

0603 Time Delay SMD Fuses 0603TD Series

Description

- ▶ 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.



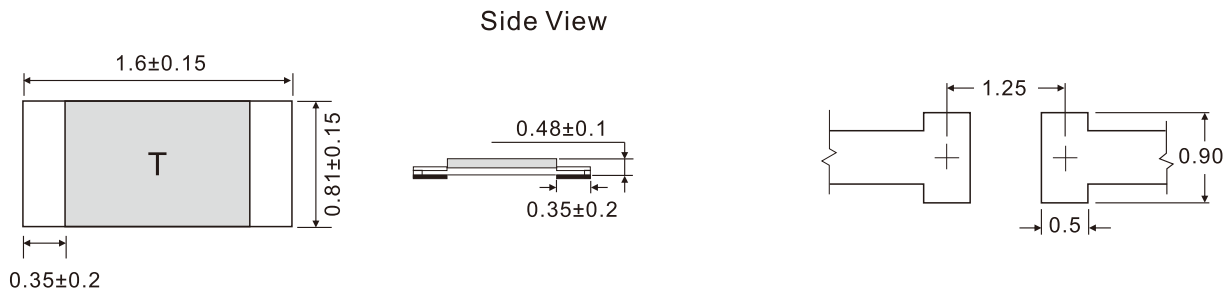
Features

- ▶ High inrush current withstanding capability
- ▶ 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

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Dimensions(Unit:mm)

Recommended Pad Layout(mm)



Specifications

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Part No.	Rated Voltage DC	Rated Current (A)	Breaking Capacity(A) ¹	Typical Cold Resistance (Ohm) ² Ref	Typical Voltage Drop (mV)	Typical Pre-Arcing I ² t (A ² Sec)	Marking
0603TD1A	32V	1	50A	0.300	345	0.011	B
0603TD1.5A		1.5		0.150	270	0.045	H
0603TD2A		2		0.072	160	0.115	K
0603TD2.5A		2.5		0.052	145	0.140	L
0603TD3A		3		0.035	130	0.280	O
0603TD3.5A		3.5		0.024	130	0.500	R
0603TD4A		4		0.021	120	0.600	S
0603TD5A		5		0.014	110	1.900	T
0603TD6A		6		0.0085	110	2.300	V**
0603TD7A		7		0.0073	90	3.000	X**
0603TD8A	8	0.0051	80	4.500	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 25°
- ▶ Typical Pre-arching I²t are measured at 10In Current Choice fuse for surge application (USB charger etc.), make sure the I²t of fuse is 4 times than surge.

**Different with other ratings, the color of glass cover of 6A, 7A and 8A is blue color

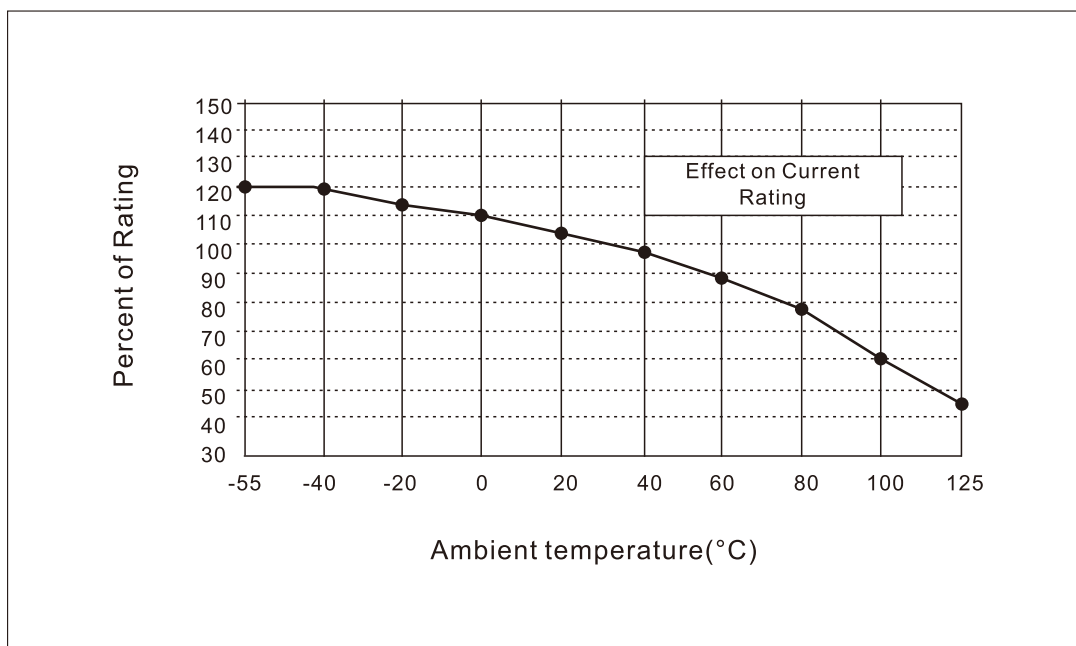
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Electrical Characteristics			
Rated Current	1.0 In	2.0 In	2.5 In
1A-8A	4 Hour Minimum	1-60 Sec	5 Sec Maximum

