

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

BRIDGEPOWER CORP  
(GOSAEK-DONG) 16 OMOKCHEN-RO 132BEON-GIL  
GWONSEON-GU SUWON-SI GYEONGGI 441-813 KOREA

Name and address of the manufacturer  
Nom et adresse du fabricant

SL POWER ELECTRONICS  
BLDG A 6050 KING DR VENTURA CA 93003 UNITED STATES

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

BRIDGEPOWER CORP  
(GOSAEK-DONG) 16 OMOKCHEN-RO 132BEON-GIL  
GWONSEON-GU SUWON-SI GYEONGGI 441-813  
KOREA

Note: When more than one factory, please report on page 2  
Note: Lorsque il y plus d'une usine, veuillez utiliser la 2<sup>eme</sup> page

Additional Information on page 2  
See Page 2

Ratings and principal characteristics  
Valeurs nominales et caractéristiques principales

Trademark (if any)  
Marque de fabrique (si elle existe)  
Type of Manufacturer's Testing Laboratories used  
Type de programme du laboratoire d'essais constructeur

SL POWER ELECTRONICS

Model / Type Ref.  
Ref. De type

BX050XYXX, BX060XYXX, XE50XYXXXXXX, XE60XYXXXXXX  
See Page 2

Additional information (if necessary may also be reported on page 2)  
Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2<sup>eme</sup> page

Additionally evaluated to EN 60950-1:2006/ A1:2010/ A11:2009/ A12:2011/ A2:2013; National Differences specified in the CB Test Report.

Additional Information on page 2

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(ed.2), IEC 60950-1(ed.2);am1,  
IEC 60950-1(ed.2);am2

As shown in the Test Report Ref. No. which forms part of this Certificate  
Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat

E300305-A108-CB-1 issued on 2015-08-27

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



- UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
- UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK
- UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
- UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see [www.ul.com/nbcnames](http://www.ul.com/nbcnames)

Date: 2015-08-27

Signature:

Jan-Erik Storgaard



Ref. Certif. No.

**DK-48086-UL**

**Model Details:**

BX050XYXX,BX060XYXX,XE50XYXXXXXX,XE60XYXXXXXX (Where X may be alphanumeric, "for marketing purpose and no impact safety related critical components and constructions", where YY may any number 05 through 48)

**Factories:**

WENDENG JEIL ELECTRONICS CO LTD  
2, XIAMEN ROAD, WENDENG ECONOMIC DEVELOPMENT ZONE, WEIHAI CITY, SHANDONG PROVINCE  
CHINA

**Ratings:**

Input Rating: 100-240 Vac, 50-60 Hz, 1.5 A

Output Rating: 5 Vdc, 6 A/7A or

9 Vdc, 5A/6A or

12 Vdc, 4.2 A/5A or

15 Vdc, 3.36 A/4A or

18 Vdc, 2.8 A / 3.4A or

24 Vdc, 2.1A / 2.7A or

48 Vdc, 1.1 A./ 1.3A

5Vdc/7A~48Vdc/1.1A

**Additional information (if necessary)**

**Information complémentaire (si nécessaire)**



UL (US), 333 Pflingsten Rd IL 60062, Northbrook, USA

UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see [www.ul.com/ncbnames](http://www.ul.com/ncbnames)

Date: 2015-08-27

Signature:

Jan-Erik Storgaard



Test Report issued under  
the responsibility of:



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

**Report Reference No** ..... : E300305-A108-CB-1

Date of issue ..... : 2015-08-27

Total number of pages ..... : 72

**CB Testing Laboratory** ..... : UL Korea, Ltd.

Address ..... : #808, Manhattan Building, 36-2 Yeouido-Dong, Yeongdeungpo-Gu,  
Seoul 150-749, Korea

