

# 1206 Fast Acting SMD Fuses

## SC1206 Fast-Acting Series

### Description

SC1206 Fast-Acting 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.	—
7A~30A		—	5 secs max.

### Specifications

Part Number	Rated Voltage DC (V)			Rated Current (A)	Breaking Capacity (A) <sup>①</sup>				Typical Cold Resistance (mOhms) <sup>②</sup>	Typical Voltage Drop (mV)	Typical Pre-Arcing I <sup>2</sup> t (A <sup>2</sup> Sec) <sup>③</sup>	Alpha Mark
					72V	63V	32V	24V				
12 000.0.25	125	63	32	0.25	100	100	100	300	3700	1350	0.00038	.2 5
12 000.0.375				0.375	100	100	100	300	1850	720	0.00077	E
12 000.0.5				0.5	100	100	100	300	1050	690	0.0019	B
12 000.0.75				0.75	100	100	100	300	775	680	0.15	G
12 000.1				1	100	100	100	300	485	550	0.18	H
12 000.1.5				1.5	100	100	100	300	218	355	0.4	K
12 000.2	72	24	32	2	100	100	100	300	133	310	1.1	N
12 000.2.5				2.5	100	100	100	300	79	230	1.7	O
12 000.3				3	100	100	100	300	49	185	2.2	P
12 000.3.5				3.5	100	100	100	300	37	175	2.7	R
12 000.4				4	100	100	100	300	33	160	3.2	S
12 000.4.5	—	24	32	4.5	100	100	100	300	28	150	4.2	X
12 000.5				5	100	100	100	300	22	135	6	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-Arcing I <sup>2</sup> t (A <sup>2</sup> Sec) ③	Alpha Mark
					72V	63v	32V	24V				
12 000.7	—	—	—	7	—	100	100	300	11.5	120	18	J
12 000.8				8	—	—	100	300	8.0	100	18	V
12 000.10				10	—	—	100	300	7.0	90	30	U
12 000.12				12	—	—	100	300	5.9	85	45	W
12 000.15				15	—	—	100	300	3.8	75	63	Y
12 000.20				20	—	—	100	300	2.9	70	80	Q
12 000.25				25	—	—	100	300	1.6	60	90	25
12 000.30				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-arcing I<sup>2</sup>t are measured at 10In Current.

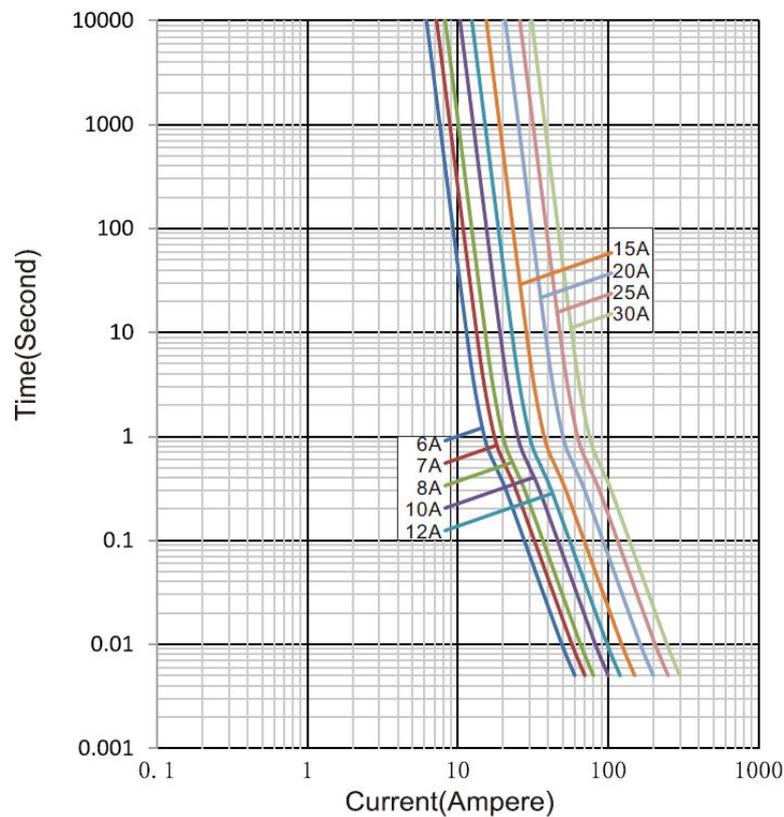
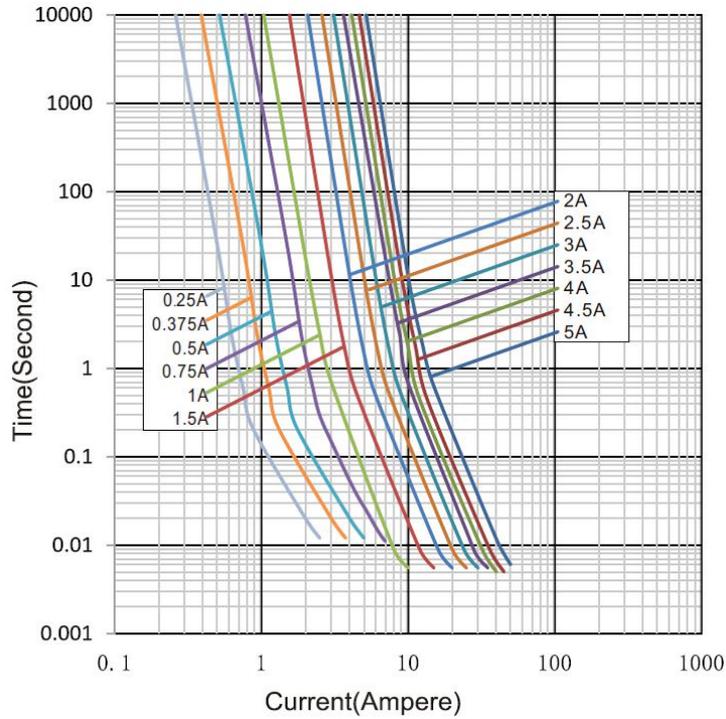
### Product Characteristics

