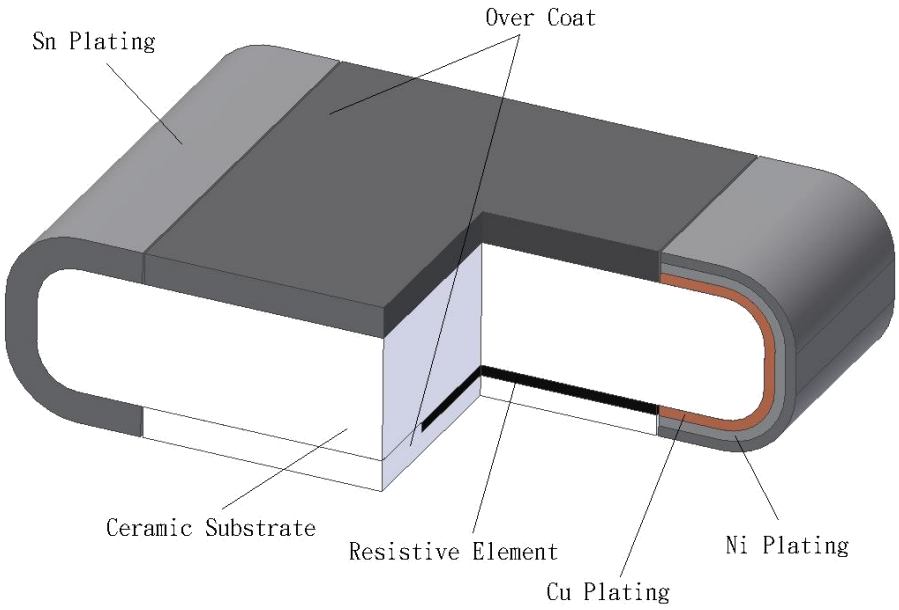
1.Scope

This specification applies for the fuse series of surface mount fuse made by TA-I.

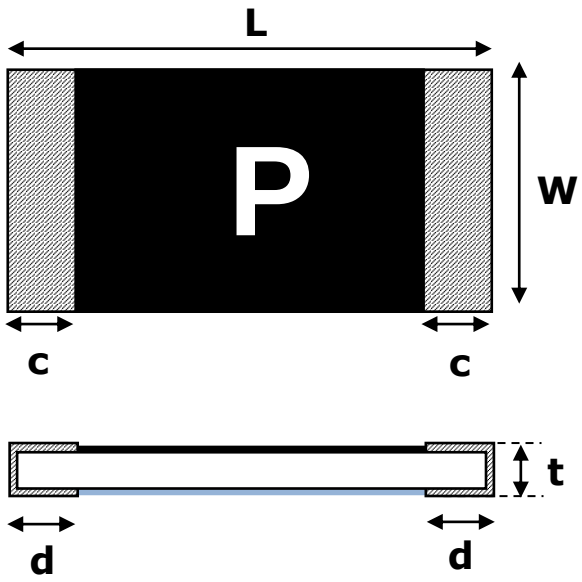
2. Construction



3.Type Designation

CFM	06	V5	T	6R00
Chip Fuse	Size	Rated Voltage	Packaging	Rated Current
	06:0603(1608)	V2:24V V3:32V V5:50V V6:63V	T: Paper Tape (5K)	1R00:1.0A 1R50:1.5A 2R00:2.0A 3R00:3.0A 4R00:4.0A 5R00:5.0A 6R00:6.0A 7R00:7.0A 8R00:8.0A

4.Dimensions



Series	L	W	C	d	t
CFM06	1.6±0.1	0.80±0.1	0.3±0.2	0.3±0.1	0.6±0.10

5.Applications and ratings

Part Designation	Marking	Rated Current	Resistance (mΩ) Tolerance ±25%	Typical I^2t (A^2 s)	Fusing Time	Rated Voltage	Breaking Capacity	Body Temperature rising
CFM06V5T1R00	L	1.00A	115.00	0.059	Open within 1~120sec. at 200% rated current	DC 50V DC 63V	DC 50V 50A	< 75℃ at 100% rate current
CFM06V5T1R50	P	1.50A	59.00	0.130				
CFM06V5T2R00	S	2.00A	33.00	0.210				
CFM06V5T3R00	3	3.00A	15.90	0.710				
CFM06V5T4R00	W	4.00A	10.00	0.960				
CFM06V5T5R00	Y	5.00A	6.77	2.050				
CFM06V5T6R00	6	6.00A	6.30	3.470				
CFM06V5T7R00	7	7.00A	4.70	5.040				
CFM06V5T8R00	8	8.00A	4.30	6.500				

