

INDIVIDUAL SPECIFICATION SHEET

Product Name: 1206 Fast Acting SMD Fuses

Part Number: F12F Series

Revision: A



Dongguan TLC Electronic Technology Co., LTD

No.18,5th GaoLi Road,TangXia Town,DongGuan,GuangDong,P.R China 523710

TEL: 86-0769-3892 0511

FAX: 86-0769-8793 2077

Http: www.tlcet.com.cn

Rev.	Effective Date	Changed Contents
A	2020-8-12	New Release

☞ The individual specification sheet are the property of Dongguan TLC electronic technology Co.,Ltd and shall not be copied or used as commercial purposes without permission.

PREPEARED BY

APPROVED BY




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~5A	4 hour min.	5 sec max.	-
6A~40A		-	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	Rated Current	Breaking Capacity(A) ¹	Typical Cold Resistance	Typical Voltage	Typical Pre-Arcing I ² t	Alpha Marking
F12F0.25	72V 63V 32V 24V	250mA	50A@72Vdc 50A@63Vdc 150A@32Vdc 300A@24Vdc	3608	1407	0.0004	.25
F12F0.375		375mA		1882	718	0.0008	E
F12F0.5		500mA		1028	650	0.0022	0.5
F12F0.75		750mA		601	616	0.0057	.75
F12F1		1A		490	510	0.10	H
F12F1.5		1.5A		240	367	0.15	K
F12F2		2A		132	316	0.41	N
F12F2.5		2.5A		77	240	0.65	O
F12F3		3A		48	187	1.39	P
F12F3.5		3.5A		40	180	1.68	R
F12F4		4A		35	173	1.73	S
F12F4.5	32V	4.5A	150A@32Vdc 300A@24Vdc	30	164	2.62	X
F12F5		5A		25	141	2.89	T
F12F6		6A		16.5	142	11	F
F12F7		7A		12	140	12.5	7
F12F8	24V	8A	150A@32Vdc 300A@24Vdc	8.5	110	14	M
F12F10		10A		6.8	100	20	U
F12F12		12A		5	85	11.5	12
F12F15		15A		3.9	78	16.5	15
F12F20		20A		1.8	60	47.17	20
F12F25		25A		1.5	57	32	25
F12F30		30A		1.25	68	43	30
F12F40		32V 24V		40A	200A@32Vdc 200A@24Vdc	0.85	95

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

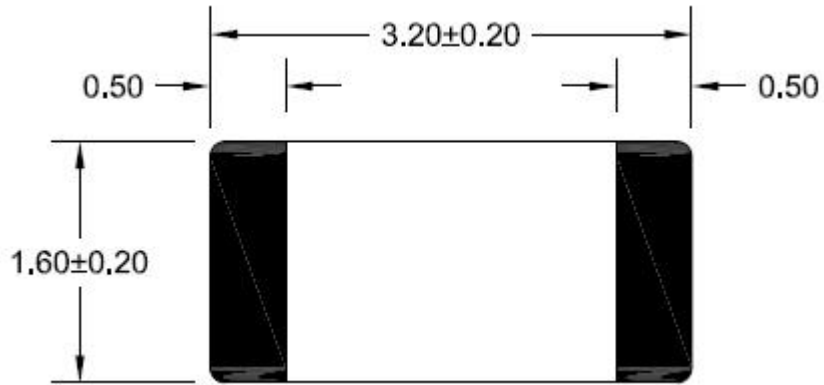
3. Typical Pre-arcing I²t are measured at 10In Current

