


General

- High inrush current withstanding capability
- 6.4mm×3.2mm physical size
- Thick film manufacturing method, ceramic substrate, Silver Alloy fusing element
- -50℃~125℃ operating temperature
- Excellent environmental integrity
- RoHS compliant
- Halogen-free

Agency / Certificate Information

Agency	File Number	Ampere Range
	JDYX2.E319512	1A
	JDYX8.E319512	1A

Application

- LED lighting
- PC related equipment and peripherals (Hard Driver, Printer, etc.)
- Portable devices (Mobile phone, PDA battery Charger, etc.)
- Power supply
- Consumer Electronics
- Wireless base station

Ordering Information

Part Number	Marking	Current Rating (A)	Voltage Rating	Interrupting Rating	Max Cold DCR* (Ω)	Typical I ² T** (A ² S)
S2512-V2-1.0A	H	1.0	250V AC	100A@250 V AC 100A@125 V DC	0.300	1.0

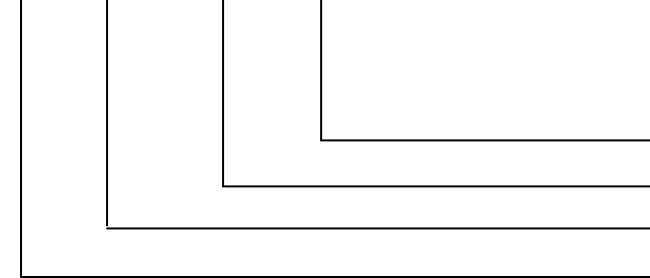
* Measured at ≤10% rated current and 25℃

** Melting I²T at 10 times of rated current

*** Fuse mounted on board with 1-oz Cu trace

Catalog Symbol

S 2512-V2-1.0A



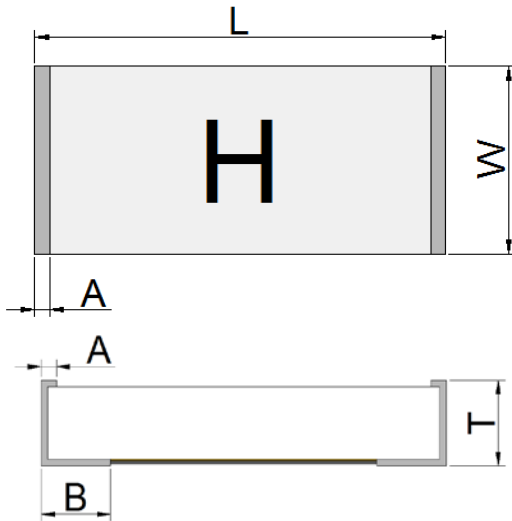
“1.0A” Ampere Rating: 1A

“V2” V = fast acting, 2=250V ac

“2512” Size Number: 2512=6.4mm×3.2mm physical size

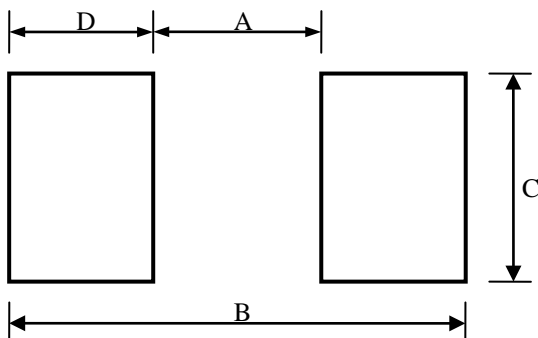
“S” Symbol of SART

Dimensions



L(mm)	W(mm)	T(mm)	B(mm)
6.40±0.20	3.25±0.20	0.55±0.20	0.85±0.20

Recommended Land Patterns



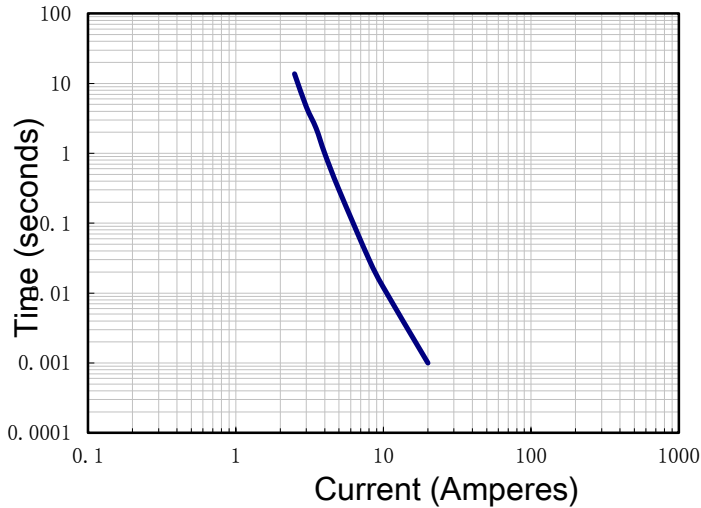
Materials

Components	Material
Substrate	Ceramic
Terminations	Silver over-plated with nickel and tin (100%)
Element	Silver Alloy

