



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!



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# PCR Series

Pulse Withstanding Chip Resistor



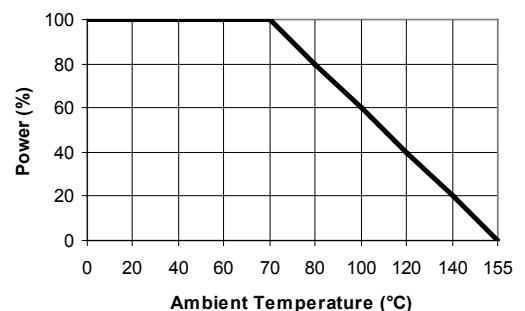
- Resistances from 1 Ohm to 20MOhms
- Power Rating 0.125 to 1.5 Watt
- Resistance Tolerances to  $\pm 5\%$
- Excellent pulse withstanding performance
- TCR's to  $\pm 100$  ppm/K
- Sizes: 0603 / 0805 / 1206 / 1210 / 2010 / 2512

## SPECIFICATIONS

Type	PCR0603	PCR0805	PCR1206	PCR1210	PCR2010	PCR2512
Power Rating (W) at 70°C	0.125	0.25	0.33	0.50	0.75	1.5
Resistance Range ( $\Omega$ ) (E24)	10 to 1M	1 to 20M				
MAX Operating Voltage <sup>1</sup>	50V	150V	200V	200V	400V	500V
Tolerances	5% / 10% / 20%					
TCR	10 $\Omega$ - 270 $\Omega$ : 200ppm 300 $\Omega$ - 1M: 100ppm	1 $\Omega$ - 270 $\Omega$ : 200ppm 300 $\Omega$ - 20M: 100ppm	1 $\Omega$ - 20 $\Omega$ :200ppm 22 $\Omega$ - 20M:100ppm			
Dimensions (LxWxT) mm [inches]	1.60 x 0.80 x 0.45 [0.06 x 0.03 x 0.018]	2.00 x 1.25 x 0.50 [0.08 x 0.05 x 0.020]	3.10 x 1.55 x 0.55 [0.12 x 0.06 x 0.022]	3.10 x 2.60 x 0.55 [0.12 x 0.10 x 0.022]	5.00 x 2.50 x 0.55 [0.20 x 0.10 x 0.022]	6.35 x 3.10 x 0.55 [0.25 x 0.12 x 0.022]

<sup>1</sup> Operating Voltage =  $\sqrt{P \cdot R}$  or MAX Listed, whichever is lower.

Power Derating Curve



Type	Quantity / Tape Diameter
PCR0603	Paper 5K / 7" 10K / 10" 20K / 13"
PCR0805	
PCR1206	
PCR1210	
PCR2010	Embossed 4K / 7" 8K / 10"
PCR2512	

## Ordering Information

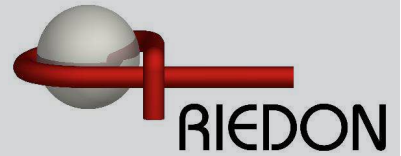
Part Number - Resistance - Tolerance - TCR - Packaging

Example: PCR 0603 50Ohms 1% 100ppm

(Note: if no TCR is specified: The highest value will be supplied)

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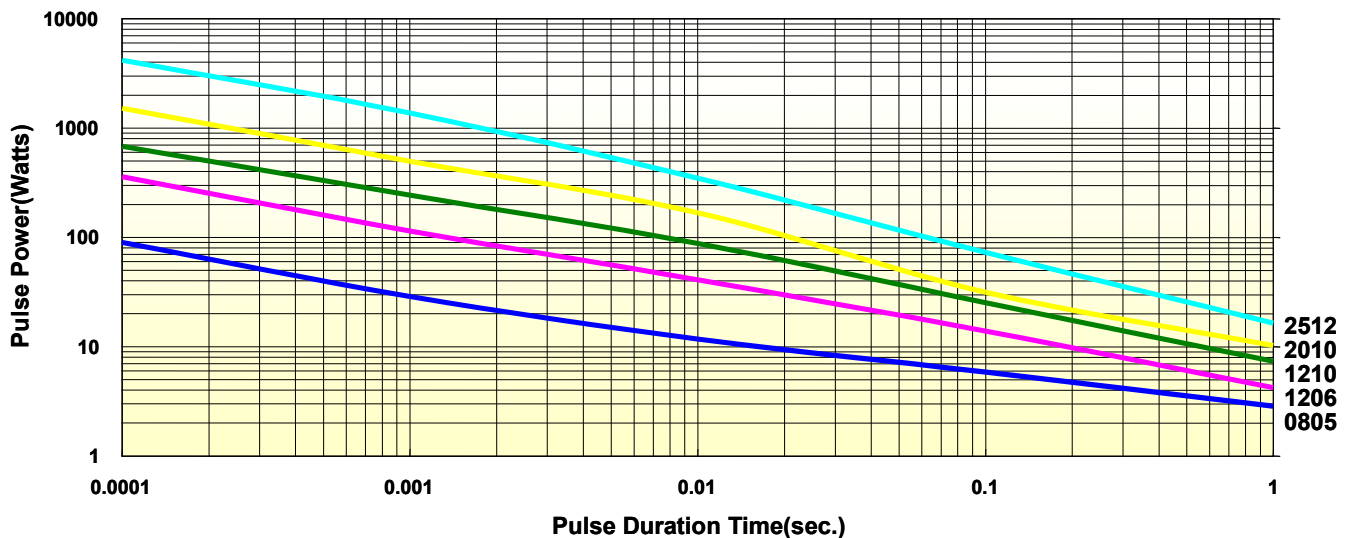


