



General

- very quick acting
- Surface mount high current fuse
- Available in ratings of 20 to 40 Amperes
- Higher voltage rating up to 100VDC
- 10.25mm×3.20mm square shape surface mount
- -55°C ~125°C Operating temperature
- Excellent environmental integrity
- Enhanced thermal cycling endurance
- Halogen Free

Agency / Certificate Information

Agency	File Number	Ampere Range
	E319512	20A~40A

Application

- Storage system power
- Cooling fan system for PC server
- Voltage regulator module
- Base station power supply
- Voltage regulator module for PC server
- High end servers / Blade computing
- Battery Management System

Electrical Specifications

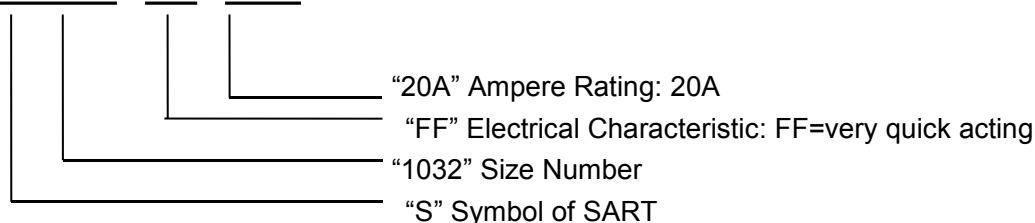
Part Number	Current Rating (A)	Voltage Rating (V)	Interrupting Rating	Typical Cold DCR* (mΩ)	Nominal I ² T** (A ² sec)
S1032-FF-20A	20	100	100VDC 300A 125VAC 100A	2.80	15.0
S1032-FF-25A	25	100		2.10	44.3
S1032-FF-30A	30	100		1.70	75.1
S1032-FF-40A	40	100		1.40	97.9

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

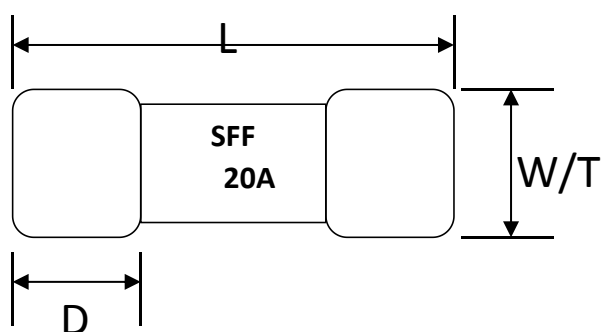
** Melting I²T at 10 times of rated current

Part Number Information

S1032-FF-20A

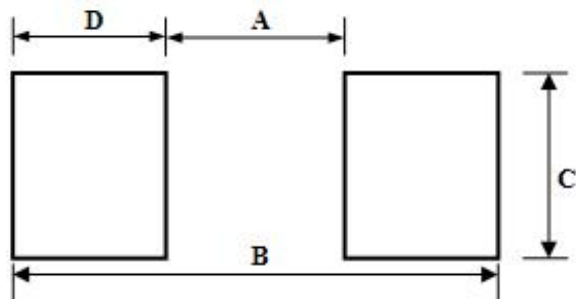


Dimensions



Type	L (mm)	W/T (mm)	D (mm)
S1032	10.25±0.20	3.20±0.15	1.75±0.15

Recommended Land Patterns

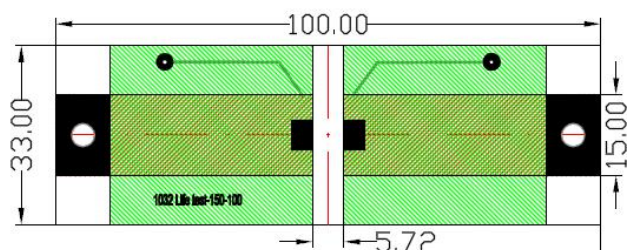


Materials

Components	Material
Body	Ceramic
Terminations	Au Plated Brass Cap
Element	Tin Plated Copper

