

INDIVIDUAL SPECIFICATION SHEET

Product Name: 0603 Fast Acting SMD Fuses**Part Number: THF0603 Series****Revision: A/4****Dongguan TLC Electronic Technology Co., LTD**

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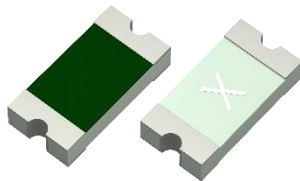
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Rev.	Effective Date	Changed Contents
A/2	2022/2/23	Update
A/3	2023/5/16	Update
A/4	2024/5/6	New Models

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Description

THF0603 series are the fuses set the industry standard for performance, reliability and quality. The ultra small (0603 size) thin-film design provides superior inrush withstand characteristics (I^2t) and temperature cycling characteristics during use and also makes our SMD fuses more heat and shock tolerant than typical subminiature fuses.

Features

- Compatible with reflow and wave solder
- Excellent environmental integrity
- One time positive disconnect
- Lead Free and Halogen free material

Time-Current Characteristic

Rated Current	1.0In	2.0In	3.0In
0.25A~5A	4 hours Minimum	5 sec Maximum	0.2 sec Maximum

In : Rating Current

Specifications

Part No.	Rated Voltage	Rated Current(A)	Breaking Capacity ¹	Typical Cold Resistance ² (mΩ)	Typical Voltage Drop (mV)	Typical Pre-Arcing I^2t (A ² Sec) ³	Marking
	DC(V)						
F06F0.25TH	32	0.25	50A@32V DC	500	170	0.0012	D
F06F0.375TH	32	0.375		312	167	0.0030	E
F06F0.5TH	32	0.5		200	152	0.0075	G
F06F0.5TH-1	32	0.5		200	152	0.0075	F
F06F0.75TH	32	0.75		131	132	0.0175	G
F06F1TH	32	1		70	79	0.0204	H
F06F1.25TH-H	32	1.25	50A@32V DC 13A@65V DC	57	73.2	0.0501	H
F06F1.25TH	32	1.25		57	73.2	0.0501	J
F06F1.5TH	32	1.5		40	71.8	0.0727	K
F06F1.75TH	32	1.75	35A@32V DC	31	71.5	0.0901	L
F06F2TH	32	2		28.8	71	0.1889	N
F06F2.5TH	32	2.5		21.7	69.6	0.2030	O
F06F3TH	32	3		17.5	68	0.2411	P
F06F5TH	32	5		9.6	62.3	0.9011	T

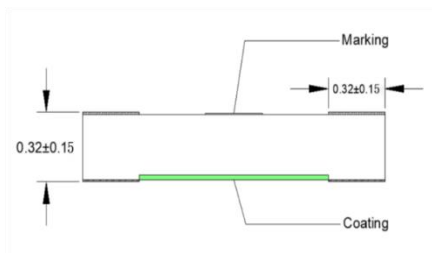
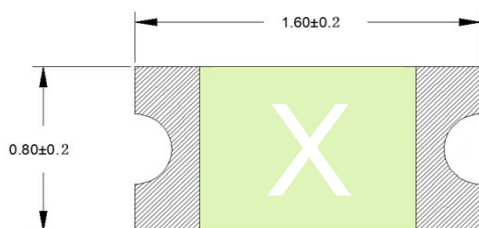
Note

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

2.DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25℃

3.Typical Pre-arcing I^2t are measured at 10In Current

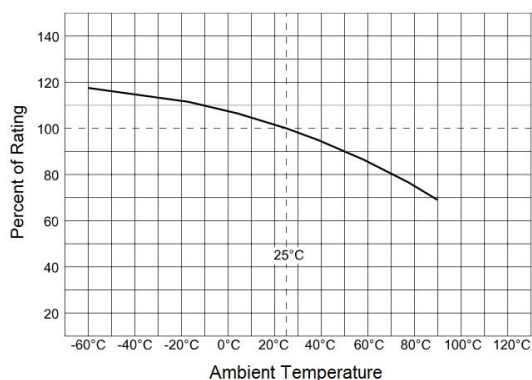
Dimensions



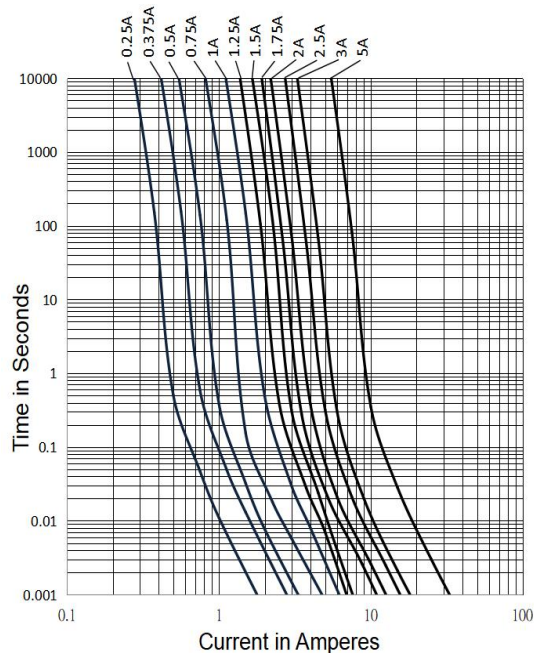
Temperature-Current Curve

When choosing the fuse's specification, if the operating environmental temperature beyond the scope from 20~26°C, you should consider the environmental temperature's affection to fuses.

