

## 0603 Fast Acting SMD Fuses

### 06 100 Series



### Description

06 100 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          | 2.0In          |
| 250mA~8A                   | 4 hour minimum | 60 sec maximum |

### Features

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

### Specifications

| Specification |               |                   |                                    |  |                           |   |            |
|---------------|---------------|-------------------|------------------------------------|--|---------------------------|---|------------|
| Part No.      | Rated Voltage | Rated Current (A) | Breaking Capacity (A) <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> | Alpha Mark |
|               | DC            |                   |                                    |  |                           |   |            |
| 06 100.0.25   | 32V           | 0.250             | 50A                                | 3250   | 893                       | 0.00042   | D          |
| 06 100.0.375  |               | 0.375             | 50A                                | 1310   | 587                       | 0.00093   | E          |
| 06 100.0.5    |               | 0.500             | 50A                                | 1070   | 582                       | 0.001   | F          |
| 06 100.0.75   |               | 0.750             | 50A                                | 470  | 427                       | 0.009   | G          |
| 06 100.1      |               | 1                 | 50A                                | 300  | 345                       | 0.011   | B          |
| 06 100.1.5    |               | 1.5               | 50A                                | 150  | 270                       | 0.045   | H          |
| 06 100.2      |               | 2                 | 50A                                | 72   | 160                       | 0.115   | K          |
| 06 100.2.5    |               | 2.5               | 50A                                | 52   | 145                       | 0.14  | L          |
| 06 100.3      |               | 3                 | 50A                                | 35   | 130                       | 0.21  | O          |
| 06 100.3.5    |               | 3.5               | 50A                                | 23.8   | 130                       | 0.5   | R          |
| 06 100.4      |               | 4                 | 50A                                | 21   | 120                       | 0.56  | S          |
| 06 100.5      |               | 5                 | 50A                                | 14   | 110                       | 1.2   | T          |
| 06 100.6      |               | 6                 | 50A                                | 8.5  | 110                       | 1.7   | V          |
| 06 100.7      |               | 7                 | 50A                                | 7.3  | 80                        | 2.3   | X          |
| 06 100.8      |               | 8                 | 50A                                | 5.1  | 75                        | 3.0   | Z          |

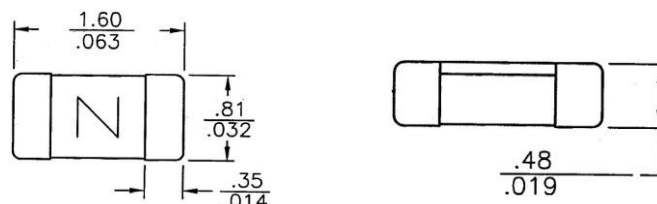
\* DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source)

