

Time-Lag Surface Mount Fuse

STE 125V Time-Delay Series

Descriptions

STE 125V Time-Delay Series provide board level primary and secondary circuit protection in a wide variety of applications. With excellent inrush current withstanding capability, excellent reliability for thermal and mechanic shock, also have a high reliability and stable solder ability, end caps are available in gold/silver/nickel plated.



Features

- ◆ Time-Lag (Slow-Blow).
- ◆ Small size (6.1mm*2.5mm).
- ◆ Wide range of current rating available.
- ◆ Wide operating temperature range.
- ◆ Low temperature de-rating.
- ◆ RoHS compliant.
- ◆ Tape and Reel for automatic placement.
- ◆ Conflict free metals.

Applications

- ◆ LED lighting
- ◆ Notebook PC
- ◆ Battery devices
- ◆ LCD/PDP devices
- ◆ LCD backlight inverter
- ◆ Portable Devices
- ◆ Power supply
- ◆ Networking devices
- ◆ PC server
- ◆ Cooling fan system
- ◆ Storage system
- ◆ Telecom system
- ◆ Wireless base station
- ◆ White goods
- ◆ Game console
- ◆ Office equipment
- ◆ Digital camera
- ◆ Industrial equipment
- ◆ Medical equipment

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Electrical Characteristics

Part Number	Ampere Rating (A)	Voltage Rating Vac(V)	Breaking Capacity	Nominal Cold Resistance (Ohms)	I ² T Melting Integral(A ² .S)
STE0250	0.25	125	50A@300V _{AC}	0.860	0.145
STE0300	0.30	125		0.620	0.162
STE0315	0.315	125		0.550	0.189
STE0375	0.375	125		0.470	0.200
STE0400	0.40	125		0.380	0.238
STE0500	0.50	125		0.320	0.275
STE0600	0.60	125		0.285	0.470
STE0630	0.63	125		0.256	0.566
STE0700	0.70	125		0.208	0.805
STE0750	0.75	125		0.175	1.240
STE0800	0.80	125		0.155	1.880
STE1100	1.00	125		0.148	3.500
STE1125	1.25	125		0.102	4.760
STE1150	1.50	125		50A@250V _{AC}	0.085
STE1200	2.00	125	0.044	8.950	
STE1250	2.50	125	0.043	16.025	
STE1300	3.00	125	0.033	21.560	
STE1315	3.15	125	0.029	22.750	
STE1350	3.50	125	0.027	27.050	
STE1400	4.00	125	200A@125V _{AC}	0.025	31.808
STE1500	5.00	125	0.019	40.250	
STE1600	6.00	125	0.018	67.245	
STE1630	6.30	125	0.017	73.550	
STE1700	7.00	125	0.016	76.280	
STE1800	8.00	125	0.015	80.750	
STE2100	10.00	125	0.014	110.380	
STE2120	12.00	125	0.013	158.080	
STE2150	15.00	125	0.012	160.680	

- ◆ Cold resistance and I²t value are pending due to fuse elements shall be customized;
- ◆ DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C;
- ◆ Typical Pre-arching I²t are calculated at 10*In Current or 8ms;
- ◆ Min Interrupting Rating: 1.35*In.

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Material Details

Part Name	Material
End caps	Gold/Silver Plated Brass Cap
Body	Non-Transparent Square Ceramic Tube
Fuse element	Cu-Ag Alloy wire

Product Characteristics

Item	Content	Reference Standards
Product Marking	Brand, Ampere Rating	Socay marking standards
Operating Temperature	-55°C to 125°C	IEC60068-2-1/2
Solderability	T=240°C±5°C , t=3sec±0.5sec, Coverage≥95%	MIL-STD-202, Method 208
Resistance to Soldering Heat	10 sec at 260°C	MIL-STD-202, Method 210, Test condition B
Insulation Resistance (after Opening)	10,000 ohms minimum	MIL-STD-202, Method 302, Test Condition A
Thermal Shock	5 cycles, -65°C / +125°C, 15 minutes at each extreme	MIL-STD-202, Method 107, Test Condition B
Mechanical Shock	100G's peak for 6 milliseconds, 3cycles	MIL-STD-202, Method 213, Test I
Vibration	0.03"amplitude, 10-55 Hz in 1 min. 2hrs each XYZ=6hrs	MIL-STD-202, Method 201
Moisture Resistance	10 cycles	MIL-STD-202, Method 106
Salt Spray	5% salt solution, 48hrs	MIL-STD-202, Method 101, Test Condition B

