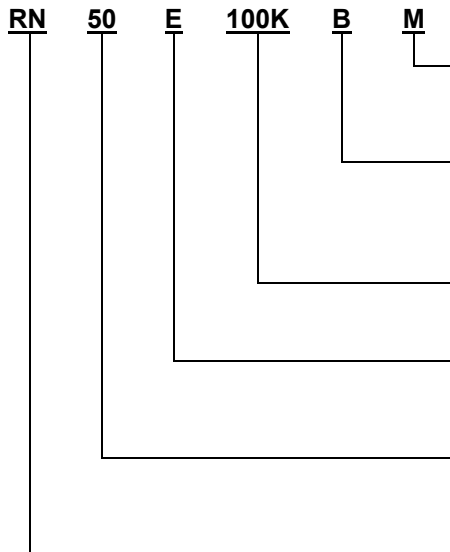


HOW TO ORDER:



Packaging

M = Tape ammo pack (1,000)
B = Bulk (100)

Resistance Tolerance

B = $\pm 0.10\%$ F = $\pm 1\%$
C = $\pm 0.25\%$ G = $\pm 2\%$
D = $\pm 0.50\%$ J = $\pm 5\%$

Resistance Value

e.g. 100K, 62R2, 30K1

Temperature Coefficient (ppm)

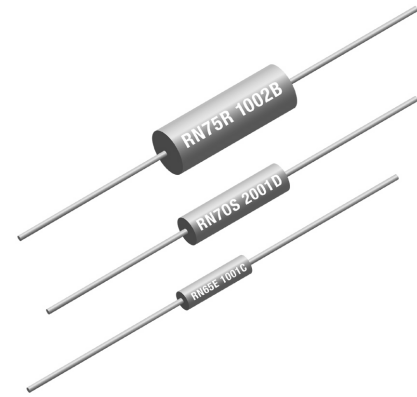
R = ± 5 E = ± 25 J = ± 100
S = ± 10 C = ± 50

Style/Length (mm)

50 = 3.8 60 = 10.5 70 = 20.0
55 = 6.6 65 = 16.0 75 = 28.0

Series

Molded Metal Film Precision



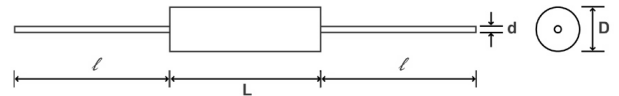
FEATURES

- Excellent Stability
- Tight TCR to $\pm 5\text{ppm}/^\circ\text{C}$
- Wide Ohmic Range
- High Precision up to $\pm 0.1\%$

DIMENSIONS (mm)

Type	L	D	ℓ	d
RN50	3.8 ± 0.5	1.8 ± 0.2	30 ± 3	0.4 ± 0.05
RN55	6.6 ± 0.5	3.4 ± 0.2	38 ± 3	0.6 ± 0.05
RN60	10.5 ± 0.5	3.9 ± 0.2	38 ± 3	0.6 ± 0.05
RN65	16.0 ± 0.5	5.3 ± 0.3	38 ± 3	0.6 ± 0.05
RN70	20.0 ± 0.5	7.0 ± 0.5	38 ± 3	0.8 ± 0.05
RN75	28.0 ± 0.5	10.0 ± 0.5	38 ± 3	0.8 ± 0.05

SCHEMATIC



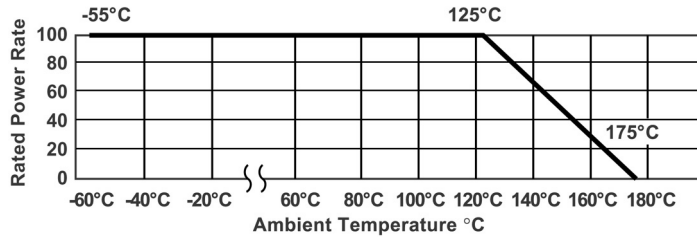
STANDARD ELECTRICAL SPECIFICATION

Series	Power Rating (Watts)		Max Working Voltage		Max Overload Voltage	TCR (ppm/ $^\circ\text{C}$)	Resistance Value Range (Ω) in Tolerance (%)				
	70 $^\circ\text{C}$	125 $^\circ\text{C}$	70 $^\circ\text{C}$	125 $^\circ\text{C}$			$\pm 0.1\%$	$\pm 0.25\%$	$\pm 0.5\%$	$\pm 1\%$	$\pm 2\%$
RN50	0.10	0.05	200	200	400	5, 10	49.9 ~ 200K	49.9 ~ 200K	49.9 ~ 200K		
						25, 50, 100	49.9 ~ 200K	30.1 ~ 200K	10.0 ~ 200K		
RN55	0.125	0.10	250	200	400	5	49.9 ~ 301K	49.9 ~ 301K	49.9 ~ 301K		
						10	49.9 ~ 397K	30.1 ~ 397K	30.1 ~ 397K		
						25, 50, 100	10.0 ~ 511K	10.0 ~ 511K	10.0 ~ 511K		
RN60	0.25	0.125	300	250	500	5	49.9 ~ 301K	49.9 ~ 301K	49.9 ~ 301K		
						10	49.9 ~ 511K	30.1 ~ 511K	30.1 ~ 511K		
						25, 50, 100	10.0 ~ 1.00M	10.0 ~ 1.00M	10.0 ~ 1.00M		
RN65	0.50	0.25	350	300	600	5	49.9 ~ 397K	49.9 ~ 397K	49.9 ~ 397K		
						10	49.9 ~ 1.00M	30.1 ~ 1.00M	30.1 ~ 1.00M		
						25, 50, 100	10.0 ~ 1.00M	10.0 ~ 1.00M	10.0 ~ 1.00M		
RN70	0.75	0.50	400	350	700	5	49.9 ~ 511K	49.9 ~ 511K	49.9 ~ 511K		
						10	49.9 ~ 3.52M	30.1 ~ 3.52M	30.1 ~ 3.52M		
						25, 50, 100	10.0 ~ 5.11M	10.0 ~ 5.11M	10.0 ~ 5.11M		
RN75	1.50	1.00	600	500	1000	5	100 ~ 301K	100 ~ 301K	100 ~ 301K		
						10	49.9 ~ 1.00M	49.9 ~ 1.00M	49.9 ~ 1.00M		
						25, 50, 100	49.9 ~ 5.11M	49.9 ~ 5.11M	49.9 ~ 5.11M		

