

General

- Chip size from 0805 to 2512
- Resistance value from 5mΩ to 200mΩ
- Low thermal EMF.
- Low TCR.
- Lead free, RoHS compliant for global applications and halogen free

Certificate Information

Certificate	File Number
ISO9001:2008	J13Q20625R1M
ISO14001:2004	J13E20626R1M
ISO/TS16949:2009	0181329

Application

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

Ordering Information

Type	Power Rating at 70°C(W)	Resistance Range(mΩ)	TCR (PPM/°C)	Resistance tolerance	Operation Temp. Range
0805	0.5	$5 \leq R \leq 9$	±100	±0.5%(D) ±1%(F) ±2%(G) ±5%(J)	-55°C~+170°C
		$10 \leq R \leq 30$	±50		
1206	0.5	$5 \leq R \leq 50$	±50		
	1.0				
2512	1.0	$10 \leq R \leq 200$	±50		
	2.0				

Remark:

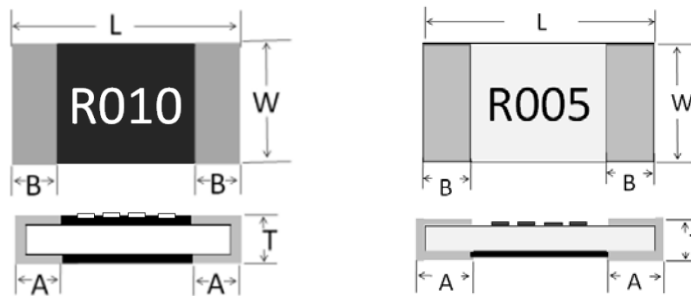
- 0.5 W with total solder pad trace size of 100 mm².
- 1.0 W with total solder pad trace size of 200 mm².
- 2.0 W with total solder pad trace size of 300 mm².

Catalog Symbol

SMF **25** **M** **2** **F** **R010** **I**
【1】 **【2】** **【3】** **【4】** **【5】** **【6】** **【7】**

- 【1】 Series Name: SART Metal Foil Type**
- 【2】 Chip size: 08:0805 12:1206 25:2512**
- 【3】 Material Code: N: Ni-Cu M:Mn-Cu**
- 【4】 Power Code: A :0.5W 1:1W 2:2W**
- 【5】 Resistance Tolerance: D:±0.5% F:±1% G:±2% J:±5%**
- 【6】 Resistance Code: R010=10mΩ**
- 【7】 Packaging Code: T: Tape & Reel B: Bulk Pack**

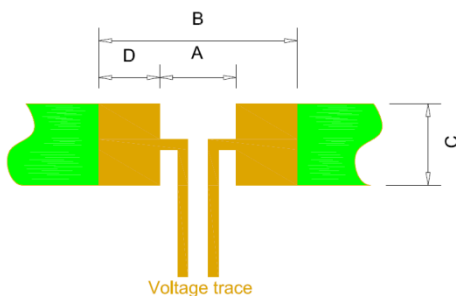
Dimensions



Type	L(mm)	W(mm)	T(mm)	A(mm)	B(mm)
0805*	2.10±0.20	1.30±0.15	0.75±0.15	0.40±0.20	0.40±0.20
1206	3.20±0.20	1.60±0.15	0.75±0.15	0.50±0.20	0.50±0.20
2512	6.40±0.20	3.20±0.15	0.75±0.15	0.90±0.20	0.90±0.20

* 5mΩ ≤ R ≤ 9mΩ no upper black coating

Recommended Land Patterns

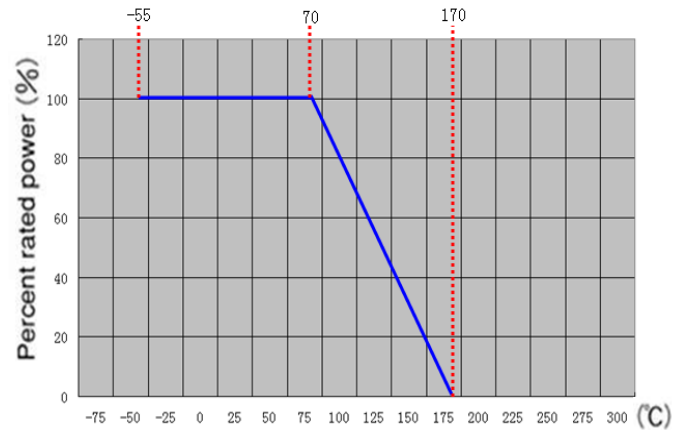


Type	A(mm)	B(mm)	C(mm)	D(mm)
0805	0.80	3.20	1.40	1.20
1206	1.80	4.40	1.80	1.30
2512	3.80	8.00	3.40	2.10