Note:

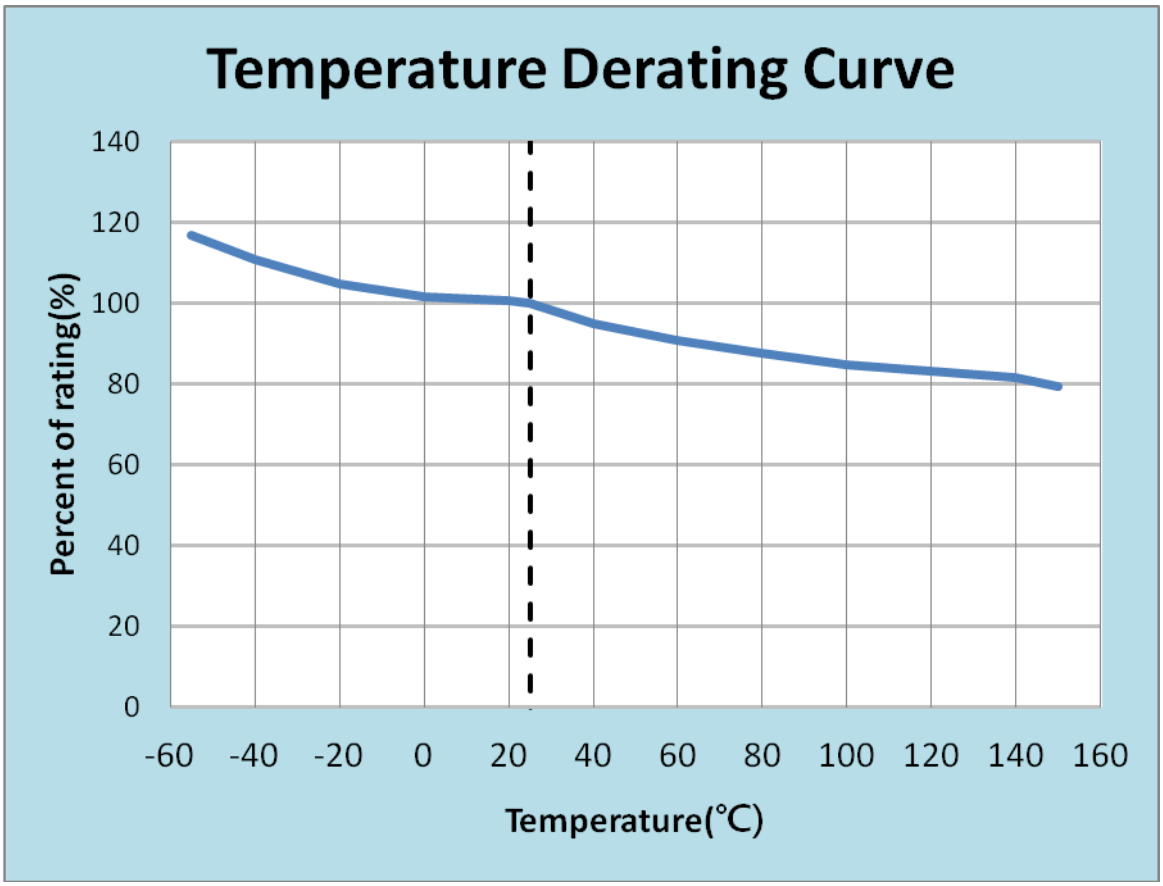
1.Typical I^2t value is measured at 10x-rated current, Application with surge over 10x-rated current.
Please confirm with us.

2.Rate voltage 63V UL only.