<b>Materials</b>	<b>Body:</b> Ceramic <b>Terminatons:</b> Silver over-plated with tin <b>Element:</b> Alloy(Ag,Cu,Zn) <b>Cover Coat:</b> Glass
<b>Operatng Temperature</b>	-55°C to 125°C
<b>Thermal Shock</b>	300 cycles -55°C to 125°C Consult temperature rerating curve chart.
<b>Humidity</b>	MIL-STD-202F, Method103B,Condition D
<b>Vibraton</b>	PerMIL-STD-202F, Method201A
<b>Insulaton Resistance (Afer Opening)</b>	Greaterthan10,000ohms
<b>Resistance to Soldering Heat</b>	MIL-STD-202G,Method210F, Condition D

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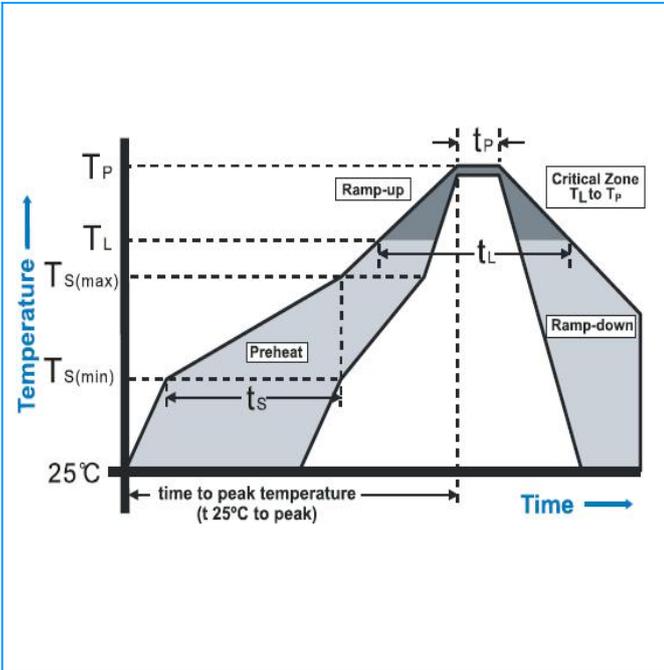
### Time Current Curve



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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

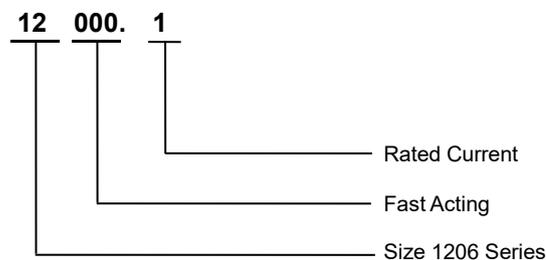
◆ **Wave / Reflow Soldering Parameters:**

- 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;

