

INDIVIDUAL SPECIFICATION SHEET

Product Name: 1206 Fast Acting SMD Fuses

Part Number: F12F20

Revision: A



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Rev.	Effective Date	Changed Contents
A	2020-12-07	New Release

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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
20A	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 ² t (A ² Sec) ³	Alpha Marking
F12F20	32V	20A	150A@32Vdc	1.8	60	47.17	20

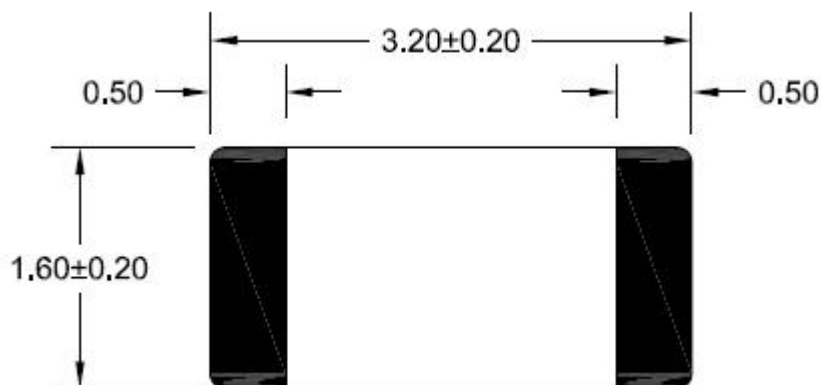
1. DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source)
2. DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C
3. Typical Pre-arcing I²t are measured at 10In Current

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

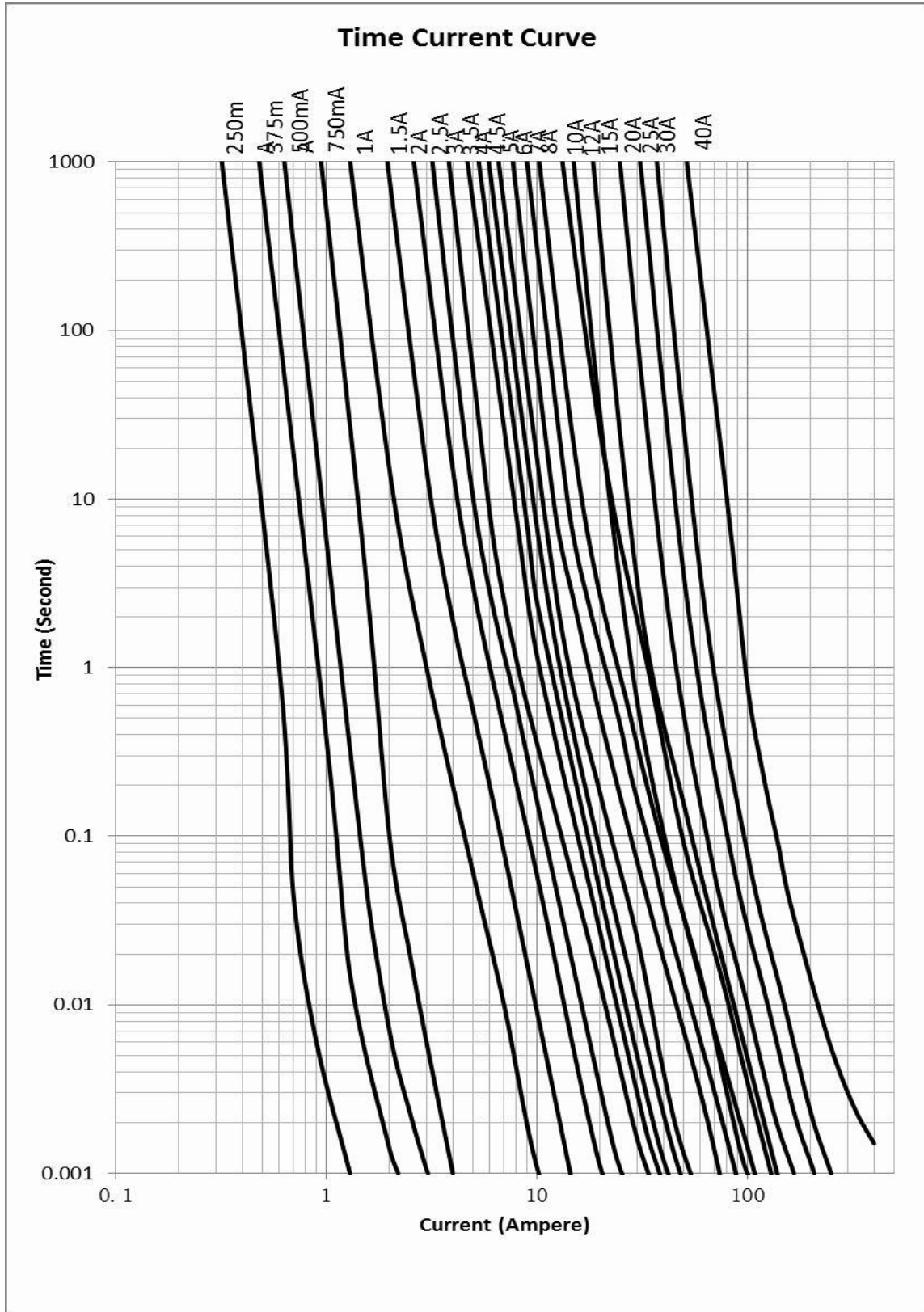
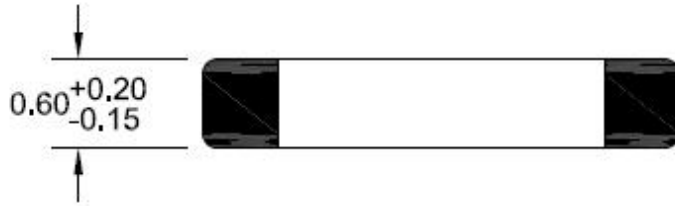
Dimension

