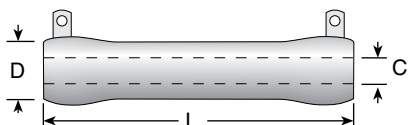


270 Series

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

Non-Inductive				RoHS Compliant	
F = Fast on (optional)	Blank = Standard	N = Non-inductive			
L	25	J	100	E	
Series	Wattage	Tolerance	Ohms		
Blank = Vitreous		J = 5%	1R0 = 1 Ω		
C = Centohm		K = 10%	250 = 250 Ω		
S = Silicone			1K0 = 1,000 Ω		
			25K = 25,000 Ω		
			25K5 = 25,500 Ω		

MADE-TO-ORDER PARTS

Non-Inductive		Core Diameter		RoHS Compliant	
Blank = Standard	N = Non-inductive	See "Core and Terminal Selection"			
270	50	K	40	5	R00JE
Coating	Wattage	Ohms	Terminal Type	Tolerance	
270 = Vitreous		R500 = 0.500 Ω	See "Resistor Terminals for Tubular Cores"	J = 5%	
470 = Silicone Ceramic		1R00 = 1 Ω		K = 10%	
		250R = 250 Ω			
		1K00 = 1,000 Ω			
		25K0 = 25,000 Ω			
		25K5 = 25,500 Ω			

See website for custom core and terminal info

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		12 Watt		Ohmic value		12 Watt		Wattage										Wattage									
12 Watt		12 Watt		12 Watt		12 Watt		Ohmic value	Part No. Prefix	Suffix	25	50	100	175	225	500	1000	Ohmic value	Part No. Prefix	Suffix	25	50	100	175	225	500	1000
0.51	✓	L12JKR51E		180	✓	L12J180E		1	—	1R0E	✓	✓	✓	✓	✓			2,500	—	2K5E	✓	✓	✓		✓		
1	✓	L12J1R0E		270	✓	L12J270E		2	—	2R0E	✓	✓	✓	✓	✓			3,000	—	3K0E	✓	✓	✓	✓	✓		
3.3	✓	L12J3R3E		330	✓	L12J330E		3	—	3R0E	✓	✓	✓	✓	✓			3,500	—	3K5E	✓	✓	✓		✓		
4.7	✓	L12J4R7E		390	✓	L12J390E		4	—	4R0E	✓	✓	✓	✓	✓			4,000	—	4K0E	✓	✓	✓		✓		
10	✓	L12J10RE		470	✓	L12J470E		5	—	5R0E	✓	✓	✓	✓	✓			5,000	—	5K0E	✓	✓	✓	✓	✓		
12	✓	L12J12RE		560	✓	L12J560E		10	—	10RE	✓	✓	✓	✓	✓			6,000	—	6K0E	✓	✓	✓		✓		
15	✓	L12J15RE		1000	✓	L12J1K0E		15	—	15RE	✓	✓	✓	✓	✓			7,500	—	7K5E	✓	✓	✓	✓	✓		
22	✓	L12J22RE		1200	✓	L12J1K2E		25	—	25RE	✓	✓	✓	✓	✓			10,000	—	10KE	✓	✓	✓	✓	✓		
27	✓	L12J27RE		1500	✓	L12J1K5E		50	—	50RE	✓	✓	✓	✓	✓			12,000	—	12KE	✓	✓	✓		✓		
33	✓	L12J33RE		2200	✓	L12J2K2E		75	—	75RE	✓	✓	✓	✓	✓			15,000	—	15KE	✓	✓	✓		✓		
47	✓	L12J47RE		2700	✓	L12J2K7E		100	—	100E	✓	✓	✓	✓	✓			20,000	—	20KE	✓	✓	✓		✓		
68	✓	L12J68RE		4700	✓	L12J4K7E		125	—	125E		✓	✓	✓	✓			25,000	—	25KE	✓	✓	✓		✓		
82	✓	L12J82RE		10000	✓	L12J10KE		150	—	150E	✓	✓	✓	✓	✓			30,000	—	30KE		✓	✓		✓		
100	✓	L12J100E		18000	✓	L12J18KE		200	—	200E	✓	✓	✓	✓	✓			35,000	—	35KE		✓			✓		
150	✓	L12J150E		22000	✓	L12J22KE		250	—	250E	✓	✓	✓	✓	✓			40,000	—	40KE	✓				✓		
				51000	✓	L12J51KE		500	—	500E	✓	✓	✓	✓	✓			50,000	—	50KE	✓	✓	✓		✓		
								750	—	750E	✓	✓	✓	✓	✓			60,000	—	60KE					✓		
								800	—	800E	✓	✓	✓	✓	✓			75,000	—	75KE		✓	✓		✓		
								1,000	—	1K0E	✓	✓	✓	✓	✓			100,000	—	100KE	✓	✓	✓	✓	✓	✓	
								1,500	—	1K5E	✓	✓	✓	✓	✓			150,000	—	150KE		✓	✓		✓		
								2,000	—	2K0E	✓	✓	✓	✓	✓			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.