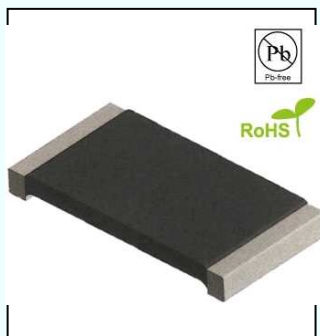


## Metal Alloy Ga U`-Resistance Resistor

### Product Specification: GR2512 3W Type



#### FEATURES :

- ◆ Ideal for all types of current sensing, voltage division and Pulse applications including switching and linear power Supplies, Instruments, power amplifiers.
- ◆ Proprietary processing technique produces extremely low Resistance values.
- ◆ High-temperature performance (up to +275°C)
- ◆ Very low inductance 0.5nH to 5nH
- ◆ Excellent frequency response
- ◆ Low thermal EMF (<1uV/°C)
- ◆ Lead(Pb)-free construction is RoHS-compliant

### 1. Standard Electrical Specifications :

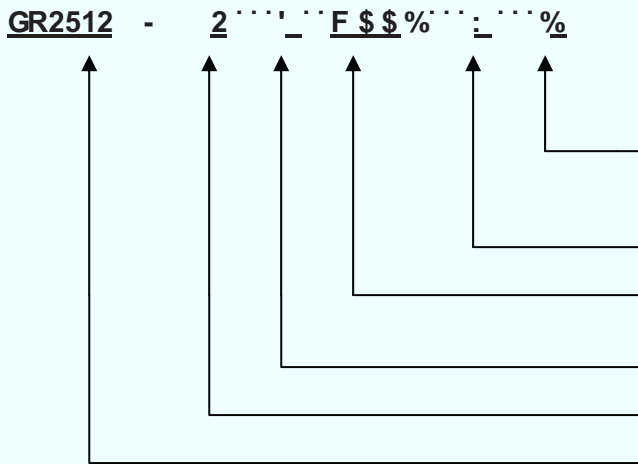
Model	Power Rating at 100 °C (Watts)	Resistance Range mΩ		
		0.5%(D)	1.0%(F)	5.0%(J)
SR2512-23	3.0	1~50	0.5~50	0.5~50

3 Watts with total solder pad trace size of 400mm<sup>2</sup>

### 2. Technical Specifications :

Parameter	Unit	SR2512-23 (mΩ)
Temperature Coefficient	ppm /°C	0.5~5= +25 6~50 = -15
Operating Temperature Range	°C	-65 ~ +275
Maximum Working Voltage	V	(P × R) <sup>1/2</sup>

### Ordering Information :


**Packing**

1=Tape &amp; Reel ; B=Bulk Pack

1=1,000 Pcs

**Tolerance**

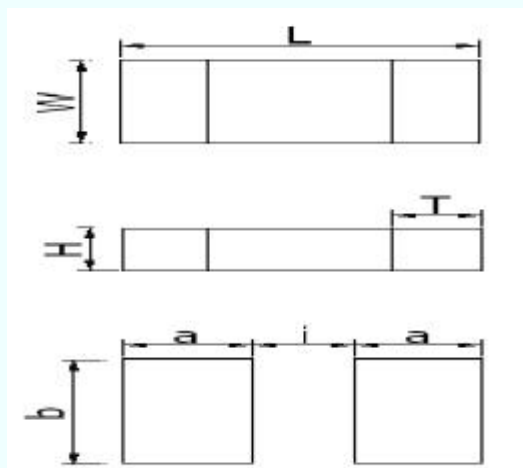
D=±0.5% ; F=±1.0% ; J=±5.0%

**Resistance**

EX : R001=1mΩ ; R010=10mΩ

**Power Rating (Watts)**
**Number of Terminals**
**Model (Size)**

### 3. Dimensions :

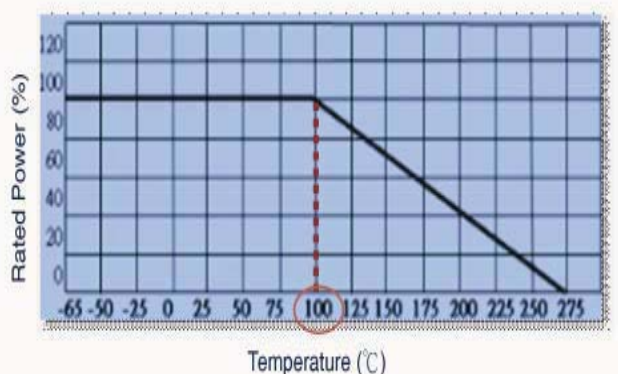


Model	DIMENSIONS - in inches (millimeters)				
	Resistance Range mΩ	L	W	H	T
SR2512-23	0.5 ~ 1.5	0.246±0.010 (6.25±0.254)	0.13±0.010 (3.30±0.254)	0.031±0.010 (0.80±0.254)	0.074±0.010 (1.88±0.254)
	2~ 50	0.246±0.010 (6.25±0.254)	0.13±0.010 (3.30±0.254)	0.031±0.010 (0.80±0.254)	0.044±0.010 (1.13±0.254)
Model	SOLDER PAD DIMENSIONS - in inches (millimeters)				
	Resistance Range mΩ	a	b	i	
SR2512-23	0.5 ~1.5	0.120(3.05)	0.145(3.68)	0.050(1.27)	
	2 ~ 50	0.083(2.11)	0.145(3.68)	0.125(3.18)	

 Remark : 3 Watts with total solder pad trace size of 400mm<sup>2</sup>

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#### 4. Power Derating Curve :

