

# Time-Lag SMD Fuses 1206

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**RoHS  
Compliant**



## Description

The SMD fuses stand out due to their ultra-small size and excellent electrical performance, reliability and quality. The solder-free design provides outstanding on-off and temperature cycling characteristics during operation and also makes our chip fuses more heat and shock tolerant than typical subminiature fuses.

## Applications

Industrial products such as cellphones, DVD players, battery packs, hard disk drives and digital cameras.

## Features

- High inrush current withstanding capability
- Compatible with reflow and wave soldering
- Ceramic and glass construction
- Excellent environmental integrity
- AEC-Q200 Automotive Grade Certified
- Lead-free and Halogen-free
- Designed to UL 248-14

## Specifications

Operating Temperature	: -55°C to +150°C
Storage Conditions	: +10°C to +60°C
Relative Humidity	: ≤ 75% yearly average without dew, maximum 30 days at 95%
Vibration Resistance	: 24 cycles at 15 min. each 10-60Hz at 0.75mm amplitude 60-2000Hz at 10g acceleration

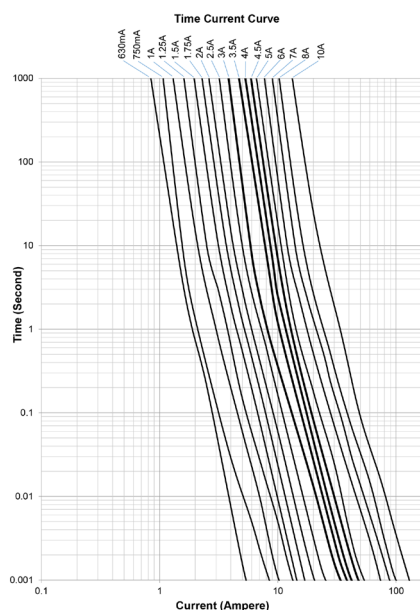
## Electrical Characteristics

### Time vs Current Characteristics Table

(measured with constant current power supply)

Time vs Current Characteristics			
Rated current	100%	350%	1000%
6A to 10A	>4h	≤5s	0.2ms to 20ms

## Average Time Current (I-T) Curves



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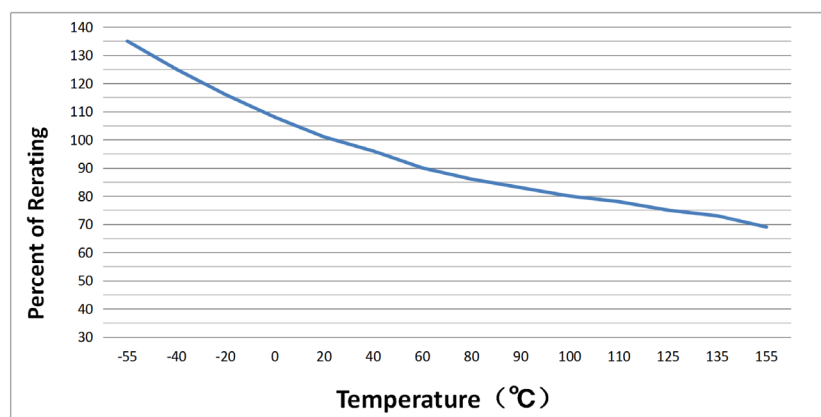
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## Electrical Characteristics at 25°C

Amp Code	Rated Current	Rated Voltage DC	Typical Voltage Drop (mV)	Breaking Capacity	Typical Melting I <sup>2</sup> T (A <sup>2</sup> s)	Typical Cold Resistance (mΩ)	Alpha Mark
1600	6.00A	24V/ 32V DC	138	50A@32V DC 300A@24V DC	12.5	15.0	F
1700	7.00A		131		14.5	12.0	7
1800	8.00A		122	300A@24V DC 150A@32V DC	16.5	8.8	M
2100	10.00A		105		25	6.0	U

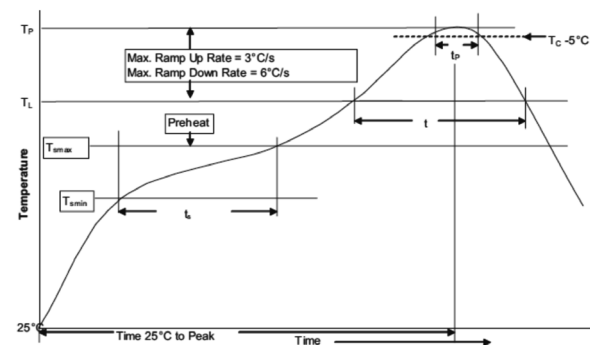
1. DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source)
2. DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C
3. Typical Pre-arcing I<sup>2</sup>t are measured at 10In current choice fuse for surge application (USB charger etc.), make sure the I<sup>2</sup>t of fuse is 4 times than surge.

