

Wirewound Resistor, Ultra Precision, Epoxy Molded, Radial Lead



FEATURES

- Resistance values up to 1 M Ω
- Resistance tolerances down to ± 0.005 %
- Tighter tolerances and lower resistance values available, please contact factory
- Temperature coefficients down to ± 2 ppm/ $^{\circ}$ C, and up to 6000 ppm/ $^{\circ}$ C
- Matched resistance sets available in tolerances down to ± 0.001 %, and in temperature coefficients down to ± 0.5 ppm/ $^{\circ}$ 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 ± 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⁾
MR602	0.250	1 to 600K	5 to 600K	50 to 600K	1K to 600K	150
MR604	0.125	1 to 500K	5 to 500K	50 to 500K	1K to 500K	150
MR605	0.125	1 to 500K	5 to 500K	50 to 500K	1K to 500K	150
MR606	0.125	1 to 500K	5 to 500K	50 to 500K	1K to 500K	150
MR612	0.400	1 to 800K	5 to 800K	50 to 800K	1K to 800K	300
MR614	0.500	1 to 1M	5 to 1M	50 to 1M	1K to 1M	400

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

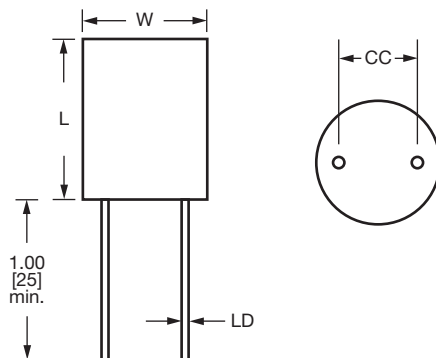
Global Part Numbering example: **MR612250R00AAE66** (visit www.vishay.net SAP parts manual for all options)

M **R** **6** **1** **2** **2** **5** **0** **R** **0** **0** **A** **A** **E** **6** **6**

GLOBAL MODEL (5 digits)	VALUE (6 digits)	TOLERANCE (1 digit)	TC (1 digit)	PACKAGING CODE (3 digits)	SPECIAL (up to 2 digits)
MR602 MR604 MR605 MR606 MR612 MR614	R = decimal K = thousand M = million 1R5000 = 1.5 Ω 1K5000 = 1.5 k Ω 1M0000 = 1 M Ω	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

Historical Part Number example: **MR612W250R0A**

MR612	W = STANDARD	250 Ω	0.05 %
HISTORICAL MODEL	TC	RESISTANCE VALUE	TOLERANCE

DIMENSIONS in inches [millimeters]


GLOBAL MODEL	DIMENSIONS in inches [millimeters]			
	$L \pm 0.025$ [0.635]	$W \pm 0.005$ [0.127]	$LD \pm 0.002$ [0.051]	$CC \pm 0.015$ [0.381]
MR602	0.500 [12.70]	0.250 [6.35]	0.025 [0.635]	0.150 [3.81]
MR604	0.312 [7.92]	0.250 [6.35]	0.025 [0.635]	0.150 [3.81]
MR605	0.312 [7.92]	0.250 [6.35]	0.025 [0.635]	0.200 [5.08]
MR606	0.375 [9.53]	0.250 [6.35]	0.025 [0.635]	0.150 [3.81]
MR612	0.500 [12.70]	0.375 [9.53]	0.032 [0.813]	0.200 [5.08]
MR614	0.500 [12.70]	0.500 [12.70]	0.032 [0.813] ⁽¹⁾	0.300 [7.62]

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

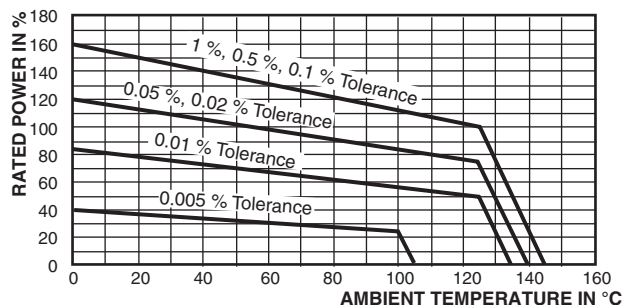
Encapsulant: epoxy

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	MR600 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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