Type	A(mm)	B (mm)	C(mm)	D(mm)
S1032	5.72±0.30	12.60±0.30	3.43±0.30	3.25±0.30

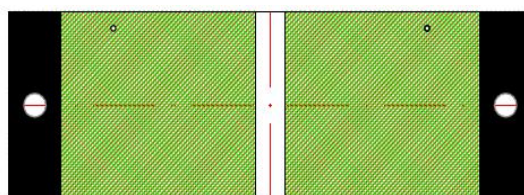
Dimensions of Standard Test Board



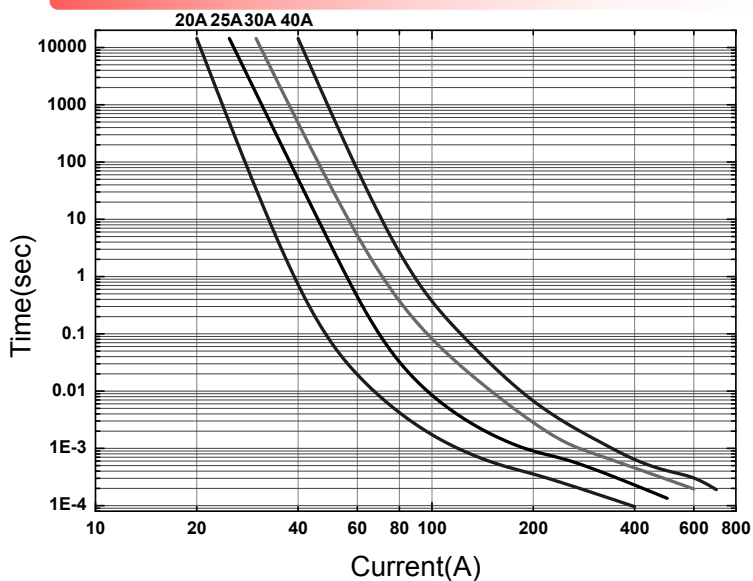
Glass epoxy body on double side.

Board thickness: 1.6mm; Thickness of Copper layer: ≥100μm.

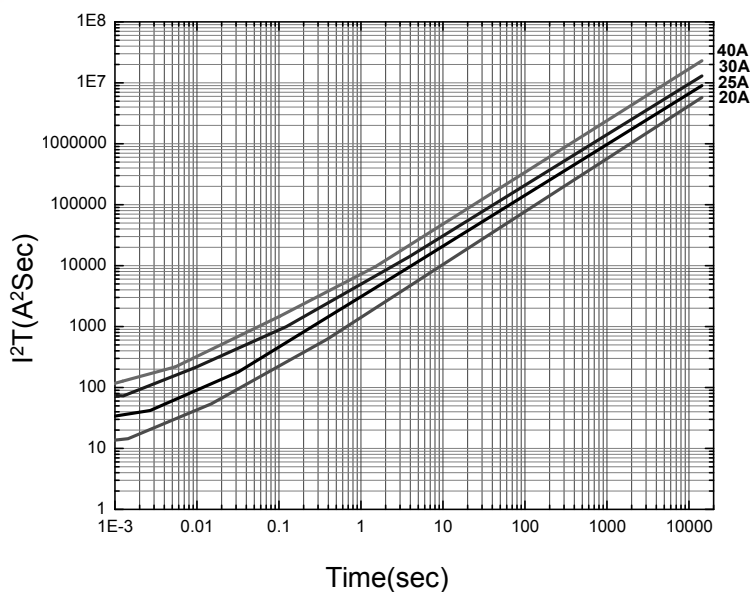
Width of Copper trace: One side 15mm and the other side 33mm.



