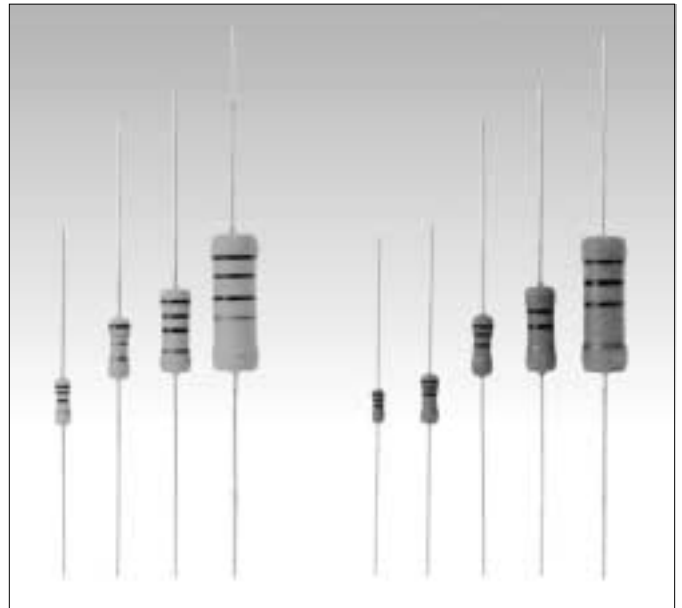


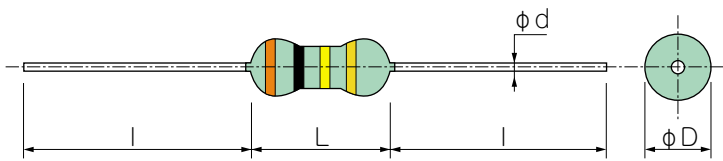
# RSI-1/2, 1, 2, 3, 1/2S, 1S, 2S, 3S, 5S

## ■ Features

1. Available in a variety of sizes from 1/2W.
2. Widely used in amplification, high frequency and power source circuit land also in general purpose electric applications.



## ■ Dimensions



Unit: mm

Style	L	D	l	d	*Unit Weight/pc.
RSI-1/2S	6.5±0.5	2.5±0.5	30±3	0.6±0.05	0.22g
RSI-1/2	9.0±1.0	3.5±1.0			0.45g
RSI-1S					0.67g
RSI-1	13.0±1.0	4.5±1.0			0.8±0.05
RSI-2S	16.0±1.0	6.0±1.0	1.25g		
RSI-2			1.4g		
RSI-3S	25.0±1.0	9.0±1.0	38±3	3.7g	
RSI-3				4.2g	
RSI-5S					

\*Values For Reference

## ■ Product Classification

### Example

RSI — 1S  
 (1)Product Type      (2)Rated Power

103  
 (3)Rated Resistance

J  
 (4)Tolerance on Rated Resistance

B  
 (5)Packaging

(1)Product Type	Style	
	(2)Rated power Code	Rated power
	1/2 · 1/2S	0.5W
	1 · 1S	1.0W
	2 · 2S	2.0W
	3 · 3S	3.0W
	5S	5.0W

(3)Rated Resistance
3Digit : E24 Series e.g : 103=10kΩ

(4)Tolerance on Rated Resistance	
Code	Tolerance on Rated Resistance
J	±5%

*(5)Packaging	
Code	Packaging
B	Bulk(Straight)
HB	Horizontal Forming (Free-Standing)
TB	52mm Width Taping(Fan Fold Box)
TL	52mm Width Taping(Reel)

\*Refer to Taping and Packaging information in page 60, 61, 62  
 Contact us for information on the details of processing and packing.  
 The code numbers may be added to the codes in some cases.

