

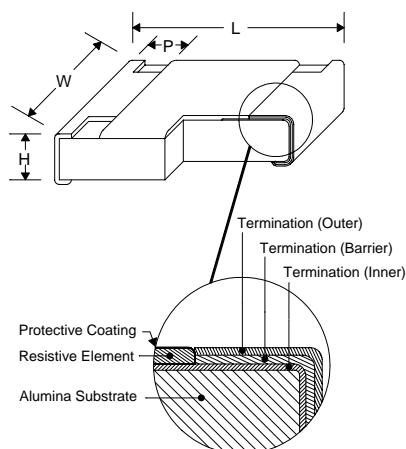


# PRC-SERIES

## PRECISION SURFACE MOUNT

PRECISION RESISTIVE PRODUCTS, INC.  
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- Thin Film
- Standard Industry Case Sizes  
0201, 0402, 0603, 0805, 1206, 1210, 2010, 2512
- Power Ratings 1/20W, 1/16W,  
1/10W, 1/8W, 1/4W, 1/2W & 1W
- Temperature Coefficients  
To 2 PPM/°C
- Resistance Tolerances  
To 0.01%
- Custom Values to 3  
Decimal Places
- Packaging is Tape &  
Reel 1,000; 5,000; 10,000 pcs.



### Specifications

Inches (mm)

[Suggested Pad Layouts](#)

Style	Rated Power	Max. CWV	L	W	H	P
PRC 0201	1/20W	15V	0.024 ±0.002 (0.60 ±0.05)	0.012 ±0.002 (0.30 ±0.05)	0.009 ±0.001 (0.23 ±0.03)	0.005 ±0.002 (0.12 ±0.05)
PRC 0402	1/16W	25V	0.039 ±0.002 (1.00 ±0.05)	0.020 ±0.002 (0.50 ±0.05)	0.014 ±0.002 (0.35 ±0.05)	0.008 ±0.004 (0.20 ±0.10)
PRC 0603	1/16W	75V	0.063 ±0.004 (1.60 ±0.10)	0.031 ±0.004 (0.80 ±0.10)	0.020 ±0.004 (0.50 ±0.10)	0.008 ±0.004 (0.20 ±0.10)
PRC 0805	1/10W	100V	0.079 ±0.006 (2.00 ±0.15)	0.049 ±0.006 (1.25 ±0.15)	0.020 ±0.006 (0.50 ±0.15)	0.016 ±0.010 (0.40 ±0.25)
PRC 1206	1/8W	150V	0.126 ±0.006 (3.20 ±0.15)	0.063 ±0.006 (1.60 ±0.15)	0.024 ±0.006 (0.60 ±0.15)	0.020 ±0.010 (0.50 ±0.25)
PRC 1210	1/4W	200V	0.126 ±0.006 (3.20 ±0.15)	0.098 ±0.006 (2.50 ±0.15)	0.024 ±0.006 (0.60 ±0.15)	0.020 ±0.010 (0.50 ±0.25)
PRC 2010	1/2W	200V	0.200 ±0.006 (5.00 ±0.15)	0.100 ±0.006 (2.50 ±0.15)	0.024 ±0.006 (0.60 ±0.15)	0.024 ±0.010 (0.60 ±0.25)
PRC 2512	1W	200V	0.250 ±0.006 (6.35 ±0.15)	0.126 ±0.006 (3.20 ±0.15)	0.024 ±0.006 (0.60 ±0.15)	0.024 ±0.010 (0.60 ±0.25)

Operating Temperature Range -55°C to +125°C

### Temperature Coefficients

T100 = 0±100 PPM/°C    TC10 = 0±10 PPM/°C  
 TC50 = 0±50 PPM/°C    TC5 = 0±5 PPM/°C  
 TC25 = 0±25 PPM/°C    TC2 = 0±2 PPM/°C \*

Refer to Capability Sheet for available ranges.  
 Contact factory for custom values.  
 \*Contact factory for availability

### Resistance Tolerances @ 25°C

0.01% 0.02% 0.05% 0.1% 0.5% 1.0%

### How to Order

[Standard Decade Values](#)

Sample Part

PRC 0805 TC10 56.2R ±0.05%

[Packaging](#)

Resistance Tolerance  
 Resistance Value  
 Temperature Coefficient  
 Case Size  
 Style



DEDICATION TO EXCELLENCE

Add "T" at the end of the Case Size portion of the part number for lead free termination.

