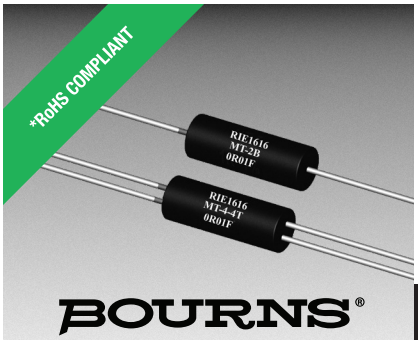


BOURNS®

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

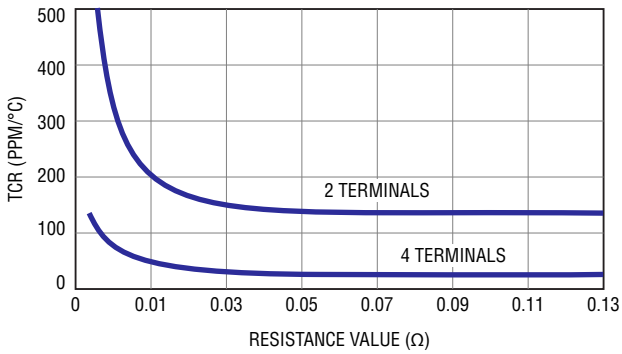
Specification	Value
Resistance Range[1]	0.003 to 0.10 ohms
Tolerances[2]	2 Terminal: ±1 % / ±5 % 4 Terminal: ±0.1 % / ±0.5 % / ±1 % / ±5 %
Temperature Coefficient	See chart below
Inductance	<10 nH
Operating Temperature Range	-55 °C to +275 °C
Dielectric Strength	1000 VAC (500 VAC for MT-1A and MT-2A)
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.

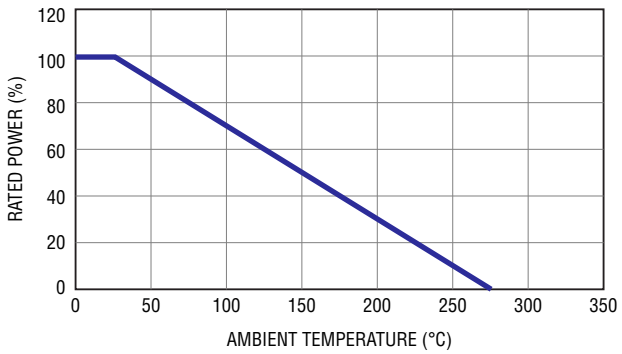
Environmental Characteristics

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:

PRODUCT | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

How To Order

MT 5 - 0R1 F 1 __ - TR14

Model

Power Rating Code
(See Specifications and Dim. 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

Packaging Options
(blank) = Bulk Packaging
-TR10 = Tape and Reel (10-inch Reel)
-TR12 = Tape and Reel (12-inch Reel)
-TR14 = Tape and Reel (14-inch Reel)

(Specific TCR values available upon request.)

Packaging Specifications

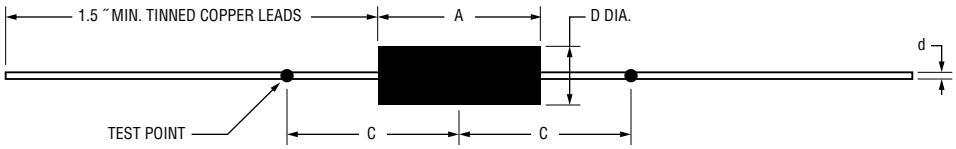
MT Series	Bulk	10 ″ Reel	12 ″ Reel	14 ″ Reel
MT1A	500	2000	N/A	N/A
MT2A, MT2B, MT2C	500	N/A	1500	N/A
MT3, MT4, MT5, MT6, MT10	250	N/A	N/A	500

CALIFORNIA WARNING: Can expose you to lead, a carcinogen and reproductive toxicant. See www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

