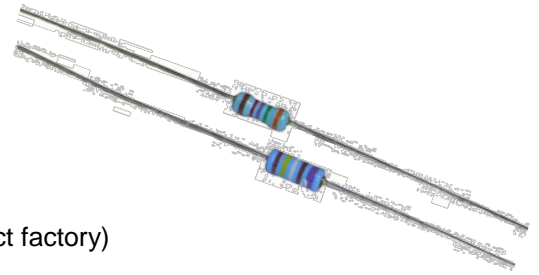
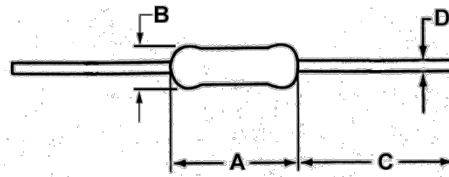


- Features:
- Precision metal film
 - Superior electrical, TCR performances
 - Flame-retardant coatings are standard
 - Panasert available (selected sizes: contact factory)
 - RNMF (mini) an ideal choice where size constraints apply
 - RNF 5% replaces MP series
 - RoHS compliant / lead-free
 - Lower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



| Electrical Specifications | | | | | | | | | | | | |
|---------------------------|---------|-----------------------------|------------------------------------|---------------------------------|------------------------------------|-------------------------------|-------------|-------------|-------------|-------------|-----------|------------|
| Type / Code | Mil Ref | Power Rating (Watts) @ 70°C | Maximum Working Voltage (Vrms) (1) | Maximum Overload Voltage (Vrms) | Resistance Temperature Coefficient | Ohmic Range (Ω) and Tolerance | | | | | | |
| | | | | | | 0.05% | 0.1% | 0.25% | 0.5% | 1% | 2% | 5% |
| RNF18 | RN 50 | 0.125W | 200V | 400V | ±10 ppm/°C | 100 - 100K | 100 - 100K | 100 - 100K | 100 - 100K | 100 - 100K | - | - |
| | | | | | ±25 ppm/°C | 100 - 100K | 100 - 100K | 100 - 100K | 30.1 - 499K | 49.9 - 499K | - | - |
| | | | | | ±50 ppm/°C | 100 - 100K | 100 - 100K | 100 - 100K | 10 - 1M | 1 - 1M | - | - |
| | | | | | ±100 ppm/°C | 100 - 100K | 51.1 - 100K | 100 - 100K | 10 - 1M | 1 - 10M | 1 - 22M | 1 - 22M |
| RNF14 | RN 55 | 0.25W | 250V | 500V | ±10 ppm/°C | 100 - 100K | 100 - 100K | - | - | - | - | - |
| | | | | | ±25 ppm/°C | 100 - 100K | 1 - 2.2M | 1 - 2.2M | 1 - 2.2M | 10 - 1M | - | - |
| | | | | | ±50 ppm/°C | 100 - 100K | 1 - 2.2M | 1 - 2.2M | 1 - 2.2M | 1 - 5.11M | - | 1.1M - 10M |
| | | | | | ±100 ppm/°C | 100 - 100K | 1 - 2.2M | 1 - 2.2M | 1 - 2.2M | 1 - 10M | 5.6 - 10M | 1 - 10M |
| RNF12 | RN 60 | 0.5W | 350V | 700V | ±25 ppm/°C | 100 - 100K | 100 - 100K | 100 - 100K | 49.9 - 499K | 49.9 - 499K | - | - |
| | | | | | ±50 ppm/°C | 100 - 100K | 100 - 100K | 100 - 100K | 10 - 1M | 1 - 4.99M | - | - |
| | | | | | ±100 ppm/°C | 100 - 100K | 100 - 100K | 100 - 100K | 10 - 1M | 1 - 10M | 1 - 10M | 1 - 10M |
| RNF1 | RN 65 | 1W | 350V | 700V | ±25 ppm/°C | - | - | - | - | - | - | - |
| | | | | | ±50 ppm/°C | - | - | - | 10 - 1M | 10 - 470K | - | - |
| | | | | | ±100 ppm/°C | - | - | - | 10 - 1M | 1 - 1M | - | - |
| RNF2 | - | 2W | 350V | 800V | ±25 ppm/°C | - | - | - | - | - | - | - |
| | | | | | ±50 ppm/°C | - | - | - | - | 10 - 1M | - | - |
| | | | | | ±100 ppm/°C | - | - | - | - | 10 - 1M | - | 10 - 1M |
| RNMF14 | - | 0.25W | 200V | 400V | ±25 ppm/°C | - | 100 - 100K | 100 - 100K | 30.1 - 499K | 30.1 - 499K | - | - |
| | | | | | ±50 ppm/°C | - | 100 - 100K | 100 - 100K | 10 - 1M | 1 - 1M | - | - |
| | | | | | ±100 ppm/°C | - | 100 - 100K | 100 - 100K | 10 - 1M | 1 - 2.15M | 1 - 2.2M | 1 - 2.2M |
| RNMF12 | RL 07 | 0.5W | 350V | 600V | ±25 ppm/°C | - | 30.1 - 294K | 30.1 - 294K | 49.9 - 1M | 49.9 - 1M | - | - |
| | | | | | ±50 ppm/°C | - | 30.1 - 1M | 30.1 - 1M | 10 - 1M | 1 - 1M | - | - |
| | | | | | ±100 ppm/°C | - | 30.1 - 1M | 30.1 - 1M | 10 - 1M | 1 - 10M | 1 - 10M | 1 - 10M |

