## 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 | JDYX2.E319512 | 0.5A~5A |
| | JDYX8.E319512 | 0.5A~5A |
| TÜVRheinland | J50260452 | 0.5A~5A |
| KC | SU05049-15003 | 0.5A~0.75A |
| | SU05049-15001 | 1A~2.5A |
| | SU05049-15002 | 3A~5A |

## Application

- LED lighting
- Battery pack
- PC related equipment and peripherals (Hard driver, Printer, etc.)
- Digital camera (Digital still camera)
- Game equipment
- LCD monitor, LCD modules
- Wireless base station
- Power supply
- Medical device

## Ordering Information

| PartNumber | Current ating (A) | Voltage ating (V) | Interrupting Rating | Typical Cold CR* (mΩ) | Nominal I2T** (A2s) |
|---|---|---|---|---|---|
| S6125-H2-0.5A | 0.5 | 250 | UL/TUV/KC<br>0.5A<br>35A 250V AC<br>50A 125V DC<br>1A~5A<br>50A 250V AC<br>50A 125V DC | 268 | 0.30 |
| S6125-H2-1.0A | 1 | 250 | | 124 | 3.00 |
| S6125-H2-1.25A | 1.25 | 250 | | 90 | 4.10 |
| S6125-H2-1.5A | 1.5 | 250 | | 78 | 4.85 |
| S6125-H2-1.6A | 1.6 | 250 | | 70 | 5.78 |
| S6125-H2-2.0A | 2 | 250 | | 55 | 6.41 |
| S6125-H2-2.5A | 2.5 | 250 | | 39 | 13.75 |
| S6125-H2-3.0A | 3 | 250 | | 27 | 14.51 |
| S6125-H2-3.15A | 3.15 | 250 | | 25 | 17.36 |
| S6125-H2-3.5A | 3.5 | 250 | | 24 | 21.88 |
| S6125-H2-4.0A | 4 | 250 | | 20 | 25.21 |
| S6125-H2-5.0A | 5 | 250 | | 14 | 30.00 |

* Measured at≤10% rated current and 25℃

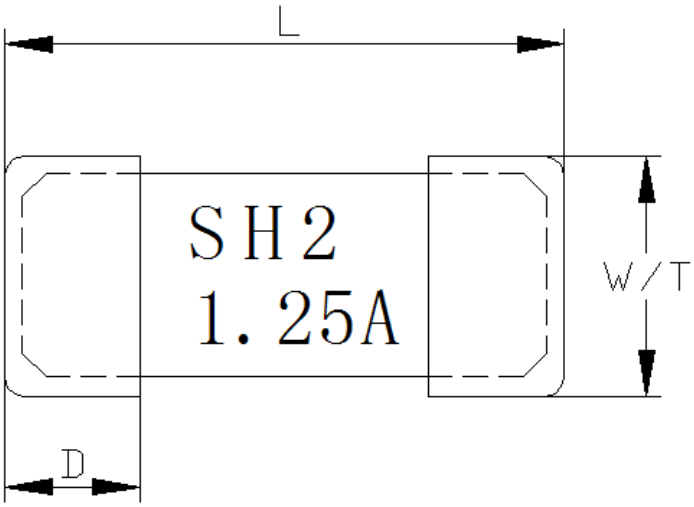
** Melting $I^2T$ at 10 times of rated current

## Catalog Symbol

**S 6125–H2–1.25A**

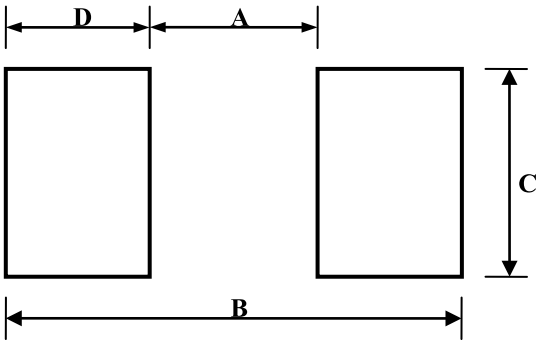
- "1.25A" Ampere Rating: 1.25A
- " H2" Electrical Characteristic: H=High Inrush 2=250Vac
- "6125" Size Number
- " S" Symbol of SART

## Dimensions




| L(mm) | W(mm) | T(mm) | D(mm) |
|---|---|---|---|
| 6.10±0.20 | 2.50±0.10 | 2.50±0.10 | 1.40±0.10 |

