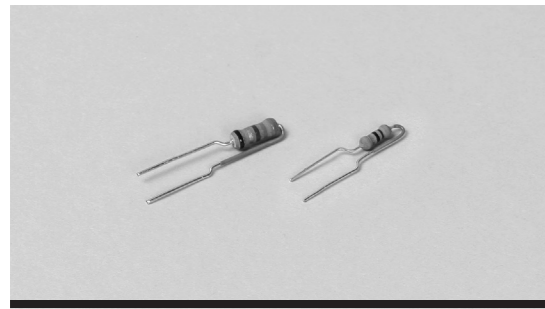
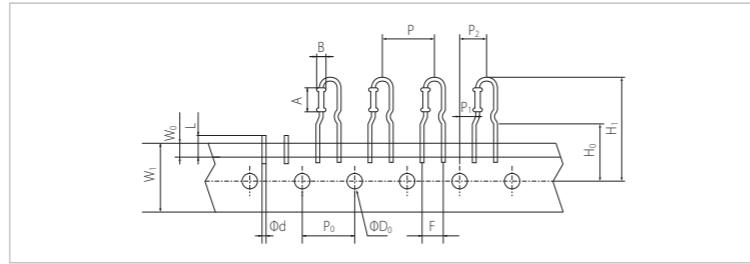


# SMR, SML Super Mini Metal Oxide Film Resistor

RoHS HF



### Dimension



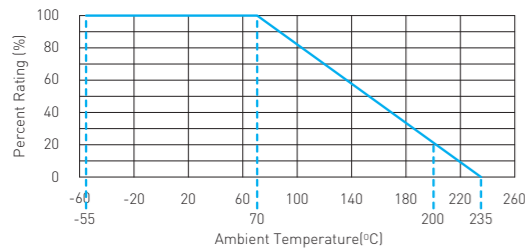
Type	Dimension (mm)						
	PO: ±1.0	Φd ±0.02	P: ±1.0	A: ±1.0	B: ±0.5	WO: ±0.5	W1: ±0.5
SMR 1W		0.55		5.8	2.3		
SMR 2W	12.7	0.65	12.7	8.2	3.8	6.0	17.85
SML 3W		0.7		8.5	3.2		

Type	Dimension (mm)						
	L	ΦDO ±0.3	F: ±0.5	P1: ±0.5	P2: ±1.0	HO: ±0.5	H1
SMR 1W							MAX. 28.0
SMR 2W	MAX. 10.1	3.85	5.0	3.85	6.35	16.0	MAX. 32.0
SML 3W							

### Features

- Excellent thermal stability at a high temperature.
- Very small dimension.
- Radial type forming.
- Flame proof coating.
- Product with lead free meet RoHS requirements.

### Derating Curve



### Type Designation

SMR(L)	01	R1	10K0	J
Products Code	Power Rating	Style	Nominal Resistance	Resistance Tolerance
	01: 1W 02: 2W	T: Axial Type F/L: Forming Type	1R00: 1Ω 10R0: 10Ω 10K0: 10KΩ 100K: 100KΩ	G: ±2% J: ±5%

### Rating & Shape

Type	Max. Working Voltage (V)	Max. Overload Voltage (V)	Dielectric Withstanding Voltage (V)	Range (Ω)	Resistance Tolerance (%)	Operating Temp. Range (°C)	Ambient Temp. (°C)	Axial Type	Punching Type
SMR 1W	350	600	350	0.47~150K	J: ±5	-55~+200	70	O	O
SMR(L) 2W			500	0.47~200K				-	O

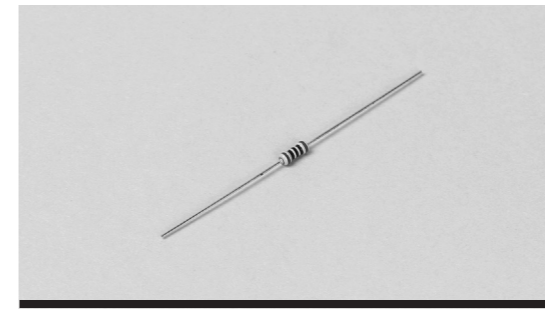
### Performance

Test Items	Performance Requirements	Test Methods
Resistance	Within specified tolerance	Measure resistance at 25°C
T.C.R	Within ± 350PPM/°C	+25°C/+125°C
Short Time Overload	±[2% + 0.1Ω]	Rated voltage x2.5 for 5sec or Max overload voltage
Resistance Against Soldering Test	±[1% + 0.05Ω]	260 ± 5°C, 2~2.5mm, 10 ± 1sec measure resistance After 1hr at room temp
Load Life in Moisture	±[5% + 0.1Ω]	40 ± 2°C, 90~95%RH, 1.5hr ON/0.5hr OFF cycle, 1,000hr
Load Life in Temperature	±[5% + 0.1Ω]	70 ± 2°C, 1.5hr ON/0.5hr OFF cycle, 1,000hr