**Applicant's name** ..... : BRIDGEPOWER CORP  
(GOSAEK-DONG) 16 OMOKCHEN-RO 132BEON-GIL

Address ..... : GWONSEON-GU  
SUWON-SI GYEONGGI 441-813 KOREA

**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.

<b>Test item description</b> .....	Switching Power Supply
Trade Mark .....	SL POWER ELECTRONICS
Manufacturer .....	SL POWER ELECTRONICS BLDG A 6050 KING DR VENTURA CA 93003 UNITED STATES
Model/Type reference .....	BX060YYX, XE60YYXXXXX, BX050YYX, XE50YYXXXXX (Where X may be alphanumeric, "for marketing purpose and no impact safety related critical components and constructions", where YY may any number 05 through 48)
Ratings .....	BX060YYX, XE60YYXXXXX, BX050YYX, XE50YYXXXXX series;  Input Rating: 100-240 Vac, 50-60 Hz, 1.5 A Output Rating: 5 Vdc, 6 A/7A or 9 Vdc, 5A/6A or 12 Vdc, 4.2 A/5A or 15 Vdc, 3.36 A/4A or 18 Vdc, 2.8 A / 3.4A or 24 Vdc, 2.1A / 2.7A or 48 Vdc, 1.1 A./ 1.3A 5Vdc/7A~48Vdc/1.1A

<b>Testing procedure and testing location:</b>	
<input checked="" type="checkbox"/>	<p><b>CB Testing Laboratory</b>                  Testing location / address .....: UL Korea, Ltd. #808, Manhattan Building, 36-2 Yeouido-Dong, Yeongdeungpo-Gu, Seoul 150-749, Korea</p> <p><input type="checkbox"/> <b>Associated CB Test Laboratory</b>                  Testing location / address .....:                  Tested by (name + signature) .....: InYoung Hwang</p> <p>Approved by (name + signature).....: SeungTae Kim</p>
<input type="checkbox"/>	<p><b>Testing Procedure: TMP/CTF Stage 1</b>                  Testing location / address .....:                  Tested by (name + signature) .....:                  Approved by (name + signature).....:</p>
<input type="checkbox"/>	<p><b>Testing Procedure: WMT/CTF Stage 2</b>                  Testing location / address .....:                  Tested by (name + signature) .....:                  Witnessed by (name + signature) ..:                  Approved by (name + signature).....:</p>
<input type="checkbox"/>	<p><b>Testing Procedure: SMT/CTF Stage 3 or 4</b>                  Testing location / address .....:                  Tested by (name + signature) .....:                  Approved by (name + signature).....:                  Supervised by (name + signature) ..:</p>
<input type="checkbox"/>	<p><b>Testing Procedure: RMT</b>                  Testing location / address .....:                  Tested by (name + signature) .....:                  Approved by (name + signature).....:                  Supervised by (name + signature) ..:</p>



<b>List of Attachments</b>	
National Differences (21 pages)	
Enclosures (88 pages)	
<b>Summary Of Testing</b>	
Unless otherwise indicated, all tests were conducted at UL Korea, Ltd. #808, Manhattan Building, 36-2 Yeouido-Dong, Yeongdeungpo-Gu, Seoul 150-749, Korea.	
<b>Tests performed (name of test and test clause)</b>	<b>Testing location / Comments</b>

End Product Reference Page

General Guidelines

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)

Capacitance Discharge (2.1.1.7)

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)

Protective Bonding II (2.6.3.4, 2.6.1)

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)

Strain Relief (3.2.6, 4.2.1, 4.2.7)

Steady Force (4.2.1 - 4.2.4)

Impact (4.2.5, 4.2.1, Part 22 10.2)

Stress Relief (4.2.7, 4.2.1)

Heating (4.5.1, 1.4.12, 1.4.13)

Ball Pressure (4.5.5, 4.5)

Touch Current (Single-Phase; TN/TT System) (5.1, Annex D)

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)

Power Supply Output Short-Circuit/Overload (5.3.7)

