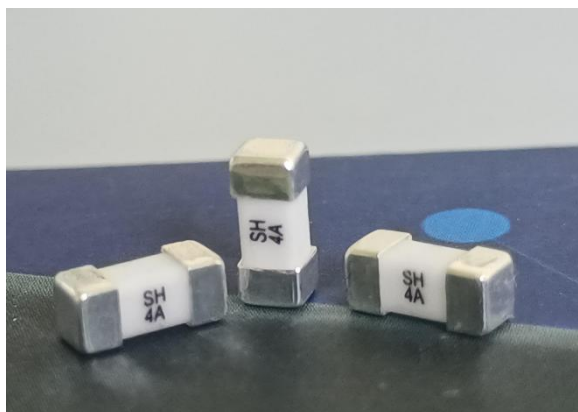




General

- High Inrush withstand capability
- Wire-In-Air performance
- Wide range of current rating available
- 6.1mm× 2.5mm square shape surface mount
- Higher temperature profiles
- -55℃~125℃ operating temperature
- Excellent environmental integrity
- Halogen-free

Agency / Certificate Information

Agency	File Number	Ampere Range
	E319512	0.5A~5A

Application

- Battery pack
- Power supply
- PC & PC peripherals
- PC server
- Wireless basestation
- Industrial equipment
- Telecom system
- LCD monitor and modules
- Medical equipment

Electrical Specifications

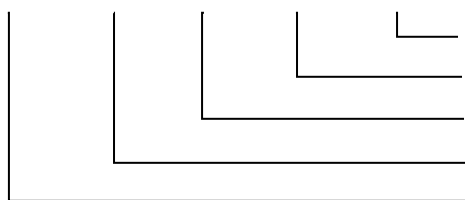
Part Number	Current Rating (A)	Voltage Rating (V)	Interrupting Rating (V)	Typical Cold DCR* (mΩ)	Typical I ² T** (A ² sec)
S6125-H-0.5A G	0.5	125	UL 50A 125V AC 50A 125V DC	250.0	0.312
S6125-H-1.0A G	1	125		115.0	3.12
S6125-H-1.25A G	1.25	125		85.0	4.21
S6125-H-1.5A G	1.5	125		78.0	4.98
S6125-H-1.6A G	1.6	125		68.0	5.85
S6125-H-2.0A G	2	125		52.0	7.20
S6125-H-2.5A G	2.5	125		36.0	14.05
S6125-H-3.0A G	3	125		28.0	16.92
S6125-H-3.15A G	3.15	125		24.0	18.68
S6125-H-3.5A G	3.5	125		22.0	21.95
S6125-H-4.0A G	4	125		20.0	32.80
S6125-H-5.0A G	5	125		12.0	37.57

