

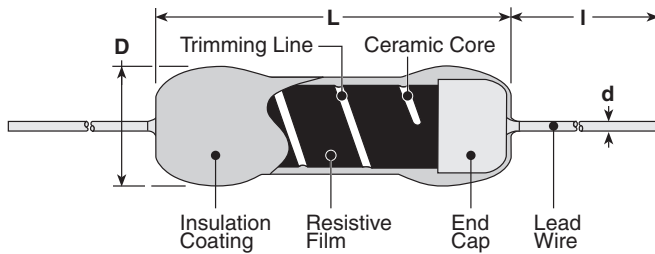
## MIL approved metal film leaded resistor



### features

- MIL-R-10509 approved and listed on the QPL
- Suitable for automatic machine insertion
- Marking: Blue-gray body color with alpha-numeric black marking per military requirements
- Products with lead-free terminations meet RoHS requirements. Pb located in glass material, electrode and resistor element is exempt per Annex 1, exemption 5 of EU directive 2005/95/EC

### dimensions and construction



Type	Dimensions inches (mm)			
	L (ref.)	D	d	I
RNS1/8	.250±.04 (6.35±1)	.095±.005 (2.41±0.13)	.024 (0.6)	1.496 (38)
RNS1/4	.374±.04 (9.5±1)	.130±.02 (3.3±0.51)		
RNS1/2	.531±.04 (13.5±1)	.138 (3.5)		
RNS1	.610±.04 (15.5±1)	.216 (5.5)		

### ordering information

New Part #	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 (Other termination styles may be available, please contact factory for options)	T26, T52	A: Ammo R: Reel	3 significant figures + 1 multiplier "R" indicates decimal on value <100Ω	B: ±0.1% C: ±0.25% D: ±0.5% F: ±1.0%

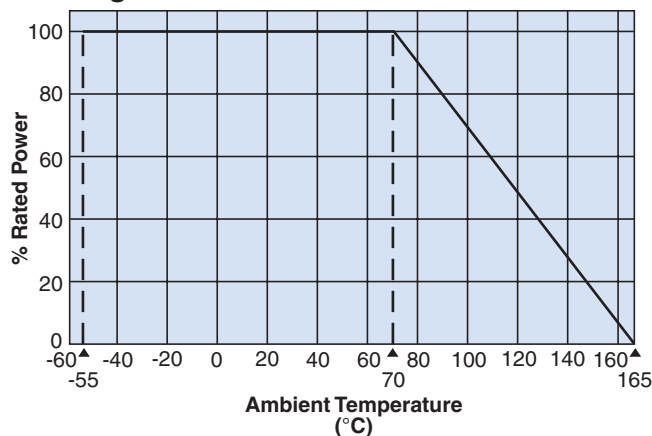
For further information on packaging, please refer to Appendix C.

## applications and ratings

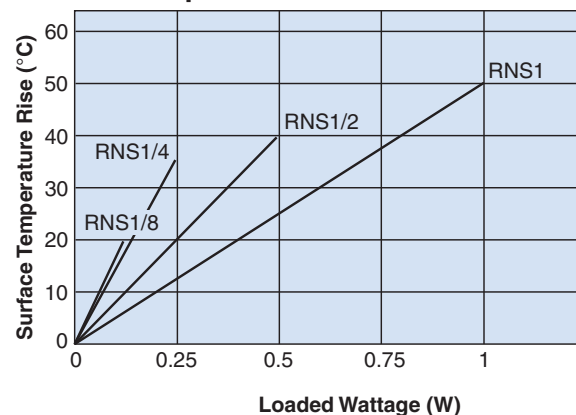
Part Designation	Power Rating	T.C.R. (ppm/°C) Max.	Resistance Range E-24, E-192 (B±0.1%)	Resistance Range E-24, E-192 (C±0.25%)	Resistance Range E-24, E-192 (D±0.5%)	Resistance Range E-24, E-96 (F±1.0%)	Absolute Maximum Working Voltage	Absolute Maximum Overload Voltage	Minimum Dielectric Withstanding Voltage	Rated Ambient Temperature	Operating Temperature 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									
		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		70°C	-55°C to +165°C			
		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				70°C	-55°C to +165°C	
		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	70°C					-55°C to +165°C
		C: ±50	5.1Ω - 2.4MΩ	5.1Ω - 2.4MΩ	0.2Ω - 5.1MΩ	0.2Ω - 6.8MΩ									

## environmental applications

### Derating Curve



### Surface Temperature Rise



## Performance Characteristics

Parameter	Requirement	
Temperature Coefficient (ppm/°C) Maximum	±50 (C)	±100 (D)
Short Time Overload	±(0.15% + 0.05Ω)	±(0.25% + 0.05Ω)
Resistance to Solder Heat	±(0.10% + 0.05Ω)	±(0.20% + 0.05Ω)
Moisture Resistance	±(0.50% + 0.05Ω)	±(1.00% + 0.05Ω)
Load Life		
Failure Rate	<10 <sup>-5</sup> /1000 hours	<10 <sup>-5</sup> /1000 hours
Temperature Cycling	±(0.15% + 0.05Ω)	±(0.25% + 0.05Ω)
Vibration	±(0.10% + 0.05Ω)	±(0.10% + 0.05Ω)
Shock		
Terminal Strength	5 # Minimum	5 # Minimum
Current Noise	<0.1µv/v/decade	<0.1µv/v/decade
Voltage Coefficient	<5 ppm	<5 ppm
Low Temperature Operation	±(0.15% + 0.05Ω)	±(0.25% + 0.05Ω)