General

- •Fast acting，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	1A~20A
	JDYX8.E319512	1A~20A
PS E	PSE11020297	1A~5A
	PSE11020296	6.3A~10A

Application

- • 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

Part Number	Current Rating (A)	Voltage Rating (V)	Interrupting Rating (V)		Typical Cold DCR (m Ω)	Normal I^2T^{**} (A^2s)
S6125-F-1.0A	1	125	UL 50A 125V AC 160V DC	PSE 100A 100V AC	80	0.56
S6125-F-1.25A	1.25	125			60	0.84
S6125-F-1.6A	1.6	125			38	1.23
S6125-F-2.0A	2	125			30	1.34
S6125-F-2.5A	2.5	125			27	1.43
S6125-F-3.0A	3	125		/	22	1.88
S6125-F-3.15A	3.15	125		PSE 100A 100V AC	21	2.05
S6125-F-4.0A	4	125			16	3.44
S6125-F-5.0A	5	125			14	4.84
S6125-F-6.3A	6.3	125			10	10.55
S6125-F-7.0A	7	125			9.4	10.58
S6125-F-8.0A	8	125			7.4	17.62
S6125-F-10.0A	10	125			5.9	30.30
S6125-F-12.0A	12	65	UL 50A 65V AC/DC		4.8	42.22
S6125-F-15.0A	15	65			3.7	69.75
S6125-F-20.0A	20	65			3	132.04

* Measured at≤10% rated current and 25℃

** MeltingI^2T at 10 times of rated current

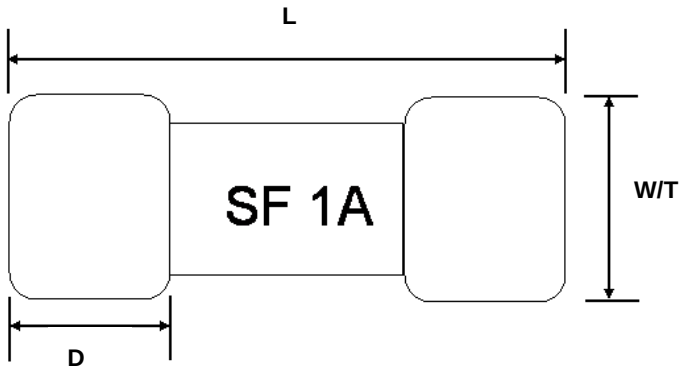
NANJING SART SCIENCE&TECHNOLOGY DEVELOPMENT CO.,LTD OR ANT TECHNOLOGY COMPANY LIMITED.（A WHOLLY OWNED SUBSIDIARY）
Maqun Science & Technology Park, Qingma Road 6#, Nanjing, China
TEL:086-25-84354852 FAX:086-25-83241791
www.sartfuse.com

Catalog Symbol

S 6125–F–1.0A

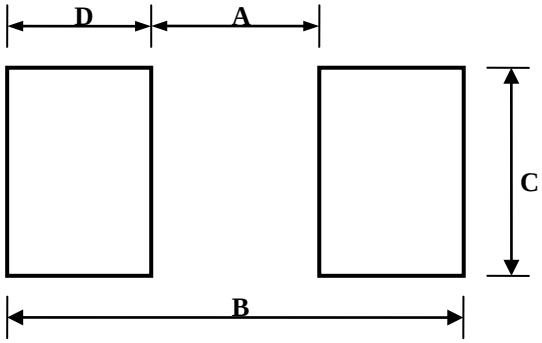
- "1.0A" Ampere Rating: 1A
- " F" Electrical Characteristic: F = Fast acting
- "6125" Size Number
- " S" Symbol of SART