6. Temperature Derating Curve

6.1 Normal Ambient Temperature: 25℃

6.2 Operating Temperature: -55℃~150℃, whit proper Derating factor as below:



7. Reliability Tests

No.	Parameter	Test Method	Requirement
#1	Solderability	aging 4 hours at 150 °C dry heat Lead-free solder bath at 245±3 °C for 3±0.5 seconds. 260±3 °C for 7±0.5 seconds	95% coverage minimum
#2	Resistance to solder Heat	Immerse the specimens in and eutectic solder at 260+5/-0°C for 10±1S.	±10%
#3	Moisture Resistance	T=24 hours / Cycle ,10Cycles. Notes: Steps 7a& 7b not required. Unpowered.	±10%
#4	Thermal Shock	Temperature -55°C/+155°C. Number of cycles required:300 Maximum transfer time-20 seconds, Dwell time-15 minutes. Air-Air.	±10%
#5	Mechanical Shock	Wave Form: Tolerance for half sine shock pulse. Peak value is 100g's. Normal duration(D) is 6(ms)	±10%

#6	Vibration	5 g's for 20 min., 12 cycles each of 3 orientations. (Note: Test from 10-2000 Hz.)	±10%
#7	Terminal Strength	Force of 1.8kg for 0603	±10%
#8	High Temperature Storage	with exemptions 1000 hrs. @ T=125°C. Unpowered. Measurement at 24±2 hours after test conclusion.	±10%
#9	Temperature Cycling	1000 Cycles (-40°C to +125°C) 30min maximum dwell time at each temperature extreme. 1 min. Maximum transition time. Measurement at 24±4 hours after test conclusion.	±10%
#10	Bias Humidity	1000 hours 85°C/85%RH. Note: Specified conditions: 10% of operating current. Measurement at 24±2 hours after test conclusion.	±10%
#11	Operational Life	1000 hours TA=85°C at 70% rated current. Measurement at 24±2 hours after test conclusion	±10%
#12	Resistance to Solvent	a:Isopropyl Alcohol：Mineral Spirits= 1：3 b:Terpene Defluxer (Bioact EC-7R) c:Deionized water：Propylene Glycol： Monomethyl Ether：monoethanolamine = 42：1：1	No evident damages on protective coating
#13	Board Flex (Bending)	3mm deflection	±10%
#14	Carrying capacity	Rated current ,4hr	±10%
#15	Fusing Time	200% of its rated current	1~120 sec
#16	Interrupting Ability	After the fuse is interrupted, rated voltage applied for 30sec again	No mechanical damages
#17	Temperature Rise	100% of its rated current, Measure of surface temperature	Δ T<75℃
#18	Residual Resistance	Measure DC resistance after fusing	10kΩ and more
#19	Low Temperature Storage	1000 hrs. @ T=-55°C. Unpowered. Measurement at 24±2 hours after test conclusion.	±10%

8. Marking

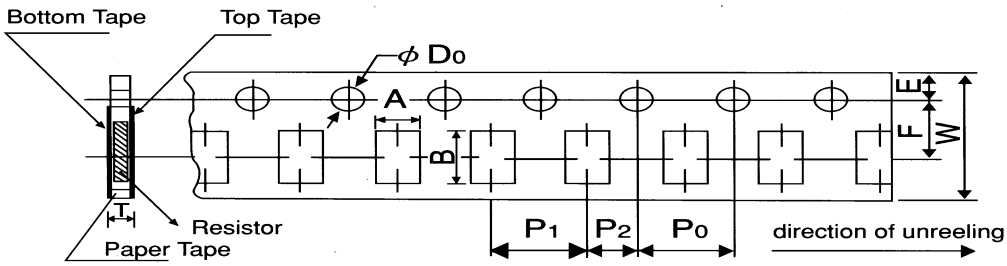
Symbol for Rating Current

Symbol	L	P	S	3	W	Y	6	7	8
Rating Current(A)	1.0	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0

