# 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.

**See page 36 for mounting hardware**

## 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.

## 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**

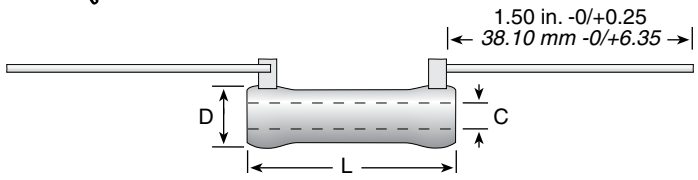
**Tolerance:** 1Ω+: ±5% under 1Ω: ±10%

**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 $\sqrt{P/R}$.




| Series | Wattage | Ohms | Dimensions (in. / *mm*) L | D | C | Lead Gauge | Max. Volt.* |
|---|---|---|---|---|---|---|---|
| **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** - B5NJ10RE
Also available in low cost Centohm or Silicone coating. Consult Ohmite.
* Maximum Voltage is based on Ohm's Law [$V=\sqrt{P*R}$] as limited by the resistance value of specified product

### ORDERING INFO

**Coating** Blank = Vitreous, C = Centohm, S = Silicone
**Wattage**
**Non-Inductive Winding** Optional (blank = std. winding)
**RoHS Compliant**

**B 8 N J 5 R 0 E**

**Series**
**Tolerance** F = 1%, H = 3%, J = 5%, K = 10%
**Ohms** 1R0 = 1 Ω, 250 = 250 Ω, 1K0 = 1,000 Ω, 25K = 25,000 Ω, 25K5 = 25,500 Ω

### MADE-TO-ORDER PARTS

See website for custom core info

**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 = 0.500 Ω, 1R00 = 1 Ω, 250R = 250 Ω, 1K00 = 1,000 Ω, 25K0 = 25,000 Ω, 25K5 = 25,500 Ω
**Tolerance** F = 1%, H = 3%, J = 5%, K = 10%