**Summary of Compliance with National Differences:**

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

List of countries addressed: AT, CN, DK, EU, GB, NO

The product fulfills the requirements of: N/A

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

<b>Test item particulars :</b>	
Equipment mobility .....	movable
Connection to the mains .....	pluggable A
Operating condition .....	continuous
Access location .....	N/A
Over voltage category (OVC) .....	OVC II
Mains supply tolerance (%) or absolute mains supply values .....	+10%, -10%
Tested for IT power systems .....	Yes (for Norway only)
IT testing, phase-phase voltage (V) .....	230 Vac
Class of equipment .....	Class I (earthed) or Class II (double insulated)
Considered current rating of protective device as part of the building installation (A) .....	15
Pollution degree (PD) .....	PD 2
IP protection class .....	IP 22
Altitude of operation (m) .....	Up to 5000m
Altitude of test laboratory (m) .....	N/A
Mass of equipment (kg) .....	0.36
<b>Possible test case verdicts:</b>	
- 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)
<b>Testing:</b>	
Date(s) of receipt of test item .....	2015-02-06
Date(s) of Performance of tests .....	2015-02-10 to 2015-02-25
<b>General remarks:</b>	
<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>	
<b>Manufacturer's Declaration per Sub Clause 4.2.5 of IEC 60950-1:</b>	
Yes	
<p>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 .....</p> <p>When differences exist, they shall be identified in the General Product Information section.</p>	
<b>Name and address of Factory(ies):</b>	BRIDGEPOWER CORP (GOSAEK-DONG) 16 OMOKCHEN-RO 132BEON-GIL GWONSEON-GU SUWON-SI GYEONGGI 441-813 KOREA  WENDENG JEIL ELECTRONICS CO LTD

2, XIAMEN ROAD, WENDENG ECONOMIC DEVELOPMENT  
ZONE, WEIHAI CITY, SHANDONG PROVINCE, CHINA

## GENERAL PRODUCT INFORMATION:

### Report Summary

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

### Product Description

Switching Mode Power Supply(AC/DC adaptor), consists of electronic components mounted on PWB, a switching transformer and electronic components mounted on PWB, housed with a plastic enclosure.

### Model Differences

Models XE60 series is identical to models BX060 series except for model designation.

Models XE50 series is identical to models BX050 series except for model designation.

Models BX050 series is identical to models BX060 series except for model designation and rated output current (See power supply reference page for detail).

### Nomenclature

B X 060 X YY X, B X 050 X YY X  
(a) (b) (c) (d) (a) (b) (c) (d)

#### (a) Family Related Designs

X is A-Z

#### (b) Output

X is S (S=Single)

#### (c) Output Voltage

05, 09, 12, 15, 18, 24, 48 , 05 through 48

#### (d) Standard Input Cord Options

F : (Class I = IEC320-C14)

Q: (Class II = IEC320-C18)

N: ((Class II = IEC320-C8)

XE 50 X YY XX X XX, XE 60 X YY XX X XX  
(a) (b) (c) (d) (e) (f) (a) (b) (c) (d) (e) (f)

#### (a) Family Related Designs

X is A-Z

#### (b) AC Ground Configuration

A to Z (Standard)

#### (c) Output Voltage

05, 09, 12, 15, 18, 24, 48 , 05 through 48

#### (d) Standards Output Cord Options

Number : 00 thru 99

#### (e) Standard Input Connector Options

F : (Class I = IEC320-C14)

Q: (Class II = IEC320-C18)



N: ((Class II = IEC320-C8)  
 (f) Model Configuration  
 Number : 00 thru 99

**Additional Information**

(4787045072)E300305-A108-CB-1  
 Max. Normal Load Condition: Rated output current

**Technical Considerations**

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer’s specification of: 40
- The means of connection to the mains supply is: Detachable power cord
- The product is intended for use on the following power systems: TN
- The equipment disconnect device is considered to be: Appliance inlet
- 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 circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): 12 Vdc, 15 Vdc, 16 Vdc, 18 Vdc, 24 Vdc and 48 Vdc outputs.

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)