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

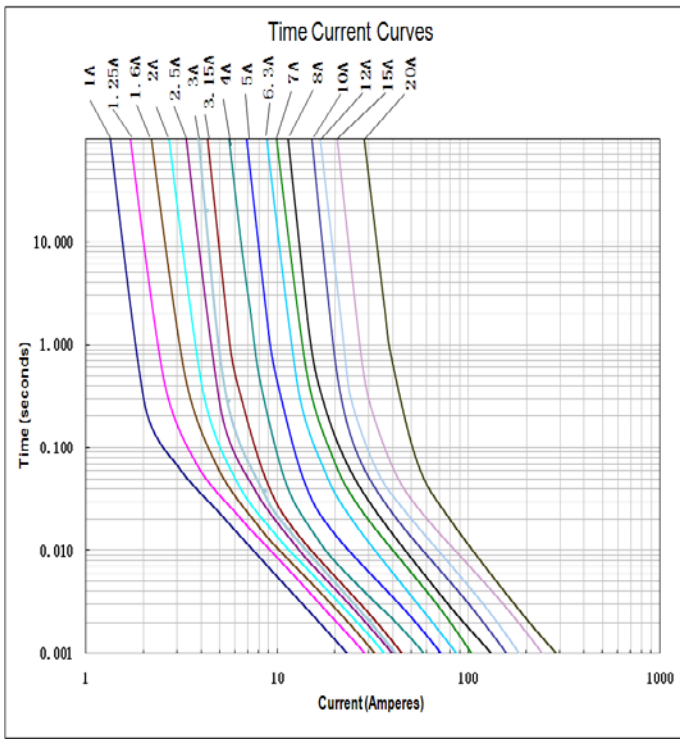
Materials

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

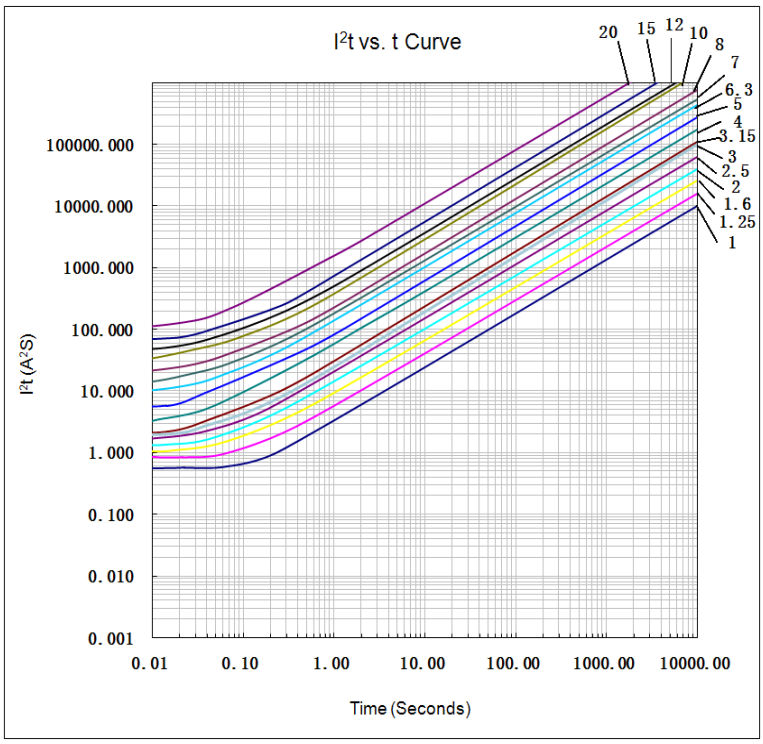
Recommended Standard Test Board

Ampere Range	Board Thickness (mm)	Copper Layer Thickness (mm)	Copper Trace Width (mm)
1A~6.3A	1.6	0.035	5
7A~10A	1.6	0.070	7.5
12A~20A	1.6	0.080	10

Time Current Curve



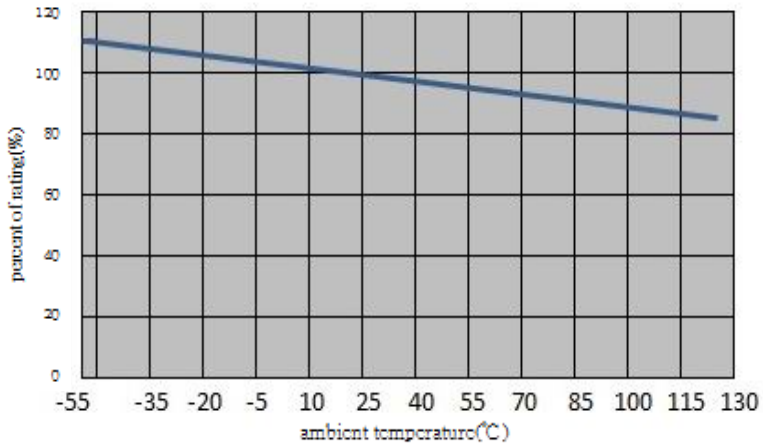
I^2T VS Time Curve



Electrical Characteristics

Ampere Rating	% of Current Rating	Opening Time
1A-20A	100%	Min.4hours
1A-10A	200%	Max.5sec
1A-10A	125%	Min.1hours
12A - 20A	200%	Max.20sec

Temperature Derating Curve



Reliability Test

Item	Test condition/ Methods	Performance	Standard
Time/Current	100% In	No Fusing ; 4hoursMin.	UL248-14
	200% In	(1A~10A)< 5 sec (12A~20A)< 20 sec	Refer to SART Spec
	1000% In	1ms-10ms	IEC60127-4
Voltage Drop	100% In	(1A-6.3A)<300mv (7A-10A)<220mv (12A-20A)<150mv	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% (1A-6.3A)<75℃ (7A-10A)<95℃	IEC-60127-4
	1 In for 4h, then testing Temperature rise	|△R|:<10% (12A-20A)<105℃	UL248-14
Interrupting Ability	50A@125V AC160V DC(1A-10A) 50A@ 65VAC/DC(12A-20A)	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