9. Taping & Reel

9.1 Taping Dimensions

4mm pitch paper

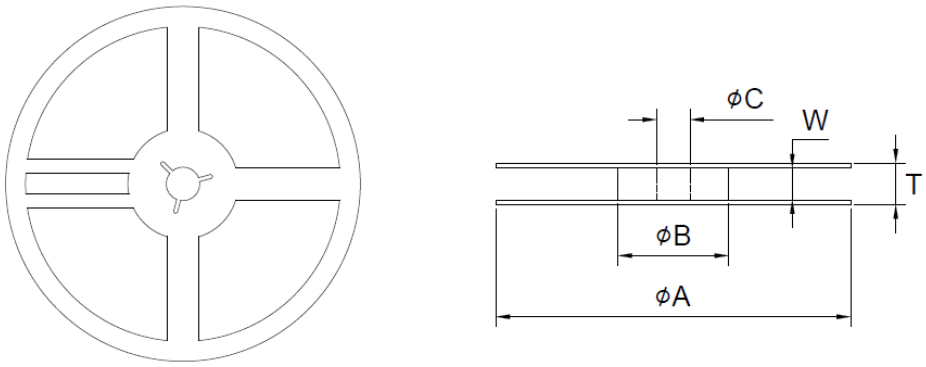


Packing	Type	A	B	W	F	E	P_1	P_2	P_0	D_0	T
Paper Tape	CFM06	1.1±0.1	1.9±0.1	8.0±0.2	3.5±0.05	1.75±0.1	4.0±0.1	2.0±0.05	4.0±0.1	ϕ 1.5 +0.1 -0	0.64±0.1

Unit: mm

Type series		Paper Tape
		4 mm pitch
		180mm/R
CFM	06	5000

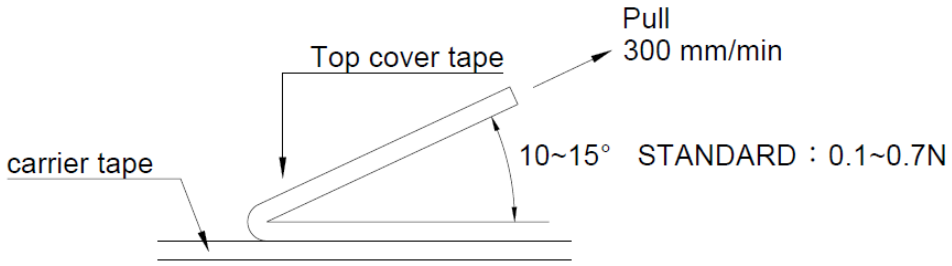
9.2 Reel Specifications



Unit: mm

Series	ϕ A	ϕ B	ϕ C	W	T
CFM06	178±2.0	60.0±1.0	13.0±1.0	9.0±1.0	11.4±2.0

9.3 Peel –off force:



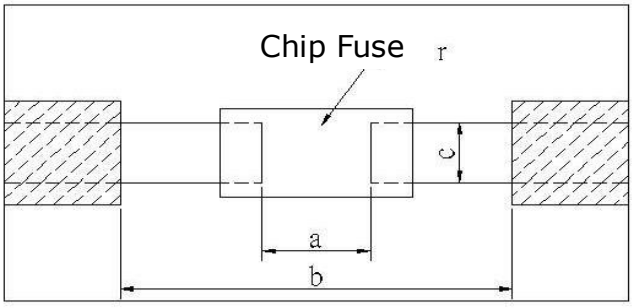
10. Storage Conditions:

Temperature: 5℃~35℃,Humidity:40%~75%.

11. Shelf Life:

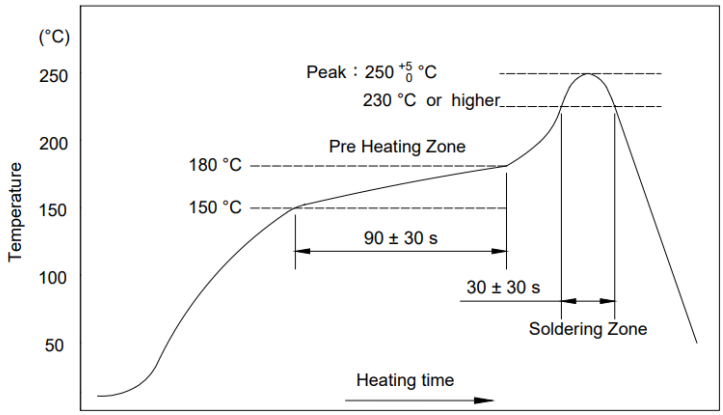
2 years from manufacturing date.

12. Recommended land patterns



Type \ Land pattern / Size		Dimension		
		a	b	c
CFM	06 (0603)	0.7~0.9	2.0~2.2	0.8~1.0

13. Recommend IR – Reflow profile: (solder: Sn96.5 / Ag3 / Cu0.5)



Peak : 250 $^{+5}_{-0}$℃ , 5 sec

Pre – heat Zone : 150 to 180 ℃, 90±30 sec.

