

1206 Time Delay SMD Fuses

SC1206 Time-Delay Series

Description

SC1206 Time-Delay Series are the fuses set the industry standard for performance, reliability and quality. The solder-free design provides excellent on-off and temperature cycling characteristics during use and also makes our SMD fuses more heat and shock tolerant than typical subminiature fuses.



Features

- ◆ Rapid interruption of excessive current.
- ◆ Compatible with reflow and wave solder.
- ◆ Ceramic and glass construction.
- ◆ One time positive disconnect.
- ◆ Lead Free and Halogen free material.

Electrical Characteristics

Rated Current	1.0In	2.5In	3.5In
250mA~5A	4 hours min.	5 secs max.	—
6A~30A		—	5 secs max.

Specifications

Part Number	Rated Voltage DC (V)			Rated Current (A)	Breaking Capacity (A) ^①				Typical Cold Resistance (mOhms) ^②	Typical Voltage Drop (mV)	Typical Pre-Arcing I ² t (A ² Sec) ^③	Alpha Mark
					72V	63V	32V	24V				
12 100.0.25	125	63	32	0.25	100	100	100	300	3700	1350	0.00038	.2 5
12 100.0.375				0.375	100	100	100	300	1850	720	0.00077	E
12 100.0.5				0.5	100	100	100	300	1050	690	0.0019	B
12 100.0.75				0.75	100	100	100	300	775	680	0.15	G
12 100.1				1	100	100	100	300	485	550	0.2	H
12 100.1.5				1.5	100	100	100	300	218	355	0.45	K
12 100.2				2	100	100	100	300	133	310	1.2	N
12 100.2.5				2.5	100	100	100	300	79	230	1.9	O
12 100.3				3	100	100	100	300	49	185	2.4	P
12 100.3.5				3.5	100	100	100	300	37	175	2.8	R
12 100.4	72	24	32	4	100	100	100	300	33	160	3.3	S
12 100.4.5				4.5	100	100	100	300	28	150	4.5	X
12 100.5				5	100	100	100	300	22	135	7	T

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Specifications (Continue)

Part Number	Rated Voltage DC (V)			Rated Current (A)	Breaking Capacity (A) ①				Typical Cold Resistance (mOhms) ②	Typical Voltage Drop (mV)	Typical Pre-Arching I ² t (A ² Sec) ③	Alpha Mark				
					72V	63v	32V	24V								
12 100.6	—	—	63	32	6	—	100	100	300	15.5	140	14	F			
12 100.7					7	—	100	100	300	11.5	120	19	J			
12 100.8					8	—	—	100	300	8.0	100	20	V			
12 100.10					10	—	—	100	300	7.0	90	32	U			
12 100.12					12	—	—	100	300	5.9	85	47	W			
12 100.15					—	—	24	15	—	—	100	300	3.8	75	63	Y
12 100.20								20	—	—	100	300	2.9	70	82	Q
12 100.25								25	—	—	100	300	1.6	60	90	25
12 100.30								30	—	—	100	300	1.3	60	100	30

- ◆ DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source).
- ◆ DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C.
- ◆ Typical Pre-arching I²t are measured at 10In Current.