Dimensions	A(mm)	B(mm)	C(mm)	D(mm)
Spec	4.50±0.50	8.50±0.50	3.50±0.50	2.00±0.50

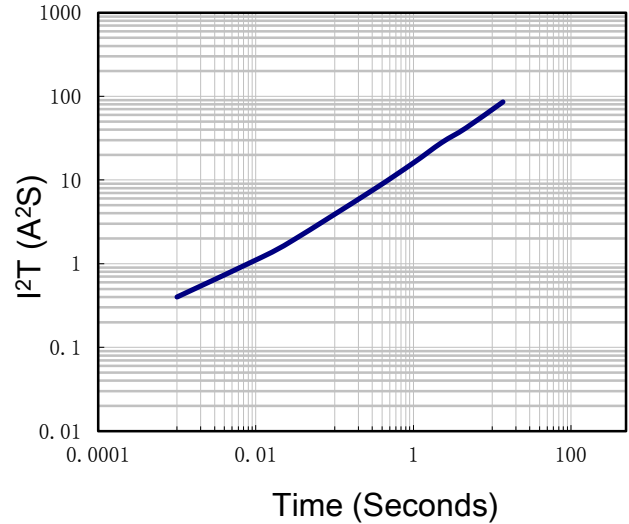
Time Current Curve

Time Current Curves



I²T vs Time Curve

I²T vs Time Curve



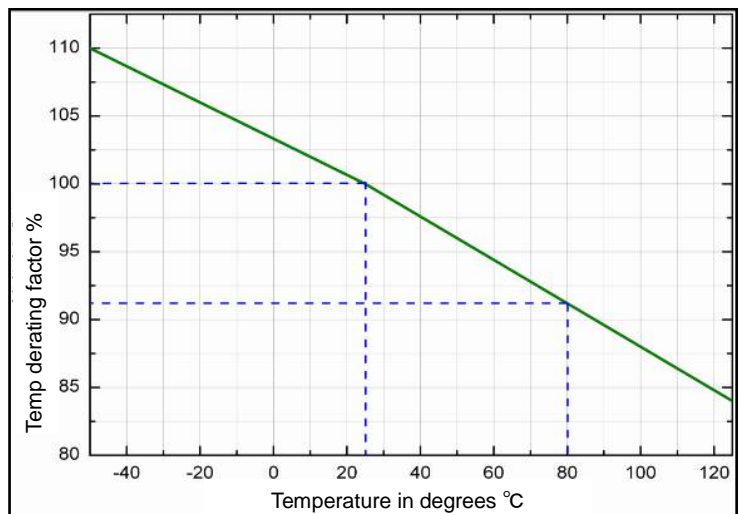
Electrical Characteristics

Ampere Rating	% of Current Rating	Opening Time
1A	100%	>4 hours
1A	350%	≤10sec

Temperature Derating Curve

- The current carrying capacity will be affected by ambient temperature which was showed in the figure.
- This current derating curve is for fusing characteristics.

Example,
Work Temp:80°C,
Temp derating factor = 91%
 $I_{actual} = I_{normal} / 0.91$