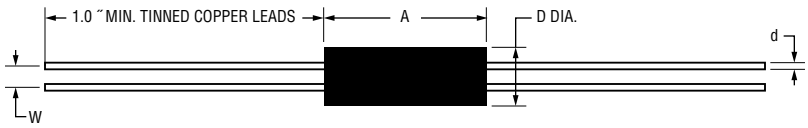
Specifications and Dimensions

Two Terminals



DIMENSIONS: MM / (INCHES)

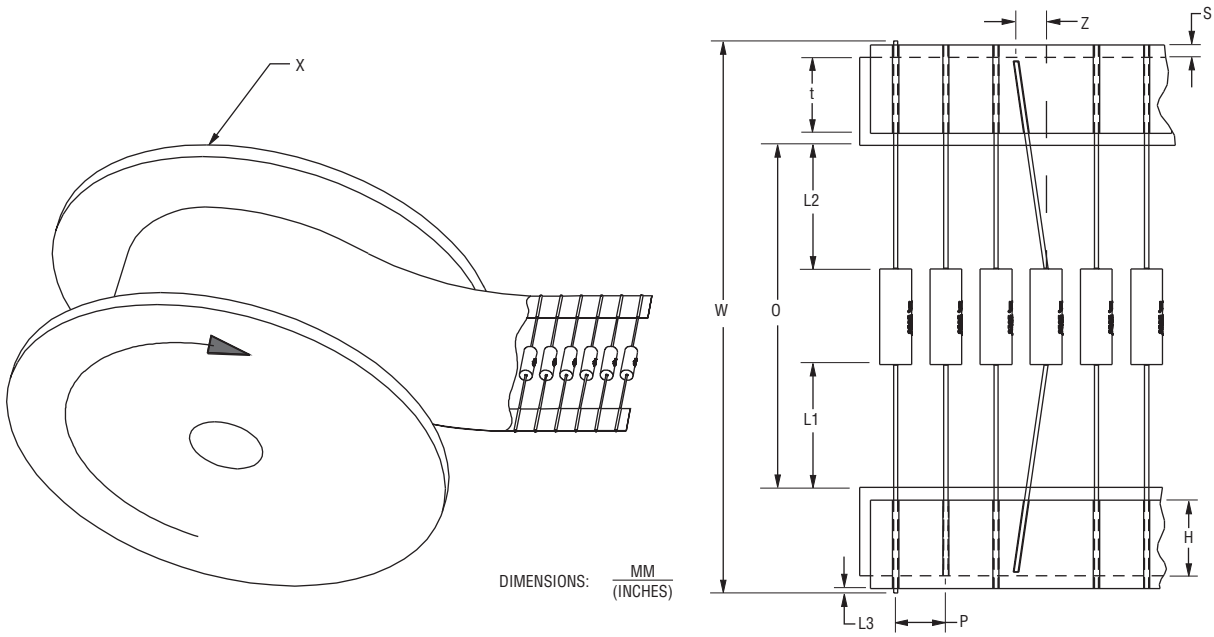
Four Terminals (4T)



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

Terminal strength: 10 lb. pull test

Packaging Specifications



Model	Dimension O (mm)	Reel Size (Inches) Dimension X	Pitch (Inches) Dimension P	Clean Lead to Clean Lead Eccentricity (Max.) Dimension L1–L2	Lead Extension (Max.) - Zero is Preferred Dimension L3	Lead Bending Dimension Z	Exposed Adhesive (Max.) Dimension S	Tape Width (mm) Dimension t	Lead Sandwich (Min.) Dimension H	Overall Width (Max.) Dimension W
MT1A	2.421-2.579	10	0.2	1.4 (.055)	0.8 (.031)	1.0 (.039)	0.8 (.031)	7 (177.8)	t/2	123.5 (4.862)
MT2A		12								
MT2B			0.4							
MT2C	1.983-2.141									
MT3	2.421-2.579	14								
MT4										
MT5										
MT6	3.206-3.364		0.6							
MT10										

REV. 02/19/26

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