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.

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

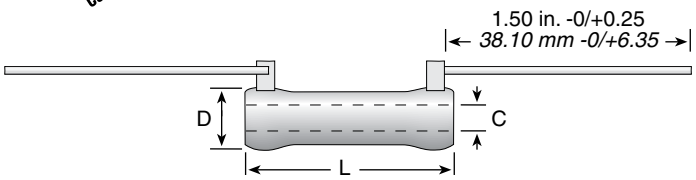
Tolerance: 1Ω+: ±5% under 1Ω: ±10%

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 $\sqrt{P/R}$.



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				

Ohmic value	Part No. (Prefix ➤ / Suffix ▼)	Wattage 5.25 B5J	8 B8J	12 B12J	20 B20J
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		✔	✔	✔

Ohmic value	Part No. (Prefix ➤ / Suffix ▼)	Wattage 5.25 B5J	8 B8J	12 B12J	20 B20J
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	✔			

Ohmic value	Part No. (Prefix ➤ / Suffix ▼)	Wattage 5.25 B5J	8 B8J	12 B12J	20 B20J
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	✔	✔	✔	✔

Ohmic value	Part No. (Prefix ➤ / Suffix ▼)	Wattage 5.25 B5J	8 B8J	12 B12J	20 B20J
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