

Features

- Precision metal film
- Superior electrical, TCR performances
- Flame-retardant coatings are standard
- Panasert available (selected sizes; contact factory)
- RNM (mini) an ideal choice where size constraints apply
- RN 5% replaces MP series
- RoHS compliant / lead-free available (RNF/RNMF)
- Lower or higher resistance values may be possible; contact factory



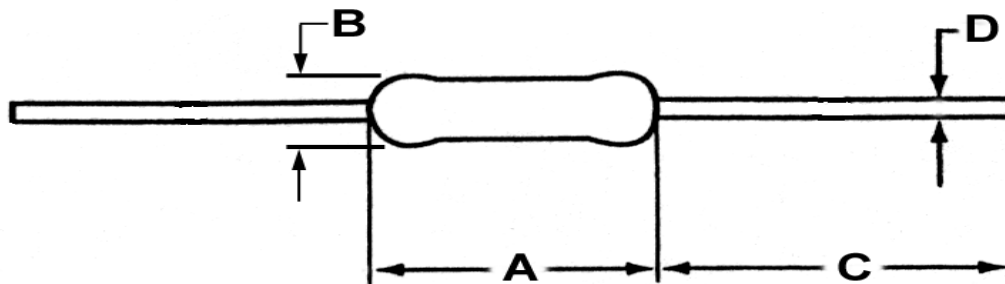
Electrical Specifications

| Type / Code | Mil Ref | Power Rating (W) @ 70°C | Max Working Voltage* | Max Pulse Voltage | Resistance Temperature Coefficient | Ohmic Range and Tolerance | | | | |
|-------------|---------|-------------------------|----------------------|-------------------|---|--|--|--|--|-------------------------|
| | | | | | | 0.1% | 0.25% | 0.5% | 1% | 5% |
| RN 1/8 | RN50 | 0.125W | 200V | 400V | ±25 ppm/°C ±50 ppm/°C ±100 ppm/°C | 100Ω – 100K 100Ω – 100K 100Ω – 100K | 100Ω – 100K 100Ω – 100K 100Ω – 100K | 49.9Ω – 499K 10Ω – 1M 10Ω – 1M | 49.9Ω – 499K 1.0Ω – 1M 0.1Ω – 4.9M | – – 1Ω – 2.2M |
| RN 1/4 | RN55 | 0.250W | 250V | 500V | ±10 ppm/°C ±25 ppm/°C ±50 ppm/°C ±100 ppm/°C | 100Ω – 100K 1.0Ω – 2.2M 1.0Ω – 2.2M 1.0Ω – 2.2M | – 1.0Ω – 2.2M 1.0Ω – 2.2M 1.0Ω – 2.2M | – 1.0Ω – 2.2M 1.0Ω – 2.2M 1.0Ω – 2.2M | – 10Ω – 1M 1.0Ω – 5.1M 0.1Ω – 10M | – – – 1Ω – 10M |
| RN 1/2 | RN60 | 0.500W | 350V | 700V | ±25 ppm/°C ±50 ppm/°C ±100 ppm/°C | 100Ω – 100K 100Ω – 100K 100Ω – 100K | 100Ω – 100K 100Ω – 100K 100Ω – 100K | 49.9Ω – 499K 10Ω – 1M 10Ω – 1M | 49.9Ω – 499K 10Ω – 5.1M 0.1Ω – 10M | – – 1Ω – 10M |
| RN 1 | RN65 | 1.000W | 350V | 700V | ±25 ppm/°C ±50 ppm/°C ±100 ppm/°C | – – | – – | 100Ω – 51K 10Ω – 100K 100Ω – 51K | 10Ω – 100K 10Ω – 1M 1.0Ω – 1M | – – – |
| RNM 1/4 | – | 0.250W | 200V | 400V | ±25 ppm/°C ±50 ppm/°C ±100 ppm/°C | 100Ω – 100K 100Ω – 100K 100Ω – 100K | 100Ω – 100K 100Ω – 100K 100Ω – 100K | 49.9Ω – 499K 10Ω – 1M 10Ω – 1M | 49.9Ω – 499K 1.0Ω – 1M 0.1Ω – 1M | – – 1Ω – 1M |
| RNM 1/2 | RL07 | 0.500W | 350V | 600V | ±25 ppm/°C ±50 ppm/°C ±100 ppm/°C | 100Ω – 294K 49.9Ω – 1M 49.9Ω – 1M | 100Ω – 294K 49.9Ω – 1M 49.9Ω – 1M | 49.9Ω – 1M 10Ω – 1M 10Ω – 1M | 49.9Ω – 1M 1.0Ω – 1M 0.1Ω – 1M | – – 1Ω – 1M |

