




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°C~125°C operating temperature
- Excellent environmental integrity
- RoHS compliant
- Halogen-free

Agency / Certificate Information

Agency	File Number	Ampere Range
	E319512	30A

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

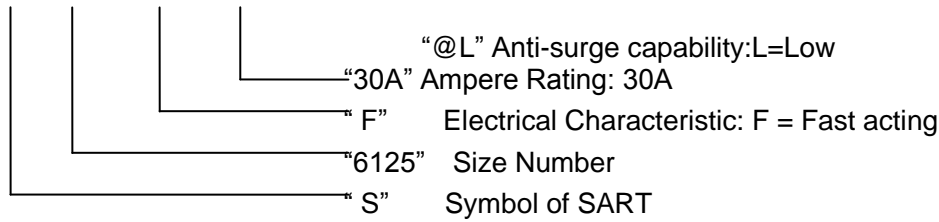
Part Number	Current Rating (A)	Voltage Rating (V)	Interrupting Rating	Typical Cold DCR* (mΩ)	Nominal I ² T** (A ² S)
S6125-F-30A@L	30	72	72V/150A DC	1.4	390

* Measured at ≤10% rated current and 25°C

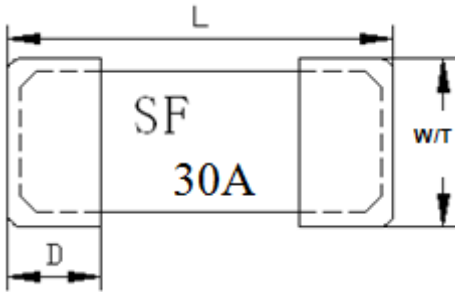
** Melting I²T at 10 times of rated current