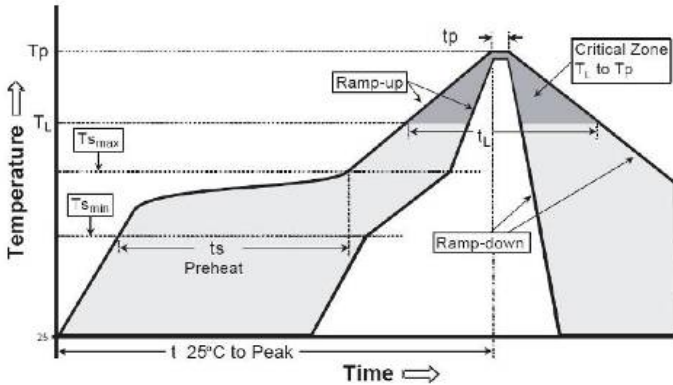


Reliability Test

Item	Test condition/ Methods	Performance	Standard
Voltage Drop	100% In; Temperature in fuse was stabilized	Individual values deviate from mean value:<15%	IEC 60127-1
Time/Current	100% In	No Fusing;4hours Min.	Refer to SART Spec
	350% In	Within 10sec	
	1000% In	>10ms	
Endurance Test	100% In, 1h on,15min off, 100 cycles; followed by 1h at 125%In	$ \Delta R < 10\%$ Legible appearance	IEC 60127-1
Temperature Rise	100%In	$ \Delta T < 75^{\circ}\text{C}$	UL248-14
Interrupting Ability	100A@250V AC 100A@125V DC	Without permanent arcing, ignition and bursting of fuse link	UL248-14 IEC60127-7
Solderability	$240^{\circ}\text{C} \pm 5^{\circ}\text{C}$, 3sec ± 0.5 sec	95% coverage Min.	IEC60127-4 IEC60068-2-20 MIL-STD-202
Resistance to Soldering	$260^{\circ}\text{C} \pm 5^{\circ}\text{C}$, 10sec ± 0.5 sec	$ \Delta R < 10\%$ Legible appearance	MIL-STD-202 IEC60127-4
Bending Test	Distance between holding points: 90mm; Bending: 1mm ; time:10sec	$ \Delta R < 10\%$ No mechanical damages	IEC 60127-4
High Temperature Operating Life	$70^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 96hours, at 60% In	$ \Delta R < 10\%$; no fusing	MIL-STD-202 M1243.ethod 108
Low Temperature Storage	$-55^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 96hours	$ \Delta R < 10\%$	IEC60068-2-1
High Temperature Storage	$125^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 96hours	$ \Delta R < 10\%$	IEC60068-2-2
Humidity (steady state)	$40^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 90%~95%RH, 1000 hours	$ \Delta R < 10\%$	MIL-STD-202 Method 103
Salt Spray	5% salt solution, 48hoursexposure	$ \Delta R < 10\%$ Legible appearance	MIL-STD-202 Method 101
Thermal Shock	5 cycles between $-55^{\circ}\text{C}/+125^{\circ}\text{C}$, 60 minutes ;each extreme	$ \Delta R < 10\%$ No mechanical damages	IEC 60068-2-14

Recommended Solder Curve

1. Infrared Reflow:
Temperature : 260°C
Time : 5sec Max.
Recommend Reflow profile



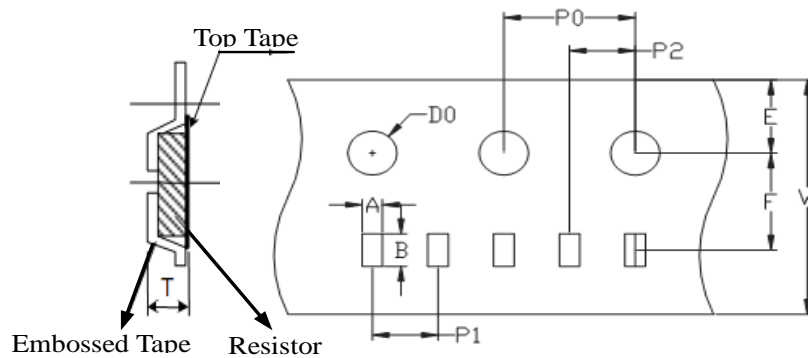
Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate ($T_{s_{max}}$ to T_p)	3°C/s Max.
Preheat Temperature Min ($T_{s_{min}}$)	150°C
Temperature Max ($T_{s_{max}}$)	200°C
Time ($T_{s_{min}}$ to $T_{s_{max}}$)	60sec~120sec
Peak Temperature (T_p)	260°C
Time within 5°C of actual Peak Temperature (T_p)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

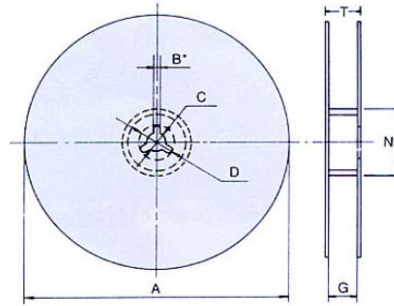
Packaging

1. 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	3.40±0.10	6.73±0.10	1.75±0.10	5.50±0.10	12.00±0.10	4.00±0.10	4.00±0.10	2.00±0.05	1.50+0.10/-0	0.81±0.10

2.Reel Dimensions



Type	A(mm)	N(mm)	C(mm)	D(mm)	B(mm)	G(mm)	T(mm)
2512	178.00±2.00	57.00±0.20	13.00±0.50	21.00±0.50	2.00±0.50	13.00±0.50	15.50±1.50

Number of Package

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

Storage

- The ambient temperature shall between 5℃~30℃.
- 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.