Drawing not to scale (Unit: mm) Top

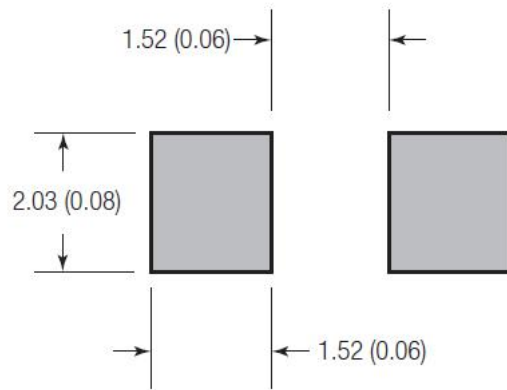
view



Side view: 1A~15A



Recommended land pattern

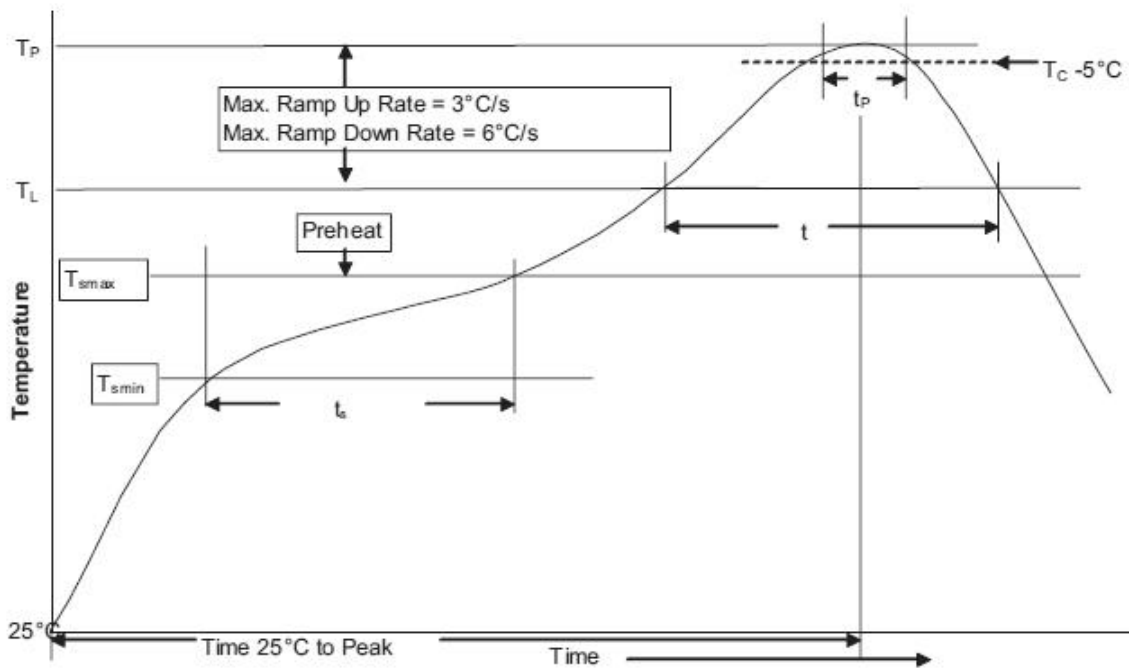


Unit: mm(inch)

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



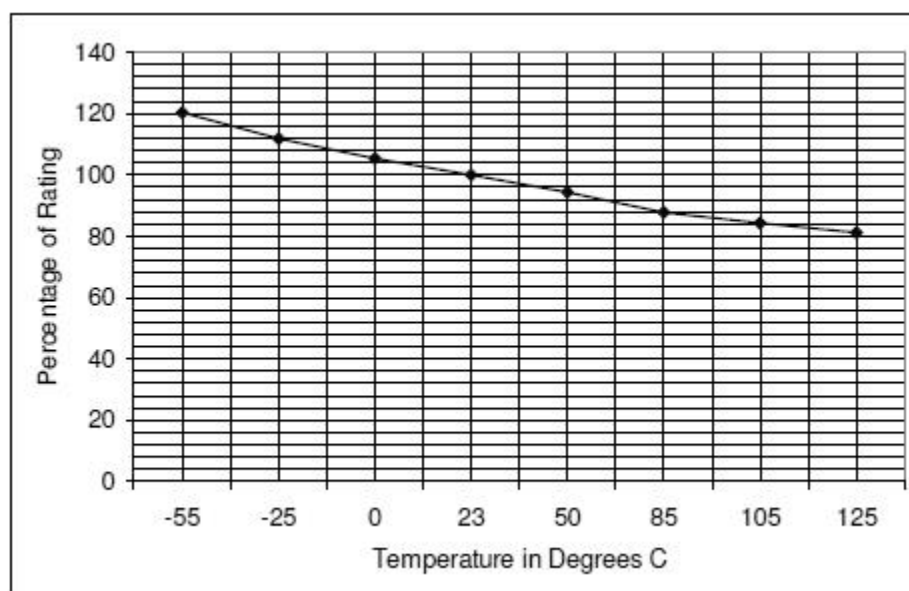
Profile Feature		Lead(Pb) free solder
Preheat and soak	• Temperature min.(T_{smin})	150°C
	• Temperature max. (T_{smax})	200°C
	• Time (T_{smin} to T_{smax}) (t_s)	60 - 120 Seconds

Average ramp up rate T_{smax} to T_p	3°C / Second Max.
Liquidous temperature (T_L) Time at liquidous (t_L)	217°C 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.

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