB, IT, KR, NL, NO, PL, SE, SI, US.</p> <p>For <u>IEC 60950-1:2001 / EN 60950-1:2001 + A11:2004</u> (All CB members countries listed in CB Bulletin No. 112A, dated December 2006) AR, AU, AT, BE, CA, CH, CN, CZ, DE, DK, FI, FR, GB, GR, HU, IL, IN, IT, KE, KR, MY, NL, NO, PL, SE, SG, SI, SK, US</p> <p>Explanation of used codes: AR=Argentina, AT=Austria, AU=Australia, BE=Belgium, CA=Canada, CH=Switzerland, CN=China, CZ=Czech Republic, DE=Germany, DK=Denmark, FI=Finland, FR=France, GB=United Kingdom, GR=Greece, HU=Hungary, IL=Israel, IN=India, IT=Italy, KE=Kenya, KR=Korea, MY=Malaysia, NL=The Netherlands, NO=Norway, PL=Poland, SE=Sweden, SG=Singapore, SI=Slovenia, SK=Slovakia, US=United States of America.</p> <p>All country difference 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 Difference.</p> <p>Additionally, the National Differences for AR, AU, AT, BE, CA, CH, CN, CZ, DE, DK, FI, FR, GB, GR, HU, IL, IN, IT, KE, KR, MY, NL, NO, PL, SE, SG, SI, SK, US have been tested according IEC 60950-1:2001 for customer required.</p>	



Test item particulars	
Equipment mobility	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input checked="" type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
Connection to the mains	<input type="checkbox"/> pluggable equipment <input type="checkbox"/> permanent connection <input type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input type="checkbox"/> not directly connected to the mains
Operating condition	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Access location	<input type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other:
Mains supply tolerance (%) or absolute mains supply values	± 10
Tested for IT power systems	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
IT testing, phase-phase voltage (V)	230V for Norway
Class of equipment	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified
Considered current rating (A)	20
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class	IPX0
Altitude during operation (m)	Less than 2000
Altitude of test laboratory (m)	Less than 2000
Mass of equipment (kg)	0.72
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	April, 2010
Date(s) of performance of tests	April, 2010
General remarks:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. *(See Enclosure #)* refers to additional information appended to the report. *(See appended table)* refers to a table appended to the report. Note: This TRF includes EN Group Differences together with National Differences and Special National Conditions, if any. All Differences are located in the Appendix to the main body of this TRF. Throughout this report a point is used as the decimal separator.	

<p>General product information: Description of change(s):</p> <ol style="list-style-type: none"> Change X-cap. (C1, C2), Y-cap (C3, C4, C5, C20, C25) source in appended table 1.5.1. Add an alternative source of Photo-coupler (IC2, IC3). To add "15C" in variable table for typo correction. <p>For the above described change(s) the following was considered to be necessary:</p>											
Change	Testing	Comments									
1.	• N/A	See appended table 1.5.1 for update information.									
2.	• Distance through insulation measurements	VDE approved source with adequate rating used. See appended table for source information and test result.									
3.	• N/A	See Definition of variable(s) for detail.									
<p>Other comments: <u>Factory(ies):</u> See original report 11019995 001.</p> <p><u>Definition of variable(s):</u></p> <table border="1"> <thead> <tr> <th>Variable:</th> <th>Range of variable:</th> <th>Content:</th> </tr> </thead> <tbody> <tr> <td>XXX</td> <td>05, 12, 15, 24, 48, 05C, 12C, 15C, 24C, or 48C</td> <td>Different output rating</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Variable:	Range of variable:	Content:	XXX	05, 12, 15, 24, 48, 05C, 12C, 15C, 24C, or 48C	Different output rating			
Variable:	Range of variable:	Content:									
XXX	05, 12, 15, 24, 48, 05C, 12C, 15C, 24C, or 48C	Different output rating									
<p><u>History of amendments and modifications:</u> Ref. No. 11019995 001, dated March 19, 2010 (original test report) Ref. No. 11019995 002, dated April 8, 2010 (amendment) Ref. No. 11019995 003, dated April 19, 2010 (modification)</p>											



Ref. Certif. No.

JPTUV-019360

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

Open Frame Switching Power Supply

Name and address of the applicant
Nom et adresse du demandeur

XP Power Inc.
305 Foster Street
Littleton MA 01460, USA

Name and address of the manufacturer
Nom et adresse du fabricant

XP Power Inc.
305 Foster Street
Littleton MA 01460, USA

Name and address of the factory
Nom et adresse de l'usine

No. 99, Din-Ping Road
Jui-Fang Industrial District, Jui-Fang, Taipei 224 Taiwan

Rating and principal characteristics
Valeurs nominales et caractéristiques principales

Input : AC 100-250V; 47-63Hz; 4.0A MAX.; Class I
Output: refer to the test report

Trade mark (if any)
Marque de fabrique (si elle existe)

XP

Model/type Ref.
Ref. de type

JPS250PQXXX (XXX = 41, 41C, 46, 46C, 47, 47C, 48 or 48C)

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

For model differences, refer to the test report.

