

RNC Series—Precision Thin Film Chip Resistors

Features

- Precision tolerances to $\pm 0.01\%$
- TCR down to $\pm 10\text{ppm}/^\circ\text{C}$
- RoHS compliant / lead-free available (RNCF)
- Wide R-value range
- Consult factory for tighter tolerances
- 2010 and 2512 sizes now available

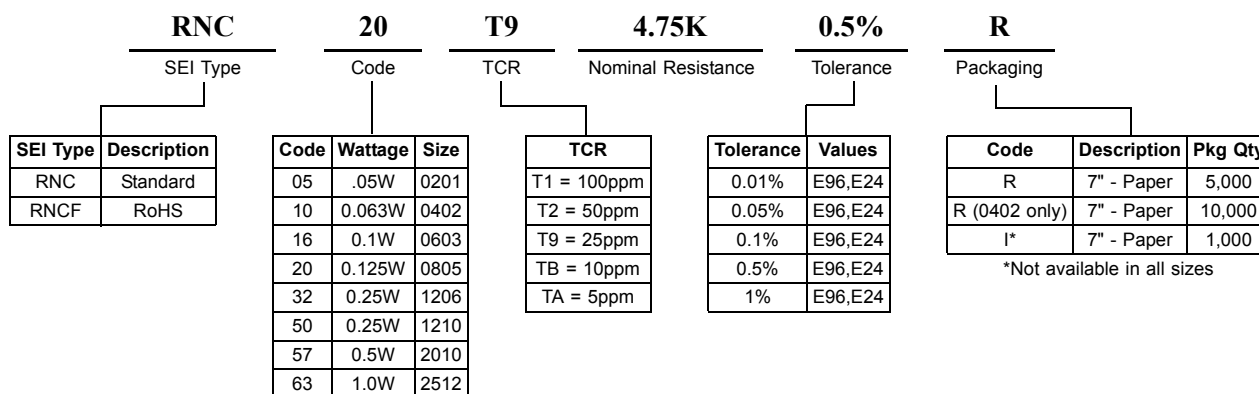


Electrical Specifications

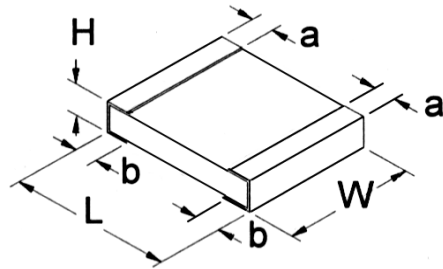
Type / Code	Package Size	Power Rating (Watts) @ 70°C	Maximum Working Voltage*	Maximum Overload Voltage	Resistance Temperature Coefficient	Ohmic Range and Tolerance			
						0.01%, 0.05%	0.1%	0.5%	1%
RNC 05	0201	0.050	15	30	$\pm 100\text{ppm}/^\circ\text{C}$ $\pm 25\text{ppm}/^\circ\text{C}$	–	–	– 33 Ω – 22K	10 Ω – 30 Ω –
RNC 10	0402	0.063	50	100	$\pm 25\text{ppm}/^\circ\text{C}$ $\pm 10\text{ppm}/^\circ\text{C}$	– 50 Ω – 15K	10 Ω – 100K 50 Ω – 15K	10 Ω – 100K –	–
RNC 16	0603	0.100	75	150	$\pm 50\text{ppm}/^\circ\text{C}$ $\pm 25\text{ppm}/^\circ\text{C}$ $\pm 10\text{ppm}/^\circ\text{C}$	– 50 Ω – 50K	4.7 Ω – 332K 4.7 Ω – 332K 50 Ω – 50K	4.7 Ω – 332K 4.7 Ω – 332K –	–
RNC 20	0805	0.125	100	200	$\pm 50\text{ppm}/^\circ\text{C}$ $\pm 25\text{ppm}/^\circ\text{C}$ $\pm 10\text{ppm}/^\circ\text{C}$ $\pm 5\text{ppm}/^\circ\text{C}$	– 50 Ω – 100K 100 Ω – 22K	4.7 Ω – 1M 4.7 Ω – 1M 50 Ω – 100K –	4.7 Ω – 1M 4.7 Ω – 1M – –	–
RNC 32	1206	0.250	150	300	$\pm 50\text{ppm}/^\circ\text{C}$ $\pm 25\text{ppm}/^\circ\text{C}$ $\pm 10\text{ppm}/^\circ\text{C}$ $\pm 5\text{ppm}/^\circ\text{C}$	– 50 Ω – 200K 100 Ω – 30K	4.7 Ω – 1M 4.7 Ω – 1M 50 Ω – 200K –	4.7 Ω – 1M 4.7 Ω – 1M – –	–
RNC 50	1210	0.250	200	400	$\pm 25\text{ppm}/^\circ\text{C}$ $\pm 10\text{ppm}/^\circ\text{C}$	–	51.1 Ω – 2M 100 Ω – 330K	–	–
RNC 57	2010	0.500	200	400	$\pm 50\text{ppm}/^\circ\text{C}$ $\pm 25\text{ppm}/^\circ\text{C}$	–	4.7 Ω – 1M 4.7 Ω – 1M	4.7 Ω – 1M 4.7 Ω – 1M	–
RNC 63	2512	1.000	200	400	$\pm 50\text{ppm}/^\circ\text{C}$ $\pm 25\text{ppm}/^\circ\text{C}$	–	4.7 Ω – 1M 4.7 Ω – 1M	4.7 Ω – 1M 4.7 Ω – 1M	–

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

How to Order



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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 ± 0.004 0.40 ± 0.10	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 0.40 ± 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 ± 0.004 0.50 ± 0.10	0.020 ± 0.012 0.50 ± 0.30	0.016 ± 0.008 0.40 ± 0.20	inches mm
RNC 50	0.126 ± 0.008 3.20 ± 0.20	0.100 ± 0.008 2.50 ± 0.20	0.024 ± 0.008 0.60 ± 0.20	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	0.09 ± 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)	≤0.05%
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	1MΩ minimum	≥1MΩ