

# Time-Lag SMD Fuses 0603

multicomp<sup>PRO</sup>

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 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 solder
- Ceramic and glass construction
- Excellent environmental integrity
- One time positive disconnect
- Lead-free and Halogen-free
- Designed compliant 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

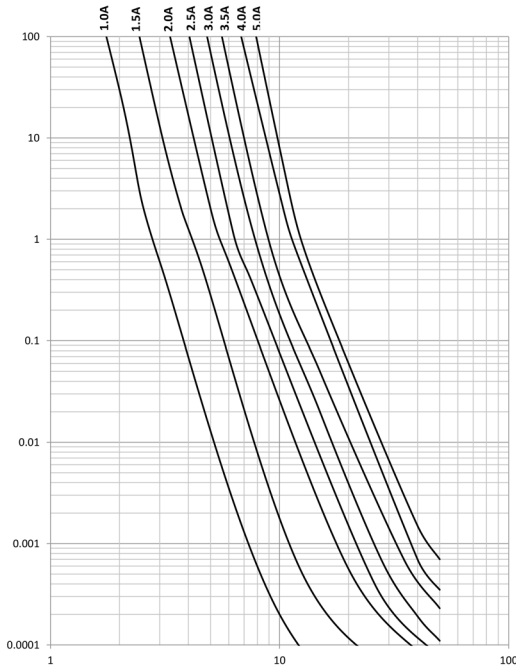
### Time vs Current Characteristics Table

(measured with constant current power supply)

Time vs Current Characteristics			
Rated current	100%	200%	250%
1A to 5A	>4h	1s~60s	<5s

# Time-Lag SMD Fuses 0603

## Average Time Current (I-T) Curves



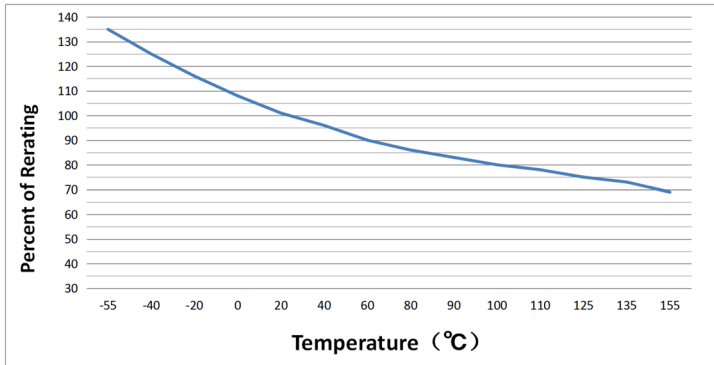
## Electrical Characteristics

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)	Typ. Resistance (mΩ)	Alpha Mark
1100	1A	32V DC	325	50A @ 32V DC	0.015	216~280	H
1150	1.5A		255		0.05	110~180	K
1200	2A		150		0.125	60~88	N
1250	2.5A		135		0.14	47~61	O
1300	3A		120		0.35	26~44	P
1350	3.5A		125		0.62	20~35	R
1400	4A		110		0.81	17~24	S
1500	5A		103		2	10.5~15	T

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 25degrees
3. Typical Pre-arcing I<sup>2</sup>t are measured at 10In Current

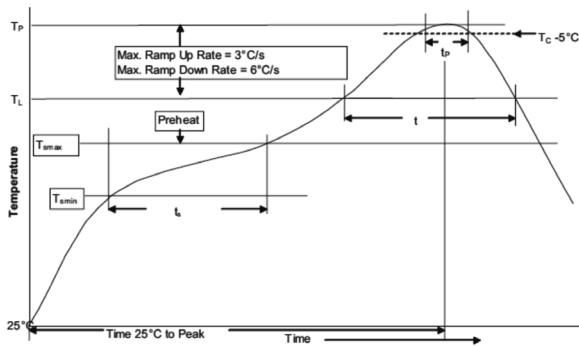
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## Temperature Re-rating Curve



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

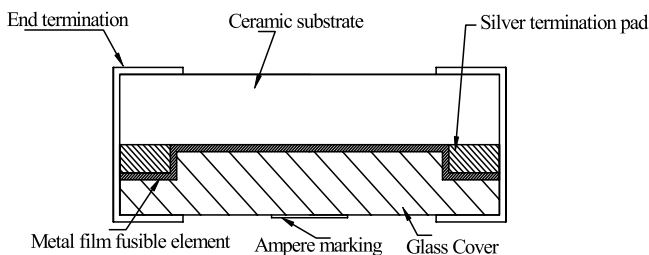
## Soldering Parameters



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 (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 (tP) within 5°C of the specified classification temperature (Tc)		30S
Average ramp-down rate (Tp to Tsm ax)		6°C/s Max.
Time (25°C to Peak Temperature)		8 Minutes Max.

- Infrared Reflow:
  - Temperature: 260°C
  - Time: 30S
  - Recommend reflow profile
- Wave Soldering:
  - Reservoir Temperature: 260°C
  - Time in Reservoir: 10sec Max.

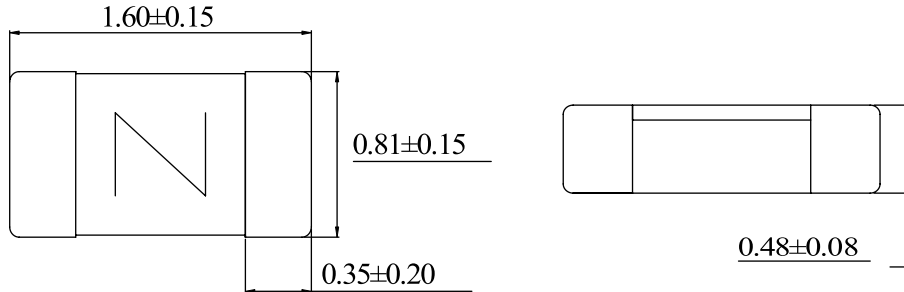
## Mechanical Specifications



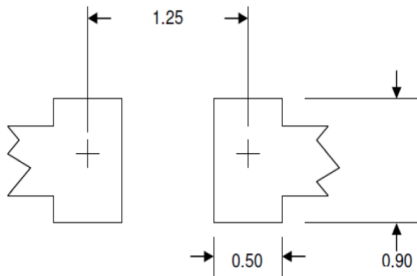
Newark.com/multicomp-pro  
 Farnell.com/multicomp-pro  
 sg.element14.com/b/multicomp-pro

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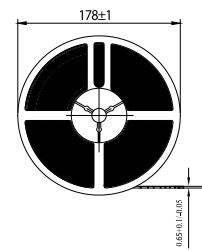
## Diagram



## Recommended land pattern



## Packing Information



## Part Number Table

Description	Part Number
SMD Fuse, Time-Lag, 1A, 32V DC, 0603	MCCFB0603TTT/1
SMD Fuse, Time-Lag, 1.5A, 32V DC, 0603	MCCFB0603TTT/1.5
SMD Fuse, Time-Lag, 2.5A, 32V DC, 0603	MCCFB0603TTT/2.5
SMD Fuse, Time-Lag, 3A, 32V DC, 0603	MCCFB0603TTT/3
SMD Fuse, Time-Lag, 3A, 32V DC, 0603	MP001603
SMD Fuse, Time-Lag, 4A, 32V DC, 0603	MCCFB0603TTT/4
SMD Fuse, Time-Lag, 5A, 32V DC, 0603	MCCFB0603TTT/5
SMD Fuse, Time-Lag, 5A, 32V DC, 0603	MP001604

Dimensions : Millimetres

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