



0603 Fast Acting SMD Fuses

DOC.NO.:  
ISS:F06F Series

# INDIVIDUAL SPECIFICATION SHEET

**Product Name:** 0603 Fast Acting SMD Fuses

**Part Number:** F06F Series

**Revision:** A



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Rev.	Effective Date	Changed Contents
A	2020-9-18	New Release

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## Description

F06F 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	2.0In
250mA~8A	4 hour minimum	60 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) <sup>1</sup>	Typical Cold Resistance (mOhms) <sup>2</sup>	Typical Voltage Drop (mV)	Typical Pre-Arcing I <sup>2</sup> t (A <sup>2</sup> Sec) <sup>3</sup>	Alpha Mark
	DC						
F06F0.25	32V	0.250	50A	3250	893	0.00042	D
F06F0.375		0.375	50A	1800	587	0.00093	E
F06F0.5		0.500	50A	1070	582	0.001	F
F06F0.75		0.750	50A	470	427	0.009	G
F06F1		1	50A	250	335	0.011	B
F06F1.5		1.5	50A	150	270	0.045	H
F06F2		2	50A	78	160	0.115	K
F06F2.5		2.5	50A	49	145	0.14	L
F06F3		3	50A	35	130	0.21	O
F06F3.5		3.5	50A	28	130	0.5	R
F06F4		4	50A	18	120	0.56	S
F06F5		5	50A	14	110	1.2	T
F06F6		6	50A	11	110	1.7	V**
F06F7		7	50A	9.5	80	2.3	X**
F06F8		8	50A	7	75	3.0	Z**

1. DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source)

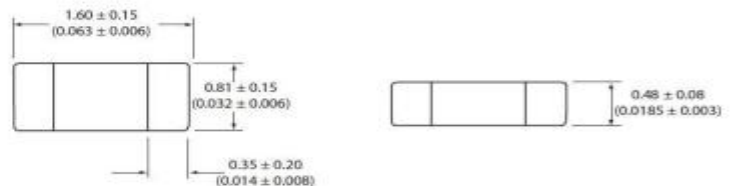
2. DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25degrees

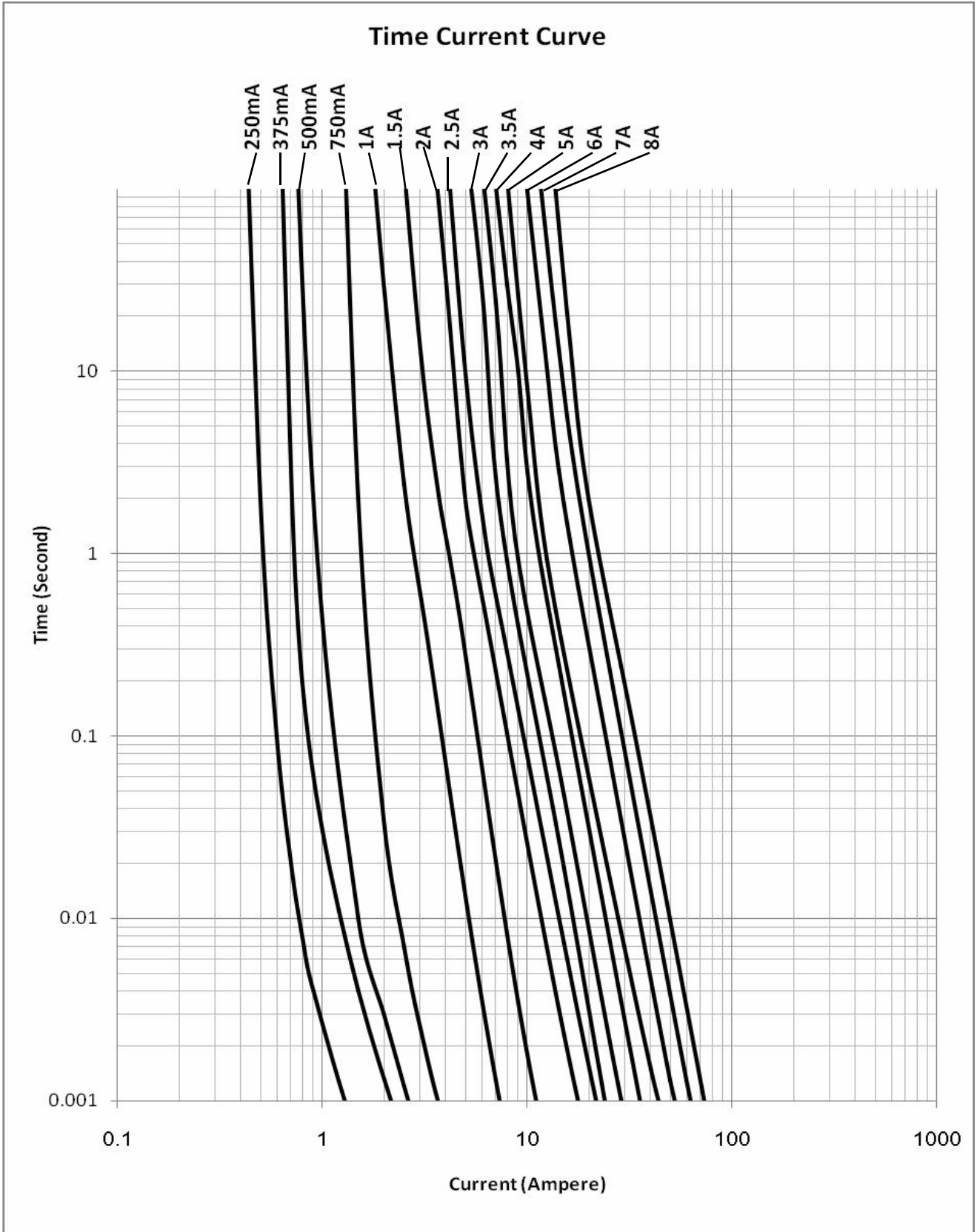
3. Typical Pre-arcing I<sup>2</sup>t are measured at 10In Current

