

Features

- Formerly a Riedon™ product
- Resistances from 0.003 to 0.10 Ω
- Resistance tolerances as low as ±0.1 %
- Power rating: 1 to 10 watts
- TCR as low as ±20 PPM/°C (4 terminal models)
- For current sensing and shunt applications
- All welded construction
- Low inductance (<10 nH)
- Non-inductive metal element
- Four-terminal models available
- RoHS compliant*

MT Series – Riedon™ Low Ohm Power Resistors by Bourns

Specifications

Specification	Value
Resistance Range ¹	0.003 to 0.10 ohms
Tolerances ²	2 Terminal: ±1 % / ±5 % 4 Terminal: ±0.1 % / ±0.5 % / ±1 % / ±5 %
Temperature Coefficient	See chart below
Inductance	<10 nH
Operating Temperature Range	-55 °C to +275 °C
Dielectric Strength	1000 VAC (500 VAC for MT-1A and MT-2A)
Insulation Resistance	>1000 MOhms / dry
Terminal Finish	100 % matte tin over copper
Flammability	UL94 V-0

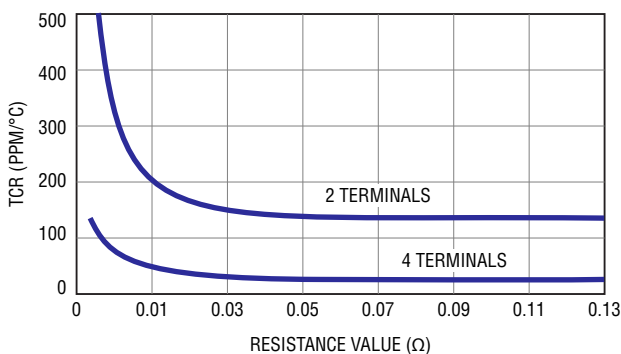
¹ Other resistance values (molding wirewound) may be available. Please [contact Bourns](#).

² Other tolerances available. Please [contact Bourns](#).

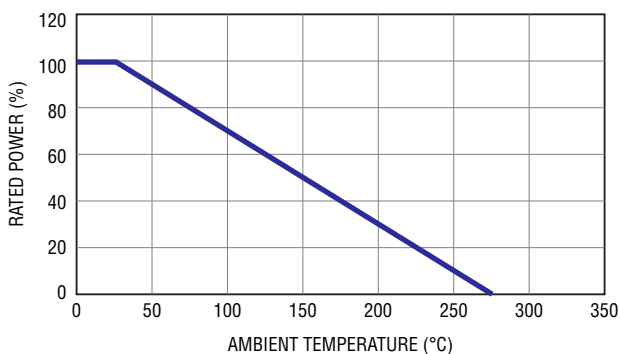
Environmental Characteristics

Test (MIL-STD 202)	ΔR	Test Conditions
Load Life	±1 %	70 °C / 90 min. ON / 30 min. OFF / 1000 hrs.
Moisture Resistance		40 °C / 90-95 % RH / DC 0.1 W / 1000 hrs.
Temperature Cycling		-40 °C for 30 min. / +125 °C for 30 min. / 1000 hrs.
Short Term Overload		5X rated power for 5 seconds

Temperature Coefficient of Resistance (TCR)



Power Derating Curve



Additional Information

Click these links for more information:



How To Order

Model MT 5 - 0R1 F 1

Power Rating Code _____
(See Specifications and Dimensions table on page 2)

Resistance Code _____
"R" represents decimal point
(Example: 0R1 = 0.1 Ω)

Tolerance _____
B = ±0.1 % (4-terminal only)
D = ±0.5 % (4-terminal only)
F = ±1 %
J = ±5 %

Internal Use _____

Terminals _____
(blank) = 2 terminals
4T = 4 terminals

(Specific TCR values available upon request.)

