

# 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

<b>Coating</b>	lead-free vitreous enamel
<b>Core</b>	Ceramic
<b>Terminals</b>	Tinned axial; RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu
<b>Derating</b>	Linearly from 100% @ +25°C to 0% @ +350°C
<b>Tolerance</b>	1Ω+: ±5% under 1Ω: ±10%
<b>Power rating</b>	Based on 25°C free air rating
<b>Overload</b>	10 times rated wattage for 5 seconds
<b>Temperature coefficient</b>	5Ω and under: ±400 ppm/°C Above 5Ω: ±260 ppm/°C
<b>Max. amps</b>	To calculate, use the formula $\sqrt{P/R}$

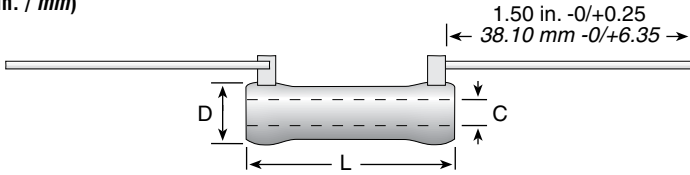
(continued)

# 200 Series

## Brown Devil® Vitreous Enamel Power

### 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	Suffix	5.25	8	12	20	Part No.	Prefix	Suffix	5.25	8	12	20	Part No.	Prefix	Suffix	5.25	8	12	20	Part No.	Prefix	Suffix	5.25	8	12	20	Part No.	Prefix	Suffix	5.25	8	12	20
0.5	—	R50E					20	—	20RE	✓	✓	✓	✓	270	—	270E	✓					2,250	—	2K25E	✓	✓			16,000	—	16KE		✓	
1	—	1R0E	✓	✓	✓	✓	22	—	22RE	✓	✓	✓	✓	300	—	300E	✓	✓	✓	✓		2,400	—	2K4E			✓	✓	17,500	—	17K5E	✓	✓	
1.1	—	1R1E					24	—	24RE	✓				330	—	330E	✓					2,500	—	2K5E	✓	✓	✓		18,000	—	18KE		✓	
1.2	—	1R2E					25	—	25RE	✓	✓	✓	✓	350	—	350E	✓	✓	✓	✓		2,700	—	2K7E	✓			20,000	—	20KE	✓	✓	✓	
1.3	—	1R3E					27	—	27RE	✓				360	—	360E						2,750	—	2K75E		✓		22,500	—	22K5E		✓	✓	
1.5	—	1R5E	✓	✓	✓	✓	30	—	30RE	✓	✓	✓	✓	390	—	390E	✓					3,000	—	3K0E	✓	✓	✓	25,000	—	25KE	✓	✓	✓	
1.6	—	1R6E	✓	✓	✓	✓	33	—	33RE	✓	✓	✓	✓	400	—	400E	✓	✓	✓	✓		3,300	—	3K3E	✓	✓	✓	30,000	—	30KE		✓	✓	
1.8	—	1R8E	✓				35	—	35RE	✓	✓			430	—	430E	✓					3,500	—	3K5E	✓	✓	✓	35,000	—	35KE	✓	✓	✓	
2	—	2R0E	✓	✓	✓	✓	36	—	36RE					450	—	450E	✓	✓				3,600	—	3K6E			✓	40,000	—	40KE		✓	✓	
2.2	—	2R2E					39	—	39RE	✓				470	—	470E	✓					3,900	—	3K9E	✓			45,000	—	45KE		✓		
2.4	—	2R4E	✓				40	—	40RE	✓	✓	✓	✓	500	—	500E	✓	✓	✓	✓		4,000	—	4K0E	✓	✓	✓	50,000	—	50KE	✓	✓	✓	
2.7	—	2R7E	✓				43	—	43RE	✓	✓			510	—	510E	✓					4,300	—	4K3E			✓	55,000	—	55KE				
3	—	3R0E	✓	✓	✓	✓	47	—	47RE	✓				560	—	560E	✓					4,500	—	4K5E	✓	✓	✓	60,000	—	60KE				
3.3	—	3R3E	✓				50	—	50RE	✓	✓	✓	✓	600	—	600E	✓	✓				4,700	—	4K7E	✓		✓	65,000	—	65KE				
3.6	—	3R6E	✓				51	—	51RE	✓				620	—	620E	✓					5,000	—	5K0E	✓	✓	✓	70,000	—	70KE				
3.9	—	3R9E	✓				56	—	56RE	✓				650	—	650E				✓		5,100	—	5K1E	✓		✓	75,000	—	75KE				
4	—	4R0E	✓	✓	✓	✓	62	—	62RE	✓				680	—	680E	✓					5,600	—	5K6E	✓			80,000	—	80KE			✓	
4.3	—	4R3E	✓				68	—	68RE	✓				700	—	700E	✓	✓				6,000	—	6K0E	✓	✓	✓	85,000	—	85KE				
4.7	—	4R7E	✓				75	—	75RE	✓	✓	✓	✓	750	—	750E	✓	✓	✓	✓		6,200	—	6K2E	✓		✓	90,000	—	90KE				
5	—	5R0E	✓	✓	✓	✓	82	—	82RE	✓	✓	✓	✓	800	—	800E	✓	✓	✓	✓		6,800	—	6K8E	✓		✓	95,000	—	95KE				
5.1	—	5R1E	✓				91	—	91RE	✓				820	—	820E	✓			✓		7,000	—	7K0E	✓	✓	✓	100,000	—	100KE				
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	✓	✓	✓							

✓ = Standard values; check availability 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

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

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