

## 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](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

**STANDARD ELECTRICAL SPECIFICATIONS**

GLOBAL MODEL	POWER RATING W <sup>(1)</sup>	RESISTANCE RANGE Ω		RESISTANCE RANGE Ω		RESISTANCE RANGE Ω		MAXIMUM WORKING VOLTAGE V <sup>(2)</sup>
		± 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**

<sup>(1)</sup> Power rating is based on tolerance, please see derating chart.

<sup>(2)</sup> 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](http://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)  (see Standard Electrical Specifications Global Model column for options)					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)  (dash number) 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]



Table with 4 columns: GLOBAL MODEL, DIMENSIONS in inches [millimeters], L ± 0.025 [0.635], D ± 0.005 [0.127], LD ± 0.002 [0.051]. Rows include models MR101 through MR116.

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

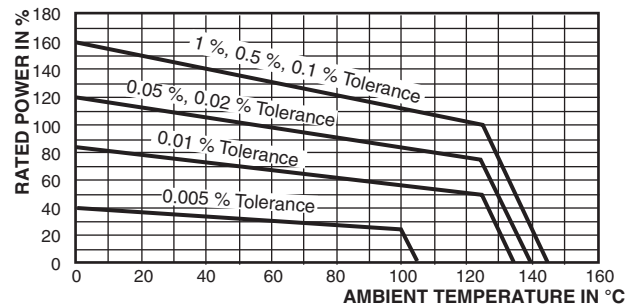


Table with 3 columns: PARAMETER, UNIT, MR100 RESISTOR CHARACTERISTICS. Rows include Temperature Coefficient, Terminal Strength, Dielectric Withstanding Voltage, and Operating Temperature Range.



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