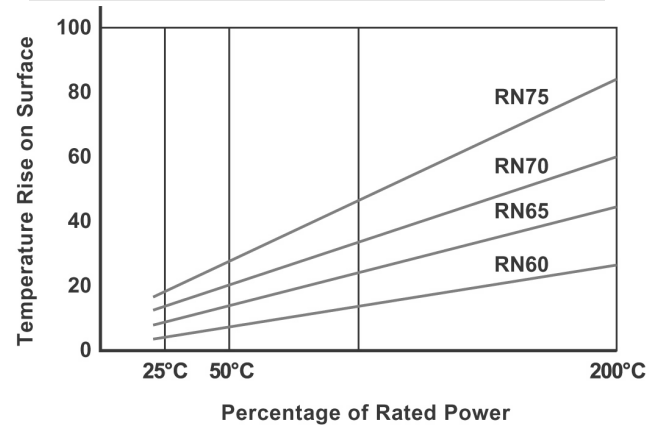
CHARACTERISTICS

ITEM	TEST METHOD	REQUIREMENTS
Operating Temperature Range		-55°C to +175°C
Short Time Overload	2.5 x rated voltage @ 5 seconds	± (0.1% + 0.01Ω)
Insulation Resistance	100V or 500V for 1 minute	100G Ω
Dielectric Withstanding Voltage	RN50, 55, 60: 450V RN65, 70, 75: 900V } for 1 minute	± (0.1% + 0.01Ω)
Terminal Strength	Pull 10 seconds, RN50: 5N, RN55, 60, 65: 10N, RN70, 75: 25N Twist 360°, 5 times	± (0.02% + 0.01Ω)
Vibration	10 to 2,000Hz, 1.5 mm or 20G, 2 directions Total 8 hours	± (0.1% + 0.01Ω)
Shock (Specified Pulse)	Saw tooth, 100 G 2 directions, total 10 times	± (0.1% + 0.01Ω)
Solderability	230°C, 5 seconds	95% or more
Resistance to Solder Heat	350 ± 10°C, 3 seconds	± (0.05% + 0.01Ω)
Low Temperature Operation	-65 ^{+0.5} °C, rated voltage 45 minutes	± (0.1% + 0.01Ω)
Thermal Shock	-65 ^{+0.5} °C, -150°C for 5 cycles	± (0.1% + 0.01Ω)
Moisture Resistance	65°C, 90 ~ 95% R.H. -10°C, 10 cycles	± (0.3% + 0.01Ω)
Moisture Resistance to Load Life	40°C, 90 ~ 95% R.H. rated voltage, 1,000 hours	± (0.2% + 0.01Ω)
Load Life at 70°C	70°C, rated voltage, 1.5 hours on, 0.5 hours off, 1,000 hours	± (0.2% + 0.01Ω)
Load Life at 125°C	125°C, rated voltage, 1.5 hours on, 0.5 hours off, 1,000 hours	± (0.3% + 0.01Ω)

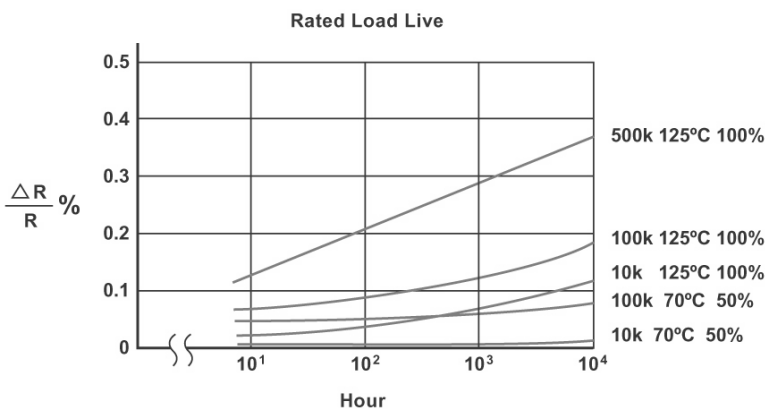
DERATING CURVE



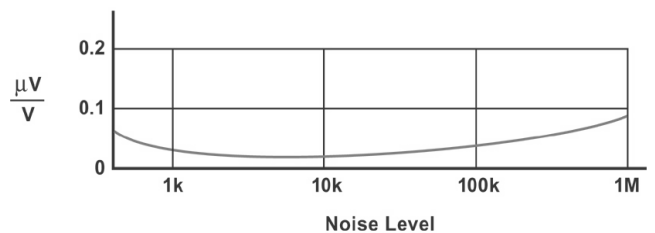
TEMPERATURE RISE



RATED LOAD LIFE



NOISE LEVEL RESISTANCE



The content of this specification may change without notification 10/12/2011