

IEC**IECEE
CB
SCHEME**

Ref. Certif. No.

JPTUV-034157

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

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'usineRating and principal characteristics
Valeurs nominales et caractéristiques principalesInput : AC 100-240V; 47-63Hz; 5A MAX.; Class I (y = 300)
AC 100-240V; 47-63Hz; 6.35A MAX.; Class I (y = 400)
Output : refer to the test reportTrade mark (if any)
Marque de fabrique (si elle existe)

XP

Model/type Ref.
Ref. de typeSMxyPSz-Y
(x = Q or U; y = 300 or 400; z = 12, 15, 18, 24, 27, 36, 48,
or 54; Y = C, D, E, F 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 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

11021868 001

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: 11.08.2010

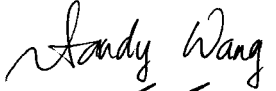

Signature:

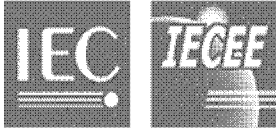
Dipl.-Ing. F. Stoezel



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.	11021868 001
Date of issue	August, 11, 2010
Total number of pages	98
CB/CCA Testing Laboratory	TÜV Rheinland Taiwan Ltd., Taichung Laboratory
Address	No. 9, Ln. 36, Sec. 3, Minsheng Rd., Daya Township, Taichung County, 428 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 page 9
Address	See page 9
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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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	Switching Power Supply
Trade Mark	XP
Manufacturer	Same as applicant
Model/Type reference	SMxyPSz-Y (x= Q or U, y= 300 or 400, z= 12, 15, 18, 24, 27, 36, 48 or 54, Y= C, D, E, F or blank)
Ratings	I/P: 100-240V~, 47-63Hz, 5A MAX. (for models SMx300PSz-Y) 100-240V~, 47-63Hz, 6.35A MAX. (for models SMx400PSz-Y) O/P: Refer to page 9



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)..... :	Sandy Wang 
Approved by (+ signature)..... :	Tina C.W. Chou 
<input type="checkbox"/> Testing procedure: TMP	N/A
Tested by (name + signature)..... :	
Approved by (+ signature)..... :	
Testing location/ address..... :	
<input type="checkbox"/> Testing procedure: WMT	N/A
Tested by (name + signature)..... :	
Witnessed by (+ signature)..... :	
Approved by (+ signature)..... :	
Testing location/ address..... :	
<input type="checkbox"/> Testing procedure: SMT	N/A
Tested by (name + signature)..... :	
Approved by (+ signature)..... :	
Supervised by (+ signature)..... :	
Testing location/ address..... :	
<input type="checkbox"/> Testing procedure: RMT	N/A
Tested by (name + signature)..... :	
Approved by (+ signature)..... :	
Supervised by (+ signature)..... :	
Testing location/ address..... :	

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

All applicable tests were performed. Details see appended clauses and tables.

- Maximum specified operating temperature is +50°C.
- The test samples were pre-production without serial number. The test had been mainly carried out on models R SMQ400PS12-Y, SMQ400PS48-Y, SMU400PS12-Y, SMU400PS48-Y to represent the other similar models.
- The external DC Fan place in primary side of SMUyPSz-Y series. This DC fan has min. 22 CFM air flow and keeps 30-50 mm to SMUyPSz-Y series.
- Pre-production samples without series numbers.

Testing location:

All applicable tests were performed at the laboratory described on page 1.

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, CA, CH, DE, DK, ES, FI, GB, IE, KR, NO, SE, 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)

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.

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, ES=Spain, FI=Finland, FR=France, GB=United Kingdom, GR=Greece, HU=Hungary, IE=Ireland, 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 Argentina, Austria, Australia, Belgium, Canada, Switzerland, China, Czech Republic, Germany, Denmark, Finland, France, United Kingdom, Greece, Hungary, Israel, India, Italy, Kenya, Korea, Malaysia, The Netherlands, Norway, Poland, Sweden, Singapore, Slovenia, Slovakia and United States of America have been tested according IEC 60950-1:2001 for customer required.

