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
- RoHS compliant
- Halogen-free

Agency / Certificate Information

Agency	File Number	Ampere Range
c UL us	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^2T** (A^2s)
S6125-H-0.5A	0.5	125	UL 50A 125V AC 50A 125V DC	250.0	0.312
S6125-H-1.0A	1	125		115.0	3.12
S6125-H-1.25A	1.25	125		85.0	4.21
S6125-H-1.5A	1.5	125		78.0	4.98
S6125-H-1.6A	1.6	125		68.0	5.85
S6125-H-2.0A	2	125		52.0	7.20
S6125-H-2.5A	2.5	125		36.0	14.05
S6125-H-3.0A	3	125		28.0	16.92
S6125-H-3.15A	3.15	125		24.0	18.68
S6125-H-3.5A	3.5	125		22.0	21.95
S6125-H-4.0A	4	125		20.0	32.80
S6125-H-5.0A	5	125		12.0	37.57

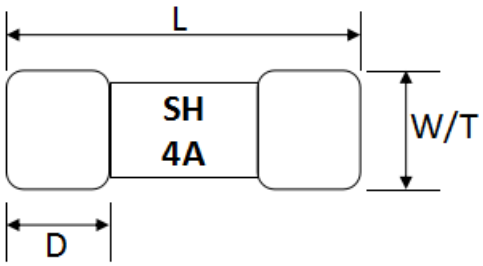
* Measured at≤10% rated current and 25℃
** Melting I^2T at 10 times of rated current

Part Number Information

S 6125–H–4.0A

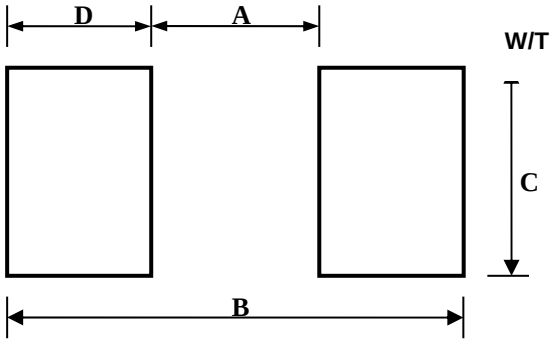
- "4.0A" Ampere Rating: 4A
- "H" Electrical Characteristic: H=High Inrush
- "6125" Size Number
- " S" Symbol of SART

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

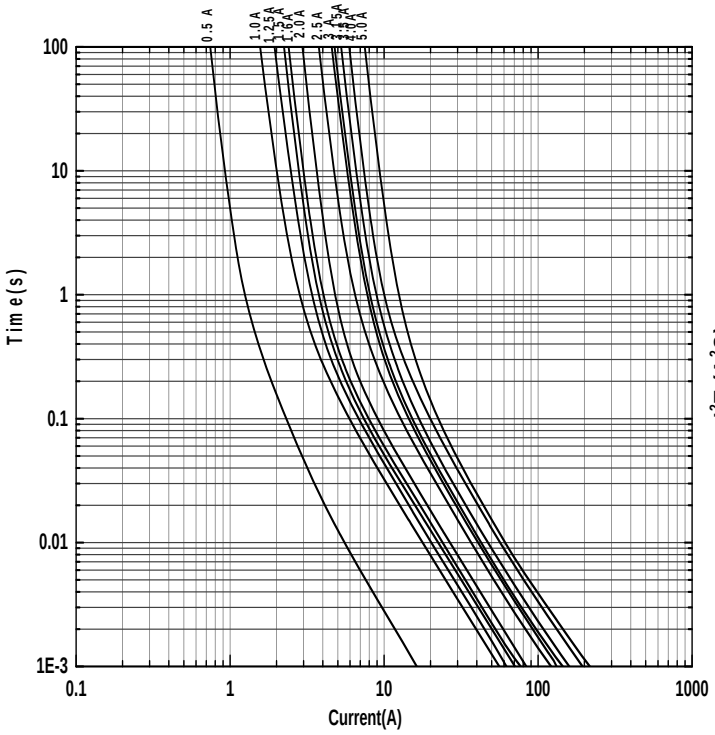
Components	Material
Body	Ceramic
Terminations	Au Plated Brass Cap
Element	Nickel alloy or Copper Alloy

