

## 1206 Time Delay SMD Fuses

### 1206TD Series



### Description

1206TD 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.



| Rated Current | Electrical Characteristics |              |            |               |            |              |
|---------------|----------------------------|--------------|------------|---------------|------------|--------------|
|               | 1.0In                      | 2.0In        | 2.5In      | 3.0In         | 3.5In      | 10.0In       |
| 0.63A~3A      | 4 hour min.                | 1sec – 60sec | 5 sec max. | 0.1sec – 3sec | -          | 0.2ms – 20ms |
| 3.5~5A        | 4 hour min.                | -            | 5 sec max. | 0.1sec – 3sec | -          | 0.2ms – 20ms |
| 6A~30A        | 4 hour min.                | -            | -          | -             | 5 sec max. | 0.2ms – 10ms |

### Features

- High inrush current withstanding capability
- AEC-Q200 Automotive Grade Certified
- Compatible with reflow and wave solder
- Ceramic and glass construction
- Excellent environmental integrity
- One time positive disconnect
- Lead Free and Halogen free material

### Specifications

| Specification |                      |     |                                     |                                    |  |                           |   |            |
|---------------|----------------------|-----|-------------------------------------|------------------------------------|--|---------------------------|---|------------|
| Part No.      | Rated                |     | 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 |
|               | Voltage              |     |                                     |                                    |  |                           |   |            |
|               | DC                   |     |                                     |                                    |  |                           |   |            |
| 1206TD630mA   | 72V                  | 63V | 0.63                                | 50A                                | 1080   | 950                       | 0.009   | B          |
| 1206TD750mA   |                      |     | 0.75                                | 50A                                | 850  | 900                       | 0.01  | 0.75       |
| 1206TD1A      |                      |     | 1                                   | 50A                                | 480  | 510                       | 0.11  | H          |
| 1206TD1.25A   |                      |     | 1.25                                | 50A                                | 330  | 500                       | 0.15  | H          |
| 1206TD1.5A    |                      |     | 1.5                                 | 50A                                | 230  | 367                       | 0.17  | K          |
| 1206TD2A      |                      |     | 2                                   | 50A                                | 140  | 316                       | 0.41  | N          |
| 1206TD2.5A    |                      |     | 2.5                                 | 50A                                | 80   | 240                       | 0.68  | O          |
| 1206TD3A      |                      |     | 3                                   | 50A                                | 50   | 187                       | 1.5   | P          |
| 1206TD3.5A    |                      |     | 3.5                                 | 50A                                | 38   | 180                       | 2   | R          |
| 1206TD4A      |                      |     | 4                                   | 50A                                | 34   | 173                       | 2.5   | S          |
| 1206TD4.5A    | 32V/45V <sup>5</sup> | 4.5 | 50A@32Vdc<br>50A@45Vdc <sup>5</sup> | 25                                 | 164  | 2.65                      | X   |            |
| 1206TD5A      |                      |     | 5                                   | 50A@32Vdc                          | 21.5   | 145                       | 4   | T          |

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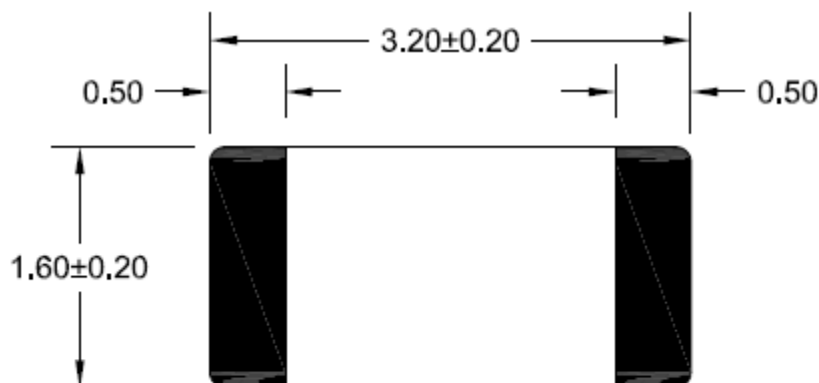
|           |            |    |                                     |      |     |      |    |
|-----------|------------|----|-------------------------------------|------|-----|------|----|
|           |            |    | 50A@45Vdc <sup>5</sup>              |      |     |      |    |
| 1206TD6A  |            | 6  | 50A@32Vdc<br>50A@45Vdc <sup>5</sup> | 16   | 140 | 12   | F  |
| 1206TD7A  |            | 7  | 50A@32Vdc<br>50A@45Vdc <sup>5</sup> | 12.3 | 130 | 14   | 7  |
| 1206TD8A  | 24V<br>32V | 8  | 300A@24V<br>150A@32V <sup>4</sup>   | 10   | 123 | 16   | M  |
| 1206TD10A |            | 10 | 300A@24V<br>150A@32V <sup>4</sup>   | 7    | 110 | 22   | U  |
| 1206TD12A |            | 12 | 300A@24V<br>150A@32V <sup>4</sup>   | 5    | 85  | 11.5 | 12 |
| 1206TD15A |            | 15 | 300A@24V<br>150A@32V <sup>4</sup>   | 3.5  | 78  | 16.5 | 15 |
| 1206TD20A |            | 20 | 300A@24V<br>150A@32V <sup>4</sup>   | 3.4  | 80  | 50   | Q  |

