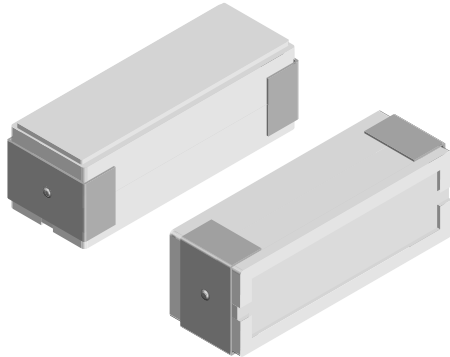


Wirewound Resistors, Commercial Power, Surface Mount


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 $P_{40^\circ\text{C}}$ W	RESISTANCE RANGE Ω	TOLERANCE $\pm \%$	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	-	5 x rated power for 5 s
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 CP002M

VALUE R = Decimal K = Thousand R1500 = 0.15 Ω 1K500 = 1.5 k Ω

TOLERANCE F = $\pm 1.0 \%$ H = $\pm 3.0 \%$ J = $\pm 5.0 \%$ K = $\pm 10 \%$
--

PACKAGING B37 = Tin/lead, bulk P07 = Tin/lead, tube

SPECIAL (Dash number) (Up to 3 digits) From 1 to 999 as applicable
--

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

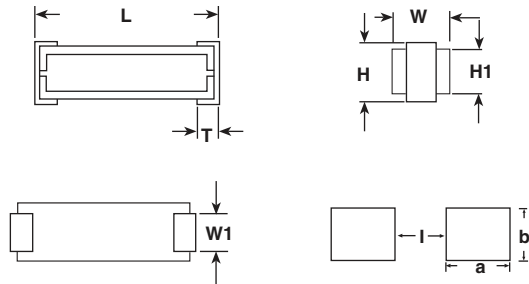
CP-2M
HISTORICAL MODEL

15 Ω
RESISTANCE VALUE

5 %
TOLERANCE CODE

B37
PACKAGING

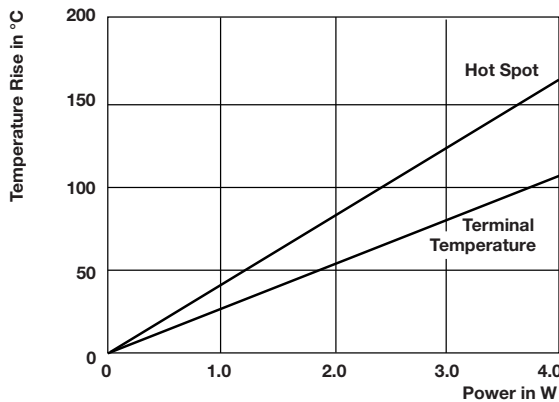
DIMENSIONS in inches [millimeters]



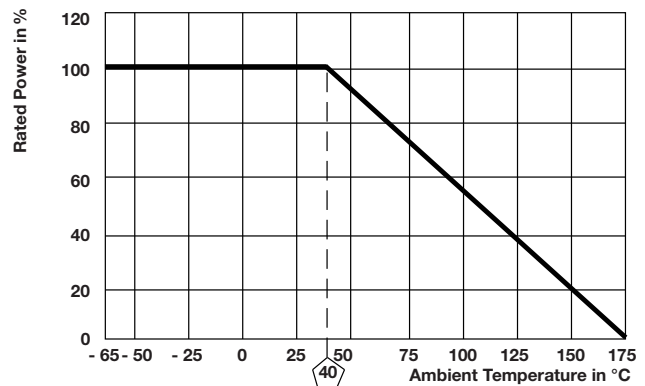
MODEL	DIMENSIONS in inches [millimeters]					
	L ± 0.032 [0.813]	W ± 0.032 [0.813]	H ± 0.032 [0.813]	W ₁ ± 0.010 [0.254]	H ₁ ± 0.032 [0.813]	T ± 0.010 [0.254]
CP002M	0.712 [18.08]	0.250 [6.35]	0.262 [6.65]	0.170 [4.32]	0.250 [6.35]	0.100 [2.54]

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	5 x rated power for 5 s	± (0.5 % + 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



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk and agree to fully indemnify and hold Vishay and its distributors harmless from and against any and all claims, liabilities, expenses and damages arising or resulting in connection with such use or sale, including attorneys fees, even if such claim alleges that Vishay or its distributor was negligent regarding the design or manufacture of the part. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.