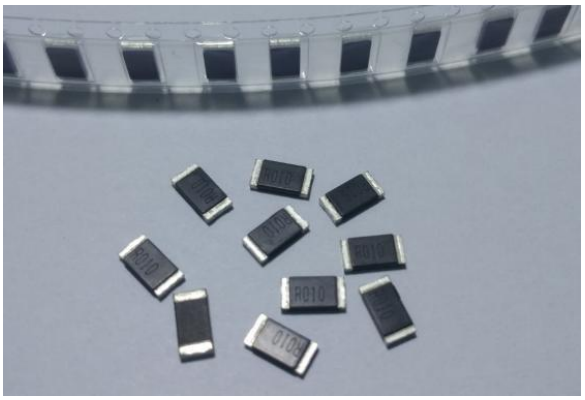


General

- Chip size 2512
- Resistance value from 0.5mΩ to 50mΩ
- 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

Electrical Specifications

Type	Power Rating at 70℃(W)	Electrode (mm)	Resistance Range (mΩ)	TCR (ppm/℃)	Resistance Tolerance	Operation Temp. Range
2512	2、 3	1.90±0.25	0.5	±160	±1%(F)	-55℃~+170℃
		0.90±0.30	1	±100	±0.5%(D) ±1%(F)	
		0.90±0.30	1.5	±100	±1%(F)	
		0.90±0.30	2~50	±50	±0.5%(D) ±1%(F)	

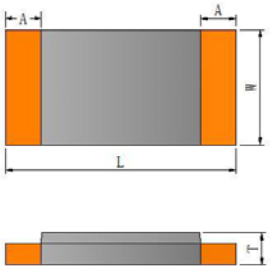
Part Number Information

SMA	25	A	2	F	R001	T
【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: ±1%
【6】Resistance Code: R001 = 1 mΩ ； 0M50 = 0.5 mΩ
【7】Packaging Code: T:Tape& Reel B: Bulk Pack

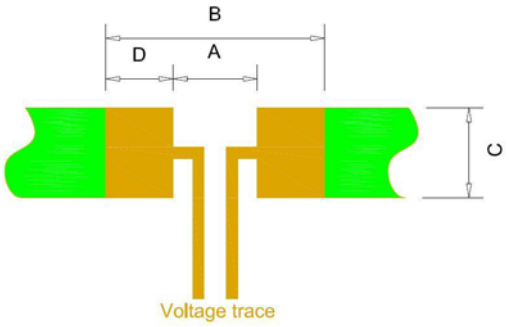
Nanjing SART Science& Technology Development Co., Ltd.
ADD.: Maqun Science & Technology Park, Qingma Road 6#, Nanjing, China
TEL.: 086-25-84354852 FAX.:086-25-83241791 Web.: www.sartfuse.com

Dimensions



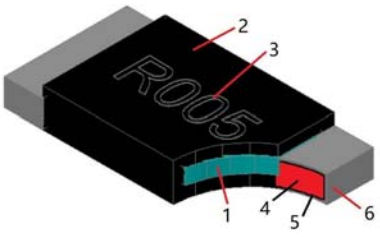
Type	Power Rating at 70℃(W)	Resistance Range (mΩ)	L （mm）	W （mm）	T （mm）	A （mm）
2512	2、 3	0.5	6.40±0.30	3.20±0.30	1.05±0.20	1.90±0.25
		1~4	6.40±0.30	3.20±0.30	1.10±0.20	0.90±0.30
		5~50	6.40±0.30	3.20±0.30	0.90±0.20	0.90±0.30

