

Wirewound Resistor, Ultra Precision, Epoxy Molded, Axial Lead


FEATURES

- Resistance values up to 6 MΩ
- Resistance tolerances down to ± 0.005 %
- Tighter tolerances and lower resistance values available, please contact factory
- Temperature coefficients down to ± 2 ppm/°C, and up to 6000 ppm/°C
- Matched resistance sets available in tolerances down to ± 0.001 %, and in temperature coefficients down to ± 0.5 ppm/°C, please contact factory
- Custom design capability available, please contact factory
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	POWER RATING W ⁽¹⁾	RESISTANCE RANGE Ω		RESISTANCE RANGE Ω		RESISTANCE RANGE Ω		MAXIMUM WORKING VOLTAGE V ⁽²⁾
		± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 %	± 0.05 %, ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 %	± 0.01 %, ± 0.05 %, ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 %	± 0.005 %, ± 0.01 %, ± 0.05 %, ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 %			
MR101	0.120	1 to 400K	5 to 400K	50 to 400K	1K to 400K	150		
MR102	0.175	1 to 750K	5 to 750K	50 to 750K	1K to 750K	200		
MR103	0.200	1 to 750K	5 to 750K	50 to 750K	1K to 750K	200		
MR104	0.150	1 to 500K	5 to 500K	50 to 500K	1K to 500K	100		
MR105	0.200	1 to 1.0M	5 to 1.0M	50 to 1.0M	1K to 1.0M	200		
MR106	0.250	1 to 1.2M	5 to 1.2M	50 to 1.2M	1K to 1.2M	300		
MR107	0.330	1 to 2.5M	5 to 2.5M	50 to 2.5M	1K to 2.5M	400		
MR108	0.400	1 to 3.8M	5 to 3.8M	50 to 3.8M	1K to 3.8M	300		
MR110	0.500	1 to 3.8M	5 to 3.8M	50 to 3.8M	1K to 3.8M	400		
MR111	0.500	1 to 3.8M	5 to 3.8M	50 to 3.8M	1K to 3.8M	400		
MR112	0.750	1 to 6.0M	5 to 6.0M	50 to 6.0M	1K to 6.0M	600		
MR114	1.000	1 to 6.0M	5 to 6.0M	50 to 6.0M	1K to 6.0M	800		
MR115	1.500	1 to 6.0M	5 to 6.0M	50 to 6.0M	1K to 6.0M	900		
MR116	2.000	1 to 6.0M	5 to 6.0M	50 to 6.0M	1K to 6.0M	1000		

Notes

- (1) Power rating is based on tolerance, please see derating chart.
 (2) The maximum working voltage is the highest voltage that can be applied to the resistor. Below this value, the maximum voltage that can continuously be applied is given by $(P \times R)^{1/2}$.

GLOBAL PART NUMBER INFORMATION

 Global Part Numbering example: **MR106250R00TAE66** (visit www.vishay.net SAP parts manual for all options)

M	R	1	0	6	2	5	0	R	0	0	T	A	E	6	6		
GLOBAL MODEL (5 digits) <small>(see Standard Electrical Specifications Global Model column for options)</small>					VALUE (6 digits) R = decimal K = thousand M = million 1R5000 = 1.5 Ω 1K5000 = 1.5 kΩ 1M0000 = 1 MΩ			TOLERANCE (1 digit) S = ± 0.005 % T = ± 0.01 % Q = ± 0.02 % A = ± 0.05 % B = ± 0.1 % C = ± 0.25 % D = ± 0.5 % F = ± 1.0 %		TC (1 digit) A = standard, 10 to 30 (W) B = 3900 (Q) C = 4500 (M) D = 6000 (N) E = 3500 (P) Y = 10 (≥ 1 Ω) G = 5 (≥ 10 Ω) J = 2 (≥ 100 Ω)		PACKAGING CODE (3 digits) E66 = lead (Pb)-free bulk pack			SPECIAL (up to 2 digits) <small>(dash number)</small> From 1 to 99 as applicable S = 0.025" terminal		

 Historical Part Number example: **MR106W250R0T**

MR106	W = STANDARD	250 Ω	0.01 %
HISTORICAL MODEL	TC	RESISTANCE VALUE	TOLERANCE

DIMENSIONS in inches [millimeters]


GLOBAL MODEL	DIMENSIONS in inches [millimeters]		
	$L \pm 0.025$ [0.635]	$D \pm 0.005$ [0.127]	$LD \pm 0.002$ [0.051]
MR101	0.250 [6.35]	0.187 [4.75]	0.025 [0.635]
MR102	0.375 [9.52]	0.187 [4.75]	0.025 [0.635]
MR103	0.450 [11.43]	0.187 [4.75]	0.025 [0.635]
MR104	0.250 [6.35]	0.250 [6.35]	0.025 [0.635]
MR105	0.375 [9.52]	0.250 [6.35]	0.032 [0.813] ⁽¹⁾
MR106	0.500 [12.70]	0.250 [6.35]	0.032 [0.813] ⁽¹⁾
MR107	0.750 [19.05]	0.250 [6.35]	0.032 [0.813] ⁽¹⁾
MR108	0.500 [12.70]	0.375 [9.52]	0.032 [0.813]
MR110	0.750 [19.05]	0.375 [9.52]	0.032 [0.813]
MR111	0.750 [19.05]	0.375 [9.52]	0.032 [0.813]
MR112	1.000 [25.40]	0.375 [9.52]	0.032 [0.813]
MR114	1.000 [25.40]	0.500 [12.70]	0.032 [0.813]
MR115	1.500 [38.10]	0.500 [12.70]	0.032 [0.813]
MR116	2.000 [50.80]	0.500 [12.70]	0.032 [0.813]

Note

⁽¹⁾ 0.025" [0.635] available, this is called out by putting an "S" in the SPECIAL section of the part number.

MATERIAL SPECIFICATIONS

Element: nickel-chrome alloy, other materials available depending on TC requirements

Core: molded epoxy

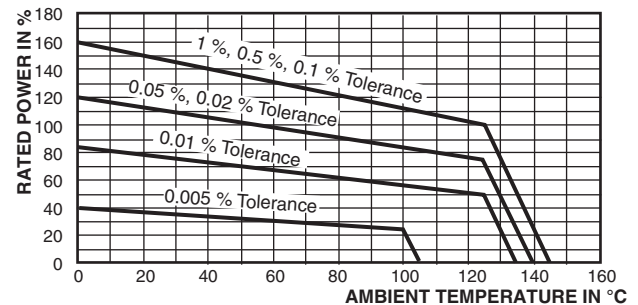
Encapsulant: epoxy

Standard Terminals: 100 % matte tinned copper

Part Marking: Mills, model, value, tolerance, date code

Note

- Due to resistor size limitations some resistors will have minimal information marked on parts

DERATING


TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	MR100 RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 10 for $> 100 \Omega$; ± 20 for 10Ω to 100Ω ; ± 30 for $< 10 \Omega$
Terminal Strength	lb	4.5
Dielectric Withstanding Voltage	V_{AC}	750
Operating Temperature Range	°C	-55 to +145 (see derating chart)



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