UL-EU CERTIFICATE

Certificate No.	UL-EU-01842-M1
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Date of Issue	2021-06-10
Certificate Holder	Flex Electronics (Shanghai) Co Ltd 33 Fuhua Road,Jiading District Shanghai, 201818 China
Manufacturer	Flex Electronics (Shanghai) Co Ltd 33 Fuhua Road,Jiading District Shanghai, 201818 China
Production site	Flex Electronics (Shanghai) Co Ltd 33 Fuhua Road,Jiading District Shanghai, 201818 China
Certified Product	DC-DC Converter
Model	BMR453****/***, BMR456****/***, BMR458****/***, BMR458**30/***, BMR458**31/***, BMR458**32/***, BMR458**33/***, BMR458**42/***, See Page 2-3
Trademark	flex
Rated Voltage / Frequency	See Page 3-5
Rated Current / Power	See Page 3-5
Insulation Class	Not classified
Degree of protection (IP)	X0
Tested acc. to	EN 62368-1:2014/A11:2017, EN 62368-1:2014
Test Report No.	E496569-A6010-CB-1 issued on 2021-06-02
Additional	The report was revised to include technical modifications.
Expire date	2023-01-06

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Model Details:

BMR453****/*** The first * : 0-9 defines the Mechanical pin option
The second *: 0-9 defines the Mechanical baseplate option
Third and fourth *:
00: hardware designed for 8.1-12Vout, max.396W output. Vin limitation for Vout which is large than 11Vout.
01: hardware designed for 8.1-12Vout, max.396W output, without the digital contact. Vin limitation for Vout which is large than 11Vout.
02: hardware designed for 3-5Vout, max.300W output. Full Vin Rating: 36-75Vdc,
03: hardware designed for 3-5Vout, max.300W output, without the digital contact. Full Vin Rating: 36-75Vdc,
04: hardware designed for 12Vout fixed, max.396W output. Full Vin Rating: 36-75Vdc,
05: hardware designed for 12Vout fixed, max.396W output, without the digital contact. Full Vin Rating: 36-75Vdc.
06: Hardware designed for 8.1V-12.45Vout with Droop function. Max.391W output. Vin limitation for Vout higher than 11Vout, without the digital contact.
07: Hardware designed for 8.1V-12.45Vout with Droop function. Max.391W output. Vin limitation for Vout higher than 11Vout, with the digital contact.
08: Stacker variant, Hardware designed for 8.1-12.45Vout with droop function. Max.720W output. Vin limitation for Vout higher than 11Vout, without the digital contact.
Fifth, sixth and seventh *:
000-999: software configuration.

BMR456****/*** The first * : 0-9 defines the Mechanical pin option
The second *: 0-9 defines the Mechanical baseplate option
The third and fourth * defines variants:
00: hardware optimized for 12Vout. 36-60Vin. Vout can be set from 6.9-13.2V
01: hardware optimized for 12Vout. 36-60Vin. Vout can be set from 6.9-13.2V, without communication interface
02: hardware optimized for 5Vout. 36-75Vin. Vout can be set from 2.0-6.7V
03: hardware optimized for 5Vout. 36-75Vin. Vout can be set from 2.0-6.7V, without communication interface
04: hardware optimized for 12Vout. 36-75Vin. Vout can be set from 6.9-13.2V
05: hardware optimized for 12Vout. 36-75Vin. Vout can be set from 6.9-13.2V, without communication interface
06: hardware optimized for 12Vout. 36-75Vin. Vout can be set from 6.9-13.2V. Drop function, without communication interface
07: hardware optimized for 12Vout. 36-75Vin. Vout can be set from 6.9-13.2V. Drop function, with communication interface
08: stacker variant, hardware optimized for 12Vout. 36-75Vin. Vout can be set from 4.0- 13.2V. Drop function, without communication interface
11: hardware optimized for 12Vout. 36-60Vin. Vout can be set from 6.9-13.2V. Drop function, with communication interface
12: hardware optimized for 12Vout. 36-60Vin. Vout can be set from 6.9-13.2V. Drop function, without communication interface.
Fifth, sixth and seventh *: 000-999: software configuration.

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BMR458****/*** The first * : 0-9 defines the Mechanical pin option
The second *: 0-9 defines the Mechanical baseplate option
The third and fourth * defines variants:
00: 36-75Vin, Vout can be set from 8-13.2V, with communication interface
01: 36-75Vin, Vout can be set from 8-13.2V, without communication interface
02: 36-75Vin, Vout can be set from 8-13.2V, with communication interface
03: 36-75Vin, Vout can be set from 8-13.2V, without communication interface
11: 40-60Vin, Vout can be set from 8-13.2V, with communication interface
12: 40-60Vin, Vout can be set from 8-13.2V, without communication interface
20: 40-60Vin, Vout can be set from 8-13.2V, peak power, with communication interface
21: 40-60Vin, Vout can be set from 8-13.2V, peak power, without communication interface
Fifth, sixth and seventh *: 000-999: software configuration.

