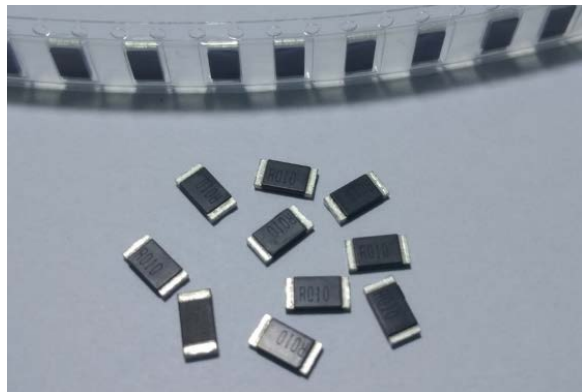




General

- Chip size 2512
- Resistance value 1 mΩ to 10mΩ
- High power rating.
- Low inductance 0.5nH to 5nH.
- Low TCR.
- Compatible with RoHS & Halogen free.

Application

- Switching model power supply.
- Battery pack.
- Notebook, personal computer.
- Test Instrument.
- Power Amplifier.

Ordering Information

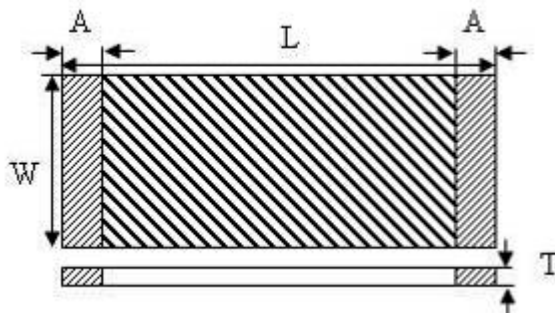
Type	Power Rating at 70℃(W)	Max Overload voltage(V)	Resistance (m Ω)	TCR(ppm/℃)	Resistance tolerance	Operating Temperature
2512	2.0	$(P \cdot R)^{1/2}$	1~3	±100	±1%(F)	-55℃~+170℃
			4~10	±75		
2512	3.0	$(P \cdot R)^{1/2}$	1~3	±100	±1%(F)	-55℃~+170℃
			4~10	±75		

Catalog Symbol

SMA 25 A 2 F R001 I
【1】 **【2】** **【3】** **【4】** **【5】** **【6】** **【7】**

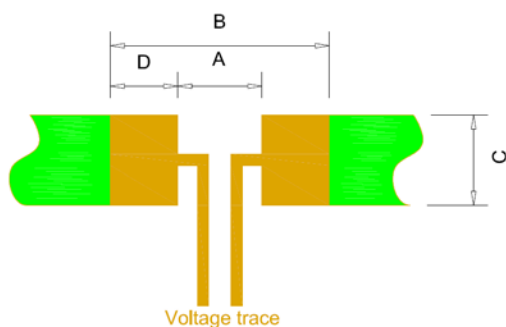
- 【1】 Series Name: SART Metal Strip Type**
【2】 Chip size: 25: 2512
【3】 Material Code: A:Alloy
【4】 Power Code: 2: 2W 3: 3W
【5】 Resistance Tolerance: F: $\pm 1\%$
【6】 Resistance Code: R001 = 1 m Ω
【7】 Packaging Code: T:Tape& Reel B: Bulk Pack

Dimensions



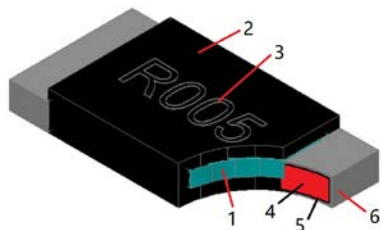
Type	L (mm)	W(mm)	T (mm)	A (mm)
2512	6.40 $\pm$ 0.20	3.20 $\pm$ 0.20	1.20 $\pm$ 0.20	0.80 $\pm$ 0.20