Temperature Derating Curve

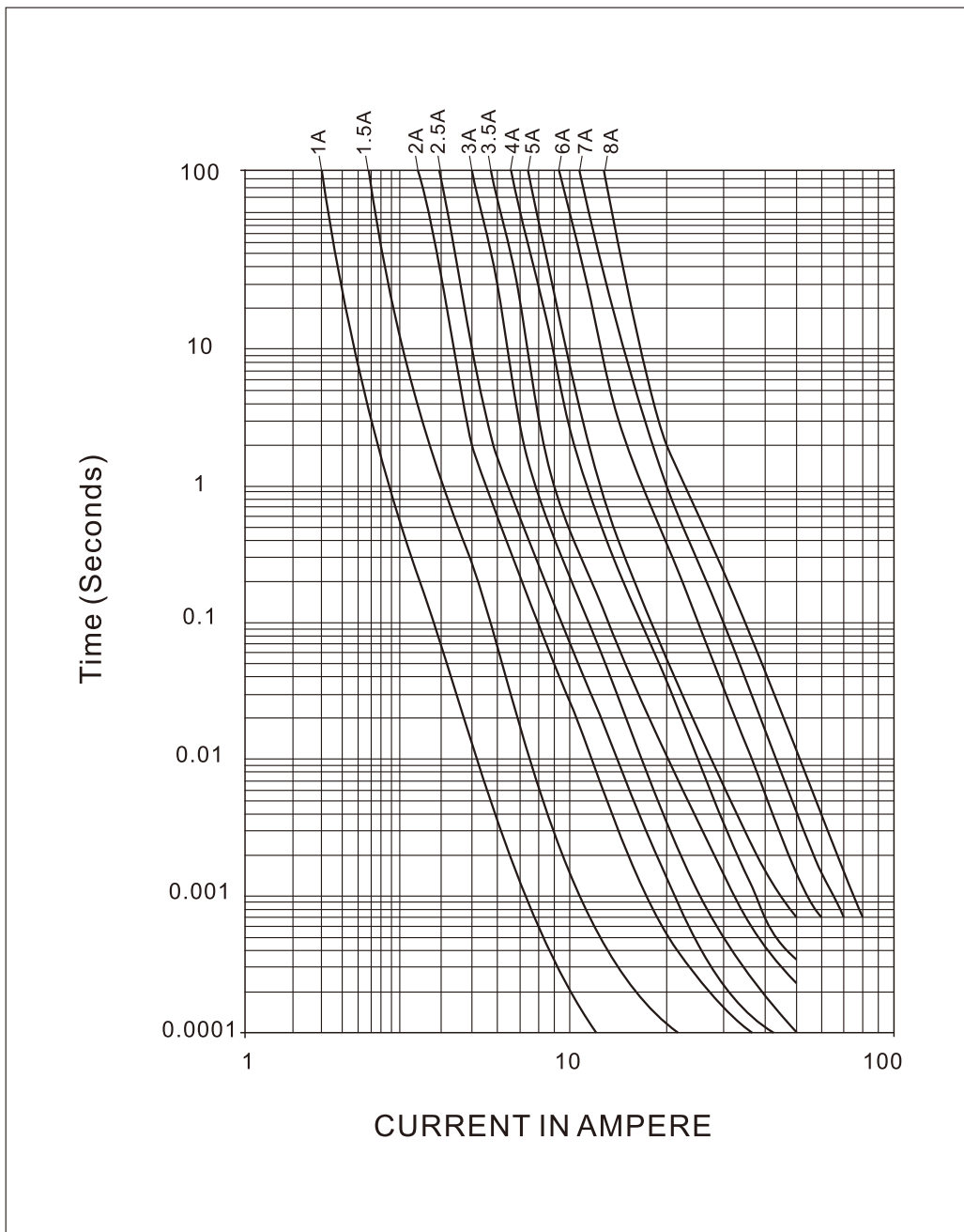
► Normal ambient temperature: $25 \pm 2^\circ\text{C}$

