

Ohmite's Brown Devil® is a small, exceptionally durable power resistor. It features all-welded construction and rugged, flame resistant conformal lead free vitreous enamel coating to ensure successful performance under high temperatures.

The wirewound 200 Series has a hollow-core construction, which accommodates rigid mounting with brackets or thru bolts.

Mounting brackets not included with resistors.

## FEATURES

- Rugged lead free vitreous enamel coating
- All-welded construction.
- Self supporting terminal mounting option.
- Higher power ratings.
- Flame-resistant lead free vitreous enamel coating.
- RoHS compliant product available. Add "E" suffix to part number to specify.

See page 36 for mounting hardware

## SPECIFICATIONS

### Material

**Coating:** lead free vitreous enamel.

**Core:** Ceramic.

**Terminals:** Tinned axial; RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu

**Derating:** Linearly from 100% @ +25°C to 0% @ +350°C.

### Electrical

**Tolerance:** 1Ω+: ±5%  
under 1Ω: ±10%

**Power rating:** Based on 25°C free air rating.

**Overload:** 10 times rated wattage for 5 seconds.

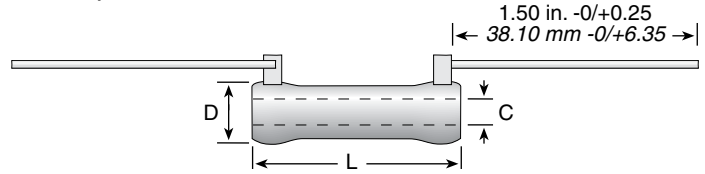
**Temperature coefficient:** 5Ω and under: ±400 ppm/°C  
Above 5Ω: ±260 ppm/°C

**To calculate max. amps:** use the formula  $\sqrt{P/R}$ .



# 200 Series

## Brown Devil® Vitreous Enamel Power



| Series | Wattage | Ohms     | Dimensions (in. / mm) |               |              | Lead Gauge | Max. Volt. * |
|--------|---------|----------|-----------------------|---------------|--------------|------------|--------------|
|        |         |          | L                     | D             | C            |            |              |
| B5     | 5.25    | 0.1-20K  | 0.625 / 15.88         | 0.250 / 6.35  | 0.135 / 3.43 | 20         | 187          |
| B8     | 8.0     | 0.03-25K | 1.000 / 25.40         | 0.313 / 7.94  | 0.188 / 4.76 | 18         | 250          |
| B12    | 12.0    | 0.08-51K | 1.750 / 44.45         | 0.313 / 7.94  | 0.188 / 4.76 | 18         | 625          |
| B20    | 20.0    | 0.1-100K | 2.000 / 50.80         | 0.438 / 11.11 | 0.250 / 6.35 | 18         | 750          |

Non-Inductive versions available. Insert "N" before tolerance code. **Example** - B5N10RE  
Also available in low cost Centohm or Silicone coating. Consult Ohmite.  
\* Maximum Voltage is based on Ohm's Law  $[V=\sqrt{P \cdot R}]$  as limited by the resistance value of specified product

## ORDERING INFO

|  |           |  |                |
|--|-----------|--|----------------|
| Coating<br>Blank = Vitreous<br>C = Centohm<br>S = Silicone | Wattage   | Non-Inductive Winding<br>Optional (blank = std. winding) | RoHS Compliant |
| <b>B 8 N J 5 R 0 E</b>                                     |           |  |                |
| Series   | Tolerance | Ohms   | RoHS Compliant |
|  | F = 1%    | 1R0 = 1 Ω  |                |
|  | H = 3%    | 250 = 250 Ω  |                |
|  | J = 5%    | 1K0 = 1,000 Ω  |                |
|  | K = 10%   | 25K = 25,000 Ω   |                |
|  |           | 25K5 = 25,500 Ω  |                |

## MADE-TO-ORDER PARTS

|  |  |                 |
|--|--|-----------------|
| Non-Inductive Winding<br>Optional (blank = std. winding) | Core Diameter<br>See "Core and Terminal Selection" | RoHS Compliant  |
| <b>2 0 0 N 8 D 5 R 0 0 J E</b>                           |  |                 |
| Coating<br>200 = Vitreous<br>400 = Silicone<br>Ceramic   | Wattage  | Ohms            |
|  | 3  | R500 = 0.500 Ω  |
|  | 5.25   | 1R00 = 1 Ω      |
|  | 8  | 250R = 250 Ω    |
|  | 12   | 1K00 = 1,000 Ω  |
|  | 20   | 25K0 = 25,000 Ω |
|  |  | 25K5 = 25,500 Ω |
| Tolerance  | F = 1%   | H = 3%          |
|  | J = 5%   | K = 10%         |