For National Differences see corresponding Attachment.

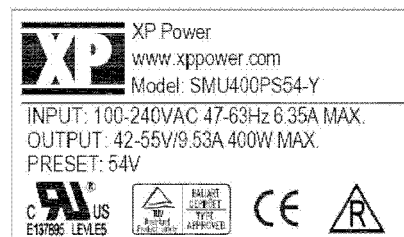
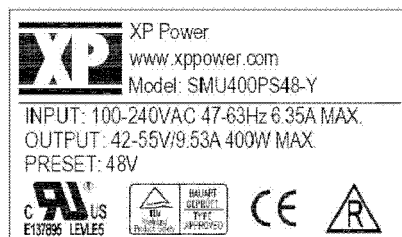
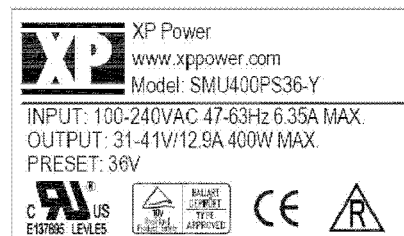
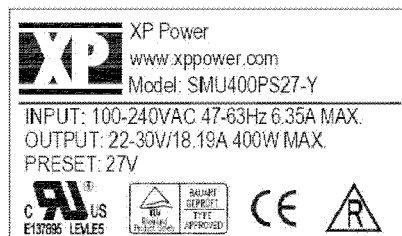
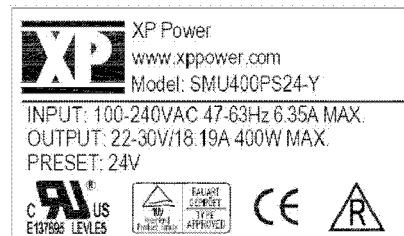
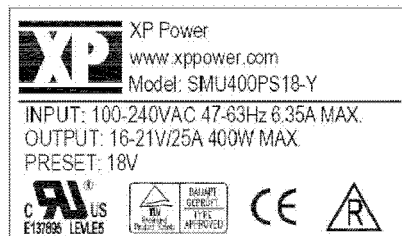
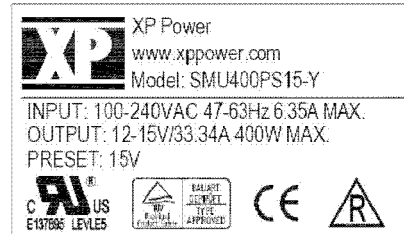
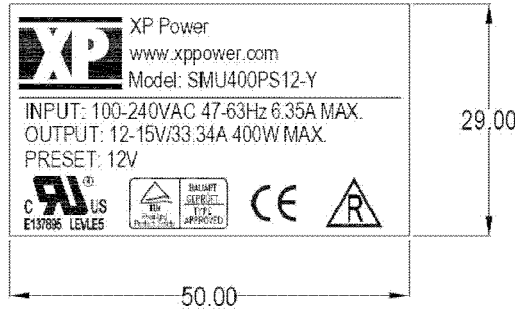
Copy of marking plate:

<p>XP Power www.xppower.com Model: SMQ400PS12-Y INPUT: 100-240VAC 47-63Hz 6.35A MAX. OUTPUT: 12-15V/33.34A 400W MAX. PRESET: 12V</p> <p>UL US E137895 LEVEL5 BALABT DEPREST TYPE APPROVED CE R</p> <p>FAN V5S+ V5S- RTN INH PG</p> <p>VO+ VO-</p>	<p>40.00</p>	<p>XP Power www.xppower.com Model: SMQ400PS15-Y INPUT: 100-240VAC 47-63Hz 6.35A MAX. OUTPUT: 12-15V/33.34A 400W MAX. PRESET: 15V</p> <p>UL US E137895 LEVEL5 BALABT DEPREST TYPE APPROVED CE R</p> <p>FAN V5S+ V5S- RTN INH PG</p> <p>VO+ VO-</p>
<p>XP Power www.xppower.com Model: SMQ400PS18-Y INPUT: 100-240VAC 47-63Hz 6.35A MAX. OUTPUT: 16-21V/25A 400W MAX. PRESET: 18V</p> <p>UL US E137895 LEVEL5 BALABT DEPREST TYPE APPROVED CE R</p> <p>FAN V5S+ V5S- RTN INH PG</p> <p>VO+ VO-</p>	<p>XP Power www.xppower.com Model: SMQ400PS24-Y INPUT: 100-240VAC 47-63Hz 6.35A MAX. OUTPUT: 22-30V/18.19A 400W MAX. PRESET: 24V</p> <p>UL US E137895 LEVEL5 BALABT DEPREST TYPE APPROVED CE R</p> <p>FAN V5S+ V5S- RTN INH PG</p> <p>VO+ VO-</p>	
<p>XP Power www.xppower.com Model: SMQ400PS27-Y INPUT: 100-240VAC 47-63Hz 6.35A MAX. OUTPUT: 22-30V/18.19A 400W MAX. PRESET: 27V</p> <p>UL US E137895 LEVEL5 BALABT DEPREST TYPE APPROVED CE R</p> <p>FAN V5S+ V5S- RTN INH PG</p> <p>VO+ VO-</p>	<p>XP Power www.xppower.com Model: SMQ400PS36-Y INPUT: 100-240VAC 47-63Hz 6.35A MAX. OUTPUT: 31-41V/12.9A 400W MAX. PRESET: 36V</p> <p>UL US E137895 LEVEL5 BALABT DEPREST TYPE APPROVED CE R</p> <p>FAN V5S+ V5S- RTN INH PG</p> <p>VO+ VO-</p>	
<p>XP Power www.xppower.com Model: SMQ400PS48-Y INPUT: 100-240VAC 47-63Hz 6.35A MAX. OUTPUT: 42-55V/9.53A 400W MAX. PRESET: 48V</p> <p>UL US E137895 LEVEL5 BALABT DEPREST TYPE APPROVED CE R</p> <p>FAN V5S+ V5S- RTN INH PG</p> <p>VO+ VO-</p>	<p>XP Power www.xppower.com Model: SMQ400PS54-Y INPUT: 100-240VAC 47-63Hz 6.35A MAX. OUTPUT: 42-55V/9.53A 400W MAX. PRESET: 54V</p> <p>UL US E137895 LEVEL5 BALABT DEPREST TYPE APPROVED CE R</p> <p>FAN V5S+ V5S- RTN INH PG</p> <p>VO+ VO-</p>	

