TLC Electronic	**1206 Fast Acting SMD Fuses**	**DOC.NO.: ISS:F12F0.25**

INDIVIDUAL SPECIFICATION SHEET

Product Name: 1206 Fast Acting SMD Fuses

Part Number: F12F0.25

Revision: A

c US REACH RoHS COMPLIANT HALOGEN FREE

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Rev.	Effective Date	Changed Contents
A	2021-6-4	New Release

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PREPEARED BY	APPROVED BY
杨娟	

Description

F12F 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	3.5In
250mA	4 hour min.	5 sec max.	-

Features

- AEC-Q200 Automotive Grade Certified
- Rapid interruption of excessive current
- Compatible with reflow and wave solder
- Ceramic and glass construction
- One time positive disconnect
- Lead Free and Halogen free material

Specifications

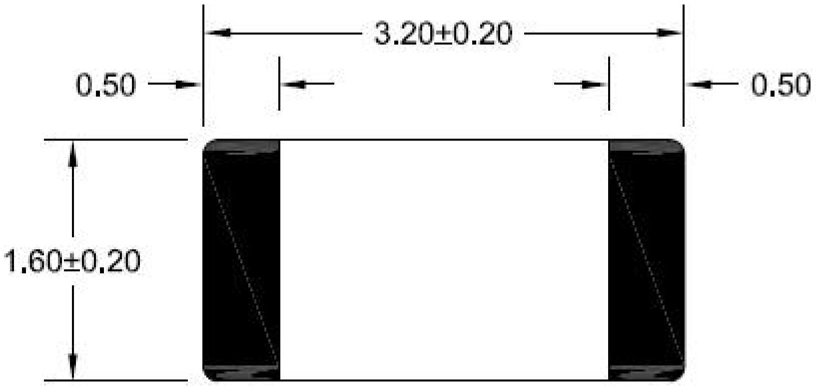
Specification							
Part No.	Rated Voltage DC	Rated Current (A)	Breaking Capacity(A) [1]	Typical Cold. Resistance (mOhms) [2]	Typical Voltage Drop (mV)	Typical Pre-Arcing I^2t (A^2Sec) [3]	Alpha Marking
F12F0.25	72V	250mA	50A@72Vdc	3608	1407	0.0004	.25

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℃
3. Typical Pre-arcing I^2t are measured at 10In Current

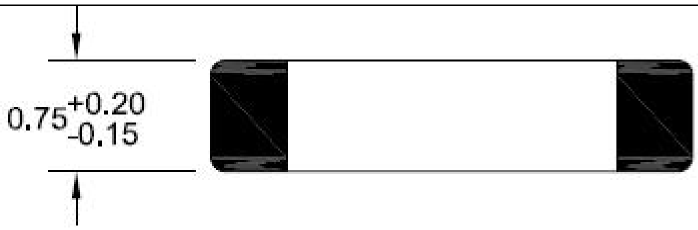
Specifications are subject to change without notice. Application testing is strongly recommended.

