



Ref. Certif. No.

DK-43717-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

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

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

BRIDGEPOWER CORP
(GOSAEK-DONG) 16 OMOKCHEN-RO 132BEON-GIL
GWONSEON-GUSUWON-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^{eme} page

Additional Information on page 2
See Page 2

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

None

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

Model / Type Ref.
Ref. De type

*ENB1050*****, *ENB1060*****, BP*050*****, BP*060*****
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^{eme} page

Additionally evaluated to EN 60950-1:2006/ A11:2009/ A1:2010/ 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-A42-CB-3 issued on 2015-02-20

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: 2015-02-20

Signature:

Jan-Erik Storgaard



Ref. Certif. No.

DK-43717-UL

Model Details:

BP*050*****, BP*060*****, *ENB1050*****, *ENB1060*****

(Where * may be alphanumeric, "for marketing purpose and no impact safety related critical components and constructions")

Factories:

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

Ratings:

For model BP*050 series and *ENB1050 series;

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

Output Rating: 5 Vdc, 6 A or

6 Vdc, 5 A or

7 Vdc, 5A or

9 Vdc, 5 A or

12 Vdc, 4.2 A or 4.26A or

15 Vdc, 3.36 A or 3.41A or

16 Vdc, 3.15 A or

18 Vdc, 2.8 A or 2.84A or

24 Vdc, 2.1 A or 2.13A or

48 Vdc, 1.1 A.

For model BP*060 series and *ENB1060 series;

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

Output Rating: 5 Vdc, 7 A or

6 Vdc, 6 A or

7 Vdc, 5A or

9 Vdc, 6 A or

12 Vdc, 5 A or

15 Vdc, 4 A or

16 Vdc, 3.7 A or

18 Vdc, 3.4 A or

24 Vdc, 2.7 A or

48 Vdc, 1.35 A.

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: 2015-02-20

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-A42-CB-3

Date of issue : 2015-02-20

Total number of pages : 81

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.

Test item description	Switching Power Supply
Trade Mark	None
Manufacturer	BRIDGEPOWER CORP (GOSAEK-DONG) 16 OMOKCHEN-RO 132BEON-GIL GWONSEON-GU SUWON-SI GYEONGGI 441-813 KOREA
Model/Type reference	BP*050*****, BP*060*****, *ENB1050*****, *ENB1060*****, (Where * may be alphanumeric, "for marketing purpose and no impact safety related critical components and constructions")
Ratings	For model BP*050 series and *ENB1050 series; Input Rating: 100-240 Vac, 50-60 Hz, 1.5 A Output Rating: 5 Vdc, 6 A or 6 Vdc, 5 A or 7 Vdc, 5A or 9 Vdc, 5 A or 12 Vdc, 4.2 A or 4.26A or 15 Vdc, 3.36 A or 3.41A or 16 Vdc, 3.15 A or 18 Vdc, 2.8 A or 2.84A or 24 Vdc, 2.1 A or 2.13A or 48 Vdc, 1.1 A. For model BP*060 series and *ENB1060 series; Input Rating: 100-240 Vac, 50-60 Hz, 1.5 A Output Rating: 5 Vdc, 7 A or 6 Vdc, 6 A or 7 Vdc, 5A or 9 Vdc, 6 A or 12 Vdc, 5 A or 15 Vdc, 4 A or 16 Vdc, 3.7 A or 18 Vdc, 3.4 A or 24 Vdc, 2.7 A or 48 Vdc, 1.35 A.

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

List of Attachments	
National Differences (31 pages)	
Enclosures (98 pages)	
Summary Of Testing	
Unless otherwise indicated, all tests were conducted at UL Korea, Ltd. #808, Manhattan Building, 36-2 Yeouido-Dong, Yeongdeungpo-Gu, Seoul 150-749, Korea.	
Tests performed (name of test and test clause)	Testing location / Comments
End Product Reference Page	

General Guidelines

Power Supply Reference Page

Guide Information Page - Maximum Output Voltage, Current, and Volt Ampere Measurement (1.2.2.1)

Input: Single-Phase (1.6.2)

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)

Semiconductor Devices and Cemented Joints (2.10.11, 2.10.9)