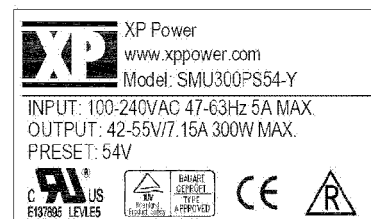
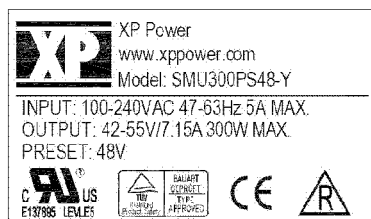
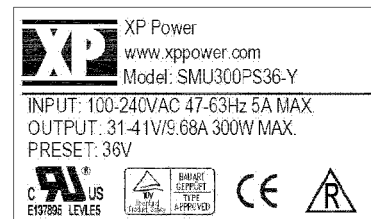
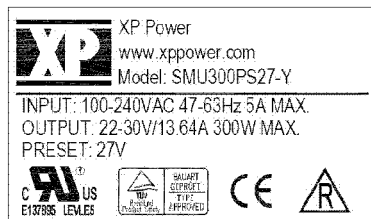
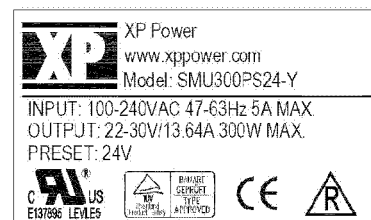
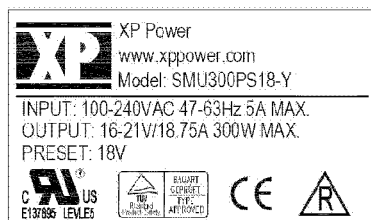
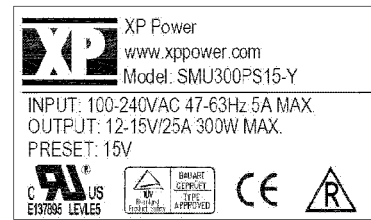
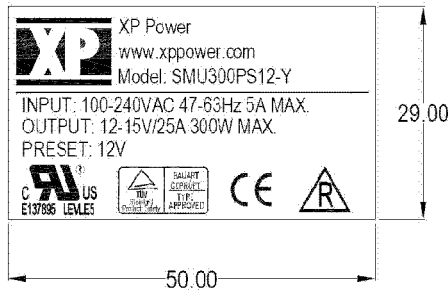
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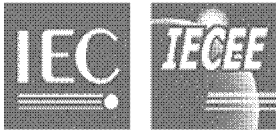
<p>XP Power www.xppower.com Model: SMQ300PS12-Y</p> <p>INPUT: 100-240VAC 47-63Hz 5A MAX. OUTPUT: 12-15V/25A 300W MAX. PRESET: 12V</p> <p>UL US E137895 LEVEL5 DALI/DMT COMPLIANT TYPE APPROVED CE R</p> <p>VO+ VO- FAN + - VRS VRS- INH RTN P/S</p> <p>40.00</p> <p>50.00</p>	<p>XP Power www.xppower.com Model: SMQ300PS15-Y</p> <p>INPUT: 100-240VAC 47-63Hz 5A MAX. OUTPUT: 12-15V/25A 300W MAX. PRESET: 15V</p> <p>UL US E137895 LEVEL5 DALI/DMT COMPLIANT TYPE APPROVED CE R</p> <p>VO+ VO- FAN + - VRS VRS- INH RTN P/S</p>
<p>XP Power www.xppower.com Model: SMQ300PS18-Y</p> <p>INPUT: 100-240VAC 47-63Hz 5A MAX. OUTPUT: 16-21V/18.75A 300W MAX. PRESET: 18V</p> <p>UL US E137895 LEVEL5 DALI/DMT COMPLIANT TYPE APPROVED CE R</p> <p>VO+ VO- FAN + - VRS VRS- INH RTN P/S</p>	<p>XP Power www.xppower.com Model: SMQ300PS24-Y</p> <p>INPUT: 100-240VAC 47-63Hz 5A MAX. OUTPUT: 22-30V/13.64A 300W MAX. PRESET: 24V</p> <p>UL US E137895 LEVEL5 DALI/DMT COMPLIANT TYPE APPROVED CE R</p> <p>VO+ VO- FAN + - VRS VRS- INH RTN P/S</p>
<p>XP Power www.xppower.com Model: SMQ300PS27-Y</p> <p>INPUT: 100-240VAC 47-63Hz 5A MAX. OUTPUT: 22-30V/13.64A 300W MAX. PRESET: 27V</p> <p>UL US E137895 LEVEL5 DALI/DMT COMPLIANT TYPE APPROVED CE R</p> <p>VO+ VO- FAN + - VRS VRS- INH RTN P/S</p>	<p>XP Power www.xppower.com Model: SMQ300PS36-Y</p> <p>INPUT: 100-240VAC 47-63Hz 5A MAX. OUTPUT: 31-41V/9.68A 300W MAX. PRESET: 36V</p> <p>UL US E137895 LEVEL5 DALI/DMT COMPLIANT TYPE APPROVED CE R</p> <p>VO+ VO- FAN + - VRS VRS- INH RTN P/S</p>
<p>XP Power www.xppower.com Model: SMQ300PS48-Y</p> <p>INPUT: 100-240VAC 47-63Hz 5A MAX. OUTPUT: 42-55V/7.15A 300W MAX. PRESET: 48V</p> <p>UL US E137895 LEVEL5 DALI/DMT COMPLIANT TYPE APPROVED CE R</p> <p>VO+ VO- FAN + - VRS VRS- INH RTN P/S</p>	<p>XP Power www.xppower.com Model: SMQ300PS54-Y</p> <p>INPUT: 100-240VAC 47-63Hz 5A MAX. OUTPUT: 42-55V/7.15A 300W MAX. PRESET: 54V</p> <p>UL US E137895 LEVEL5 DALI/DMT COMPLIANT TYPE APPROVED CE R</p> <p>VO+ VO- FAN + - VRS VRS- INH RTN P/S</p>