\*\* For 1A-5A, the color of glass coating is Green; for others, it's Blue.

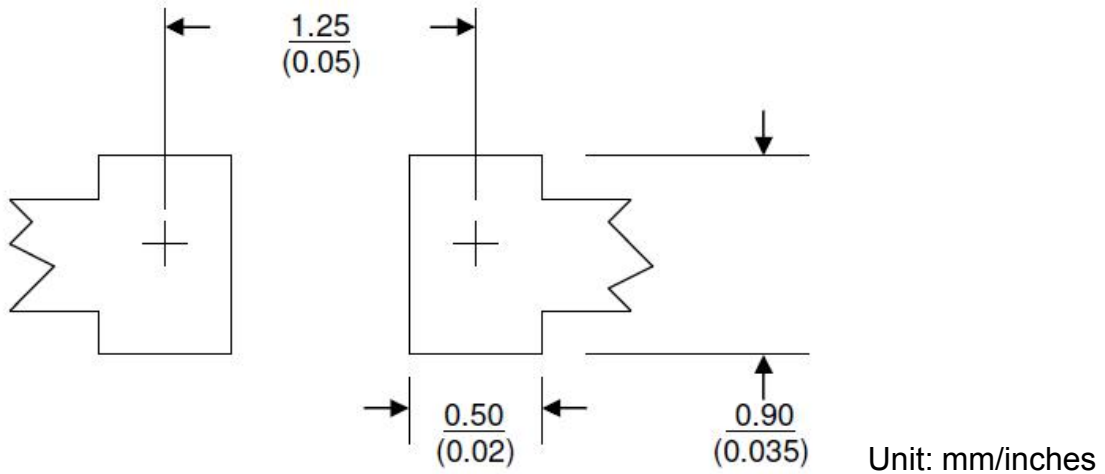
Specifications are subject to change without notice. Application testing is strongly recommended.

