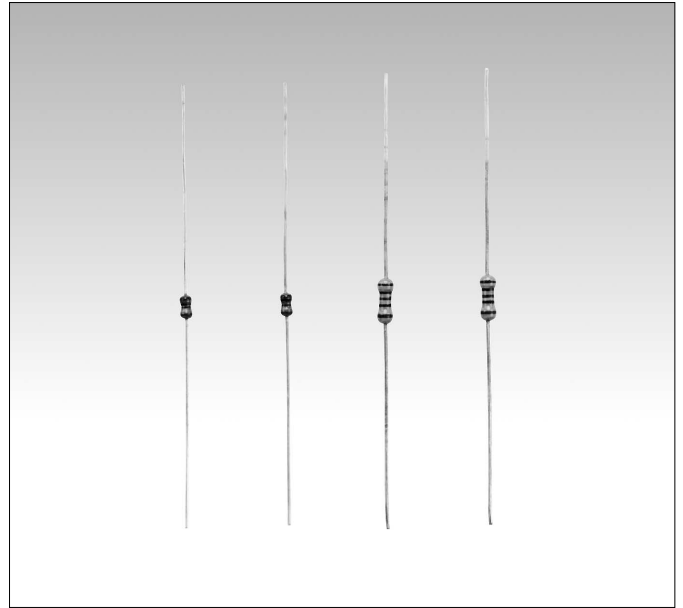


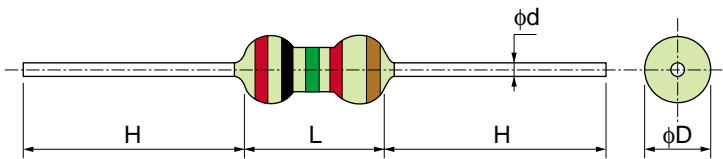
RN1/6, 1/4S, 1/4

●Features

1. The RN Series are formed by depositing Ni-Cr base metal on a ceramic body by sputtering or vacuum deposit on techniques. The resistor is protected by several protective coatings to give excellent resistance to heat and moisture.
2. Available in both $\pm 50 \times 10^{-6}/^{\circ}\text{C}$ and $\pm 100 \times 10^{-6}/^{\circ}\text{C}$ temperature coefficients.
3. Extremely stable device, with long life and durability.
4. RN1/6 and RN1/4S are suitable for high density applications.
5. Stability class : 2%



●Dimensions



Unit : mm

Style	L	D	H	d	*Unit weight/pc.
RN1/6, 1/4S	3.2±0.2	1.8±0.1	30±3	0.43±0.03	105mg
RN1/4	6.5±0.5	2.3±0.2		0.6 ±0.05	212mg

* Color coding uses 5 bands.

*Values for reference

●Product Classification

Example

 RN 1/6 C
 ①Product Type ②Rated power ③Temperature Coefficient of Resistance

 1002
 ④Rated Resistance

 F B
 ⑤Tolerance on Rated Resistance ⑥Packaging

Style	
①Product Type	
② Rated power	
Code	Rated power
1/6	0.167W
1/4S	0.25W
1/4	

③ Temperature Coefficient of Resistance	
Code	Temperature Coefficient of Resistance
C	$\pm 50 \times 10^{-6}/^{\circ}\text{C}$
K	$\pm 100 \times 10^{-6}/^{\circ}\text{C}$

④ Rated Resistance	
E48, 96 Series	
e.g: 10R7=10.7 ohm	
1002=10k ohm	

⑤ Tolerance on Rated Resistance	
Code	Tolerance on Rated Resistance
F	±1%

*⑥ Packaging		
Code	Packaging	Application
B	Bulk (Straight)	All Styles
V	Radial Forming	RN1/6, 1/4S
VA	Radial Forming(Kinked)	RN1/4
H	Horizontal Forming	All Styles
TA	26 mm Width Taping(Fan Fold Box)	
TB	52 mm Width Taping(Fan Fold Box)	

*Refer to Taping and Packaging information in page 62. 63. 64
 Contact us for information on the details of processing and packing.
 The code numbers may be added to the codes for from in some cases.