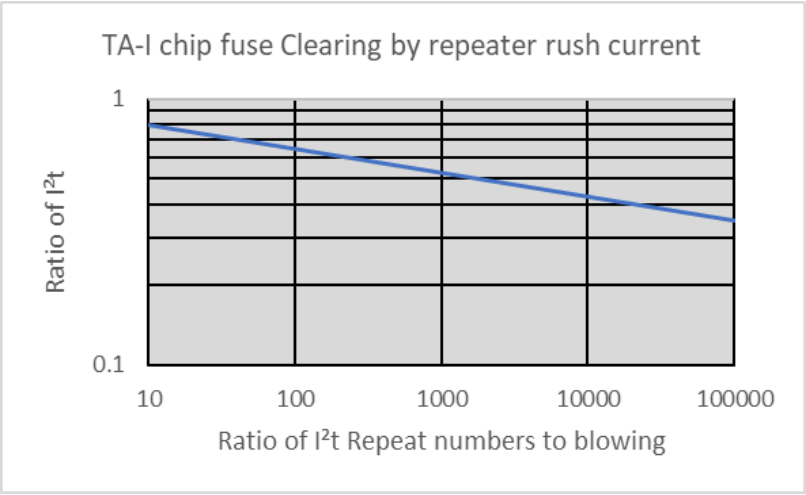
Soldering Zone : 230℃ or higher , 30±10 sec.

14. Approval by UL248-14

The fuses have been approved by UL.

File No. of UL Recognition is E241710

15. Pulses derating curve:



16. ECN

Engineering Change Notice: The customer will be informed with ECN if there is significant modification on the characteristics and materials described in Approval Sheet.

17. Manufacturing Country & City:

TA-I TECHNOLOGY CO., LTD. (Taiwan– Tao Yuan)

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Associated companies:

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(2) TA-I TECHNOLOGY ELECTRONIC (DONGGUAN) CO., LTD. (China –Dongguan)

Tel: (+86) 769-8339-4790～3 Fax : (+86) 769-8339-4794

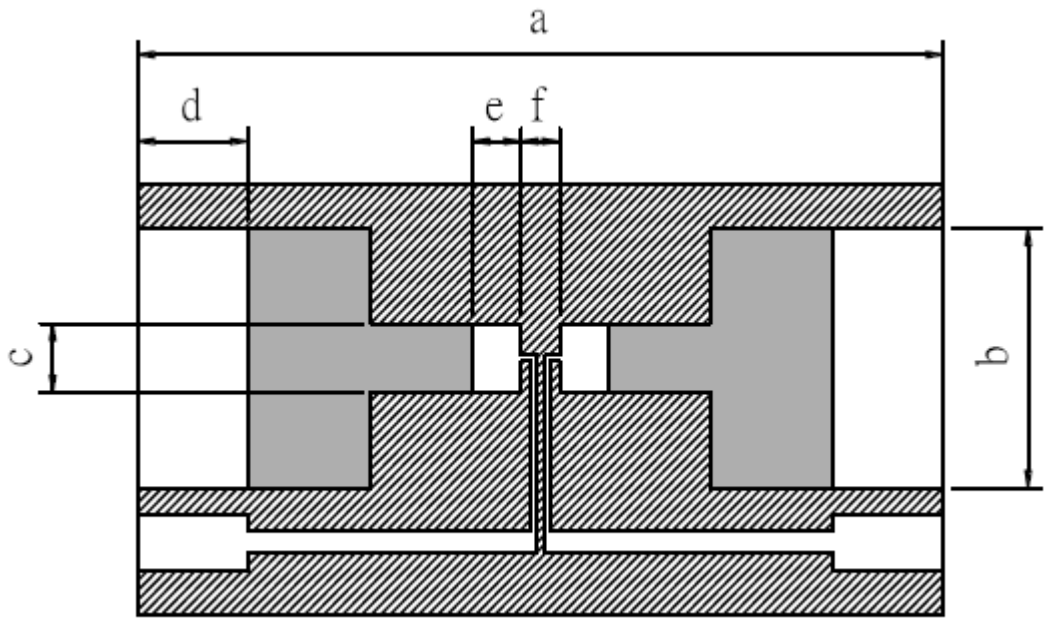
(3) FORTUNE TASK RESISTOR FACTORY (China – Dongguan)

Tel: (+86) 769-8339-4790～3 Fax : (+86) 769-8339-4794

(4) TAI OHM ELECTRONICS (M) SDN. BHD. (Malaysia – Penang)