Recommended Land Patterns



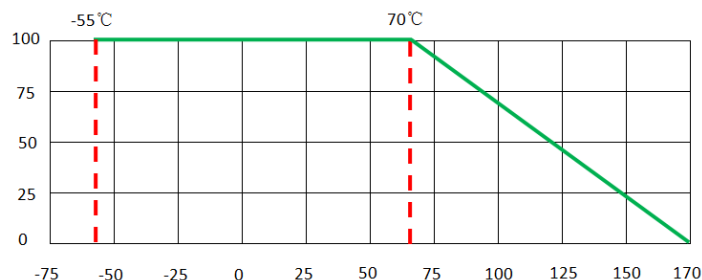
Type	A(mm)	B(mm)	C(mm)	D(mm)
2512	3.18	7.40	3.57	2.11

Materials



1	Alloy	4	Copper
2	Epoxy molding compounds	5	Nickel
3	Marking	6	Tin

Power Derating Curve



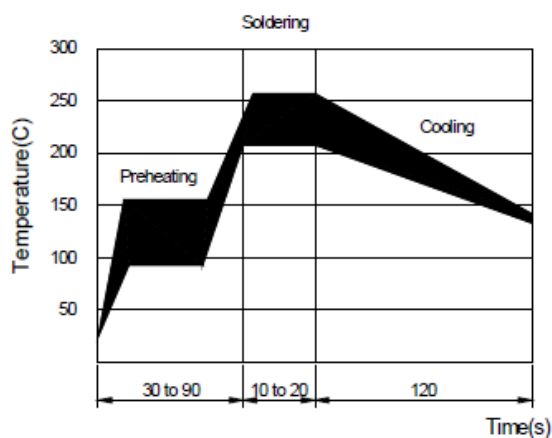
Recommended Solder Curve

1. Infrared Reflow

Preheating : $145 \pm 15^{\circ}\text{C}$, max.120 sec.

Soldering: min. 220°C , max. 60 sec.

Maximum temperature : $260 \pm 5^{\circ}\text{C}$, max. 10sec.



3. Hand Soldering

Temperature: 350°C

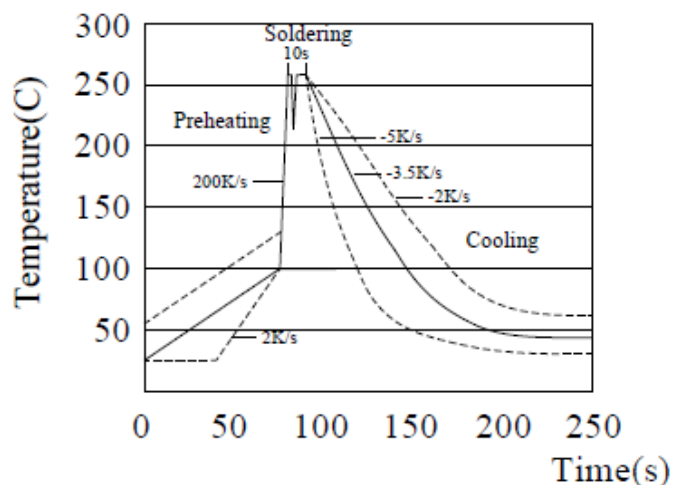
Time: 5sec Max.

2. Wave solder Temperature condition

Preheating : $100^{\circ}\text{C} \sim 130^{\circ}\text{C}$, max.100 sec.

Soldering: $250^{\circ}\text{C} \sim 265^{\circ}\text{C}$ max. 10 sec.

Maximum temperature : $260 \pm 5^{\circ}\text{C}$, max. 10sec.

