

RPC Series

Pulse Withstanding Thick Film Chip Resistor

Stackpole Electronics, Inc.

Resistive Product Solutions

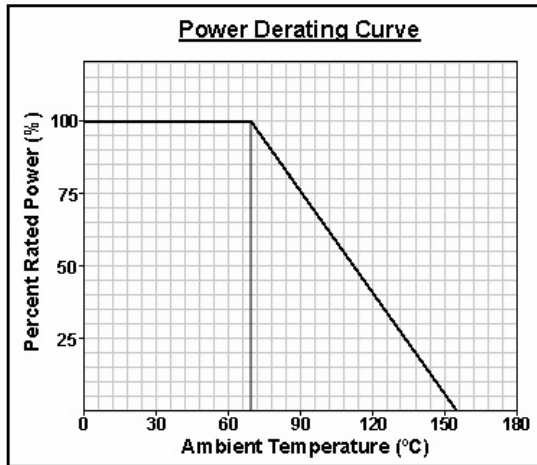
- Features:
- ✓ Excellent pulse withstanding performance
 - ✓ Broad resistance range
 - ✓ Higher anti-surge performance compared with RMC Series
 - ✓ Stability class: 5%
 - ✓ RoHS compliant / lead-free



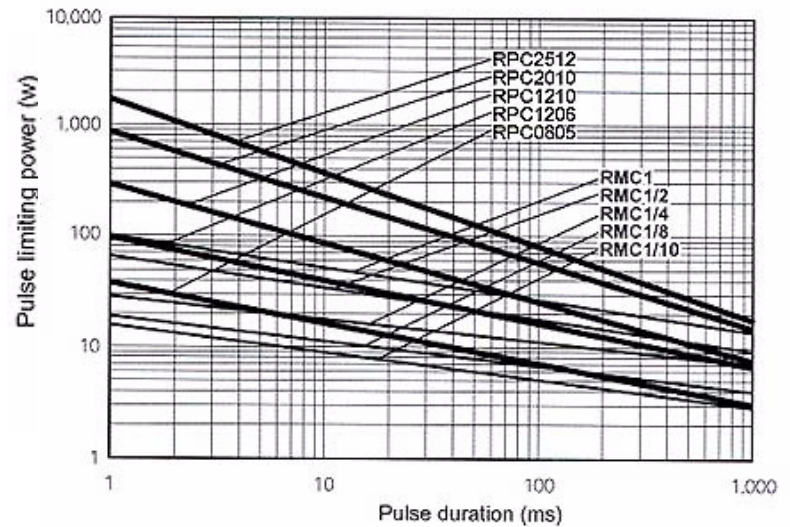
Electrical Specifications				
Type / Code	Power Rating (Watts) @ 70°C	Maximum Working Voltage [Ⓞ]	Resistance Temperature Coefficient	Ohmic Range and Tolerance 5%, 10%, 20%
RPC 0603	0.100W	50V	±200 ppm/°C	10Ω - 1MΩ
RPC 0805	0.250W	150V	±200 ppm/°C	0.27Ω - 22MΩ
RPC 1206	0.330W	200V	±200 ppm/°C	
RPC 1210	0.500W	200V	±200 ppm/°C	
RPC 2010	0.750W	200V	±200 ppm/°C	
RPC 2512	1.000W	200V	±200 ppm/°C	

Ⓞ Lesser of \sqrt{PR} or maximum working voltage

Ⓜ Higher power rating for each package size is valid if ambient temp $\leq 80^\circ\text{C}$ and terminal temp $\leq 105^\circ\text{C}$



Pulse Limiting Power Curve (100Ω)

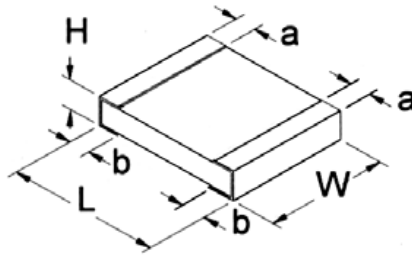


How to Order

SEI Type		Code		Nominal Resistance	Tolerance		Packaging			
RPC		0805		10M	5%		A			
Type	Description	Code	Wattage		Tolerance	Values	SEI Types	Pkg Qty	Description	Code
RPC	Pulse Withstanding	0603	0.100W		5%	E24	0603	5,000	7" Reel - Paper	R
		0805	0.250W		10%		0805, 1206	10,000	10" Reel - Paper	G
		1206	0.330W		20%		1210, 2010, 2512	5,000	7" Reel - Paper	R
		1210	0.500W					4,000		
		2010	0.750W							
		2512	1.000W							

Rev Date: 9/30/2009

This specification may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.