* Measured at ≤10% rated current and 25℃

** Melting I²T at 10 times of rated current

Part Number Information

S 6125—H—4.0A G



“G”: G=Ag Plated Brass Cap,

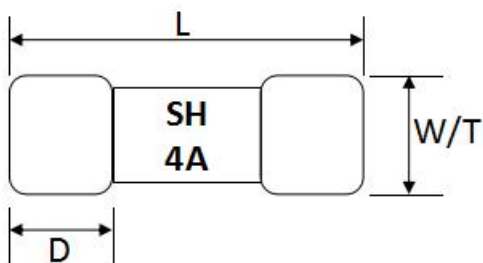
“4.0A” Ampere Rating: 4A

“H” Electrical Characteristic: H=High Inrush

“6125” Size Number

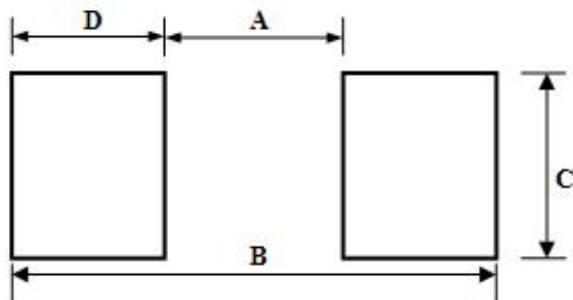
“S” Symbol of SART

Dimensions



Type	L (mm)	W/ T (mm)	D (mm)
S6125	6.10±0.20	2.50±0.10	1.40±0.10

Recommended Land Patterns



Materials

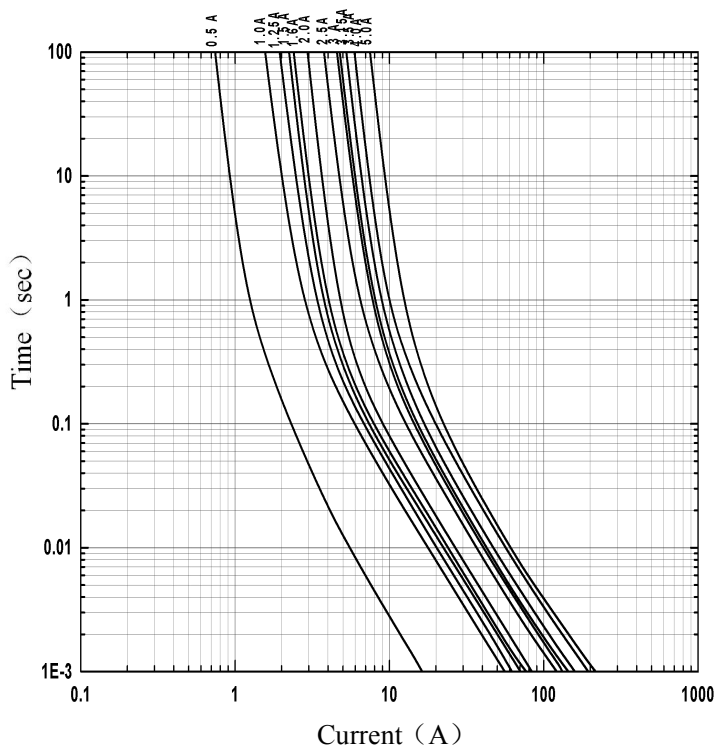
Components	Material
Body	Ceramic
Terminations	Ag Plated Brass Cap
Element	Nickel alloy or Copper Alloy

Type	A(mm)	B(mm)	C(mm)	D(mm)
S6125	3.00±0.30	8.00±0.30	3.00±0.30	2.50±0.30

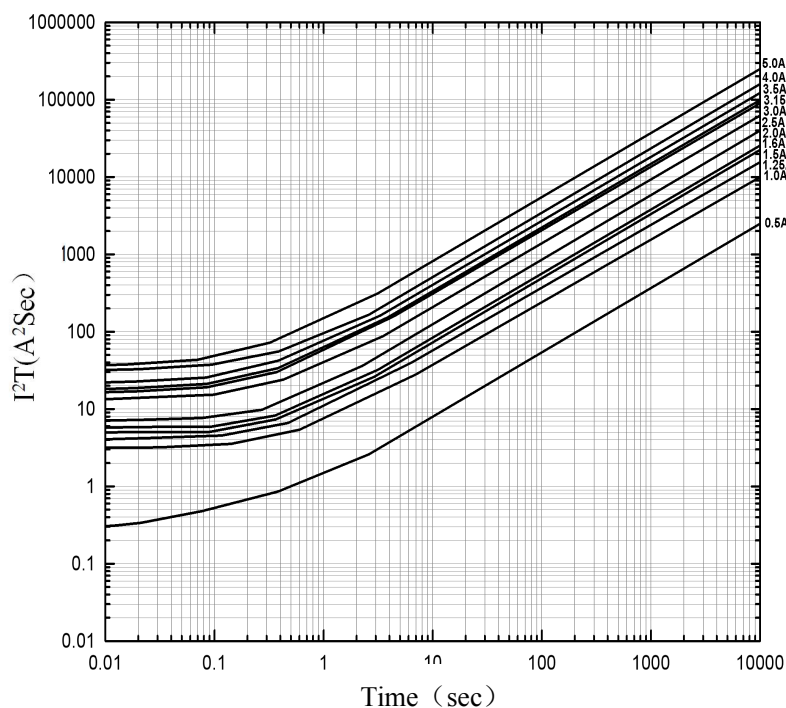
Dimensions of Standard Test Board

Type	Ampere Rating	Board Thickness (mm)	Copper Layer Thickness (mm)	Copper Trace Width (mm)
S6125	0.5A~5A	1.6	0.035	5

