Description

12 113 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
250mA ~ 5A	4 hour min.	5 sec max.

Features

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

Specifications

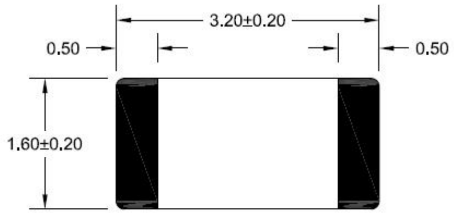
Part No.	Rated Voltage		Rated Current (A)	Breaking Capacity (A)[1] AC/DC	Typical Cold. Resistance (mOhms) [2]	Typical Voltage Drop (mV)	Typical Pre-Arcing I^2t (A^2Sec) [3]	Alpha Marking
	AC	DC						
12 113 0.25	125V	125V	250mA	50A	3608	1407	0.0004	0.25
12 113 0.375			375mA	50A	1882	718	0.0008	E
12 113 0.5			500mA	50A	1028	650	0.0022	0.5
12 113 0.75			750mA	50A	601	616	0.0057	0.75
12 113 1			1A	50A	240	300	0.0075	H
12 113 1.5			1.5A	50A	160	245	0.013	K
12 113 2			2A	50A	80	200	0.04	N
12 113 2.5			2.5A	50A	51	140	0.045	O
12 113 3			3A	50A	32	130	0.065	P
12 113 3.5		72V	3.5A	50A	25	120	0.075	R
12 113 4			4A	50A	20	110	0.105	S
12 113 5			5A	50A	15	100	0.185	T

1. AC Interrupting Rating (measured at designated voltage, 100% power factor); DC Interrupting Rating (measured at designated 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

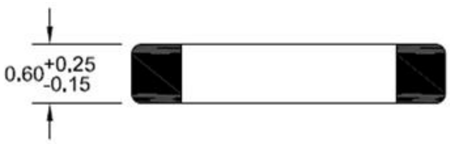
Dimension

Drawing not to scale (Unit: mm)