- 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-arcing I<sup>2</sup>t are measured at 10I<sub>n</sub> Current  
Choice fuse for surge application (USB charger etc.), make sure the I<sup>2</sup>t of fuse is 4 times than surge.
- Internal qualification for 8-30A @ 32Vdc, UL Approval is pending.
- Internal qualification for 4.5A-7A @ 45Vdc, UL Approval is pending.

**Dimension**

Drawing not to scale (Unit: mm)

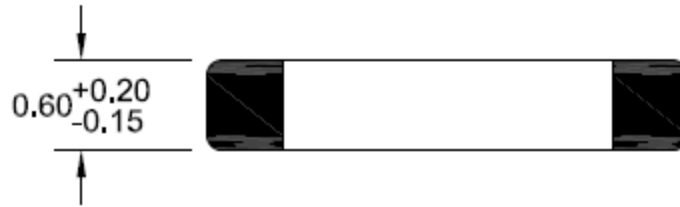
Top view



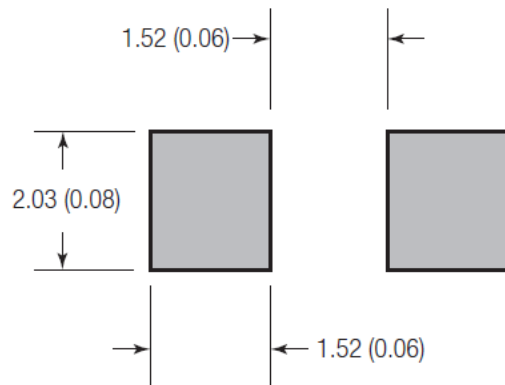
Side view

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1206TD Series



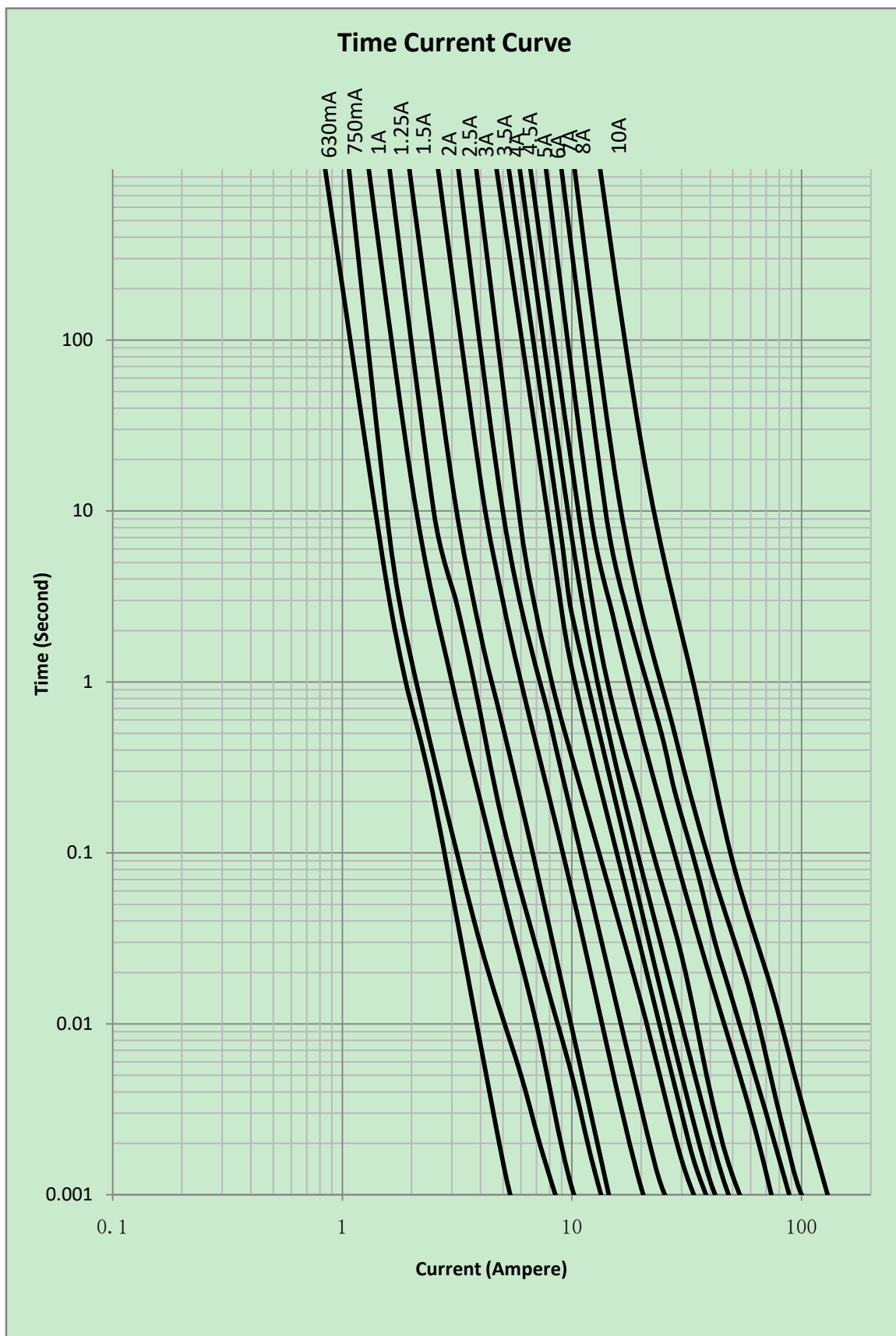
### Recommended land pattern



Unit: mm(inch)

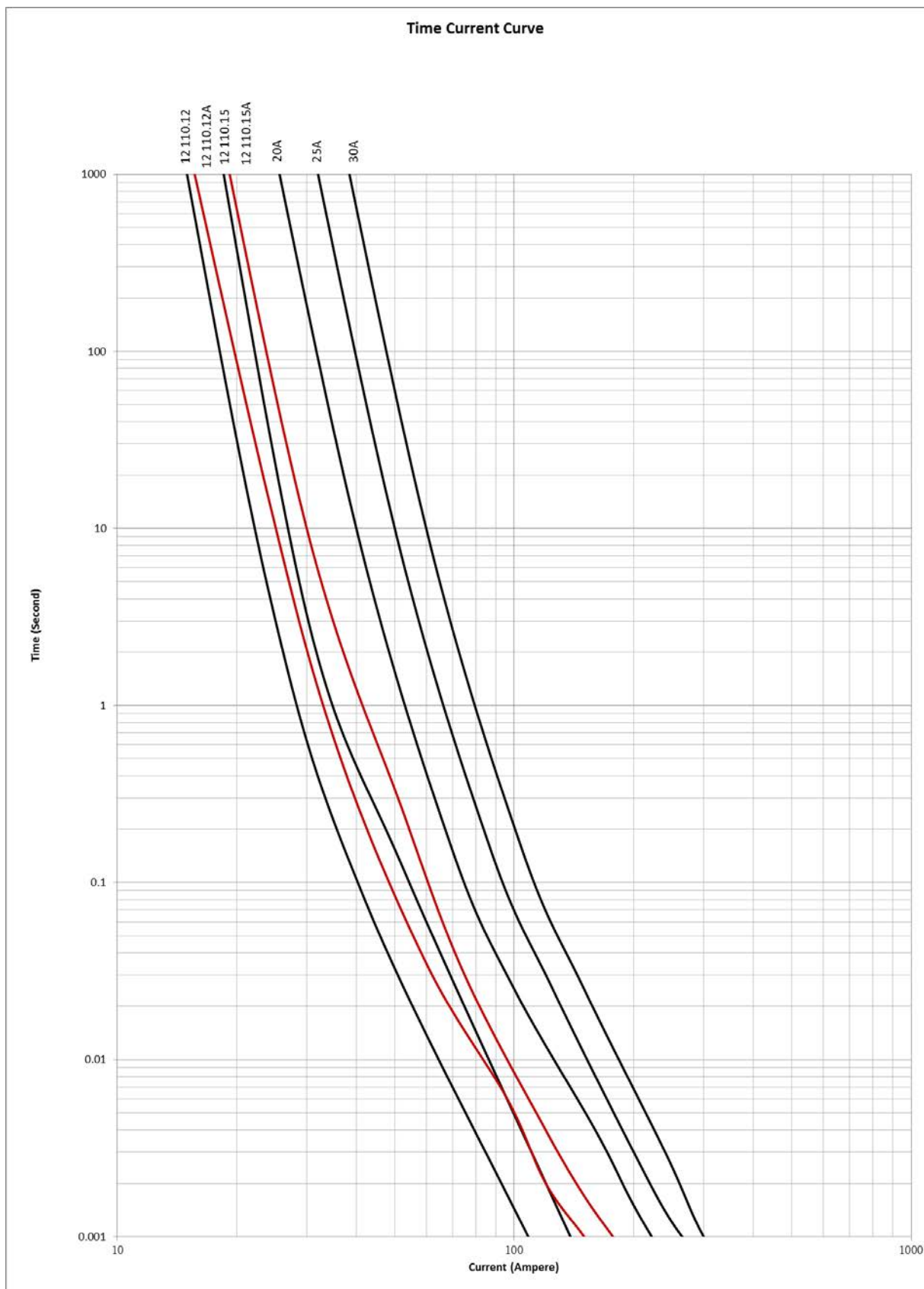
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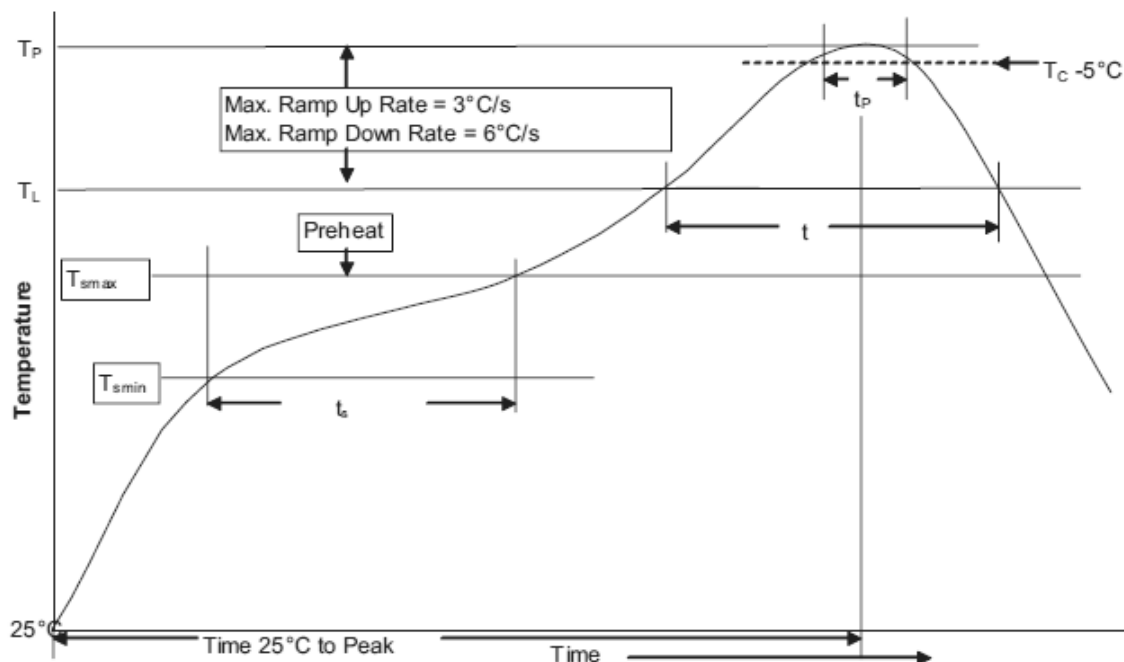
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E302100