See web-site for custom core info

## STANDARD PART NUMBERS FOR 200 SERIES

| Ohmic value | Part No. | Wattage | Ohmic value | Part No. | Wattage | Ohmic value | Part No. | Wattage | Ohmic value | Part No. | Wattage | Ohmic value | Part No. | Wattage |   |    |    |
|-------------|----------|---------|-------------|----------|---------|-------------|----------|---------|-------------|----------|---------|-------------|----------|---------|---|----|----|
| Prefix      | Suffix   | 5.25    | 8           | 12       | 20      | Prefix      | Suffix   | 5.25    | 8           | 12       | 20      | Prefix      | Suffix   | 5.25    | 8 | 12 | 20 |
| 0.5         | R50E     | ✓       | ✓           | ✓        | ✓       | 20          | 20RE     | ✓       | ✓           | ✓        | ✓       | 270         | 270E     | ✓       | ✓ | ✓  | ✓  |
| 1           | 1R0E     | ✓       | ✓           | ✓        | ✓       | 22          | 22RE     | ✓       | ✓           | ✓        | ✓       | 300         | 300E     | ✓       | ✓ | ✓  | ✓  |
| 1.1         | 1R1E     | ✓       | ✓           | ✓        | ✓       | 24          | 24RE     | ✓       | ✓           | ✓        | ✓       | 330         | 330E     | ✓       | ✓ | ✓  | ✓  |
| 1.2         | 1R2E     | ✓       | ✓           | ✓        | ✓       | 25          | 25RE     | ✓       | ✓           | ✓        | ✓       | 350         | 350E     | ✓       | ✓ | ✓  | ✓  |
| 1.3         | 1R3E     | ✓       | ✓           | ✓        | ✓       | 27          | 27RE     | ✓       | ✓           | ✓        | ✓       | 360         | 360E     | ✓       | ✓ | ✓  | ✓  |
| 1.5         | 1R5E     | ✓       | ✓           | ✓        | ✓       | 30          | 30RE     | ✓       | ✓           | ✓        | ✓       | 390         | 390E     | ✓       | ✓ | ✓  | ✓  |
| 1.6         | 1R6E     | ✓       | ✓           | ✓        | ✓       | 33          | 33RE     | ✓       | ✓           | ✓        | ✓       | 400         | 400E     | ✓       | ✓ | ✓  | ✓  |
| 1.8         | 1R8E     | ✓       | ✓           | ✓        | ✓       | 35          | 35RE     | ✓       | ✓           | ✓        | ✓       | 430         | 430E     | ✓       | ✓ | ✓  | ✓  |
| 2           | 2R0E     | ✓       | ✓           | ✓        | ✓       | 36          | 36RE     | ✓       | ✓           | ✓        | ✓       | 450         | 450E     | ✓       | ✓ | ✓  | ✓  |
| 2.2         | 2R2E     | ✓       | ✓           | ✓        | ✓       | 39          | 39RE     | ✓       | ✓           | ✓        | ✓       | 470         | 470E     | ✓       | ✓ | ✓  | ✓  |
| 2.4         | 2R4E     | ✓       | ✓           | ✓        | ✓       | 40          | 40RE     | ✓       | ✓           | ✓        | ✓       | 500         | 500E     | ✓       | ✓ | ✓  | ✓  |
| 2.7         | 2R7E     | ✓       | ✓           | ✓        | ✓       | 43          | 43RE     | ✓       | ✓           | ✓        | ✓       | 510         | 510E     | ✓       | ✓ | ✓  | ✓  |
| 3           | 3R0E     | ✓       | ✓           | ✓        | ✓       | 47          | 47RE     | ✓       | ✓           | ✓        | ✓       | 560         | 560E     | ✓       | ✓ | ✓  | ✓  |
| 3.3         | 3R3E     | ✓       | ✓           | ✓        | ✓       | 50          | 50RE     | ✓       | ✓           | ✓        | ✓       | 600         | 600E     | ✓       | ✓ | ✓  | ✓  |
| 3.6         | 3R6E     | ✓       | ✓           | ✓        | ✓       | 51          | 51RE     | ✓       | ✓           | ✓        | ✓       | 620         | 620E     | ✓       | ✓ | ✓  | ✓  |
| 3.9         | 3R9E     | ✓       | ✓           | ✓        | ✓       | 56          | 56RE     | ✓       | ✓           | ✓        | ✓       | 650         | 650E     | ✓       | ✓ | ✓  | ✓  |