Operating temperature: $-55-125^\circ\text{C}$, with proper correction factor applied



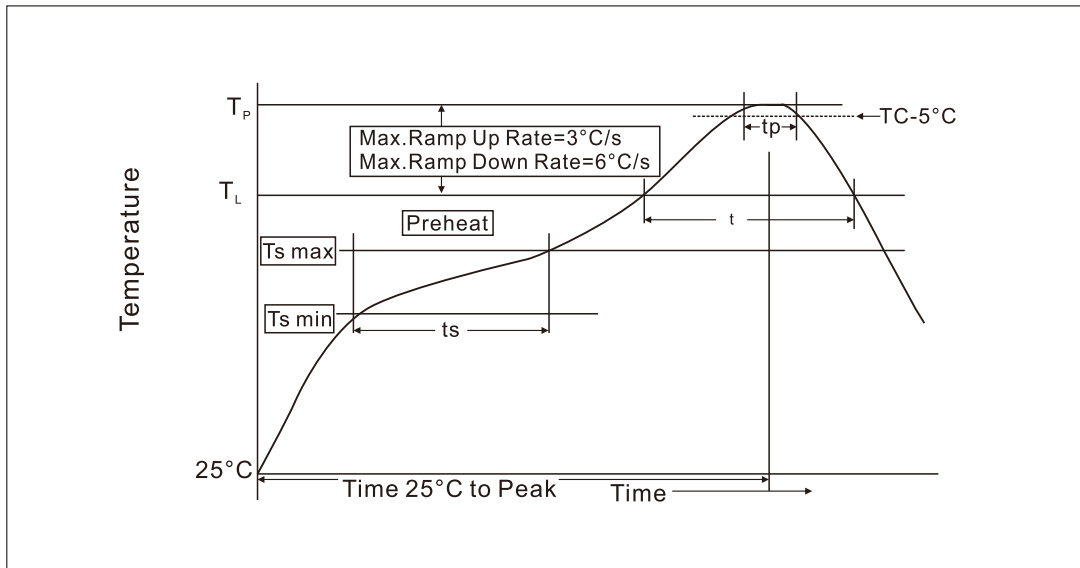
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Time Current Characteristic Curve



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Solder reflow profile



Profile Feature		Lead(Pb)free solder
Preheat and soak	Temperature min .(T_s min)	150°C
	Temperature max .(T_s max)	200°C
	Time (T_s min to T_s max)(t_s)	60-120 Seconds
Average ramp up rate T_s max to T_p		3°C/Second Max.
Liquidous temperature(T_L) Time at liquidous(t_L)		217°C 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_s max)		6°C/Second Max.
Time(25°C to Peak Temperature)		8 Minutes Max.

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Soldering method

- ▶ Wave solder
Reservoir temperature: 260°C
Time in reservoir: 10 seconds maximum
- ▶ Infrared reflow
Temperature: 260°C
Time: 30 seconds maximum

Packaging

- ▶ On Tape: 0603TD-5000 pcs Per Reel
- ▶ 0603TD-50000 pcs outer box