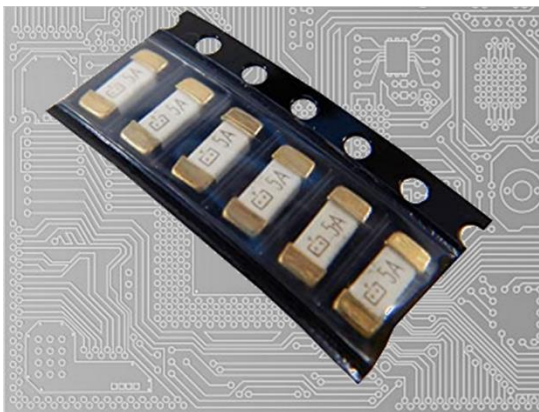


SURFACE MOUNT FUSES - TIME DELAY

DESCRIPTION:



ALPS6125TDXX is Slow Blow surface mount fuse Rugged ceramic construction. Designed to UL 248-14, Excellent environmental performance with RoHS Compliant.

FEATURES:

- Time-delay surface mount fuse
- Satisfies the EIA/IS-722 Standard
- Solder immersion compatible
- Thick film manufacturing method, ceramic substrate, silver fusing element
- -55°C~125°C operating temperature
- Excellent environmental integrity
- RoHS compliant
- Halogen-free
- Lead free.

APPLICATIONS:

- Motherboards (servers, notebooks)
- LCD monitor inverter (large panels)
- LED Lighting
- Automotive Electronics modules



beyond boundaries...

ALPS6125TDXX Series

Brick Fuses

ELECTRICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS							
Product Code	Current Rating	Voltage Rating		Interrupting Rating*	Resistance (ohms)** Typ.	Typical Melt I ² t*** DC (A ² s)	Alpha Code Marking
		AC	DC	AC/DC			
ALPS6125TD500	500mA	125V	125V	50A	0.290	1.00	0.5A
ALPS6125TD630	630mA	125V	125V	50A	0.195	1.07	0.63A
ALPS6125TD800	800mA	125V	125V	50A	0.155	2.88	0.8A
ALPS6125TD1	1A	125V	125V	50A	0.100	4.50	1A
ALPS6125TD1.25	1.25A	125V	125V	50A	0.060	7.45	1.25A
ALPS6125TD1.6	1.6A	125V	125V	50A	0.050	10.2	1.6A
ALPS6125TD2	2A	125V	125V	50A	0.040	16.3	2A
ALPS6125TD2.5	2.5A	125V	125V	50A	0.038	19.5	2.5A
ALPS6125TD3	3A	125V	125V	50A	0.030	21.5	3A
ALPS6125TD3.15	3.15A	125V	125V	50A	0.022	24.5	3.15A
ALPS6125TD4	4A	125V	125V	50A	0.016	55.8	4A
ALPS6125TD5	5A	125V	125V	50A	0.014	57.4	5A
ALPS6125TD7	7A	125V	125V	50A	0.009	93.2	7A

*; AC Interrupting Rating measured at designated voltage, 100% power factor; DC interrupting rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source)

**DC Cold Resistance (Measured at 10% of rated current)

*** Typical Melting I²t (Measured with a battery bank at rated DC voltage, 10x-rated current, not to exceed IR, time constant of calibrated circuit less than 50 microseconds) (7A measured at interrupting rating)

Device designed to carry rated current for four hours minimum. An operating current of 75% or less of rated current is recommended, with further derating required at elevated ambient temperatures.

ELECTRICAL CHARACTERISTICS			
TYPE	AMPER RATING	% of CURRENT RATING	OPENING TIME
ALPS6125-TD	500mA-7A	100%	4 Hours Min
	500mA-7A	200%	120 Seconds Max

ORDER INFORMATION

Specify Packaging and product code (i.e., ALPS6125TDXX-TRH)

