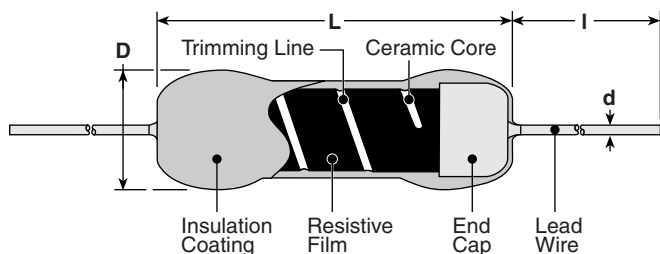




features

- High precision resistors with resistance tolerance $\pm 0.1\%$ and T.C.R. $\pm 5 \times 10^{-6}/K$
- Suitable for automatic machine insertion
- Products meet EU RoHS requirements
- Excellent long term stability in resistance values

dimensions and construction



Type	Dimensions inches (mm)			
	L (ref.)	D	d	l*
RNS1/8	.250 $\pm$.04 (6.4 $\pm$ 1)	.091 $\pm$.02 (2.3 $\pm$ 0.5)	.024 (0.6)	1.496 (38)
RNS1/4	.374 $\pm$.04 (9.5 $\pm$ 1)	.138 $\pm$.02 (3.5 $\pm$ 0.5)		
RNS1/2	.531 $\pm$.04 (13.5 $\pm$ 1)	.138 $\pm$.02 (3.5 $\pm$ 0.5)		
RNS1	.610 $\pm$.04 (15.5 $\pm$ 1)	.216 $\pm$.02 (5.5 $\pm$ 0.5)	.031 (0.8)	

* Lead length changes depending on taping and forming type.

ordering information

RNS	1/8	E	C	T52	R	1001	F
Type	Power Rating	T.C.R.	Termination Material	Taping and Forming	Packaging	Nominal Resistance	Tolerance
	1/8: 0.125W 1/4: 0.25W 1/2: 0.5W 1: 1W	Y: ± 5 T: ± 10 E: ± 25 C: ± 50	C: SnCu	1/8: T26, T52, VT*, VTP*, VTE* 1/4, 1/2: T52 1: T521	A: Ammo R: Reel Nil: Box	3 significant figures + 1 multiplier "R" indicates decimal on value <100 Ω	B: $\pm 0.1\%$ C: $\pm 0.25\%$ D: $\pm 0.5\%$ F: $\pm 1.0\%$

* ± 5 ppm/ $^{\circ}$ C and ± 10 ppm/ $^{\circ}$ C options are not available in radial taping.

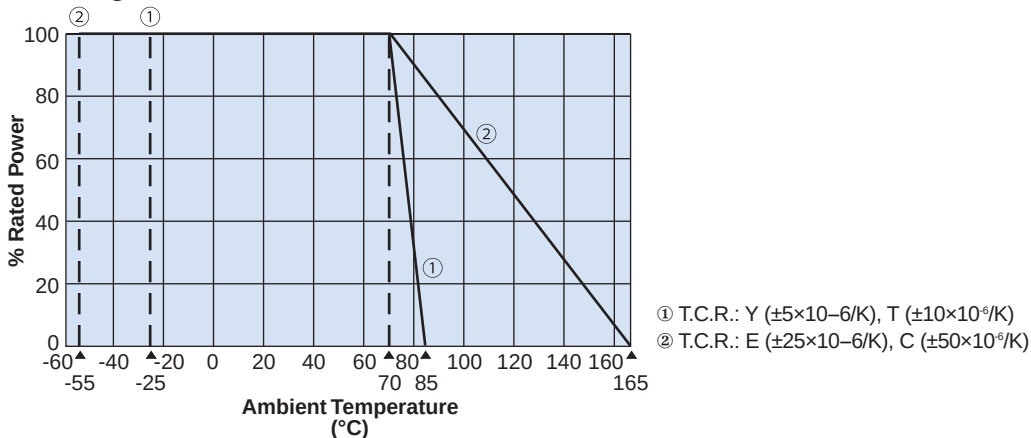
For further information on packaging, please refer to Appendix C.

applications and ratings

Part Designation	Power Rating	T.C.R. (ppm/°C) Max.	Resistance Range E-24, E-192 (B±0.1%)	Resistance Range E-24, E-192 (C±0.25%)	Resistance Range E-24, E-192 (D±0.5%)	Resistance Range E-24, E-96 (F±1.0%)	Absolute Maximum Working Voltage	Absolute Maximum Overload Voltage	Minimum Dielectric Withstanding Voltage	Rated Ambient Temp.	Operating Temp. Range	
RNS1/8	0.125W	Y: ±5	100Ω - 100kΩ	100Ω - 100kΩ	100Ω - 100kΩ	100Ω - 100kΩ	200V	400V	500V	+70°C	-25°C to +85°C	
		T: ±10	100Ω - 200kΩ	100Ω - 200kΩ	100Ω - 200kΩ	100Ω - 200kΩ					-55°C to +165°C	
		E: ±25	5.1Ω - 750kΩ	5.1Ω - 1.62MΩ	0.2Ω - 2MΩ	0.2Ω - 2MΩ						
		C: ±50	5.1Ω - 750kΩ	5.1Ω - 1.62MΩ	0.2Ω - 2MΩ	0.2Ω - 2MΩ						
RNS1/4	0.25W	E: ±25	5.1Ω - 1MΩ	5.1Ω - 2MΩ	0.2Ω - 2MΩ	0.2Ω - 2MΩ	250V	500V	700V			
		C: ±50	5.1Ω - 1.5MΩ	5.1Ω - 2MΩ	0.2Ω - 5.1MΩ	0.2Ω - 5.1MΩ						
RNS1/2	0.50W	E: ±25	5.1Ω - 1.5MΩ	5.1Ω - 2MΩ	0.2Ω - 2.4MΩ	0.2Ω - 4.7MΩ	300V	600V	700V			
		C: ±50	5.1Ω - 2MΩ	5.1Ω - 2.4MΩ	0.2Ω - 5.1MΩ	0.2Ω - 5.1MΩ						
RNS1	1W	E: ±25	5.1Ω - 2MΩ	5.1Ω - 2.4MΩ	0.2Ω - 5.1MΩ	0.2Ω - 5.1MΩ	350V	700V	1000V			
		C: ±50	5.1Ω - 2.4MΩ	5.1Ω - 2.4MΩ	0.2Ω - 5.1MΩ	0.2Ω - 6.8MΩ						

environmental applications

Derating Curve



For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the above derating curve.

Performance Characteristics

Parameter	Requirement $\Delta R \pm (\% + 0.05\Omega)$		Test Method
	Limit	Typical	
Resistance	Within specified tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	Y, T: +25°C/+65°C; E, C: +25°C/+125°C
Overload (Short time)	±0.25%	±0.15%	Rated voltage x 2.5 or max. overload voltage for 5 seconds, whichever is lower
Resistance to Solder Heat	±0.2%	±0.075%	350°C ± 10°C, 3.5 seconds ± 0.5 second
Rapid Change of Temperature	±0.2%	±0.075%	-55°C (30 minutes), +85°C (30 minutes), 5 cycles
Moisture Resistance	±0.75%	±0.5%	40°C ± 2°C, 90 - 95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	±0.5%	±0.35%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle

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