

RNCP Series

High Power Anti-Sulfur Thin Film Chip Resistor

Stackpole Electronics, Inc.

Resistive Product Solutions

- Features:
- Higher power ratings than standard thick film chips
 - Absolute TCRs to $\pm 100\text{ppm}/^\circ\text{C}$
 - Impervious to Sulfur contamination, no silver present in terminations
 - Absolute Tolerances to 1%
 - Completely lead free and RoHS compliant without exemptions – does not use lead containing glass
 - Comparable in cost to standard thick film chip resistors



Electrical Specifications						
Type / Code	Package Type	Power Rating ² (Watts) @ 70°C	Maximum Working Voltage ¹	Maximum Overload Voltage	Resistance Temperature Coefficient	Ohmic Range and Tolerance
						1%, 2%, 5%
RNCP 0402	0402	0.100W	50V	100V	$\pm 100\text{ ppm}/^\circ\text{C}$	1Ω - 100KΩ
RNCP 0603	0603	0.125W	75V	150V	$\pm 100\text{ ppm}/^\circ\text{C}$	1Ω - 360KΩ
RNCP 0805	0805	0.250W	100V	200V	$\pm 100\text{ ppm}/^\circ\text{C}$	1Ω - 360KΩ
RNCP 1206	1206	0.500W	200V	400V	$\pm 100\text{ ppm}/^\circ\text{C}$	1Ω - 360KΩ

¹ Lesser of $\sqrt{\text{PR}}$ or maximum working voltage.

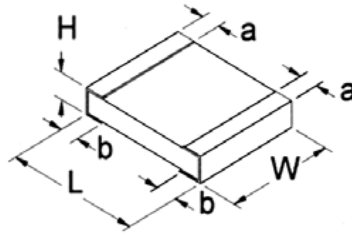
² Power rating for each package size is valid if ambient temp $\leq 80^\circ\text{C}$ and terminal temp $\leq 105^\circ\text{C}$.

Performance Characteristics			
Test	Test Conditions	Typical	
		1%	2%, 5%
Short Time Overload	RCWV * 2.5 or Max Overload Voltage, 5 seconds	$\pm 1\%$	$\pm 2\%$
Thermal Shock	MIL-STD-202F Method 107G -55°C to +125°C, 1000 Cycles	$\pm 1\%$	$\pm 1\%$
Load Life	MIL-STD-202F Method 108A RCWV, 125°C, 1.5 Hrs ON, 0.5 Hrs OFF, Total 1000 Hrs	$\pm 2\%$	$\pm 3\%$
Humidity (steady state)	MIL-STD-202F Method 103B 85°C, 85% RH, RCWV 1.5Hrs ON, 0.5Hrs OFF, Total 1000Hrs	$\pm 3\%$	$\pm 3\%$
Resistance to Soldering Heat	MIL-STD-202F Method 210E 260 \pm 5°C, 10 \pm 1 second	$\pm 1\%$	$\pm 1\%$

* Storage Temperature : 25 \pm 3°C; Humidity < 80% RH

How to Order

SEI Type		Code			TCR	Nominal Resistance	Tolerance	Packaging			
RNCP		0603			T1	4.75K	1%	R			
Type	Description	Code	Wattage	Size	Code	Tolerance	SEI Types	Pkg Qty	Description	Code	
RNCP	High Power Anti-Corrosive	0402	0.100W	0402	T1 = 100ppm	1%	0402	10,000	7" reel - 2mm pitch	R	
		0603	0.125W	0603		2%	0603, 0805, 1206	5,000	7" reel - 4mm pitch	R	
		0805	0.250W	0805		5%					
		1206	0.500W	1206							



Mechanical Specifications						
Type / Code	L Body Length	W Body Width	H Body Height	a Top Termination	b Bottom Termination	Units
RNCP 0402	0.040 ± 0.004 1.00 ± 0.10	0.02 ± 0.002 0.50 ± 0.05	0.012 ± 0.002 0.30 ± 0.05	0.01 ± 0.006 0.25 ± 0.15	0.012 ± 0.006 0.30 ± 0.15	inches mm
RNCP 0603	0.059 ± 0.004 1.50 ± 0.20	0.032 ± 0.004 0.80 ± 0.10	0.016 ± 0.004 0.40 ± 0.10	0.012 ± 0.006 0.30 ± 0.15	0.016 ± 0.008 0.40 ± 0.20	inches mm
RNCP 0805	0.079 ± 0.006 2.00 ± 0.15	0.049 ± 0.006 1.25 ± 0.15	0.020 ± 0.004 0.50 ± 0.10	0.018 ± 0.008 0.40 ± 0.20	0.024 ± 0.008 0.60 ± 0.20	inches mm
RNCP 1206	0.122 ± 0.008 3.10 ± 0.20	0.059 ± 0.008 1.50 ± 0.20	0.020 ± 0.004 0.50 ± 0.10	0.020 ± 0.012 0.50 ± 0.20	0.028 ± 0.008 0.70 ± 0.20	inches mm