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 60950-1:2001
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 une partie de ce Certificat

11009686 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






TÜV Rheinland Group

TÜV Rheinland Japan Ltd.
Shin Yokohama Daini Center Bldg.
3-19-5, Shin Yokohama, Kcho-ku
Yokohama 222-0033 Japan
Phone + 81 45 470-1850
Fax + 81 45 473-5221
Mail: info@jpn.tuv.com
Web: www.tuv.com

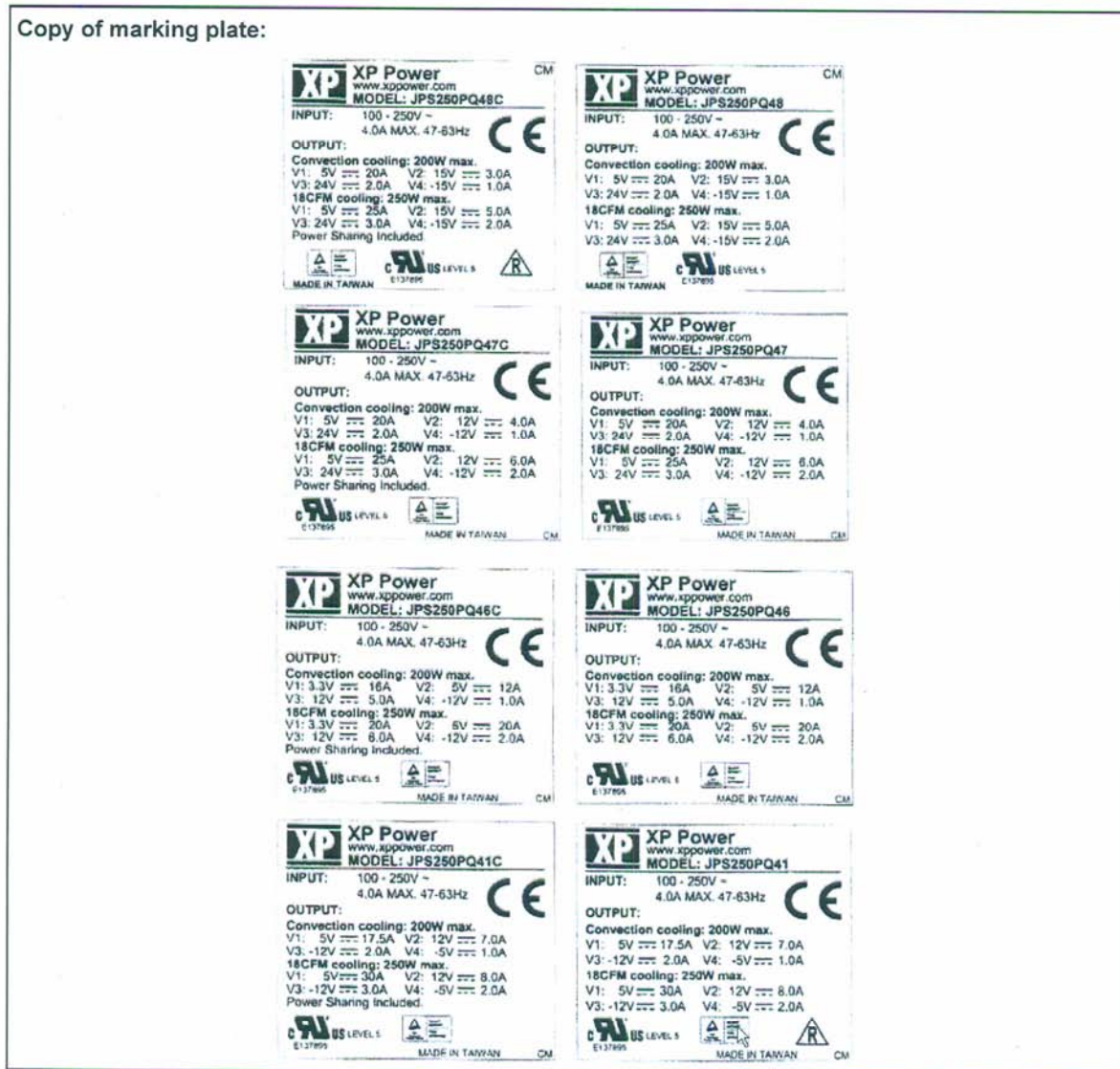
Date: 14.06.2007

Signature:

Dipl.-Ing. W. Hsu

EST REPORT IEC 60950-1 and/or EN 60950-1 Information technology equipment – Safety – Part 1: General requirements	
Report reference No	11009686 001
Tested by (printed name and signature)	Robert Kong 
Approved by (printed name and signature)	Jean Chen 
Date of issue	June 12, 2007
Testing Laboratory Name	TÜV Rheinland Taiwan, Taichung Laboratory
Address	10F, No. 219, Min-Chuan Road, Taichung 403, Taiwan
Testing location	CBTL <input checked="" type="checkbox"/> CCATL <input type="checkbox"/> SMT <input type="checkbox"/> TMP <input type="checkbox"/>
Address	Same as above.
Applicant's Name	XP Power Inc.
Address	305 Foster Street, Littleton MA 01460 USA
Test specification	
Standard	IEC 60950-1:2001 EN 60950-1:2001 + A11:2004
Test procedure	CB-scheme
Non-standard test method	N/A
Test Report Form No.	IECEN60950_1B
TRF originator	SGS Fimko Ltd
Master TRF	dated 2003-03
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Test item description	Open Frame Switching Power Supply
Trademark	
Manufacturer	Same as applicant.
Model and/or type reference	JPS250PQXXX (XXX=41, 41C, 46, 46C, 47, 47C, 48 or 48C)
Serial number	Pre-production sample(s) without serial number(s).
Rating(s)	Input: 100-250V~, 47-63Hz, 4.0A MAX. Output: See pages 4 and 5.

