

# 0603 Fast Acting SMD Fuses

## 06 122 Series



### Description

06 122 Series are the fuses set the industry standard for performance, reliability and quality. The solder-free design provides excellent on-off and temperature cycling characteristics during use and also makes our SMD fuses more heat and shock tolerant than typical subminiature fuses.



Electrical Characteristics		
Rated Current	1.0In	2.5In
250mA~5A	4 hour minimum	5 sec maximum

### Features

- AEC-Q200 Automotive Grade Certified
- Compatible with reflow and wave solder
- Excellent environmental integrity
- One time positive disconnect
- Lead Free and Halogen free material

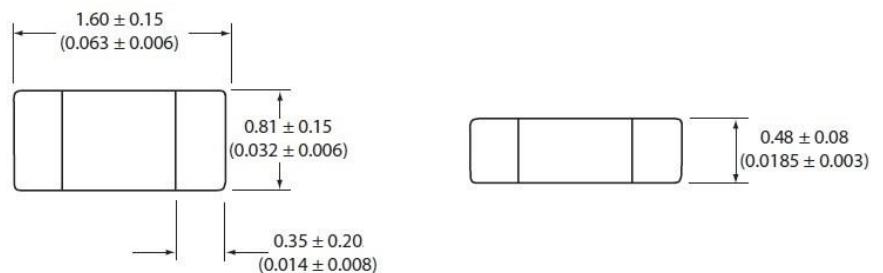
### Specifications

Specification							
Part No.	Rated Voltage	Rated Current (A)	Breaking Capacity (A) <sub>1</sub>	Typical Cold Resistance (mOhms) <sub>2</sub>	Typical Voltage Drop (mV)	Typical Pre-Arcing I <sup>2</sup> t (A <sup>2</sup> Sec) <sub>3</sub>	Alpha Mark
	DC						
06 122.0.25	63V	0.250	50A	3250	893	0.0004	D
06 122.0.375		0.375	50A	1800	587	0.0009	E
06 122.0.5		0.500	50A	1070	582	0.001	F
06 122.0.75		0.750	50A	470	427	0.009	G
06 122.1		1	50A	250	335	0.01	H
06 122.1.5		1.5	50A	150	270	0.04	K
06 122.2		2	50A	75	160	0.115	N
06 122.2.5		2.5	50A	47	145	0.14	O
06 122.3		3	50A	35	130	0.28	P
06 122.3.5		3.5	50A	27	130	0.5	R
06 122.4		4	50A	18	120	0.6	S
06 122.5		5	50A	12	110	1.9	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
- Specifications are subject to change without notice. Application testing is strongly recommended.

