

## Features

- Formerly a Riedon™ product
- Wirewound technology
- Power ratings from 100 to 500 watts
- Resistance range of 1 to 5 K $\Omega$
- Tolerances of 1 %, 5 %, or 10 %
- Ultra-slim 12 mm profile
- Compact packaging
- RoHS compliant\*

## Applications

- Renewable energy
- Power converters
- Motor drives

## BRS Series – Riedon™ Slim Profile High Power Metal Clad Braking Resistors by Bourns

### Electrical Characteristics

Bourns Part Number	Power Rating with Heat Sink (W)	Resistance Range ( $\Omega$ )
BRS100	100	1 - 1.0K
BRS150	150	1 - 1.0K
BRS200	200	1 - 2.0K
BRS250	250	1 - 2.5K
BRS300 <sup>1</sup>	300	1 - 3.0K
BRS400 <sup>1</sup>	400	1 - 4.0K
BRS500 <sup>1</sup>	500	1 - 5.0K

Note:

1. Stated power rating is dependent on the resistor being mounted to a panel or heat sink of adequate mass to prevent the resistor surface from exceeding 200 °C. See temperature rise and derating curves for more information.

### Environmental Specifications

Parameter	Specification
Operating Temperature Range	-55 °C to +200 °C
TCR	< 260 PPM/°C maximum
Dielectric Withstanding Voltage	2500 VAC
Insulation Resistance	20 M $\Omega$ minimum
Short Time Overload	$\pm 1$ % + 0.05 $\Omega$   5 times rated power for 5 seconds
Moisture Resistance	$\pm 2$ % + 0.05 $\Omega$   40 °C, 95 % RH, 100 VDC case to terminal, 500 hours
Load Life	$\pm 5$ % + 0.05 $\Omega$   90 minutes rated power, 30 minutes off, 500 hours
Thermal Shock	$\pm 2$ % + 0.05 $\Omega$   30 minutes rated power, 15 minutes -25 °C
Vibration	$\pm 1$ % + 0.05 $\Omega$   10 Hz - 55 Hz - 10 Hz (1 minute) 2 hours each direction
Moisture Load Life	$\pm 2$ % + 0.05 $\Omega$   40 °C, 95 % RH, 90 minutes 10 % rated power, 30 minutes off, 500 hours
Terminals	200 $\pm$ 10 mm (7.87 $\pm$ 0.39 in.) Silicone heat-resistant wire 16 ga (1.39 mm <sup>2</sup> ), white

### Additional Information

Click these links for more information:



### How To Order

**BRS 200 - 10R J 1**

Model \_\_\_\_\_  
 BRS = Braking Resistor, Slim

Power Rating w/Heat Sink \_\_\_\_\_  
 100 = 100 W  
 150 = 150 W  
 200 = 200 W  
 250 = 250 W  
 300 = 300 W  
 400 = 400 W  
 500 = 500 W

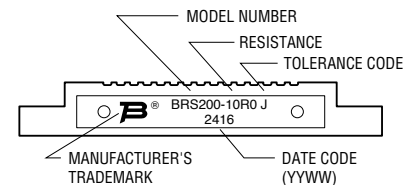
Resistance ( $\Omega$ ) \_\_\_\_\_  
 0.1 - 5.0K

Tolerance \_\_\_\_\_  
 F =  $\pm 1$  %  
 J =  $\pm 5$  %  
 K =  $\pm 10$  %

Internal Code \_\_\_\_\_  
 0 to 9

### Typical Part Marking

Represents total content. Layout may vary.