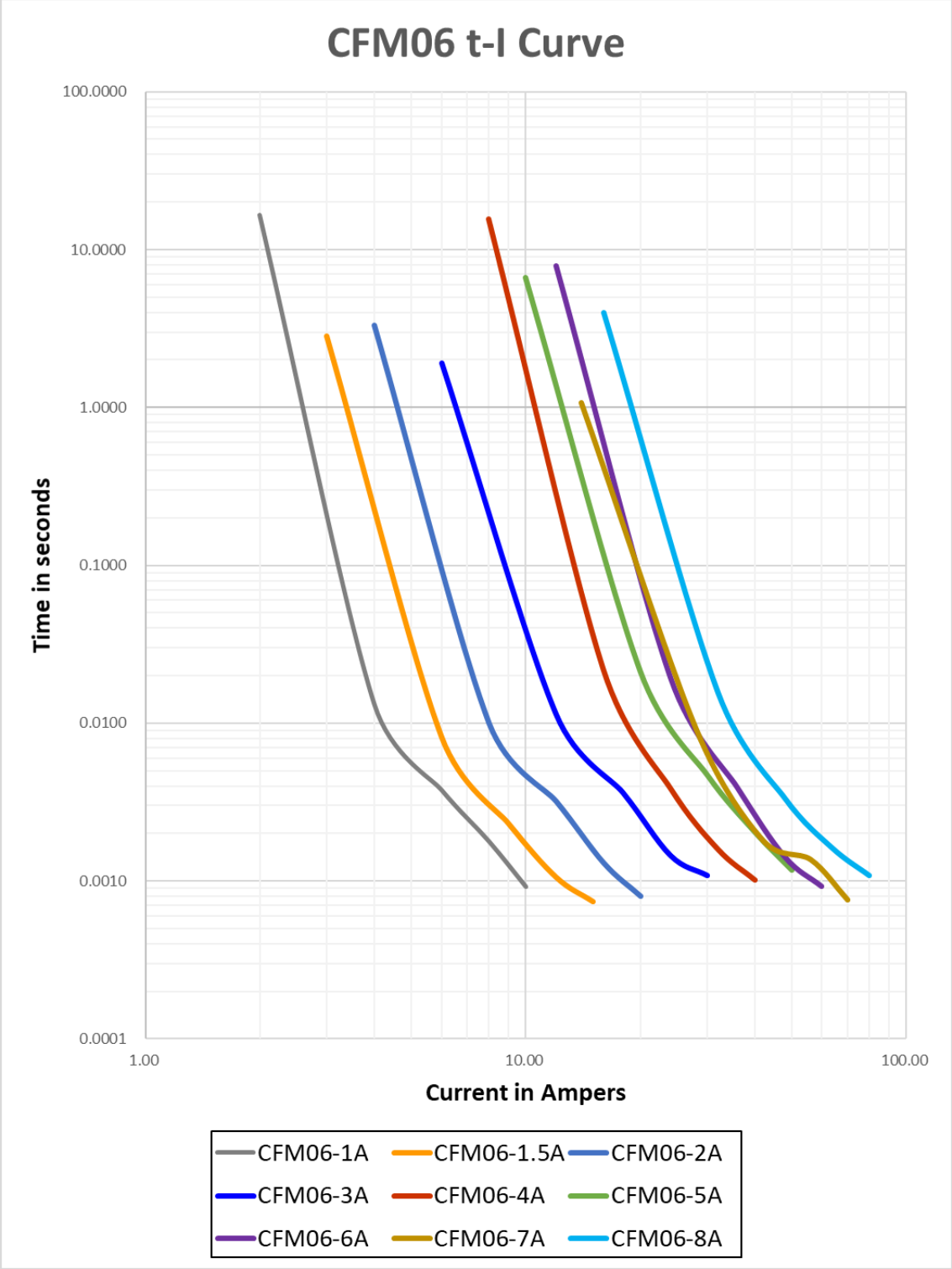
Tel: (+60) 4- 3900480 Fax: (+60) 4-3901481

18. Test Circuit Board :



Type	a	b	c	d	e	f
CFM0603	19	6	1.6	2.6	1.15	0.9

19.TA-I 0603 Metal Foil Chip Fuse I-t Curve:



20.TA-I 0603 Metal Foil Chip Fuse I2-t Curve