

# INDIVIDUAL SPECIFICATION SHEET

**Product Name:** 1206 Slow Blow SMD Fuses

**Part Number:** :F12T4.5

**Revision:** B



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Rev.	Effective Date	Changed Contents
A	2020-9-25	New Release
B	2021-3-10	Update Spedfications

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## Description

F12T 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	3.0In	3.5In	10.0In
4.5A	4 hour min.	5 sec max.	0.1sec – 3sec	-	0.2ms – 20ms

## Features

- High inrush current withstanding capability
- AEC-Q200 Automotive Grade Certified
- Compatible with reflow and wave solder
- Ceramic and glass construction
- Excellent environmental integrity
- One time positive disconnect
- Lead Free and Halogen free material

## Specifications

Specification							
Part No.	Rated	Rated	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
	Voltage	Current (A)					
	DC						
F12T4.5	32V	4.5	50A	29	164	2.65	X

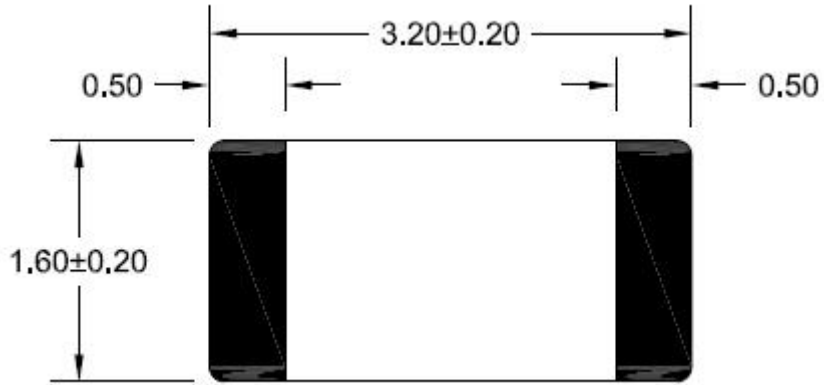
1. DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source)
2. DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C
3. Typical Pre-arcing I<sup>2</sup>t are measured at 10In Current

Choice fuse for surge application (USB charger etc.), make sure the I<sup>2</sup>t of fuse is 4 times than surge. Specifications are subject to change without notice. Application testing is strongly recommended.

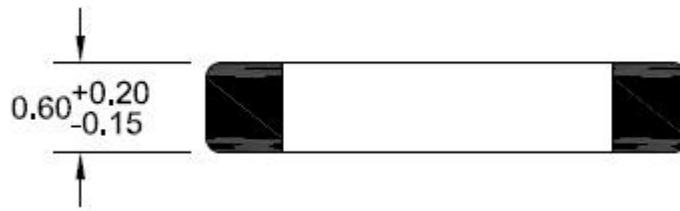
**Dimension**

Drawing not to scale (Unit: mm)

