Ref. Certif. No.

DK-48133-UL

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 Note: *When more than one factory, please report on page 2* Note: *Lorsque il y plus d'une usine, veuillez utiliser la 2ème page*	BRIDGEPOWER CORP (GOSAEK-DONG) 16 OMOKCHEN-RO 132BEON-GIL GWONSEON-GU SUWON-SI GYEONGGI 441-813 KOREA ☒ Additional Information on page 2
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	See Page 2
Trademark (if any) Marque de fabrique (si elle existe)	SL POWER ELECTRONICS
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	CTF Stage 1
Model / Type Ref. Ref. De type	BX010XYYX, BX020XYYX, XE10XYYXXXXX, XE20XYYXXXXX, See Page 2
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2ème 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-A107-CB-1 issued on 2015-08-28

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/ncbnames

Date: 2015-08-31

Signature:

Jan-Erik Storgaard

Ref. Certif. No.

DK-48133-UL

Model Details:
BX010XYYX, BX020XYYX, XE10XYYXXXXX, XE20XYYXXXXX (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, 0.5 A
Output Rating: 5 Vdc, 2.0A/3.0A or
5.9Vdc, 1.67A/2.5A or
7.5Vdc, 1.33A/2.0A
9 Vdc, 1.33A/2.0A or
12 Vdc, 1.0A/1.5A or
15 Vdc, 0.8A/1.2A or
18 Vdc, 0.67A / 1.0A or
24 Vdc, 0.5A / 0.83A or
48 Vdc, 0.25 A./ 0.42A or
5Vdc/3.0A~48Vdc /0.25A

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

- ☐ 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/ncbnames

Date: 2015-08-31

Signature:
Jan-Erik Storgaard

Test Report issued under the responsibility of:

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

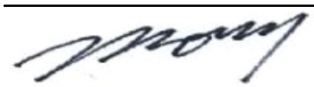
Report Reference No ..... :	E300305-A107-CB-1
Date of issue ..... :	2015-08-28
Total number of pages ..... :	77
CB Testing Laboratory ..... :	UL Korea, Ltd.
Address ..... :	#808, Manhatan Building, 36-2 Yeouido-Dong, Yeongdeungpo-Gu, Seoul 150-749, Korea
Applicant's name ..... :	BRIDGEPOWER CORP
Address ..... :	(GOSAEK-DONG) 16 OMOKCHEN-RO 132BEON-GIL 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

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description ..... :	Switching Power Supply
Trade Mark ..... :	SL POWER ELECTRONICS
Manufacturer ..... :	SL POWER ELECTRONICS BLDG A 6050 KING DR VENTURA CA 93003 UNITED STATES
Model/Type reference ..... :	BX020XYYX, XE20XYYXXXXX, BX010XYYX, XE10XYYXXXXX (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 ..... :	BX020XYYX, XE20XYYXXXXX, BX010XYYX, XE10XYYXXXXX series; Input Rating: 100-240 Vac, 50-60 Hz, 0.5 A Output Rating: 5 Vdc, 2.0A/3.0A or 5.9Vdc, 1.67A/2.5A or 7.5Vdc, 1.33A/2.0A 9 Vdc, 1.33A/2.0A or 12 Vdc, 1.0A/1.5A or 15 Vdc, 0.8A/1.2A or 18 Vdc, 0.67A / 1.0A or 24 Vdc, 0.5A / 0.83A or 48 Vdc, 0.25 A./ 0.42A or 5Vdc/3.0A~48Vdc /0.25A

Testing procedure and testing location:		
[ ]	**CB Testing Laboratory**	
	Testing location / address .....:	
[ ]	**Associated CB Test Laboratory**	
	Testing location / address .....:	
	Tested by (name + signature) .....:	
	Approved by (name + signature)....:	
[x]	**Testing Procedure: TMP/CTF Stage 1**	
	Testing location / address .....:	BRIDGEPOWER CORP (GOSAEK-DONG) 16 OMOKCHEN-RO 132BEON-GIL GWONSEON-GU SUWON-SI GYEONGGI 441-813 KOREA
	Tested by (name + signature) .....:	InYoung Hwang 
	Approved by (name + signature)....:	SeungTae Kim 
[ ]	**Testing Procedure: WMT/CTF Stage 2**	
	Testing location / address .....:	
	Tested by (name + signature) .....:	
	Witnessed by (name + signature) ..:	
	Approved by (name + signature)....:	
[ ]	**Testing Procedure: SMT/CTF Stage 3 or 4**	
	Testing location / address .....:	
	Tested by (name + signature) .....:	
	Approved by (name + signature)....:	
	Supervised by (name + signature) .:	
[ ]	**Testing Procedure: RMT**	
	Testing location / address .....:	
	Tested by (name + signature) .....:	
	Approved by (name + signature)....:	
	Supervised by (name + signature) .:	

List of Attachments
National Differences (37 pages)
Enclosures (183 pages)
Summary Of Testing Unless otherwise indicated, all tests were conducted at BRIDGEPOWER CORP (GOSAEK-DONG) 16 OMOKCHEN-RO 132BEON-GIL GWONSEON-GU SUWON-SI GYEONGGI 441-813 KOREA.

Tests performed (name of test and test clause)	**Testing location / Comments**

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)

Steady Force (4.2.1 - 4.2.4)

Impact (4.2.5, 4.2.1, Part 22 10.2)

Drop (4.2.6, 4.2.1)

Stress Relief (4.2.7, 4.2.1)

Direct Plug-In Equipment-Moment (4.3.6)

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: AU, CA, CN, DK, EU, GB, NO, NZ, US

The product fulfills the requirements of: N/A

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

Test item particulars :	
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) ..... :	20
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) ..... :	160g
Possible test case verdicts:	
- test case does not apply to the test object ..... :	N / A
- test object does meet the requirement ..... :	P(Pass)
- test object does not meet the requirement ..... :	F(Fail)
Testing:	
Date(s) of receipt of test item ..... :	2015-02-24, 2015-06-01
Date(s) of Performance of tests ..... :	2015-03-18 to 2015-06-01
General remarks: "(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report. Throughout this report a point is used as the decimal separator.	
Manufacturer's Declaration per Sub Clause 4.2.5 of IECEE 02:	Yes
The application for obtaining a CB Test Certificate includes more than one factory and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... When differences exist, they shall be identified in the General Product Information section.	
Name and address of Factory(ies):	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 XE20 series is identical to models BX020 series except for model designation.
Models XE10 series is identical to models BX010 series except for model designation.
Models BX010 series is identical to models BX020 series except for model designation and rated output current (See power supply reference page for detail).

Nomenclature

B X 020 X YY X, B X 010 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, 06, 07, 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 10 X YY XX X XX, XE 20 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, 06, 07, 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

4787045069
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: Plug, 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): All 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)