PCR Series

Pulse Withstanding Chip Resistor

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

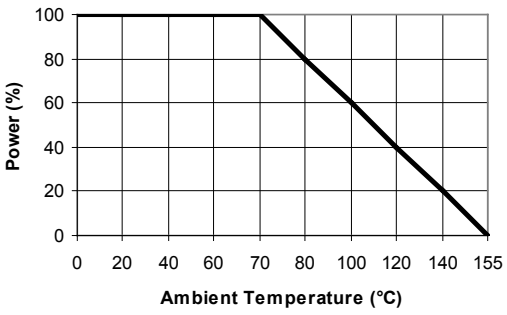
SPECIFICATIONS

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 (Ω) (E24)	10 to 1M	1 to 20M				
MAX Operating Voltage[1]	50V	150V	200V	200V	400V	500V
Tolerances	5% / 10% / 20%					
TCR	10Ω - 270Ω: 200ppm 300Ω - 1M: 100ppm	1Ω - 270Ω: 200ppm 300Ω - 20M: 100ppm	1Ω - 20Ω:200ppm 22Ω - 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]

[1] Operating Voltage = $\sqrt{(P * R)}$ or MAX Listed, whichever is lower.

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

Power Derating Curve



Ordering Information

Part Description: Part Type - Resistance - Tolerance - TCR - Packaging
Example: PCR0603 10Ohms 5% 200ppm
(Note: if no TCR is specified: The highest value will be supplied)

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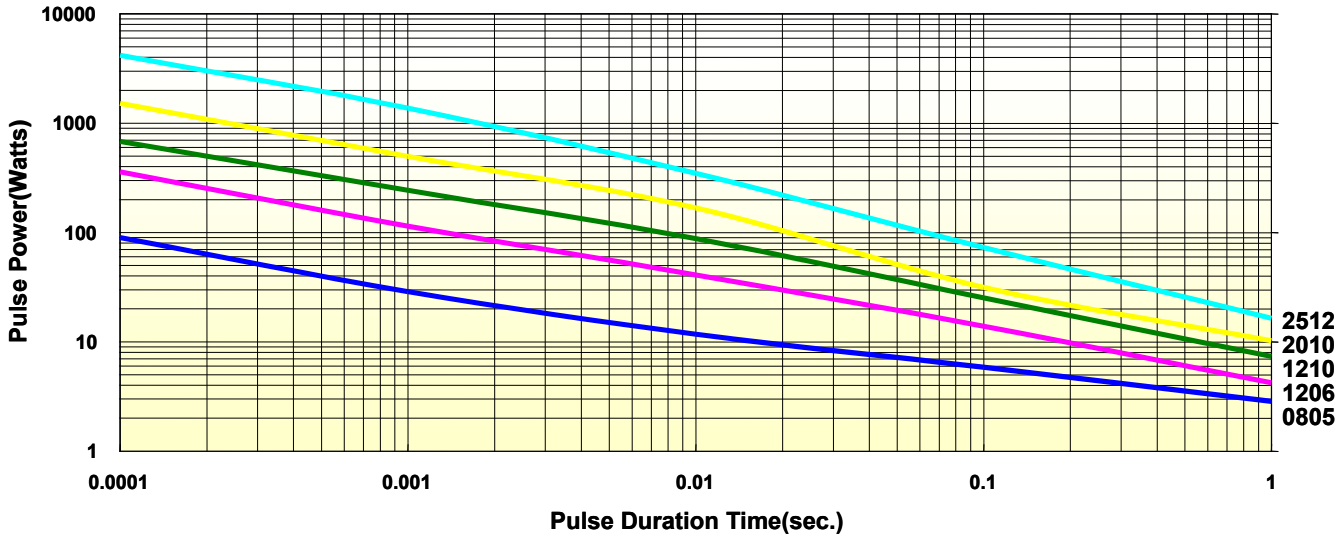
Specifications

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

Pulse Graphs

Single Pulse



[1]Result of 50 rectangular pulses at 1 min intervals
[2]<1% deviation from initial value

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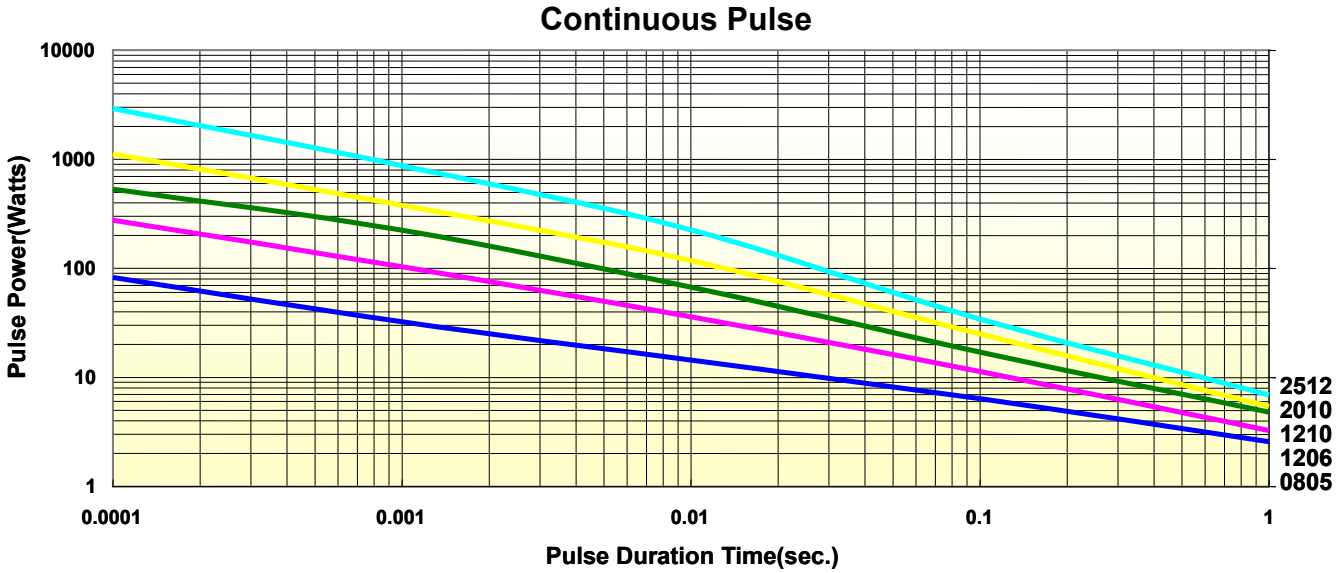
Pulse Graphs



[1]Result of rectangular pulses at intervals causing max power rating at 70C

[2]<1% deviation from initial value

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