Vishay Dale

Wirewound Resistors, Commercial Power, Surface Mount



FEATURES

- High wattage in a SMD package
- Meets or performs better than EIA-RS-344 requirements
- Special inorganic potting compound and ceramic case provide high thermal conductivity in a fireproof package
- Superior surge capability
- Direct mounting on printed circuit board

STANDARD ELECTRICAL SPECIFICATIONS				
GLOBAL MODEL	HISTORICAL MODEL	POWER RATING P _{40°C} W	RESISTANCE RANGE Ω ± 5% Standard; ± 1% and ± 3% Available	
CP002M	CP-2M	4	0.1 - 2.74k	

TECHNICAL SPECIFICATIONS				
PARAMETER	UNIT	CP002M RESISTOR CHARACTERISTICS		
Temperature Coefficient	ppm/°C	\pm 90 below 1.0Ω, \pm 50 1.0Ω and above		
Short Time Overload	-	5 x rated power for 5 seconds		
Operating Temperature Range	°C	- 65/+ 175		
Dielectric Withstanding Voltage	V _{AC}	1000		
Maximum Working Voltage	V	(P x R) ^{1/2}		
Weight (typical)	g	1.6		





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DIMENSIONS





	DIMENSIONS in inches [millimeters]					
MODEL	L	W	H	W ₁	H ₁	T
	± 0.032	± 0.032	± 0.032	± 0.010	± 0.032	± 0.010
	[0.813]	[0.813]	[0.813]	[0.254]	[0.813]	[0.254]
CP002M	0.712	0.250	0.262	0.170	0.250	0.100
	[18.08]	[6.35]	[6.65]	[4.32]	[6.35]	[2.54]





b

MODEL	SOLDER PAD DIMENSIONS in inches [millimeters]			
NODEL	а	b	I	
CP002M	0.280 [7.11]	0.200 [5.08]	0.460 [11.68]	



MATERIAL SPECIFICATIONS		
Element	Copper-nickel alloy or nickel-chrome alloy depending on resistance value	
Core	Alumina ceramic	
Body	Steatite ceramic case with inorganic potting compound	
Terminals	High temperature solder dipped copper	
Part Marking	DALE, Model, Wattage, Value, Tolerance, Date Code	

PERFORMANCE				
TEST	CONDITIONS OF TEST	TEST LIMITS		
Thermal Shock	- 55°C to + 150°C, 5 cycles, 15 minutes at each extreme	± (0.2% + 0.05Ω)ΔR		
Short Time Overload	5 x rated power for 5 seconds	± (0.5% + 0.05Ω)ΔR		
Low Temperature Storage	- 65°C for 24 hours	± (0.2% + 0.05Ω)ΔR		
High Temperature Condition	1000 hours at +175°C	± (0.5% + 0.05Ω)ΔR		
Insulation Resistance	MIL-STD-202 Method 302, 100 volts	1000 M Ω minimum		
Mechanical Shock	100g's for 11 milliseconds, 5 pulses	± (0.1% + 0.05Ω)ΔR		
Vibration	Frequency varied 10 to 500Hz in one minute, 3 directions, 9 hours	± (0.1% + 0.05Ω)ΔR		
Load Life	1000 hours at rated power, + 40°C, 1.5 hours "ON", 0.5 hours "OFF"	± (1.0% + 0.05Ω)ΔR		
Resistance to Solder Heat	+ 260°C solder, 10-12 second dwell, 25mm/second emergence	± (0.5% + 0.05Ω)ΔR		
Bias Humidity	+ 85°C, 85% RH, 10% bias, 1000 hours	± (1.0% + 0.05Ω)ΔR		

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