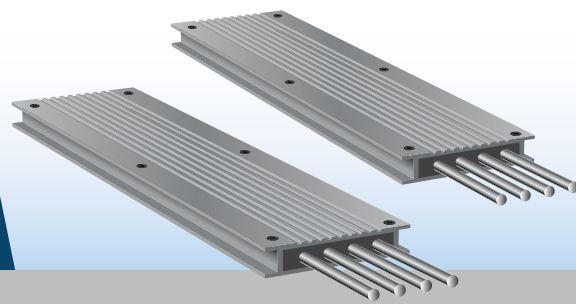


Riedon™ BRF Series High Precision Power Foil Resistors by Bourns

NEW PRODUCT BRIEF



INTRODUCTION

The Riedon™ BRF Series High Precision Power Resistors by Bourns are designed for high energy pulse applications, offering exceptional power ratings up to 2500 W and Temperature Coefficient of Resistance (TCR) as low as ± 15 ppm/°C. These features make this new resistor series an excellent energy dissipation solution for circuits requiring high precision.

Constructed utilizing metal foil technology housed in a low-profile aluminum heat sink package, the BRF Series meets the robust operational demands in applications such as power converters, Battery Energy Storage Systems (BESS), industrial power supplies, inverters, and motor drives.

Target customers include power supply designers, system integrators, and engineers developing high-reliability circuits in sectors such as industrial automation, renewable energy, Battery Energy Storage Systems (BESS), power conversion, motor control, and precision test and measurement instrumentation. The availability of both 2- and 4-terminal options, along with termination current ratings up to 150 A gives developers the flexibility to tailor these resistors to their exact design requirements.

By combining outstanding power capacity with precision temperature stability, the BRF Series provides a versatile solution that supports the growing need for efficient, reliable, and accurate energy dissipation in next-generation high-performance systems.

FEATURES

- Resistance values from 0.001 to 500 Ω
- Power rating up to 2500 W
- TCR to ± 15 ppm/°C
- Load stability to 0.1 %
- Very low inductance: <50 nH
- RoHS compliant*

BENEFITS

- Supports demanding applications with power ratings up to 2500 W
- Ultra-low TCR (± 15 ppm/°C) and excellent load stability (0.1 %) provide highly accurate and reliable energy dissipation
- Offered in 2- and 4-terminal configurations with termination current ratings up to 150 A affords flexibility to optimize circuit integration to specific requirements
- Aluminum heat sink design enables efficient thermal management in space-constrained applications
- Superior solution for high-speed and high-frequency circuits due to <50 nH inductance that minimizes parasitic effects
- Resistance values from 0.001 Ω to 500 Ω accommodates a variety of precision and high-power application specifications

APPLICATIONS

- Current sensing
- Power management
- Industrial power control
- Energy storage

HOW TO ORDER

BRF 8065 - F Z - R005 TD 4

Model _____

Size _____

8065 = 80 x 65 mm
8110 = 80 x 110 mm
8216 = 80 x 216 mm
8320 = 80 x 320 mm
8370 = 80 x 370 mm

Resistance Tolerance (%) _____

B = ± 0.1 F = ± 1
C = ± 0.25 G = ± 2
D = ± 0.5 J = ± 5

TCR (PPM/°C) _____

Z = ± 50

Resistance Value Code _____

"R" represents decimal point
(example: R005 = 5 m Ω , 5R00 = 5.00 Ω , 100R = 100 Ω)

