

**Description**

K121002 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.



**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**

Electrical Characteristics			
Rated Current	1.0In	2.5In	3.5In
250mA~5A	4 hour min.	5 sec max.	-
6A~30A		-	5 sec max.

Specification								
Part No.	Rated Voltage DC	Rated Current (A)	Breaking Capacity <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> DC	Alpha Marking
				Min	Max			
K121002	72V 63V 32V 24V	2A	50A@72V 50A@63V 50A@32V 300A@24V	103	165	316	0.41	N

\* DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source)

\* DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C

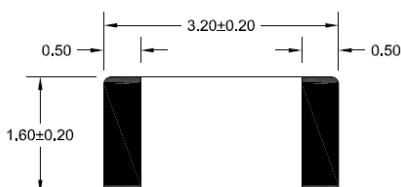
\* Typical Pre-arching I<sup>2</sup>t are measured at 10In Current

\*Part No. Description

**Dimension**

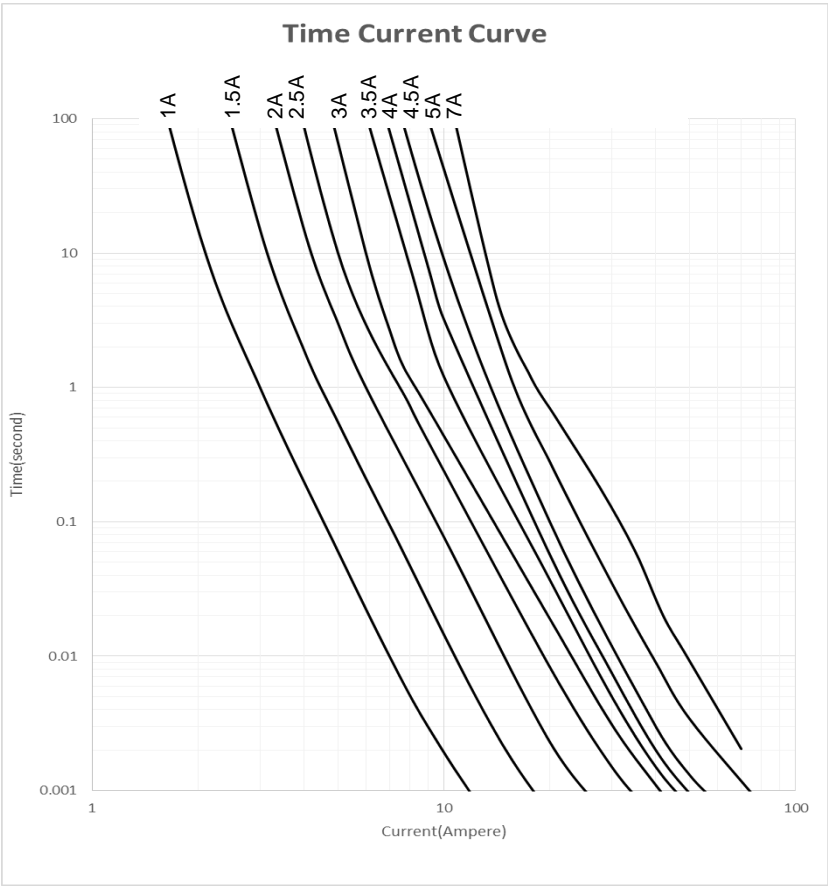
Drawing not to scale (Unit: mm)