BMR458**30/***, BMR458**31/***, BMR458**32/***, BMR458**33/***, BMR458**42/***
The first * will be 0-9 defines the Mechanical pin option
The second *: 0-9 defines the Mechanical baseplate option
third, fourth and fifth *: 000-999: software configuration.

Additional Information:
This certificate replaces the certificate No. UL-EU-01842 issued on 2020-03-06 due to adding new models and the data of Tables.

Ratings:
(optional)
For BMR453**00/*** and BMR453**01/***:
DC Input: 36-75Vdc,
DC Output: 8.1-12Vdc/max.396W, max.33A.

For BMR453**02/*** and BMR453**03/***:
DC Input: 36-75Vdc,
DC Output: 3-5Vdc/max.300W, max.60A.

For BMR453**04/*** and BMR453**05/***:
DC Input: 36-75Vdc,
DC Output: 12Vdc/max.396W.

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For BMR453**06/*** and BMR453**07/***:
DC Input: 36-75Vdc,
DC Output: 8.1-12.45Vdc/max.391W，MAX.33A.

For BMR453**08/***:
DC Input: 36-75Vdc,
DC Output: 8.1-12.45Vdc/max.720W.

For BMR456**00/*** and BMR456**01/***
DC Input: 36-60Vdc
DC output: 6.9-12Vdc. Max power 468W.

For BMR456**02/*** and BMR456**03/***
DC Input: 36-75Vdc
DC output: 2.0-6.7Vdc. Max power 315W.

For BMR456**04/*** and BMR456**05/***
DC Input: 36-75Vdc
DC output: 6.9-12Vdc. Max power 420W.

For BMR456**06/*** and BMR456**07/***
DC Input: 36-75Vdc
DC output: 6.9-12.45Vdc. Max power 415W.

For BMR456**08/***
DC Input: 36-75Vdc
DC output: 4.0-13.2Vdc. Max power 746W.

For BMR456**11/*** and BMR456**12/***
DC Input: 36-60Vdc
DC output: 6.9-12.45Vdc. Max power 463W.

For BMR458**00/***
DC Input: 36-75Vdc
DC output: 8-13.2Vdc. Max power 600W.

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For BMR458**01/***
DC Input: 36-75Vdc
DC output: 8-13.2Vdc. Max power 600W.

For BMR458**02/***, BMR458**03/***, BMR458**32/***, BMR458**33/***, BMR458**42/***
DC Input: 36-75Vdc
DC output: 8-13.2Vdc. Max power 600W

For BMR458**11/***, BMR458**12/***, BMR458**30/***, BMR458**31/***
DC Input: 40-60Vdc
DC output: 8-13.2Vdc. Max power 650W.

For BMR458**20/***
DC Input: 40-60Vdc
DC output: 8-13.2Vdc. Max power 650W. 100ms peak power max 93A.

For BMR458**21/***
DC Input: 40-60Vdc
DC output: 8-13.2Vdc. Max power 650W. 100ms peak power max 93A.

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Certification Mark UL-EU Mark

The UL-EU Mark, as displayed below, shall appear on certified products only. Minimum size is not specified, as long as the Mark is legible. The following is suggested.

The minimum height of the registered trademark symbol ® shall be 1 mm. When the overall diameter of the UL-EU Mark is less than 9.5 mm, the trademark symbol may be omitted if it is not legible to the naked eye.

The UL-EU Mark may appear on a label, nameplate, or may be cast, stamped or molded into the product. When appearing on a label or nameplate, the Manufacturer's name or trademark along with a model number are also required on that same label or nameplate. If cast, stamped or molded, the Certificate Manufacturer's name or trademark and model number shall also appear elsewhere on the product.

All content shall be in accordance with the details provided on this UL-EU Certificate.

PROCUREMENT

The Production site may reproduce the Mark or obtain it from a UL authorized supplier. The list of UL authorized suppliers can be found on UL's online directory at www.ul.com

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Alternate certification Mark for cables

As an alternative to the UL-EU Mark specified above the alternate UL-EU Mark, displayed below, can appear on certified cables only. Minimum size is not specified, as long as the mark is legible. The following is suggested:

(UL)-EU

The alternate UL-EU Mark may be cast, stamped or molded into the cable and continue throughout the length of the cable as specified in the applicable cable standard.

All content shall be in accordance with the details provided on this UL-EU Certificate.