PRODUCT BULLETIN

PRC-SERIES

PRECISION SURFACE MOUNT

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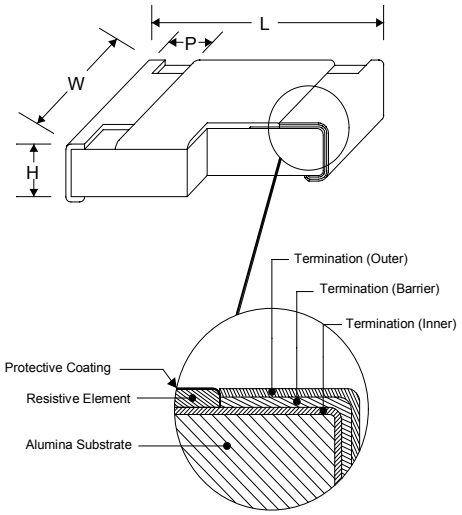
- THIN FILM
- STANDARD INDUSTRY CASE SIZES
  0201 0402 0603 0805 1206 1210 2010
- POWER RATINGS 1/20W, 1/16W, 1/10W
  1/8W, 1/4W & 1/2W
- TEMPERATURE COEFFICIENTS
  TO 2PPM/°C
- RESISTANCE TOLERANCES
  TO 0.05%
- CUSTOM VALUES TO 3 DECIMAL PLACES
- PACKAGING IS TAPE & REEL
  1,000; 5,000; 10,000 pcs.



DEDICATION TO EXCELLENCE

Specifications

INCHES / MILLIMETERS

TYPE	RATED PWR	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	0.390 ±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 (0.08±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)	0.022 ±0.006 (0.56±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)	0.022 ±0.006 (0.56±0.15)	0.024 ±0.010 (0.60±0.25)

Operating Temperature Range is -55°C to +125°C
*** -20°C to +85°C**

Temperature Coefficients

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

Resistance Ranges

Refer to Capability Sheet for available ranges
Contact factory for custom values

Resistance Tolerances

0.05% 0.1% 0.5% 1.0%

How to Order

Sample Part

PRC 0805 TC10 56.2R ±0.05%

- ±0.05% — Resistance Tolerance
- 56.2R — Resistance Value
- TC10 — Temperature Coefficient
- 0805 — Case Size
- PRC — Type

Data subject to change without notice

Continued on reverse side

TYPICAL RELIABILITY TEST DATA AND SPECIFICATIONS

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

Derating Curve

must be derated in accordance with the curve in the graph below.