

Time Delay | 0.063x0.032 inch Thick Film Chip Fuses

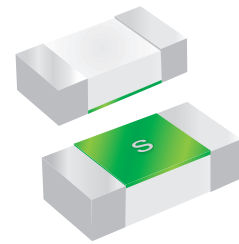
0603TD Series



0603TD 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.

Features

- High inrush current withstanding capability
- Ceramic and glass construction
- Halogen free, lead free and RoHS compliant
- Ultra high I²t values
- Excellent environmental integrity
- One time positive disconnect
- AEC-Q200 Automotive Grade Certified



Applications

- Flat panel displays and televisions
- Automotive infotainment and ECU
- Computer servers
- Portable electronics
- Mobile device chargers

Electrical Characteristics

| Amp Rating | % of Amp Rating | Opening Time |
|------------|-----------------|-------------------|
| 1~8A | 100% | 4 Hours Min. |
| 1~8A | 200% | 1~60 Seconds Max. |
| 1~8A | 250% | 5 Seconds Max. |

Specification

| Part Number | Ampere Rating (A) | Voltage Rating (V) | Interrupting Rating | Typical Cold Resistance (Ohms) | Typical Melting I ² t (A ² Sec) | Typical Voltage Drop (V) | Marking Code |
|-------------|-------------------|--------------------|---------------------|--------------------------------|---|--------------------------|--------------|
| 0603TD-1A | 1.00 | 32 | 32V@50A | 0.295 | 0.019 | 0.340 | B |
| 0603TD-1.5A | 1.50 | 32 | 32V@50A | 0.141 | 0.057 | 0.270 | H |
| 0603TD-2A | 2.00 | 32 | 32V@50A | 0.070 | 0.125 | 0.163 | K |
| 0603TD-2.5A | 2.50 | 32 | 32V@50A | 0.056 | 0.223 | 0.145 | L |
| 0603TD-3A | 3.00 | 32 | 32V@50A | 0.035 | 0.278 | 0.135 | O |
| 0603TD-3.5A | 3.50 | 32 | 32V@50A | 0.024 | 0.514 | 0.116 | R |
| 0603TD-4A | 4.00 | 32 | 32V@50A | 0.021 | 0.651 | 0.120 | S |
| 0603TD-5A | 5.00 | 32 | 32V@50A | 0.013 | 1.525 | 0.104 | T |
| 0603TD-6A | 6.00 | 32 | 32V@50A | 0.0085 | 2.745 | 0.100 | V |
| 0603TD-7A | 7.00 | 32 | 32V@50A | 0.0057 | 3.052 | 0.082 | X |
| 0603TD-8A | 8.00 | 32 | 32V@50A | 0.0042 | 4.177 | 0.076 | Z |

- DC Interrupting Rating - Measured at designated voltage, time constant < 50 microseconds.
- DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C.
- Typical Melting I²t measured at 10In Current.
- Typical Voltage Drop measured at rated current after temperature has stabilized.

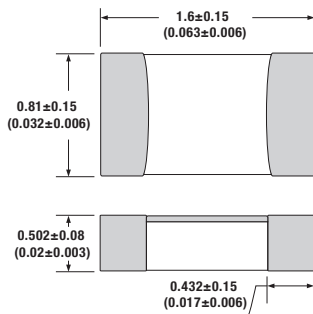
Time Delay | 0.063x0.032 inch

Thick Film Chip Fuses

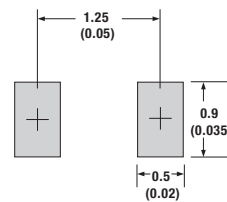
0603TD Series

Dimension

Unit: mm/inch



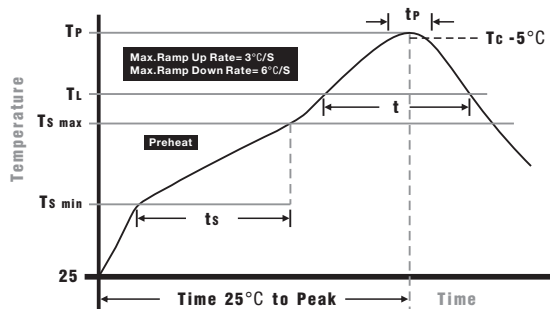
Pad layout



Packaging

- Quantity: 5,000pcs
- 8mm wide tape on 178mm(7 inch) diameter reel - specification EIA Standard 481.

