

# RN/RNM Series — General Purpose Metal Film Resistors

## 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)



## Electrical Specifications

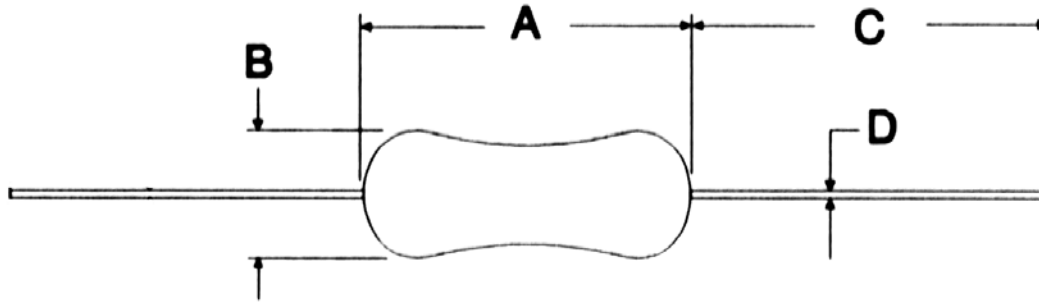
Type / Code	Mil Ref	Power Rating (W) @ 70°C	Max Working Voltage*	Max Pulse Voltage	Resistance Temperature Coefficient	Ohmic Range and Tolerance				
						0.1%	0.25%	0.5%	1%	5%
RN 1/8	RN50	0.125W	200V	400V	±25 ppm/°C ±50 ppm/°C ±100 ppm/°C	100Ω – 100K 100Ω – 100K 51.1Ω – 100K	100Ω – 100K 100Ω – 100K 100Ω – 100K	30.1Ω – 499K 10Ω – 1M 10Ω – 1M	49.9Ω – 499K 10Ω – 1M 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 – 301K 1Ω – 2.2M 1Ω – 2.2M 1Ω – 2.2M	– 1Ω – 2.2M 1Ω – 2.2M 1Ω – 2.2M	– 1Ω – 2.2M 1Ω – 2.2M 1Ω – 2.2M	– 10Ω – 1M 1Ω – 5.11M 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 1Ω – 4.99M 1Ω – 10M	– – 1Ω – 10M
RN 1	RN65	1.000W	350V	700V	±50 ppm/°C ±100 ppm/°C	– –	– –	10Ω – 100K –	10Ω – 1M 1Ω – 1M	– –
RNM 1/4	–	0.250W	250V	500V	±25 ppm/°C ±50 ppm/°C ±100 ppm/°C	100Ω – 100K 100Ω – 100K 100Ω – 100K	100Ω – 100K 100Ω – 100K 100Ω – 100K	30.1Ω – 499K 10Ω – 1M 10Ω – 1M	30.1Ω – 499K 10Ω – 1M 1Ω – 4.99M	– – 10Ω – 2M
RNM 1/2	RL07	0.500W	350V	700V	±25 ppm/°C ±50 ppm/°C ±100 ppm/°C	100Ω – 294K 30.1Ω – 1M 30.1Ω – 1M	100Ω – 294K 30.1Ω – 1M 30.1Ω – 1M	49.9Ω – 1M 10Ω – 1M 10Ω – 1M	49.9Ω – 1M 1Ω – 10M 1Ω – 2.15M	– – 10Ω – 2M

\* Lesser of √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	2,500		
				5%	E24	1	1,000	Bulk	A
						1/8, 1/4, 1/2	1,000		

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## Mechanical Specifications

Type / Code	A Body Length	B Body Diameter	C Lead Length (Bulk)	D Lead Diameter	Units
RN 1/8	0.13 ± 0.01 3.2 ± 0.2	0.073 ± 0.006 1.85 ± 0.20	1.10 ± 0.08 28.0 ± 2.0	0.018 ± 0.002 0.45 ± 0.05	inches mm
RN 1/4	0.24 ± 0.01 6.0 ± 0.3	0.09 ± 0.01 2.4 ± 0.2	1.10 ± 0.08 28.0 ± 2.0	0.023 ± 0.002 0.60 ± 0.05	inches mm
RN 1/2	0.33 ± 0.02 8.5 ± 0.5	0.11 ± 0.01 2.8 ± 0.3	1.10 ± 0.08 28.0 ± 2.0	0.027 ± 0.002 0.70 ± 0.05	inches mm
RN 1	0.433 ± 0.04 11.0 ± 1.0	0.177 ± 0.02 4.5 ± 0.5	1.18 ± 0.12 30 ± 3.0	0.032 ± 0.004 0.8 ± 0.1	inches mm
RNM 1/4	0.13 ± 0.01 3.2 ± 0.2	0.073 ± 0.006 1.85 ± 0.20	1.10 ± 0.08 28.0 ± 2.0	0.018 ± 0.002 0.45 ± 0.05	inches mm
RNM 1/2	0.24 ± 0.01 6.0 ± 0.3	0.09 ± 0.01 2.4 ± 0.2	1.10 ± 0.08 28.0 ± 2.0	0.023 ± 0.002 0.60 ± 0.05	inches 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%