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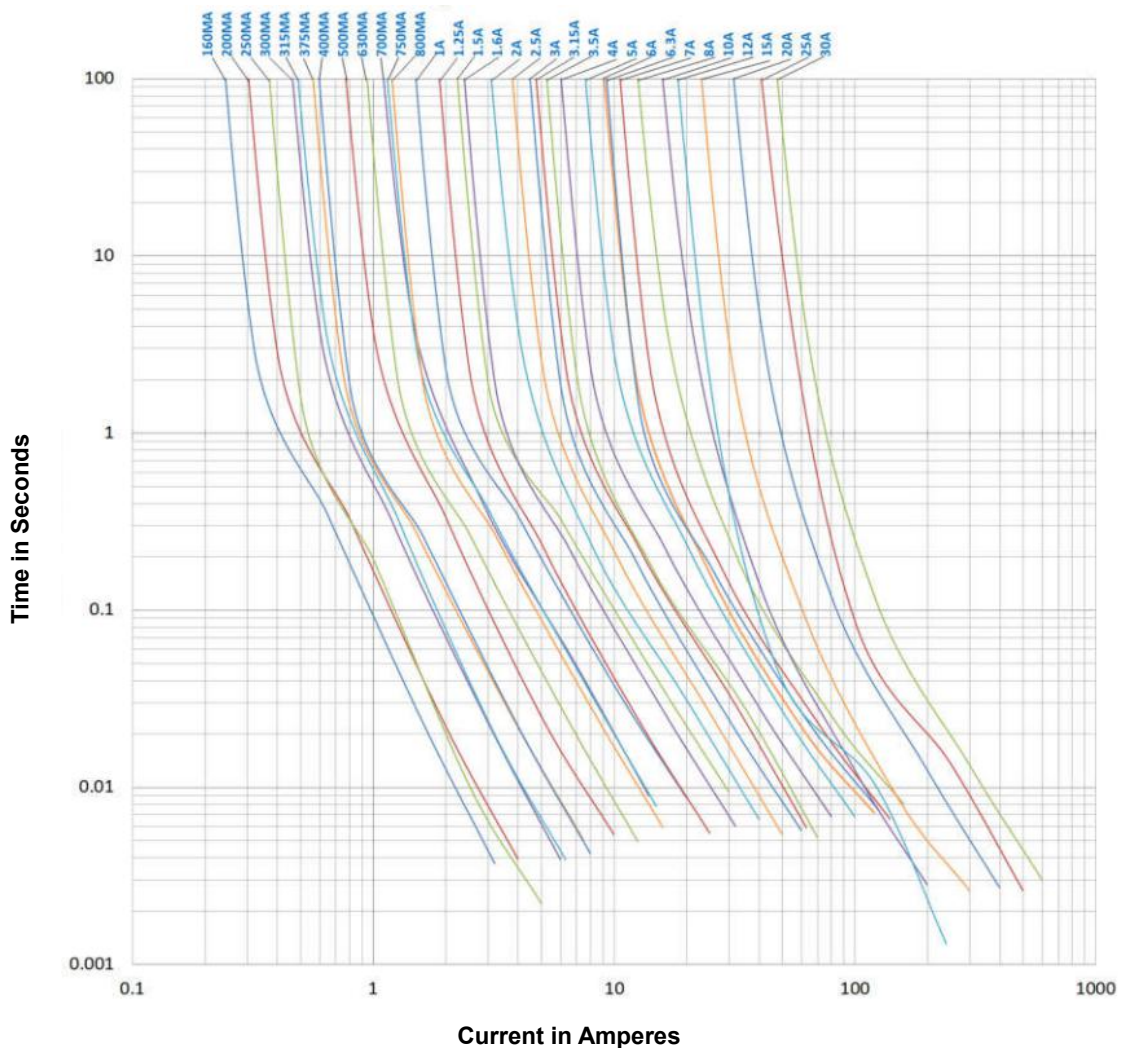
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Electrical Characteristics

- ◆ Test Condition:
All electrical test is to be conducted with the ambient air at a temperature of 25±5°C.
- ◆ Interrupting Rating:
Breaking Capacity: 50A@250Vac, 200A@125Vac.
- ◆ Operating Characteristics:

% of Ampere Rating(In)	Blowing Time
100% * In	4 hours Min
200% * In	120 secs Max
1000% * In	10ms Min