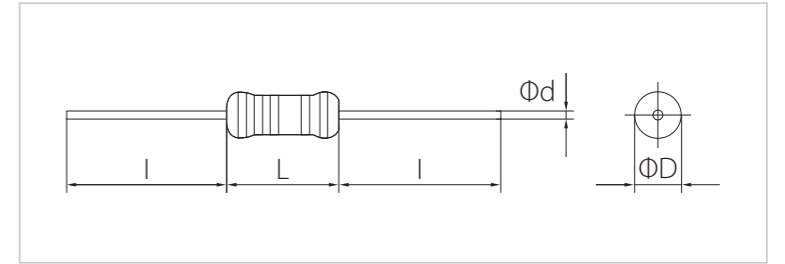
Specification given here in may be changed at any time without prior notice. Please confirm technical specifications before you order or use.

# RN Precision Metal Film Resistor

RoHS HF



### Dimension



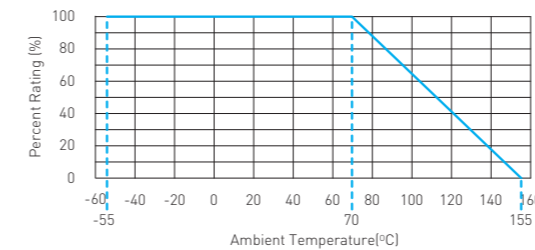
Type	Dimension (mm)			
	L	D	l	d
1/6W	3.2 ± 0.3	1.8 ± 0.2	28.0 ± 3.0	0.43 ± 0.02
1/4W	5.8 ± 0.5	2.3 ± 0.2	27.0 ± 3.0	0.55 ± 0.02
1/2W	8.5 ± 1.0	3.2 ± 0.2	26.0 ± 3.0	0.70 ± 0.02
1W	11.0 ± 1.0	4.0 ± 0.5	28.0 ± 3.0	0.80 ± 0.02

RN has been developed for application in which precision, stability and low temperature coefficient are required. A homogeneous film of Ni-Cr is magnetron sputtered on a high grade ceramic substrate and protected by the application of inner and outer coating having superior heat resistance and weather ability to assure long life stability of resistive film. They are ideally suitable for high stability circuit use.

### Features

- High precision and Low T.C.R. metal film resistor.
- Low current noise : Less than 0.2μV/V.
- Excellent stability for a long period of time.
- General / Flame retardant type.

### Derating Curve



### Rating & Shape

Type	Max. Working Voltage (V)	Max. Overload Voltage (V)	Dielectric Withstanding Voltage (V)	Range (Ω) & Tolerance (%)		Resistance Tolerance (%)	Operating Temp. Range (°C)	Ambient Temp. (°C)	Axial Type			Forming Type
				F (±1)	G (±2), J (±5)				26mm	52mm	63mm	
1/6W	150	300	300	10~100K	0.47~100K	F: ±1 G: ±2 J: ±5	-55~+155	70	O	O	-	-
1/4W	250	500	500	10~470K	0.47~100K				O	O	-	O
1/2W	350	700	700	10~470K	0.47~100K				-	O	-	O
1W				10~470K	0.47~100K				-	-	O	-

### Performance \*When pulse is applied to resistor, the peak value of pulse shall be within rated voltage.

Test Items	Performance Requirements	Test Methods
Resistance	Within specified tolerance	Measure resistance at 25°C
T.C.R	±100PPM/°C [Less than 10Ω ±350PPM/°C]	+25°C/+125°C
Short Time Overload	±[1%+0.05Ω]	Rated voltage x2.5 for 5sec or Max overload voltage
Resistance Against Soldering Test	±[1%+0.05Ω]	260 ± 5°C, 2~2.5mm, 10 ± 1sec measure resistance After 1hr at room temp
Load Life in Moisture	±[5%+0.1Ω]	40 ± 2°C, 90~95%RH, 1.5hr ON/0.5hr OFF cycle, 1,000hr
Load Life in Temperature	±[5%+0.1Ω]	70 ± 2°C, 1.5hr ON/0.5hr OFF cycle, 1,000hr

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