(1) Lesser of √PR or maximum working voltage

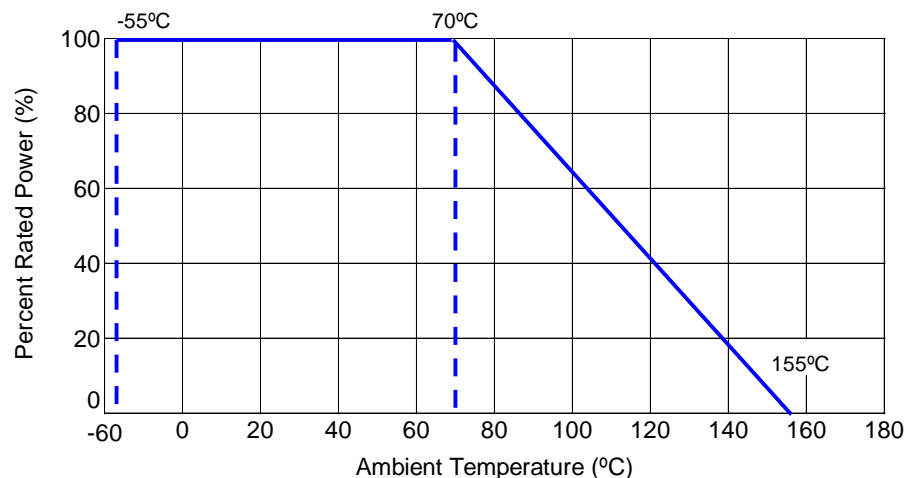


| Mechanical Specifications | | | | | |
|---------------------------|------------------|--------------------|-------------------------|--------------------|--------|
| Type / Code | A Body Length | B Body Diameter | C Lead Length (Bulk) | D Lead Diameter | Unit |
| RNF18 | 0.130 ± 0.012 | 0.071 ± 0.012 | 1.102 ± 0.118 | 0.018 ± 0.003 | inches |
| | 3.30 ± 0.30 | 1.80 ± 0.30 | 28.00 ± 3.00 | 0.45 ± 0.07 | mm |
| RNF14 | 0.250 ± 0.026 | 0.093 ± 0.010 | 1.102 ± 0.118 | 0.022 ± 0.003 | inches |
| | 6.35 ± 0.65 | 2.35 ± 0.25 | 28.00 ± 3.00 | 0.56 ± 0.08 | mm |
| RNF12 | 0.344 ± 0.030 | 0.108 ± 0.039 | 1.102 ± 0.197 | 0.026 ± 0.004 | inches |
| | 8.75 ± 0.75 | 2.75 ± 1.00 | 28.00 ± 5.00 | 0.65 ± 0.10 | mm |
| RNF1 | 0.433 ± 0.039 | 0.177 ± 0.020 | 1.181 ± 0.118 | 0.030 ± 0.002 | inches |
| | 11.00 ± 1.00 | 4.50 ± 0.50 | 30.00 ± 3.00 | 0.75 ± 0.05 | mm |
| RNF2 | 0.591 ± 0.039 | 0.197 ± 0.020 | 1.339 ± 0.157 | 0.028 ± 0.004 | inches |
| | 15.00 ± 1.00 | 5.00 ± 0.50 | 34.00 ± 4.00 | 0.70 ± 0.10 | mm |
| RNMF14 | 0.130 ± 0.012 | 0.070 ± 0.003 | 1.102 ± 0.118 | 0.017 ± 0.002 | inches |
| | 3.30 ± 0.30 | 1.78 ± 0.08 | 28.00 ± 3.00 | 0.44 ± 0.05 | mm |
| RNMF12 | 0.250 ± 0.026 | 0.093 ± 0.010 | 1.102 ± 0.118 | 0.022 ± 0.003 | inches |
| | 6.35 ± 0.65 | 2.35 ± 0.25 | 28.00 ± 3.00 | 0.56 ± 0.08 | mm |

