



General

- Chip size from 0805 to 2512
- Resistance value from 1mΩ 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.

Ordering Information

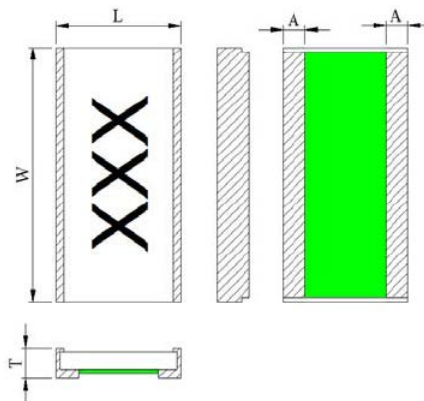
Type	Power Rating at 70°C(W)	Max Overload voltage(V)	Resistance (mΩ)	TCR(ppm/°C)	Resistance tolerance
0805	1	$(P \cdot R)^{1/2}$	$2 \leq R \leq 9$	±100	±1%(F)
			$10 \leq R \leq 50$	±50	±0.5%(D), ±1%(F)
1206	1.5		$1 \leq R \leq 9$	±100	±1%(F)
			$10 \leq R \leq 50$	±50	±0.5%(D), ±1%(F)
2512	3		$1 \leq R \leq 9$	±100	±1%(F)
			$10 \leq R \leq 50$	±50	±0.5%(D), ±1%(F)

Catalog Symbol

SME **25** **A** **3** **F** **R002** **I**
【1】 **【2】** **【3】** **【4】** **【5】** **【6】** **【7】**

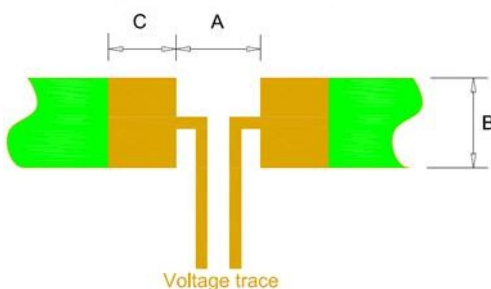
- 【1】 Series Name: SART Metal Foil Long Electrode Type**
- 【2】 Chip size: 08:0805 12:1206 25:2512**
- 【3】 Material Code: A:Alloy**
- 【4】 Power Code: 3:3W 1:1W B:1.5W**
- 【5】 Resistance Tolerance: D: ±0.5% F: ±1%**
- 【6】 Resistance Code: R002=2 mΩ**
- 【7】 Packaging Code: T:Tape& Reel B: Bulk Pack**

Dimensions



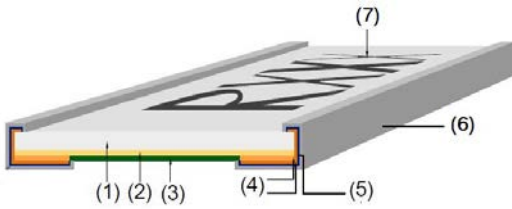
Type	Resistance (mΩ)	W (mm)	L(mm)	T (mm)	A (mm)
0805	2	2.10±0.20	1.35±0.20	0.65±0.20	0.45±0.20
	3~50	2.10±0.20	1.35±0.20	0.65±0.20	0.45±0.20
1206	1	3.30±0.20	1.70±0.20	0.65±0.20	0.55±0.30
	2~4	3.30±0.20	1.70±0.20	0.65±0.20	0.40±0.20
	5~50	3.30±0.20	1.70±0.20	0.65±0.20	0.40±0.20
2512	1	6.40±0.30	3.20±0.30	0.65±0.20	0.60±0.20
	2~50	6.40±0.30	3.20±0.30	0.65±0.20	0.60±0.20

Recommended Land Patterns



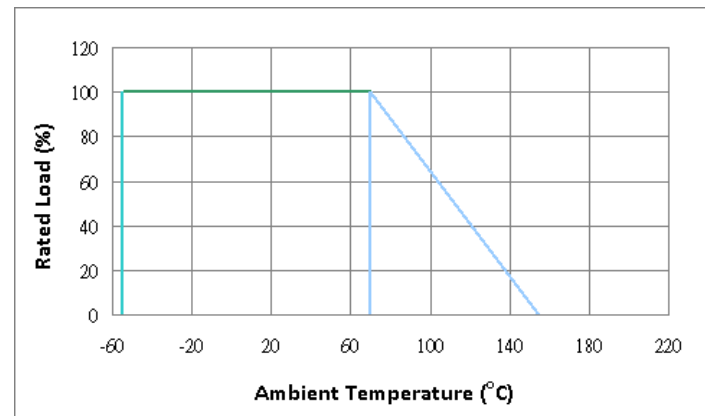
Type	Resistance (mΩ)	A(mm)	B(mm)	C(mm)
0805	2	0.6	2.3	1.1
	3~50	0.6	2.3	1.1
1206	1	0.5	3.68	1.35
	2~4	0.6	3.68	1.30
	2~50	0.6	3.68	1.30
2512	1	1.40	7.25	2.35
	2~50	1.40	7.25	2.35