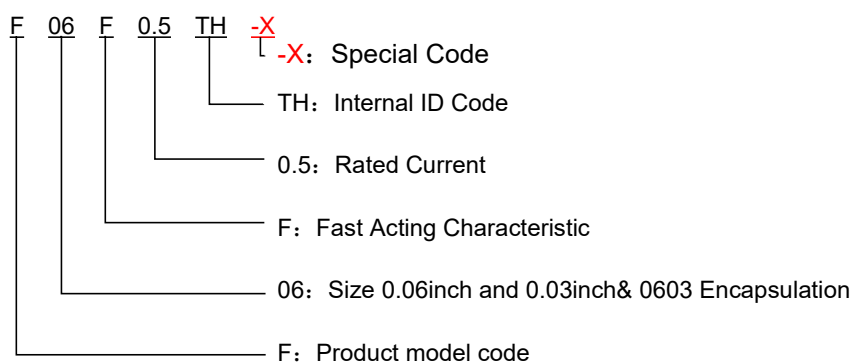
please refer Temperature-Current curve:



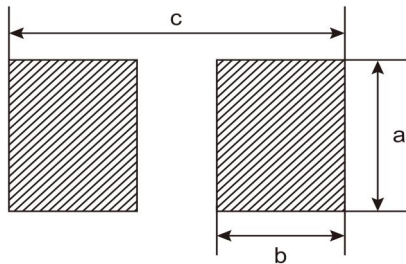
Time-Current Curve



Part Number



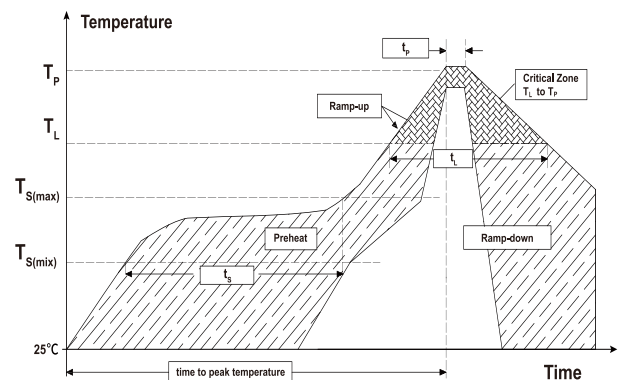
Solder Pad Size



Model	0.25A~5A
a	0.9 ± 0.15 mm
b	0.5 ± 0.10 mm
c	1.75 ± 0.15 mm

Soldering Parameters

Reflow Methods		
Reflow Condition		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 - 180 Seconds
Average ramp up rate T_s (max) to T_L		5°C / Second Max.
Reflow	Liquidous temperature (T_L)	217°C
	Time at liquidous (t_L)	60 - 150 Seconds
Peak package body temperature (T_P)		250 $^{+0}_{-5}$ °C
Time within 5°C of actual peak temperature (t_p)		20-40 Seconds
Average ramp-down rate		5°C / Second Max.
Time (25°C to Peak Temperature)		8 Minutes Max.
Do not exceed		260°C



Wave solder:

Reservoir temperature: 260°C

Time in reservoir: 10 seconds maximum

Packing Information & Storage Conditions

Part No.	Quantity	Packaging Option	Packaging Specification
F06FxxxTH	5000pcs/Reel	8mm Tape and Reel	EIA-481 Rev. D (IEC 60286, part 3)

Storage Conditions:

Under airtight in temperature 10°C~40°C, relative humidity $\leq 75\%$ can store 2 years.

Without dew in temperature 10°C~40°C, relative humidity be 95% maximum value for 30 days.

Notice

THF0603 Series of SMD fuse is not and shall not be used for any purpose (including but not limited to automotive, military, aerospace, medical, life-saving, life-sustaining or nuclear facility application, surgical implant device or any other application where the product fails or is inoperable), but it is suitable for secondary protection of handheld devices such as cell phones, battery packs, DVDS, hard drives, digital cameras, etc. Warranties granted for products not expressly stated for any purpose shall be deemed null and void. This SMD fuse is not liable for any claims or damages arising from products not specified. Users should test the suitability of the product they choose.

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