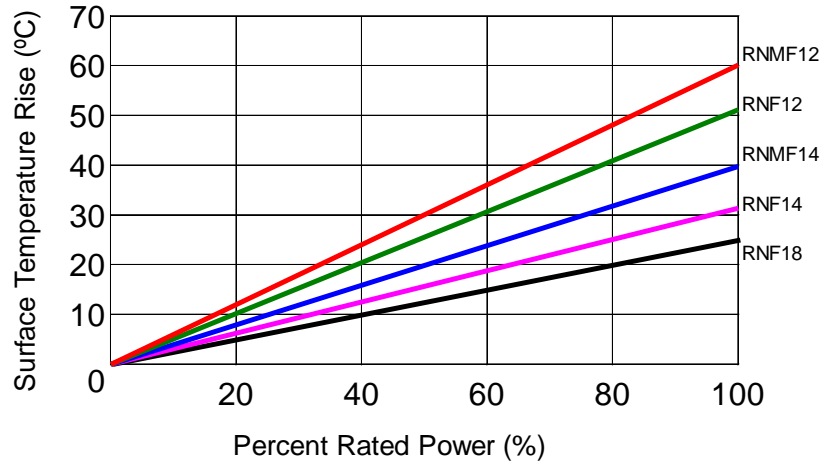
| Performance Characteristics | | |
|-----------------------------|-------------------------|-------------|
| Test | Standard / Method | Requirement |
| Biased Humidity | MIL-STD 202, Method 103 | ± 1.5% |
| Resistance to Solder Heat | MIL-STD 202, Method 210 | ± 0.5% |
| Insulation Resistance | JIS C 5202 5.6 | ± 0.5% |
| Load Life | MIL-STD 202, Method 108 | ± 1% |
| Terminal Strength | MIL-STD 202, Method 211 | ± 0.2% |
| Temperature Cycling | JESD22 Method JA-104 | ± 1% |
| Moisture Resistance | MIL-STD 202, Method 106 | ± 0.5% |

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

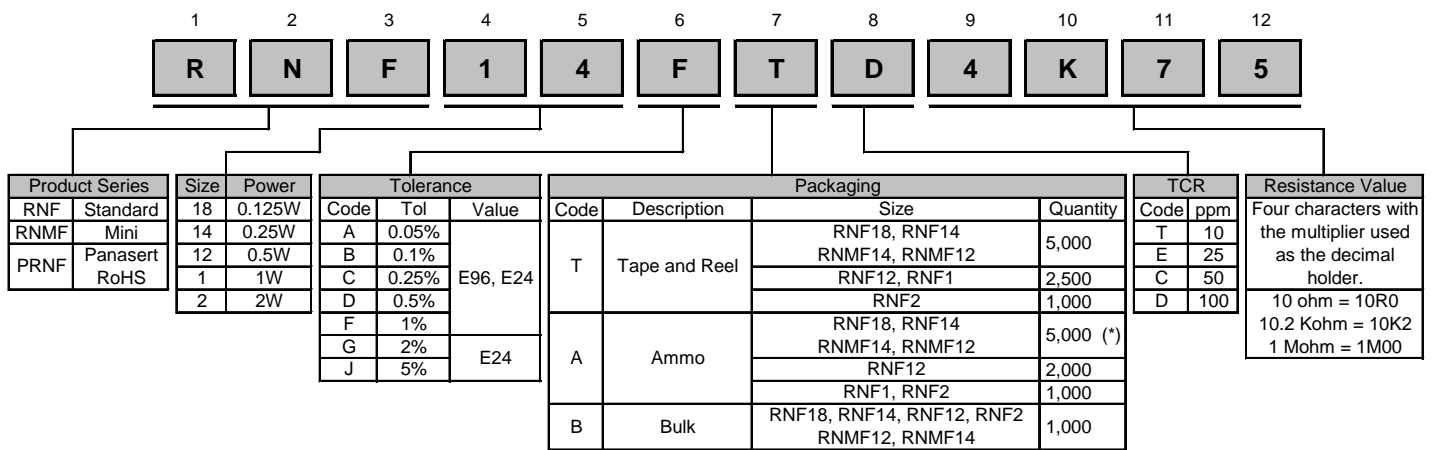
Power Derating Curve:



Surface Temperature Rise:



How to Order



(*) Precision metal film resistors with tolerances <1% may be available in smaller quantities. Contact factory for more details.

Legacy Part Number (before January 3, 2011):

| SEI Type | | Code | TCR | Nominal Resistance | Tolerance | Packaging | | | | |
|----------|-------------|------|-----|--------------------|-----------|------------------------------|---|-------|---------------|------|
| RNF | | 1/4 | T1 | 4.75K | 1% | R | | | | |
| Type | Description | Code | TCR | Tol | Values | SEI Types | Pkg Qty | Code | Description | |
| RNF | Standard | 1/8 | T1 | 100ppm | E96, E24 | RNF18, RNF14, RNMF14, RNMF12 | 5,000 | R | Tape and Reel | |
| RNMF | Mini | 1/4 | T2 | 50ppm | | RNF12, RNF1 | 2,500 | | | |
| PRN | Panasert | 1/2 | T9 | 25ppm | | RNF2 | 1,000 | | | |
| PRNF | Pana - RoHS | 1 | TB | 10ppm | | RNF18, RNF14, RNMF14, RNMF12 | 5,000 (*) | T | Ammo | |
| | | 2 | | | | RNF12 | 2,000 | | | |
| | | | | | | 1% | RNF1, RNF2 | 1,000 | | |
| | | | | | 5% | E24 | RNF18, RNF14, RNF12, RNF2, RNF1, RNMF14, RNMF12 | 1,000 | A | Bulk |

(*) Precision metal film resistors with tolerances <1% may be available in smaller quantities. Contact factory for more details.