

200 Series

Brown Devil® Vitreous Enamel Power



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.

SERIES SPECIFICATIONS

| Series | Wattage | Ohms | Lead Gauge | Max. Voltage* |
|--------|---------|----------|------------|---------------|
| B5 | 5.25 | 0.1-20K | 20 | 187 |
| B8 | 8.0 | 0.03-25K | 18 | 250 |
| B12 | 12.0 | 0.08-51K | 18 | 625 |
| B20 | 20.0 | 0.1-100K | 18 | 750 |

Non-Inductive versions available. Insert "N" before tolerance code.

Example: B5NJ10RE

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

CHARACTERISTICS

| | |
|--------------------------------|---|
| 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 |
| 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 |
| Max. amps | To calculate, use the formula $\sqrt{P/R}$ |

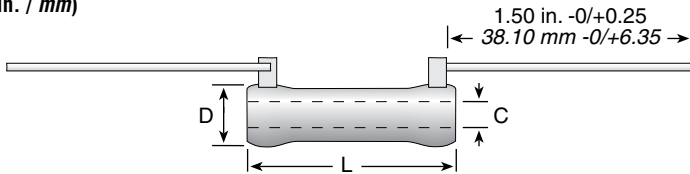
(continued)

200 Series

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DIMENSIONS

(in. / mm)



| Series | Wattage | L | D | C | Lead Gauge |
|--------|---------|---------------|---------------|--------------|------------|
| B5 | 5.25 | 0.625 / 15.88 | 0.250 / 6.35 | 0.135 / 3.43 | 20 |
| B8 | 8.0 | 1.000 / 25.40 | 0.313 / 7.94 | 0.188 / 4.76 | 18 |
| B12 | 12.0 | 1.750 / 44.45 | 0.313 / 7.94 | 0.188 / 4.76 | 18 |
| B20 | 20.0 | 2.000 / 50.80 | 0.438 / 11.11 | 0.250 / 6.35 | 18 |