**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.       |

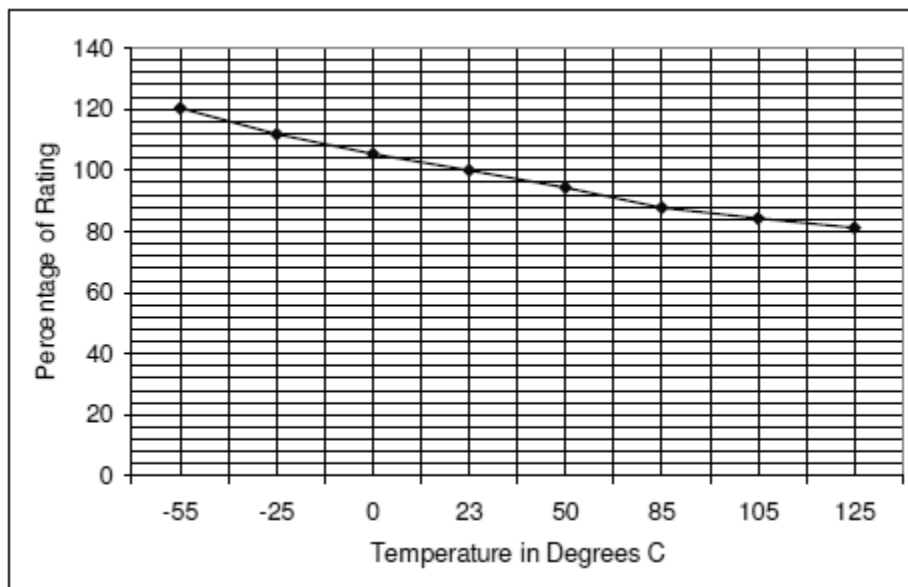
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**Temperature Derating Curve**

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 ---

单击下面可查看定价，库存，交付和生命周期等信息

[>>KINGWAHOO\(金华\)](#)