Dimensions	A(mm)	B(mm)	C(mm)	D(mm)
Spec	3.00±0.30	8.00±0.30	3.00±0.30	2.50±0.30

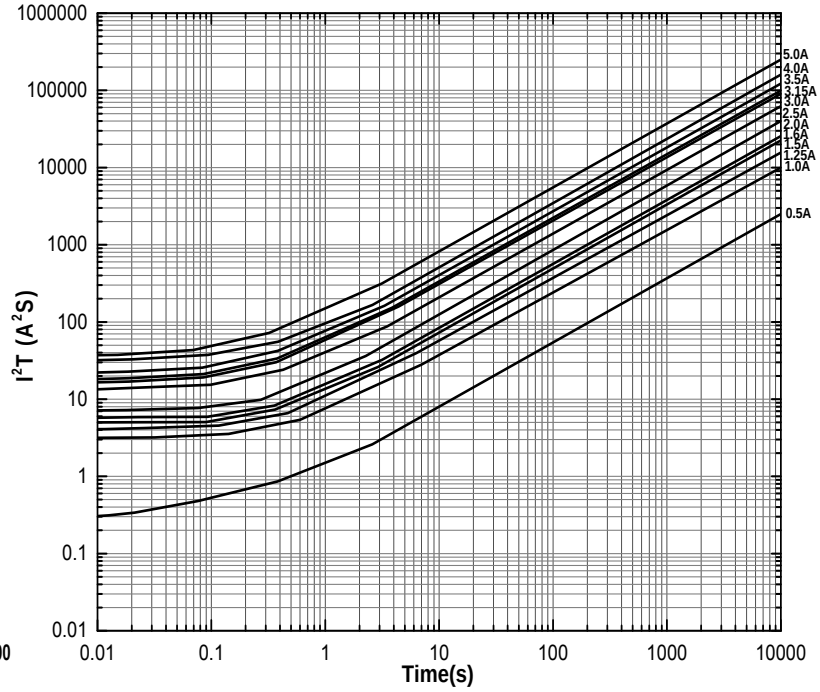
Dimensions of Standard Test Board

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



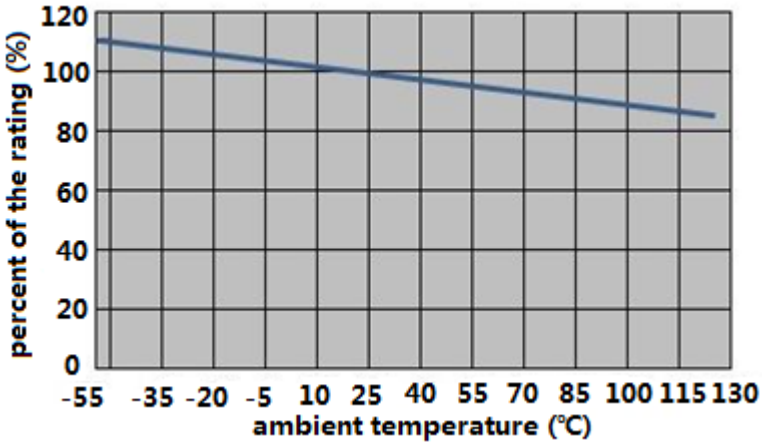
I²T VS Time Curve



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

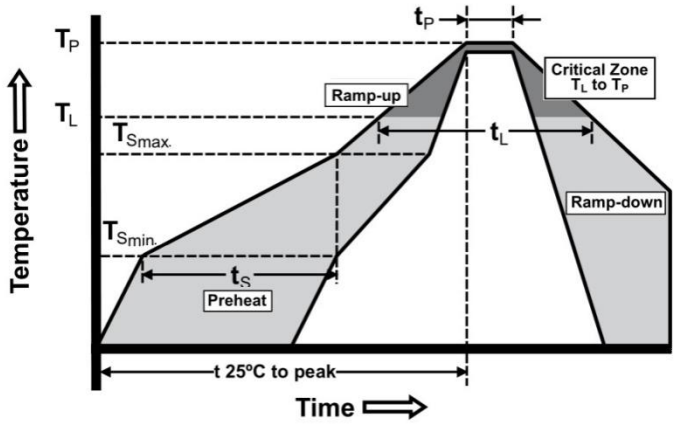


Product Characteristics

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	>10ms	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.	|ΔR|:<10% ΔT<75℃	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℃±5℃, 3sec±0.5sec	95% coverage Min.	IEC60127-4 IEC60068-2-20; MIL-STD-202
Resistance to Soldering	260℃±5℃, 10sec±0.5sec	|ΔR|:<10%	MIL-STD-202 Method 210
High Temperature Operating Life	T=70℃±2℃, 60% of current rating, 96 hours	|ΔR|: <10%	MIL-STD-202 Method 108
Humidity (Steady State)	T=40℃±2℃, RH=90%～95%, 1000 hours	|ΔR|: <10%	MIL-STD-202 Method 103
Low Temperature Storage	T=-55℃±3℃, 96 hours	|ΔR|: <10%	IEC60068-2-1
High Temperature Storage	T=125℃±2℃, 96 hours	|ΔR|: <10%	IEC60068-2-2
Salt Spray	5% salt solution, 48 hours	|ΔR|: <10%	MIL-STD-202 Method 101