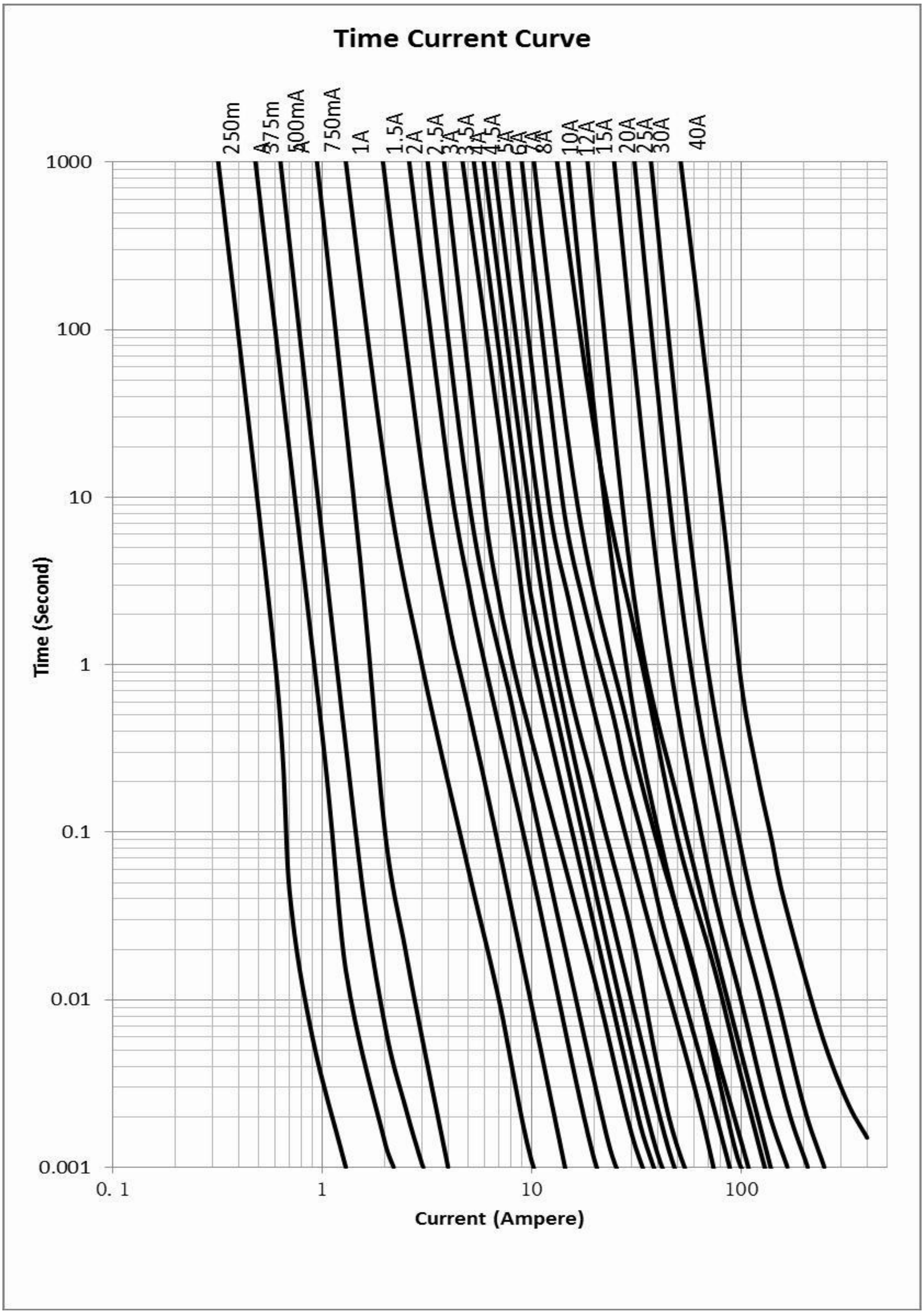
Dimension

Drawing not to scale (Unit: mm) Top view

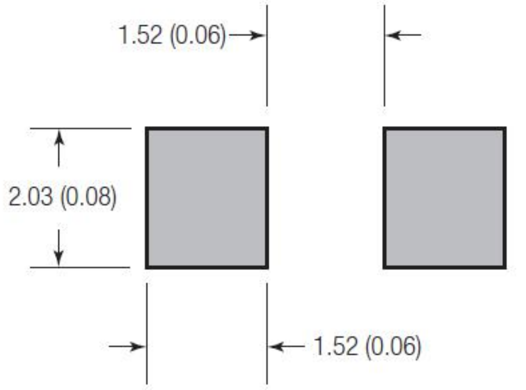


Side view: 250mA~750mA/20A~40A


0.75 +0.20 -0.15


Time Current Curve
250mA
375mA
500mA
750mA
1A
1.5A
2A
2.5A
3A
3.5A
4A
4.5A
5A
6A
7A
8A
10A
12A
15A
20A
25A
30A
40A
1000
100
10
1
0.1
0.01
0.001
Time (Second)
0. 1
1
10
100
Current (Ampere)