Copy of marking plate:



Summary of testing:

- The manufacturer specified maximum ambient temperature is:
 - +50°C for Output 1 and Output 2,
 - +70°C for Output 3 and Output 4.
- All tests have been carried out:
 - for Output 1 and Output 3 without external air-cooling,
 - for Output 2 and Output 4 with external air-cooling of 18 CFM and airflow direction from output to input side as specified in the installation instruction.
- For load conditions refer to corresponding tables in the test report.
- Unless otherwise specified, all tests were performed on model JPS250PQ41C, JPS250PQ46C, JPS250PQ47C, and JPS250PQ48C to represent the other similar models.

Particulars: test item vs. test requirements		
Equipment mobility	For building-in	
Operating condition	Continuous	
Mains supply tolerance (%)	±10%	
Tested for IT power systems	Yes, for Norway	
IT testing, phase-phase voltage (V)	IT, 230V for Norway	
Class of equipment	Class I	
Mass of equipment (kg).....	0.78 for models JPS250PQ41 and JPS250PQ41C, 0.84 for models JPS250PQ46 and JPS250PQ46C, 0.74 for models JPS250PQ47, JPS250PQ47C, JPS250PQ48 and JPS250PQ48C	
Protection against ingress of water	IPX0	
Test case verdicts		
Test case does not apply to the test object ...	N/A	
Test item does meet the requirement	P(ass)	
Test item does not meet the requirement	F(ail)	
Testing		
Date of receipt of test item	February, 2007	
Date(s) of performance of test	February-June, 2007	
General remarks		
<p>"This report is not valid as a CB Test Report unless appended by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECCE 02".</p> <p>The test result presented in this report relate only to the object(s) tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p> <p>"(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a point is used as the decimal separator.</p>		
Comments:		
<u>Summary of compliance with National Differences (for explanation of codes see below):</u> EU Group Differences, EU Special National Conditions, EU A-Deviations, AR, AT, AU, BE, CA, CH, CN, CZ, DE, DK, FI, FR, GB, GR, HU, IL, IN, IT, KE, KR, MY, NL, NO, PL, SE, SG, SI, SK, US.		
AR=Argentina, AT=Austria, AU=Australia, BE=Belgium, CA=Canada, CH=Switzerland, CN=China, CZ=Czech Republic, DE=Germany, DK=Denmark, FI=Finland, FR=France, GB=United Kingdom, GR=Greece, HU=Hungary, IL=Israel, IN=India, IT=Italy, KE=Kenya, KR=Korea, MY=Malaysia, NL=The Netherlands, NO=Norway, PL=Poland, SE=Sweden, SG=Singapore, SI=Slovenia, SK=Slovakia, US=United States of America.		
For National Differences see end of this test report.		
<u>Factory:</u>		
No. 99, Din-Ping Road, Jui-Fang Industrial District, Jui-Fang, Taipei 224, Taiwan		
<u>Definition of variables:</u>		
Variable:	Range of variable:	Content:

XXX	41, 41C, 46, 46C, 47, 47C, 48 or 48C	Specify different transformer, output ratings and secondary circuit
-----	---	---

General product information:
Comments:
Brief description of the test sample:

The equipment model series JPS250PQXXX is an open frame switching power supply (building-in type) for the use in information technology equipment. All models are similar except for model designation, output ratings, secondary circuitry and transformer T1 and T2.

The unit incorporates a power factor board according to the definition with or without "C" by model name. The usage of the power factor board has no further safety impact.

Throughout the test report following abbreviations may be used:

- | | | | |
|-------|-----------------------------|-------|-------------------|
| • cl | clearance | • ext | external distance |
| • dcr | creepage distance | • int | internal distance |
| • dti | distance through insulation | • o-c | open-circuit |
| • EUT | equipment under test | • o-l | overload |
| • SPS | switching power supply | • s-c | short-circuit |

Ratings:

Model	Output rating			
	Output 1	Output 2	Output 3	Output 4
JPS250PQ41	5Vdc/17.5A, 12Vdc/7A, -12Vdc/2A, -5Vdc/1A	5Vdc/30A, 12Vdc/8A, -12Vdc/3A, -5Vdc/2A	5Vdc/8.8A, 12Vdc/3.5A, -12Vdc/1A, -5Vdc/0.5A	5Vdc/15A, 12Vdc/4A, -12Vdc/1.5A, -5Vdc/1A
JPS250PQ41C	5Vdc/17.5A, 12Vdc/7A, -12Vdc/2A, -5Vdc/1A	5Vdc/30A, 12Vdc/8A, -12Vdc/3A, -5Vdc/2A	5Vdc/8.8A, 12Vdc/3.5A, -12Vdc/1A, -5Vdc/0.5A	5Vdc/15A, 12Vdc/4A, -12Vdc/1.5A, -5Vdc/1A
JPS250PQ46	3.3Vdc/16A, 5Vdc/12A, 12Vdc/5A, -12Vdc/1A	3.3Vdc/20A, 5Vdc/20A, 12Vdc/6A, -12Vdc/2A	3.3Vdc/8A, 5Vdc/6A, 12Vdc/2.5A, -12Vdc/0.5A	3.3Vdc/10A, 5Vdc/10A, 12Vdc/3A, -12Vdc/1A
JPS250PQ46C	3.3Vdc/16A, 5Vdc/12A, 12Vdc/5A, -12Vdc/1A	3.3Vdc/20A, 5Vdc/20A, 12Vdc/6A, -12Vdc/2A	3.3Vdc/8A, 5Vdc/6A, 12Vdc/2.5A, -12Vdc/0.5A	3.3Vdc/10A, 5Vdc/10A, 12Vdc/3A, -12Vdc/1A
JPS250PQ47	5Vdc/20A, 12Vdc/4A, 24Vdc/2A, -12Vdc/1A	5Vdc/25A, 12Vdc/6A, 24Vdc/3A, -12Vdc/2A	5Vdc/10A, 12Vdc/2A, 24Vdc/1A, -12Vdc/0.5A	5Vdc/12.5A, 12Vdc/3A, 24Vdc/1.5A, -12Vdc/1A
JPS250PQ47C	5Vdc/20A, 12Vdc/4A, 24Vdc/2A, -12Vdc/1A	5Vdc/25A, 12Vdc/6A, 24Vdc/3A, -12Vdc/2A	5Vdc/10A, 12Vdc/2A, 24Vdc/1A, -12Vdc/0.5A	5Vdc/12.5A, 12Vdc/3A, 24Vdc/1.5A, -12Vdc/1A

JPS250PQ48	5Vdc/20A, 15Vdc/3A, 24Vdc/2A, -15Vdc/1A	5Vdc/25A, 15Vdc/5A, 24Vdc/3A, -15Vdc/2A	5Vdc/10A, 15Vdc/1.5A, 24Vdc/1A, -15Vdc/0.5A	5Vdc/12.5A, 15Vdc/2.5A, 24Vdc/1.5A, -15Vdc/1A
JPS250PQ48C	5Vdc/20A, 15Vdc/3A, 24Vdc/2A, -15Vdc/1A	5Vdc/25A, 15Vdc/5A, 24Vdc/3A, -15Vdc/2A	5Vdc/10A, 15Vdc/1.5A, 24Vdc/1A, -15Vdc/0.5A	5Vdc/12.5A, 15Vdc/2.5A, 24Vdc/1.5A, -15Vdc/1A



Ref. Certif. No.

JPTUV-028192

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

Open frame switching power supply

Name and address of the applicant
Nom et adresse du demandeur

XP Power Inc.
305 Foster Street
Littleton MA 01460, USA

Name and address of the manufacturer
Nom et adresse du fabricant

XP Power Inc.
305 Foster Street
Littleton MA 01460, USA

Name and address of the factory
Nom et adresse de l'usine

No. 99, Din-Ping Road
Jui-Fang Industrial District, Jui-Fang, Taipei 224 Taiwan

Rating and principal characteristics
Valeurs nominales et caractéristiques principales

Input : AC 100-250V; 47-63Hz; 4.0A MAX.; Class I
Output: refer to the test report

Trade mark (if any)
Marque de fabrique (si elle existe)

XP

Model/type Ref.
Ref. de type

JPS350PSXXX
(XXX = 05, 12, 15, 24, 48, 05C, 12C, 15C, 24C, 48C, 05-E, 12-E, 15-E, 24-E or 48-E)

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

For model differences, refer to the test report.

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
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 une partie de ce Certificat

11017644 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



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: 11.08.2009

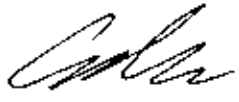
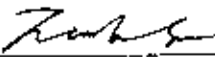
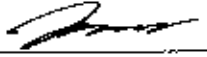
Signature:

Dipl.-Ing. G. Stoezel



TEST REPORT	
IEC 60950-1: 2005 (2nd Edition) and/or EN 60950-1:2006 Information technology equipment – Safety – Part 1: General requirements	
Report Reference No.....	11017644 001
Date of issue.....	August 04, 2009
Total number of pages.....	89
CB/CCA Testing Laboratory	TÜV Rheinland Taiwan Ltd., Taichung Laboratory
Address.....	10F, No. 219, Min Chuan Rd., Taichung 403, Taiwan
Applicant's name	XP Power Inc.
Address.....	305 Foster Street, Littleton MA 01460, USA
Manufacturer's name	XP Power Inc.
Address.....	305 Foster Street, Littleton MA 01460, USA
Factory's name	See page 7
Address.....	See page 7
Test specification:	
Standard.....	<input checked="" type="checkbox"/> IEC 60950-1:2005 (2nd Edition) and/or <input checked="" type="checkbox"/> EN 60950-1:2006+A11:2009
Test procedure.....	CB
Non-standard test method.....	N/A
Test Report Form No	IECEN60950_1C
Test Report Form(s) Originator.....	SGS Firmko Ltd
Master TRF.....	Dated 2007-06
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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.	
If this Test Report Form is used by non-CCA members, the CIG logo and the reference to the CCA Procedure shall be removed.	
This report is not valid as a CCA Test Report unless signed by an approved CCA Testing Laboratory and appended to a CCA Test Certificate issued by an NCB in accordance with CCA	
Test item description.....	Open frame switching power supply
Trade Mark.....	XP
Manufacturer.....	Same as applicant
Model/Type reference.....	JPS350PSXXX (XXX = 05, 12, 15, 24, 48, 05C, 12C, 15C, 24C, 48C, 05-E, 12-E, 15-E, 24-E or 48-E)
Ratings.....	i/p: 100-250V~, 47-63Hz, 4.0A MAX. o/p: See page 7



Testing procedure and testing location:	
<input checked="" type="checkbox"/> CB/CCA Testing Laboratory:	See cover page
Testing location/ address.....:	See cover page
<input type="checkbox"/> Associated CB Laboratory:	
Testing location/ address.....:	
Tested by (name + signature).....:	Carol Y.M. Lee 
Approved by (+ signature).....:	 
<input type="checkbox"/> Testing procedure: TMP	
Tested by (name + signature).....:	
Approved by (+ signature).....:	
Testing location/ address.....:	
<input type="checkbox"/> Testing procedure: WMT	
Tested by (name + signature).....:	
Witnessed by (+ signature).....:	
Approved by (+ signature).....:	
Testing location/ address.....:	
<input type="checkbox"/> Testing procedure: SMT	
Tested by (name + signature).....:	
Approved by (+ signature).....:	
Supervised by (+ signature).....:	
Testing location/ address.....:	
<input type="checkbox"/> Testing procedure: RMT	
Tested by (name + signature).....:	
Approved by (+ signature).....:	
Supervised by (+ signature).....:	
Testing location/ address.....:	



Ref. Certif. No.

JPTUV-010623

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

Switching Power Supply

Name and address of the applicant
Nom et adresse du demandeur

XPiQ Inc.
260 Hopping Brook Road
Holliston, MA 01746, USA

Name and address of the manufacturer
Nom et adresse du fabricant

XPiQ Inc.
260 Hopping Brook Road
Holliston, MA 01746, USA

Name and address of the factory
Nom et adresse de l'usine

No. 99, Din-Ping Road
Jui-Fang Industrial District, Jui-Fang, Taipei 224 Taiwan

Rating and principal characteristics
Valeurs nominales et caractéristiques principales

Input : AC 100-250V; 47-63Hz; 4.5A MAX.; Class I
Output: refer to the test report

Trade mark (if any)
Marque de fabrique (si elle existe)

XP

Model/type Ref.
Ref. de type

JPS350PQXY
(X = 41, 46, 47, 48; Y = C or blank)

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

For model differences, refer to the test report.

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 60950-1:2001
inclusive CENELEC Common Modifications
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 une partie de ce Certificat

11003996 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





TÜV Rheinland Group

TÜV Rheinland Japan Ltd.
Shin Yokohama Daini Center Bldg.
3-19-5, Shin Yokohama, Kohoku-ku
Yokohama 222-0033 Japan
Phone + 81 45 470-1850
Fax + 81 45 473-5221
Mail: info@jpn.tuv.com
Web: www.tuv.com

Signature:

Yoshihiro Takahata

Date: 06.04.2005

TEST REPORT IEC 60950-1 and/or EN 60950-1 Information technology equipment – Safety – Part 1: General requirements	
Report reference No	<11003996 001>
Tested by (printed name and signature)	Best Chen 
Approved by (printed name and signature)	Johnny Chang 
Date of issue	March 18, 2005
Testing Laboratory Name	TÜV Rheinland Taiwan, Taichung Laboratory
Address	10F, No. 219, Min-Chuan Road, Taichung 403, Taiwan
Testing location	CBTL <input checked="" type="checkbox"/> CCATL <input type="checkbox"/> SMT <input type="checkbox"/> TMP <input type="checkbox"/>
Address	Same as above.
Applicant's Name	XPIQ Inc.
Address	260 Hopping Brook Road, Holliston, MA 01746, USA
Test specification	
Standard	IEC 60950-1:2001 EN 60950-1: 2001 + A11: 2004 AS 60950.1-2003, CAN/CSA C22.2 No. 60950-1/UL60950-1, K60950, UL 60950-1
Test procedure	CB-scheme
Non-standard test method	N.A.
Test Report Form No.	IECEN60950_1B
TRF originator	SGS Fimko Ltd
Master TRF	Dated 2003-03
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Test item description	Switching Power Supply
Trademark	Trademark of XP
Model and/or type reference	JPS350PQXY (X = 41, 46, 47, 48; Y = C or blank)
Serial number	Pre-production samples without serial numbers
Rating(s)	i/p: AC 100-250V~, 47-63Hz, 4.5A MAX o/p: For detail of pages 2-3.



