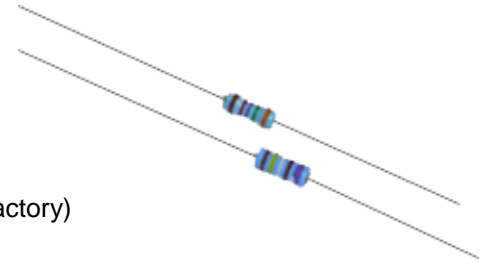


- Features:
- Precision metal film
 - Superior electrical, TCR performances
 - Flame-retardant coatings are standard
 - Panasert available (selected sizes: contact factory)
 - RNMF (mini) an ideal choice where size constraints apply
 - RNF 5% replaces MP series
 - Lower or higher resistance values may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



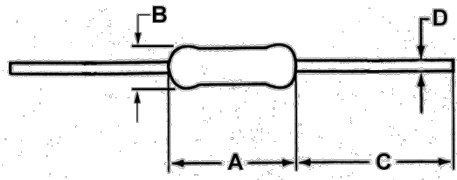
Electrical Specifications												
Type / Code	Mil Ref	Power Rating (Watts) @ 70°C	Maximum Working Voltage (Vrms) ⁽¹⁾	Maximum Overload Voltage (Vrms)	Resistance Temperature Coefficient	Ohmic Range (Ω) and Tolerance						
						0.05%	0.1%	0.25%	0.5%	1%	2%	5%
RNF18	RN 50	0.125W	200V	400V	±10 ppm/°C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

(1) Lesser of √PR or maximum working voltage

Performance Characteristics			
Test	Standard / Method	Typical Results	Test Limits
Insulation Resistance	JIS C5201-1, IEC60115-1, 4.6	≥ 1000 MΩ	≥ 1000 MΩ
Voltage Proof	JIS C5201-1, IEC60115-1, 4.7	<± 0.25%	≤ ± (0.5% + 0.05Ω) No mechanical damage.
Short Time Overload	JIS C5201-1, IEC60115-1, 4.13	<± 0.1%	≤ ± (0.25% + 0.05Ω)
Resistance to Solder Heat	JIS C5201-1, IEC60115-1, 4.18	<± 0.01%	≤ ± (0.3% + 0.05Ω)
Rapid Change of Temperature	JIS C5201-1, IEC60115-1, 4.19	<± 0.05%	≤ ± (0.35% + 0.05Ω)
Endurance at 70°C	JIS C5201-1, IEC60115-1, 4.25.1	<± 0.15%	≤ ± (1.0% + 0.05Ω)
Robustness of Terminations	JIS C5201-1, IEC60115-1, 4.16	<± 0.10%	≤ ± (0.2% + 0.05Ω)
Damp Heat (Steady state)	JIS C5201-1, IEC60115-1, 4.24	<± 0.10%	≤ ± (1.5% + 0.05Ω)

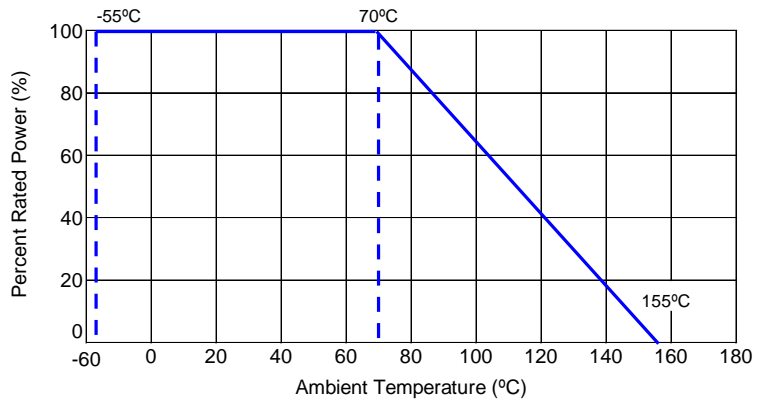
Operating Temperature Range: -55°C to +155°C