Recommended land pattern

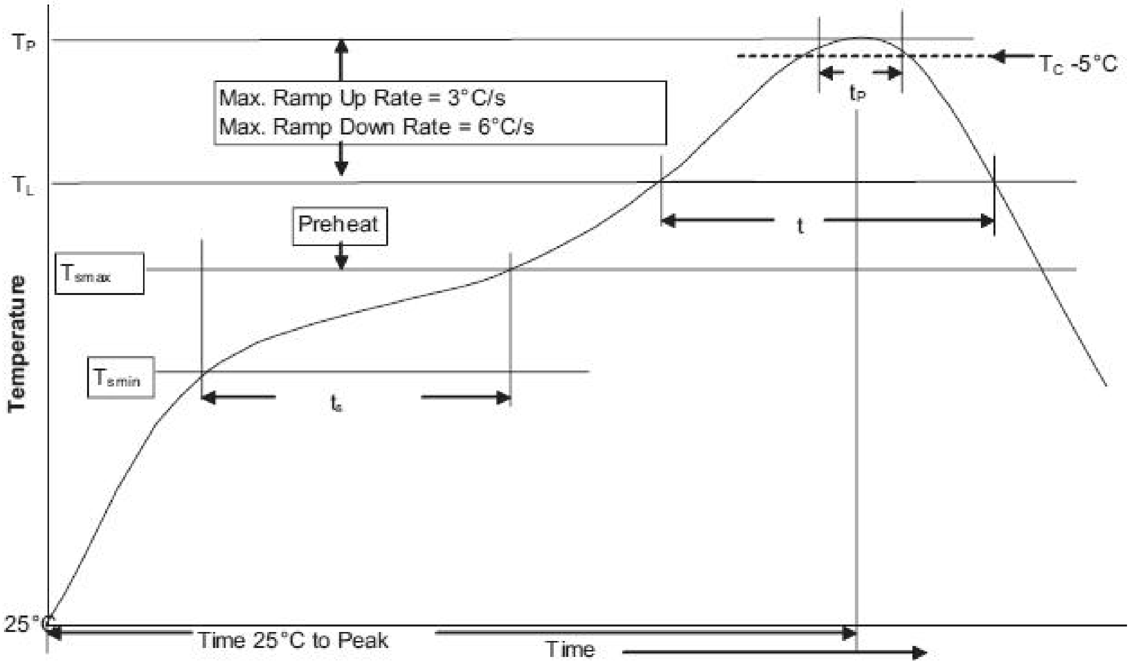


Unit: mm(inch)

Soldering method

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

Solder reflow profile



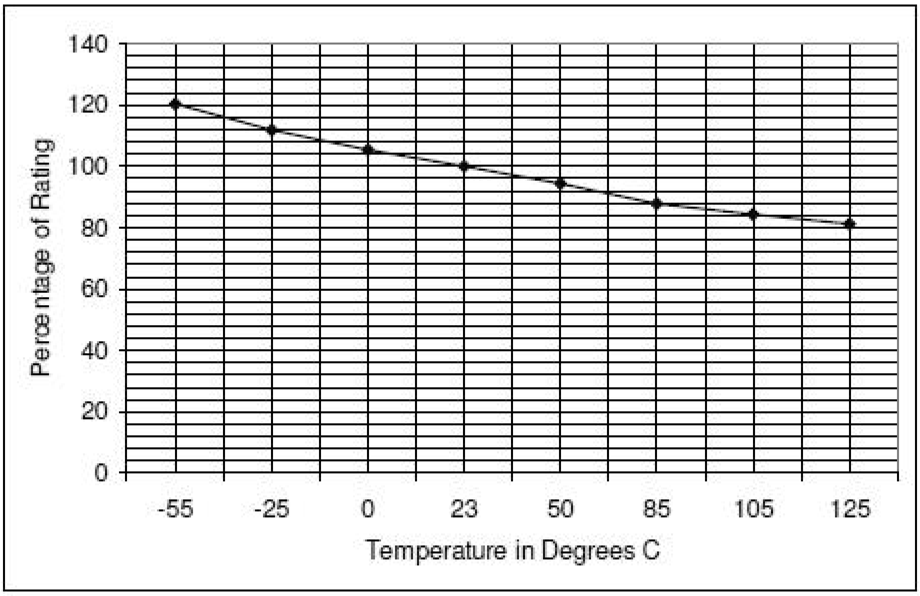
Profile Feature		Lead(Pb) free solder
Preheat and soak	• Temperature min.(T_{smin})	150℃
	• Temperature max. (T_{smax})	200℃
	• Time (T_{smin} to T_{smax}) (t_S)	60 - 120 Seconds

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

Temperature Derating Curve

Normal ambient temperature: 23+/-3℃

Operating temperature: -55 ~ 125℃, with proper correction factor applied



Package

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

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