Materials

Substrate	Element	Terminations
Ceramic	Mn-Cu or Ni-Cu	Cu/Ni/Sn

Power Derating Curve



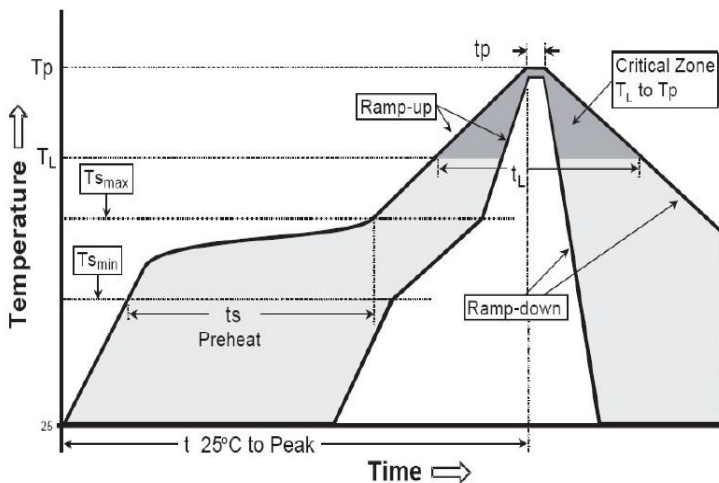
Recommended Solder Curve

1. Infrared Reflow

Temperature: 260°C

Time: 5sec Max.

Recommend Reflow profile:



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate ($T_{s_{max}}$ to T_p)	3°C/s Max.
Preheat Temperature Min ($T_{s_{min}}$)	150°C
Preheat Temperature Max ($T_{s_{max}}$)	200°C
Preheat Time ($T_{s_{min}}$ to $T_{s_{max}}$)	60sec~120sec
Peak Temperature (T_p)	260°C
Time within 5°C of actual Peak Temperature (T_p)	5sec
Melting tin time (T_L)	20sec~30sec
Ramp-Down Rate	6°C/s Max.
Time 25°C to Peak Temperature	8 minutes Max.

2. Wave soldering

Reservoir Temperature : 260°C

Time in Reservoir : 10sec Max.

3. Hand Soldering

Temperature : 350°C

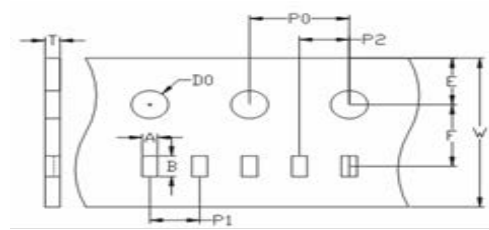
Time : 5sec Max.