Thermal Shock	100 cycles，-65℃ to ＋125℃，30 minutes@each extreme	|ΔR|: <(10%R+0.005Ω)	IEC 60068-2-14

Recommended Solder Curve

1. Infrared Reflow:
   - Temperature: 260℃
   - Time: 5sec Max.
   - Thickness of solder paste: 0.2mm Max
   - Recommend Reflow profile



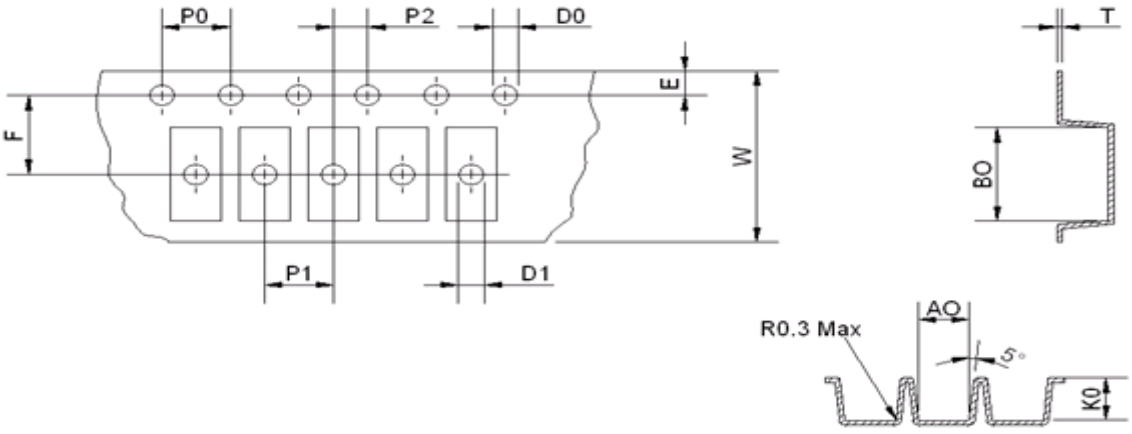
Profile Feature	Pb-Free Assembly
Average Ramp-up Rate(Ts_{max} to Tp)	3℃/sec Max.
Preheat Temperature Min.(Ts_{min}) Temperature Max.(Ts_{max}) Time(Ts_{min} to Ts_{max})	150℃ 200℃ 60sec~120sec
Peak Temperature(Tp)	260℃
Time within 5℃ of actual Peak Temperature(Tp)	5sec
Melting tin time(T_L)	20sec~40sec
Ramp-down Rate	6℃/sec Max.
Time 25℃ to peak Temperature	8min Max.

2. Wave soldering
   - Reservoir Temperature: 260℃
   - Time in Reservoir: 10sec Max.

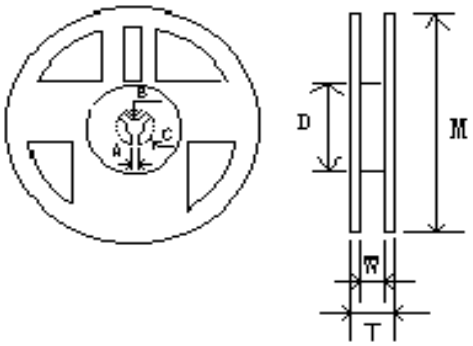
3.Hand Soldering
   - Temperature: 300℃
   - Time: 2sec Max.
   - Soldering iron avoid touch Brass Cap.

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)
Spec	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)
Spec	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)
Spec	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℃~30℃.
- 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.