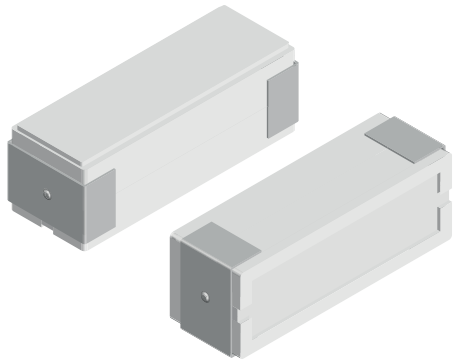
Wirewound Resistors, Commercial Power, Surface Mount



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

Please reference the Vishay Dale closest equivalent: SM-5 (www.vishay.com/doc?31812).

Notes

- There may be slight differences between the CP002M product and the SM-5 product.
- See the cross-reference file for a complete list of differences and part number crosses: www.vishay.net/files/Cross-Reference%20Data%20-%20PTN-DR-018-2015%20Rev%200.pdf.

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{40\,°C}$ W	RESISTANCE RANGE Ω	TOLERANCE ± %	WEIGHT (typical) g
CP002M	CP-2M	4	0.1 to 2.74K	1, 3, 5, 10	1.6

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	CP002M RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 50 1.0 Ω and above, ± 90 below 1.0 Ω
Short Time Overload	-	See Performance table
Dielectric Withstanding Voltage	V_{AC}	1000
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Operating Temperature Range	°C	-65 to +175

PART NUMBER AND PRODUCT DESCRIPTION

Global Part Number example: CP002M15R00JB37

C	P	0	0	2	M	1	5	R	0	0	J	B	3	7			

GLOBAL MODEL	VALUE	TOLERANCE	PACKAGING	SPECIAL
CP002M	**R** = decimal **K** = thousand **R1500** = 0.15 Ω **1K500** = 1.5 kΩ	**F** = ± 1.0 % **H** = ± 3.0 % **J** = ± 5.0 % **K** = ± 10 %	**B37** = tin/lead, bulk **P07** =tin/lead, tube	(dash number) (up to 3 digits) from **1 to 999** as applicable

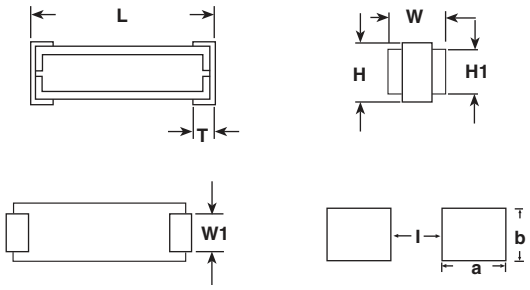
Historical Part Numbering example: CP-2M 15 Ω 5 % B37

CP-2M	15 Ω	5 %	B37
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING

For technical questions, contact: ww2bresistors@vishay.com

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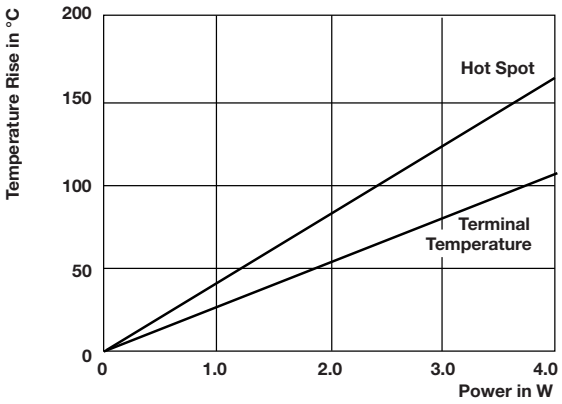
DIMENSIONS in inches [millimeters]



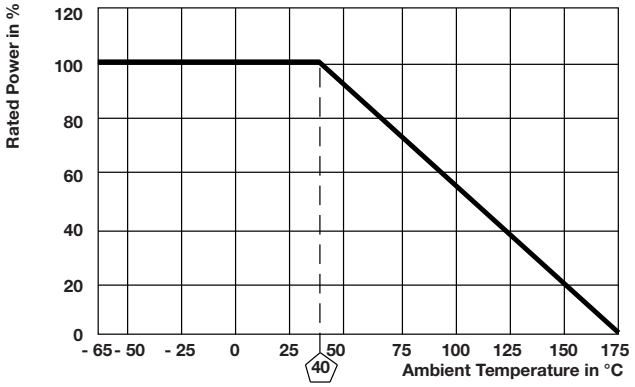
MODEL	DIMENSIONS in inches [millimeters]					
	L ± 0.032 [0.813]	W ± 0.032 [0.813]	H ± 0.032 [0.813]	W_1 ± 0.010 [0.254]	H_1 ± 0.032 [0.813]	T ± 0.010 [0.254]
CP002M	0.712 [18.08]	0.250 [6.35]	0.262 [6.65]	0.170 [4.32]	0.250 [6.35]	0.100 [2.54]

MODEL	SOLDER PAD DIMENSIONS in inches [millimeters]		
	a	b	l
CP002M	0.280 [7.11]	0.200 [5.08]	0.460 [11.68]

TEMPERATURE RISE



DERATING



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 min at each extreme	± (0.2 % + 0.05 Ω) ΔR
Short Time Overload	3.5 x rated power for 5 s 5 x rated power for 5 s	± (0.5 % + 0.05 Ω) ΔR ± (4.0 % + 0.05 Ω) ΔR
Low Temperature Storage	-65 °C for 24 h	± (0.2 % + 0.05 Ω) ΔR
High Temperature Condition	1000 h at +175 °C	± (0.5 % + 0.05 Ω) ΔR
Insulation Resistance	MIL-STD-202, method 302, 100 V	1000 MΩ min.
Mechanical Shock	100 *g*'s for 11 ms, 5 pulses	± (0.1 % + 0.05 Ω) ΔR
Vibration	Frequency varied 10 Hz to 500 Hz in one min, 3 directions, 9 h	± (0.1 % + 0.05 Ω) ΔR
Load Life	1000 h at rated power, +40 °C, 1.5 h "ON", 0.5 h "OFF"	± (1.0 % + 0.05 Ω) ΔR
Resistance to Solder Heat	+260 °C solder, 10 s to 12 s dwell, 25 mm/s emergence	± (0.5 % + 0.05 Ω) ΔR
Bias Humidity	+85 °C, 85 % RH, 10 % bias, 1000 h	± (1.0 % + 0.05 Ω) ΔR

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