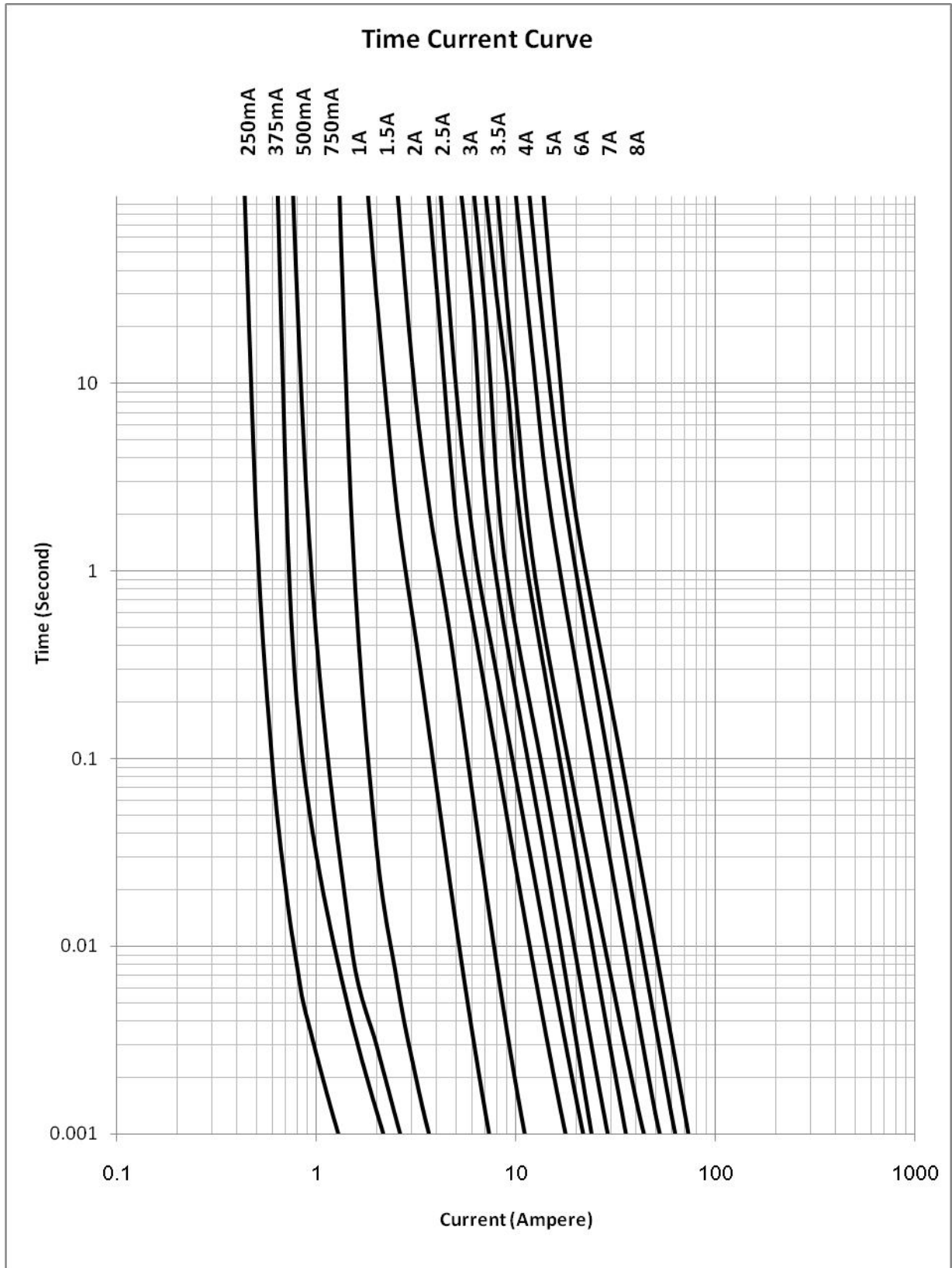
\* DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25degrees

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

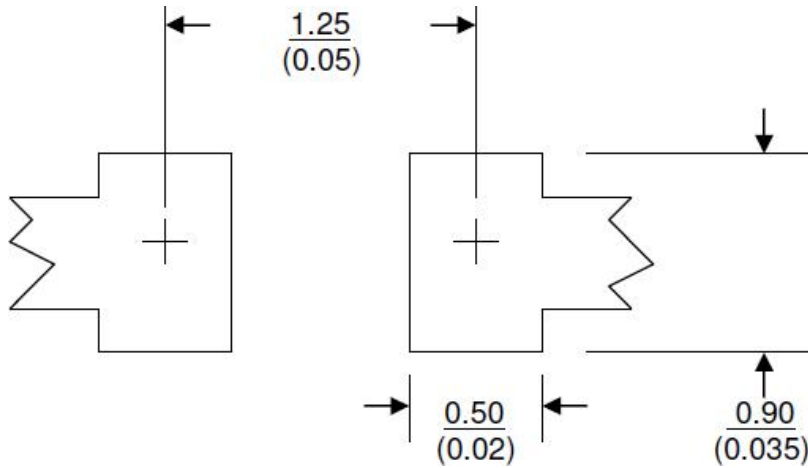
\*\* For 1A-5A, the color of glass coating is Green; for others, it's Blue.