●Ratings

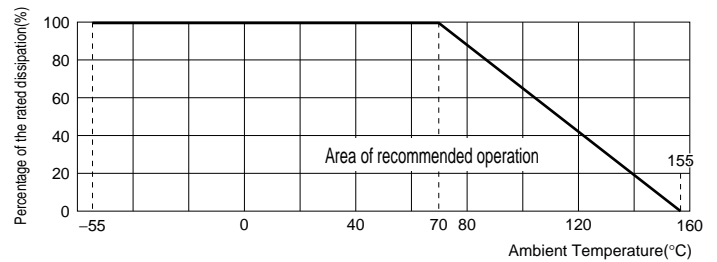
Style	Rated Dissipation at 70°C W	Limiting Element Voltage V	Rated Resistance Range	Tolerance on Rated Resistance	Preferred Number Series for Resistors	Isolation Voltage V	Category Temperature Range °C
RN1/6	0.167	200	10 ohm~1M ohm	F(±1%)	E48 Series E96 Series	300	-55~+155
RN1/4S	0.25	250					
RN1/4	0.25	250				500	

Note.1 Rated Voltage = $\sqrt{(\text{Rated Power}) \times (\text{Rated Resistance})}$, (d.c. or a.c. r.m.s. Voltage)

Note.2 Limiting Element Voltage can only be applied to resistors when the resistance value is equal to or higher than the critical resistance value.

●Derating Curve

The derated values of dissipation at temperature in excess of 70°C shall be as indicated by the following Curve.



●Climatic Category

55/155/56

- Lower Category Temperature -55°C
- Upper Category Temperature +155°C
- Duration of the Damp heat, Steady-State Test 56days

●Performance Characteristics JIS C 5201-1 : 1998

Description	Requirements	Test Methods
Voltage proof	No breakdown or flashover	Clause 4.7 V-block method RN1/6, 1/4S 300Va.c.,60s RN1/4 500Va.c.,60s
Variation of resistance with Temperature	T.C.R : C : $\pm 50 \times 10^{-6}/^{\circ}\text{C}$ K : $\pm 100 \times 10^{-6}/^{\circ}\text{C}$	Clause 4.8 Measuring temperature : +20°C/-55°C/ +20°C/+155°C/+20°C
Temperature characteristic of resistance	C : $\pm 50 \times 10^{-6}/^{\circ}\text{C}$ K : $\pm 100 \times 10^{-6}/^{\circ}\text{C}$	Clause 4.8 20°C/70°C/20°C 1cycle
Overload	$\Delta R \leq \pm(0.5\%+0.05 \text{ ohm})$ No visible damage, legible marking	Clause 4.13 The applied voltage shall be 2.5 times of the rated voltage or twice the limiting element voltage, whichever is the less severe, 5s.
Robustness of Terminations	Tensile $\Delta R \leq \pm(0.5\%+0.05 \text{ ohm})$ No visible damage	Clause 4.16.2 RN1/6, 1/4S :5N RN1/4 :10N for 5-10s
	Bending $\Delta R \leq \pm(0.5\%+0.05 \text{ ohm})$ No visible damage	Clause 4.16.3 RN1/6, 1/4S :2.5N RN1/4 :5N twice
	Torsion $\Delta R \leq \pm(0.5\%+0.05 \text{ ohm})$ No visible damage	Clause 4.16.4 180°C 2 rotation
Solderability	In accordance with Clause 4.17.4.5	Clause 4.17 235°C, 2s
Resistance to soldering heat	$\Delta R \leq \pm(0.5\%+0.05 \text{ ohm})$ No visible damage, legible marking	Clause 4.18 After immersion into the flux, the immersion into solder shall be carried out in solder bath at 350°C for 3.5s.
Rapid change of temperature	$\Delta R \leq \pm(0.5\%+0.05 \text{ ohm})$ No visible damage	Clause 4.19 5 cycles between -55°C and +155°C.
Climatic sequence	$\Delta R \leq \pm(2\%+0.05 \text{ ohm})$ Insulation resistance : $R \geq 100\text{M ohm}$ No visible damage	Clause 4.23 Dry/Damp heat(12+12h cycle), first cycle./ Cold/Damp heat(12+12h cycle), remaining cycle./ D.C.Load.
Damp test, steady state	$\Delta R \leq \pm(2\%+0.05 \text{ ohm})$ Insulation resistance : $R \geq 100\text{M ohm}$ No visible damage, legible marking	Clause 4.24 40°C 95%R.H. 56days, test a),b)and c) of Clause 4.24.2.1
Endurance at 70°C	$\Delta R \leq \pm(2\%+0.05 \text{ ohm})$ No visible damage Insulation resistance : $R \geq 1\text{G ohm}$	Clause 4.25.1 Rated voltage, 1.5h "ON", 0.5h "OFF", 70°C, 1000h.
Endurance at the upper Category temperature	$\Delta R \leq \pm(2\%+0.05 \text{ ohm})$ No visible damage Insulation resistance : $R \geq 1\text{G ohm}$	Clause 4.25.3 155°C, no-load, 1000h.