Particulars: test item vs. test requirements	
Equipment mobility	Equipment for building-in
Operating condition	Continuous
Mains supply tolerance (%).....	+10 % / -10 %
Tested for IT power systems	Yes
IT testing, phase-phase voltage (V)	230 V (for Norway)
Class of equipment	Class I
Mass of equipment (kg).....	0.84
Protection against ingress of water	IPX0
Test case verdicts	
Test case does not apply to the test object ...:	N/A
Test item does meet the requirement	P(ass)
Test item does not meet the requirement	F(ail)
Testing	
Date of receipt of test item	March, 2005
Date(s) of performance of test	March, 2005
General remarks	
"This report is not valid as a CB Test Report unless appended to a CB Test Certificate issued by a NCB, in accordance with IEC 60950-1".	
This report shall not be reproduced except in full without the written approval of the testing laboratory.	
The test results presented in this report relate only to the item(s) tested.	
"(see remark #)" refers to a remark appended to the report.	
"(see Annex #)" refers to an annex appended to the report.	
Throughout this report a point is used as the decimal separator.	
<u>Procedure deviation:</u>	
Argentina, Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, India, Israel, Italy, Korea, Malaysia, Netherlands, Norway, Poland, Singapore, Slovenia, Sweden, Switzerland, United Kingdom, United States of America	
<u>Manufacturer:</u>	
Same as applicant.	
<u>Factory:</u>	
No. 99, Din-Ping Rd., Jui-Fang Industrial District, Jui-Fang, Taipei 224, Taiwan	
<i>Brief description of the test sample:</i>	
Rating:	
1.	I/P: 100-250Vac, 47-63Hz, 4.5A for models JPS350PQ41 and JPS350PQ41C O/P1: 5Vdc/25A; 12Vdc/10A; -12Vdc/2A; -5Vdc/1A Convection cooling: 274W O/P2: 5Vdc/35A; 12Vdc/14A; -12Vdc/3A; -5Vdc/2A

Maximum total output: 350W with 18CFM cooling fan.

O/P3: **5Vdc/12.5A, 12Vdc/5A, -12Vdc/1A, -5Vdc/0.5A**

O/P4: **5Vdc/17.5A, 12Vdc/5.375A, -12Vdc/1.5A, -5Vdc/1A with 18CFM cooling fan**

2. I/P: 100-250Vac, 47-63Hz, 4.5A for models JPS350PQ46 and JPS350PQ46C

O/P1: **3.3Vdc/20A; 5Vdc/20A; 12Vdc/4.5A; -12Vdc/1A**

Convection cooling: 235W

O/P2: **3.3Vdc/35A; 5Vdc/35A; 12Vdc/6A; -12Vdc/3A**

Maximum total output: 350W with 18CFM cooling fan.

O/P3: **3.3Vdc/10A, 5Vdc/10A, 12Vdc/2.25A, -12Vdc/0.5A**

O/P4: **3.3Vdc/17.5A, 5Vdc/17.5A, 12Vdc/0.979A, -12Vdc/1.5A with 18CFM cooling fan**

3. I/P: 100-250Vac, 47-63Hz, 4.5A for models JPS350PQ47 and JPS350PQ47C

O/P1: **5Vdc/25A; 12Vdc/6A; 24Vdc/3A; -12Vdc/2A**

Convection cooling: 300W

O/P2: **5Vdc/35A; 12Vdc/8A; 24Vdc/4A; -12Vdc/3A**

Maximum total output: 350W with 18CFM cooling fan.

O/P3: **5Vdc/12.5A, 12Vdc/3A, 24Vdc/1.5A, -12Vdc/1A**

O/P4: **5Vdc/17.5A, 12Vdc/4A, 24Vdc/0.896A, -12Vdc/1.5A with 18CFM cooling fan**

4. I/P: 100-250Vac, 47-63Hz, 4.5A for models JPS350PQ48 and JPS350PQ48C

O/P1: **5Vdc/25A; 15Vdc/5A; 24Vdc/3A; -15Vdc/1.6A**

Convection cooling: 300W

O/P2: **5Vdc/35A; 15Vdc/7A; 24Vdc/4A; -15Vdc/3A**

Maximum total output: 350W with 18CFM cooling fan.

O/P3: **5Vdc/12.5A, 15Vdc/2.5A, 24Vdc/1.5A, -15Vdc/0.8A**

O/P4: **5Vdc/17.5A, 15Vdc/3.5A, 24Vdc/0.521A, -15Vdc/1.5A with 18CFM cooling fan**

The maximum ambient temperature is 50°C for O/P1 and O/P2.

The maximum ambient temperature is 70°C for O/P3 and O/P4.

The equipment model JPS350PQXY (X = 41, 46, 47, 48; Y = C or blank) is a series switching power supply for the use in information technology equipment. In the model name, "X" stands for different output ratings; "Y" stands for the different secondary circuit designation.