## Temperature Re-rating Curve



Normal ambient temperature : 23 ±3°C  
 Operating temperature : -55°C ~ +150°C, with proper correction factor applied

## Soldering Parameters

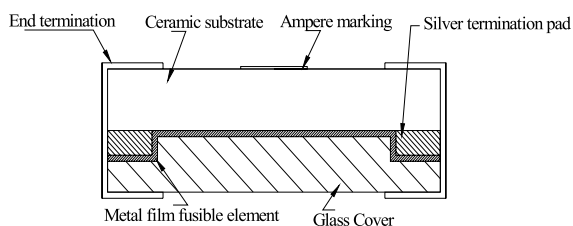


1. Infrared Reflow:  
 Temperature: 260°C  
 Time: 30sec Max.
2. Wave Soldering:  
 Reservoir Temperature: 260°C  
 Time in Reservoir: 10sec Max.

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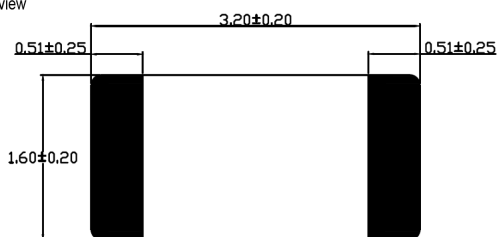
Profile Feature		Pb-Free Assembly
Average Ramp-UP Rate(Tsmax to Tp)		3°C/s Max.
Preheat	Temperature Min (Ts min)	150°C
	Temperature Max (Ts max)	200°C
	Time (Tsm in to Ts max)	60sec to 120sec
Liquidous temperature(TL)		217°C
Time at liquidous(tL)		60 to 150S
Peak package body temperature (Tp)		260°C
Time (tr) within 5°C of the specified classification temperature (Tc)		30S
Average ramp-down rate (Tp to Tsmax)		6°C/s Max.
Time (25°C to Peak Temperature)		8 Minutes Max.

## Mechanical Specifications

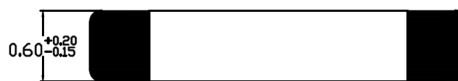


## Diagram

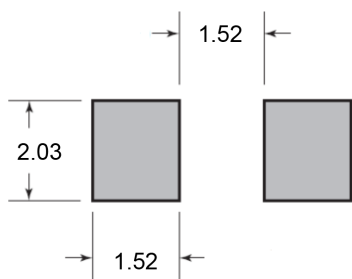
Top view



Side view



## Recommended Land Pattern

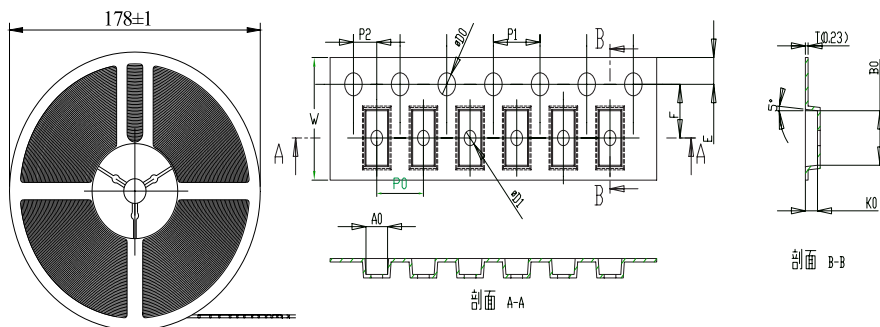


Dimensions : Millimetres

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## Packing Information



W	E	F	D0	D1	P0	P1	P2	P0×10	t	A0	B0	K0
8 ±0.2	1.75 ±0.1	3.5 ±0.05	1.5 +0.1/-0	1 ±0.1	4 ±0.05	4 ±0.01	2 ±0.05	40 ±0.2	0.25 ±0.05	1.85 ±0.1	3.56 ±0.1	1.04 ±0.1

## Part Number Table

Description	Part Number
SMD Fuse, Time-Lag, 6A, 32V DC, 1206	MCCFB1206TTT/6
SMD Fuse, Time-Lag, 7A, 32V DC, 1206	MP001611
SMD Fuse, Time-Lag, 8A, 32V DC, 1206	MCCFB1206TTT/8
SMD Fuse, Time-Lag, 10A, 32V DC, 1206	MCCFB1206TTT/10

Dimensions : Millimetres

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