## Recommended Land Patterns

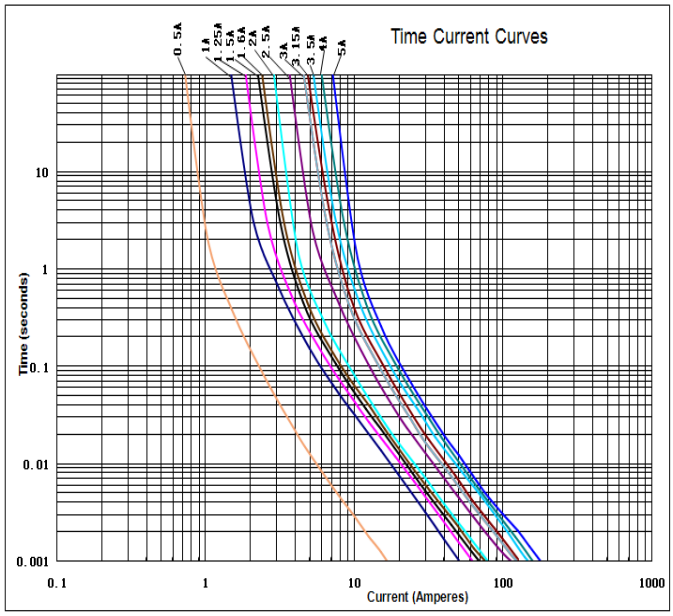



| Dimensions | A(mm) | B(mm) | C(mm) | D(mm) |
|---|---|---|---|---|
| Spec | 3.00±0.30 | 8.00±0.30 | 3.00±0.30 | 2.50±0.30 |

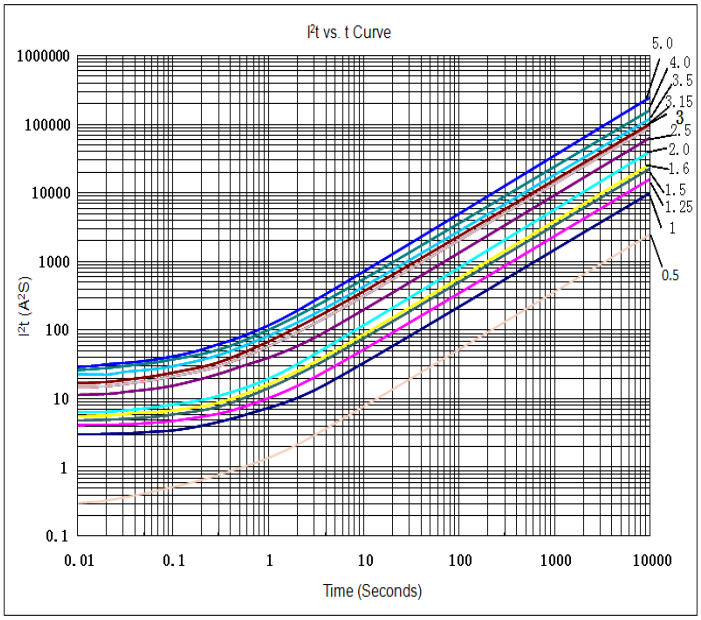
## Materials

| Components | Material |
|---|---|
| Body | Ceramic |
| Terminations | Au Plated Brass Cap |
| Element | Cu-Ag Alloy wire |

## Time Current Curve



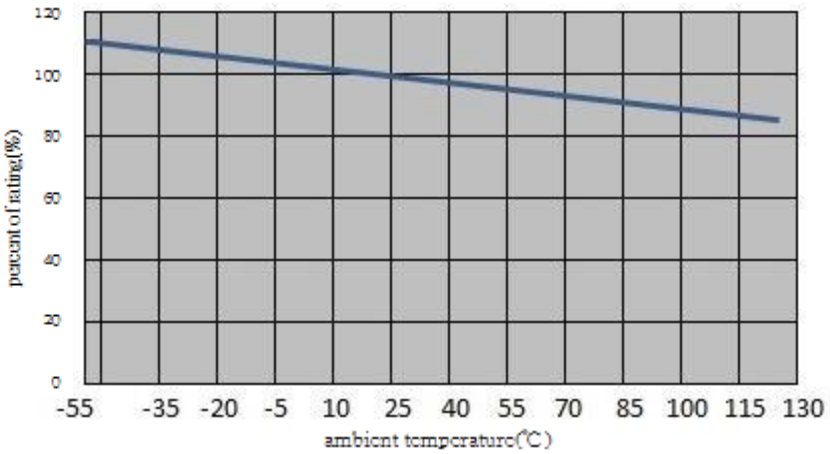

## $I^2T$ vs Time Curve




## Electrical Characteristics

| Ampere Rating | % of Current Rating | Opening Time |
|---|---|---|
| 0.5A-5A | 100% | Min.4hours |
| 0.5A-5A | 125% | Min.1hour |
| 0.5A-5A | 200% | Max.120sec |