Packaging Specifications

MT Series	Bulk	10" Reel	12" Reel	14" Reel
MT1A	1000	2000	3000	5000
MT2A, MT2B, MT2C	1000	500	1500	3000
MT3, MT4, MT5, MT6	1000	N/A	500	1000
MT10	250	N/A	200	N/A



WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

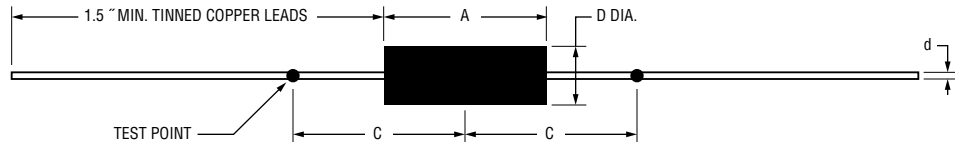
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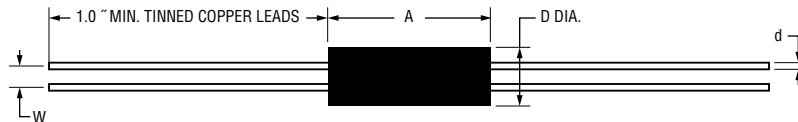
Specifications and Dimensions

Two Terminals



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Four Terminals (4T)



Model and Power Rating Code	Power Rating @ 25 °C (W)	A	D	C	d	W (4T)
MT1A	1	$\frac{10.9 \pm 0.5}{(.430 \pm .020)}$	$\frac{3.0 \pm 0.5}{(.120 \pm .020)}$	$\frac{15.0 \pm 0.5}{(.590 \pm .020)}$	$\frac{0.6 \pm 0.05}{(.025 \pm .002)}$	—
MT2A	2	$\frac{10.9 \pm 0.5}{(.430 \pm .020)}$	$\frac{3.0 \pm 0.5}{(.120 \pm .020)}$	$\frac{15.0 \pm 0.5}{(.590 \pm .020)}$	$\frac{0.8 \pm 0.05}{(.032 \pm .002)}$	
MT2B	3	$\frac{14.7 \pm 0.5}{(.580 \pm .020)}$	$\frac{5.1 \pm 0.5}{(.200 \pm .020)}$	$\frac{16.9 \pm 0.5}{(.665 \pm .020)}$	$\frac{0.8 \pm 0.05}{(.032 \pm .002)}$	
MT2C	3	$\frac{12.7 \pm 0.5}{(.500 \pm .020)}$	$\frac{6.4 \pm 0.5}{(.250 \pm .020)}$	$\frac{15.9 \pm 0.5}{(.625 \pm .020)}$	$\frac{0.8 \pm 0.05}{(.032 \pm .002)}$	
MT3	4	$\frac{15.2 \pm 0.5}{(.600 \pm .020)}$	$\frac{6.4 \pm 0.5}{(.250 \pm .020)}$	$\frac{17.1 \pm 0.5}{(.675 \pm .020)}$	$\frac{0.8 \pm 0.05}{(.032 \pm .002)}$	$\frac{3.2 \pm 0.3}{(.125 \pm .010)}$
MT4	4.5	$\frac{19.1 \pm 0.5}{(.750 \pm .020)}$	$\frac{6.4 \pm 0.5}{(.250 \pm .020)}$	$\frac{19.1 \pm 0.5}{(.750 \pm .020)}$	$\frac{1.0 \pm 0.05}{(.040 \pm .002)}$	
MT5	5	$\frac{22.6 \pm 0.5}{(.890 \pm .020)}$	$\frac{8.5 \pm 0.5}{(.335 \pm .020)}$	$\frac{20.8 \pm 0.5}{(.820 \pm .020)}$	$\frac{1.0 \pm 0.05}{(.040 \pm .002)}$	
MT6	6	$\frac{26.8 \pm 0.5}{(1.055 \pm .020)}$	$\frac{10.0 \pm 0.5}{(.395 \pm .020)}$	$\frac{22.9 \pm 0.5}{(.903 \pm .020)}$	$\frac{1.0 \pm 0.05}{(.040 \pm .002)}$	
MT10	10	$\frac{44.58 \pm 0.5}{(1.755 \pm .020)}$	$\frac{9.02 \pm 0.5}{(.355 \pm .020)}$	$\frac{34.0 \pm 0.5}{(1.338 \pm .020)}$	$\frac{1.0 \pm 0.05}{(.040 \pm .002)}$	

Terminal strength: 10 lb. pull test



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REV. 10/24

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