Wirewound Resistor, Ultra Precision, Epoxy Molded, Axial Lead

FEATURES

- Resistance values up to 250 kΩ
- Resistance tolerances down to ± 0.01 %
- Temperature coefficients down to 2 ppm/°C
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

Pb-free

e3

RoHS COMPLIANT

GREEN (5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	POWER RATING $P_{25\,°C}$ W	RESISTANCE RANGE Ω ± 0.01 %, ± 0.02 %, ± 0.1 %	RESISTANCE RANGE Ω ± 0.25 %, ± 0.5 %, ± 1 %	MAXIMUM WORKING VOLTAGE V
MR503	0.06	10 to 75K	1 to 75K	75
MR508	0.08	10 to 150K	1 to 150K	100
MR510	0.10	10 to 250K	1 to 250K	100
MR512	0.10	10 to 250K	1 to 250K	100

GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: MR50336R000FAE66 (visit www.vishay.net SAP parts manual for all options)

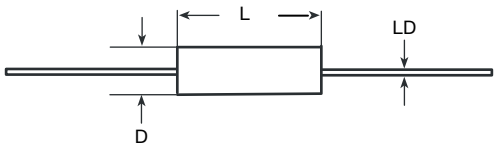
M	R	5	0	3	3	6	R	0	0	0	F	A	E	6	6		

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	**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) **G** = 5 **J** = 2	**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

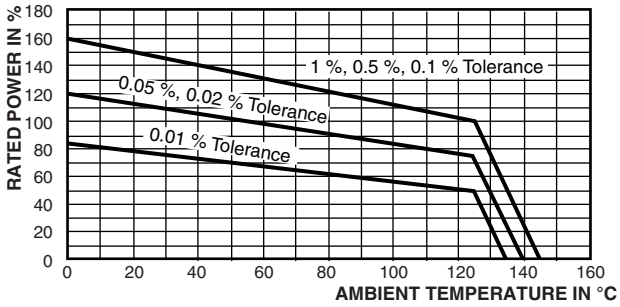
Standard Terminals: 100 % matte tinned copper

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 > 100 Ω; ± 20 for 10 Ω to 100 Ω; ± 30 for 1 Ω to 9.99 Ω
Terminal Strength	lb	4.5
Dielectric Withstanding Voltage	V_{AC}	750
Operating Temperature Range	°C	- 55 to 145
Maximum Working Voltage	V	$(P \times R)^{1/2}$

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