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

Dimension

Drawing not to scale (Unit: mm) Top

view

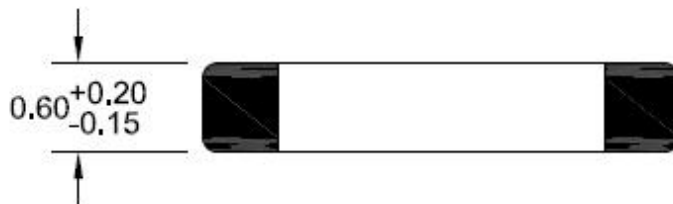


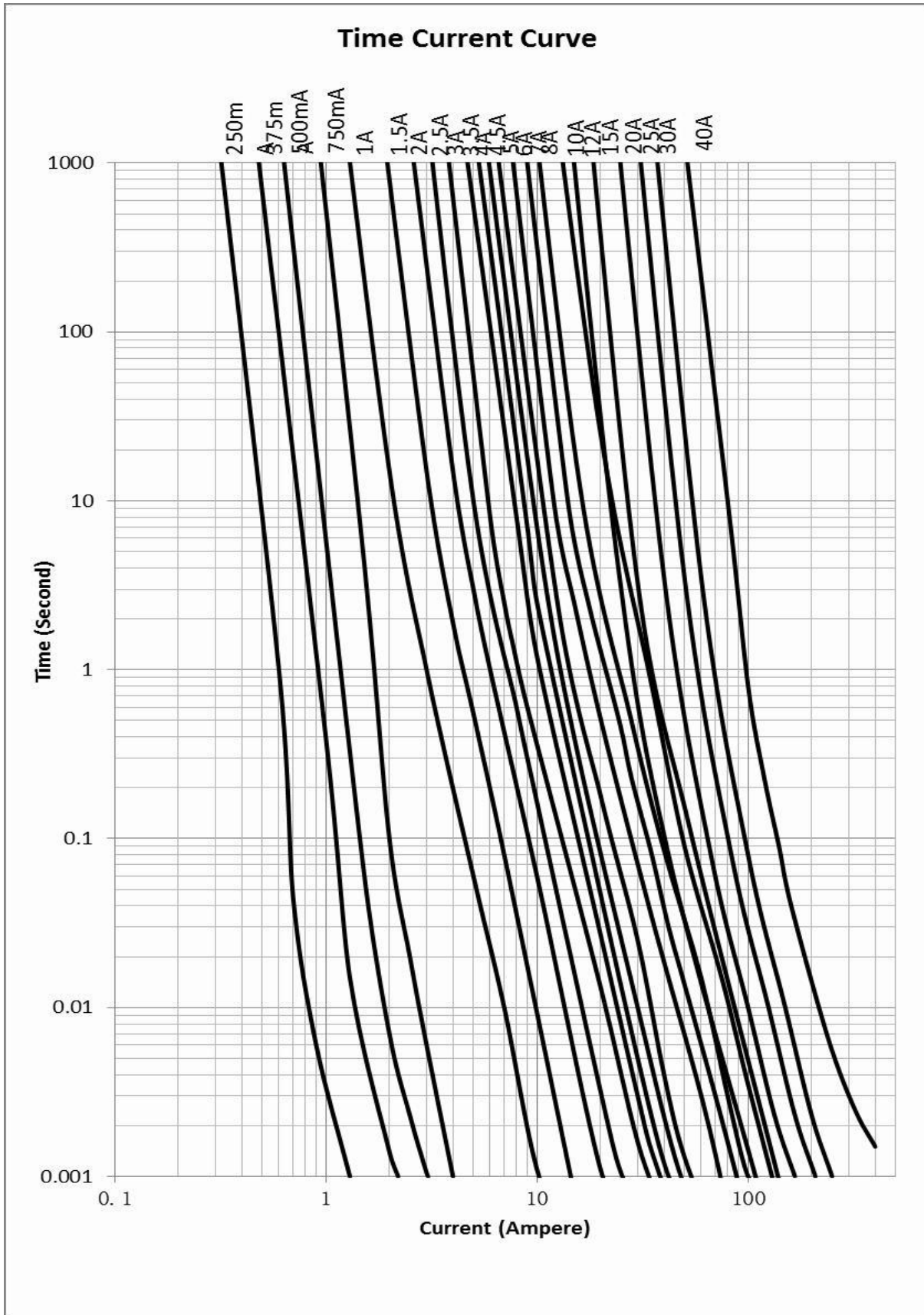
Side view:

250mA~750mA/20A~40A

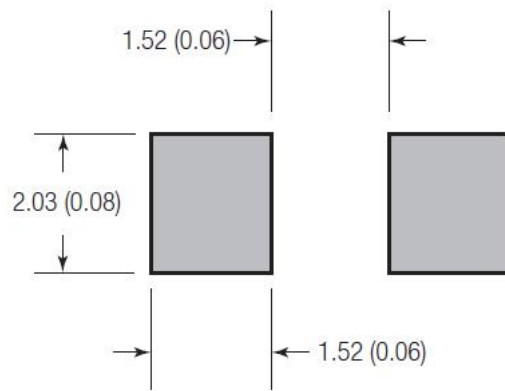


1A~15A





Recommended land pattern

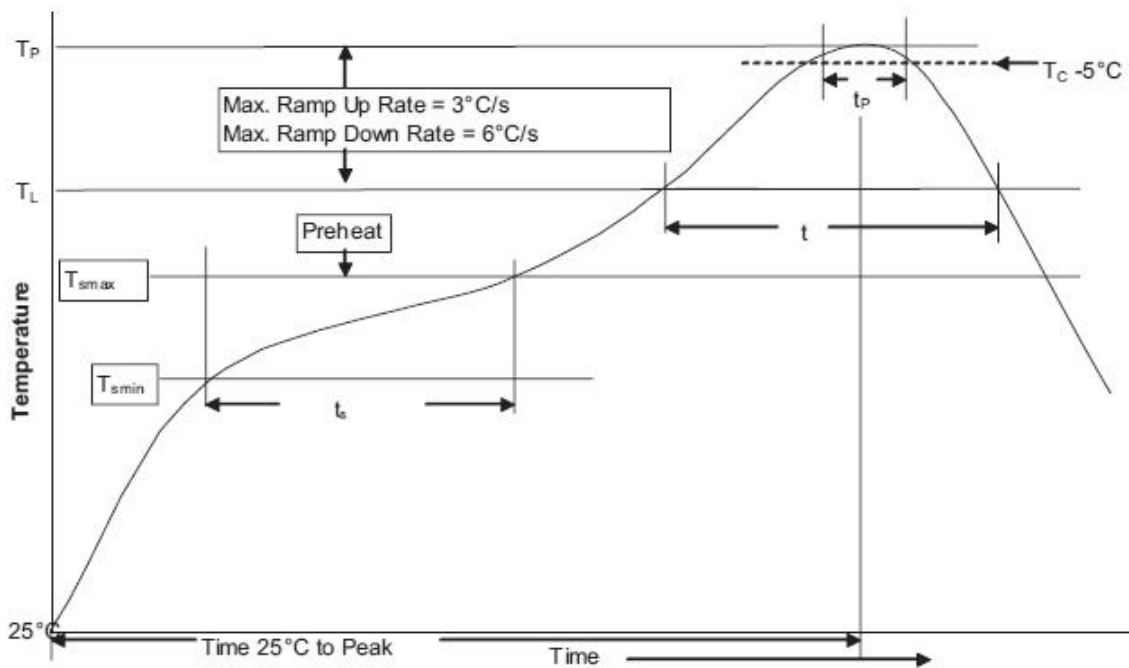


Unit: mm(inch)

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



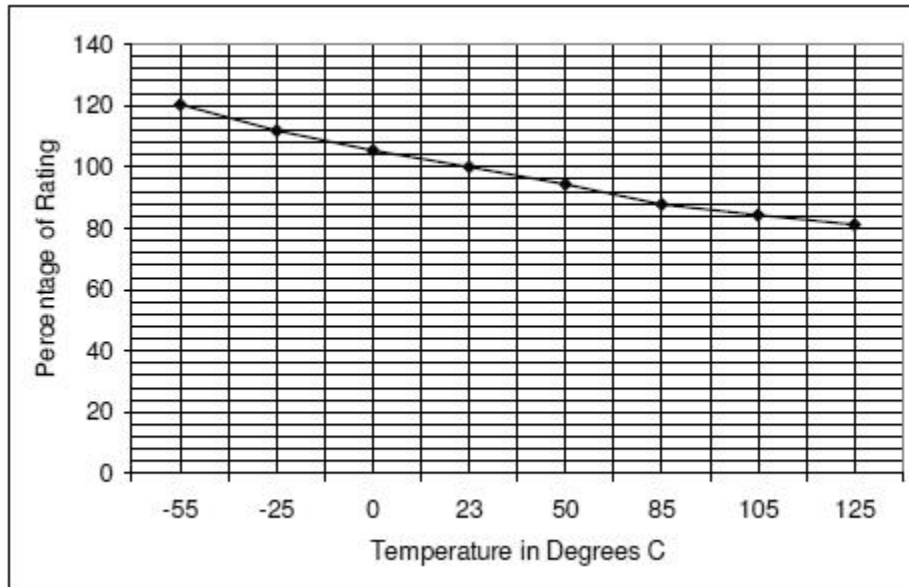
Profile Feature		Lead(Pb) free solder
Preheat and soak	• Temperature min. (T_{smin})	150°C
	• Temperature max. (T_{smax})	200°C
	• Time (T_{smin} to T_{smax}) (t_s)	60 - 120 Seconds

Average ramp up rate T_{smax} to T_p	3°C / Second Max.
Liquidous temperature (T_L)	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 ---