20 Series

Vitreous Enamel Conformal Axial Terminal Wirewound, 5% Tolerance Std.



The 20 Series axial terminal resistors are both durable and economical. They have all the electrical attributes of the more expensive 90 Series resistors, including all-welded construction.

They offer the durability of a lead free conformal vitreous enamel coating and are ideal for computer, communications and industrial applications in which cost, quality, and reliability are key considerations.

FEATURES

- Rugged vitreous enamel coating withstands high humidity and temperature cycling.
- Durable construction, recommended for industrial applications where reliability is paramount.
- All-welded construction.
- Flame resistant lead free vitreous enamel coating.
- RoHS compliant; Add "E" suffix to part number to specify.

SERIES SPECIFICATIONS

Series	Wattage	Ohms	Max. Voltage*
21	1	1.0-3.0K	75
22	2	1.0-3.0K	65
23	3	0.1-10K	135
25	5	0.1-28K	330
27	7	0.1-25K	450
20	10	0.1-100K	720

12.5 watt size available on special order

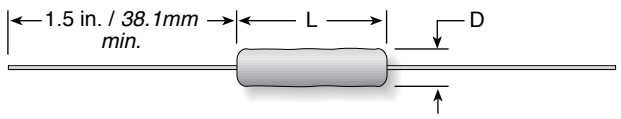
*Maximum Voltage is based on Ohm's Law [$V=\sqrt{(P*R)}$] as limited by the resistance value of specified product

CHARACTERISTICS

Coating	Conformal lead free vitreous enamel
Core	Ceramic.
Terminals	Solder-coated axial. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu
Derating	Linearly from 100% @ +25°C to 0% @ +350°C
Tolerance	±5% standard; other tolerances available
Power rating	Based on 25°C free air rating (other wattages available)
Overload	Under 7 watts: 5 times rated wattage for 5 seconds; 7 watts and over: 10 times rated wattage for 5 seconds
Temperature coefficient	1 to 9.99 ohms: ±50 ppm/°C; 10 ohms and over: ±30 ppm/°C

DIMENSIONS

(in./mm max.)



Series	Wattage	Length* (max.)	Diam.* (max.)	Lead ga.
21	1	0.421 / 10.7	0.156 / 4.0	24
22	2	0.421 / 10.7	0.219 / 5.6	20
23	3	0.515 / 13.1	0.220 / 5.6	20
25	5	1.015 / 25.8	0.276 / 7.0	20
27	7	1.265 / 32.1	0.394 / 10.0	20
20	10	1.859 / 47.2	0.394 / 10.0	20

*For units below 1Ω, add 15% to body diameter, 10% to body length.

(continued)