Average Time Current Curves

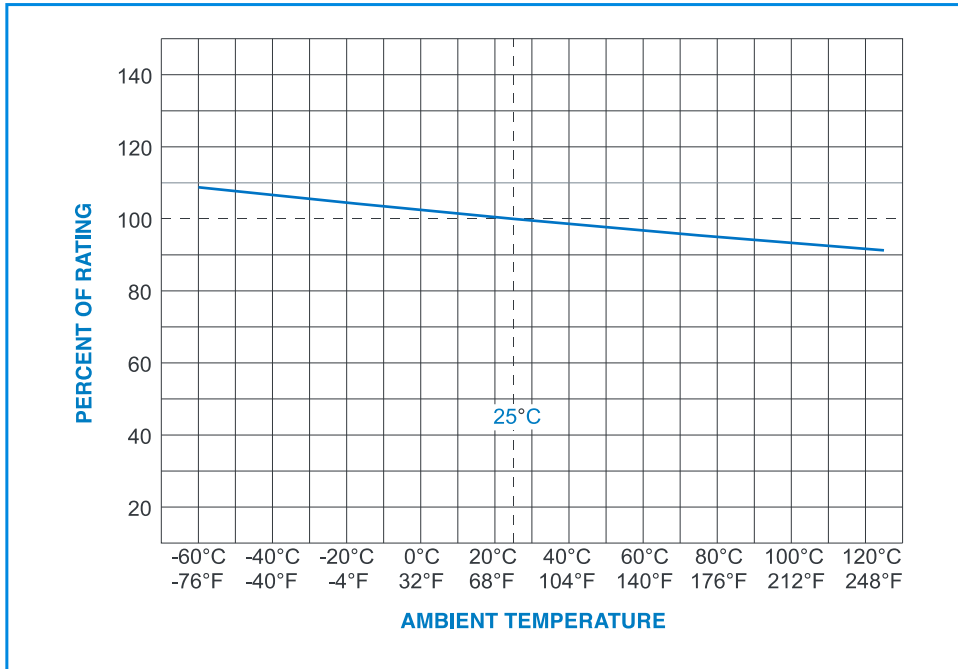


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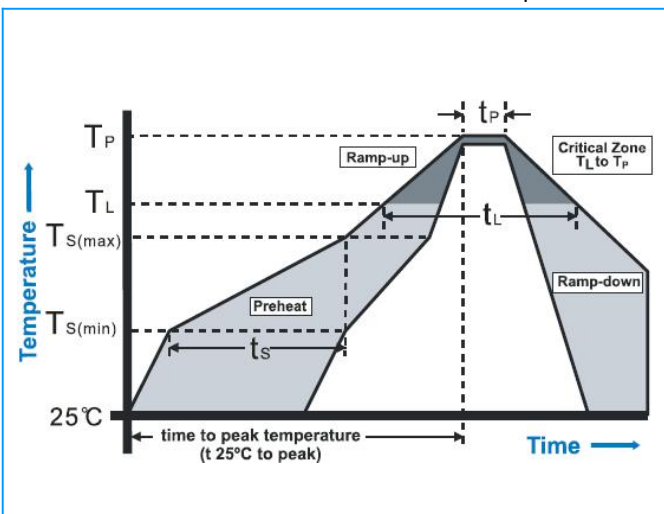
Environmental Characteristics

When choosing the fuse's specification, if the operating environmental temperature beyond the scope from 20~30°C, engineer should consider the environmental temperature's affection to fuses. Please refer: Temperature Rerating Curve:



Recommended Soldering Parameters

- ◆ Wave / Reflow Soldering Parameters: Solder paste process; Solder Pot Temperature: 260°C Max; Solder Dwell Time: 5 seconds max.
- ◆ Hand-Solder Parameters: Solder Iron Temperature: 300±5°C; Heating Time: 1~2s Max.