### Packaging Specifications

Bulk..... 10 pcs. per box



**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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

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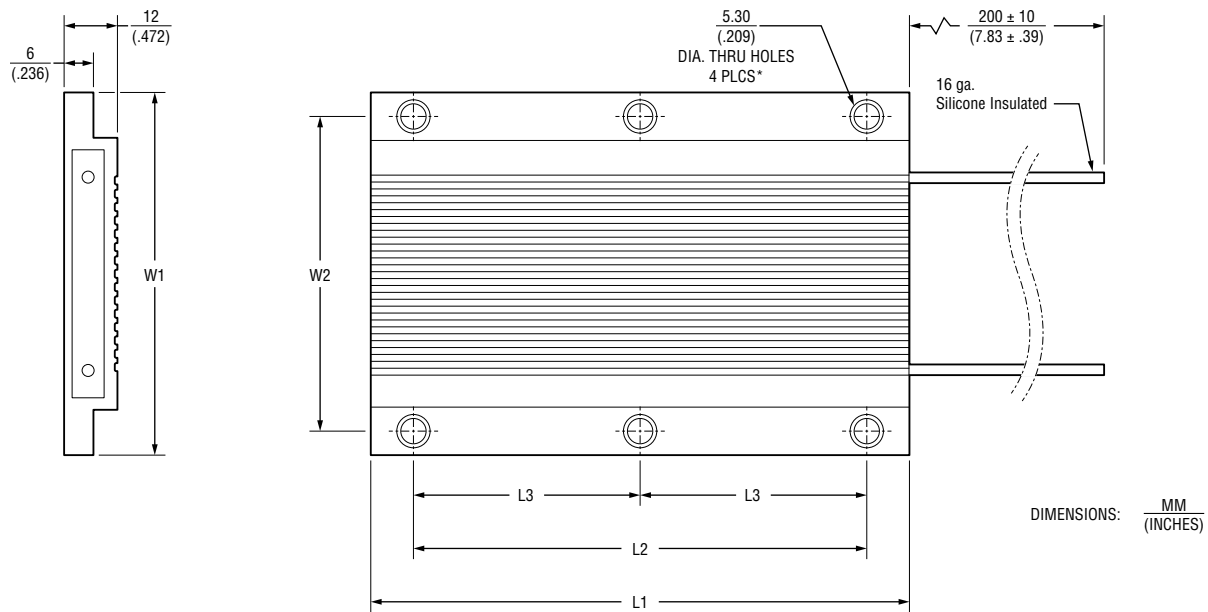
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# BRS Series – Riedon™ Slim Profile High Power Metal Clad Braking Resistors by Bourns

**BOURNS®**

## Product Dimensions



$$L3 = 0.5 \times L2$$

\*BRS300 - BRS500 include six mounting holes

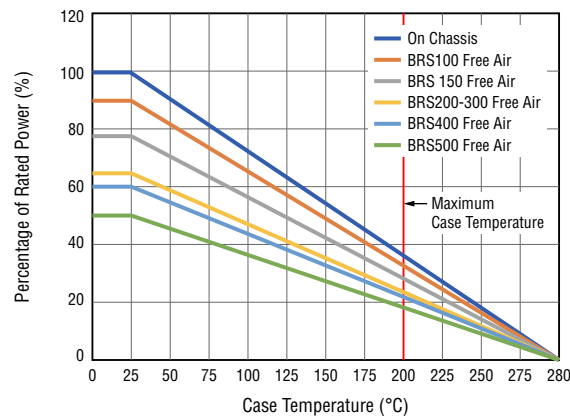
Model	L1 $\pm 1.0$ (0.04)	L2 $\pm 0.5$ (0.020)	W1 $\pm 0.5$ (0.020)	W2 $\pm 0.5$ (0.020)
BRS100	$\frac{90}{(3.54)}$	$\frac{70}{(2.76)}$	$\frac{80}{(3.15)}$	$\frac{70}{(2.76)}$
BRS150	$\frac{120}{(4.72)}$	$\frac{100}{(3.94)}$		
BRS200	$\frac{150}{(5.91)}$	$\frac{130}{(5.12)}$		
BRS250	$\frac{180}{(7.08)}$	$\frac{160}{(6.30)}$		
BRS300	$\frac{210}{(8.27)}$	$\frac{190}{(7.48)}$		
BRS400	$\frac{270}{(10.63)}$	$\frac{250}{(9.84)}$		
BRS500	$\frac{330}{(12.99)}$	$\frac{310}{(12.20)}$		

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**Power Derating**



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