The unit incorporates power factor circuit according to the definition with or without "C" by model name. There is no further safety impact which power factor circuit will be used.

All models are similar except for type designation, PCB type number, output ratings, primary component and some different secondary circuit, for detail see table 1.5.1.

The equipment tested were provided an airflow of 18 CFM minimum with an inward air-flow direction which is kept the distance of 5 cm near secondary components of Switching Power Supply.

Unless otherwise specified, all tests were performed on models JPS350PQ41, JPS350PQ46, JPS350PQ47,



JPS350PQ48 to represent the other similar models.

Model designation	PCB number
JPS350PQ41, JPS350PQ41C	Main board: 850-3Q41 Sub- boards: 855-R007-A (MD2), 855-R005-2 (MD3)
JPS350PQ46, JPS350PQ46C	Main board: 850-3Q46 Sub- boards: 855-R007-B (MD2), 855-Z003-3 (MD3)
JPS350PQ47, JPS350PQ47C	Main board: 850-3Q47 Sub- boards: 855-R007-A (MD2), 855-R005-2 (MD3)
JPS350PQ48, JPS350PQ48C	Main board: 850-3Q48 Sub- boards: 855-R007-A (MD2), 855-R005-2 (MD3)



Copy of marking plate:

XP	XPiQ inc. www.xpiq.com MODEL : JPS350PQ41C
	INPUT: 100-250V~ 4.5A MAX. 47-63Hz
Convection cooling: 274W max V1: 5.0Vdc/25A V3: -12.0Vdc/2.0A V2: 12.0Vdc/10A V4: -5.0Vdc/1.0A 18CFM Cooling : 350W max V1: 5.0Vdc/35A V3: -12.0Vdc/3.0A V2: 12.0Vdc/14A V4: -5Vdc/2.0A Power sharing included.	
PATENT GRANTED Made in Taiwan CM	

XP	XPiQ inc. www.xpiq.com MODEL : JPS350PQ41C
	INPUT: 100-250V~ 4.5A MAX. 47-63Hz
Convection cooling V1: 5Vdc/12.5A V3: -12Vdc/1A V2: 12Vdc/5A V4: -5Vdc/0.5A 18CFM Cooling V1: 5Vdc/17.5A V3: -12Vdc/1.5A V2: 12Vdc/5.375A V4: -5Vdc/1A Power sharing included.	
PATENT GRANTED Made in Taiwan CM	

XP	XPiQ inc. www.xpiq.com MODEL : JPS350PQ41
	INPUT: 100-250V~ 4.5A MAX. 47-63Hz
Convection cooling: 274W max V1: 5.0Vdc/25A V3: -12.0Vdc/2.0A V2: 12.0Vdc/10A V4: -5.0Vdc/1.0A 18CFM Cooling : 350W max V1: 5.0Vdc/35A V3: -12.0Vdc/3.0A V2: 12.0Vdc/14A V4: -5Vdc/2.0A	
PATENT GRANTED Made in Taiwan CM	

XP	XPiQ inc. www.xpiq.com MODEL : JPS350PQ41
	INPUT: 100-250V~ 4.5A MAX. 47-63Hz
Convection cooling V1: 5Vdc/12.5A V3: -12Vdc/1A V2: 12Vdc/5A V4: -5Vdc/0.5A 18CFM Cooling V1: 5Vdc/17.5A V3: -12Vdc/1.5A V2: 12Vdc/5.375A V4: -5Vdc/1A	
PATENT GRANTED Made in Taiwan CM	



Copy of marking plate:

XP		XPIQ inc. www.xpiq.com MODEL : JPS350PQ46C	
INPUT: 100-250V~ 4.5A MAX. 47-63Hz	Convection cooling: 235W max V1: 3.3Vdc/20A V2: 5Vdc/20A V3: 12Vdc/4.5A V4: -12Vdc/1.0A		
	18CFM Cooling : 350W max V1: 3.3Vdc/35A V2: 5Vdc/35A V3: 12Vdc/6.0A V4: -12Vdc/3.0A Power sharing included.		
PATENT GRANTED Made in Taiwan CM			

XP		XPIQ inc. www.xpiq.com MODEL : JPS350PQ46C	
INPUT: 100-250V~ 4.5A MAX. 47-63Hz	Convection cooling V1: 3.3Vdc/10A V2: 5Vdc/10A V3: 12Vdc/2.25A V4: -12Vdc/0.5A		
	18CFM Cooling V1: 3.3Vdc/17.5A V2: 5Vdc/17.5A V3: 12Vdc/0.979A V4: -12Vdc/1.5A Power sharing included.		
PATENT GRANTED Made in Taiwan CM			


XP		XPIQ inc. www.xpiq.com MODEL : JPS350PQ46	
INPUT: 100-250V~ 4.5A MAX. 47-63Hz	Convection cooling: 235W max V1: 3.3Vdc/20A V2: 5Vdc/20A V3: 12Vdc/4.5A V4: -12Vdc/1.0A		
	18CFM Cooling : 350W max V1: 3.3Vdc/35A V2: 5Vdc/35A V3: 12Vdc/6.0A V4: -12Vdc/3.0A Power sharing included.		
PATENT GRANTED Made in Taiwan CM			