ALP: Alpinesemi

S6125: Series Size

TD: Time Delay

XX: Ampere Rating

TRH: 1,000 pieces of fuses on tape-and-reel

PRODUCT CHARACTERISTICS

ITEM	TEST CONDITION/ METHODS	PERFORMANCE	STANDARD
Time/Current	100% of current rating	No Fusing, 4hours Min.	UL248-14
	250% of current rating	0.5A ~ 0.75A: ≤20sec 1.0A ~ 7.0A: ≤5sec	ALP SPEC.
	1000% of current rating	>0.1ms	IEC60127-4
Voltage Drop	100% of current rating	Deviation between the mean value: <15%	IEC60127-4
Temperature Rise	100% of current rating	ΔT <75°C	IEC60127-4
Endurance Test	100 cycles of 1In for 1h "ON", for 15min "OFF", then following by 1h at 125%In	ΔR : <10%	IEC60127-4
Interrupting Ability	0.5A ~ 3.5A: 50A 32V DC 4.0A ~ 7.0A: 35A 32V DC	without permanent arcing, ignition, and bursting of fuse link	UL248-14 IEC60127-4
Solderability	240°C ±5°C, 3sec ±0.5sec	95% coverage Min.	IEC60127-4 MIL-STD-202 Method 208
Resistance to Soldering	260°C ±5°C, 10sec ±0.5sec	ΔR : <10% Legible appearance	MIL-STD-202 Method 210
Bending Test	Distance between holding points: 90mm Bending: 1mm, time: 10sec	ΔR : <10% No mechanical damages	IEC60127-4
High Temperature Operating Life	T=70°C ±2°C, 60%In, 96hours	ΔR : <10%; No fusing	MIL-STD-202 Method 108
Humidity (Steady State)	T=40°C ±2°C, 90% ~ 95%RH, 1000hours	ΔR : <10%	MIL-STD-202 Method 103
Low Temperature Storage	T=-55°C ±3°C, 96hours	ΔR : <10%	IEC60068-2-1
High Temperature Storage	T=125°C ±2°C, 96hours	ΔR : <10%	IEC60068-2-2
Salt Spray	5% salt solution, 48hours	ΔR : <10% Legible appearance	MIL-STD-202 Method 101
Thermal Shock	100 cycles between -65°C / +125°C 60 minutes, each extreme	ΔR : <10% No mechanical damages	MIL-STD-202 Method 107

TYPICAL DEVICE CHARACTERISTICS CURVES

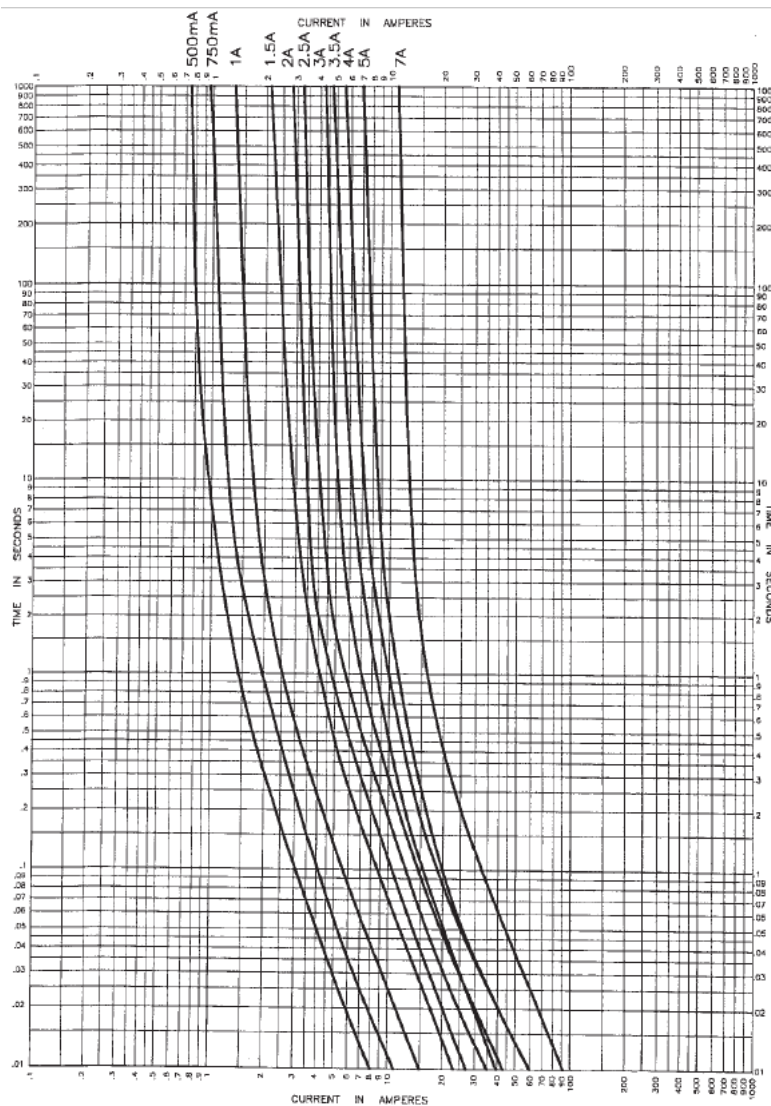
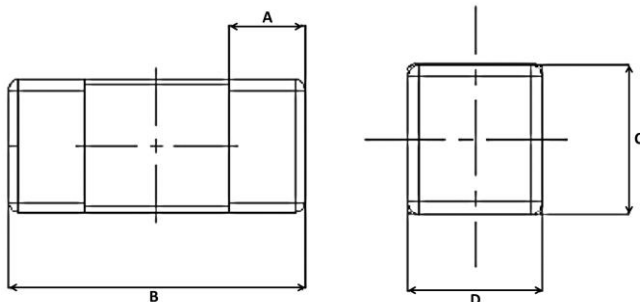