Reliability Test

Item	Test condition / Methods	Performance	Standard
Short Time Overload	0.5W:5X rated power for 5 sec 1.0W:5X rated power for 5 sec 2.0W:4X rated power for 5 sec	$ \Delta R \leq \pm(1\%+0.5m\Omega)$	JIS C 5201 4.13
Temperature Coefficient of Resistance (T.C.R.)	$TCR = (R-R_0)/R_0(T_2-T_1) \times 10^6$ T1 T2 Test temperature: 25°C~125°C	Refer to SART Spec	JIS C 5201 4.8
Load Life	1000 hours at rated power, 70°C±2°C, 1.5hours "ON", 0.5hour "OFF"	$ \Delta R \leq \pm(1\%+0.5m\Omega)$	JIS C 5201 4.25
Bias Humidity	40°C±2°C, 90%~95% RH, 1,000 hours at rated power, 1.5 hours On, 0.5 hours Off	$ \Delta R \leq \pm(1\%+0.5m\Omega)$	JIS C 5201 4.24
Thermal Shock	-55°C(15min.)/+155°C (15min.), 5 cycle	$ \Delta R \leq \pm(1\%+0.5m\Omega)$	JIS C 5201 4.19
Solderability	245°C ± 5°C, 3sec ± 0.5sec	95% coverage Min.	JIS C 5201 4.17
Resistance to Soldering Heat	260°C±5°C, 10sec ± 0.5sec	$ \Delta R \leq \pm(1\%+0.5m\Omega)$	JIS C 5201 4.18
High temperature Exposure	125°C±3°C for 1000 hours	$ \Delta R \leq \pm(1\%+0.5m\Omega)$	JIS C 5201 4.23
Bending test	Bending width 2mm, Epoxy thickness 1.6mm, Fulcrums distance 90mm	$ \Delta R \leq \pm(1\%+0.5m\Omega)$	JIS C 5201 4.33

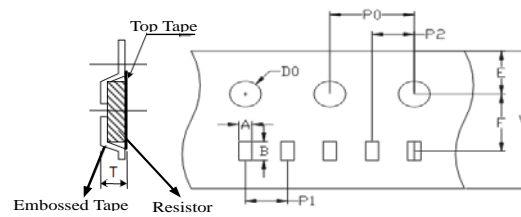
Packaging

1. Paper Tape Dimensions



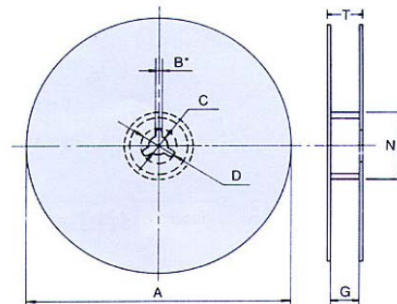
Type	A(mm)	B(mm)	E(mm)	F(mm)	W(mm)	P0(mm)	P1(mm)	P2(mm)	D0(mm)	T(mm)
0805	1.60±0.10	2.40±0.10	1.75±0.10	3.50±0.05	8.00±0.20	4.00±0.10	4.00±0.10	2.00±0.05	1.55±0.05	0.97±0.10
1206	2.00±0.10	3.60±0.10	1.75±0.10	3.50±0.05	8.00±0.20	4.00±0.10	4.00±0.10	2.00±0.05	1.55±0.05	0.97±0.10

2. Embossed Tape Dimensions



Type	A(mm)	B(mm)	E(mm)	F(mm)	W(mm)	P0(mm)	P1(mm)	P2(mm)	D0(mm)	T(mm)
2512	3.50±0.10	6.80±0.10	1.75±0.10	5.50±0.05	12.00±0.20	4.00±0.05	4.00±0.10	2.00±0.05	1.50±0.10	1.00±0.20

3. Reel Dimensions

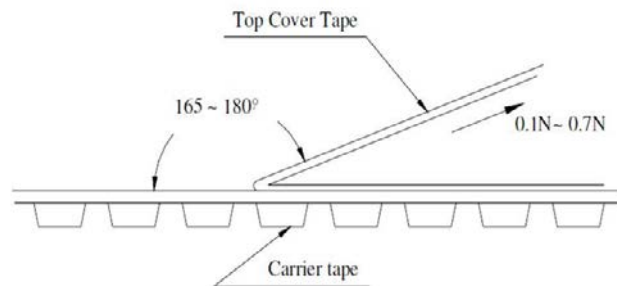


Type	A(mm)	N(mm)	C(mm)	D(mm)	B(mm)	G(mm)	T(mm)
2512	178.00±2.00	60.00±0.50	13.00±0.50	20.00Min.	2.00±0.50	13.80±1.50	16.7Max.
1206 0805	178.00±2.00	60.00±0.50	13.00±0.50	20.00Min.	2.00±0.50	10.00±1.50	14.9Max.

Number of Package

Packaging style	Tape and Reel		
Type	0805	1206	2512
Quantity(PCS)	5000	5000	4000

Peeling Test



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.

单击下面可查看定价，库存，交付和生命周期等信息

[>>SART\(萨特\)](#)