Terminal Options _____

TD = 60 A (standard)
T1 = 70 A
T2 = 85 A
T3 = 100 A
T4 = 120A
T5 = 150 A

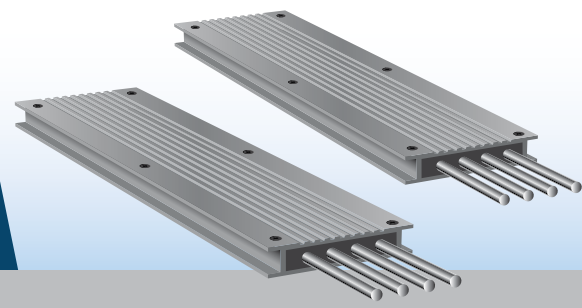
Terminals _____

2 = 2 terminals
4 = 4 terminals

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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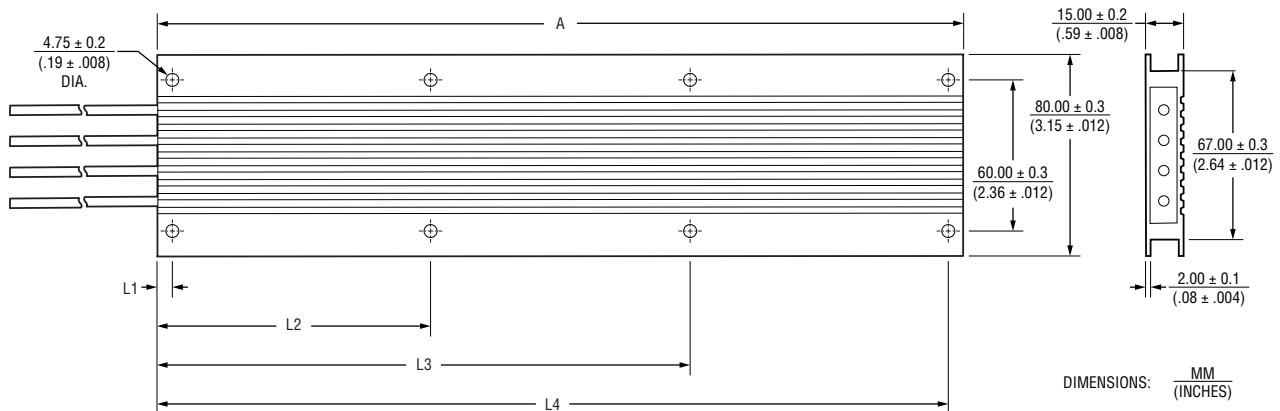


ELECTRICAL CHARACTERISTICS

Series	Power Rating (W)	Resistance Range (Ω)	Tolerance (%)	Temperature Coefficient of Resistance (TCR)	Thermal Resistance (K/W)
BRF8065	Heat Sink: 350	0.001 to 400	4 Terminals: $< 10 \text{ m}\Omega$: 0.5, 1, 2, 5 $\geq 10 \text{ m}\Omega$: 0.25, 0.5, 1, 2, 5 $\geq 20 \text{ m}\Omega$: 0.1, 0.25, 0.5, 1, 2, 5 2 Terminals: 0.5, 1, 2, 5	4 Terminals: $> 20 \text{ m}\Omega \pm 15 \text{ ppm}$ $\leq 20 \text{ m}\Omega \pm 20 \text{ ppm}$ $\leq 10 \text{ m}\Omega \pm 30 \text{ ppm}$ 2 Terminals: $\pm 50 \text{ ppm}$	0.16
BRF8110	Heat Sink: 600	0.001 to 500			0.09
BRF8216	Heat Sink: 1200	0.001 to 500			0.04
BRF8320	Heat Sink: 2000	0.001 to 500			0.026
BRF8370	Heat Sink: 2500	0.001 to 500			0.022

For full characteristics, see data sheet

PRODUCT DIMENSIONS



	BRF8065	BRF8110	BRF8216	BRF8320	BRF8370
A	65.00 ± 0.3 (2.56 ± .012)	110.00 ± 0.3 (4.33 ± .012)	216.00 ± 0.3 (8.50 ± .012)	320.00 ± 0.3 (12.60 ± .012)	370.00 ± 0.3 (14.57 ± .012)
L1	6.00 ± 0.3 (.24 ± .012)	6.00 ± 0.3 (.24 ± .012)	6.00 ± 0.3 (.24 ± .012)	6.00 ± 0.3 (.24 ± .012)	6.00 ± 0.3 (.24 ± .012)
L2	59.00 ± 0.3 (2.32 ± .012)	104.00 ± 0.3 (4.09 ± .012)	108.00 ± 0.3 (4.25 ± .012)	108.50 ± 0.3 (4.27 ± .012)	125.50 ± 0.3 (4.94 ± .012)
L3	—	—	210.00 ± 0.3 (8.27 ± .012)	211.50 ± 0.3 (8.33 ± .012)	244.50 ± 0.3 (9.63 ± .012)
L4	—	—	—	314.00 ± 0.3 (12.36 ± .012)	364.00 ± 0.3 (14.33 ± .012)

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