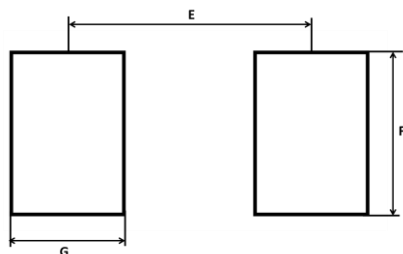
Fig1: TIME CURRENT CURVE

PACKAGE INFORMATION

DIMENSIONS



LAND PATTERN

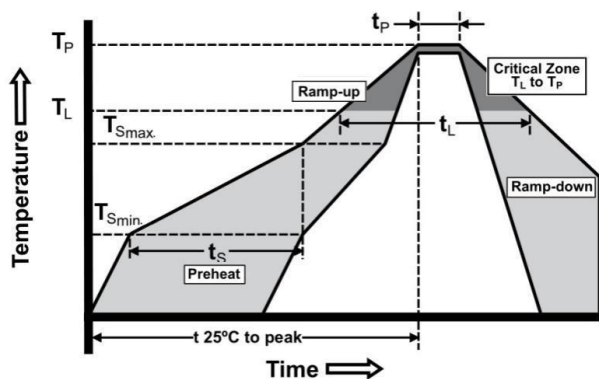


OUTLINE DIMENSIONS (mm)	
SYMBOL	MAX
A	1.6±0.5mm
B	6.5±0.5mm
C	2.8±0.2mm
D	2.8±0.2mm
E	5.0
F	3.0
G	2.0

RECOMMENDED SOLDER CURVE

Reflow Soldering:

- Temperature: 260°C
- Time: 30 sec Max.
- Recommend Reflow profile



Profile Feature	Pb Free Assembly
Average Ramp-up Rate (TSmax to TP)	3°C sec Max.
Preheat Temperature Min. (TSmin)	150°C
Temperature Max. (TSmax)	200°C
Time (TSmin to TSmax)	60sec ~ 120sec
Peak Temperature (TP)	260°C
Time within 5°C of actual Peak Temperature(tp)	20sec
Melting tin time(tL)	60sec ~ 150sec
Ramp-down Rate	6°C /sec Max.
Time 25°C to peak Temperature	8minutes Max.

Wave soldering

- Reservoir Temperature: 260°C
- Time in Reservoir: 10sec Max.



beyond boundaries...

ALPS6125TDXX Series

Brick Fuses

CUSTOMER NOTE:

DISCLAIMER

The product information and the selection guide facilitates the selection of the ALPINESEMI™'s Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review the Data sheet(s) so as to confirm that the Device(s) meets functionality parameters for your application. The information furnished on the Data Sheet and the ALPINESEMI™'s Web Site is believed to be accurate and reliable at the time of preparation of this document. ALPINESEMI™ however, does not assume any inaccuracies that may arise when the components are mounted and removed. Furthermore, ALPINESEMI™ does not assume liability whatsoever, arising out of the application or the use of any of ALPINESEMI™'s product(s). Neither, does it convey any license under its patent rights nor the rights of others. These products are not guaranteed for use in life saving/support appliances or systems. ALPINESEMI™'s customers using these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and ALPINESEMI™ will not be responsible in any way(s) for any damage(s) resulting from such use.

Please check the website **www.alpinesemi.com** for continues updates and revision of datasheets.

DESIGN CHANGES: ALPINESEMI™ strives for continuous improvement and reserves the right to change the specifications of its products without prior notice. ALPINESEMI™ reserves the right to discontinue product lines without prior notice. Any product selection is a recommendation based on best understanding of such product(s) by our engineers. However, buyers are advised to rely on their own judgment for such selection of the products.

ALPINESEMI™ makes no warranty, representation or guarantee regarding the suitability of its products for any particular applications. Neither does ALPINESEMI™ assume any liability arising out of the applications nor the use of such products. ALPINESEMI™ specifically disclaims all liabilities either consequential or incidental.

All rights of the product and datasheet are reserved to ALPINESEMI™.

All logos and information provided in the datasheets are for reference only. Any registered and/or trademark/logos belonging to respective companies be the property of those companies. ALPINESEMI™ extends the courtesy to them, if any of the information found in its datasheet.

Component Disposal Instructions

1. ALPINESEMI™ Semiconductor Devices are RoHS compliant and hence customers are requested to dispose as per the prevailing Environmental Legislation put forth in their specific country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).



sales@alpinesemi.com
www.alpinesemi.com