Recommended Land Patterns



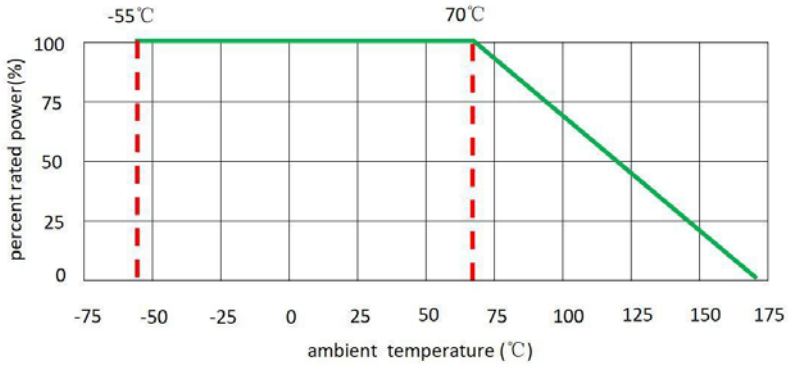
Type	Resistance Range (mΩ)	A (mm)	B (mm)	C (mm)	D (mm)
2512	0.5	1.50	7.40	3.57	2.95
	1~50	3.18	7.40	3.57	2.11

Materials



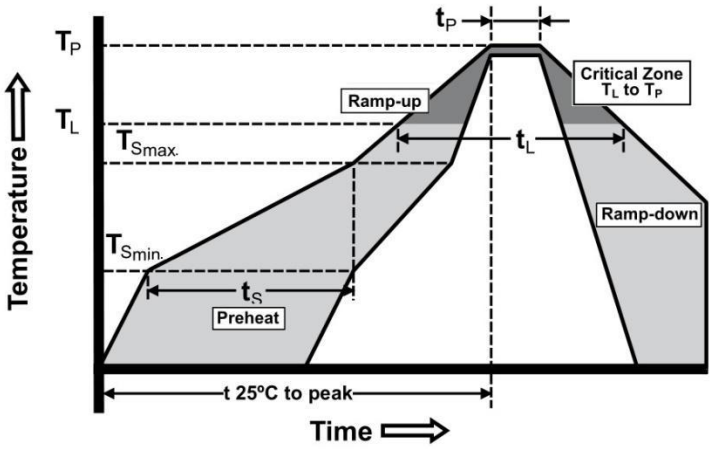
No.	Materials	No.	Materials
1	Alloy	4	Copper
2	Epoxy molding compounds	5	Nickel
3	Marking	6	Tin

Power Derating Curve



Recommended Solder Curve

1.Infrared Reflow
- Temperature: 260℃
- Time: 5sec Max.
- Recommend Reflow profile:



Profile Feature	Pb-Free Assembly
Average Ramp-up Rate (Ts_{max} to Tp)	3℃/sec Max.
Preheat Temperature Min.(Ts_{min}) Temperature Max.(Ts_{max}) Time(Ts_{min} to Ts_{max})	150℃ 200℃ 60sec~120sec
Peak Temperature(Tp)	260℃
Time within 5℃ of actual Peak Temperature(Tp)	5sec
Melting tin time(T_L)	20sec~30sec
Ramp-down Rate	6℃/sec Max.
Time 25℃ to peak Temperature	8 min Max.

2. Wave soldering
- Reservoir Temperature: 260℃
- Time in Reservoir: 10sec Max.

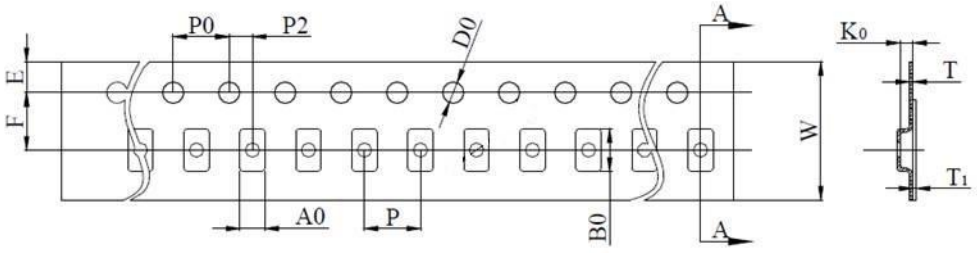
3. Hand Soldering
- Temperature: 350℃
- Time: 5sec Max.

