

- Features:
- Precision tolerances to $\pm 0.01\%$
 - TCR down to $\pm 5\text{ppm}/^\circ\text{C}$
 - RoHS compliant / lead-free available (RNCF)
 - E96 and E24 values are standard; E192 are built to order with no part marking
 - Wide R-value range
 - Consult factory for tighter tolerances
 - 2010 and 2512 sizes now available



Electrical Specifications											
Type / Code	Package Size	Power Rating (Watts) @ 70°C	Maximum Working Voltage [ⓐ]	Maximum Overload Voltage	Resistance Temperature Coefficient	Ohmic Range and Tolerance					
						0.01%	0.05%	0.1%	0.25%	0.5%	1%
RNC 05	0201	0.032W (0.050W [ⓑ])	15V	30V	$\pm 25\text{ ppm}/^\circ\text{C}$ $\pm 50\text{ ppm}/^\circ\text{C}$	-	-	-	-	49.9Ω - 5K 49.9Ω - 33K	49.9Ω - 5K 49.9Ω - 33K
RNC 10	0402	0.063W	25V	50V	$\pm 5\text{ ppm}/^\circ\text{C}$	49.9Ω - 5K	49.9Ω - 5K	49.9Ω - 5K	-	-	-
					$\pm 10\text{ ppm}/^\circ\text{C}$	49.9Ω - 12K	49.9Ω - 12K	10Ω - 100K	10Ω - 100K	10Ω - 100K	10Ω - 100K
					$\pm 25\text{ ppm}/^\circ\text{C}$ $\pm 50\text{ ppm}/^\circ\text{C}$	-	-	10Ω - 205K	10Ω - 205K	10Ω - 205K	10Ω - 205K
RNC 16	0603	0.063W (0.100W [ⓑ])	50V	100V	$\pm 5\text{ ppm}/^\circ\text{C}$	24.9Ω - 15K	24.9Ω - 15K	24.9Ω - 15K	-	-	-
					$\pm 10\text{ ppm}/^\circ\text{C}$	24.9Ω - 100K	24.9Ω - 100K	10Ω - 390K	10Ω - 390K	10Ω - 390K	10Ω - 390K
					$\pm 25\text{ ppm}/^\circ\text{C}$ $\pm 50\text{ ppm}/^\circ\text{C}$	-	4.7Ω - 332K 4.7Ω - 332K	4.7Ω - 1M 4.7Ω - 1M	2Ω - 1M 2Ω - 1M	2Ω - 1M 1Ω - 1M	2Ω - 1M 1Ω - 1M
RNC 20	0805	0.100W (0.125W [ⓑ])	100V	200V	$\pm 5\text{ ppm}/^\circ\text{C}$	24.9Ω - 30K	24.9Ω - 30K	24.9Ω - 30K	-	-	-
					$\pm 10\text{ ppm}/^\circ\text{C}$	24.9Ω - 200K	24.9Ω - 200K	10Ω - 800K	10Ω - 800K	10Ω - 800K	10Ω - 800K
					$\pm 25\text{ ppm}/^\circ\text{C}$ $\pm 50\text{ ppm}/^\circ\text{C}$	-	4.7Ω - 511K 4.7Ω - 511K	4.7Ω - 2M 4.7Ω - 2M	1Ω - 2M 1Ω - 2M	1Ω - 2M 1Ω - 2M	
RNC 32	1206	0.125W (0.250W [ⓑ])	150V	300V	$\pm 5\text{ ppm}/^\circ\text{C}$	24.9Ω - 50K	24.9Ω - 50K	24.9Ω - 50K	-	-	-
					$\pm 10\text{ ppm}/^\circ\text{C}$	24.9Ω - 500K	24.9Ω - 500K	10Ω - 1M	10Ω - 1M	10Ω - 1M	10Ω - 1M
					$\pm 25\text{ ppm}/^\circ\text{C}$ $\pm 50\text{ ppm}/^\circ\text{C}$	-	4.7Ω - 1M 4.7Ω - 1M	4.7Ω - 2.5M 4.7Ω - 2.5M	1Ω - 2.5M 1Ω - 2.5M	1Ω - 2.5M 1Ω - 2.5M	
RNC 50	1210	0.200W (0.250W [ⓑ])	150V	300V	$\pm 5\text{ ppm}/^\circ\text{C}$	24.9Ω - 50K	24.9Ω - 50K	24.9Ω - 50K	-	-	-
					$\pm 10\text{ ppm}/^\circ\text{C}$	24.9Ω - 500K	24.9Ω - 500K	24.9Ω - 500K	-	-	-
					$\pm 25\text{ ppm}/^\circ\text{C}$ $\pm 50\text{ ppm}/^\circ\text{C}$	-	4.7Ω - 1M 4.7Ω - 1M	4.7Ω - 2.5M 4.7Ω - 2.5M	1Ω - 2.5M 1Ω - 2.5M	1Ω - 2.5M 1Ω - 2.5M	
RNC 57	2010	0.250W (0.500W [ⓑ])	150V	300V	$\pm 5\text{ ppm}/^\circ\text{C}$	24.9Ω - 100K	24.9Ω - 100K	24.9Ω - 100K	-	-	-
					$\pm 10\text{ ppm}/^\circ\text{C}$	24.9Ω - 500K	24.9Ω - 500K	24.9Ω - 500K	-	-	-
					$\pm 25\text{ ppm}/^\circ\text{C}$ $\pm 50\text{ ppm}/^\circ\text{C}$	-	4.7Ω - 1M 4.7Ω - 1M	4.7Ω - 3M 4.7Ω - 3M	1Ω - 3M 1Ω - 3M	1Ω - 3M 1Ω - 3M	
RNC 63	2512	0.500W (1.000W [ⓑ])	150V	300V	$\pm 5\text{ ppm}/^\circ\text{C}$	24.9Ω - 100K	24.9Ω - 100K	24.9Ω - 100K	-	-	-
					$\pm 10\text{ ppm}/^\circ\text{C}$	24.9Ω - 500K	24.9Ω - 500K	24.9Ω - 500K	-	-	-
					$\pm 25\text{ ppm}/^\circ\text{C}$ $\pm 50\text{ ppm}/^\circ\text{C}$	-	4.7Ω - 1M 4.7Ω - 1M	4.7Ω - 3M 4.7Ω - 3M	1Ω - 3M 1Ω - 3M	1Ω - 3M 1Ω - 3M	