## Temperature Derating Curve



## Reliability Test

| Item | Test condition/ Methods | Performance | Standard |
|---|---|---|---|
| Time/Current | 100% In | No Fusing ; 4hoursMin. | UL248-14 |
| | 200% In | <120sec | Refer to SART Spec |
| | 1000% In | 10ms-60ms | IEC60127-4 |
| Voltage Drop | 100% In | <300mV | IEC-60127-4 SART Spec |
| Endurance Test | Repeating 100 cycles of 1In for 1 h and switchingoff for 15min, following by 1 h at 1.25In and testing Temperature rise. | \|△R\|:<10% <75℃ | IEC-60127-4 |
| Interrupting Ability | 0.5A 35A@250V AC/50A@125V DC 1A~5A 50A@250V 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 | \|△R\|:<10% | MIL-STD-202 Method 210 |
| High Temperature Operating Life | T=70℃±2℃，0.6In，96hours | \|△R\|: <10% | MIL-STD-202 Method 108 |
| Humidity(steady state) | T=40℃±2℃，90%～95%RH，1000hours | \|△R\|: <10% | MIL-STD-202 Method 103 |
| Low Temperature Storage | T=-55℃±3℃，96hours | \|△R\|: <10% | IEC60068-2-1 |
| High Temperature Storage | T=125℃±2℃，96hours | \|△R\|: <10% | IEC60068-2-2 |
| Salt Spray | 5% salt solution ，48hours | \|△R\|: <10% | MIL-STD-202 Method 101 |
| Thermal Shock | 100 cycles between -65℃/+125℃, 60 minutes ; each extreme | \|△R\|: <(10%R+0.005Ω) | IEC 60068-2-14 |

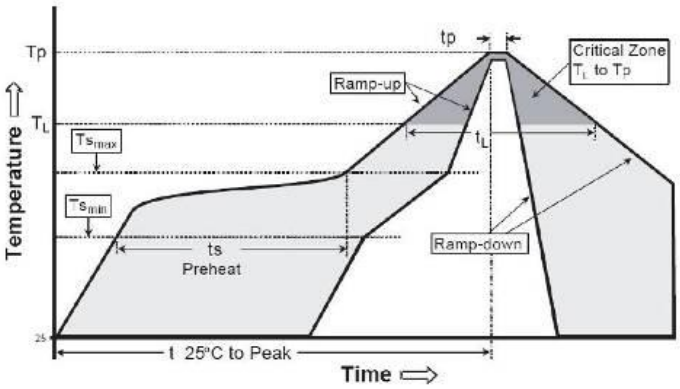
## Recommended Solder Curve

**1. Infrared Reflow:**

**Temperature：260℃**

**Time：5secMax.**

**Recommend Reflow profile**




| Profile Feature | Pb-Free Assembly |
|---|---|
| Average Ramp-Up Rate($Ts_{max}$ to Tp) | 3℃/s Max. |
| Preheat<br>Temperature Min($Ts_{min}$)<br>Temperature Max($Ts_{max}$)<br>Time($Ts_{min}$ to $Ts_{max}$) | <br>150℃<br>200℃<br>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℃/s Max. |
| Time 25℃ to Peak Temperature | 8 minutes Max. |

**2.Wave soldering**

**Reservoir Temperature：260℃**

**Time in Reservoir：10secMax.**

**3.Hand Soldering**

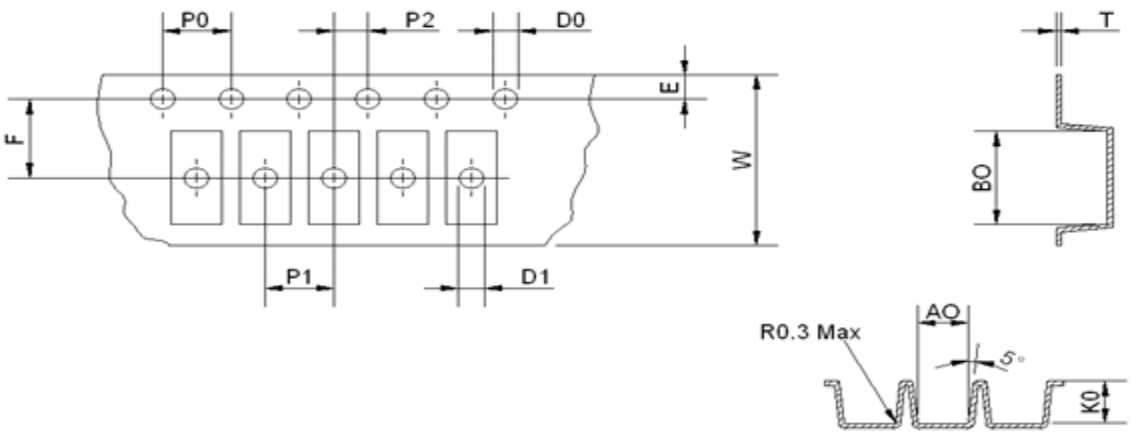
**Temperature：300℃**

**Time：2secMax.**

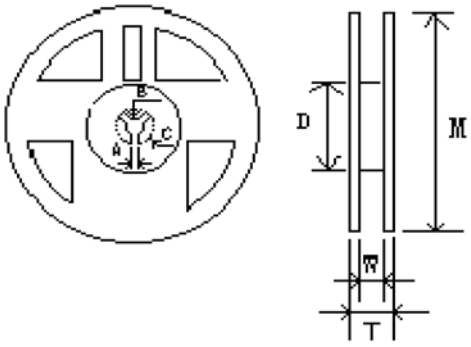
**Soldering iron avoid touch Brass Cap.**

## 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 shall be kept 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.