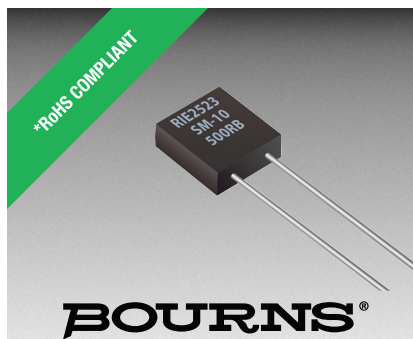




Features

- Formerly a Riedon™ product
- Resistances to 500K Ω
- Resistance tolerances to $\pm 0.005\%$
- Non-inductive Multi-Pi cores
- TCR to ± 2 PPM/ $^{\circ}\text{C}$
- 100 % acceptance tested / traceable to NIST

- Long term stability / 100 ppm/year
- Matched resistance sets to $\pm 0.001\%$ and ± 0.5 ppm/ $^{\circ}\text{C}$
- Flame & moisture resistant protective encapsulation
- RoHS compliant*

SM8, SM10 Series Riedon™ Precision Wirewound Resistors by Bourns

Specifications

Specification	Value
Tolerances	$\pm 0.005\%$ to $\pm 1\%$ (See Derating Curve)
Standard Temperature Coefficients ¹	from 1 Ω to 5 Ω : ± 50 PPM/ $^{\circ}\text{C}$ greater than 5 Ω to 10 Ω : ± 30 PPM/ $^{\circ}\text{C}$ greater than 10 Ω to 100 Ω : ± 20 PPM/ $^{\circ}\text{C}$ greater than 100 Ω : ± 10 PPM/ $^{\circ}\text{C}$
Temperature Range	-55 $^{\circ}\text{C}$ to +145 $^{\circ}\text{C}$ (See Derating Curve)
Termination Finish	100 % Matte Tin over Copper

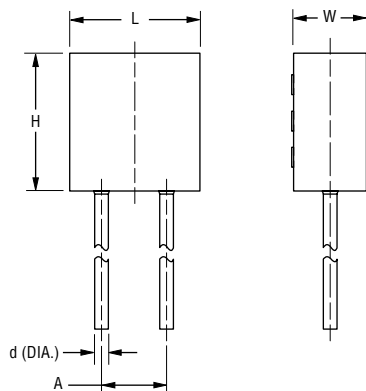
¹ Contact Bourns for other options. TCR down to 2 PPM/ $^{\circ}\text{C}$ may be available on request.

Additional Information

Click these links for more information:



Bourns Model Number	Commercial Power (W)	Resistance Range (Ω) ¹	Dimensions					Max. Working Voltage
			Width "W"	Height "H"	Length "L"	Lead Diameter ² "d"	Lead Spacing "A"	
SM8	0.125	1 - 500 k	$\frac{3.6 \pm 0.25}{(.140 \pm .010)}$	$\frac{6.4 \pm 0.64}{(.250 \pm .025)}$	$\frac{6.9 \pm 0.25}{(.270 \pm .010)}$	$\frac{0.8 \pm 0.05}{(.032 \pm .002)}$	$\frac{3.2 \pm 0.4}{(.125 \pm .015)}$	150
SM10	0.300	1 - 250 k	$\frac{2.6 \pm 0.25}{(.102 \pm .010)}$	$\frac{8.1 \pm 0.64}{(.320 \pm .025)}$	$\frac{7.6 \pm 0.25}{(.300 \pm .010)}$	$\frac{0.6 \pm 0.05}{(.025 \pm .002)}$	$\frac{3.8 \pm 0.4}{(.150 \pm .015)}$	150



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

LEAD LENGTH: $\frac{31.75 \pm 6.35}{(1.250 \pm .250)}$

¹ Other resistance values may be available; please [contact Bourns](#).

Factory Options

Fast Rise Time - These resistors are available in a low reactance design for fast rise time and extended frequency response.

High Stability - These resistors are available in a high stability version with maximum resistance change of ± 20 PPM/year under normal conditions.

Wide TCR Range - These resistors are available in low and high TC configurations from -20 PPM/ $^{\circ}\text{C}$ to +6000 PPM/ $^{\circ}\text{C}$.

[Contact Bourns](#) for these options.



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 are subject to change without notice. Users should verify actual device performance in their specific applications.

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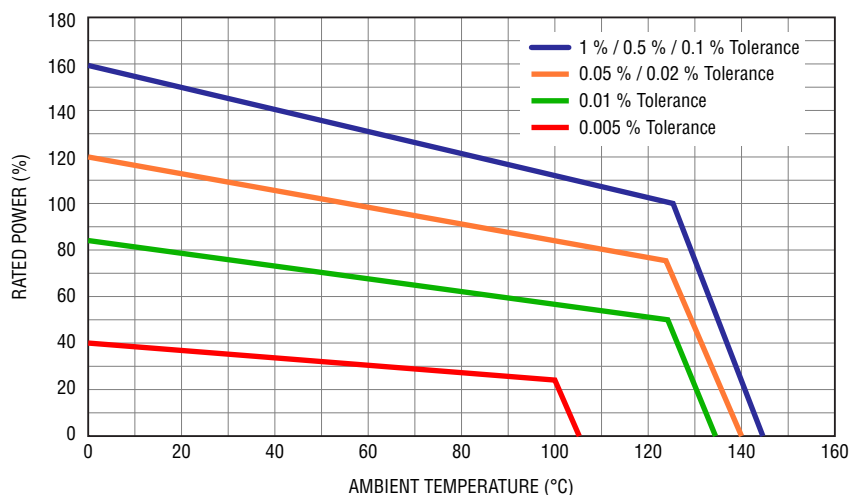
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Power Derating Curves



How To Order

SM10 - 25R X 1

Model _____
(See Specifications Table)

Resistance Code _____
For values $\leq 10K \Omega$, "R"
represents decimal point
(Example: 25R = 25 Ω)
For values $> 10K \Omega$, "K"
represents decimal point
(Example: 1K5 = 1.5K Ω)

Tolerance (%) _____
Y** = ± 0.005 U = ± 0.05 D = ± 0.5 J = ± 5
X** = ± 0.01 B = ± 0.1 F = ± 1 K = ± 10
W** = ± 0.02 T = ± 0.2 G = ± 2
V** = ± 0.025 C = ± 0.25 H = ± 3

Internal Use _____
(Specific TCR values are available upon request.)

**Contact Bourns for tolerances $< \pm 0.01\%$.

Packaging Specifications

SM8, SM10.....100 pcs. bulk

BOURNS®

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