Fast-Acting SMD Fuses 0603

multicomp PRO

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 SMD fuses more heat and shock tolerant than typical SMD fuses.

Applications

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

Features

- Rapid interruption of excessive current
- Pass the AEC-Q200 automotive grade certified
- Compatible with reflow and wave soldering
- Ceramic and glass construction
- Excellent environmental integrity
- Non-resettable fuse design
- Lead-free and Halogen-free
- Designed to UL 248-14

Specifications

Operating Temperature	: -55°C to +125°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

Part Number	Rated Current (A)	Rated Voltage Max.	Typical Voltage Drop (mV)	Breaking Capacity	Type Cold Resistance (mΩ)	Typical Melting I^2t (A^2sec)
MP001585	1	32V DC	335	50A @ 32V DC	230	0.011
MP001596	1.5		270		150	0.045
MP001597	2		160		72	0.115
MP001598	3		130		35	0.21

Notes:

(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^2t are measured at 10In current

(4) For 1A-3A, the colour of glass coating is green; for others, it's blue

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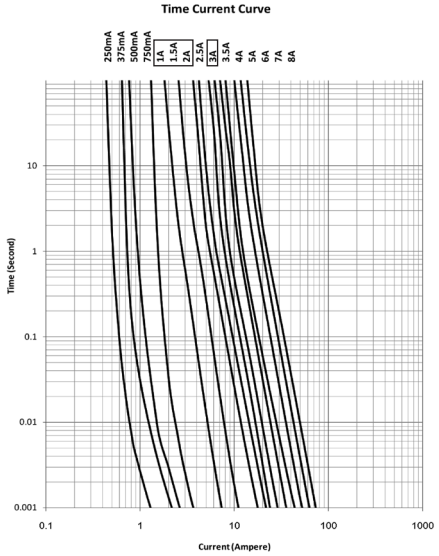
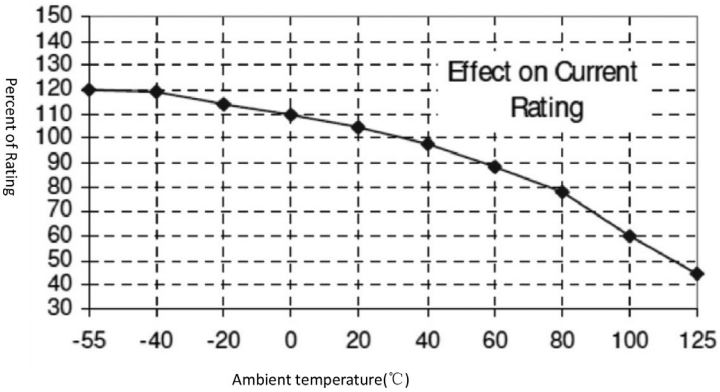
Time vs Current Characteristics Table

Time vs Current Characteristics: UL-248-14		
Rated Current	100%	200%
1A to 3A	>4H	<60s



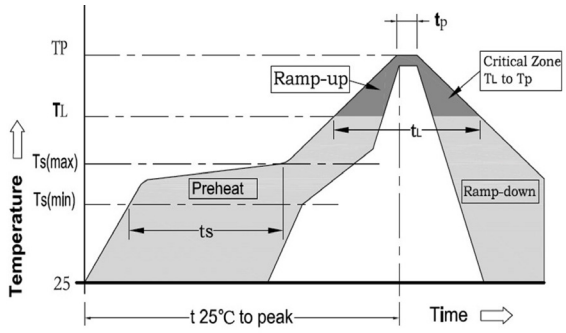
Temperature Derating Curve



(1) Normal ambient temperature: 23°C ±3°C

(2) Operating temperature: -55°C to +125°C, with proper correction factor applied

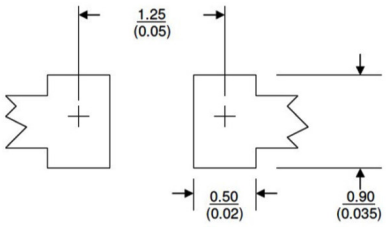
Soldering Parameters



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 (Tsmin to Ts max)	60sec to 120sec
Liquidous temperature (T_L) Time at liquidous (t_L)		217°C 60sec to 150sec.
Peak package body temperature (T_P)		260°C
Time(tp) within 5°C of specified classification temperature(TC)		30sec.
Average ramp-down rate (T_P to Tsmax)		6°C/s Max.
Time (25°C to Peak Temperature)		8 minutes Max.

1. Infrared Reflow:
   Temperature: 260°C
   Time: 30sec Max.
2. Wave Soldering:
   Reservoir Temperature: 260°C
   Time in Reservoir: 10sec Max.
3. Hand Soldering
   Temperature: 300°C
   Time: 2 sec. Max.

Recommended Land Pattern



Dimensions : Millimetres (Inches)

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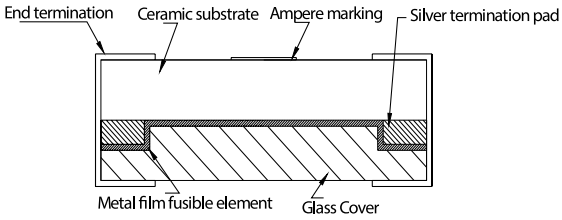
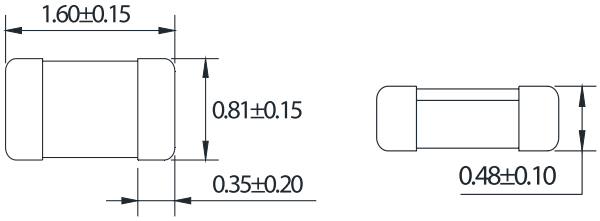
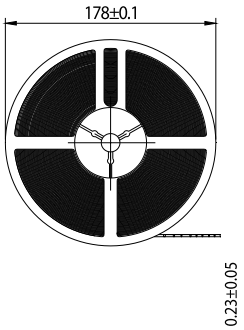
Mechanical Specifications



Diagram



Packing Information



Dimensions : Millimetres

Part Number Table

Description	Part Number
SMD Fuse, Fast-Acting, 1A, 32V DC, 0603	MP001585
SMD Fuse, Fast-Acting, 1.5A, 32V DC, 0603	MP001596
SMD Fuse, Fast-Acting, 2A, 32V DC, 0603	MP001597
SMD Fuse, Fast-Acting, 3A, 32V DC, 0603	MP001598