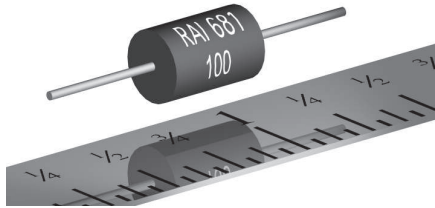


# 100 Series / SM Series / PC Series

Precision Wirewound Resistors



- Resistances to 6 Megohms
- Resistance Tolerances to  $\pm 0.005\%$
- Temperature Coefficients of  $\pm 2 \text{ ppm}/^\circ\text{C}$
- High TCR Available (Balco & Platinum Wire)
- 100% Acceptance Tested / Traceable to NIST
- Long Term Stability / 100ppm/year
- Matched Resistance Sets to  $\pm 0.001\%$  and  $\pm 0.5 \text{ ppm}/^\circ\text{C}$

## SPECIFICATIONS



Type	Commercial Wattage ( Watts )	Maximum Ohms	Minimum Tolerance ( % )	Dimensions			Maximum Working Voltage
				Diameter $\pm 0.005"$ [ $\pm 0.13\text{mm}$ ]	Length $\pm 0.025"$ [ $\pm 0.64\text{mm}$ ]	Lead Diameter <sup>1</sup> $\pm 0.002"$ [ $\pm 0.05\text{mm}$ ]	
SM-2	0.06	75k	0.005	0.100 [2.5]	0.210 [5.3]	0.020 [0.5]	75
SM-3	0.08	150k		0.125 [3.2]	0.260 [6.6]	<b>0.020 [0.5]</b> 0.025 [0.6]	100
SM-4	0.10	250k		0.125 [3.2]	0.375 [9.5]	0.020 [0.5]	100
SM-13	0.10	250k		0.156 [4.0]	0.312 [7.9]	0.020 [0.5]	100
SM-5	0.12	400k		0.187 [4.7]	0.250 [6.4]	0.025 [0.6]	150
SM-6	0.15	500k		0.187 [4.7]	0.295 [7.5]	0.025 [0.6]	150
139A	0.15	500k		0.250 [6.4]	0.250 [6.4]	0.025 [0.6]	100
SM-15	0.175	750k		0.187 [4.7]	0.375 [9.5]	<b>0.025 [0.6]</b>	200
SM-12	0.20	750k		0.187 [4.7]	0.450 [11.4]	0.025 [0.6]	200
100	0.20	1M		0.250 [6.4]	0.375 [9.5]	<b>0.032 [0.8]</b> 0.025 [0.6]	200
SM-7	0.25	1M		0.210 [5.3]	0.465 [11.8]	0.025 [0.6]	250
101	0.25	1.2M		0.250 [6.4]	0.500 [12.7]	<b>0.032 [0.8]</b> 0.025 [0.6]	300
102	0.33	2.5M		0.250 [6.4]	0.750 [19.1]	<b>0.032 [0.8]</b> 0.025 [0.6]	400
120	0.40	3.8M		0.375 [9.5]	0.500 [12.7]	0.032 [0.8]	300
121	0.50	3.8M		0.375 [9.5]	0.750 [19.1]	0.032 [0.8]	400
129	0.75	6M		0.375 [9.5]	1.000 [25.4]	0.032 [0.8]	600
106	1.00	6M		0.500 [12.7]	1.000 [25.4]	0.032 [0.8]	800
107	1.50	6M		0.500 [12.7]	1.500 [38.1]	0.032 [0.8]	900
108	2.00	6M	0.500 [12.7]	2.000 [50.8]	0.032 [0.8]	1000	

<sup>1</sup>Where more than one lead is listed / the top value is Standard  
Lead Length = 1.50 [38] Min.