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, BE, CH, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IE, IT, JP, KR, NL, NO, PL, PT, SE, SI, SK

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)	1.5A
Pollution degree (PD)	PD 2
IP protection class	IP X0
Altitude of operation (m)	Up to 5000m
Altitude of test laboratory (m)	N/A
Mass of equipment (kg)	0.31

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	2009-07-28, 2010-06-08, 2011-07-27, 2012-07-05, 2012-11-17, 2014-04-22
Date(s) of Performance of tests	2009-07-31, 2009-08-03 to 2009-08-07, 2010-06-09, 2011-07-29, 2012-07-10 to 2012-08-24, 2012-11-19, 2014-04-22

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 IEC 60950-1:

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 *ENB1060 series is identical to models BP*060 series except for model designation.
Models *ENB1050 series is identical to models BP*050 series except for model designation.
Models BP*050 series is identical to models BP*060 series except for model designation and rated output current (See Cover Page for detail).

Nomenclature

BP*(a)060*(b)**(c)*(d)**(e), BP*(a)050*(b)**(c)*(d)**(e)

(a) means Family Related Designs, may be A to Z;

(b) means Output, S (S= Single);

(c) means Output Voltage, may be 05, 06, 07, 09, 12, 15, 16, 18, 24, 48;

(d) means Standard Input Cord Options, may be F, Q, N;

F : (Class I = IEC320-C14)

Q: (Class II = IEC320-C18)

N: (Class II = IEC320-C8)

E: Cord connected type

(e) means Custom Options (Marking, Cord ect.), may be 00 to 99.

(a)ENB1060(b)**(c)**(d)*(e)**(f), *(a)ENB1050*(b)**(c)**(d)*(e)**(f)

(a) means Family Related Designs, may be A to Z;

(b) means Design Revision Changes, may be A to Z (Standard);

(c) means Output Voltage, may be 05, 06, 07, 09, 12, 15, 16, 18, 24, 48;

(d) means Standard Output Cord Options, may be 00 to 99;

(e) means Standard Input Cord Options, may be F, Q, N;

F : (Class I = IEC320-C14)

Q: (Class II = IEC320-C18)

N: (Class II = IEC320-C8)

E: Cord connected type

(f) means Custom Options (Marking, Cord ect.), may be 00 to 99.

Additional Information

Original, 09CA37153

Max. Normal Load Condition: Rated output current (See Cover Page for detail).

Procedure deviation:

Australia*, Austria**, Belgium**, Czech Republic**, Denmark, Finland, France**, Germany, Greece**, Group, Hungary**, Ireland, Italy**, Japan, China, Korea, Netherlands**, Norway, Poland**, Portugal**, Slovakia**, Slovenia**, Spain, Sweden, Switzerland, United Kingdom, United States, Canada.

* - No National Differences Declared, ** - Only Group Differences.

For China and Japan differences, it is not listed in the CB bulletin 112A dated Dec. 2006 for IEC 60950-1, therefore the deviation of IEC 60950 3rd ed is used, see Enclosure, Miscellaneous.

Before placing the products in the different countries, the manufacturer has to guarantee that:

1. Operating instructions and warnings are written in an accepted language of the certain country.
2. The equipment is in compliance with the national standards of the certain country.

Correction 1, SR5663528

Delete incorrect supplementary information in Table 5.2.

Amendment 1, 10CA29250

Alternate Fuse (F1) Rating (5.0 A)

Add Varistor (ZNR2, ZNR3) and Surge Absorber (ZNR1)

Correction 2, SR7010916

1. Correct incorrect pin number from T1 pin6 / T1 pin 9,10 to T1 pin3/T1 pin9,10 on model BPM060S48F01 in the appended table 2.10.3 and 2.10.4
2. Add manufacturer declaration.

Correction 3, 10CA61546

1. Correct reference number of discharge resistor from PR1, PR2 to PR9, PR10.
2. Correct Varistor type. See appended table 1.5.1 for details.

