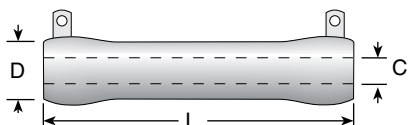


270 Series

Vitreous Enamel Power



See page 36
for mounting
hardware

FEATURES

- Terminals suitable for soldering or bolt connection
- High wattage applications
- Rugged lead free vitreous enamel coating
- Flame resistant coating
- All-welded construction
- RoHS compliant available
- "Fast on" option – see terminal 538, page 37

SPECIFICATIONS

Material

Coating: Lead free vitreous enamel. Very large models (750 watts and up) are supplied in Silicone Ceramic. Also available in low-cost Centohm coating; Consult factory.

Core: Tubular ceramic.

Terminals: Solder coated radial lug. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu

Derating: Linearly from 100% @ +25°C to 0% @ +350°C.

Electrical

Tolerance:

±5% 1Ω and over (J)
±10% under 1Ω (K)

Power rating: Based on 25°C free air rating.

Overload: 10 times rated wattage for 5 seconds.

Temperature coefficient:

1 to 20Ω: ±400 ppm/°C.
Above 20Ω: ±260 ppm/°C

Dielectric withstanding voltage:

1000 VAC: 12 to 100 watt rating.
3000 VAC: 175 to 225 watt rating (Measured from terminal to mounting bracket)

To calculate max. amps: use the formula $\sqrt{P/R}$

Series	Wattage	Ohms	Dimensions (in. / mm)			Core Code	Voltage	Standard Terminal
			L	D	C			
L12	12	0.1-51K	1.75 / 44.4	0.313 / 7.94	0.188 / 4.76	D	565	57
L25	25	0.15-100K	2.0 / 50.8	0.562 / 14.3	0.313 / 7.94	K	625	40
L50	50	0.38-260K	4.0 / 101.6	0.562 / 14.3	0.313 / 7.94	K	1625	40
L100	100	0.23-101K	6.5 / 165.1	0.750 / 19.1	0.50 / 12.7	M	2845	40
L175	175	0.13-101K	8.5 / 215.9	1.125 / 28.6	0.75 / 19.1	P	3595	46
L225	225	0.16-129K	10.5 / 266.7	1.125 / 28.6	0.75 / 19.1	P	4595	46
L500	500	0.38-218K	12.0 / 304.8	2.50 / 63.5	1.75 / 44.5	S	4970	45
L1000	1000	0.69-392K	20.0 / 508.0	2.50 / 63.5	1.75 / 44.5	S	8900	45

Non-Inductive versions available; Other sizes available; 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

Select 270 Type fixed resistors for applications requiring wattage ratings from 12 to 1000 watts.

The 270 Type resistors are equipped with lug terminals suitable for soldering or sturdy bolt connection. When secure mounting is required, the hollow core of these resistors permit fastening with spring-type brackets, thru bolts or thru bolts with slotted-steel brackets.

Suitable for rugged applications, the 270 Type resistors feature all-welded construction and durable lead free vitreous enamel coating. Mounting brackets not included with resistors.

ORDERING INFO

Coating	Series	Wattage	Tolerance	Ohms
Blank = Vitreous	L	25	J = 5%	1R0 = 1 Ω
C = Centohm	25	50	K = 10%	250 = 250 Ω
S = Silicone	J	100		1K0 = 1,000 Ω
	100			25K = 25,000 Ω
	E			25K5 = 25,500 Ω

Non-Inductive Blank = Standard N = Non-inductive
RoHS Compliant

MADE-TO-ORDER PARTS

Coating	Wattage	Ohms	Tolerance
270 = Vitreous	270	500 = 0.500 Ω	J = 5%
470 = Silicone Ceramic	500	1R00 = 1 Ω	K = 10%
	405	250R = 250 Ω	
	5R00	1K00 = 1,000 Ω	
	00J	25K0 = 25,000 Ω	
	JE	25K5 = 25,500 Ω	

Non-Inductive Blank = Standard N = Non-inductive
Core Diameter See "Core and Terminal Selection"
RoHS Compliant
Terminal Type See "Resistor Terminals for Tubular Cores"

Power limitations for high resistance values: When resistance exceeds the resistance values listed, derate the Power Rating by 25% to improve reliability:

Power rating	Resistance value	No power derating necessary for ratings higher than 100W.
12W	3,900Ω	
25W	12,000Ω	
50W	35,000Ω	
100W	75,000Ω	

STANDARD PART NUMBERS FOR 270 SERIES

Ohmic value				Wattage				Ohmic value				Wattage			
value	12 Watt			value	12 Watt			value	12 Watt			value	12 Watt		
0.51	✓ L12JKR51E			180	✓ L12J180E			2,500	— 2K5E	✓	✓	✓	✓		
1	✓ L12J1R0E			270	✓ L12J270E			3,000	— 3K0E	✓	✓	✓	✓	✓	
3.3	✓ L12J3R3E			330	✓ L12J330E			3,500	— 3K5E	✓	✓	✓	✓	✓	
4.7	✓ L12J4R7E			390	✓ L12J390E			4,000	— 4K0E	✓	✓	✓	✓	✓	
10	✓ L12J10RE			470	✓ L12J470E			5,000	— 5K0E	✓	✓	✓	✓	✓	
12	✓ L12J12RE			560	✓ L12J560E			6,000	— 6K0E	✓	✓	✓	✓	✓	
15	✓ L12J15RE			1000	✓ L12J1K0E			7,500	— 7K5E	✓	✓	✓	✓	✓	
22	✓ L12J22RE			1200	✓ L12J1K2E			10,000	— 10KE	✓	✓	✓	✓	✓	
27	✓ L12J27RE			1500	✓ L12J1K5E			12,000	— 12KE	✓	✓	✓	✓	✓	
33	✓ L12J33RE			2200	✓ L12J2K2E			15,000	— 15KE	✓	✓	✓	✓	✓	
47	✓ L12J47RE			2700	✓ L12J2K7E			20,000	— 20KE	✓	✓	✓	✓	✓	
68	✓ L12J68RE			4700	✓ L12J4K7E			25,000	— 25KE	✓	✓	✓	✓	✓	
82	✓ L12J82RE			10000	✓ L12J10KE			30,000	— 30KE	✓	✓	✓	✓	✓	
100	✓ L12J100E			18000	✓ L12J18KE			35,000	— 35KE	✓	✓	✓	✓	✓	
150	✓ L12J150E			22000	✓ L12J22KE			40,000	— 40KE	✓	✓	✓	✓	✓	
				51000	✓ L12J51KE			50,000	— 50KE	✓	✓	✓	✓	✓	
								60,000	— 60KE	✓	✓	✓	✓	✓	
								75,000	— 75KE	✓	✓	✓	✓	✓	
								100,000	— 100KE	✓	✓	✓	✓	✓	
								150,000	— 150KE	✓	✓	✓	✓	✓	
								200,000	— 200KE	✓	✓	✓	✓	✓	
								250,000	— 250KE	✓	✓	✓	✓	✓	

✓ = Standard values; check availability using the worldwide inventory search at www.ohmite.com

Red outlined values supplied in Silicone-Ceramic coatings instead of vitreous enamel.

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