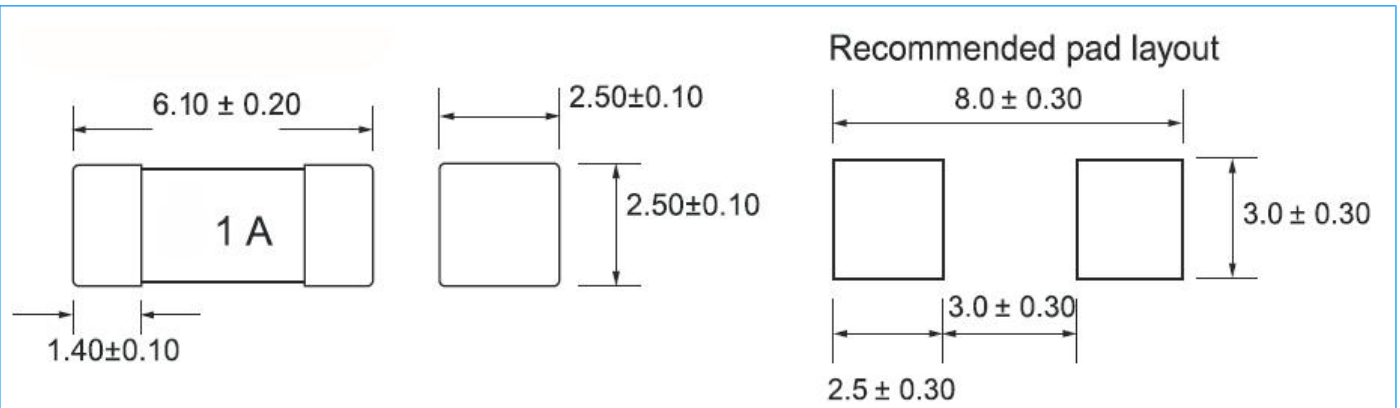


Reflow Condition		Pb-free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	150°C
	- Temperature Max ($T_{s(max)}$)	200°C
	- Time (min to max) (t_s)	60 -120 seconds
Average ramp up rate ($T_{s(max)}$ to T_p)		5°C /second max.
Reflow	- Temperature (T_L)	220°C
	- Time Max (T_L)	60 seconds
Peak Temperature (T_P)		260°C max
Ramp-down Rate		5°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max

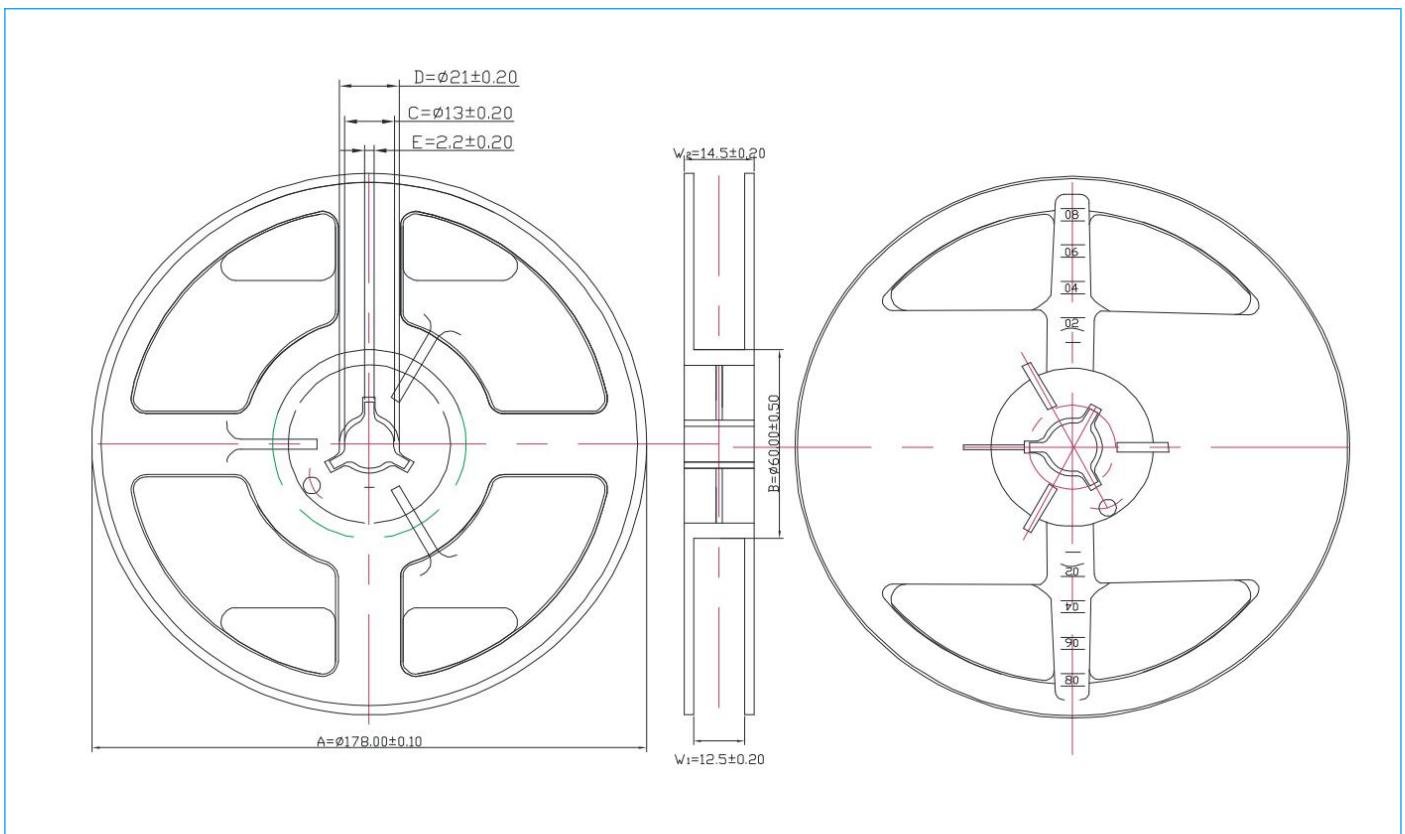
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Dimensions and Structure (Unit: mm)