## Dimension Drawing not to scale (Unit: mm/inch)





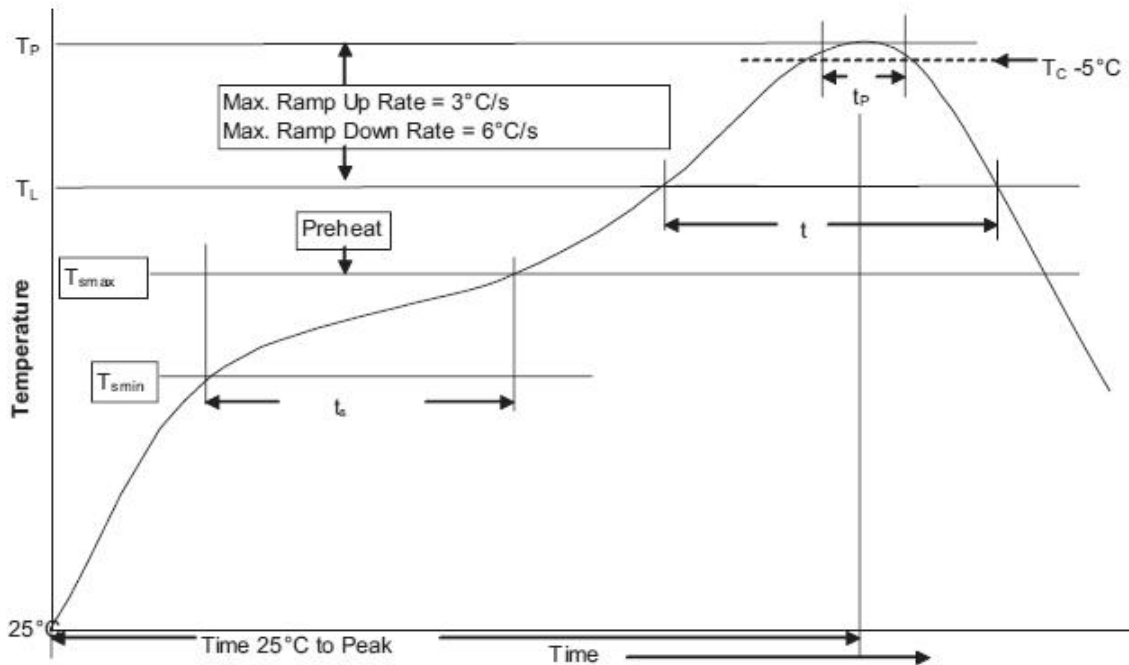
### Recommended land pattern



### 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

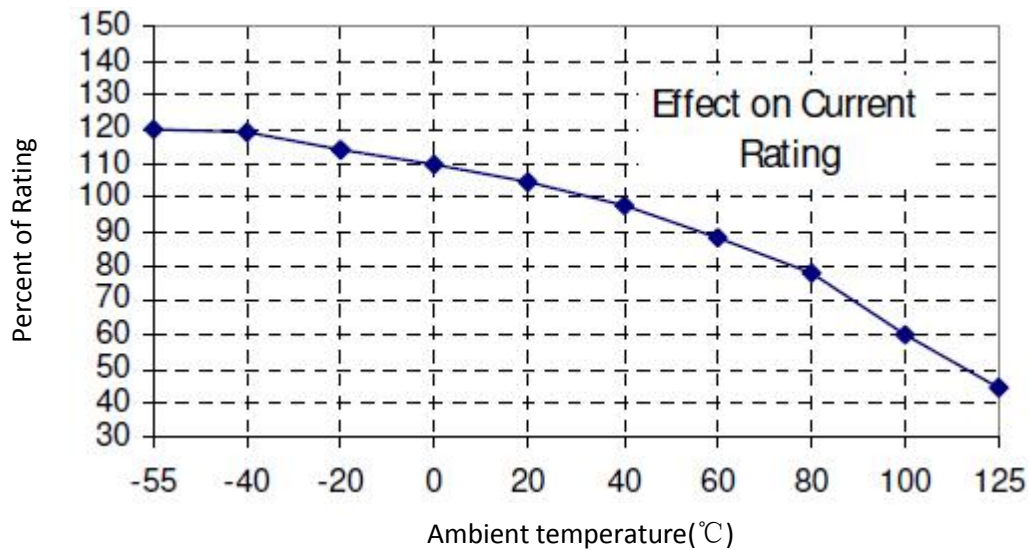


Profile Feature		Lead(Pb) free solder
Preheat and soak	• Temperature min.( $T_{smin}$ )	150°C
	• Temperature max. ( $T_{smax}$ )	200°C
• Time ( $T_{smin}$ to $T_{smax}$ ) (ts)		60 - 120 Seconds
Average ramp up rate $T_{smax}$ to $T_p$		3°C / Second Max.
Liquidous temperature ( $T_L$ )		217°C
Time at 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 ~ 125°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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