

Wirewound Resistor, Ultra Precision, Epoxy Molded, Radial Lead


FEATURES

- Resistance values up to 1 MΩ
- Resistance tolerances down to ± 0.005 %
- Tighter tolerances and lower resistance values available, please contact factory
- Temperature coefficients down to ± 5 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



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	POWER RATING W ⁽¹⁾	RESISTANCE RANGE Ω	RESISTANCE RANGE Ω	RESISTANCE RANGE Ω	RESISTANCE RANGE Ω	MAXIMUM WORKING VOLTAGE V ⁽²⁾
		± 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 %	
MR702	0.125	1 to 500K	5 to 500K	50 to 500K	1K to 500K	150
MR705	0.300	1 to 500K	5 to 500K	50 to 500K	1K to 500K	150
MR706	0.500	1 to 1M	5 to 1M	50 to 1M	1K to 1M	150

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: **MR70233K330B A E 6 6** (visit www.vishay.net SAP parts manual for all options)

M
R
7
0
2
3
3
K
3
3
0
B
A
E
6
6

GLOBAL MODEL
(5 digits)

MR702
MR705
MR706

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 digits)

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)

PACKAGING CODE
(3 digits)

E66 = lead (Pb)-free bulk pack

SPECIAL
(up to 2 digits)

(dash number) from **1** to **99** as applicable

Historical Part Number Example: **MR702W33K330B**

MR702

HISTORICAL MODEL

W = STANDARD

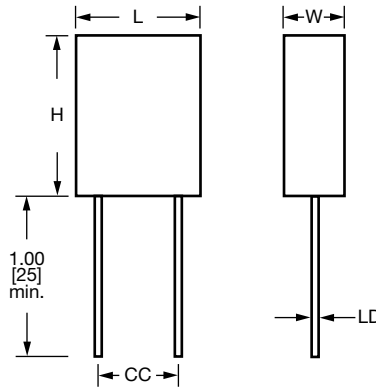
TC

33.33 kΩ

RESISTANCE VALUE

0.1 %

TOLERANCE

DIMENSIONS in inches [millimeters]


GLOBAL MODEL	DIMENSIONS in inches [millimeters]				
	$L \pm 0.010$ [0.254]	$H \pm 0.005$ [0.127]	$W \pm 0.010$ [0.254]	$LD \pm 0.002$ [0.051]	$CC \pm 0.015$ [0.381]
MR702	0.270 [6.86]	0.250 [6.35]	0.140 [3.56]	0.032 [0.813]	0.125 [3.18]
MR705	0.300 [7.62]	0.320 [8.13]	0.102 [2.59]	0.025 [0.635]	0.150 [3.81]
MR706	0.585 [14.86]	0.525 [13.34]	0.160 [4.06]	0.032 [0.813]	0.400 [10.16]

MATERIAL SPECIFICATIONS

Element: nickel-chrome alloy, other materials available depending on TC requirements

Core: molded epoxy

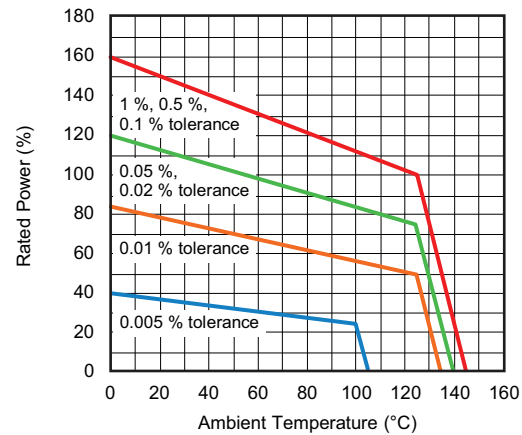
Encapsulant: epoxy

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	MR700 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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