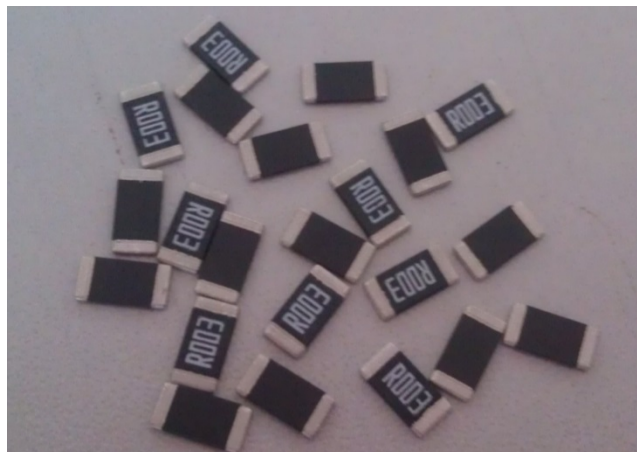




General

- High power rating.
- Low inductance 0.5nH to 5nH.
- Low TCR.
- Compatible with RoHS & 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)	Max Overload voltage(mV)	Resistance (mΩ)	TCR(ppm/°C)	Resistance tolerance	Operating Temperature
2512	2.0	154	3	±100	±1%(F)	-55°C~+170°C

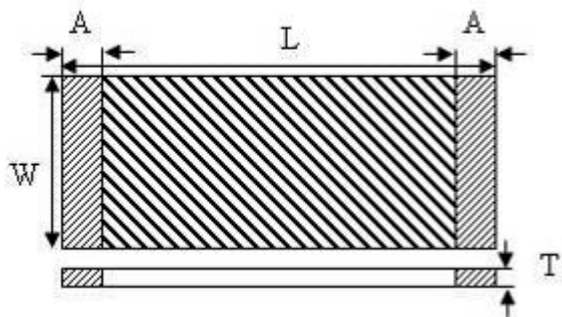
Power testing with total solder-pad and trace size of 200 mm²

Catalog Symbol

SM 25 N 2 E R003 I
【1】 **【2】** **【3】** **【4】** **【5】** **【6】** **【7】**

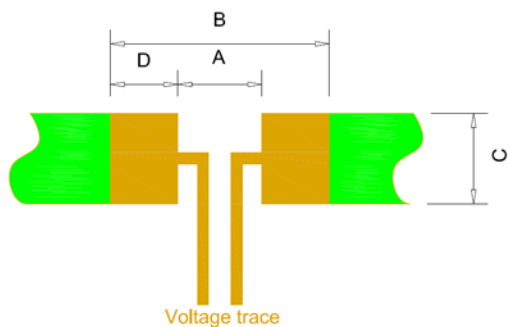
- 【1】 Series Name: SART Metal Strip Type**
- 【2】 Chip size: 25:2512**
- 【3】 Material Code: N:Ni-Cu**
- 【4】 Power Code: 2:2W**
- 【5】 Resistance Tolerance: F: $\pm 1\%$**
- 【6】 Resistance Code: R003=3 m Ω**
- 【7】 Packaging Code: T:Tape& Reel**

Dimensions



Type	L (mm)	W(mm)	T (mm)	A (mm)
2512	6.35 ± 0.20	3.20 ± 0.20	0.60 ± 0.20	0.80 ± 0.20

Recommended Land Patterns

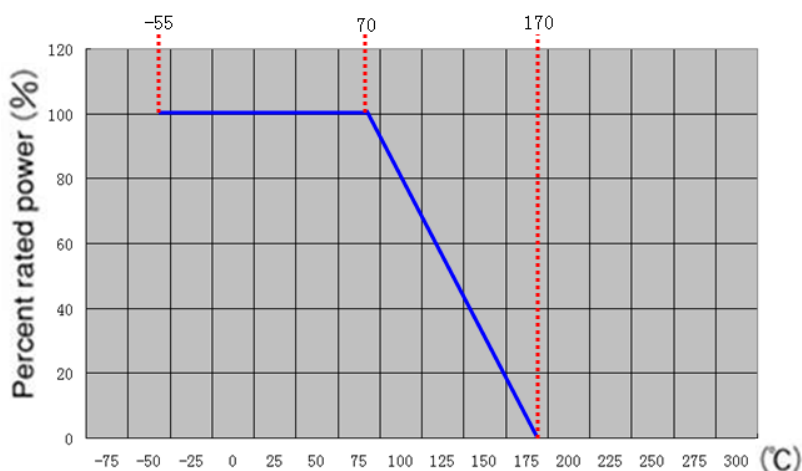


Type	A(mm)	B(mm)	C(mm)	D(mm)
2512	3.8	8.0	3.4	2.1

Materials

Element	Terminations
Ni-Cu	Cu/Ni/Sn

Power Derating Curve



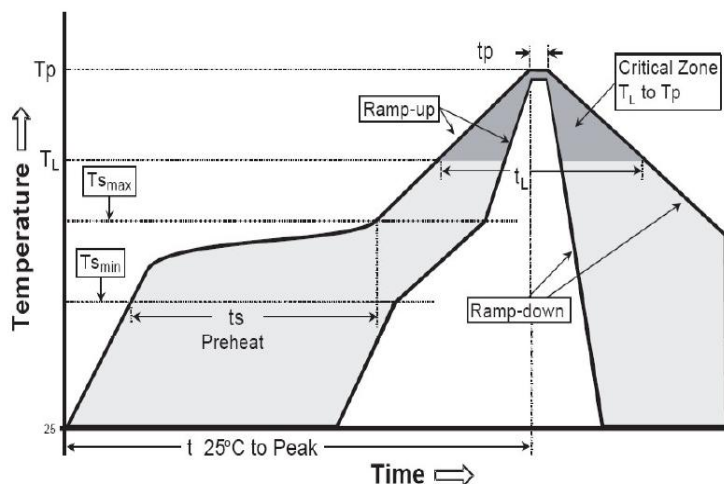
Recommended Solder Curve

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($T_{s_{min}}$) Temperature Max($T_{s_{max}}$) Time($T_{s_{min}}$ to $T_{s_{max}}$)	150°C 200°C 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