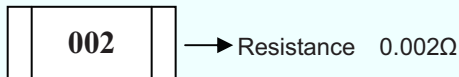


#### 5. Performance :

Test Item	Conditions of test	Test Method	Test Limits
Short Time Overload	3W 3x rated power for 5 seconds	JIS C5202 5.5	$\pm(0.5\%+0.0005\Omega)\Delta R$
Resistance to Solder Heat	Solder temp./immersion time:260±5°C,10±1secs and 350±10°C,3.5±0.5secs	JIS C5202 6.4	$\pm(0.5\%+0.0005\Omega)\Delta R$
Solderability test	Steam aging:4 hrs, cool down 30 minutes then test	JIS C5202 6.5	95% coverage
Vibration	Frequency varied 55Hz in one minute , 3 directions , 12 hours	JIS C5202 6.7	$\pm(0.5\%+0.0005\Omega)\Delta R$
Resistance to solvent	Immersion time:60±5 secs,20°C ~25 °C	JIS C5202 6.9	$\pm(0.5\%+0.0005\Omega)\Delta R$
Mechanical Shock	100 grams for 6 milliseconds, 5 pulses	JIS C5202 6.13	$\pm(0.5\%+0.0005\Omega)\Delta R$
Low Temperature Storage	-55°C for 1000 hours	JIS C5202 7.1	$\pm(0.5\%+0.0005\Omega)\Delta R$
High Temperature Exposure	1000 hours @ + 155°C	JIS C5202 7.2	$\pm(1.0\%+0.0005\Omega)\Delta R$
Thermal Shock	- 55 °C to + 125 °C , 1000 cycles , 15 minutes at each extreme	JIS C5202 7.4	$\pm(0.5\%+0.0005\Omega)\Delta R$
Moisture Resistance	Mil-STD-202 , Method 106 , 0% power , 7a and 7b not required	JIS C5202 7.6	$\pm(0.5\%+0.0005\Omega)\Delta R$
Bias Humidity	+ 85°C , 85% RH, 10% Bias, 1000 hours,90 minutes "ON",30 minutes "OFF"	JIS C5202 7.9	$\pm(0.5\%+0.0005\Omega)\Delta R$
Load Life	1000 hours @ rated power, + 100°C , 1.5 hours "ON" , 0.5 hours "OFF"	JIS C5202 7.10	$\pm(1.0\%+0.0005\Omega)\Delta R$

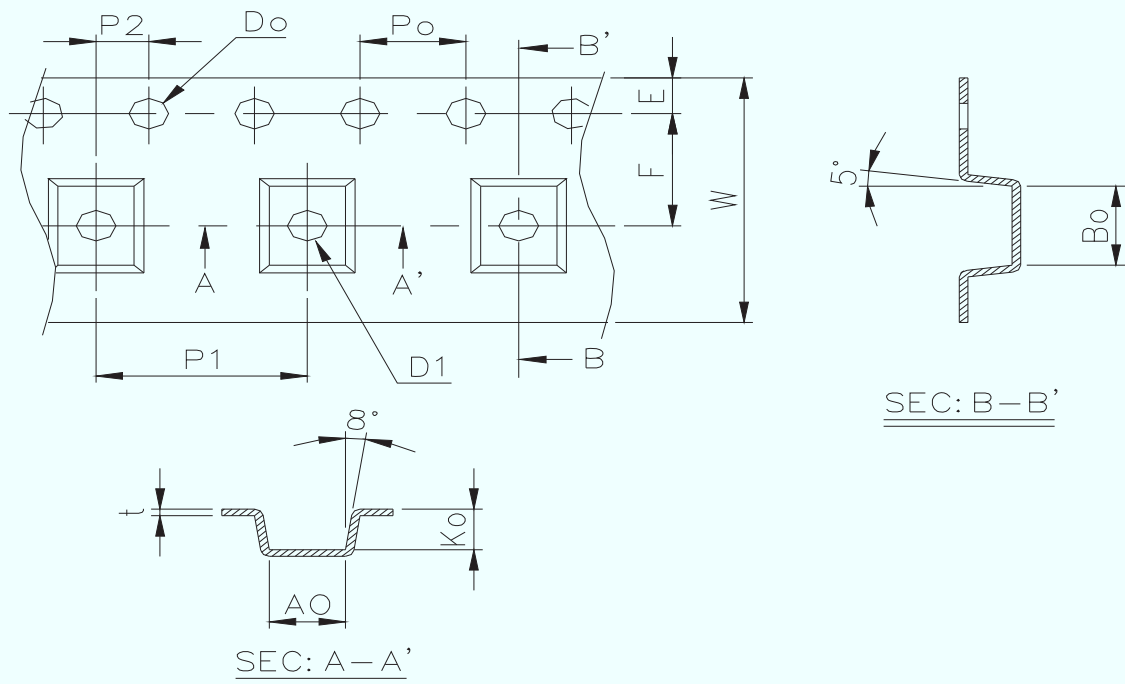
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## 6. Marking :



## 7. Packaging :

Model	Reel			
	Tape Width	Diameter	Pieces/Reel	Code
SR2512-23	12mm/Embossed Plastic	178mm/7"	1,000	1



Unit: mm

Item	W	P1	E	F	Do	D1	P0	Po*10	P2	Ao	Bo	Ko	t
<b>Spec.</b>	12.00	8.00	1.75	5.50	1.50	1.50	4.00	40.00	2.00	3.90	6.74	1.08	0.24
<b>Tole.</b>	±0.10	±0.10	±0.10	±0.05	+ 0.10 - 0.00	±0.10	±0.05	±0.10	±0.05	±0.10	±0.10	±0.05	±0.05

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