

Wirewound Resistor, Ultra Precision, Epoxy Molded, Axial Lead



FEATURES

- Resistance values up to 6 MΩ
- Resistance tolerances down to $\pm 0.01\%$
- Temperature coefficients down to 2 ppm/°C
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
GREEN
(5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	POWER RATING $P_{25\text{ }^{\circ}\text{C}}$ W	RESISTANCE RANGE Ω	RESISTANCE RANGE Ω	MAXIMUM WORKING VOLTAGE V
		$\pm 0.01\%$, $\pm 0.02\%$, $\pm 0.05\%$, $\pm 0.1\%$	$\pm 0.25\%$, $\pm 0.5\%$, $\pm 1\%$	
MR301	0.120	10 to 400K	1 to 400K	150
MR302	0.175	10 to 750K	1 to 750K	200
MR303	0.200	10 to 750K	1 to 750K	200
MR304	0.150	10 to 500K	1 to 500K	100
MR305	0.200	10 to 1.0M	1 to 1.0M	200
MR306	0.250	10 to 1.2M	1 to 1.2M	300
MR307	0.330	10 to 2.5M	1 to 2.5M	400
MR308	0.400	10 to 3.8M	1 to 3.8M	300
MR310	0.500	10 to 3.8M	1 to 3.8 M	400
MR311	0.500	10 to 3.8M	1 to 3.8M	400
MR312	0.750	10 to 6.0M	1 to 6.0M	600
MR314	1.000	10 to 6.0M	1 to 6.0M	800
MR315	1.500	10 to 6.0M	1 to 6.0M	900
MR316	2.000	10 to 6.0M	1 to 6.0M	1000

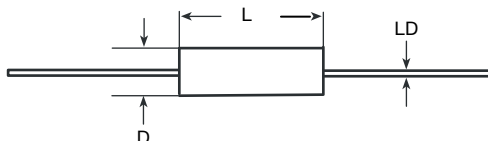
GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: **MR30615K000QAE66** (visit www.vishay.net SAP parts manual for all options)

M	R	3	0	6	1	5	K	0	0	0	Q	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 k Ω 1M0000 = 1 M Ω			T = $\pm 0.01\%$ Q = $\pm 0.02\%$ A = $\pm 0.05\%$ B = $\pm 0.1\%$ C = $\pm 0.25\%$ D = $\pm 0.5\%$ F = $\pm 1.0\%$		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: **MR306W15K0Q**

MR306	W = STANDARD	15 kΩ	0.02 %
HISTORICAL MODEL	TC	RESISTANCE VALUE	TOLERANCE

DIMENSIONS in inches [millimeters]


MODEL	DIMENSIONS in inches [millimeters]		
	$L \pm 0.025$ [0.635]	$D \pm 0.005$ [0.127]	$LD \pm 0.002$ [0.051]
MR301	0.250 [6.35]	0.187 [4.75]	0.025 [0.635]
MR302	0.375 [9.52]	0.187 [4.75]	0.025 [0.635]
MR303	0.450 [11.43]	0.187 [4.75]	0.025 [0.635]
MR304	0.250 [6.35]	0.250 [6.35]	0.025 [0.635]
MR305	0.375 [9.52]	0.250 [6.35]	0.032 [0.813] ⁽¹⁾
MR306	0.500 [12.70]	0.250 [6.35]	0.032 [0.813] ⁽¹⁾
MR307	0.750 [19.05]	0.250 [6.35]	0.032 [0.813] ⁽¹⁾
MR308	0.500 [12.70]	0.375 [9.52]	0.032 [0.813]
MR310	0.750 [19.05]	0.375 [9.52]	0.032 [0.813]
MR311	0.750 [19.05]	0.375 [9.52]	0.032 [0.813]
MR312	1.000 [25.40]	0.375 [9.52]	0.032 [0.813]
MR314	1.000 [25.40]	0.500 [12.70]	0.032 [0.813]
MR315	1.500 [38.10]	0.500 [12.70]	0.032 [0.813]
MR316	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

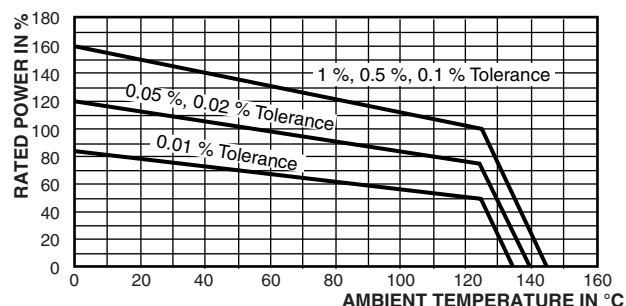
Encapsulant: Epoxy

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	MR300 RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	$\pm 10 > 100 \Omega$; ± 20 for 10Ω to 100Ω ; ± 30 for 1Ω to 9.99Ω
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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