



# **Description**

RoHS Compliant

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

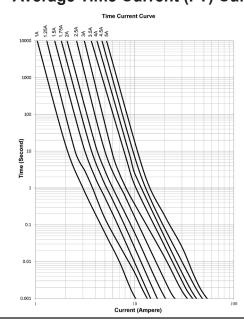
#### **Electrical Characteristics**

#### **Time vs Current Characteristics Table**

(measured with constant current power supply)

Time vs Current Characteristics						
Rated current	100%	250%	300%	1000%		
1A to 5A	>4h	<5s	0.1s~3s	0.2ms~20ms		

### Average Time Current (I-T) Curves





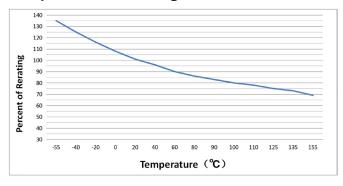


#### Electrical Characteristics at 25°C

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	
1100	1A		530		0.15	465	Н	
1150	1.5A		468	50A @ 12V AC 50A @ 63V DC	0.21	215	K	
1200	2A	12VAC	320		0.43	130	N	
1250	2.5A	63VDC	250		50A @ 63V DC	0.72	75	0
1300	3A		197		1.75	48	Р	
1400	4A		175		2.65	33	S	
1500	5A	32V DC 12V AC	150	100A @ 32V DC 100A @ 12V AC	4.15	23	Т	

- 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 I2t are measured at 10In Current

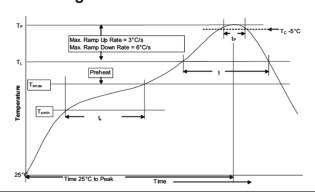
# **Temperature Re-rating Curve**



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: 5S

Recommend reflow profile

2. Wave Soldering:

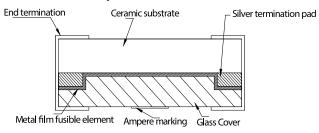
Reservoir Temperature: 260°C Time in Reservoir: 10sec Max.





Profile Featu	ire	Pb-Free Assembly				
Average Rai	mp-UP Rate(Tsmax to Tp)	3°C/s Max.				
	Temperature Min (Ts min)	150°C				
Preheat	Temperature Max (Ts max)	200°C				
	Time (Tsmin to Ts max)	60sec to 120sec				
Liquidous te Time at liqui	mperature(TL) dous(tL)	217°C 60 to 150S				
Peak packa	ge body temperature (Tp)	260°C				
, ,	hin 5°C of the specified n temperature (Tc)	30S				
Average ram	np-down rate (Tp to Tsmax)	6°C/s Max.				
Time (25°C	to Peak Temperature)	8 Minutes Max.				

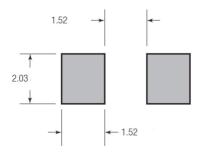
# **Mechanical Specifications**



### Diagram



#### **Recommended Land Pattern**

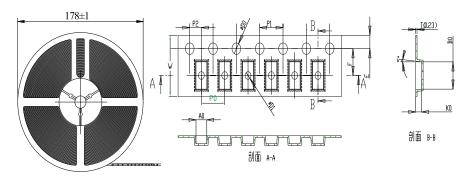


Dimensions : Millimetres





### **Packing Information**



w	E	F	D0	D1	P0	P1	P2	P0×10	t	A0	В0	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, 1A, 63V DC, 1206	MP001606
SMD Fuse, Time-Lag, 1.5A, 63V DC, 1206	MCCFB1206TTT/1.5
SMD Fuse, Time-Lag, 2A, 63V DC, 1206	MP001607
SMD Fuse, Time-Lag, 2.5A, 63V DC, 1206	MCCFB1206TTT/2.5
SMD Fuse, Time-Lag, 3A, 63V DC, 1206	MP001608
SMD Fuse, Time-Lag, 3A, 63V DC, 1206	MCCFB1206TTT/3
SMD Fuse, Time -Lag, 3A, 72V DC / 63V DC, 1206	MP006275
SMD Fuse, Time-Lag, 4A, 32V DC, 1206	MCCFB1206TTT/4
SMD Fuse, Time-Lag, 4A, 63V DC, 1206	MP001609
SMD Fuse, Time-Lag, 5A, 32V DC, 1206	MCCFB1206TTT/5
SMD Fuse, Time-Lag, 5A, 32V DC, 1206	MP001610

**Dimensions: Millimetres** 

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