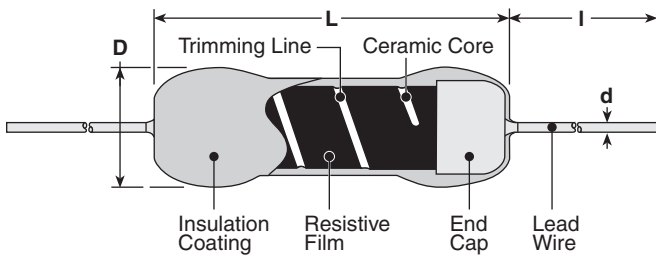


features

- 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 EU RoHS and China RoHS requirements

dimensions and construction



| Type | Dimensions inches (mm) | | | |
|--------|------------------------|-----------------------|---------------|---------------|
| | L (ref.) | D | d | I |
| RNS1/8 | .250±.04 (6.35±1) | .091±.02 (2.3±0.5) | .024 (0.6) | 1.496 (38) |
| RNS1/4 | .374±.04 (9.5±1) | .138±.02 (3.5±0.5) | | |
| RNS1/2 | .531±.04 (13.5±1) | .138±.02 (3.5±0.5) | | |
| RNS1 | .610±.04 (15.5±1) | .216±.02 (5.5±0.5) | | |

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 | 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% |

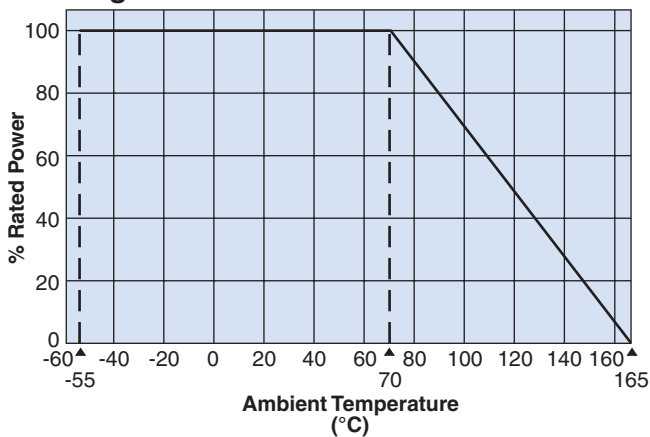
For further information on packaging, please refer to Appendix C.

applications and ratings

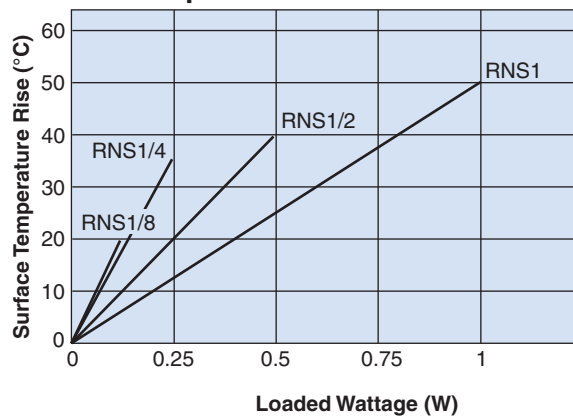
| Part Designation | Power Rating | T.C.R. (ppm/°C) Max. | Resistance Range E-24, E-192 (B±0.1%) | Resistance Range E-24, E-192 (C±0.25%) | Resistance Range E-24, E-192 (D±0.5%) | Resistance Range E-24, E-96 (F±1.0%) | Absolute Maximum Working Voltage | Absolute Maximum Overload Voltage | Minimum Dielectric 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 $\Delta R \pm(\% + 0.05\Omega)$ | | 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 |