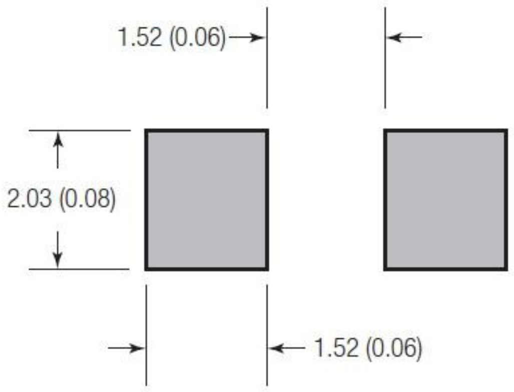
Top view



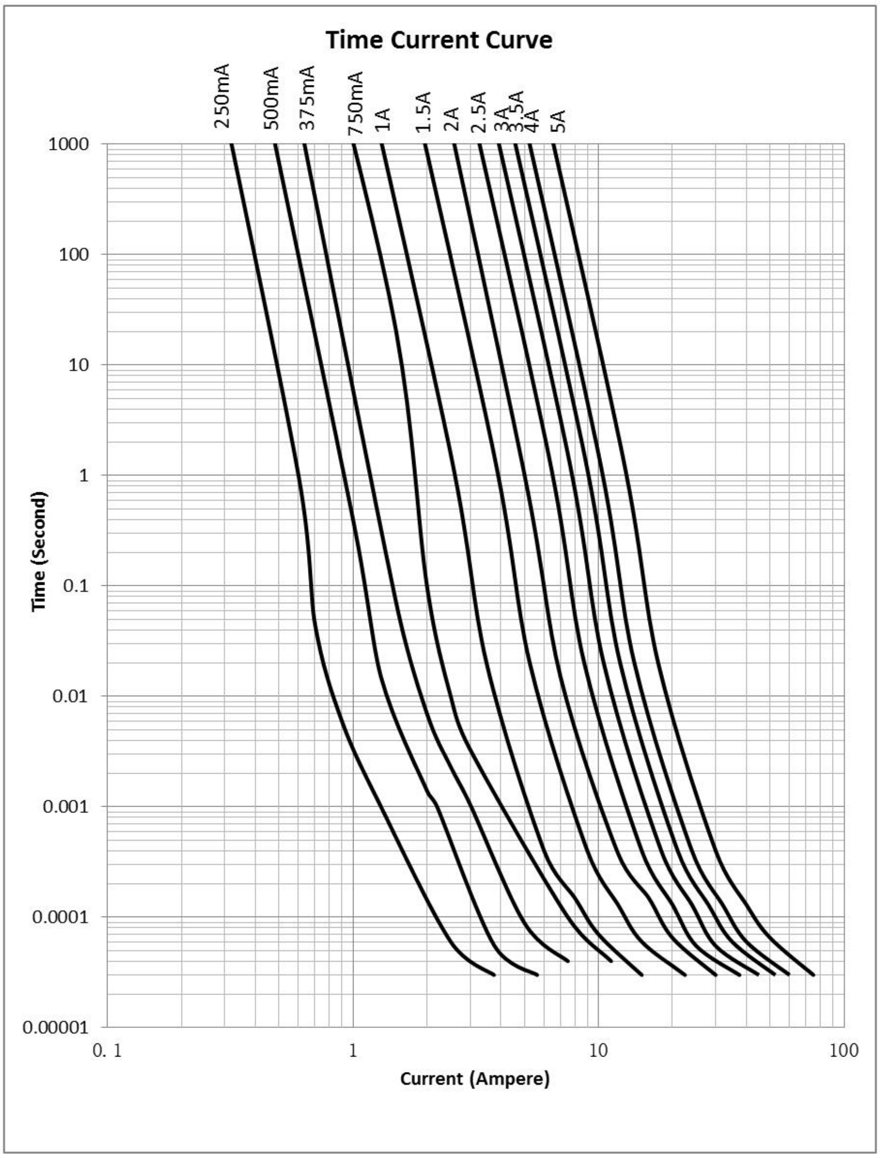
Side view



Recommended land pattern



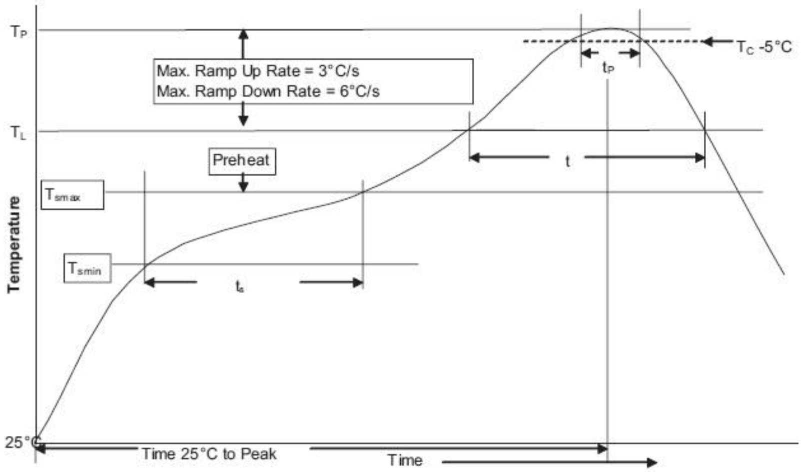
Unit: mm(inch)



Soldering method

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

Solder reflow profile

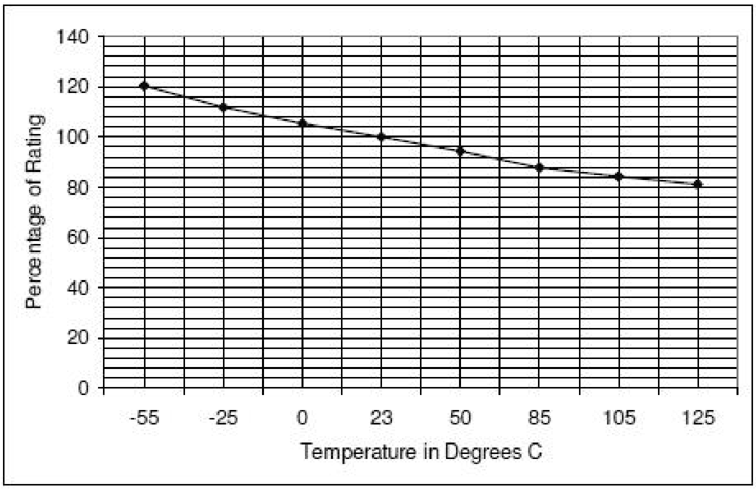


Profile Feature		Lead(Pb) free solder
Preheat and soak	• Temperature min.(T_{smin})	150℃
	• Temperature max. (T_{smax})	200℃
	• Time (T_{smin} to T_{smax}) (t_S)	60 - 120 Seconds
Average ramp up rate T_{smax} to T_p		3℃ / Second Max.
Liquidous temperature (T_L)		217℃
Time at liquidous (t_L)		60 - 150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



Agency Approvals

- ■ Agency Approvals：UL、CSA
- ■ Regulation/Standard: RoHS, Reach

Package information

Model	Q'ty/Reel
12 113 X	3000 pcs

Note: Reel packaging per EIA-481-1 standard