

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

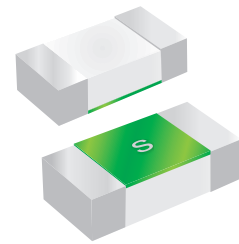
0603TD Series



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.

Specifications

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.

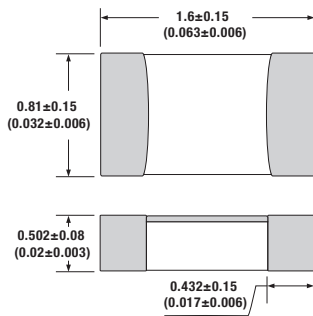
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Thick Film Chip Fuses

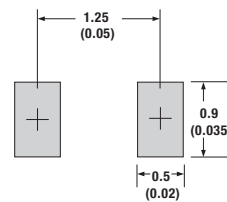
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Dimension

Unit: mm/inch



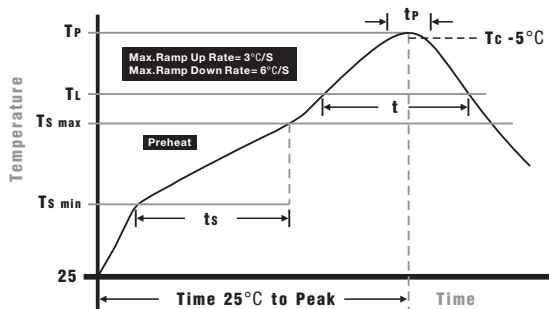
Pad layout



Packaging

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

Soldering Parameters

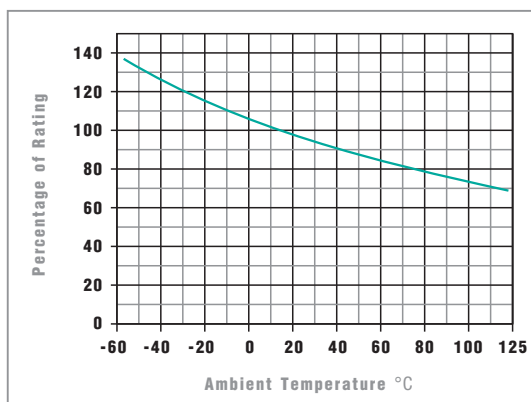


Wave Soldering: 260°C, 10 seconds max.
Infrared Reflow: 260°C, 30 seconds max.

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 (T _{max} to T _p)	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 (T _p to T _{max})	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

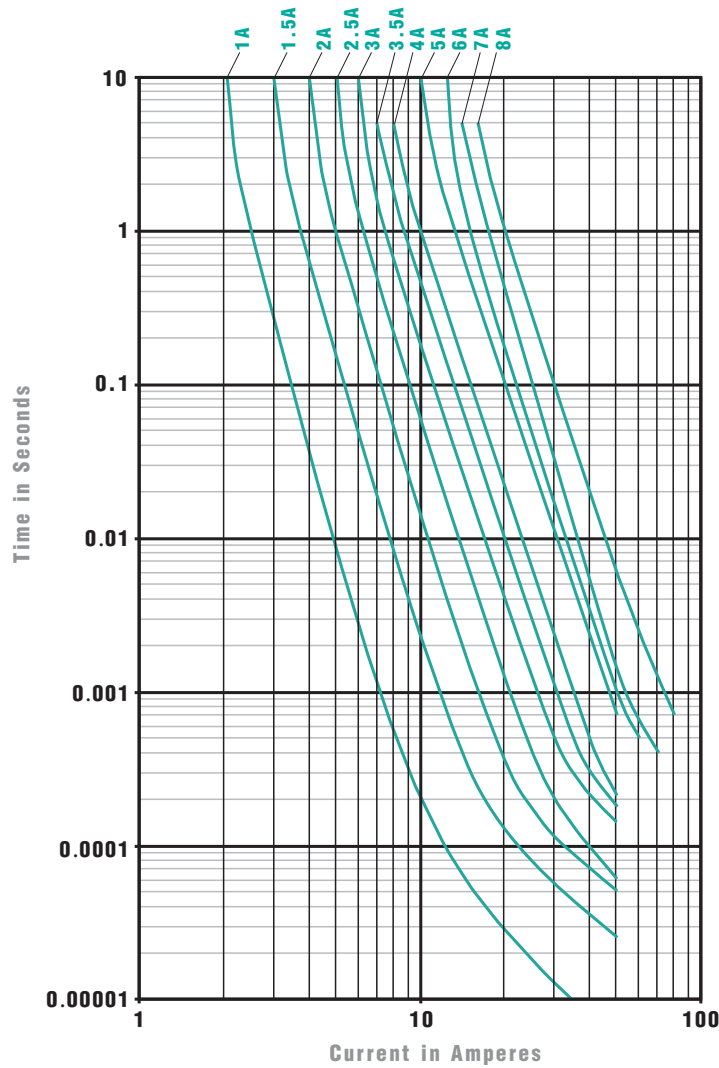
- Normal Operating Temperature: 23°C± 2
- Operating Temperature: -20 to 105°C
- The fuse rating is determined by the equation below:

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

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Thick Film Chip Fuses 0603TD Series

Average Time Current Curves



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