Mechanical Specifications						
Type / Code	L Body Length	W Body Width	H Body Height	a Top Termination	b Bottom Termination	Units
RPC 0603	0.063 ± 0.004 1.60 ± 0.10	0.032 ± 0.004 0.80 ± 0.10	0.018 ± 0.004 0.45 ± 0.10	0.012 ± 0.008 0.30 ± 0.20	0.012 ± 0.008 0.30 ± 0.20	inches mm
RPC 0805	0.079 ± 0.004 2.00 ± 0.10	0.049 ± 0.004 1.25 ± 0.10	0.021 ± 0.004 0.55 ± 0.10	0.012 ± 0.008 0.30 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	inches mm
RPC 1206	0.126 ± 0.006 3.20 ± 0.15	0.063 ± 0.006 1.60 ± 0.15	0.021 ± 0.004 0.55 ± 0.10	0.012 ± 0.008 0.30 ± 0.20	0.020 ± 0.010 0.50 ± 0.25	inches mm
RPC 1210	0.126 ± 0.006 3.20 ± 0.15	0.098 ± 0.006 2.50 ± 0.15	0.021 ± 0.006 0.55 ± 0.15	0.012 ± 0.008 0.30 ± 0.20	0.020 ± 0.010 0.50 ± 0.25	inches mm
RPC 2010	0.197 ± 0.006 5.00 ± 0.15	0.098 ± 0.006 2.50 ± 0.15	0.021 ± 0.006 0.55 ± 0.15	0.012 ± 0.008 0.30 ± 0.20	0.024 ± 0.008 0.60 ± 0.20	inches mm
RPC 2512	0.248 ± 0.006 6.30 ± 0.15	0.126 ± 0.006 3.20 ± 0.15	0.021 ± 0.006 0.55 ± 0.15	0.012 ± 0.008 0.30 ± 0.20	0.024 ± 0.008 0.60 ± 0.20	inches mm

Performance Characteristics		
Test	Test Methods (JIS C 5201-1 : 1198)	Test Results
Voltage Proof	Clause 4.7 500Va.a., 60s	No breakdown or flashover R ≥ 1G Ohm
Variation of Resistance with Temperature	Clause 4.8 +20°C/ -55°C / +20°C/ +125°C/ +20°C: RPC 2010, 2512 +20°C/ -55°C/ +20°C/ +155°C/ +20°C: RPC 0603, 0805, 1206, 1210	See ratings table
Overload	Clause 4.13 The applied voltage shall be 2.5 times of the rated voltage or twice of the limiting element voltage, whichever is the less severe, 2s.	ΔR ≤ ± 1% +0.05Ω No visible damage, legible markings
Solderability	Clause 4.17 235°C, 2s.	In accordance with Clause 4.17.4.5
Resistance to Soldering Heat	Clause 4.18 After immersion into the flux, the immersion into solder shall be carried out in solder bath at 260° for 5s.	ΔR ≤ ± 1% +0.05Ω
Rapid Change of Temperature	Clause 4.19 Cycle: -55°C/ +125°C 5 times: RPC 2010, 2512 Cycle: -55°C/ +155°C 5 times: RPC 0603, 0805, 1206, 1210	ΔR ≤ ± 1% +0.05Ω No visible damage
Climatic Sequence	Clause 4.23 Dry/Damp heat (12+12h cycle), first cycle/ Cold/Damp heat (12+12h cycle), remaining cycle / D.C. Load	ΔR ≤ ± 5% +0.1Ω No visible damage
Damp Test, Steady State	Clause 4.24 40°C, 95% R.H., 56 days, test a) and b) of Clause 4.24.2.1	ΔR ≤ ± 5% +0.1Ω No visible damage, legible markings
Endurance @ 70°C	Clause 4.25.1 Rated voltage, 1.5h "ON", 0.5h "OFF", 70°C, 1,000h	ΔR ≤ ± 5% +0.1Ω No visible damage
Endurance at the Upper Category Temperature	Clause 4.25.3 125°C, no load, 1,000h: RPC 2010, 2512 155°C, no load, 1,000h: RPC 0603, 0805, 1206, 1210	ΔR ≤ ± 5% +0.1Ω No visible damage
Adhesion	Clause 4.32 5N, 10s	No visible damage
Bend of Strength of the Face Plating	Clause 4.33 Amount of bend: 3mm RPC 0603, 0805, 1206, 1210 Amount of bend: 1mm RPC 2010, 2512	ΔR ≤ ± 1% +0.05Ω

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