Mechanical Specifications

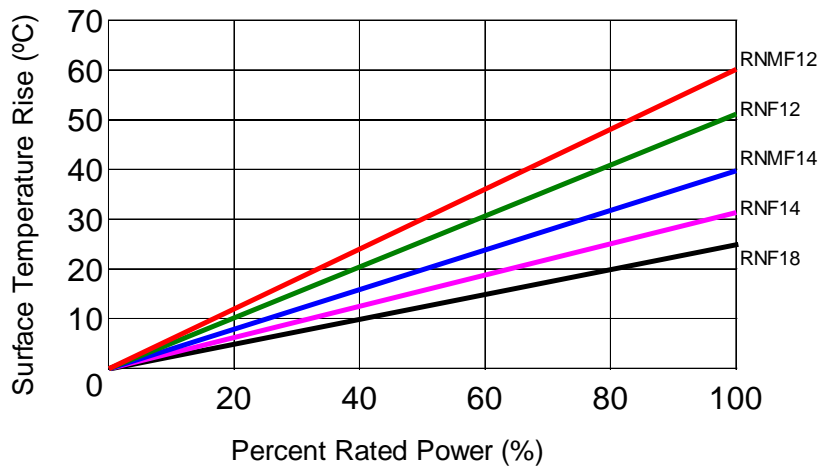


Type / Code	A Body Length	B Body Diameter	C Lead Length (Bulk)	D Lead Diameter	Unit
RNF18	0.130 ± 0.012	0.071 ± 0.012	1.102 ± 0.118	0.018 ± 0.003	inches
	3.30 ± 0.30	1.80 ± 0.30	28.00 ± 3.00	0.45 ± 0.07	mm
RNF14	0.250 ± 0.026	0.093 ± 0.010	1.102 ± 0.118	0.022 ± 0.003	inches
	6.35 ± 0.65	2.35 ± 0.25	28.00 ± 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

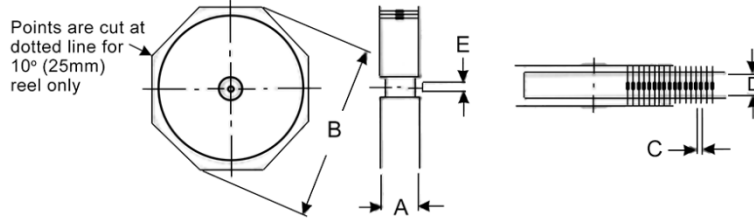
Power Derating Curve:



Surface Temperature Rise:



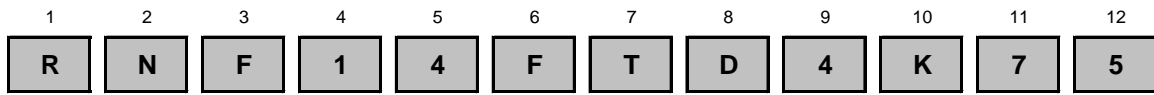
Packaging Specifications



Series	Code	A max ⁽¹⁾	B max	C	D ⁽²⁾	Tape	Unit
RNF	18	2.756 ± 0.118	11.811 ± 0.197	0.197 ± 0.020	2.047 ± 0.020	0.250	inches
		70.00 ± 3.00	300.00 ± 5.00	5.00 ± 0.50	52.00 ± 0.50	6.35	mm
	14	2.756 ± 0.118	11.811 ± 0.197	0.197 ± 0.020	2.047 ± 0.020	0.250	inches
		70.00 ± 3.00	300.00 ± 5.00	5.00 ± 0.50	52.00 ± 0.50	6.35	mm
	12	2.756 ± 0.118	11.811 ± 0.197	0.197 ± 0.020	2.047 ± 0.020	0.250	inches
		70.00 ± 3.00	300.00 ± 5.00	5.00 ± 0.50	52.00 ± 0.50	6.35	mm
RNMF	14	2.756 ± 0.118	11.811 ± 0.197	0.197 ± 0.020	2.047 ± 0.020	0.250	inches
		70.00 ± 3.00	300.00 ± 5.00	5.00 ± 0.50	52.00 ± 0.50	6.35	mm
	12	2.756 ± 0.118	11.811 ± 0.197	0.197 ± 0.020	2.047 ± 0.020	0.250	inches
		70.00 ± 3.00	300.00 ± 5.00	5.00 ± 0.50	52.00 ± 0.50	6.35	mm
	1	2.756 ± 0.118	11.811 ± 0.197	0.197 ± 0.020	2.047 ± 0.020	0.250	inches
		70.00 ± 3.00	300.00 ± 5.00	5.00 ± 0.50	52.00 ± 0.50	6.35	mm

- Dimension "E": This is a non-critical dimension that does not have a tolerance in the standard.
Range of diameters is from 0.547 inches (13.90 mm) to 1.500 inches (38.10 mm).
- (1) Reference value only. The "A" dimension shall be governed by the overall length of the taped component. The distance between flanges shall be 0.059 inches (1.50 mm) to 0.315 (8.00 mm) greater than the overall component.
 - (2) The given dimension "D" expresses the standard width spacing. A 26mm narrow spacing is available as option "N" packaging code.

How to Order



Product Series	Size	Power	Tolerance			Packaging			TCR		Resistance Value	
			Code	Tol	Value	Code	Description	Quantity	Code	ppm		
RNF	Standard	18	0.125W	A	0.05%	E96, E24	T	Tape and Reel	RNF18, RNF14	5,000	T	10
RNMF	Mini	14	0.25W	B	0.1%		RNF12, RNF1	2,500	E	25		
PRNF	Panaset RoHS	12	0.5W	C	0.25%		RNF2	1,000	C	50		
		1	1W	D	0.5%		A	Ammo	RNF18, RNF14	5,000 (*)	D	100
		2	2W	F	1%				RNF12	2,000		
				G	2%		B	Bulk	RNF1, RNF2	1,000		
				J	5%	RNF18, RNF14, RNF12, RNF1, RNF2, RNMF12, RNMF14			1,000			

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