Top view

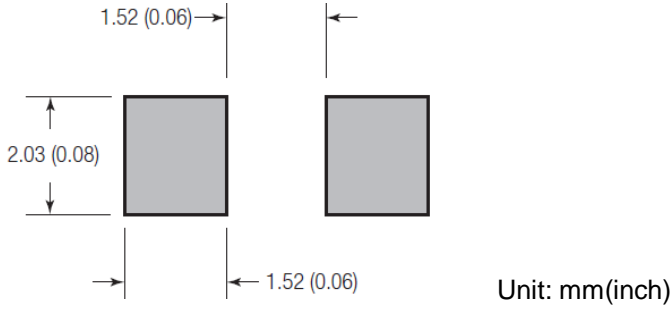


Side view: 1A~15A





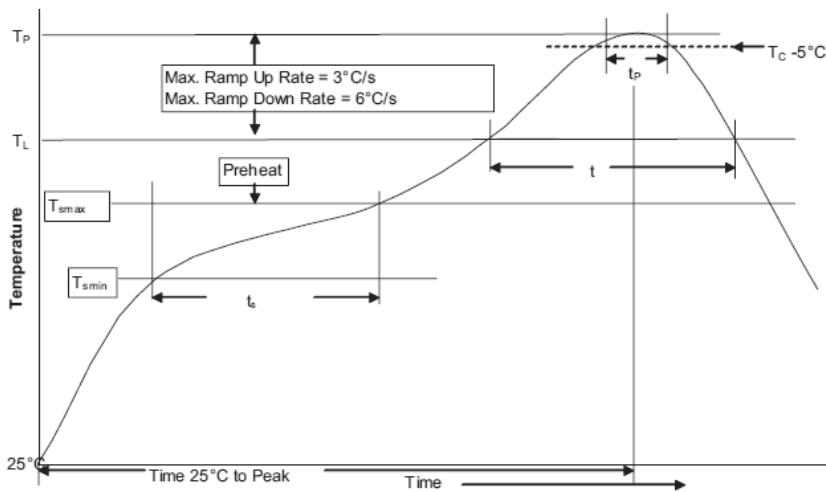
**Recommended land pattern**



**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**

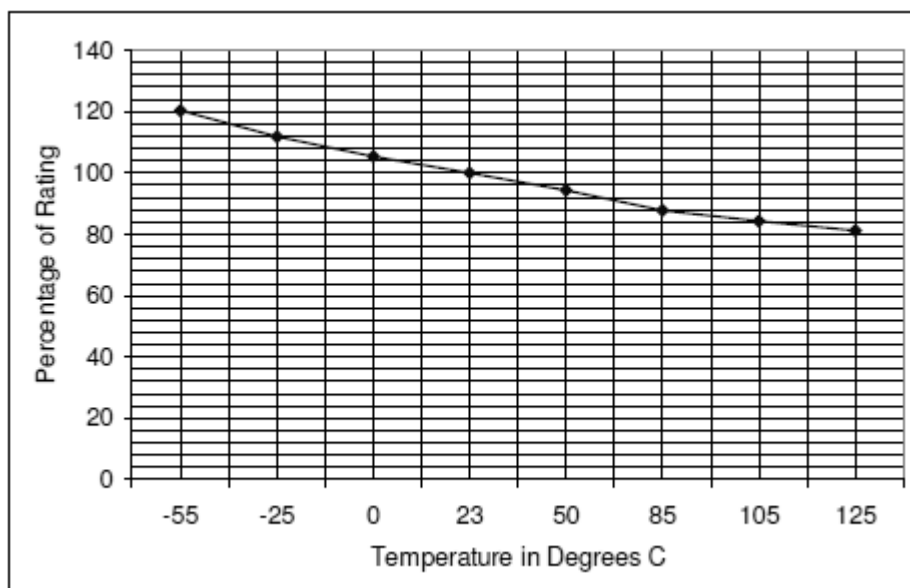


Profile Feature	Lead(Pb) free solder
Preheat and soak	<ul style="list-style-type: none"> <li>Temperature min. (<math>T_{smin}</math>) 150°C</li> <li>Temperature max. (<math>T_{smax}</math>) 200°C</li> <li>Time (<math>T_{smin}</math> to <math>T_{smax}</math>) (<math>t_s</math>) 60 - 120 Seconds</li> </ul>
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



**Environmental Characteristics**

Storage Conditions .....+40 °C Max. 70% RH Max. Packed in original packaging.

**Agency Approvals**

- Regulation/Standard: RoHS, Reach

**Package information**

<u>Model</u>	<u>Q'ty/Reel</u>
	3000 pcs

Note: Reel packaging per EIA-481-1 standard