



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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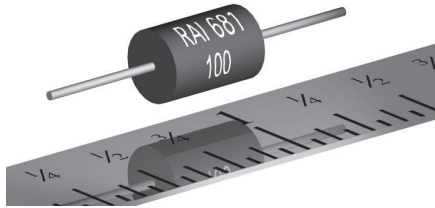
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# 100 Series / SM Series / PC Series

Precision Wirewound Resistors



- Resistances to 6 Megohms
- Resistance Tolerances to  $\pm 0.005\%$
- Temperature Coefficients of  $\pm 2$  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  $\pm 0.5$  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]	0.032 [0.8] 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

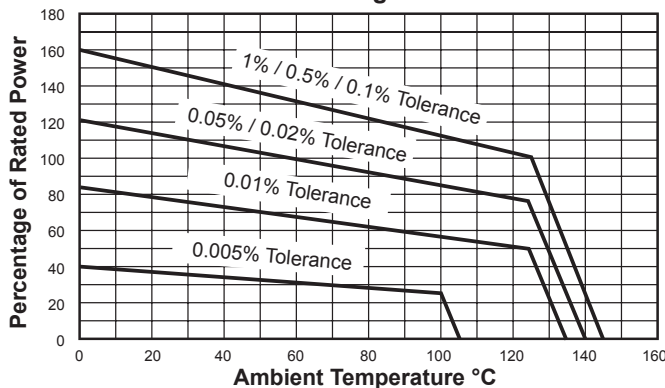
Type	Commercial Wattage ( Watts )	Maximum Ohms	Dimensions					Maximum Working Voltage
			Width ±0.010" [±0.25mm]	Height ±0.025" [±0.64mm]	Length ±0.010" [±0.25mm]	Lead Diameter <sup>1</sup> ±0.002" [±0.05mm]	Lead Spacing ±0.015" [±0.4mm]	
SM-8	0.125	500k	0.140 [3.6]	0.250 [6.4]	0.270 [6.9]	0.032 [0.8]	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.