Time Current Curve



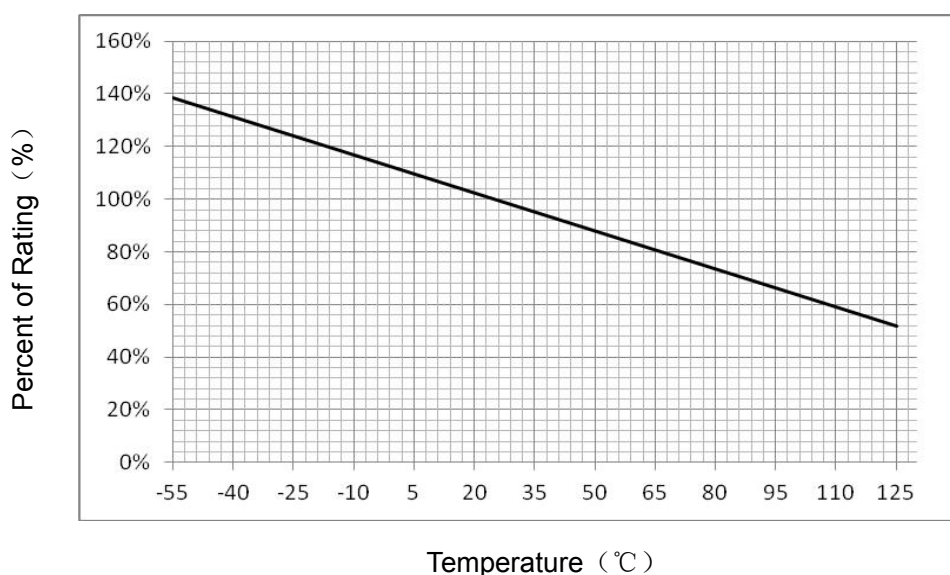
I²T VS Time Curve



Electrical Characteristics

Type	Ampere Rating	% of Current Rating	Opening Time
S1032	20A~40A	100	Min.4hours
	20A~40A	200	Max.60sec
	20A~40A	1000	Max. 2msec

Temperature Derating Curve



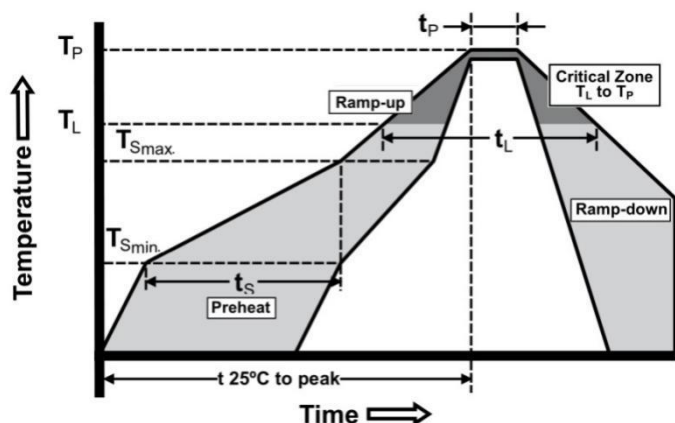
Product Characteristics

Item	Test condition/ Methods		Performance	Standard
Time/Current	100% of current rating		No Fusing; 4hours Min.	UL248-14
	200% of current rating		60sec Max.	SART SPEC
	1000%of current rating		2msec Max.	SART SPEC
Endurance Test	100% of rating current for 4 hours and testing Temperature rise at the last 5min.		No fusing; 20A~40A: <105℃	UL248-14
Interrupting Ability	20A~40A	100VDC 300A 125VAC 100A	without permanent arcing, ignition and bursting of fuse link	UL248-14 IEC60127-4
Solder ability	240℃±5℃, 3sec±0.5sec		95% coverage Min.	IEC60127-4 IEC60068-2-20; MIL-STD-202
Resistance to soldering	260℃±5℃, 10sec±0.5sec		No Breaking	MIL-STD-202 Method 210
Moisture resistance	Temperature Humidity, T: 85℃±3℃, RH: 85%±5%, Duration: 1000 hours		ΔR : <10% No mechanical damage	MIL-STD-202 Method 106
Low Temperature Storage	T=-55℃±3℃, 1000hours		ΔR : <10%	IEC60068-2-1
High Temperature Storage	T=125℃±2℃, 1000hours		ΔR : <10%	IEC60068-2-2
Salt Spray	5%±1% salt solution , 48hours		ΔR : <10%	MIL-STD-202 Method 101
Thermal Shock	100 cycles, -55℃ to +125℃, 30 minutes @ each extreme		ΔR : <10%	IEC 60068-2-14
Vibration	Amplitude 10Hz~55Hz in 1 min. 2 hours each XYZ, total 6 hours		ΔR : <10% No mechanical damage	MIL-STD-202F Method 201
Mechanical shock	100G'sec peak amplitude, saw tooth wave 6msec duration, 3 cycles XYZ+xyz = 18		ΔR : <10% No mechanical damage	MIL-STD-202 Method 213