ORDERING INFORMATION

Standard Values

| Ohmic value | | Wattage | | | | Ohmic value | | Wattage | | | | Ohmic value | | Wattage | | | | Ohmic value | | Wattage | | | | | | | | | | | | | | | |
|-------------|--------|---------|---|----|----|-------------|--------|---------|---|----|----|-------------|--------|---------|---|----|----|-------------|--------|---------|---|----|----|------------------|---|--|---|----|----|----------|--------|------|---|----|----|
| Part No. | Prefix | 5.25 | 8 | 12 | 20 | Part No. | Prefix | 5.25 | 8 | 12 | 20 | Part No. | Prefix | 5.25 | 8 | 12 | 20 | Part No. | Prefix | 5.25 | 8 | 12 | 20 | Part No. | Prefix | 5.25 | 8 | 12 | 20 | Part No. | Prefix | 5.25 | 8 | 12 | 20 |
| 0.5 | R50E | | | | | 20 | 20RE | | | | | 270 | 270E | | | | | 2,250 | 2K25E | | | | | 16,000 | 16KE | | | | | 17,500 | 17K5E | | | | |
| 1 | 1R0E | | | | | 22 | 22RE | | | | | 300 | 300E | | | | | 2,400 | 2K4E | | | | | 18,000 | 18KE | | | | | 18,000 | 18KE | | | | |
| 1.1 | 1R1E | | | | | 24 | 24RE | | | | | 330 | 330E | | | | | 2,500 | 2K5E | | | | | 20,000 | 20KE | | | | | 20,000 | 20KE | | | | |
| 1.2 | 1R2E | | | | | 25 | 25RE | | | | | 350 | 350E | | | | | 2,700 | 2K7E | | | | | 22,500 | 22K5E | | | | | 22,500 | 22K5E | | | | |
| 1.3 | 1R3E | | | | | 27 | 27RE | | | | | 360 | 360E | | | | | 2,750 | 2K75E | | | | | 25,000 | 25KE | | | | | 30,000 | 30KE | | | | |
| 1.5 | 1R5E | | | | | 30 | 30RE | | | | | 390 | 390E | | | | | 3,000 | 3K0E | | | | | 35,000 | 35KE | | | | | 40,000 | 40KE | | | | |
| 1.6 | 1R6E | | | | | 33 | 33RE | | | | | 400 | 400E | | | | | 3,300 | 3K3E | | | | | 45,000 | 45KE | | | | | 50,000 | 50KE | | | | |
| 1.8 | 1R8E | | | | | 35 | 35RE | | | | | 430 | 430E | | | | | 3,500 | 3K5E | | | | | 55,000 | 55KE | | | | | 60,000 | 60KE | | | | |
| 2 | 2R0E | | | | | 36 | 36RE | | | | | 450 | 450E | | | | | 3,600 | 3K6E | | | | | 65,000 | 65KE | | | | | 70,000 | 70KE | | | | |
| 2.2 | 2R2E | | | | | 39 | 39RE | | | | | 470 | 470E | | | | | 3,900 | 3K9E | | | | | 75,000 | 75KE | | | | | 80,000 | 80KE | | | | |
| 2.4 | 2R4E | | | | | 40 | 40RE | | | | | 500 | 500E | | | | | 4,000 | 4K0E | | | | | 85,000 | 85KE | | | | | 90,000 | 90KE | | | | |
| 2.7 | 2R7E | | | | | 43 | 43RE | | | | | 510 | 510E | | | | | 4,300 | 4K3E | | | | | 95,000 | 95KE | | | | | 100,000 | 100KE | | | | |
| 3 | 3R0E | | | | | 47 | 47RE | | | | | 560 | 560E | | | | | 4,500 | 4K5E | | | | | ✓ | Standard values; check availability at 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. | | | | | | | | | |
| 3.3 | 3R3E | | | | | 50 | 50RE | | | | | 600 | 600E | | | | | 4,700 | 4K7E | | | | | B5: 6.8K-20KΩ | | | | | | | | | | | |
| 3.6 | 3R6E | | | | | 51 | 51RE | | | | | 620 | 620E | | | | | 5,000 | 5K0E | | | | | B8: 12.5K-25KΩ | | | | | | | | | | | |
| 3.9 | 3R9E | | | | | 56 | 56RE | | | | | 650 | 650E | | | | | 5,100 | 5K1E | | | | | B12: 30K-51KΩ | | | | | | | | | | | |
| 4 | 4R0E | | | | | 62 | 62RE | | | | | 680 | 680E | | | | | 5,600 | 5K6E | | | | | B20: 22.5K-100KΩ | | | | | | | | | | | |
| 4.3 | 4R3E | | | | | 68 | 68RE | | | | | 700 | 700E | | | | | 6,000 | 6K0E | | | | | | | | | | | | | | | | |
| 4.7 | 4R7E | | | | | 75 | 75RE | | | | | 750 | 750E | | | | | 6,200 | 6K2E | | | | | | | | | | | | | | | | |
| 5 | 5R0E | | | | | 82 | 82RE | | | | | 800 | 800E | | | | | 6,800 | 6K8E | | | | | | | | | | | | | | | | |
| 5.1 | 5R1E | | | | | 91 | 91RE | | | | | 820 | 820E | | | | | 7,000 | 7K0E | | | | | | | | | | | | | | | | |
| 5.6 | 5R6E | | | | | 100 | 100E | | | | | 900 | 900E | | | | | 7,500 | 7K5E | | | | | | | | | | | | | | | | |
| 6.2 | 6R2E | | | | | 110 | 110E | | | | | 910 | 910E | | | | | 8,000 | 8K0E | | | | | | | | | | | | | | | | |
| 6.8 | 6R8E | | | | | 120 | 120E | | | | | 1,000 | 1K0E | | | | | 8,200 | 8K2E | | | | | | | | | | | | | | | | |
| 7.5 | 7R5E | | | | | 125 | 125E | | | | | 1,100 | 1K1E | | | | | 8,500 | 8K5E | | | | | | | | | | | | | | | | |
| 8.2 | 8R2E | | | | | 130 | 130E | | | | | 1,200 | 1K2E | | | | | 9,000 | 9K0E | | | | | | | | | | | | | | | | |
| 9.1 | 9R1E | | | | | 150 | 150E | | | | | 1,250 | 1K25E | | | | | 9,100 | 9K1E | | | | | | | | | | | | | | | | |
| 10 | 10RE | | | | | 160 | 160E | | | | | 1,300 | 1K3E | | | | | 10,000 | 10KE | | | | | | | | | | | | | | | | |
| 11 | 11RE | | | | | 180 | 180E | | | | | 1,500 | 1K5E | | | | | 11,000 | 11KE | | | | | | | | | | | | | | | | |
| 12 | 12RE | | | | | 200 | 200E | | | | | 1,600 | 1K6E | | | | | 12,000 | 12KE | | | | | | | | | | | | | | | | |
| 13 | 13RE | | | | | 220 | 220E | | | | | 1,750 | 1K75E | | | | | 12,500 | 12K5E | | | | | | | | | | | | | | | | |
| 15 | 15RE | | | | | 225 | 225E | | | | | 1,800 | 1K8E | | | | | 13,000 | 13KE | | | | | | | | | | | | | | | | |
| 16 | 16RE | | | | | 240 | 240E | | | | | 2,000 | 2K0E | | | | | 13,500 | 13K5E | | | | | | | | | | | | | | | | |
| 18 | 18RE | | | | | 250 | 250E | | | | | 2,200 | 2K2E | | | | | 15,000 | 15KE | | | | | | | | | | | | | | | | |

Coating
Blank = Vitreous
C = Centohm
S = Silicone

Non-Inductive Winding
Optional (blank = std. winding)

RoHS Compliant

B 8 N J 5 R 0 E

Series: B, Wattage: 8, Non-Inductive Winding: N, Tolerance: J, Ohms: 5, Coating: R, RoHS: 0, Suffix: E

Tolerance
F = 1%
H = 3%
J = 5%
K = 10%

Ohms
1R0 = 1Ω
250 = 250Ω
1K0 = 1,000Ω
25K = 25,000Ω
25K5 = 25,500Ω

Made-to-order Parts

Non-Inductive Winding
Optional (blank = std. winding)

Core Diameter
See "Core and Terminal Selection"

RoHS Compliant

2 0 0 N 8 D 5 R 0 0 0 J E

Coating
200 = Vitreous
400 = Silicone
Ceramic

Wattage
3
5.25
8
12
20

Ohms
R500 = 0.500Ω
1R00 = 1Ω
250R = 250Ω
1K00 = 1,000Ω
25K0 = 25,000Ω
25K5 = 25,500Ω

Tolerance
F = 1%
H = 3%
J = 5%
K = 10%

See website for custom core info