## STANDARD PART NUMBERS FOR 200 SERIES

| Ohmic value | Part No. Prefix ➤ Suffix ▼ | Wattage 5.25 B5J | 8 B8J | 12 B12J | 20 B20J |
|---|---|---|---|---|---|
| 0.5 | R50E | | | ✔ | ✔ |
| 1 | 1R0E | ✔ | ✔ | ✔ | ✔ |
| 1.1 | 1R1E | | | | |
| 1.2 | 1R2E | | | | |
| 1.3 | 1R3E | | | | |
| 1.5 | 1R5E | ✔ | ✔ | ✔ | |
| 1.6 | 1R6E | ✔ | | | |
| 1.8 | 1R8E | ✔ | | | |
| 2 | 2R0E | ✔ | ✔ | ✔ | ✔ |
| 2.2 | 2R2E | | | | |
| 2.4 | 2R4E | ✔ | | | |
| 2.7 | 2R7E | ✔ | | | |
| 3 | 3R0E | ✔ | ✔ | ✔ | ✔ |
| 3.3 | 3R3E | ✔ | | | |
| 3.6 | 3R6E | ✔ | | | |
| 3.9 | 3R9E | ✔ | | | |
| 4 | 4R0E | | ✔ | ✔ | ✔ |
| 4.3 | 4R3E | ✔ | | | |
| 4.7 | 4R7E | ✔ | | | |
| 5 | 5R0E | | ✔ | ✔ | ✔ |
| 5.1 | 5R1E | ✔ | | | |
| 5.6 | 5R6E | ✔ | | | |
| 6.2 | 6R2E | ✔ | | | |
| 6.8 | 6R8E | ✔ | | | |
| 7.5 | 7R5E | ✔ | ✔ | ✔ | |
| 8.2 | 8R2E | ✔ | | | |
| 9.1 | 9R1E | ✔ | | | |
| 10 | 10RE | ✔ | ✔ | ✔ | ✔ |
| 11 | 11RE | | | | |
| 12 | 12RE | ✔ | ✔ | ✔ | |
| 13 | 13RE | | | | |
| 15 | 15RE | ✔ | ✔ | ✔ | |
| 16 | 16RE | | | | |
| 18 | 18RE | | | | |
| 20 | 20RE | ✔ | ✔ | ✔ | |
| 22 | 22RE | ✔ | | | |
| 24 | 24RE | ✔ | | | |
| 25 | 25RE | | ✔ | ✔ | ✔ |
| 27 | 27RE | ✔ | | | |
| 30 | 30RE | ✔ | ✔ | ✔ | |
| 33 | 33RE | ✔ | | | |
| 35 | 35RE | | ✔ | ✔ | |
| 36 | 36RE | | | | |
| 39 | 39RE | ✔ | | | |
| 40 | 40RE | | ✔ | ✔ | ✔ |
| 43 | 43RE | ✔ | | | |
| 47 | 47RE | ✔ | | | |
| 50 | 50RE | | ✔ | ✔ | ✔ |
| 51 | 51RE | ✔ | | | |
| 56 | 56RE | ✔ | | | |
| 62 | 62RE | ✔ | | | |
| 68 | 68RE | ✔ | | | |
| 75 | 75RE | ✔ | ✔ | ✔ | ✔ |
| 82 | 82RE | ✔ | | | |
| 91 | 91RE | ✔ | | | |
| 100 | 100E | ✔ | ✔ | ✔ | ✔ |
| 110 | 110E | | | | |
| 120 | 120E | ✔ | | | |
| 125 | 125E | | ✔ | ✔ | ✔ |
| 130 | 130E | | | ✔ | |
| 150 | 150E | ✔ | ✔ | | ✔ |
| 160 | 160E | ✔ | | | |
| 180 | 180E | ✔ | | | |
| 200 | 200E | ✔ | ✔ | ✔ | ✔ |
| 220 | 220E | ✔ | | | |
| 225 | 225E | | | ✔ | |
| 240 | 240E | ✔ | | | |
| 250 | 250E | | ✔ | ✔ | ✔ |
| 270 | 270E | ✔ | | | |
| 300 | 300E | | ✔ | ✔ | ✔ |
| 330 | 330E | ✔ | | | |
| 350 | 350E | | ✔ | ✔ | ✔ |
| 360 | 360E | | | | |
| 390 | 390E | ✔ | | | |
| 400 | 400E | | ✔ | ✔ | ✔ |
| 430 | 430E | | | | |
| 450 | 450E | | ✔ | ✔ | |
| 470 | 470E | ✔ | | | |
| 500 | 500E | | ✔ | ✔ | ✔ |
| 510 | 510E | ✔ | | | |
| 560 | 560E | ✔ | | | |
| 600 | 600E | | ✔ | ✔ | |
| 620 | 620E | ✔ | | | |
| 650 | 650E | | | | ✔ |
| 680 | 680E | ✔ | | | |
| 700 | 700E | | ✔ | ✔ | |
| 750 | 750E | ✔ | ✔ | ✔ | ✔ |
| 800 | 800E | | ✔ | ✔ | ✔ |
| 820 | 820E | ✔ | | | |
| 900 | 900E | | ✔ | ✔ | |
| 910 | 910E | | | | |
| 1,000 | 1K0E | ✔ | ✔ | ✔ | ✔ |
| 1,100 | 1K1E | ✔ | ✔ | | |
| 1,200 | 1K2E | ✔ | | ✔ | ✔ |
| 1,250 | 1K25E | | ✔ | ✔ | ✔ |
| 1,300 | 1K3E | ✔ | | | |
| 1,500 | 1K5E | ✔ | ✔ | ✔ | ✔ |
| 1,600 | 1K6E | | | | |
| 1,750 | 1K75E | | ✔ | ✔ | ✔ |
| 1,800 | 1K8E | | | | |
| 2,000 | 2K0E | ✔ | ✔ | ✔ | ✔ |
| 2,200 | 2K2E | ✔ | | | |
| 2,250 | 2K25E | | ✔ | ✔ | |
| 2,400 | 2K4E | | | | |
| 2,500 | 2K5E | | ✔ | ✔ | ✔ |
| 2,700 | 2K7E | ✔ | | | |
| 2,750 | 2K75E | | | | ✔ |
| 3,000 | 3K0E | ✔ | ✔ | ✔ | ✔ |
| 3,300 | 3K3E | ✔ | | | |
| 3,500 | 3K5E | | ✔ | ✔ | ✔ |
| 3,600 | 3K6E | | | | |
| 3,900 | 3K9E | ✔ | | | |
| 4,000 | 4K0E | | ✔ | ✔ | ✔ |
| 4,300 | 4K3E | | | | |
| 4,500 | 4K5E | ✔ | ✔ | ✔ | |
| 4,700 | 4K7E | ✔ | | | |
| 5,000 | 5K0E | | ✔ | ✔ | ✔ |
| 5,100 | 5K1E | ✔ | | | |
| 5,600 | 5K6E | ✔ | | | |
| 6,000 | 6K0E | | ✔ | ✔ | ✔ |
| 6,200 | 6K2E | ✔ | | | |
| 6,800 | 6K8E | ✔ | | | |
| 7,000 | 7K0E | | ✔ | ✔ | ✔ |
| 7,500 | 7K5E | ✔ | ✔ | ✔ | ✔ |
| 8,000 | 8K0E | | ✔ | ✔ | ✔ |
| 8,200 | 8K2E | ✔ | | | |
| 8,500 | 8K5E | | | | |
| 9,000 | 9K0E | | ✔ | | ✔ |
| 9,100 | 9K1E | | | | |
| 10,000 | 10KE | ✔ | ✔ | ✔ | ✔ |
| 11,000 | 11KE | | | ✔ | |
| 12,000 | 12KE | ✔ | | ✔ | |
| 12,500 | 12K5E | | ✔ | ✔ | ✔ |
| 13,000 | 13KE | ✔ | | | |
| 13,500 | 13K5E | | | ✔ | |
| 15,000 | 15KE | ✔ | ✔ | ✔ | ✔ |
| 16,000 | 16KE | | | ✔ | |
| 17,500 | 17K5E | | ✔ | ✔ | |
| 18,000 | 18KE | | | ✔ | |
| 20,000 | 20KE | ✔ | ✔ | ✔ | ✔ |
| 22,500 | 22K5E | | | ✔ | |
| 25,000 | 25KE | | ✔ | ✔ | ✔ |
| 30,000 | 30KE | | | ✔ | ✔ |
| 35,000 | 35KE | | | ✔ | ✔ |
| 40,000 | 40KE | | | ✔ | ✔ |
| 45,000 | 45KE | | | ✔ | |
| 50,000 | 50KE | | | ✔ | ✔ |
| 55,000 | 55KE | | | | |
| 60,000 | 60KE | | | | |
| 65,000 | 65KE | | | | |
| 70,000 | 70KE | | | | |
| 75,000 | 75KE | | | | |
| 80,000 | 80KE | | | | ✔ |
| 85,000 | 85KE | | | | |
| 90,000 | 90KE | | | | |
| 95,000 | 95KE | | | | |
| 100,000 | 100KE | | | | |

✔ = Standard values; check availability using the worldwide inventory search 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:

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

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