Time Current Curve



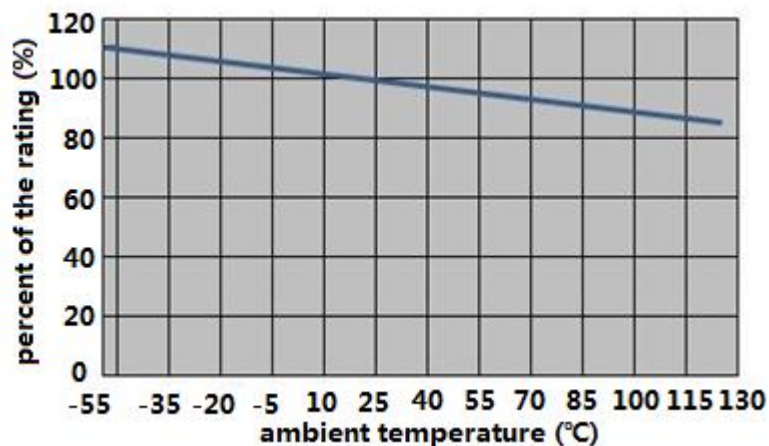
I²T VS Time Curve



Electrical Characteristics

Type	Ampere Rating	% of Current Rating	Opening Time
S6125	0.5A~5A	100	4hours Min.
	0.5A~5A	200	120sec Max.

Temperature Derating Curve



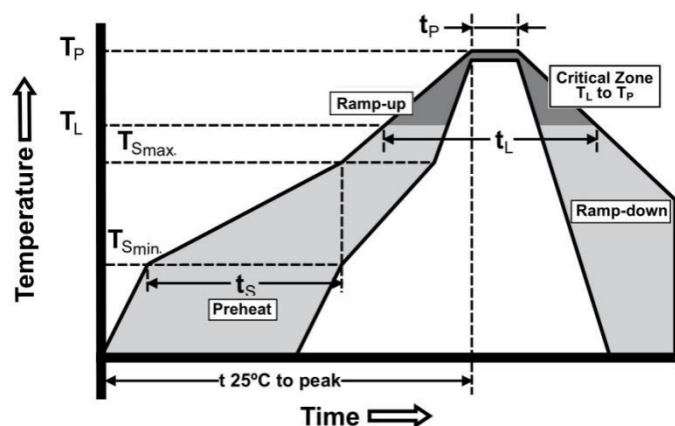
Product Characteristics

Item	Test condition/ Methods	Performance	Standard
Time/Current	100% of current rating	No Fusing, 4hours Min.	UL248-14
	200% of current rating	< 120sec	SART SPEC
	1000% of current rating	>10msec	IEC60127-4
Voltage Drop	100% of current rating	<300mV	IEC-60127-4
Endurance Test	Repeating 100 cycles of 100% of current rating for 1hour "ON", for 15min "OFF", then following by 1hour of 125% of current rating and testing Temperature rise.	$ \Delta R < 10\%$ $\Delta T < 75^{\circ}\text{C}$	IEC-60127-4
Interrupting Ability	50A 125V AC 50A 125V DC	without permanent arcing, ignition and bursting of fuse link	UL248-14 IEC60127-4
Solderability	$240^{\circ}\text{C} \pm 5^{\circ}\text{C}$, 3sec $\pm 0.5\text{sec}$	95% coverage Min.	IEC60127-4 IEC60068-2-20; MIL-STD-202
Resistance to Soldering	$260^{\circ}\text{C} \pm 5^{\circ}\text{C}$, 10sec $\pm 0.5\text{sec}$	$ \Delta R < 10\%$	MIL-STD-202 Method 210
High Temperature Operating Life	$T = 70^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 60% of current rating, 96 hours	$ \Delta R < 10\%$	MIL-STD-202 Method 108
Humidity (Steady State)	$T = 40^{\circ}\text{C} \pm 2^{\circ}\text{C}$, RH=90%~95%, 1000 hours	$ \Delta R < 10\%$	MIL-STD-202 Method 103
Low Temperature Storage	$T = -55^{\circ}\text{C} \pm 3^{\circ}\text{C}$, 96 hours	$ \Delta R < 10\%$	IEC60068-2-1
High Temperature Storage	$T = 125^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 96 hours	$ \Delta R < 10\%$	IEC60068-2-2
Salt Spray	5% salt solution, 48 hours	$ \Delta R < 10\%$	MIL-STD-202 Method 101
Thermal Shock	100 cycles, -65°C to $+125^{\circ}\text{C}$, 30 minutes@each extreme	$ \Delta R < (10\%R + 0.005\Omega)$	IEC 60068-2-14