## Specifications

Test	Specification	Test Method
TCR	see above	-55°C~+125°C, 25°C is the reference temperature
Short Time Overload	$\pm(1.0\%+0.05\Omega)$	RCWV*2.5 or Max. overload voltage for 5 seconds
Insulation Resistance	$\geq 10G$	Max. overload voltage for 1 minute
Load Life	$\pm(3.0\%+0.05\Omega)$	70 $\pm$ 2°C, Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Damp Heat with Load	$\pm(3.0\%+0.05\Omega)$	40 $\pm$ 2°C, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Dry Heat	$\pm(3.0\%+0.05\Omega)$	at +155°C for 1000 hrs
Bending Strength	$\pm(1.0\%+0.05\Omega)$	Bending once for 5 seconds 2010, 2512 sizes: 2mm Other sizes: 3mm
Solderability	95% min. coverage	245 $\pm$ 5°C for 3 seconds
Resistance to Soldering Heat	$\pm(1.0\%+0.05\Omega)$	260 $\pm$ 5°C for 10 seconds
Voltage Proof	No breakdown or flashover	1.42 times RCWV (RMS) for 1 minute
Leaching	Individual leaching area $\leq 5\%$ Total leaching area $\leq 10\%$	260 $\pm$ 5°C for 30 seconds
Rapid Change of Temperature	$\pm(1.0\%+0.05\Omega)$	-55°C to +155°C, 5 cycles

## Pulse Graphs

### Single Pulse

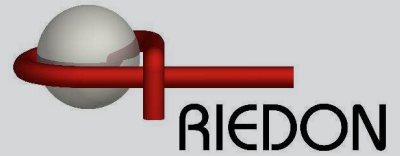


<sup>1</sup>Result of 50 rectangular pulses at 1 min intervals  
<sup>2</sup><1% deviation from initial value



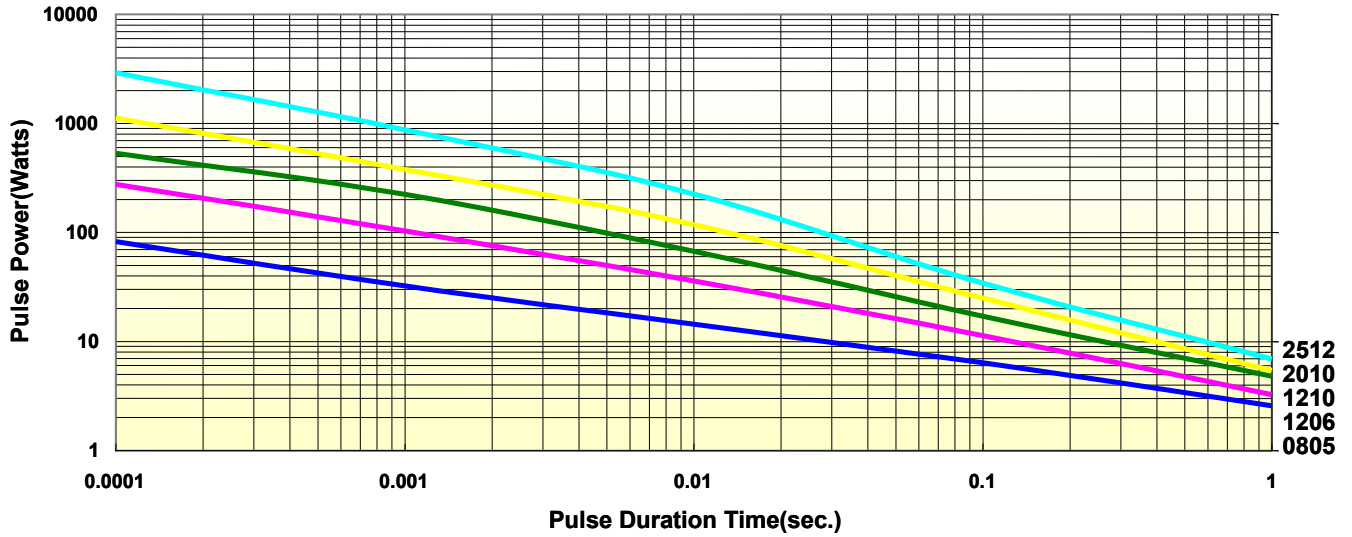
# PCR Series

Pulse Withstanding Chip Resistor



## Pulse Graphs

### Continuous Pulse



<sup>1</sup>Result of rectangular pulses at intervals causing max power rating at 70C  
<sup>2</sup><1% deviation from initial value