

RPC Series — Pulse Withstanding Thick Film Chip Resistor

Features

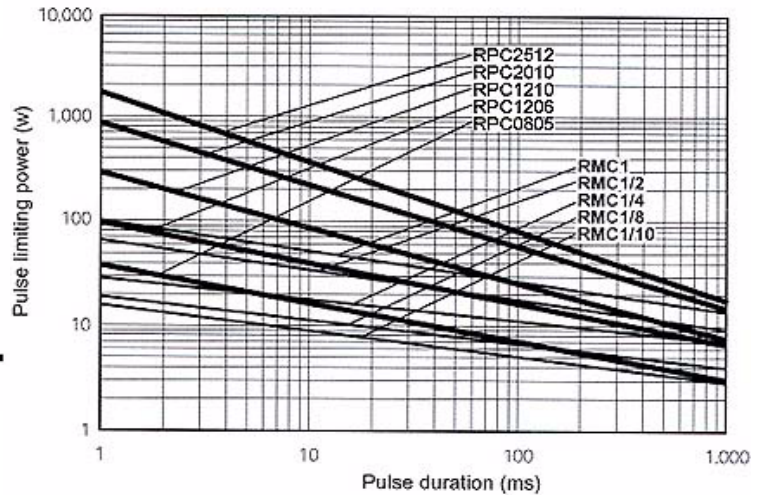
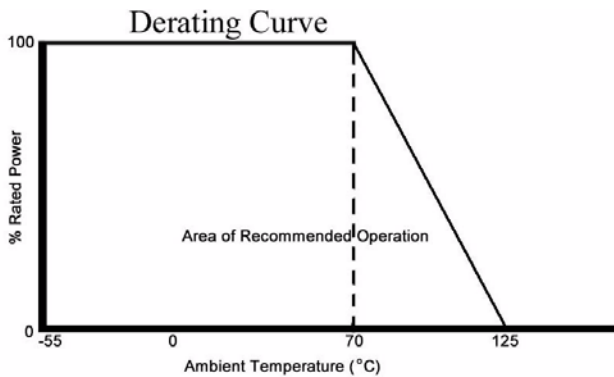
- Excellent pulse withstanding performance
- Improved working voltage
- Higher anti-surge performance compared with RMC series
- Stability class: 5%
- Broad resistance range
- RoHS compliant / lead-free available



Electrical Specifications

Type / Code	Power Rating (Watts) @ 70°C	Maximum Working Voltage	Isolation Voltage	Resistance Temperature Coefficient	Ohmic Range and Tolerance
					5%, 10%, 20%
RPC 0805	0.125W	150V	500V	±200 ppm/°C	0.27Ω – 22MΩ
RPC 1206	0.250W	200V	500V	±200 ppm/°C	
RPC 1210	0.333W	200V	500V	±200 ppm/°C	
RPC 2010	0.750W	200V	500V	±200 ppm/°C	
RPC 2512	1.000W	200V	500V	±200 ppm/°C	

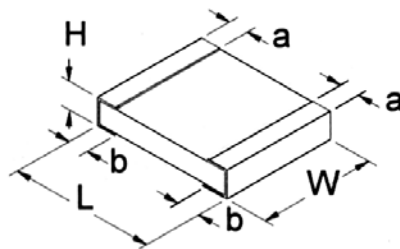
Pulse Limiting Power Curve (100Ω)



How to Order

RPC	0805	10M	5%	A			
SEI Type	Code	Nominal Resistance	Tolerance	Packaging			
	Code	Tolerance	Values	SEI Types	Pkg Qty	Description	Code
	0805	5%	E24	0805, 1206	10,000	10" reel - Paper	G
	1206	10%	E24		5,000	7" reel - Paper	R
	1210	20%	E24	1210, 2010, 2512	4,000		R
	2010						
	2512						

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Mechanical Specifications

Type / Code	L Body Length	W Body Width	H Body Height	a Top Termination	b Bottom Termination	Units
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

Climatic Category

	RPC 2010 & RPC 2512	RPC 0805, RPC 1206, & RPC 1210
Lower Category Temperature	-55°C	-55°C
Upper Category Temperature	+125°C	+155°C
Duration of the Damp heat, Steady-State Test	56 days	56 days

Performance Characteristics

Test	Test Results	Test Methods (JIS C 520-1:1198)
Voltage Proof	No breakdown or flashover $R \geq 1G$ ohm	Clause 4.7 500Va.c., 60s
Variation of Resistance with Temperature	See ratings table	Clause 4.8 +20°C/ -55°C/ +20°C/ +125°C/ +20°C : RPC 2010 RPC 2512 +20°C/ -55°C/ +20°C/ +155°C/ +20°C : RPC 0805 RPC 1206 RPC 1210
Overload	$\Delta R \leq \pm 1\% + 0.05\Omega$ No visible damage, legible markings	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.
Solderability	In accordance with Clause 4.17.4.5	Clause 4.17 235°C, 2s.
Resistance to Soldering Heat	$\Delta R \leq \pm 1\% + 0.05\Omega$	Clause 4.18 After immersion into the flux, the immersion into solder shall be carried out in Solder bath at 260°C for 5s.
Rapid Change of Temperature	$\Delta R \leq \pm 1\% + 0.05\Omega$ No visible damage	Clause 4.19 Cycle: -55°C/ + 125°C 5 times: RPC 2010 RPC 2512 Cycle: -55°C/ +155°C 5 times: RPC 0805 RPC 1206 RPC 1210
Climatic Sequence	$\Delta R \leq \pm 5\% + 0.10\Omega$ No visible damage	Clause 4.23 Dry/Damp heat (12+12h cycle), first cycle./ Cold/Damp heat (12+12h cycle), remaining cycle./ D.C. Load
Damp Test, Steady State	$\Delta R \leq \pm 5\% + 0.10\Omega$ No visible damage, legible markings	Clause 4.24 40°C, 95% R.H., 56 days, test a) and b) of Clause 4.24.2.1
Endurance @ 70°C	$\Delta R \leq \pm 5\% + 0.10\Omega$ No visible damage	Clause 4.25.1 Rated voltage, 1.5h "ON", 05.h "OFF", 70°C, 1,000h
Endurance at the Upper Category Temperature	$\Delta R \leq \pm 5\% + 0.10\Omega$ No visible damage	Clause 4.25.3 125°C, no load, 1,000h: RPC 2010 RPC 2512 155°C, no load, 1,000h: RPC 0805 RPC 1206 RPC 1210
Adhesion	No visible damage	Clause 4.32 5N, 10s
Bend of Strength of the Face Plating	$\Delta R \leq \pm 1\% + 0.05\Omega$	Clause 4.33 Amount of bend: 3mm RPC 0805 RPC 1206 RPC 1210 Amount of bend: 1mm RPC 2010 RPC 2512