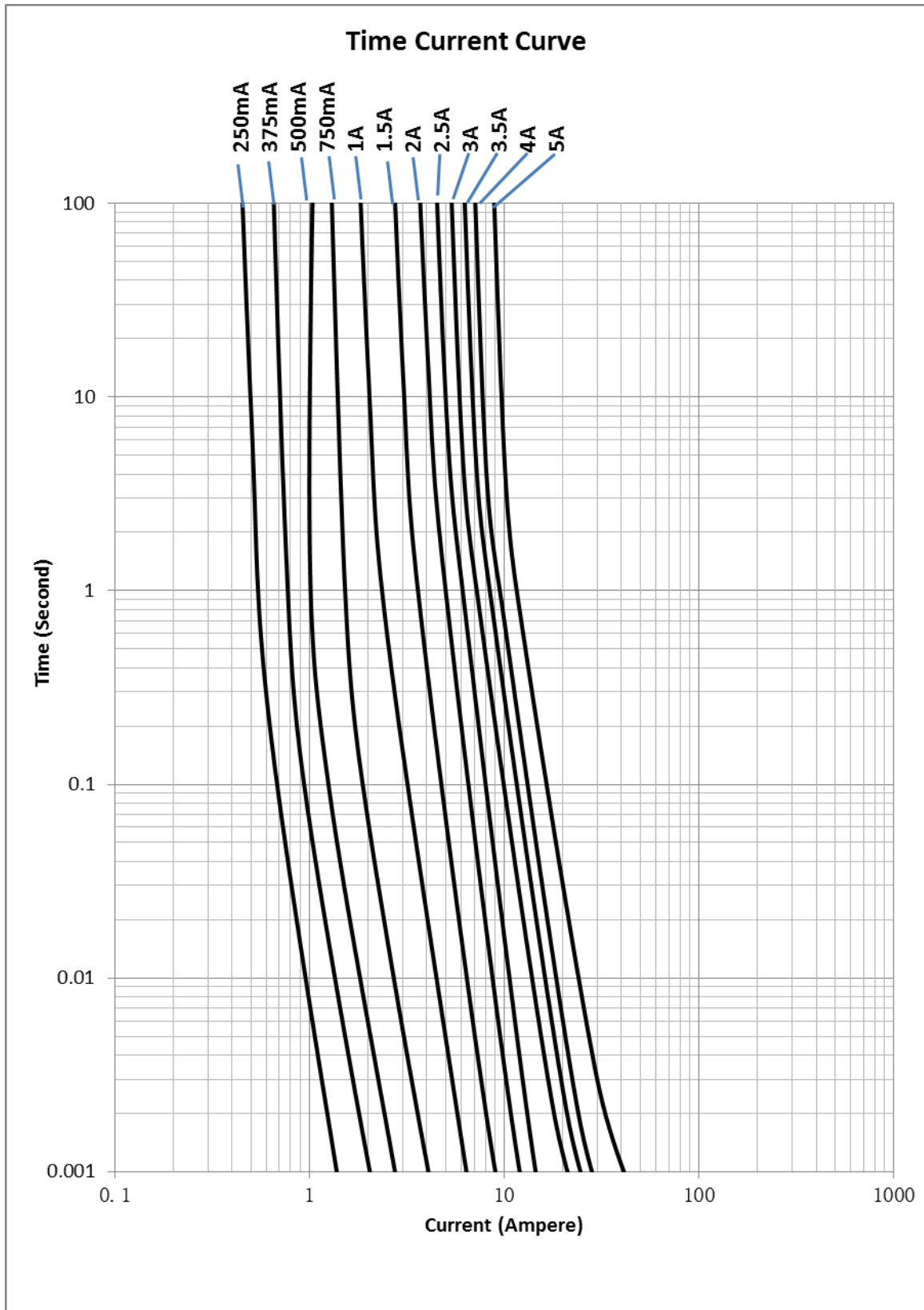
### Dimension

Drawing not to scale (Unit: mm/inch)



0603 Fast Acting SMD Fuses

06 122 Series

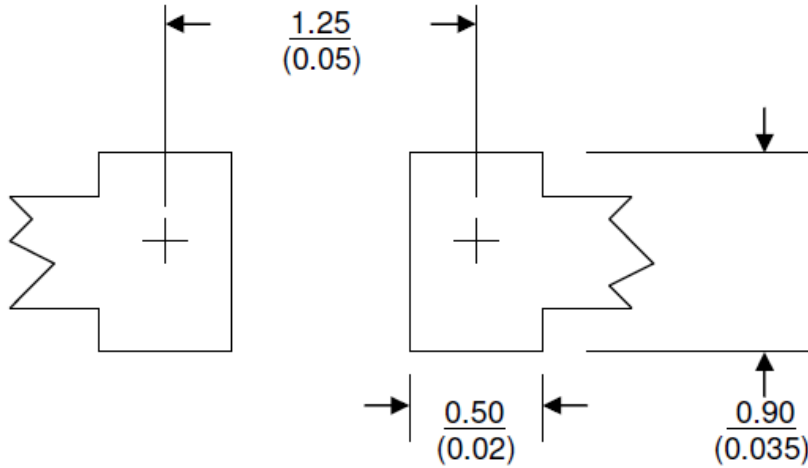


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### Recommended land pattern

