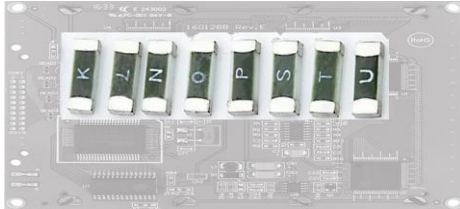


SURFACE MOUNT FUSES: 1206 SIZE → FAST ACTING

DESCRIPTION:



ALPS1206FXX is Fast acting for excessive current. Compatible with reflow and wave solder. Rugged ceramic and glass construction. Excellent environmental performance. RoHS Compliant, Lead Free & Halogen Free material

FEATURES:

- Fast acting
- 3.2mm× 1.6mm physical size
- Thick film manufacturing method, ceramic substrate, silver fusing element
- -55°C~125°C operating temperature
- Excellent environmental integrity
- RoHS compliant
- Halogen-free

APPLICATIONS:

- Telecommunication: PDA / DSL
- Computers: LCD Panel / Printers / Laptop / Servers
- Consumer Electronics: DVD player / MP3 MP4 Player

ELECTRICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS								
Product Code	Current Rating	Voltage Rating		Interrupting Rating*	Resistance (ohms)** Typ.	Typical Melt I ² t*** DC (A ² s)	Typical Voltage Drop (V)****	Alpha Code Marking*****
		AC	DC	AC/DC				
ALPS1206F250	250mA	32V	63V	50A	4.1	0.0004	1.30	D
ALPS1206F375	375mA	32V	63V	50A	2.21	0.0008	0.93	E
ALPS1206F500	500mA	32V	63V	50A	1.5	0.0018	0.76	F
ALPS1206F750	750mA	32V	63V	50A	0.6	0.0055	0.68	G
ALPS1206F1	1A	32V	63V	50A	0.26	0.030	0.32	H
ALPS1206F1.25	1.25A	32V	63V	50A	0.24	0.046	0.27	J
ALPS1206F1.5	1.5A	32V	63V	50A	0.12	0.083	0.19	K
ALPS1206F1.75	1.75A	32V	63V	50A	0.1	0.090	0.18	M
ALPS1206F2	2A	32V	63V	50A	0.072	0.110	0.19	N
ALPS1206F2.5	2.5A	32V	63V	50A	0.051	0.240	0.16	O
ALPS1206F3	3A	32V	63V	50A	0.038	0.255	0.16	P
ALPS1206F3.5	3.5A	32V	32V	50A	0.025	0.280	0.14	R
ALPS1206F4	4A	32V	32V	50A	0.02	0.305	0.13	S
ALPS1206F4.5	4.5A	32V	32V	50A	0.017	0.395	0.12	X
ALPS1206F5	5A	32V	32V	50A	0.016	0.500	0.12	T
ALPS1206F6	6A	32V	32V	50A	0.012	2.064	0.10	Y
ALPS1206F7	7A	32V	32V	50A	0.01	2.720	0.10	U
ALPS1206F8	8A	32V	32V	50A	0.008	4.630	0.10	8

*AC Interrupting Rating (Measured at rated voltage with a unity 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) (6A, 7A & 8A measured at interrupting rating)

**** Typical Voltage drop (measured at rated current after temperature stabilizes)

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
ALPS1206-F	250mA-8A	100%	4 Hours Minimum
	250mA-8A	250%	5 Seconds Maximum

ORDER INFORMATION

Specify Packaging and product code (i.e., ALPS1206FXX-TR)

ALP: Alpinesemi

S1206: Series Size

F: Fast Acting

XX: Ampere Rating

TR: 5,000 pieces of fuses on 8mm tape-and-reel on a 7-inch (178mm) reel per EIA Standard 481