## Ordering Information

Part Description: Part Type - Resistance - Tolerance - TCR ( If not standard )  
Example: SM-6 25K Ohms 0.1%

# 100 Series / SM Series / PC Series

Precision Wirewound Resistors



## SPECIFICATIONS (continued)

### PC Series

Type	Commercial Wattage ( Watts )	Maximum Ohms	Minimum Tolerance <sup>1</sup> ( % )	Dimensions				Maximum Working Voltage
				Diameter ±0.005" [±0.13mm]	Length ±0.025" [±0.64mm]	Lead Diameter <sup>2</sup> ±0.002" [±0.05mm]	Lead Spacing ±0.015" [±0.4mm]	
110PC	0.05	75k	0.005	0.130 [3.3]	0.200 [5.1]	0.016 [0.4]	0.075 [2.5]	150
100PC	0.125	500k		0.250 [6.4]	0.375 [9.5]	0.025 [0.6]	0.150 [3.8]	150
130PC	0.125	500k		0.250 [6.4]	0.312 [7.9]	0.025 [0.6]	0.150 [3.8]	150
131PC	0.125	500k		0.250 [6.4]	0.312 [7.9]	0.025 [0.6]	0.200 [5.1]	150
101PC	0.25	600k		0.250 [6.4]	0.500 [12.7]	0.025 [0.6]	0.150 [3.8]	150
120PC	0.40	800k		0.375 [9.5]	0.500 [12.7]	0.032 [0.8]	0.200 [5.1]	300
104PC	0.50	1M		0.500 [12.7]	0.500 [12.7]	<b>0.032 [0.8]</b> 0.025 [0.6]	0.300 [7.6]	400



<sup>1</sup>May not apply for all wire types. Please call factory.  
<sup>2</sup>Where more than one lead is listed / the top value is Standard  
 Lead Length = 1.00 [25] Min.

### Rectangular Series

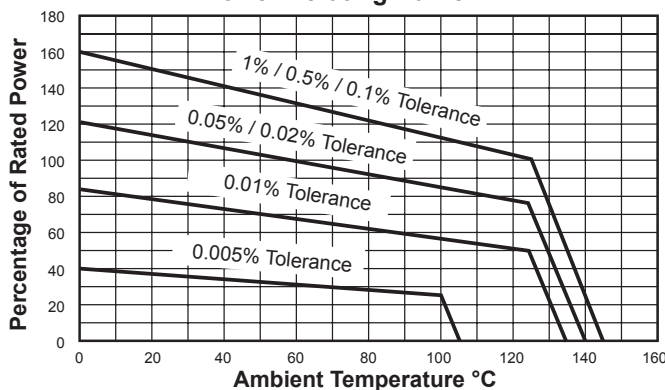
Type	Commercial Wattage ( Watts )	Maximum Ohms	Dimensions					Maximum Working Voltage
			Width ±0.010" [±0.25mm]	Height ±0.025" [±0.64mm]	Length ±0.010" [±0.25mm]	Lead Diameter <sup>1</sup> ±0.002" [±0.05mm]	Lead Spacing ±0.015" [±0.4mm]	
SM-8	0.125	500k	0.140 [3.6]	0.250 [6.4]	0.270 [6.9]	0.032 [0.8]	0.125 [3.2]	150
SM-9	0.250	750k	0.150 [3.8]	0.270 [6.9]	0.540 [13.7]	0.032 [0.8]	0.250 [6.4]	150
SM-10	0.300	500k	0.102 [2.6]	0.320 [8.1]	0.300 [7.6]	0.025 [0.6]	0.150 [3.8]	150
SM-11	0.500	1M	0.160 [4.1]	0.525 [13.3]	0.585 [14.9]	0.032 [0.8]	0.400 [10.2]	150



<sup>1</sup>Lead Length = 1.00 [25] Min.

Specification	Value
Tolerances	±0.005% to ±1% ( See Derating Curve )
Temperature Coefficient ( Standard ) ( down to 1ppm on request )	>100Ω : ±10ppm/°C 10Ω to 100Ω : ±20ppm/°C <10Ω : ±30ppm/°C
Temperature Range	-55°C to +145°C ( See Derating Curve )

**Power Derating Curve**



**Notes:** ( Contact Factory for these 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 ±20ppm/year under normal conditions.

**Wide TCR Range** - These resistors are available in Low and High TC configurations from -20ppm/K to +6000ppm/K.