Packaging (Unit: mm)

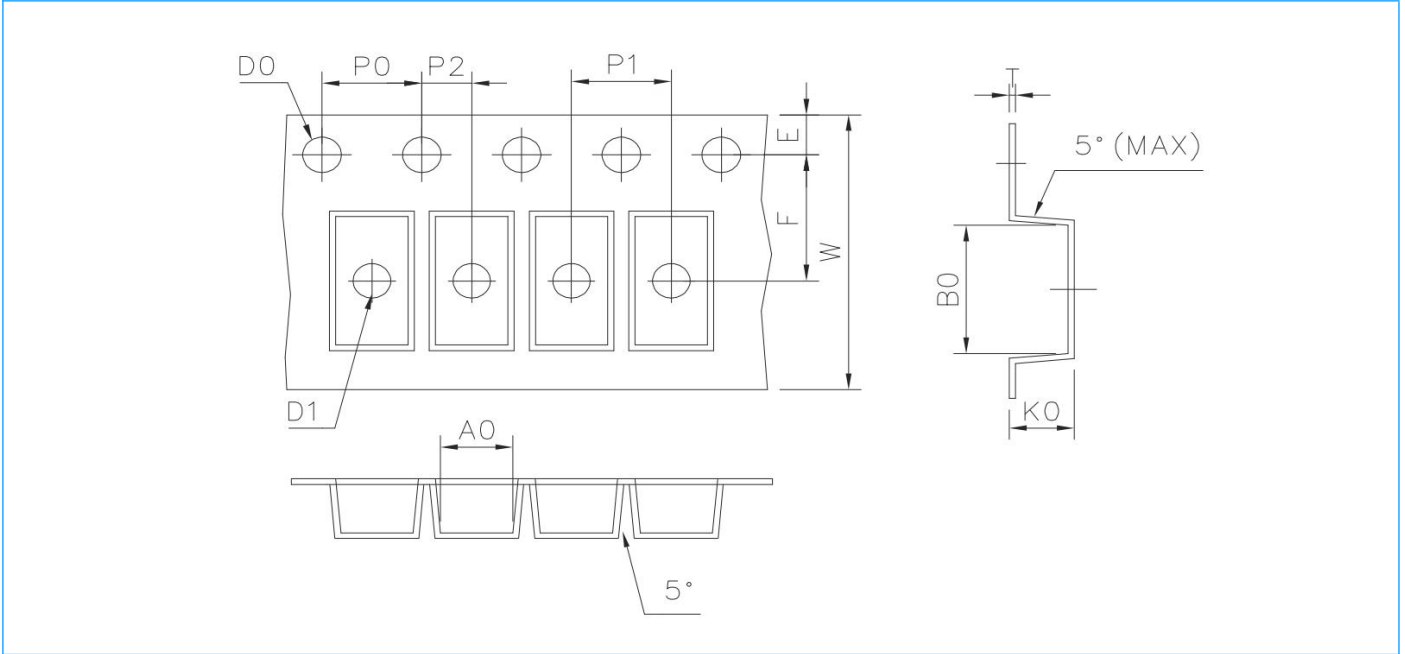


Symbol	A	B	C	D	E	W1	W2
Spec.(mm)	178±0.10	60±0.50	13±0.20	21±0.20	2.2±0.20	12.5±0.20	14.5±0.20

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Packaging (Unit: mm) (Continue)



Symbol	A0	B0	D0	D1	E	F
Spec.(mm)	2.70±0.10	6.40±0.10	1.50±0.10	1.50±0.25	1.75±0.10	5.50±0.10
Symbol	K0	P0	P1	P2	W	t
Spec.(mm)	2.70±0.10	4.00±0.10	4.00±0.10	2.00±0.10	12.00±0.15	0.25±0.05

Packaging Quantity

Part Number	Rated Current (A)	Packaging Option	Quantity
STE 125V Time-Delay Series	≤1A	Tape & Reel	1500 PCS
	>1A	Tape & Reel	1000 PCS