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

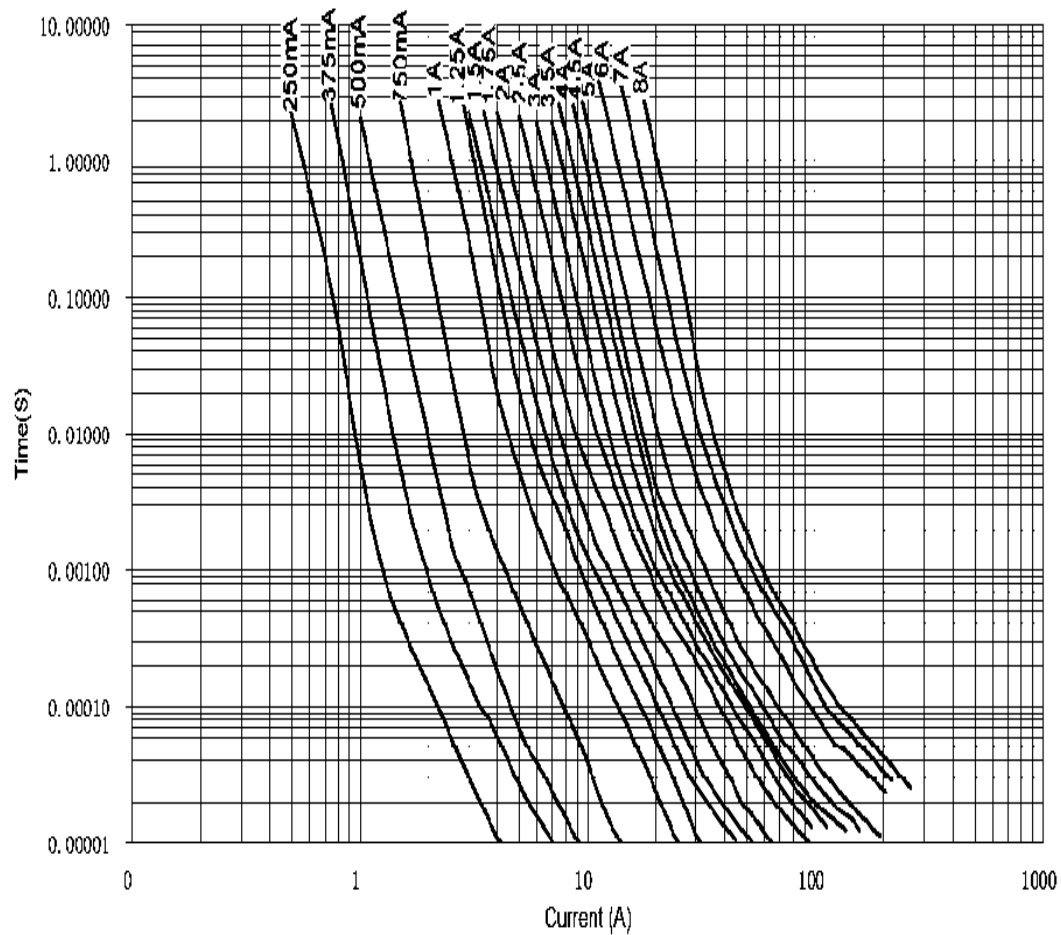
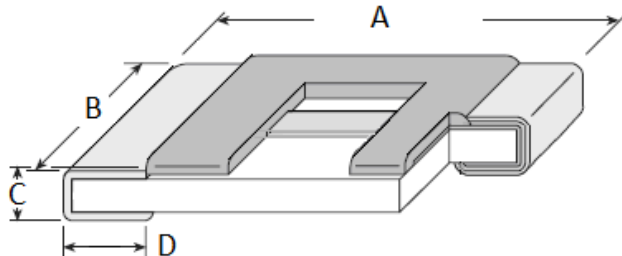


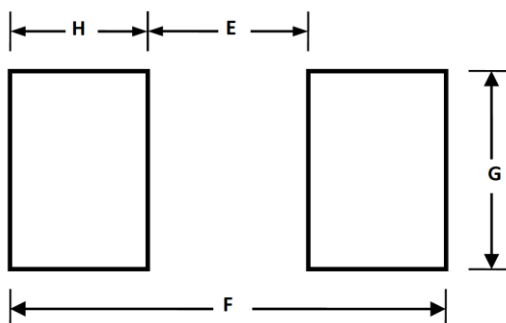
Fig1: TIME CURRENT CURVE

PACKAGE INFORMATION

DIMENSIONS



LAND PATTERN

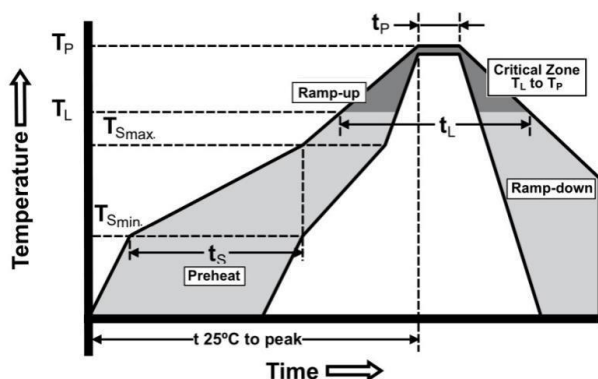


OUTLINE DIMENSIONS (mm)	
SYMBOL	MAX
A	3.2±0.2mm
B	1.6±0.2mm
C	0.55±0.2mm
D	0.5±0.25mm
E	2.00±0.30mm
F	4.40±0.50mm
G	2.40±0.30mm
H	1.20±0.30mm

RECOMMENDED SOLDER CURVE

Reflow Soldering:

- Temperature: 260°C
- Time: 30 sec 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
Melting tin time(t_L)	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.

Hand Soldering

- Temperature: 350°C
- Time: 5sec Max.



beyond boundaries...

ALPS1206FXX Series Chip 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.

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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).



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