Copy of marking plates:



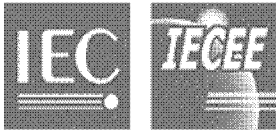
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Test item particulars	
Equipment mobility	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input checked="" type="checkbox"/> for building-in <input type="checkbox"/> 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)	Up to 2000
Altitude of test laboratory (m)	Not exceed 2000
Mass of equipment (kg)	1.5
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	August, 2010
Date(s) of performance of tests	August, 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.	

General product information:



The equipment, models SMxyPSz-Y (x = Q or U, y = 300 or 400, z = 12, 15, 18, 24, 27, 36, 48 or 54, Y = C, D, E, F or blank), is a switching mode power supply (building-in type) for DC supply of information technology equipment.

For the modes where "x" = U to denote the enclosure is U-shape. The maximum power for models SMxyPSz-Y is delivered when external DC fan with a minimum air-flow of 22CFM is provided.

For models where "x" = Q, there a DC fan is built-in type and provides minimum inward air-flow of 8.54CFM.

Models SMQyPSz-Y are provided with appliance inlet with power switch, appliance inlet with integrated G-fuse holder or appliance inlet with integrated switch for appliances or terminal block mounted on the chassis for connecting the mains supply.

Models SMUyPSz-Y are provided with terminal block or primary connector mounted on the PCB for connecting the mains supply.

The output power rating depends on the construction of T1 (different for each output voltage range) and control circuit components rating.

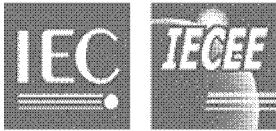
Output rating			
Models	Voltage [Vd.c.]	Current [A]	Maximum power [W]
SMQ300PS12-Y, SMU300PS12-Y	12-15	25	300
SMQ300PS15-Y, SMU300PS15-Y	12-15	25	300
SMQ300PS18-Y, SMU300PS18-Y	16-21	18.75	300
SMQ300PS24-Y, SMU300PS24-Y	22-30	13.64	300
SMQ300PS27-Y, SMU300PS27-Y	22-30	13.64	300
SMQ300PS36-Y, SMU300PS36-Y	31-41	9.68	300
SMQ300PS48-Y, SMU300PS48-Y	42-55	7.15	300
SMQ300PS54-Y, SMU300PS54-Y	42-55	7.15	300
SMQ400PS12-Y, SMU400PS12-Y	12-15	33.34	400
SMQ400PS15-Y, SMU400PS15-Y	12-15	25	400
SMQ400PS18-Y, SMU400PS18-Y	16-21	25	400
SMQ400PS24-Y, SMU400PS24-Y	22-30	18.19	400
SMQ400PS27-Y, SMU400PS27-Y	22-30	18.19	400
SMQ400PS36-Y, SMU400PS36-Y	31-41	12.9	400
SMQ400PS48-Y, SMU400PS48-Y	42-55	9.53	400
SMQ400PS54-Y, SMU400PS54-Y	42-55	9.53	400

Other comments:

Factories:

Definition of variable(s):

Variable:	Range of variable:	Content:
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x	Q or U	Denote differ construction of metal chassis and main connector
y	300 or 400	Denote differ max. power
z	12, 15, 18, 24, 27, 36, 48 or 54	Denote differ output ranges
Y	C, D, E, F or blank	Denote marketing purpose, no technical difference
<u>Attachments to this Test Report:</u> - Photo Documentation		