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

How to Order

| RN | | 1/4 | T1 | 4.75K | 1% | R | | | |
|----------|---------------|------|-------------|--------------------|-----------|-------------------|---------|-------------|------|
| SEI Type | | Code | TCR | Nominal Resistance | Tolerance | Packaging | | | |
| Type | Description | Code | TCR | Tolerance | Values | SEI Types | Pkg Qty | Description | Code |
| RN | EIA standard | 1/8 | T1 = 100ppm | 0.1% | E96 | 1/8, 1/4, RNM 1/2 | 5,000 | Reel | R |
| RNM | Mini | 1/4 | T2 = 50ppm | 0.25% | E96 | RN 1/2, 1 | 2,500 | Ammo | T |
| RNF | Standard RoHS | 1/2 | T9 = 25ppm | 0.5% | E96 | 1/8, 1/4, RNM 1/2 | 5,000 | | |
| RNMF | Mini RoHS | 1 | TB = 10ppm | 1% | E96, E24 | 1/2 | 2,000 | | |
| PRN | Panasert | | | 5% | E24 | 1 | 1,000 | Bulk | A |
| PRNF | Pana - RoHS | | | | | 1/8, 1/4, 1/2 | 1,000 | | |



| Mechanical Specifications | | | | | |
|---------------------------|------------------|--------------------|-------------------------|--------------------|--------|
| Type / Code | A Body Length | B Body Diameter | C Lead Length (Bulk) | D Lead Diameter | Units |
| RN 1/8 | 0.13 ± 0.010 | 0.069 ± 0.010 | 1.10 ± 0.08 | 0.017 ± 0.003 | inches |
| | 3.20 ± 0.20 | 1.75 ± 0.25 | 28.0 ± 2.0 | 0.44 ± 0.07 | mm |
| RN 1/4 | 0.25 ± 0.026 | 0.093 ± 0.010 | 1.10 ± 0.08 | 0.022 ± 0.004 | inches |
| | 6.35 ± 0.65 | 2.35 ± 0.25 | 28.0 ± 2.0 | 0.56 ± 0.09 | mm |
| RN 1/2 | 0.34 ± 0.030 | 0.128 ± 0.030 | 1.10 ± 0.12 | 0.026 ± 0.004 | inches |
| | 8.75 ± 0.75 | 3.25 ± 0.75 | 28.0 ± 3.0 | 0.65 ± 0.10 | mm |
| RN 1 | 0.433 ± 0.04 | 0.177 ± 0.02 | 1.18 ± 0.12 | 0.030 ± 0.002 | inches |
| | 11.00 ± 1.00 | 4.50 ± 0.50 | 30 ± 3.0 | 0.75 ± 0.05 | mm |
| RNM 1/4 | 0.13 ± 0.010 | 0.070 ± 0.003 | 1.10 ± 0.08 | 0.017 ± 0.001 | inches |
| | 3.20 ± 0.20 | 1.78 ± 0.08 | 28.0 ± 2.0 | 0.44 ± 0.02 | mm |
| RNM 1/2 | 0.25 ± 0.026 | 0.093 ± 0.010 | 1.10 ± 0.08 | 0.022 ± 0.002 | inches |
| | 6.35 ± 0.65 | 2.35 ± 0.25 | 28.0 ± 2.0 | 0.56 ± 0.04 | mm |

| Performance Characteristics | | |
|-----------------------------|-------------------------|-------------|
| Test | Standard / Method | Requirement |
| Biased Humidity | MIL-STD 202, Method 103 | ± 1.5% |
| Resistance to Solder Heat | MIL-STD 202, Method 210 | ± 0.5% |
| Insulation Resistance | JIS C 5202 5.6 | ± 0.5% |
| Load Life | MIL-STD 202, Method 208 | ± 1.0% |
| Terminal Strength | MIL-STD 202, Method 211 | ± 0.2% |
| Temperature Cycling | JESD22 Method JA-104 | ± 1.0% |
| Moisture Resistance | MIL-STD 202, Method 106 | ± 0.5% |

Operating Temperature Range : -55°C to +155°C