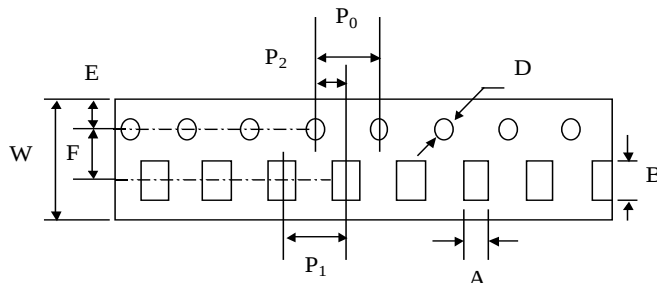
Time: 5sec Max.

Reliability Test

Item	Test condition / Methods	Performance	Standard
Short Time Overload	5X rated power for 5 sec	$ \Delta R \leq \pm(1\%R + 0.1 \text{ m}\Omega)$	IEC 60115-1 4.13/ JIS C 5201 4.13
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/ JIS C 5201 4.8
Thermal Shock	-55°C (15min.) / +155°C (15min.), 5 cycles	$ \Delta R \leq \pm(1\%R + 0.5 \text{ m}\Omega)$	IEC 60115-1 4.19/ JIS C 5201 4.19
Resistance to Solder Heat	260°C ± 5°C, 10sec ± 0.5sec	$ \Delta R \leq \pm(1\%R + 0.1 \text{ m}\Omega)$	IEC 60115-1 4.18/ JIS C 5201 4.18
Insulation Resistance	100V ± 15V DC	≥ 1000MΩ	IEC 60115-1 4.6.1.1/ JIS C 5201 4.6
Solderability	245°C ± 5°C, 3sec ± 0.5sec	95% coverage Min.	IEC 60115-1 4.17/ JIS C 5201 4.17
Load Life	1000 hours at rated power, 70°C ± 2°C, 1.5hours "ON", 0.5hour "OFF"	$ \Delta R \leq \pm(1\%R + 0.5 \text{ m}\Omega)$	IEC 60115-1 4.25.1/ JIS C 5201 4.25
Damp heat, Steady state	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\%R + 0.5 \text{ m}\Omega)$	IEC 60115-1 4.24/ JIS C 5201 4.24
Bending test	Bending width 2mm, Epoxy thickness 1.6mm, Fulcrums distance 90mm	$ \Delta R \leq \pm(1\%R + 0.5 \text{ m}\Omega)$	IEC 60115-1 4.33/ JIS C 5201 4.33

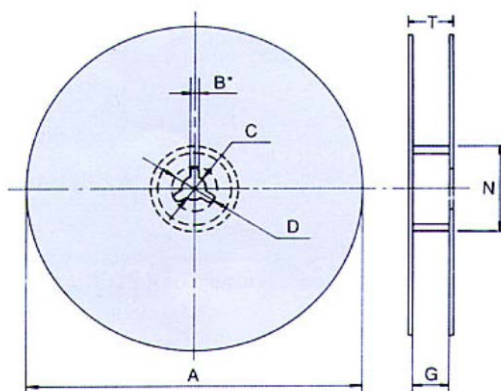
Packaging

1. Tape Packaging Dimensions



Type	A(mm)	B(mm)	W(mm)	F(mm)	E(mm)	P1(mm)	P2(mm)	P0(mm)	D(mm)
2512	3.50±0.20	6.75±0.20	12.00±0.30	5.50±0.05	1.75±0.10	4.00±0.10	2.00±0.05	4.00±0.10	1.50+0.10/-0

2. Reel Dimensions

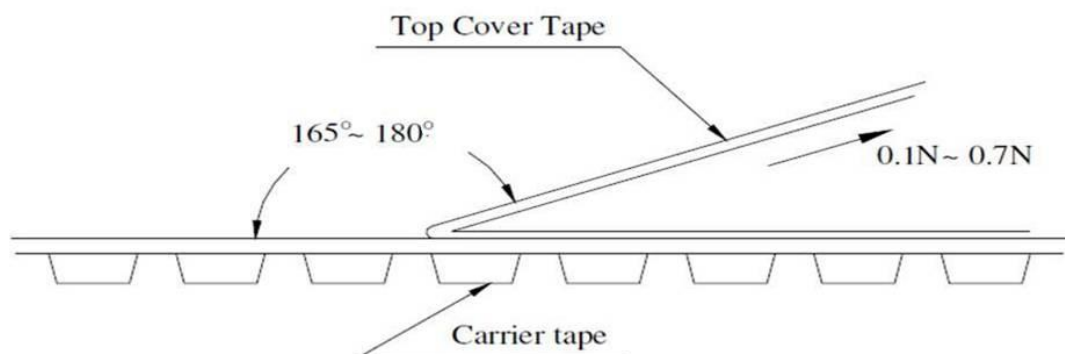


Type	A(mm)	N(mm)	C(mm)	D(mm)	B(mm)	G(mm)	T(mm)
2512	178.00±2.00	60.00±0.50	13.00±0.50	20.00Min.	2.00±0.50	13.80±1.50	16.70Max.

Number of Package

Packaging style	Tape and Reel
Type	2512
Quantity(PCS)	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.