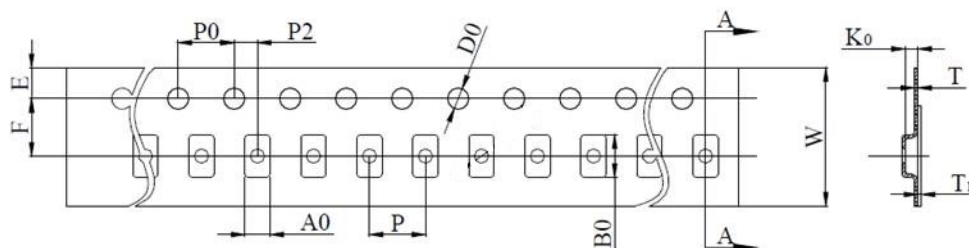


Reliability Test

Item	Test condition / Methods	Performance	Standard
Short Time Overload	2W:R001 :P= 3Pr ; T=25±2°C , t = 5sec. R002~ R010 :P= 5Pr ; T=25±2°C , t = 5sec.	ΔR ≤±(1%+0.5 mΩ)	IEC 60115-1 4.13
	3W:R001~ R010:P= 3Pr; T=25±2°C , t = 5sec.		
Temperature Coefficient of Resistance (TCR)	$TCR = \frac{(R - R_0)}{R_0} \frac{(T_2 - T_1)}{T_1} \times 10^6$ Test temperature: +25°C~+125°C	Refer to SART Spec	IEC 60115-1 4.8.4.2
Thermal Shock	-55°C(30Min.)/+150°C(30 Min.),100 个循环	ΔR ≤±(1%+0.5 mΩ)	IEC 60115-1 4.19
Resistance to Solder Heat	265°C±5°C, 20sec±1sec	ΔR ≤±(1%+0.5mΩ)	IEC 60115-1 4.18
Solderability	245°C±5°C, 3sec±0.5sec	95% coverage Min.	IEC 60115-1 4.17
Load Life	1000 hours at rated power, 70°C±2°C, 1.5hours “ON”, 0.5hour “OFF”	ΔR ≤±(2% +0.5 mΩ)	IEC 60115-1 4.25.1
Moisture Load Life (60°C、95%RH)	Vtest = Vmax ; T=60±2°C ; RH=95% ; t= 90min ON , 30min OFF , 1000h	ΔR ≤±(2%+0.5 mΩ)	IEC 60115-1 4.24
Bending test	Bending width 2mm, Epoxy thickness 1.6mm, Fulcrums distance 90mm	ΔR ≤±(1%+0.5 mΩ)	IEC 60115-1 4.33
High Temp. Exposure	T = +170±2°C ; t = 1000h	ΔR ≤±(1%+0.5 mΩ)	IEC60115-1 4.25
Low Temp. Storage	T = -55±2°C ; t = 1000h	ΔR ≤±(1%+0.5 mΩ)	IEC60115-1 4.25
Mechanical Shock	a =100G , t =11ms, 5 times shock	ΔR ≤±(1%+0.5 mΩ)	IEC60115-1 4.21

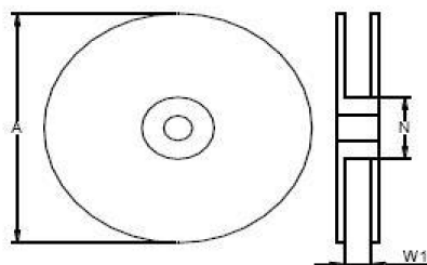
Packaging

1. Tape Packaging Dimensions



A0(mm)	B0(mm)	W(mm)	F(mm)	E(mm)	T(mm)
3.90±0.20	6.75±0.20	12.00±0.30	5.50±0.05	1.75±0.10	0.25±0.10
P(mm)	P0(mm)	P2(mm)	D0(mm)	T1(mm)	K0(mm)
8.00±0.10	4.00±0.10	2.00±0.10	1.55±0.10	Max. 0.1	1.5 -0.10/+0.20

2. Reel Dimensions



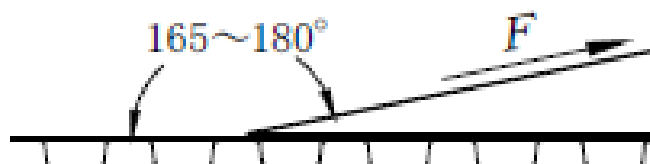
Type	A(mm)	N(mm)	W1(mm)
2512	178.00±5.00	60.00±2.00	13.00±1.00

Number of Package

Packaging style	Tape and Reel
Type	2512
Quantity(PCS)	1,500

Peeling Test

F = Peeling Strength: 0.1 – 1.0N (10 - 100gf)



Storage

- The ambient temperature shall be between 5°C~30°C.
- The relative humidity recommended for storage is between 25%~60%.
- Sealed plastic bags with desiccant shall be used to reduce the oxidation of the termination and shall only be opened prior to use. The products shall not be stored in areas where harmful gases containing sulfur or chlorine are present.