SMD Fuses

multicomp PRO

RoHS Compliant

Description

The brick fuse for the small size and good electrical performance, reliability and quality. The solder-free design provides excellent on-off and temperature cycling characteristics during use and also makes our brick fuses more heat and shock tolerant than typical subminiature fuses.

Features

- Rapid interruption of excessive current
- Ceramic body and silver plated copper terminal
- Excellent environmental integrity
- One time positive disconnect
- Operating Temperature: -55°C to +125°C
- Storage Conditions: +10°C to +60°C
- Vibration Resistance: 24 cycles at 15 min. each (60068-6)
- Lead-free and Halogen-free
- Designed to UL 248-14

Electrical Characteristics

Part Number	Rated Current	Rated Voltage	Max. Voltage Drop (mV)	Typical Melting I^2t(A^2sec)	Typical Cold Resistance (mΩ)	Breaking Capacity
MP012920	500mA	125V AC 250V AC 125V DC 250V DC 350V DC	220	0.9	277	150A@125V AC 150A@250V AC 150A@125V DC 150A@250V DC 100A@350V DC
MP012921	750mA		150	1.69	140	
MP012922	2.5A		100	27	26.6	
MP012923	3.15A		100	51.8	20.5	

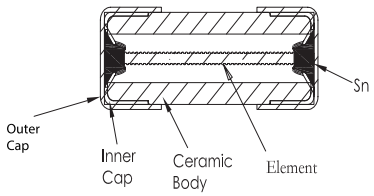
Note: (1) Permissible continuous operating current is ≤100% at ambient temperature of 23°C (73.4°F)
(2) The current values used for calculating I^2T should be within the standard range of 8ms ~ 10ms

Time VS Current Characteristics Table

(Measured with constant current power supply)

Rated Current	100%	200%
500mA to 3.15A	>4H	<60s

Construction



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

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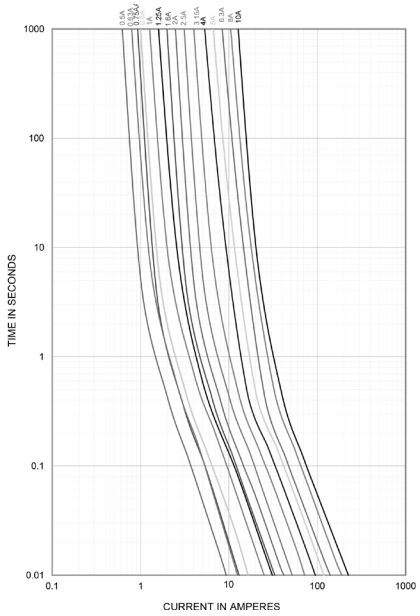
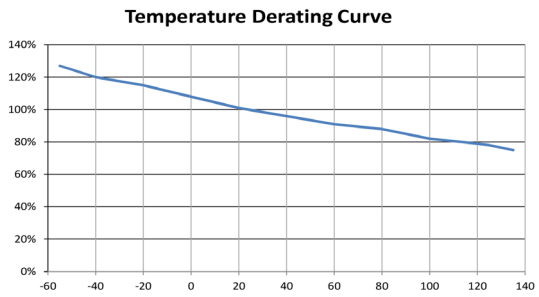
Average Time Current (I-T) Curves

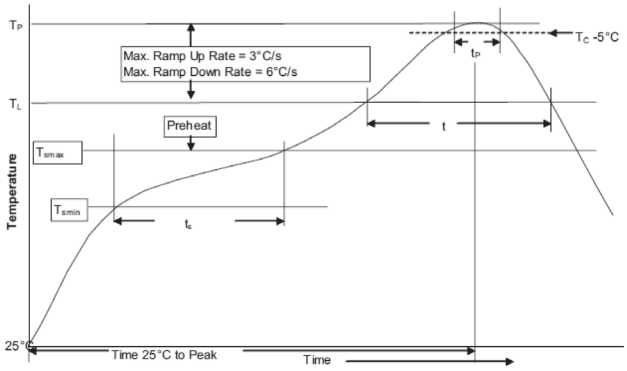


Temperature Derating Curve



Calculation for ideal fuse selection = $\frac{\text{Operating Current (A)}}{\text{Rating (\%}\times 0.75)}$

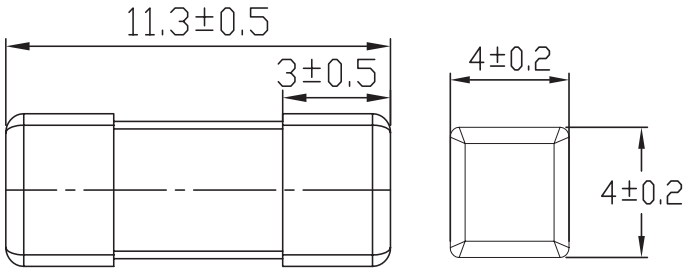
Soldering Parameters



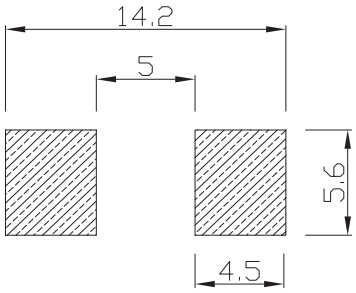
1. Infrared Reflow: Temperature:260°C
   Time:30sec Max.
   Recommend reflow profile
2. Wave Soldering
   Reservoir
   Temperature: 260°C
   Time in Reservoir: 10sec Max.

Profile Feature		Lead (Pb) free solder
Average Ramp-UP Rate (Tsmax to Tp)		3°C/s Max.
Preheat and soak	Temperature min.(Tsmin	150°C
	Temperature max.(Tsmax)	200°C
	Time (Tsmin to Tsmax)(ts)	60 ~ 120s
Liquidous temperature (TL) Time at liquidous (tL)		217°C 60~150s
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 Tsmax)		6°C/s Max.
Time (25°C to Peak Temperature)		8 Minutes Max.

Diagram



Recommended Land Pattern



Part Number Table

Description	Part Number
SMD Brick Fuse, Time Lag, 1140 size, 500mA	MP012920
SMD Brick Fuse, Time Lag, 1140 size, 750mA	MP012921
SMD Brick Fuse, Time Lag, 1140 size, 2.5A	MP012922
SMD Brick Fuse, Time Lag, 1140 size, 3.15A	MP012923

Dimensions : Millimetres