Catalog Symbol

S 6125-F-30A @L

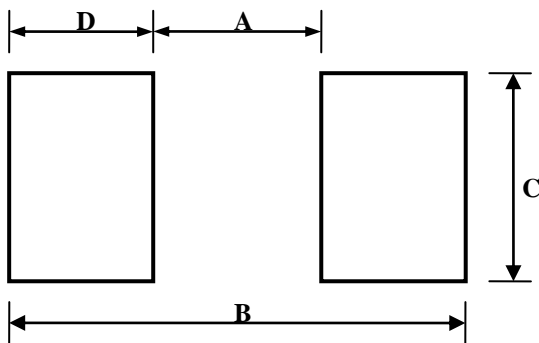


Dimensions



Type	L(mm)	W(mm)	T(mm)	D(mm)
S6125	6.10±0.2	2.50±0.1	2.50±0.1	1.40±0.1

Recommended Land Patterns

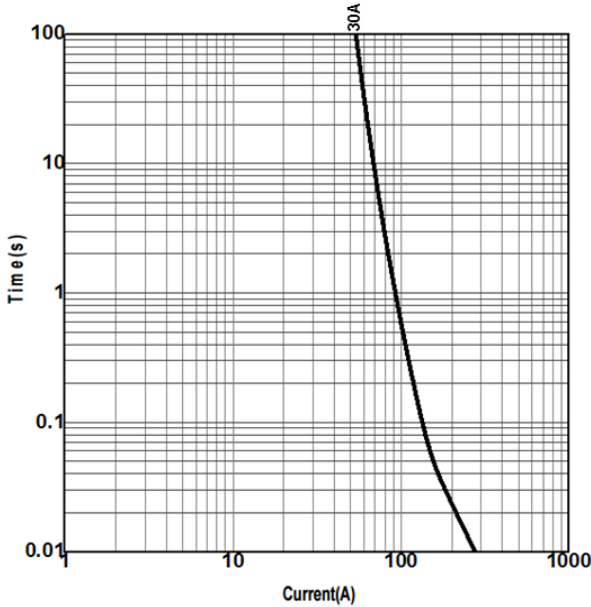


Materials

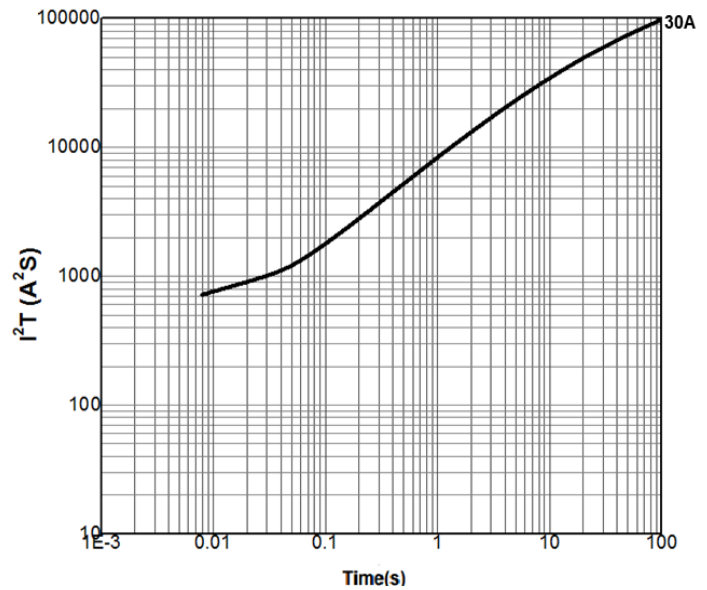
Type	Components	Material
S6125	Body	Ceramic
	Terminations	Au Plated Brass Cap
	Element	Copper alloy

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

Time Current Curve



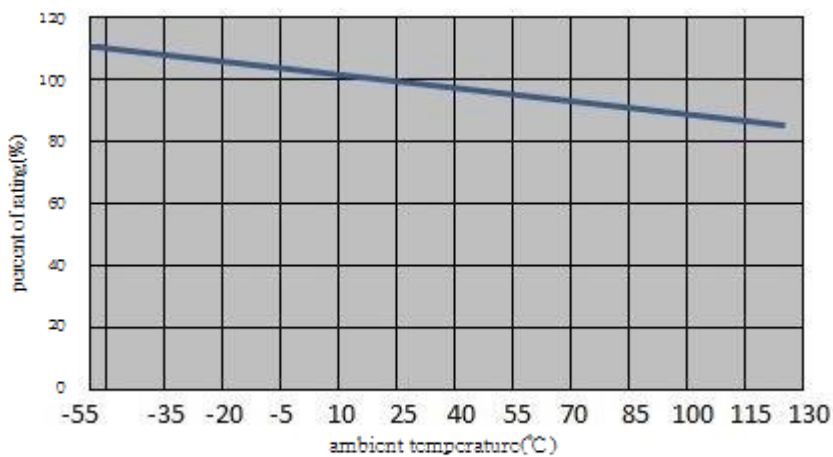
I^2T vs Time Curve



Electrical Characteristics

Ampere Rating	% of Current Rating	Opening Time
30A	100%	Min.4hours
	250%	Max.10sec

Temperature Derating Curve



Reliability Test

Item	Test condition / Methods	Performance	Standard
Time/Current	100% In	No Fusing ; 4hours Min.	UL248-14
	250% In	≤ 10 sec	Refer to SART File
	1000% In	>3ms	IEC60127-4
Voltage Drop	100% In	<90mV	IEC-60127-4 SART File
Endurance Test	1 In for 4h, then testing Temperature rise	$ \Delta R < 10\%$ <105°C	UL248-14
Interrupting Ability	150A@ 72V DC	without permanent arcing, ignition and bursting of fuse link	UL248-14 IEC60127-4
Solder ability	240°C±5°C, 3sec±0.5sec	95% coverage Min.	IEC60127-4 IEC60068-2-20; MIL-STD-202
Resistance to soldering	260°C±5°C, 10sec±0.5sec	$ \Delta R < 10\%$	MIL-STD-202 Method 210
High Temperature Operating Life	T=70°C±2°C, 0.6In, 96hours	$ \Delta R < 10\%$	MIL-STD-202 Method 108
Humidity(steady state)	T=40°C±2°C, 90%~95%RH, 1000hours	$ \Delta R < 10\%$	MIL-STD-202 Method 103
Low Temperature Storage	T=-55°C±3°C, 96hours	$ \Delta R < 10\%$	IEC60068-2-1
High Temperature Storage	T=125°C±2°C, 96hours	$ \Delta R < 10\%$	IEC60068-2-2
Salt Spray	5% salt solution , 48hours	$ \Delta R < 10\%$	MIL-STD-202 Method 101
Thermal Shock	100 cycles between -65°C/+125°C 60 minutes ; each extreme	$ \Delta R < (10\%R + 0.005 \Omega)$	IEC 60068-2-14