Recommended Solder Curve

1. Infrared Reflow:

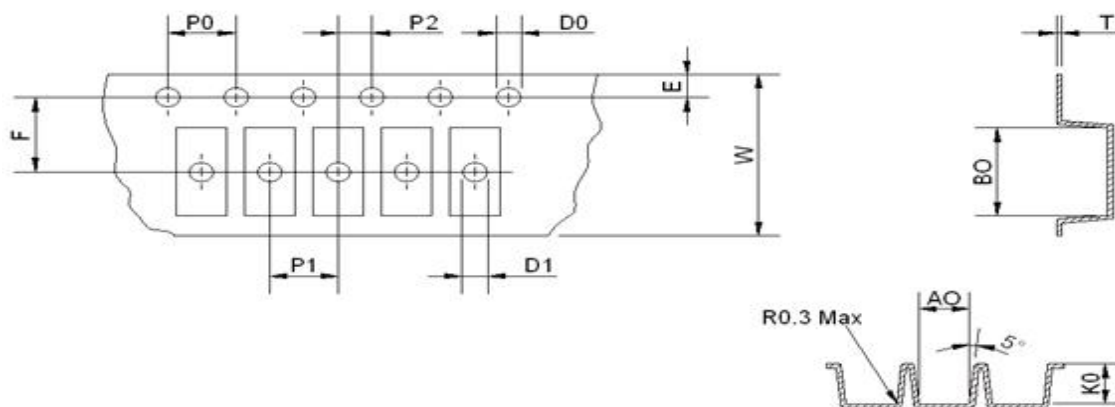
- Temperature: 260°C
- Time: 20sec Max.
- Recommend Reflow profile



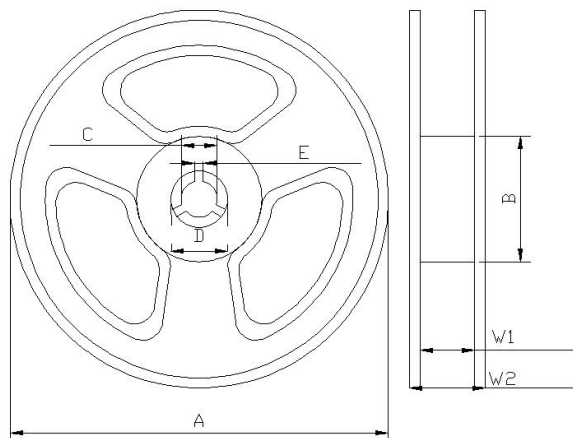
Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate(T_{Smax} to T_P)	3°C/sec Max.
Preheat	
Temperature Min(T_{Smin})	150°C
Temperature Max(T_{Smax})	200°C
Time(T_{Smin} to T_{Smax})	60sec ~ 120sec
Peak Temperature(T_P)	260°C
Time within 5°C of actual Peak Temperature(t_P)	20sec
Temperature (T_L)	217°C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

Packaging

- 2000 pieces of fuses on 24mm tape-and-reel on 13 inch (330mm) reel



Type	A0(mm)	B0(mm)	E(mm)	F(mm)	W(mm)	K0(mm)
S1032	3.50±0.10	10.60±0.15	1.75±0.10	11.50±0.10	24.00±0.30	3.50±0.10
Type	P0(mm)	P1(mm)	P2(mm)	D0(mm)	D1(mm)	T(mm)
S1032	4.00±0.10	8.00±0.10	2.00±0.10	1.50 ^{+0.10} ₋₀	1.50 ^{+0.10} ₋₀	0.35±0.05



Type	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	W1(mm)	W2(mm)
S1032	330.0±2.0	100.0±1.5	13.0±0.5	21.0±0.5	2.2±0.2	24.5±1.5	28.5±2.0

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.