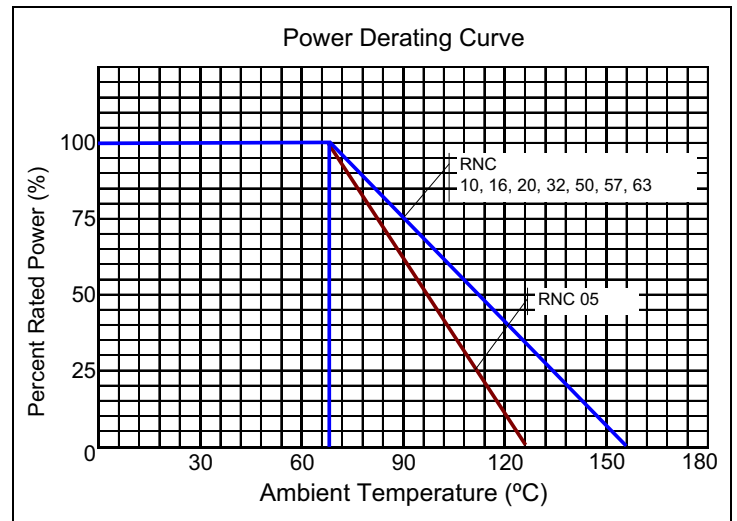
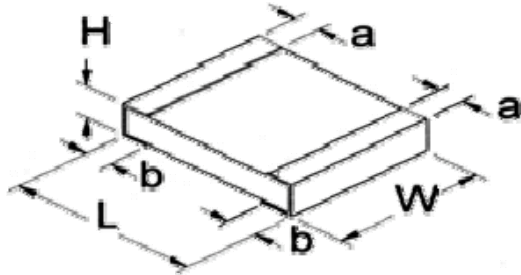
[ⓐ] Lesser of $\sqrt{\text{PR}}$ or maximum working voltage.