## TYPICAL RELIABILITY TEST DATA AND SPECIFICATIONS

Characteristic	Test Conditions Test result based on 25ppm 0.1%	Result				Specification
		Value	Max.	Min.	Avg.	
MOISTURE LOAD LIFE	60°C 95%RH Rated voltage for 1½ hours ON, ½ hour OFF. 1000 hours	100 Ω	0.027%	0.003%	0.014%	ΔR within ±0.5%
		10 KΩ	0.019%	-0.008%	0.005%	
		100 KΩ	0.023%	-0.024%	0.014%	
TEMPERATURE CYCLE	-55°C~RT~ +155°C~RT 30 min. ON 3 min. OFF 5 cycles	100 Ω	0.036%	-0.010%	0.007%	ΔR within ±0.25%
		10 KΩ	0.005%	0.002%	0.000%	
		100 KΩ	0.011%	-0.006%	0.002%	
HIGH TEMPERATURE	175°C No load 1000 hours	100 Ω	0.254%	0.156%	0.194%	ΔR within ±0.5%
		10 KΩ	0.263%	0.130%	0.158%	
		100 KΩ	0.380%	0.194%	0.250%	
RANDOM VIBRATION	10~50Hz 3 directions each 2 hours	100 Ω	0.008%	-0.008%	0.003%	ΔR within ±0.25% without mechanical damage.
		10 KΩ	0.006%	-0.001%	0.002%	
		100 KΩ	0.006%	0.001%	0.003%	
MECHANICAL SHOCK	Acceleration 50G Axis 11 msec. x 3 Total 18 cycles	100 Ω	0.008%	0.002%	0.005%	ΔR within ±0.25% without mechanical damage.
		10 KΩ	0.008%	-0.002%	0.003%	
		100 KΩ	0.017%	0.003%	0.007%	
RESISTANCE TO SOLDERING HEAT	Solder temperature 275°C for 20 sec. ±1sec.	100 Ω	0.061%	-0.012%	0.013%	ΔR within ±0.1%
		10 KΩ	-0.018%	-0.044%	-0.024%	
		100 KΩ	-0.020%	-0.045%	-0.033%	
SOLDERABILITY	Solder temperature 230°C ±5°C for 3 sec. ±1 sec.	100 Ω 10 KΩ 100 KΩ	100% MEET SPECIFICATION			Minimum 95% of the electrode surface covered.
SHORT TIME OVERLOAD	2.5 times to rated voltage for 5 seconds	100 Ω	0.012%	-0.009%	-0.001%	ΔR within ±0.25%
		10 KΩ	0.000%	-0.018%	-0.001%	
		100 KΩ	0.012%	-0.008%	0.000%	
HUMIDITY	60°C, 95%RH No load 1000Hour	100 Ω	0.083%	0.002%	0.027%	ΔR within ±0.25%
		10 KΩ	0.005%	0.001%	0.003%	
		100 KΩ	0.018%	0.008%	0.012%	
LOAD LIFE	70°C Rated voltage for 1½ hours ON, ½ hour OFF. 1000 hours	100 Ω	0.052%	-0.057%	0.009%	ΔR within ±0.5%
		10 KΩ	0.017%	-0.009%	0.007%	
		100 KΩ	0.018%	-0.001%	0.007%	

### Derating Curve

For resistors operated in ambient above 70°C, power dissipation must be derated in accordance with the curve in the graph below.