Materials



1	Ceramic substrate	5	Nickel
2	Alloy	6	Tin
3	Protective coating	7	Marking
4	Copper		

Power Derating Curve



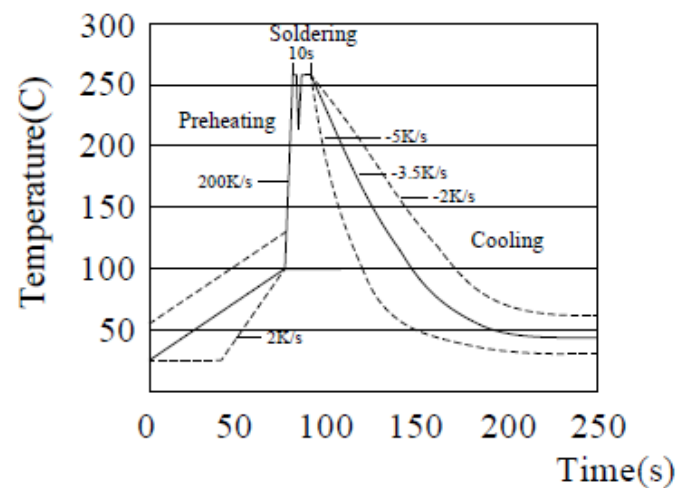
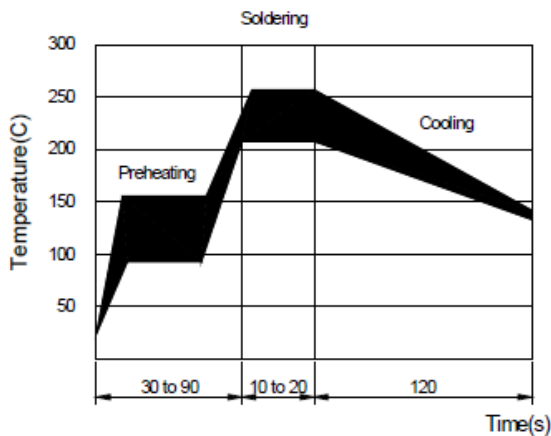
Recommended Solder Curve

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.

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.



3. Hand Soldering

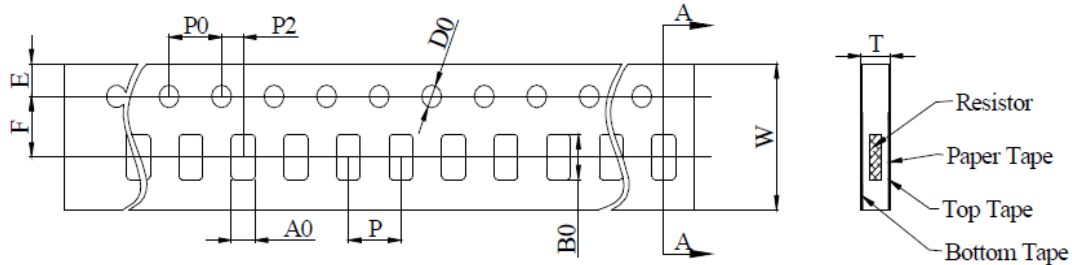
Temperature: 350°C
Time: 5sec Max.