| 4           | 4R0E     | ✓       | ✓           | ✓        | ✓       | 62          | 62RE     | ✓       | ✓           | ✓        | ✓       | 680         | 680E     | ✓       | ✓ | ✓  | ✓  |
| 4.3         | 4R3E     | ✓       | ✓           | ✓        | ✓       | 68          | 68RE     | ✓       | ✓           | ✓        | ✓       | 700         | 700E     | ✓       | ✓ | ✓  | ✓  |
| 4.7         | 4R7E     | ✓       | ✓           | ✓        | ✓       | 75          | 75RE     | ✓       | ✓           | ✓        | ✓       | 750         | 750E     | ✓       | ✓ | ✓  | ✓  |
| 5           | 5R0E     | ✓       | ✓           | ✓        | ✓       | 82          | 82RE     | ✓       | ✓           | ✓        | ✓       | 800         | 800E     | ✓       | ✓ | ✓  | ✓  |
| 5.1         | 5R1E     | ✓       | ✓           | ✓        | ✓       | 91          | 91RE     | ✓       | ✓           | ✓        | ✓       | 820         | 820E     | ✓       | ✓ | ✓  | ✓  |
| 5.6         | 5R6E     | ✓       | ✓           | ✓        | ✓       | 100         | 100E     | ✓       | ✓           | ✓        | ✓       | 900         | 900E     | ✓       | ✓ | ✓  | ✓  |
| 6.2         | 6R2E     | ✓       | ✓           | ✓        | ✓       | 110         | 110E     | ✓       | ✓           | ✓        | ✓       | 910         | 910E     | ✓       | ✓ | ✓  | ✓  |
| 6.8         | 6R8E     | ✓       | ✓           | ✓        | ✓       | 120         | 120E     | ✓       | ✓           | ✓        | ✓       | 1,000       | 1K0E     | ✓       | ✓ | ✓  | ✓  |
| 7.5         | 7R5E     | ✓       | ✓           | ✓        | ✓       | 125         | 125E     | ✓       | ✓           | ✓        | ✓       | 1,100       | 1K1E     | ✓       | ✓ | ✓  | ✓  |
| 8.2         | 8R2E     | ✓       | ✓           | ✓        | ✓       | 130         | 130E     | ✓       | ✓           | ✓        | ✓       | 1,200       | 1K2E     | ✓       | ✓ | ✓  | ✓  |
| 9.1         | 9R1E     | ✓       | ✓           | ✓        | ✓       | 150         | 150E     | ✓       | ✓           | ✓        | ✓       | 1,250       | 1K25E    | ✓       | ✓ | ✓  | ✓  |
| 10          | 10RE     | ✓       | ✓           | ✓        | ✓       | 160         | 160E     | ✓       | ✓           | ✓        | ✓       | 1,300       | 1K3E     | ✓       | ✓ | ✓  | ✓  |
| 11          | 11RE     | ✓       | ✓           | ✓        | ✓       | 180         | 180E     | ✓       | ✓           | ✓        | ✓       | 1,500       | 1K5E     | ✓       | ✓ | ✓  | ✓  |
| 12          | 12RE     | ✓       | ✓           | ✓        | ✓       | 200         | 200E     | ✓       | ✓           | ✓        | ✓       | 1,600       | 1K6E     | ✓       | ✓ | ✓  | ✓  |
| 13          | 13RE     | ✓       | ✓           | ✓        | ✓       | 220         | 220E     | ✓       | ✓           | ✓        | ✓       | 1,750       | 1K75E    | ✓       | ✓ | ✓  | ✓  |
| 15          | 15RE     | ✓       | ✓           | ✓        | ✓       | 225         | 225E     | ✓       | ✓           | ✓        | ✓       | 1,800       | 1K8E     | ✓       | ✓ | ✓  | ✓  |
| 16          | 16RE     | ✓       | ✓           | ✓        | ✓       | 240         | 240E     | ✓       | ✓           | ✓        | ✓       | 2,000       | 2K0E     | ✓       | ✓ | ✓  | ✓  |
| 18          | 18RE     | ✓       | ✓           | ✓        | ✓       | 250         | 250E     | ✓       | ✓           | ✓        | ✓       | 2,200       | 2K2E     | ✓       | ✓ | ✓  | ✓  |

✓ = Standard values; check availability using the world-wide inventory search at [www.ohmite.com](http://www.ohmite.com)

These values involve very fine resistance wire and should not be used in critical applications without burn-in and/or thermal cycling:

B5: 6.8K-20KΩ  
B8: 12.5K-25KΩ  
B12: 30K-51KΩ  
B20: 22.5K-100KΩ