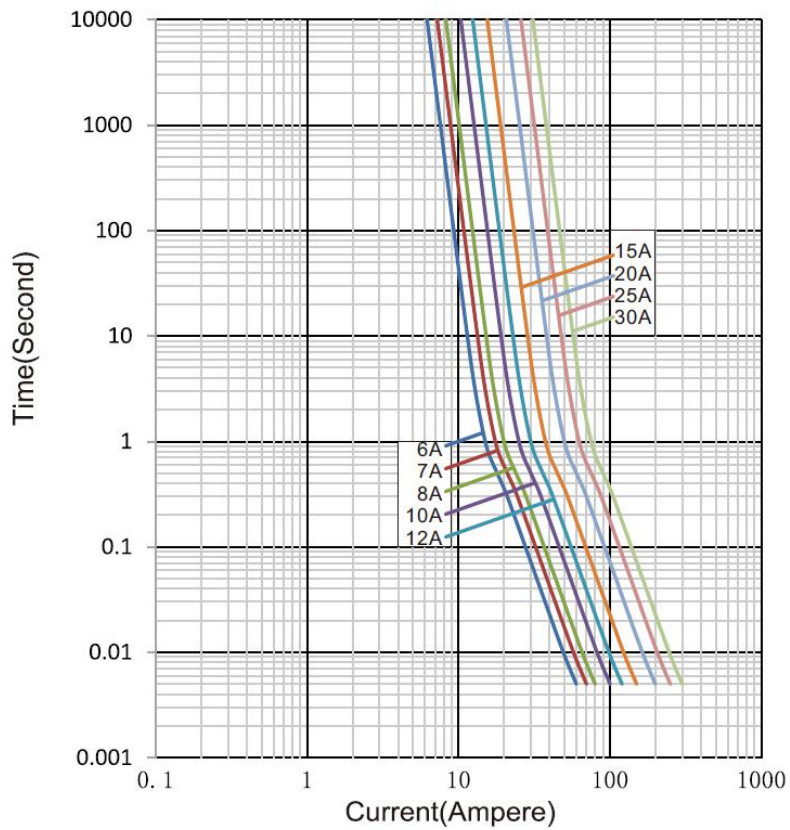
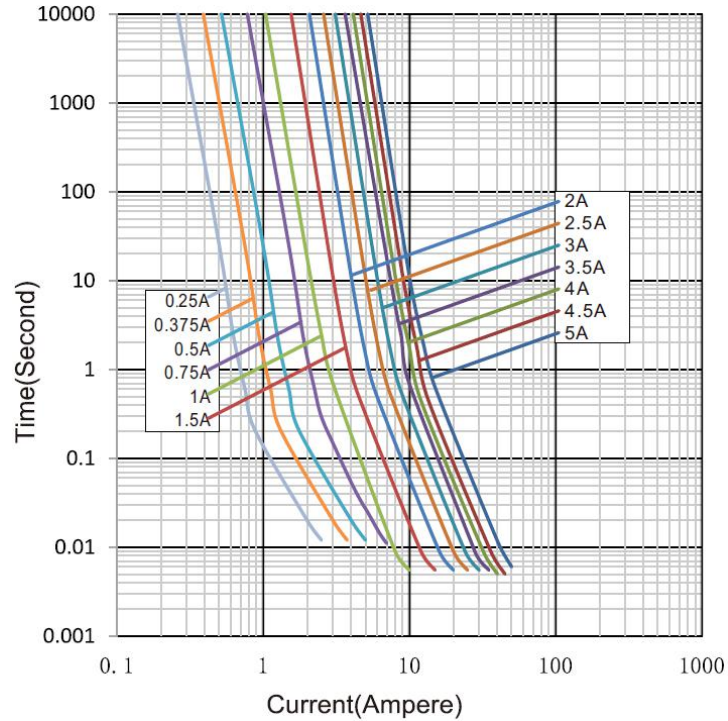
Product Characteristics

Materials	Body: Ceramic Terminations: Silver over-plated with tin Element: Alloy(Ag,Cu,Zn) Cover Coat: Glass
Operating Temperature	-55°C to 125°C
Thermal Shock	300 cycles -55°C to 125°C Consult temperature derating curve chart.
Humidity	MIL-STD-202F, Method103B, Condition D
Vibration	PerMIL-STD-202F, Method201A
Insulation Resistance (After Opening)	Greater than 10,000 ohms
Resistance to Soldering Heat	MIL-STD-202G, Method210F, Condition D

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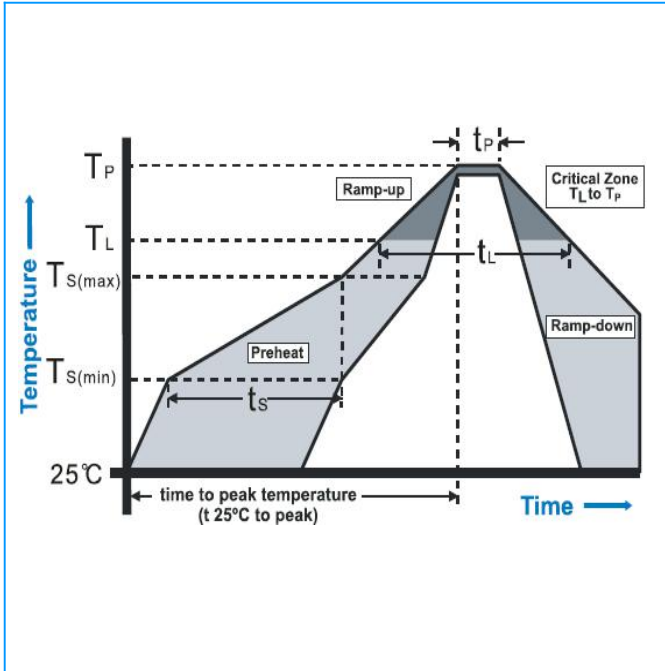
Time Current Curve