### Dimension Drawing not to scale (Unit: mm/inch)





### Recommended land pattern

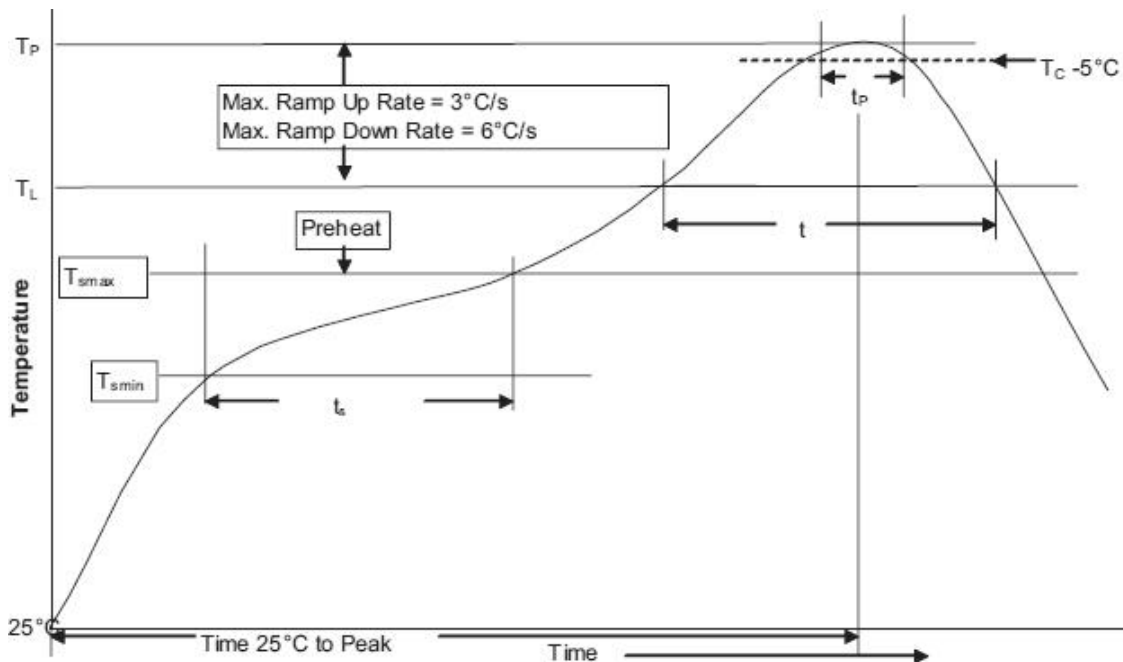


Unit: mm/inches

### 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



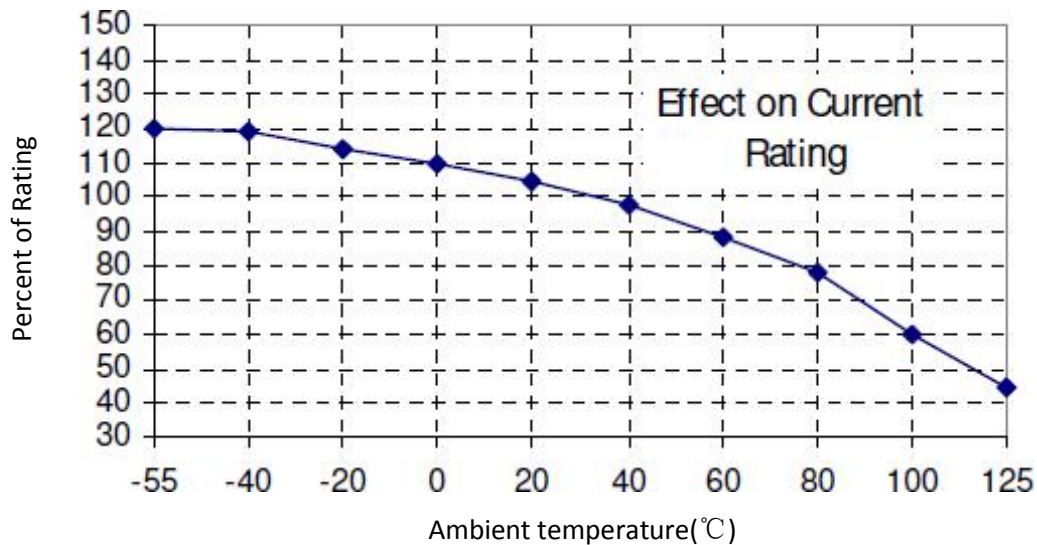
| Profile Feature  |                                   | Lead(Pb) free solder |
|------------------|-----------------------------------|----------------------|
| Preheat and soak | • Temperature min. ( $T_{smin}$ ) | 150°C                |
|                  | • Temperature max. ( $T_{smax}$ ) | 200°C                |

|   |                           |
|---|---------------------------|
| • Time ( $T_{smin}$ to $T_{smax}$ ) (ts)  | 60 - 120 Seconds          |
| Average ramp up rate $T_{smax}$ to $T_p$  | 3°C / Second Max.         |
| Liquidous temperature ( $T_L$ )<br>Time at liquidous ( $t_L$ )                  | 217°C<br>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

5000 fuses on 8mm tape-and-reel on a 7 inch (178mm) reel per EIA Standard 481.

--- End of Document ---

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