FIXED METAL OXIDE FILM RESISTORS RSI-1/2, 1, 2, 3, 1/2S, 1S, 2S, 3S, 5S

**■ 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
RSI-1/2S	0.5	250	0.1Ω~100kΩ	J(±5%)	E24 Series	500	-55~+200
RSI-1/2			0.1Ω~330kΩ				
RSI-1S	1.0	350	0.1Ω~510kΩ				
RSI-1			2.0			0.22Ω~470kΩ	
RSI-2S	3.0					500	
RSI-2							
RSI-3S	5.0	500	0.47Ω~100kΩ				
RSI-3							
RSI-5S	5.0	500	0.47Ω~100kΩ				

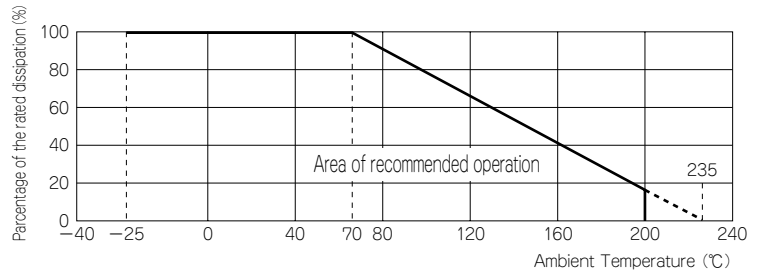
Note.1 Rated Voltage =  $\sqrt{(\text{Rated Power}) \times (\text{Rated Resistance})}$  . (d.c. or a.c. r.m.s. Voltage)

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.

Note.3 RSP Series (0.22~100Ω) with upgraded performance in surge test are available too, contact the Sales Dept for detail.

**■ Derating Curve**

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



**■ Climatic Category**

55/200/56

- Lower Category Temperature -55°C
- Upper Category Temperature +200°C
- Duration of the Damp heat, Steady-State Test 56days

**■ Performance Characteristics JIS C 5201-1 : 1998**

Description	Requirements	Test Methods
<b>Voltage proof</b>	No breakdown or flashover	Clause 4.7 V-block method RSI-1/2, 1/2S 500Va.c.,60s RSI-1,2,1S,2S,3S 700Va.c.,60s RSI-3,5S 1,000Va.c.,60s
<b>Variation of resistance with Temperature</b>	T.C.R : $\pm 350 \times 10^{-6}/^{\circ}\text{C}$	Clause 4.8 Measuring temperature : +20°C/-55°C/ +20°C/+155°C/+20°C
<b>Overload</b>	$\Delta R \leq \pm(0.5\%+0.05\Omega)$ No visible damage, legible marking	Clause 4.13 The applied voltage shall be 2.5 times of the rated voltage or twice of the limiting element voltage, whichever is the less severe, 5s
<b>Temperature rise</b>	$\Delta \theta \leq 235^{\circ}\text{C}$	Clause 4.14 XRated voltage
<b>Robutness of Terminations</b>	<b>Tensile</b> $\Delta R \leq \pm(1\%+0.05\Omega)$ No visible damage	Clause 4.16.2 10N for 5~10s
	<b>Bending</b> $\Delta R \leq \pm(1\%+0.05\Omega)$ No visible damage	Clause 4.16.3 5N twice
	<b>Torsion</b> $\Delta R \leq \pm(1\%+0.05\Omega)$ No visible damage	Clause 4.16.4 180°C 2 rotation
<b>Solderability</b>	In accordance with Clause 4.17.4.5	Clause 4.17 235°C, 2s
<b>Resistance to soldering heat</b>	$\Delta R \leq \pm(1\%+0.05\Omega)$ 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.
<b>Rapid change of temperature</b>	$\Delta R \leq \pm(1\%+0.05\Omega)$ No visible damage	Clause 4.19 5 cycles between -55°C and +200°C.
<b>Climatic sequence</b>	$\Delta R \leq \pm(5\%+0.05\Omega)$ Insulation resistance : $R \geq 100\text{M}\Omega$ 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.
<b>Damp test, steady state</b>	$\Delta R \leq \pm(5\%+0.1\Omega)$ Insulation resistance : $R \geq 100\text{M}\Omega$ 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
<b>Endurance at 70°C</b>	$\Delta R \leq \pm(5\%+0.1\Omega)$ No visible damage Insulation resistance : $R \geq 1\text{G}\Omega$	Clause 4.25.1 Rated voltage, 1.5h "ON", 0.5h "OFF", 70°C, 1000h.
<b>Endurance at the upper Category temperature</b>	$\Delta R \leq \pm(5\%+0.1\Omega)$ No visible damage Insulation resistance : $R \geq 1\text{G}\Omega$	Clause 4.25.3 200°C, no-load, 1000h.