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Recommended Soldering Parameters



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 (Liquidus Temp (TL) to peak)		3°C /second max.
TS(max) to TL - Ramp-up Rate		5°C /second max.
Reflow	-Temperature(TL) (Liquidus)	217°C
	- Temperature (T_L)	60 – 150 seconds
Peak Temperature (T_P)		260+0/-5°C
Time within 5°C of actual Peak Temperature (T_P)		30 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes max.
Do not exceed		260°C

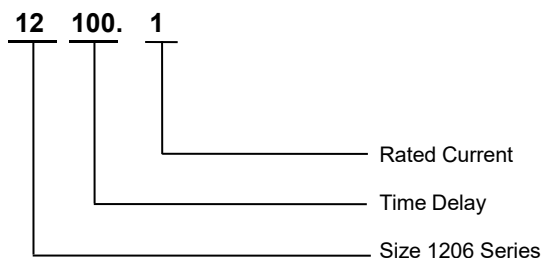
◆ **Wave / Reflow Soldering Parameters:**

- Solder Pot Temperature: 260°C Max;
- Solder Dwell Time: 10 seconds max;

◆ **Hand-Solder Parameters:**

- Solder Iron Temperature: 280±5°C;
- Heating Time: 5 Seconds min;
- Generally, hand-soldering is not recommended;

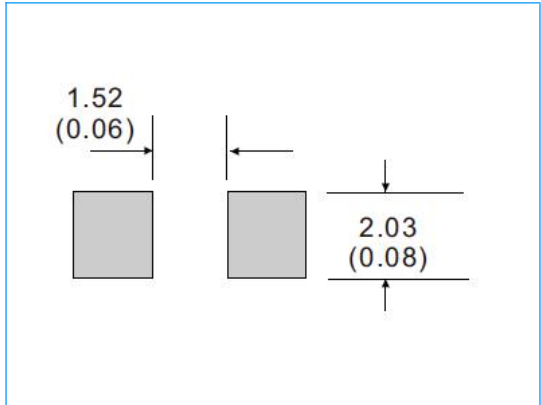
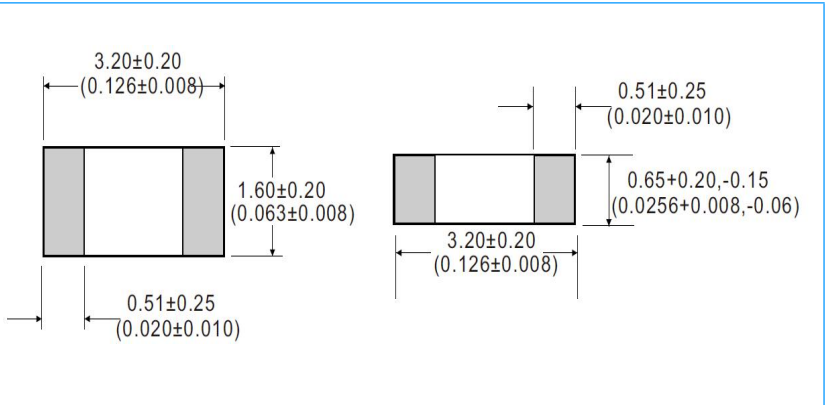
Part Numbering