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ORDERING INFORMATION

Standard part numbers

Ohmic value	Part No. Prefix ➤ Suffix ▼	Wattage 1 (21J)	2 (22J)	3 (23J)	5 (25J)	7 (27J)	10 (20J)
0.10	R10			✔	✔		✔
0.13	R13			✔	✔		✔
0.15	R15			✔	✔		✔
0.20	R20			✔	✔		✔
0.25	R25			✔	✔		✔
0.30	R30			✔	✔		✔
0.33	R33			✔	✔		✔
0.50	R50			✔	✔		✔
0.75	R75			✔	✔		✔
1	1R0	✔	✔	✔	✔	✔	✔
1.5	1R5	✔	✔	✔	✔	✔	✔
2	2R0	✔	✔	✔	✔	✣	✔
2.2	2R2	✔	✔	✔	✔	✣	✔
3	3R0	✔	✔	✔	✔	✔	✔
4	4R0	✔	✣	✔	✔	✣	✔
5	5R0	✔	✔	✔	✔	✣	✔
7.5	7R5	✔	✔	✔	✔	✣	✔
10	10R	✔	✔	✔	✔	✣	✔
12	12R	✣	✣	✔	✔	✣	✔
15	15R	✔	✣	✔	✣	✔	✔
18	18R	✔	✣	✔	✔	✣	✔
20	20R	✔	✔	✔	✔	✣	✔
22	22R	✔	✔	✔	✔	✣	✔
25	25R	✣	✔	✔	✔	✣	✔
27	27R	✔	✔	✔	✔	✣	✣
30	30R	✔	✔	✔	✔	✣	✔
33	33R	✔	✔	✔	✔	✔	✔
35	35R	✣	✣	✣	✔	✣	✣
39	39R	✔	✔	✔	✣	✣	✔
40	40R	✔	✣	✔	✔	✣	✔
47	47R	✔	✔	✔	✔	✣	✔
50	50R	✔	✔	✔	✔	✔	✔
56	56R	✣	✔	✔	✔	✣	✣
62	62R	✣	✣	✔	✔	✣	✔
68	68R	✔	✔	✔	✔	✣	✔
75	75R	✔	✔	✔	✔	✣	✔
82	82R	✔	✔	✔	✔	✣	✔
100	100	✔	✣	✔	✔	✔	✔
120	120	✔	✔	✔	✔	✣	✔
125	125	✣	✣	✔	✔	✔	✔
150	150	✔	✔	✔	✔	✣	✔
180	180	✔	✔	✔	✔	✣	✔
200	200	✔	✔	✔	✔	✔	✔
220	220	✔	✔	✔	✔	✣	✔
225	225	✣	✣	✣	✣	✣	✣
250	250	✔	✔	✔	✔	✣	✔
270	270	✔	✔	✔	✔	✣	✣
300	300	✔	✔	✔	✔	✣	✔
330	330	✔	✔	✔	✔	✣	✔
350	350	✣	✔	✣	✔	✣	✔
390	390	✔	✣	✔	✣	✣	✣
400	400	✣	✣	✔	✔	✣	✔
450	450	✣	✣	✣	✔	✣	✔
470	470	✔	✔	✔	✔	✣	✔
500	500	✔	✔	✔	✔	✔	✔
560	560	✔	✔	✔	✔	✣	✣
600	600	✔	✔	✔	✔	✣	✔
680	680	✔	✣	✔	✔	✣	✔
750	750	✔	✔	✔	✔	✣	✔
800	800	✔	✣	✔	✔	✣	✣
820	820	✔	✔	✔	✔	✣	✔
900	900	✣	✔	✔	✔	✣	✣
1,000	1K0	✔	✔	✔	✔	✔	✔
1,100	1K1	✣	✣	✔	✔	✣	✔
1,200	1K2	✔	✔	✔	✔	✣	✔
1,500	1K5	✔	✔	✔	✔	✣	✔
1,800	1K8	✔	✔	✔	✣	✣	✣
2,000	2K0	✣	✔	✔	✔	✣	✔
2,200	2K2	✔	✔	✔	✔	✣	✔
2,500	2K5	✔	✔	✔	✔	✣	✔
2,700	2K7	✔	✔	✔	✣	✣	✔
3,000	3K0	✔	✔	✔	✔	✣	✔
3,300	3K3			✔	✔	✣	✣
3,500	3K5			✣	✔	✣	✣
3,900	3K9			✔	✔	✣	✔
4,000	4K0			✔	✔	✣	✔
4,500	4K5			✣	✔	✣	✣
4,700	4K7			✔	✔	✣	✔
5,000	5K0			✔	✔	✔	✔
6,000	6K0			✔	✔	✔	✔
6,800	6K8			✔	✔	✣	✣
7,000	7K0			✔	✔	✣	✣
7,500	7K5			✔	✔	✣	✔
8,000	8K0			✔	✔	✣	✔
9,000	9K0			✔	✣	✣	✣
10,000	10K			✔	✔	✣	✔
12,000	12K				✔	✣	✔
13,000	13K					✣	✔
15,000	15K				✔	✣	✔
17,000	17K					✣	✣
20,000	20K				✔	✔	✔
22,000	22K				✔	✣	✣
25,000	25K				✔	✣	✔
30,000	30K						✔
33,000	33K						✣
35,000	35K						✣
40,000	40K						✔
50,000	50K						✔

✔ = Standard values

✣ = Non-standard values subject to minimum handling charge per item

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

RoHS Compliant

21JR10E

20 Series	Wattage	Tolerance	Resistance Value
Vitreous Enamel	1 = 1W	J = 5%	R10 = 0.10Ω
Axial Lead	2		1R0 = 1.0Ω
Wirewound	3		10R = 10.0Ω
	5		250 = 250Ω
	7		1K0 = 1,000Ω
	0 = 10W		4K5 = 4,500Ω
			50K = 50,000Ω

Mouser Electronics

Authorized Distributor

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Ohmite:

20J20K 25J25R 20J22K 20J25K 25J10R 25J20R 25J50R 25J2R0 20J50R 23J600 23J4R0 23J470 25J40R
23J10K 23J7R5 23J5K0 23J1K0 23J3K0 25J300 25J8K2 25J250 25J150 25J180 25J100 25J1R5 25J10K
25J4K0 25J1K0 20J270 20J560 20J5R0 20J100 20J120 20J150 20J12K 23J180 23J100 23J1R0 23J1R5
23J125 23J120 23J150 23J3R0 23J330 23J33R 23J50R 23J68R 23J18R 23J82R 23J10R 23J30R 23J15R
25J5K0 25J3K0 25J7K0 20J3K5 23J3K3 25JR33 23J3K5 25J2K2 23J2K2 20J25R 20J10R 25J2K5 23J2K5
25J3K9 23J250 23J220 23JR10 23J200 23J2R0 22J22R 20J4R0 23J6K8 20J500 20J750 20J1K0 20J5K0
25J4K7 23J4K7 25J22K 25J1K8 23J1K5 25J20K 20J1K5 25J1K5 23JR25 23J1K2 25J1K2 25J25K 20J7K5
23J5R0 20J39RE 20J350E 22J56RE 20JR13E 20J2R0E 20JR15E 20JR10E 20J22RE