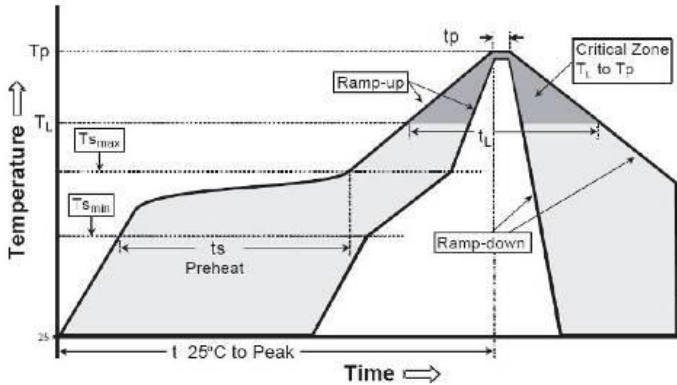
Recommended Solder Curve

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
Preheat Temperature Max($T_{s_{max}}$)	200°C
Preheat 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~40sec
Ramp-Down Rate	6°C/s Max.
Time 25°C to Peak Temperature	8 minutes Max.

2. Hand Soldering

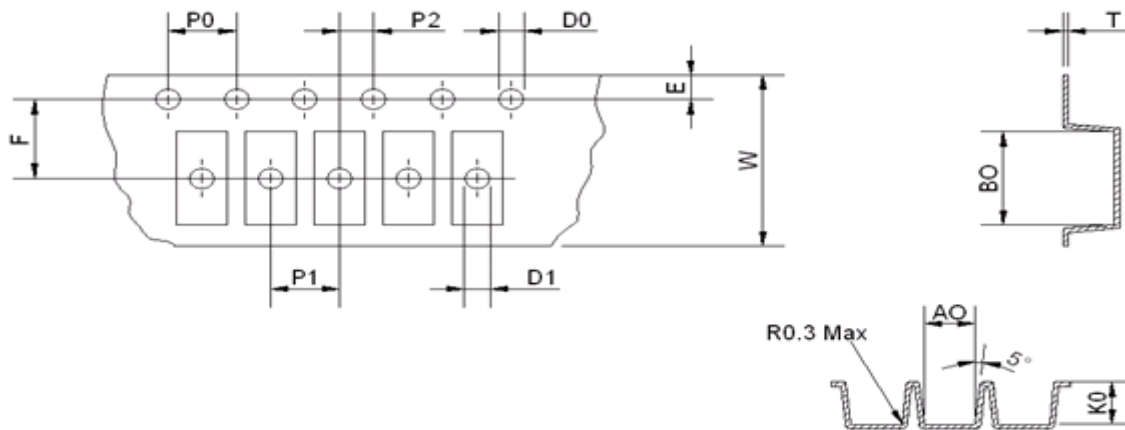
Temperature : 300°C

Time : 2sec Max.

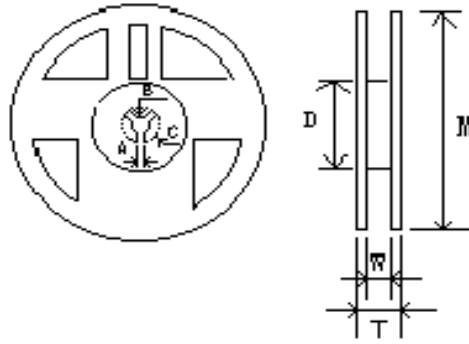
Soldering iron avoid touch Brass Cap.

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)
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 shall be between 5°C~30°C.
- 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.