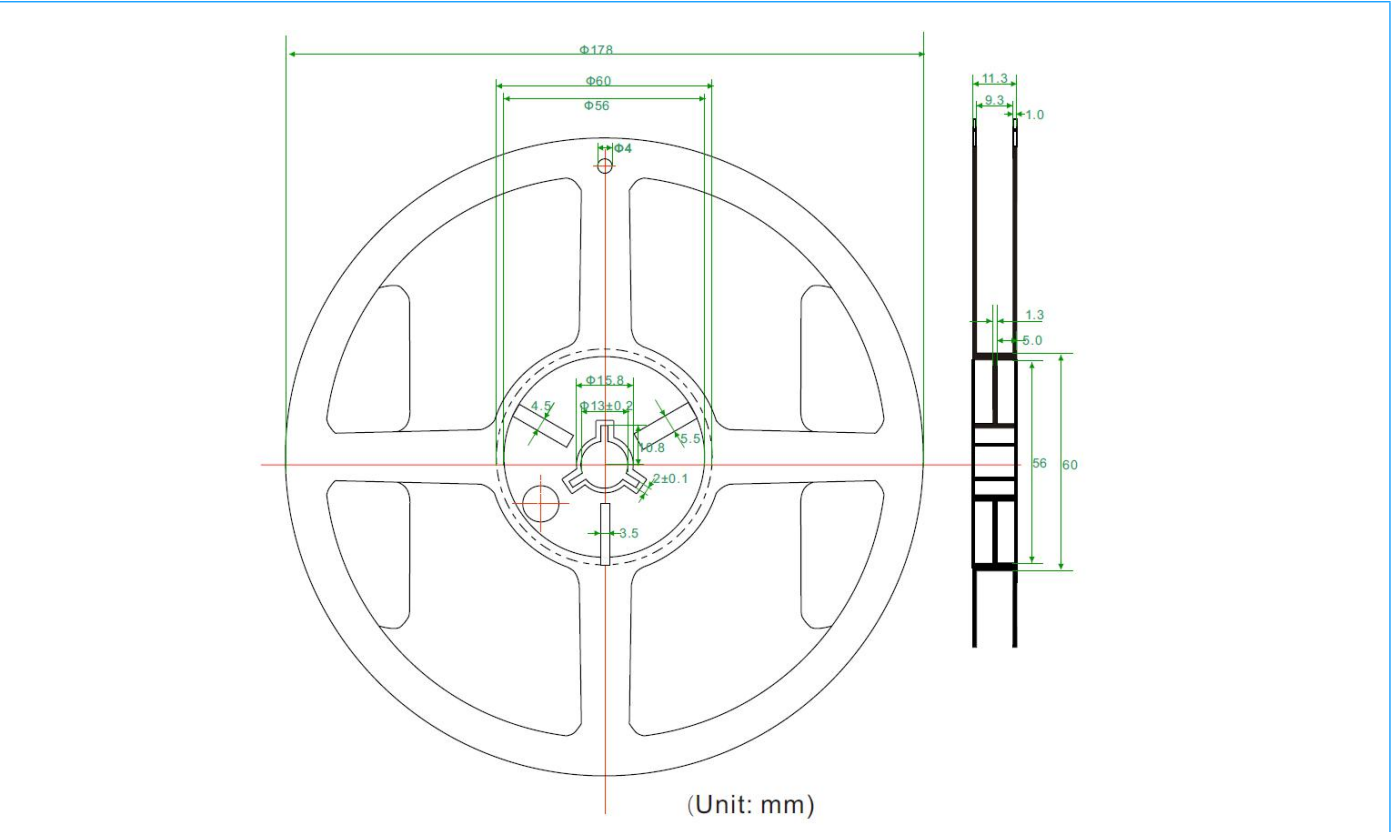
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Dimensions (Unit: mm/Inch) Pad layout (Unit: mm/Inch)



Packaging (Unit: mm)

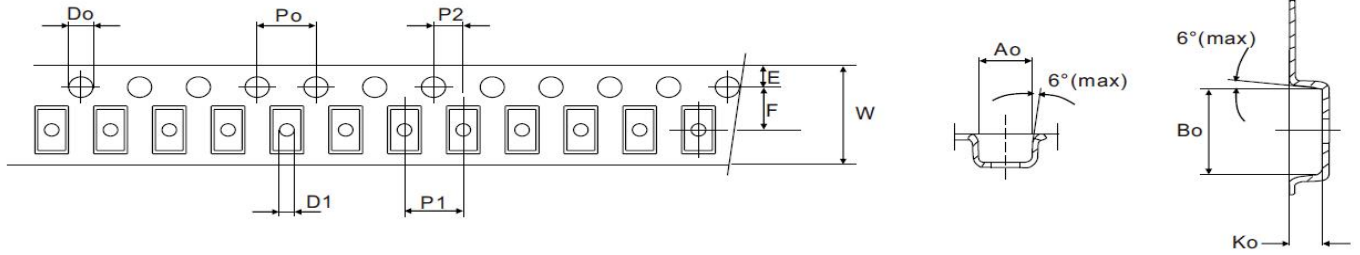


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Packaging (Unit: mm) (Continue)

3,000 pieces of fuses in plastic or paper taper (3000pcs)



Symbol	A_o	B_o	K_o	P_o	P_1	P_2
Spec.(mm)	1.80 ± 0.10	3.50 ± 0.10	1.27 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10
Symbol	E	F	D_o	D_1	W	T
Spec.(mm)	1.75 ± 0.10	3.50 ± 0.10	1.50 ± 0.10	1.00(Max)	8.00 ± 0.10	0.25 ± 0.05