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

How to Order

SEI Type		Code			TCR		Nominal Resistance	Tolerance	Packaging				
RNC		20			T9		4.75K	0.5%	R				
Type	Description	Code	Wattage	Size	TCR			Tolerance	Values	SEI Types	Pkg Qty	Code	Description
RNC	Standard	05	0.050W	0201	T1	100ppm		0.01%	E192 [ⓐ] , E96, E24	5, 10	10,000	R	7" reel
RNCF	RoHS	10	0.063W	0402	T2	50ppm		0.05%	E192 [ⓐ] , E96, E24	16, 20, 30	5,000	R	
		16	0.100W	0603	T9	25ppm		0.1%	E192 [ⓐ] , E96, E24		1,000	I	
		20	0.125W	0805	TB	10ppm		0.25%	E192 [ⓐ] , E96, E24	50	5,000	R	
		32	0.250W	1206	TA	5ppm		0.5%	E192 [ⓐ] , E96, E24	57, 63	4,000	R	
		50	0.250W	1210				1%	E96, E24		1,000	I	
		57	0.500W	2010									
		63	1.000W	2512									

[ⓐ]non-standard



Mechanical Specifications						
Type / Code	L Body Length	W Body Width	H Body Height	a Top Termination	b Bottom Termination	Units
RNC 05	0.024 ± 0.002 0.60 ± 0.05	0.012 ± 0.002 0.30 ± 0.05	0.009 ± 0.001 0.23 ± 0.030	0.005 ± 0.002 0.12 ± 0.05	0.005 ± 0.002 0.12 ± 0.05	inches mm
RNC 10	0.039 ± 0.002 1.00 ± 0.05	0.020 ± 0.002 0.50 ± 0.05	0.014 ± 0.002 0.35 ± 0.05	0.008 ± 0.004 0.20 ± 0.10	0.010 ± 0.002 0.25 ± 0.10	inches mm
RNC 16	0.063 ± 0.008 1.60 ± 0.20	0.032 ± 0.008 0.80 ± 0.20	0.016 ± 0.006 0.40 ± 0.15	0.012 ± 0.008 0.30 ± 0.20	0.012 ± 0.008 0.30 ± 0.20	inches mm
RNC 20	0.079 ± 0.008 2.00 ± 0.20	0.049 ± 0.008 1.25 ± 0.20	0.016 ± 0.004 0.50 ± 0.10	0.016 ± 0.008 0.40 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	inches mm
RNC 32	0.126 ± 0.008 3.20 ± 0.20	0.063 ± 0.008 1.60 ± 0.20	0.020 ± 0.006 0.50 ± 0.15	0.020 ± 0.012 0.50 ± 0.30	0.016 ± 0.008 0.40 ± 0.20	inches mm
RNC 50	0.122 ± 0.006 3.10 ± 0.20	0.090 ± 0.006 2.40 ± 0.15	0.024 ± 0.004 0.60 ± 0.10	0.020 ± 0.012 0.50 ± 0.30	0.016 ± 0.008 0.40 ± 0.20	inches mm
RNC 57	0.193 ± 0.006 4.90 ± 0.15	0.090 ± 0.006 2.40 ± 0.15	0.024 ± 0.004 0.60 ± 0.10	0.024 ± 0.012 0.60 ± 0.30	0.020 ± 0.010 0.50 ± 0.25	inches mm
RNC 63	0.246 ± 0.006 6.30 ± 0.15	0.122 ± 0.006 3.10 ± 0.15	0.024 ± 0.004 0.60 ± 0.10	0.024 ± 0.012 0.60 ± 0.30	0.020 ± 0.010 0.50 ± 0.25	inches mm

Performance Characteristics (JIS C 5202)		
Test	Specification	Typical
Moisture Resistance, Thermal Shock	±(0.25% + 0.05Ω)	≤0.1%
Load Life	±(0.5% + 0.05Ω)	≤0.2%
Load Life in Moisture	±(0.5% + 0.05Ω)	≤0.25%
Resistance to Soldering Heat	±(0.25% + 0.05Ω)	≤0.5%
Solderability	Min 95% coverage	≥0.95%
Terminal Strength	±(0.2% + 0.05Ω)	≤0.05%
Dielectric Withstanding Voltage	±(0.25% + 0.05Ω)	≤0.05%
Short Time Overload	±(0.25% + 0.05Ω)	≤0.05%
Insulation Resistance	1GΩ minimum	≥1GΩ

Operating Temperature Range: -55°C to +125°C (0201);
-55°C to +155°C (0402 to 2512)