Soldering Parameters

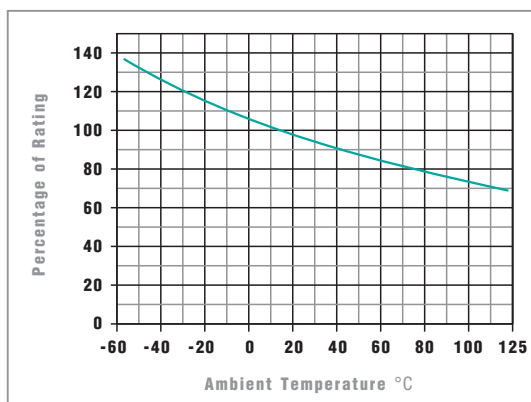


Wave Soldering: 260°C, 10 seconds max.
Infrared Reflow: 260°C, 30 seconds max.

IR Reflow Profile

| | |
|---|------------------|
| Preheat Heat | |
| Temperature min (T _{min}) | 150°C |
| Temperature max (T _{max}) | 200°C |
| Time (T _{min} to T _{max}) (t _s) | 60 - 120 seconds |
| Average ramp-up rate (T_{max} to T_p) | |
| Average ramp-up rate | 3°C/second max. |
| Liquidous temperature (T_l) | |
| Liquidous temperature (T _l) | 217°C |
| Time at liquidous (t _l) | 60 - 150 seconds |
| Peak temperature (T_p) | |
| Peak temperature (T _p) | 260+0/-5°C |
| Time within 5°C of actual peak Temperature (t_p) | |
| Time within 5°C of actual peak Temperature (t _p) | 10 - 30 seconds |
| Average ramp-down rate (T_p to T_{max}) | |
| Average ramp-down rate | 6°C/second max. |
| Time 25 °C to peak temperature | |
| Time 25 °C to peak temperature | 8 minutes max. |

Temperature Derating Curve



- Normal Operating Temperature: 23°C± 2
- Operating Temperature: -55 to 125°C

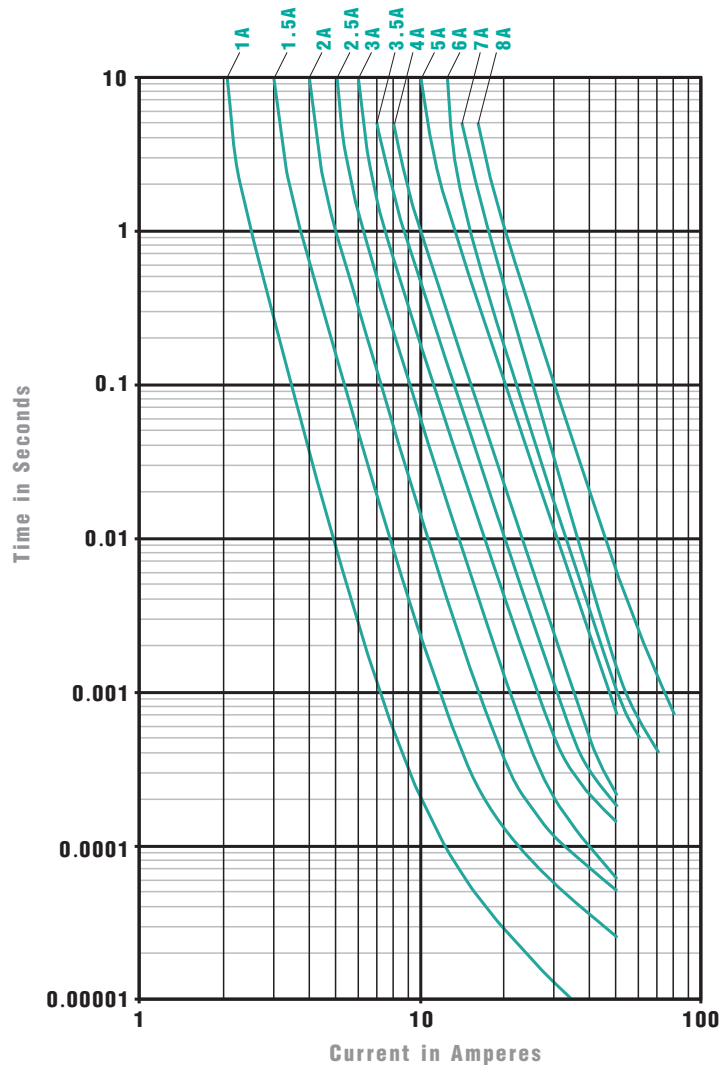
- Normal Operating Temperature: 23°C± 2
- Operating Temperature: -20 to 105°C
- The fuse rating is determined by the equation below:

$$I_n = \frac{I_{input\ MAX.}}{0.75 \times K_{temp}}$$

Time Delay | 0.063x0.032 inch

Thick Film Chip Fuses 0603TD Series

Average Time Current Curves



© 2017 PROSEMI Inc. All Rights Reserved.
 Specifications and features are subject to change without notice.
www.prosemitech.com

The PROSEMI logo, and all other PROSEMI trademarks are the property of PROSEMI Inc. All other trademarks are the property of their respective owners.