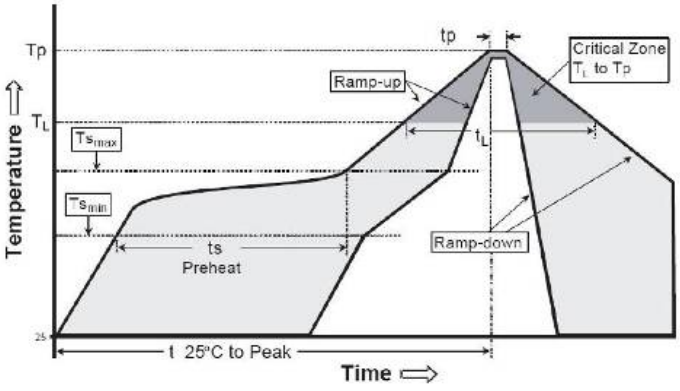
Recommended Solder Curve

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 Temperature Min(Ts_{min}) Temperature Max(Ts_{max}) Time(Ts_{min}toTs_{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℃/s Max.
Time 25℃ to Peak Temperature	8 minutes Max.

2.Wave soldering

Reservoir Temperature：260℃

Time in Reservoir：10secMax.

3.Hand Soldering

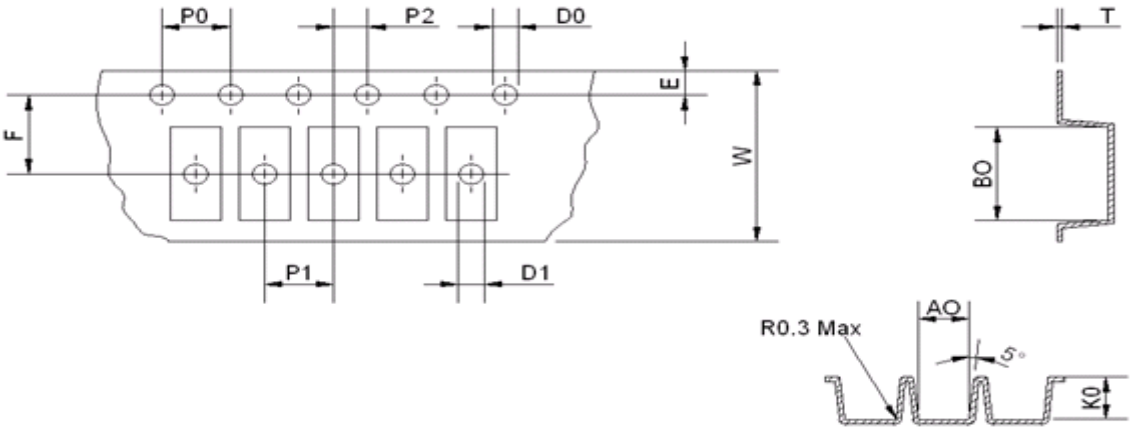
Temperature：300℃

Time：2secMax.

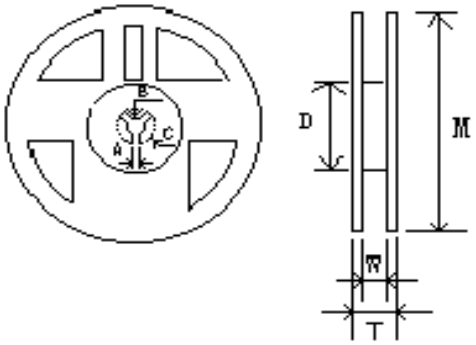
Soldering iron avoid touch Brass Cap.

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 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.

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FHC20402ADTP NFVC6125S0R50TRF SFT-125MA TF16SN2.00TTD FCC16501ABTP FCC16102ABTP FHC16322ADTP 0308.250UR 0308.375UR 0308.750UR 0308001.UR 030801.5UR F0603G0R03FNTR SKY87604-12 SKY87604-11 SKY87604-13 R451003.L R451.500L R451001.L 3-103-119 3-103-123 CF12V6T2R0 ABB-A 25A 500V PSFB-1.6A PSFB-2.5A PSFA-1.6A PSFB-1A 2410FA-5A SGB401 SGB075 MTS2200A 0154002.DRL 0154008.DRL 0154.500DRL 189140.1,25 189140.0,8 189140.0,4 189140.0,63 189140.0,25 0402FA-R200 0402SFF150F/24-2 0435.250KRHFS 0468003.WR 0494001.NRHF 0494002.NRHF 0494003.NRHF 049402.5NRHF 049403.5NRHF 0494.250NRHF 0494.375NRHF