Recommended Solder Curve

1. Infrared Reflow:

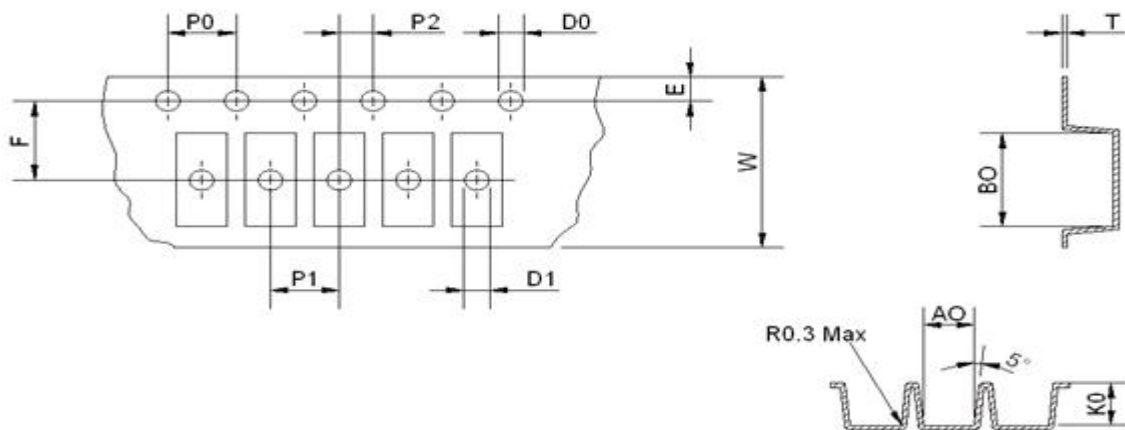
- Temperature: 260℃
- Time: 20sec Max.
- Thickness of solder paste: 0.2mm Max
- Recommend Reflow profile



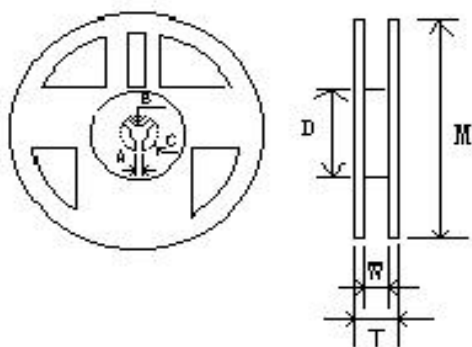
Profile Feature	Pb-Free Assembly
Average Ramp-up Rate(T_{Smax} to T_P)	3°C/sec Max.
Preheat Temperature Min. (T_{Smin}) Temperature Max. (T_{Smax}) Time (T_{Smin} to T_{Smax})	150°C 200°C 60sec~120sec
Peak Temperature(T_P)	260°C
Time within 5°C of actual Peak Temperature(t_P)	20sec
Temperature (T_L)	217°C
Melting tin time(t_L)	60sec~150sec
Ramp-down Rate	6°C/sec Max.
Time 25°C to peak Temperature	8min Max.

Packaging

- 1000 pieces of fuses in emboss taper and reeled on a 178mm(7 inch) reel.



Type	A0(mm)	B0(mm)	K0(mm)	P0(mm)	P1(mm)	P2(mm)
S6125	2.70±0.10	6.40±0.10	2.70±0.10	4.00±0.10	4.00±0.10	2.00±0.10
Type	E(mm)	F(mm)	D0(mm)	D1(mm)	W(mm)	T(mm)
S6125	1.75±0.10	5.50±0.10	1.50±0.10	1.50±0.25	12.00±0.15	0.25±0.05



Type	M(mm)	W(mm)	T(mm)	A(mm)	B(mm)	C(mm)	D(mm)
S6125	178.00±2.00	12.50±1.00	14.50±1.50	2.00±0.50	13.00±0.50	21.00±0.50	58.00±2.00

Storage

- The ambient temperature recommended for storage shall be between 5°C~30°C.
- The relative humidity recommended for storage shall be 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.