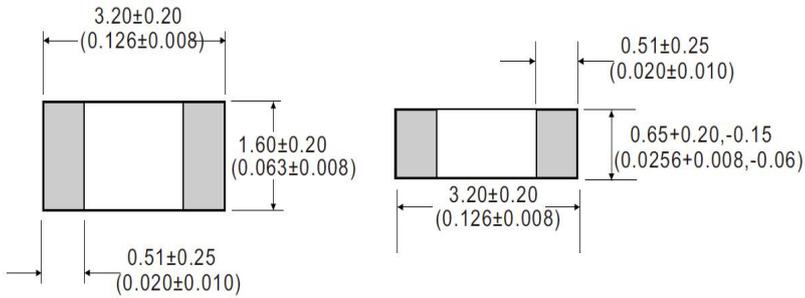
### Part Numbering



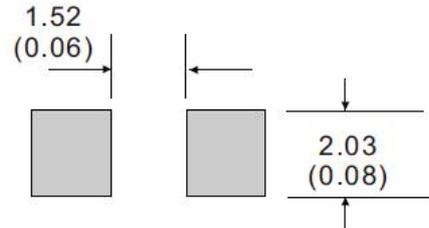
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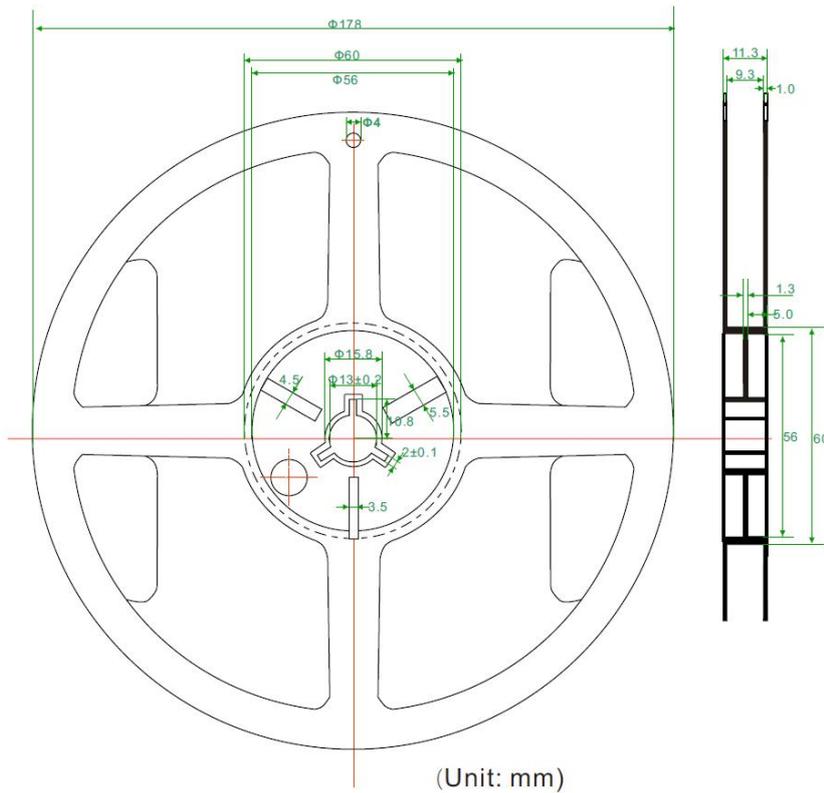
### Dimensions (Unit: mm/Inch)



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



### Packaging (Unit: mm)

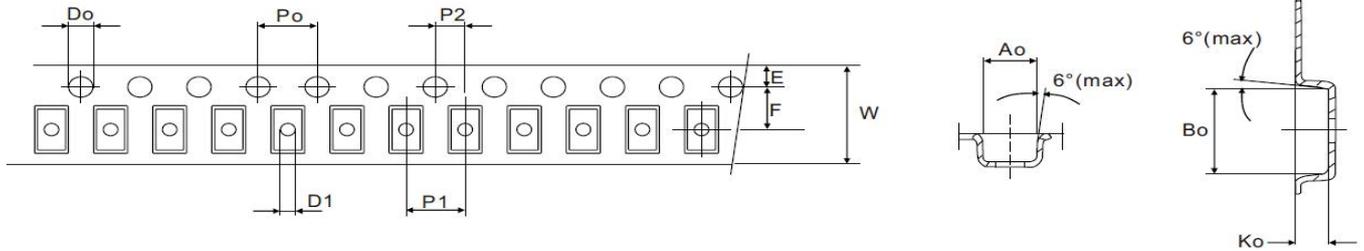


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### Packaging (Unit: mm) (Continue)

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)	$1.80 \pm 0.10$	$3.50 \pm 0.10$	$1.27 \pm 0.10$	$4.00 \pm 0.10$	$4.00 \pm 0.10$	$2.00 \pm 0.10$
Symbol	$E$	$F$	$D_o$	$D_1$	$W$	$T$
Spec.(mm)	$1.75 \pm 0.10$	$3.50 \pm 0.10$	$1.50 \pm 0.10$	1.00(Max)	$8.00 \pm 0.10$	$0.25 \pm 0.05$