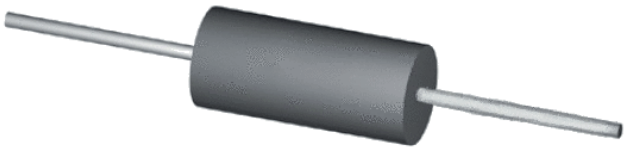
Wirewound Resistor, Ultra Precision, Epoxy Molded, Axial Lead



FEATURES

- Resistance values up to 250 kΩ
- 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

Pb-free

e3

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	POWER RATING W (1)	RESISTANCE RANGE Ω ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 %	RESISTANCE RANGE Ω ± 0.05 %, ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 %	RESISTANCE RANGE Ω ± 0.01 %, ± 0.05 %, ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 %	RESISTANCE RANGE Ω ± 0.005 %, ± 0.01 %, ± 0.05 %, ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 %	MAXIMUM WORKING VOLTAGE V (2)
MR503	0.06	1 to 75K	5 to 75K	50 to 75K	1K to 75K	75
MR508	0.08	1 to 150K	5 to 150K	50 to 150K	1K to 150K	100
MR510	0.10	1 to 250K	5 to 250K	50 to 250K	1K to 250K	100
MR512	0.10	1 to 250K	5 to 250K	50 to 250K	1K to 250K	100

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: MR50336R000FAE66 (visit www.vishay.net SAP parts manual for all options)

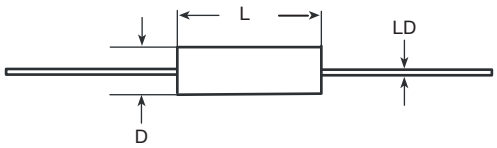
M	R	5	0	3	3	6	R	0	0	0	F	A	E	6	6		

GLOBAL MODEL (5 digits)	VALUE (6 digits)	TOLERANCE (1 digit)	TC (1 digits)	PACKAGING CODE (3 digits)	SPECIAL (up to 2 digits)
(see Standard Electrical Specifications Global Model column for options)	**R** = decimal **K** = thousand **M** = million **1R5000** = 1.5 Ω **1K5000** = 1.5 kΩ **1M0000** = 1 MΩ	**S** = ± 0.005 % **T** = ± 0.01 % **Q** = ± 0.02 % **A** = ± 0.05 % **B** = ± 0.1 % **C** = ± 0.25 % **D** = ± 0.5 % **F** = ± 1.0 %	**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)	**E66** = lead (Pb)-free bulk pack	(dash number) from **1** to **99** as applicable S = 0.025" terminal

Historical Part Number example: MR503W36R0F

MR503	W = STANDARD	36 Ω	1 %
HISTORICAL MODEL	TC	RESISTANCE VALUE	TOLERANCE

DIMENSIONS in inches [millimeters]



GLOBAL MODEL	DIMENSIONS in inches [millimeters]		
	L ± 0.025 [0.635]	D ± 0.005 [0.127]	LD ± 0.002 [0.051]
MR503	0.210 [5.33]	0.100 [2.54]	0.020 [0.508]
MR508	0.260 [6.60]	0.125 [3.18]	0.020 [0.508] (1)
MR510	0.375 [9.52]	0.125 [3.18]	0.020 [0.508]
MR512	0.312 [7.92]	0.156 [3.96]	0.020 [0.508]

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

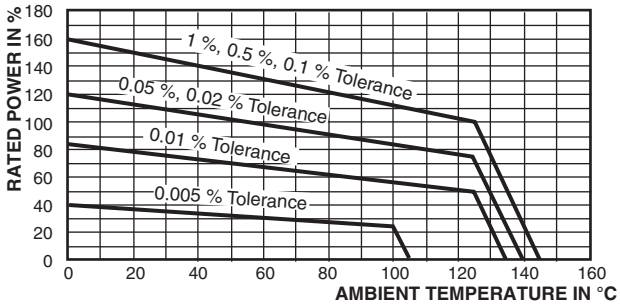
Standard Terminals: 100 % matte tinned copper

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	MR500 RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 10 for > 100 Ω; ± 20 for 10 Ω to 100 Ω; ± 30 for < 10 Ω
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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