Reliability Test

Item	Test condition / Methods	Performance	Standard
Short Time Overload	P= 2.5Pr; T=25±2°C , t = 5sec.	$ \Delta R \leq \pm(1\% + 0.5 \text{ m}\Omega)$	IEC 60115-1 4.13
Temperature Coefficient of Resistance (TCR)	$\text{TCR} = \frac{(R - R_0)}{R_0} \frac{(T_2 - T_1)}{T_1} \times 10^6$ Test temperature: +25°C ~ +125°C	Refer to SART Spec	IEC 60115-1 4.8.4.2
Thermal Shock	[-55°C 30min. → R.T. 3min. → +150°C 30min. → R.T. 3min], 100Cycles	$ \Delta R \leq \pm(1\% + 0.5 \text{ m}\Omega)$	IEC 60115-1 4.19
Resistance to Solder Heat	265°C±5°C, 20sec±1sec	$ \Delta R \leq \pm(1\% + 0.5 \text{ m}\Omega)$	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"	$ \Delta R \leq \pm(2\% + 0.5 \text{ m}\Omega)$	IEC 60115-1 4.25
Moisture Load Life (60°C、95%RH)	Vtest = Vmax ; T=60±2°C ; RH=95% ; t= 90min ON , 30min OFF , 1000h	$ \Delta R \leq \pm(2\% + 0.5 \text{ m}\Omega)$	IEC 60115-1 4.24
Bending test	Bending width 2mm, Epoxy thickness 1.6mm, Fulcrums distance 90mm	$ \Delta R \leq \pm(1\% + 0.5 \text{ m}\Omega)$	IEC 60115-1 4.33
High Temp. Exposure	T = +170±2°C ; t = 1000h	$ \Delta R \leq \pm(1\% + 0.5 \text{ m}\Omega)$	IEC60115-1 4.25
Low Temp. Storage	T = -55±2°C ; t = 1000h	$ \Delta R \leq \pm(1\% + 0.5 \text{ m}\Omega)$	IEC60115-1 4.25
Mechanical Shock	a =100G , t =11ms, 5 times shock	$ \Delta R \leq \pm(1\% + 0.5 \text{ m}\Omega)$	IEC60115-1 4.21

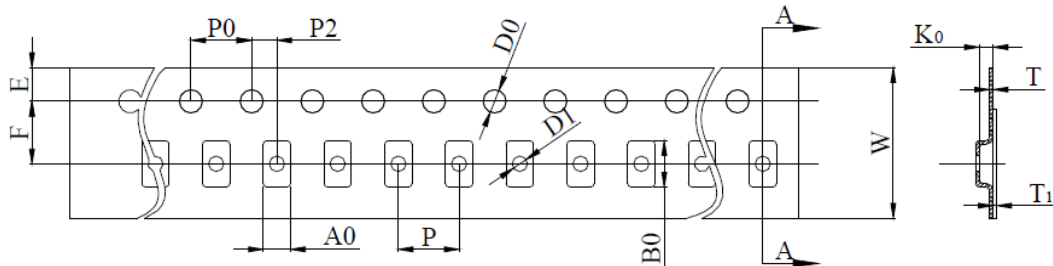
Packaging

1. Tape Packaging Dimensions For 0805:



A0(mm)	B0(mm)	W(mm)	F(mm)	E(mm)	P(mm)
1.68±0.20	2.38±0.20	8.00±0.30	3.50±0.10	1.75±0.10	4.00±0.10
P2(mm)	P0(mm)	D0(mm)	T(mm)		
2.00±0.10	4.00±0.10	1.50±0.10	0.87±0.20		

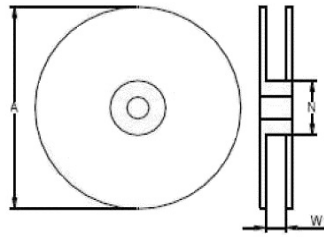
For 1206/2512:



Type	A0(mm)	B0(mm)	W(mm)	F(mm)	E(mm)	P(mm)
1206	2.05±0.20	3.65±0.20	8.00±0.30	3.50±0.10	1.75±0.10	4.00±0.10
	P2(mm)	P0(mm)	D0(mm)	T(mm)	T1(mm)	K0(mm)
	2.00±0.10	4.00±0.10	1.50±0.10	0.20±0.10	Max. 0.1	0.85±0.20

Type	A0(mm)	B0(mm)	W(mm)	F(mm)	E(mm)	P(mm)
2512	3.40±0.20	6.75±0.20	12.00±0.30	5.50±0.10	1.75±0.10	4.00±0.10
	P2(mm)	P0(mm)	D0(mm)	T(mm)	T1(mm)	K0(mm)
	2.00±0.10	4.00±0.10	1.50±0.10	0.25±0.10	Max. 0.1	1.00±0.20

2. Reel Dimensions



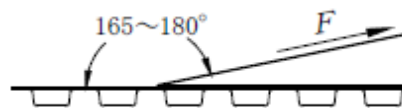
Type	A(mm)	N(mm)	W1(mm)
0805	178±5	60±2	9.0±1
1206	178±5	60±2	9.0±1
2512	178±5	60±2	13.0±1

Number of Package

Type	Quantity(PCS)
0805	5000
1206	5000
2512	4000

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.