Product Characteristics

Item	Test condition / Methods	Performance	Standard
Short Time Overload	P= 5Pr ; T=25℃±2℃ , t = 5sec	|△R|≤±(1%+0.5 mΩ)	IEC 60115-1 4.13
Temperature Coefficient of Resistance (TCR)	TCR =$(R-R_0)/R_0(T2-T1)X\ 10^6$ T1 T2 Test temperature：+25℃~+125℃	Refer to SART Spec	IEC 60115-1 4.8
Thermal Shock	-55℃(30min)/+150℃(30 min),100 cycles	|△R|≤±(1%+0.5 mΩ)	IEC 60115-1 4.19
Resistance to Solder Heat	265℃±5℃, 20sec±1sec	|△R|≤±(1%+0.5mΩ)	IEC 60115-1 4.18
Solderability	245℃±5℃, 3sec±0.5sec	95% coverage Min.	IEC 60115-1 4.17
Load Life	1000 hours at rated power, 70℃±2℃, 1.5hours “ON”, 0.5hours “OFF”	|△R|≤±(2% +0.5 mΩ)	IEC 60115-1 4.25.1
Moisture Load Life （60℃、95%RH）	T=60℃±2℃ ; RH=95% ;$V_{test} = V_{max}$; t= 1.5hours “ON”, 0.5hours “OFF” , 1000hours	|△R|≤±(2%+0.5 mΩ)	IEC 60115-1 4.24
Bending test	Bending width 2mm, Epoxy thickness 1.6mm, Fulcrums distance 90mm	|△R|≤±(1%+0.5 mΩ)	IEC 60115-1 4.33
High Temp. Exposure	T = +170℃±2℃ ; t = 1000hours	|△R|≤±(1%+0.5 mΩ)	IEC60115-1 4.25
Low Temp. Storage	T = -55℃±2℃ ; t = 1000hours	|△R|≤±(1%+0.5 mΩ)	IEC60115-1 4.25
Mechanical Shock	a =100G , t =11ms, 5 times shock	|△R|≤±(1%+0.5 mΩ)	IEC60115-1 4.21

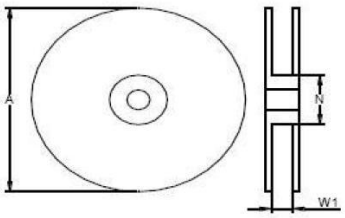
Packaging

1. Tape Packaging Dimensions



Type	Power (w)	Resistance（mΩ）	A0 (mm)	B0 (mm)	W (mm)	F (mm)	E (mm)	T (mm)
2512	2	0.5~4	3.40±0.20	6.75±0.20	12.00±0.30	5.50±0.10	1.75±0.10	0.20±0.10
		5~50	3.40±0.20	6.75±0.20	12.00±0.30	5.50±0.10	1.75±0.10	0.20±0.10
	3	0.5~50	3.40±0.20	6.75±0.20	12.00±0.30	5.50±0.10	1.75±0.10	0.20±0.10
Type	Power (w)	Resistance（mΩ）	P (mm)	P0 (mm)	P2 (mm)	D0 (mm)	T1 (mm)	K0 (mm)
2512	2	0.5~4	4.00±0.10	4.00±0.10	2.00±0.10	1.55±0.10	Max. 0.10	$1.3^{+0.20}_{-0.10}$
		5~50	4.00±0.10	4.00±0.10	2.00±0.10	1.55±0.10	Max. 0.10	1.00±0.20
	3	0.5~50	4.00±0.10	4.00±0.10	2.00±0.10	1.55±0.10	Max. 0.10	$1.3^{+0.20}_{-0.10}$

2. Reel Dimensions

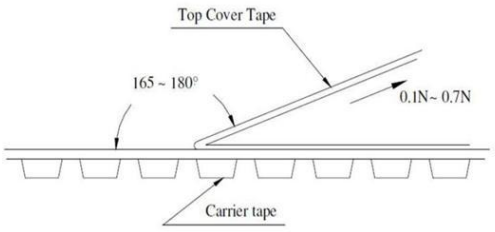


Type	A (mm)	N (mm)	W1 (mm)
2512	178.00±5.00	60.00±2.00	13.00±1.00

3.Quantity of Package

Type	Power (w)	Resistance Range(mΩ)	Quantity(pcs）
2512	2	0.5~4	3000
		5~50	4000
	3	0.5~50	3000

4.Peeling Test



Storage

- The ambient temperature shall between 5℃~30℃.
- The relative humidity recommended for storage is between 25%RH~60%RH.
- 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.