XP		XPIQ inc. www.xpiq.com MODEL : JPS350PQ46	
INPUT: 100-250V~ 4.5A MAX. 47-63Hz	Convection cooling V1: 3.3Vdc/10A V2: 5Vdc/10A V3: 12Vdc/2.25A V4: -12Vdc/0.5A		
	18CFM Cooling V1: 3.3Vdc/17.5A V2: 5Vdc/17.5A V3: 12Vdc/0.979A V4: -12Vdc/1.5A Power sharing included.		
PATENT GRANTED Made in Taiwan CM			




Copy of marking plate:

 XPiQ inc. www.xpiq.com MODEL : JPS350PQ47C	
INPUT: 100-250V~ 4.5A MAX. 47-63Hz	Convection cooling: 300W max V1: 5.0Vdc/25A V3: 24.0Vdc/3.0A V2: 12.0Vdc/6.0A V4: -12.0Vdc/2.0A 18CFM Cooling : 350W max V1: 5.0Vdc/35A V3: 24.0Vdc/4.0A V2: 12.0Vdc/8.0A V4: -12.0Vdc/3.0A Power sharing included.
PATENT GRANTED Made in Taiwan CM	

 XPiQ inc. www.xpiq.com MODEL : JPS350PQ47C	
INPUT: 100-250V~ 4.5A MAX. 47-63Hz	Convection cooling V1: 5Vdc/12.5A V3: 24Vdc/1.5A V2: 12Vdc/3A V4: -12Vdc/1A 18CFM Cooling V1: 5Vdc/17.5A V3: 24Vdc/0.896A V2: 12Vdc/4A V4: -12Vdc/1.5A Power sharing included.
PATENT GRANTED Made in Taiwan CM	

 XPiQ inc. www.xpiq.com MODEL : JPS350PQ47	
INPUT: 100-250V~ 4.5A MAX. 47-63Hz	Convection cooling: 300W max V1: 5.0Vdc/25A V3: 24.0Vdc/3.0A V2: 12.0Vdc/6.0A V4: -12.0Vdc/2.0A 18CFM Cooling : 350W max V1: 5.0Vdc/35A V3: 24.0Vdc/4.0A V2: 12.0Vdc/8.0A V4: -12.0Vdc/3.0A
PATENT GRANTED Made in Taiwan CM	

 XPiQ inc. www.xpiq.com MODEL : JPS350PQ47	
INPUT: 100-250V~ 4.5A MAX. 47-63Hz	Convection cooling V1: 5Vdc/12.5A V3: 24Vdc/1.5A V2: 12Vdc/3A V4: -12Vdc/1A 18CFM Cooling V1: 5Vdc/17.5A V3: 24Vdc/0.896A V2: 12Vdc/4A V4: -12Vdc/1.5A
PATENT GRANTED Made in Taiwan CM	



Copy of marking plate:

	XPIQ inc. www.xpiq.com MODEL : JPS350PQ48C
	INPUT: 100-250V~ 4.5A MAX. 47-63Hz
	Convection cooling: 300W max V1: 5.0Vdc/25A V3: 24.0Vdc/3.0A V2: 15.0Vdc/5.0A V4: -15.0Vdc/1.6A 18CFM Cooling : 350W max V1: 5.0Vdc/35A V3: 24.0Vdc/4.0A V2: 15.0Vdc/7.0A V4: -15.0Vdc/3.0A Power sharing included.
PATENT GRANTED Made in Taiwan CM	

	XPIQ inc. www.xpiq.com MODEL : JPS350PQ48C
	INPUT: 100-250V~ 4.5A MAX. 47-63Hz
	Convection cooling V1: 5Vdc/12.5A V3: 24Vdc/1.5A V2: 15Vdc/2.5A V4: -15Vdc/0.8A 18CFM Cooling V1: 5Vdc/17.5A V3: 24Vdc/0.521A V2: 15Vdc/3.5A V4: -15Vdc/1.5A Power sharing included.
PATENT GRANTED Made in Taiwan CM	

	XPIQ inc. www.xpiq.com MODEL : JPS350PQ48
	INPUT: 100-250V~ 4.5A MAX. 47-63Hz
	Convection cooling: 300W max V1: 5.0Vdc/25A V3: 24.0Vdc/3.0A V2: 15.0Vdc/5.0A V4: -15.0Vdc/1.6A 18CFM Cooling : 350W max V1: 5.0Vdc/35A V3: 24.0Vdc/4.0A V2: 15.0Vdc/7.0A V4: -15.0Vdc/3.0A
PATENT GRANTED Made in Taiwan CM	

	XPIQ inc. www.xpiq.com MODEL : JPS350PQ48
	INPUT: 100-250V~ 4.5A MAX. 47-63Hz
	Convection cooling V1: 5Vdc/12.5A V3: 24Vdc/1.5A V2: 15Vdc/2.5A V4: -15Vdc/0.8A 18CFM Cooling V1: 5Vdc/17.5A V3: 24Vdc/0.521A V2: 15Vdc/3.5A V4: -15Vdc/1.5A
PATENT GRANTED Made in Taiwan CM	