Amendment 2, 11CA10660

1. Add output rating ; 12Vdc / 4.26A , 15Vdc/3.41A, 18Vdc/2.84A, 24Vdc/2.13A

E300305-A42-CB-1 , Amendment 3

1. Alternate Y capacitor(CY2,CY3) in critical component list

E300305-A42-CB-1 , Correction 4

1. Add missing information of previous report
 - Alternate Y capacitor (CY4,CY5) in critical component list
 - Alternate transformer type JEC(B) (Part No.: 3025618003S) in critical component list
2. Correct CY4,CY5 information of critical component list
 - Delete DA or DS by DONGIL , SD or SC by SAMWHA CAPACITOR , SE or SB by SUccess Eletronics , KX or KY by Murata , CD or CS by TDK Corp
 - Add PCY2 130 by Pilkor

E300305-A42-CB-2, Reissue

- Upgrade report from IEC 60950-1 2nd edition to IEC 60950-1 2nd edition, Amendment1
- Altitude of operation is up to 2000m to up to 5000m refer to IEC 60664-1 table A.2
- Humidity test was conducted at 40 degreeC, 95% for China Deviation.
- Revise national difference for China
- Correct model name to "BP*050*****, BP*060*****, *ENB1050*****, *ENB1060*****"
- Add output ; 7Vdc, 5A
- Revise manufacturer declaration letter.

E300305-A42-CB-2, Correction1

- Add optical isolator certification information under mark of conformity section due to missing
- Add bobbin's manufacturer name due to missing
- Correct optical isolator CR,CL from "thermal cycling conducted " to measured CR, CP in table 2.10.2 , 2.10.3 and 2.10.4 due to typo error.

E300305-A42-CB-2, Amendment1 (12CA60094)

- Alternate cord type
- Add supplementary information in table 5.2, table 2.10.3 and 2.10.4 , optical isolator table(1,5,1),table C.2
- Correct enclosure type from "HN-1064W(+)" to "HN-1064(+)"

E300305-A42-CB-2, Correction2(SR9336622)

- Correct transformer required clearance from 6.2mm to 6.5mm in table C.2 and table 2.10.2 and 2.10.4

E300305-A42-CB-2, Correction3(SR9671622)

- Add 2.2 test results due to missing
- Add 2.10.2 test results table due to missing

E300305-A42-CB-2, Correction4

- Add national difference for Australia due to missing in enclosure

E300305-A42-CB-2, Amendment2(4786385416)

- Add photo of bottom side
- Alternate schematic due to additon of EMI shielding board (as primary part)

E300305-A42-CB-3, Reissue(4786811225)

- Upgrade report IEC 60950-1 2nd edition ,Amendment1 to IEC 60950-1 2nd edition , Amendment2
- Change Address of factory ; From " BRIDGEPOWER CORP 964 GOSAEK-DONG GWONSEON-GU SUWON-SI GYEONGGI-DO 441-813 KOREA " , "WENDENG JEIL ELECTRONICS CO LTD DONG SHOU GUANGZHOU UKAIFA-QUWENDENG-SHI SHANDONG CHINA " to "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 "
- Change Address of Applicant and Manufacturer address ; from " BRIDGEPOWER CORP 964 GOSAEK-DONG GWONSEON-GU SUWON-SI GYEONGGI-DO 441-813 KOREA " to "BRIDGEPOWER CORP (GOSAEK-DONG) 16 OMOKCHEN-RO 132BEON-GIL GWONSEON-GU SUWON-SI GYEONGGI 441-813 KOREA"
- This report is a reissue of CBTR Ref. No.:E300305-A42-CB-2, CB Test Certificate Ref. No.DK-28036-A2-UL. Based on the previously conducted testing and the review of product technical documentation including photos, schematics, wiring diagrams and similar, has been determined that the product continues to comply with the standard

Delete critical component list

- SC-12 by Supercom Wires & Cable Co. Ltd
- SC-18-UDS,SC-18-UD by Supercom Wires & Cable Co. Ltd
- DA53-362M by MITSUBISHI MATERIALS CORPORATION

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: Non-detachable power cord, Detachable power cord, Pluggable A,
- The product is intended for use on the following power systems: TN, IT for Norway only.,
- The equipment disconnect device is considered to be: Appliance inlet, Plug,
- 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): 9 Vdc, 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)