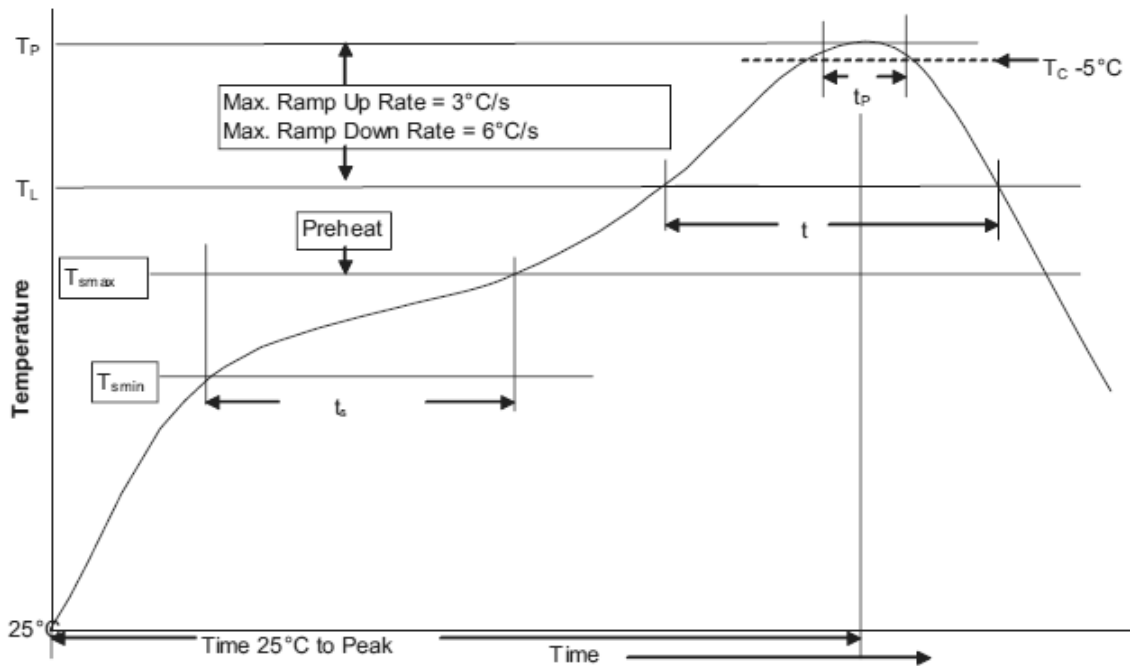


Unit: mm/inches

### Soldering method

- Wave solder
  - Reservoir temperature: 260°C
  - Time in reservoir: 10 seconds maximum
- Infrared reflow
  - Temperature: 260°C
  - Time: 30 seconds maximum

### Solder reflow profile



Profile Feature		Lead(Pb) free solder
Preheat and soak	<ul style="list-style-type: none"> <li>• Temperature min. (<math>T_{smin}</math>)</li> <li>• Temperature max. (<math>T_{smax}</math>)</li> </ul>	<ul style="list-style-type: none"> <li>150°C</li> <li>200°C</li> </ul>

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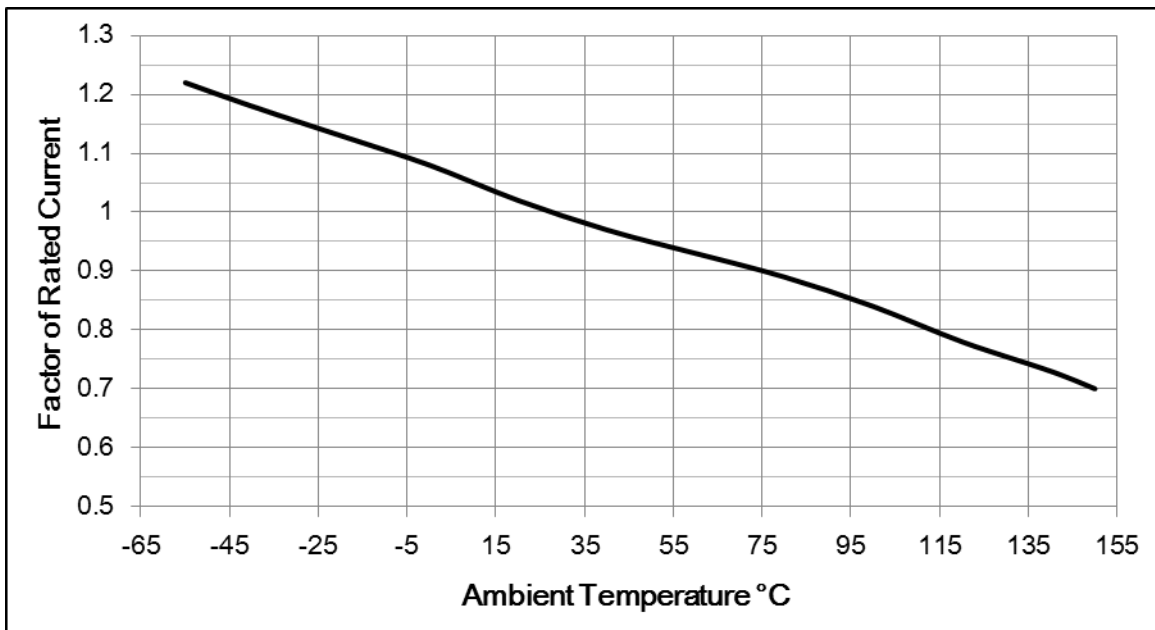


• Time ( $T_{smin}$ to $T_{smax}$ ) ( $t_s$ )	60 - 120 Seconds
Average ramp up rate $T_{smax}$ to $T_p$	3°C / Second Max.
Liquidous temperature ( $T_L$ )	217°C
Time at liquidous ( $t_L$ )	60 - 150 Seconds
Peak package body temperature ( $T_P$ )	260°C
Time ( $t_P$ ) within 5°C of the specified classification temperature ( $T_C$ )	30 Seconds
Average ramp-down rate ( $T_P$ to $T_{smax}$ )	6°C / Second Max.
Time (25°C to Peak Temperature)	8 Minutes Max.

## Temperature Derating Curve

Normal ambient temperature: 23+/-3°C

Operating temperature: -55 ~ 150°C, with proper correction factor applied



## Package

5000 fuses on 8mm tape-and-reel on a 7 inch (178mm) reel per EIA Standard 481.

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