

MR/MRS/TMR Series

Low Resistance Value Resistor – Molded 2 and 4 Leads

Stackpole Electronics, Inc.

Resistive Product Solutions

Features:

- Metal element resistors
- Excellent load life stability
- Inherently non-inductive
- Tinned copper leads
- Low temperature coefficient
- RoHS compliant
- Molded bodies
- TMR – Kelvin Bridge Test
- MRS high stability version
- Cut and formed product is available on selected sizes
- Contact factory for details



Electrical Specifications

Type / Code	Power Rating (Watts) @ 70°C	Short Time Overload	Dielectric Strength	Resistance Temperature Coefficient	Ohmic Range (Ω) and Tolerance
					1%, 5%
MR1	1W	5 sec. at 5x rated power	500 VAC	±50 to ±400 ppm/°C (1)	0.01 - 0.1
MR3	3W	5 sec. at 5x rated power	500 VAC	±50 to ±400 ppm/°C (1)	0.005 - 0.2
MR5	5W	5 sec. at 5x rated power	500 VAC	±50 to ±400 ppm/°C (1)	0.005 - 0.3
MR10	10W	5 sec. at 5x rated power	500 VAC	±50 to ±400 ppm/°C (1)	0.01 - 0.5
TMR3	3W	5 sec. at 5x rated power	500 VAC	±40 ppm/°C	0.005 - 0.2
TMR5	5W	5 sec. at 5x rated power	500 VAC	±40 ppm/°C	0.005 - 0.3

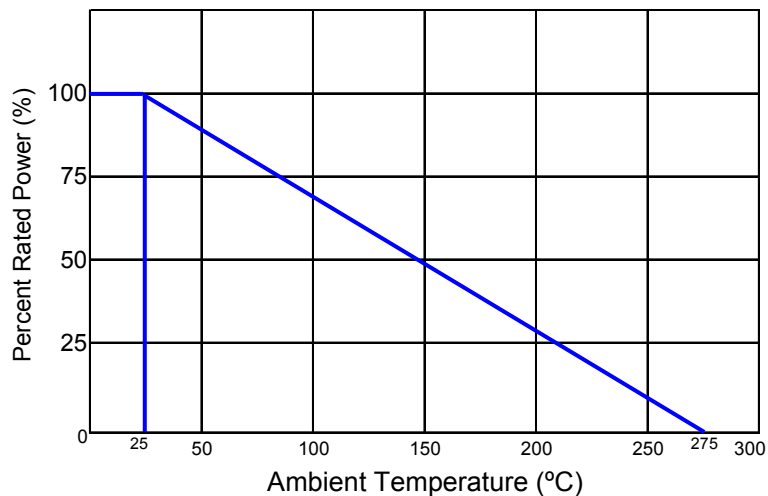
(1) TCR is value dependent. Contact factory for specific data.

Performance Characteristics

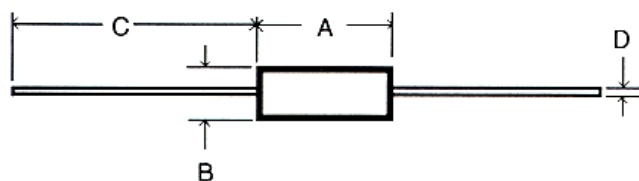
Test	Test Results
Moisture Resistance	±5%
Thermal Shock	±2%
Load Life @ 70°C - 1,000 hrs.	±5%
Resistance to Soldering Heat	±2%
Short Time Overload	±2%
Dielectric Withstanding Voltage	±2%

Operating Temperature Range: -55°C to +275°C

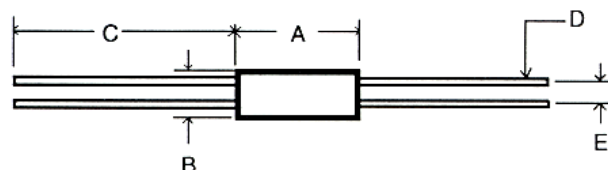
Power Derating Curve:



MR



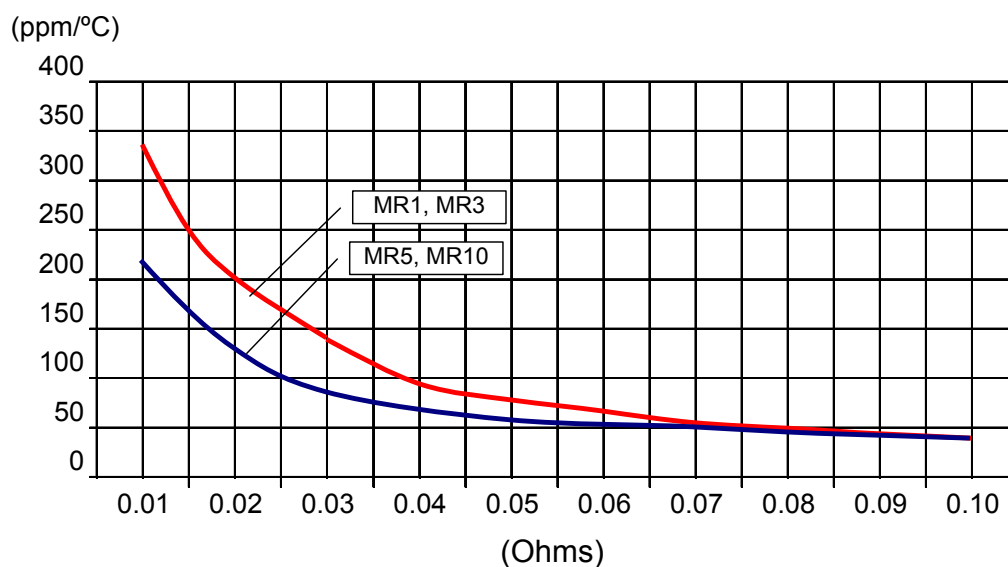
TMR



Mechanical Specifications

Type / Code	A Body Length	B Body Diameter	C Lead Length	D Lead Diameter	E Lead Spacing (Ref.)	Unit
Tolerance	±0.015 ±0.4	±0.015 ±0.4	±0.125 ±3.4	±0.002 ±0.05	-	inches mm
MR1	0.385 9.8	0.135 3.4	1.375 34.9	0.032 0.81	-	inches mm
MR3	0.56 14.2	0.205 5.2	1.375 34.9	0.032 0.81	-	inches mm
MR5	0.925 23.5	0.33 8.4	1.375 34.9	0.036 0.91	-	inches mm
MR10	1.925 46.4	0.475 10	1.375 34.9	0.036 0.91	-	inches mm
TMR3	0.625 15.9	0.205 5.2	1.375 34.9	0.032 0.81	0.125 3.2	inches mm
TMR5	0.94 23.9	0.33 8.4	1.375 34.9	0.036 0.91	0.2 5.1	inches mm

TCR x Resistance:



How to Order

1	2	3	4	5	6	7	8	9
M	R	3	F	T	R	1	0	0

Product Series	Size	Power	Tolerance	Code	Description	Size	Quantity	Resistance Value
MR	2 Leads	1	1W	Code	Tol			Four characters with the multiplier used as the decimal holder.
TMR	4 Leads	3	3W	F	1%			"L" used as multiplier of 10 ⁻³ for any value under 0.1 ohm.
MRS	High Stability	5	5W	J	5%			0.005 ohm = 5L00 0.01 ohm = 10L0 0.2 ohm = R200
		10	10W					

Code	Description	Size	Quantity
T	Tape and Reel	MR1	2,000
		MR3	750
		MR5	500
		MR10	250
B	Bulk	MR1, MR3, MR5	1,000
		MR10	500
		TMR 3, 5	100

Legacy Part Number (before January 3, 2011):

SEI Type	Code	Nominal Resistance	Tolerance	Packaging
MR	3	0.1	1%	R

Type	Description	Code
MR	2 Leads	1
TMR	4 Leads	3
MRS	High Stability	5
		10

Tolerance
1%
5%

Type	Pkg Qty	Description	Code
MR1	2,000	Tape and Reel	R
MR3	750		
MR5	500		
MR10	250		
MR1, MR3, MR5	1,000	Bulk	B
MR10	500		
TMR3, TMR5	100		