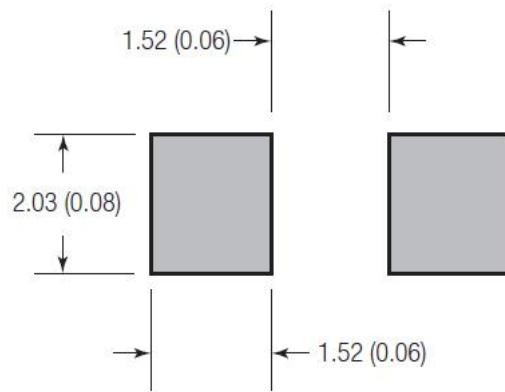
Top view



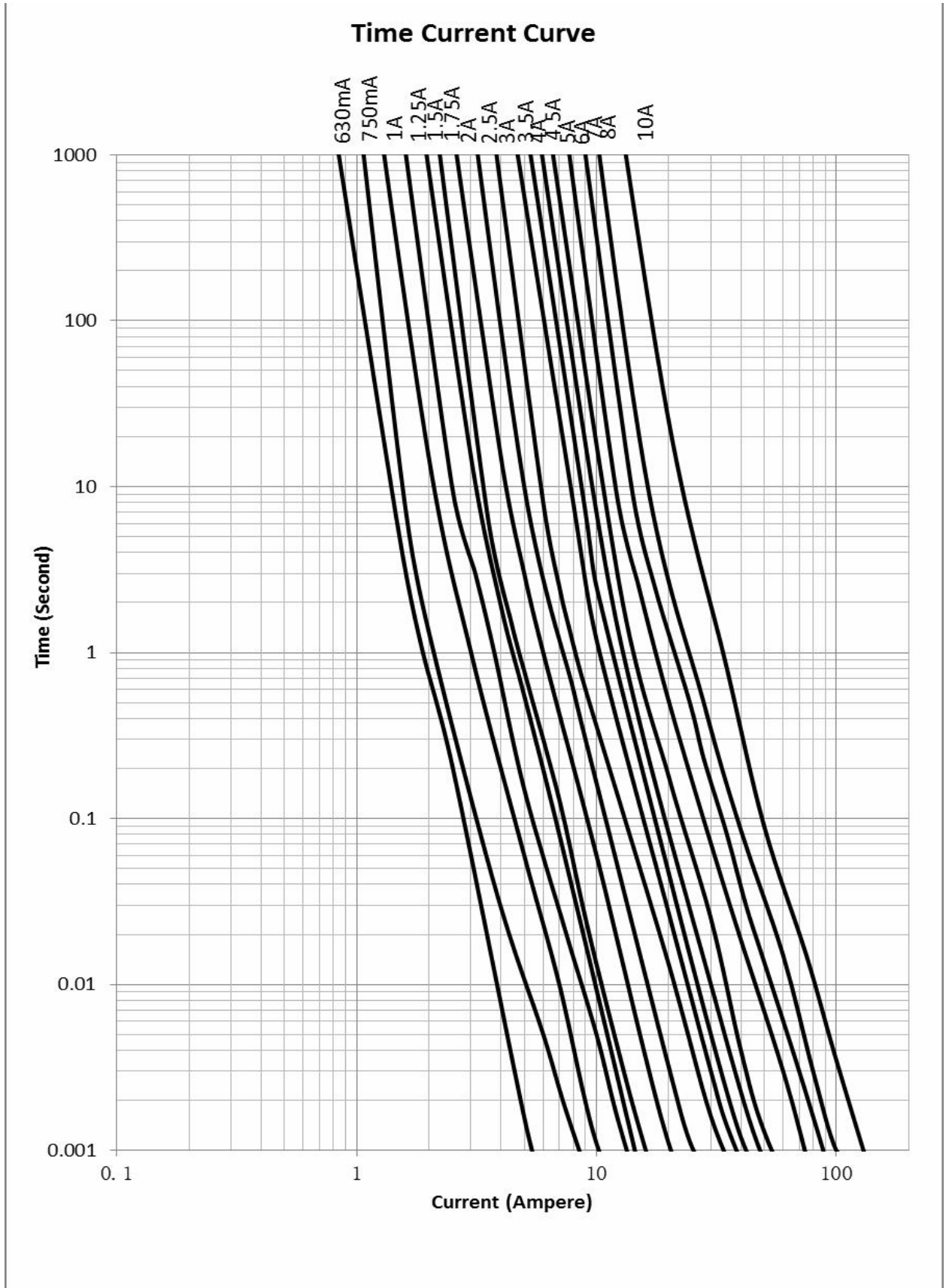
Side view



**Recommended land pattern**



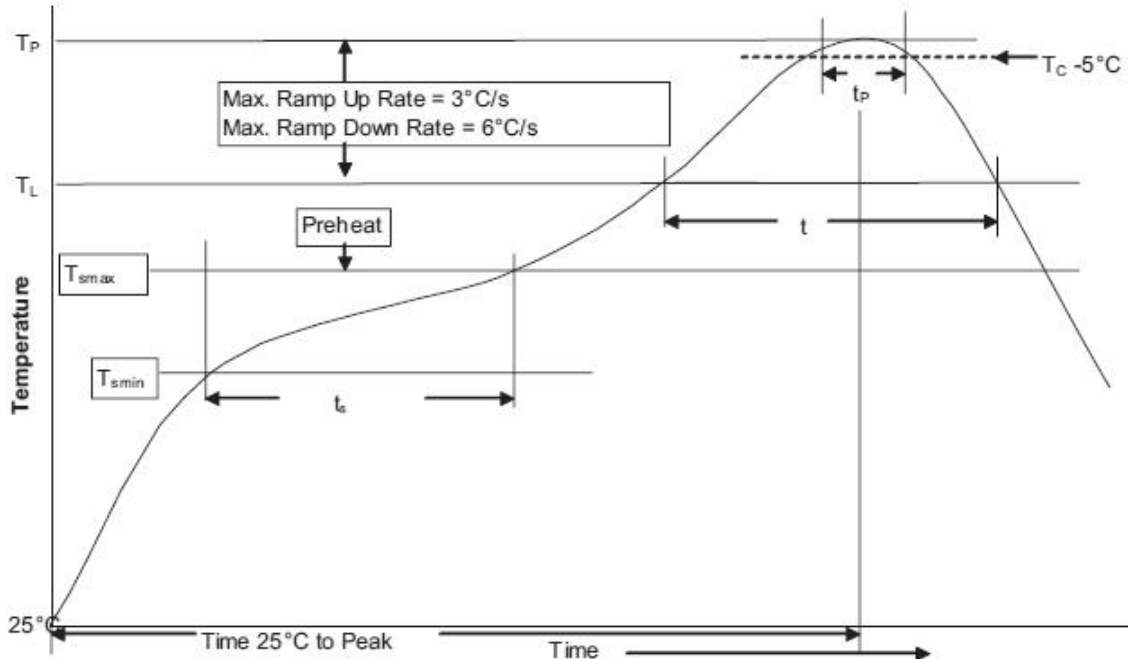
Unit: mm(inch)



### 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

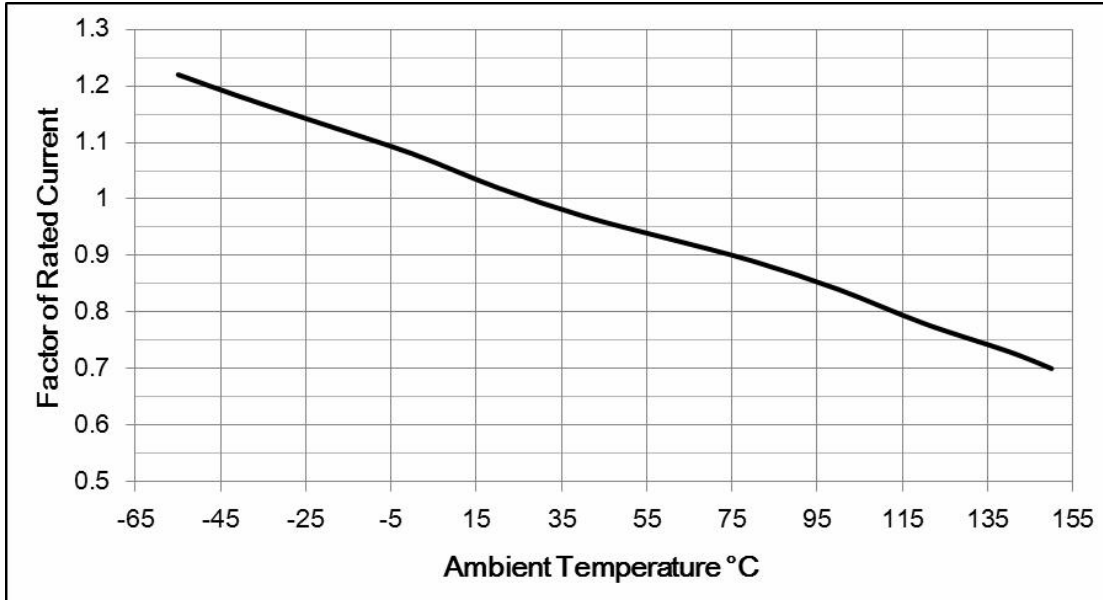


Profile Feature		Lead(Pb) free solder
Preheat and soak	• Temperature min. ( $T_{smin}$ )	150°C
	• Temperature max. ( $T_{smax}$ )	200°C
	• Time ( $T_{smin}$ to $T_{smax}$ ) ( $t_s$ )	60 - 120 Seconds
Average ramp up rate $T_{smax}$ to $T_P$		3°C / Second Max.
Liquidous temperature ( $T_L$ )		217°C
Time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



**Package**

3000 fuses on 8mm tape-and-reel on a 7 inch (178mm) reel per EIA Standard 481.

--- End of Document ---

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