



# Surface Mount Fuse (Thin Film Chip Fuse)



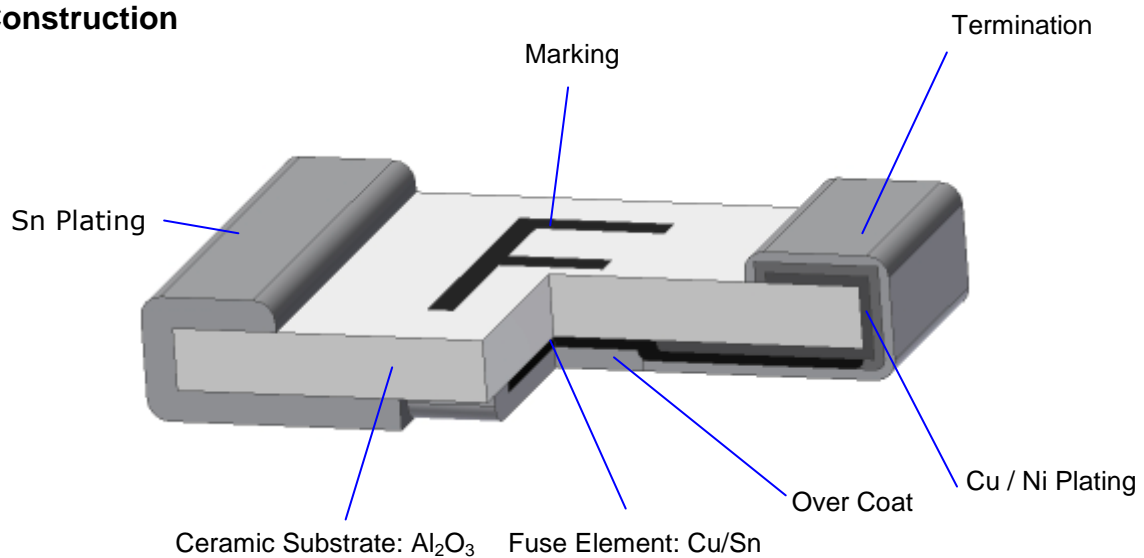
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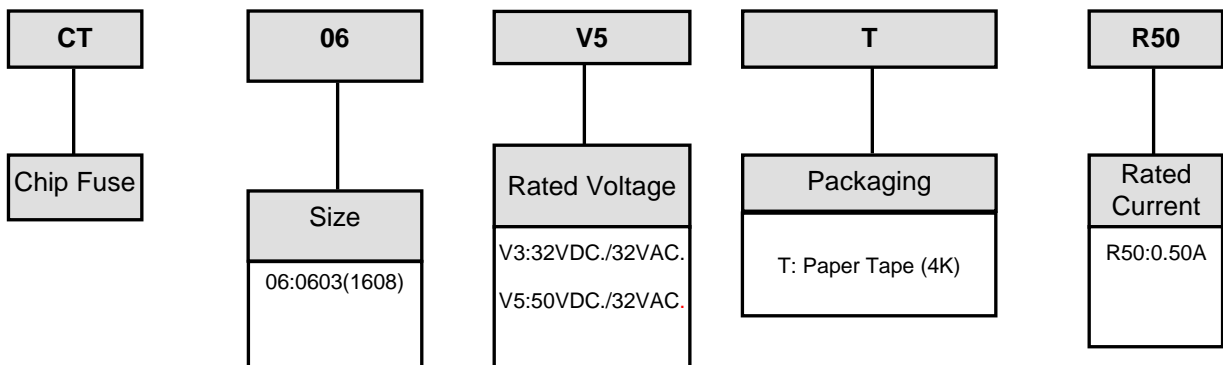
## 1. Scope

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

## 2. Construction



## 3. Type Designation





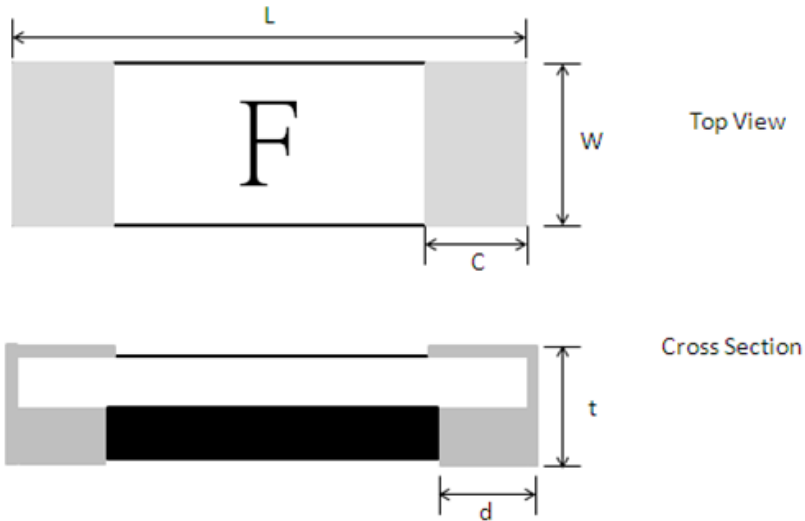
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## 4. Dimensions



Unit: mm

Type (Size code)	Dimensions (mm)				
	L	W	C	d	t
CT06 (0603)	1.65±0.2	0.85±0.2	0.5±0.2	0.5±0.2	0.8±0.20

## 5. Marking

Symbol for Rating Current

Symbol	B	C	D	E	F	K	L	M	P	N	S	T	3	U	W	Y
Rating Current(A)	0.2	0.25	0.315	0.4	0.5	0.8	1	1.25	1.5	1.6	2	2.5	3	3.15	4	5



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## 6. Applications and ratings

Part Designation	Marking	Rated Current	Fusing Time	Resistance* (mΩ) Typical	Rated Voltage	Breaking Capacity
CT06V5TR20	B	0.20A	Open within 2 min.at 200% rated current	3000	50V DC / 32V AC	50A 50V DC 32V AC
CT06V5TR25	C	0.25A		1500		
CT06V5TR315	D	0.315A		750		
CT06V5TR40	E	0.40A		496		
CT06V5TR50	F	0.50A		343		
CT06V5TR80	K	0.80A		142		
CT06V5T1R0	L	1.00A		88	32V DC/AC	50A 32V DC/AC
CT06V5T1R25	M	1.25A		63		
CT06V5T1R50	P	1.50A		60		
CT06V5T1R60	N	1.60A		56		
CT06V3T2R0	S	2.00A		34		
CT06V3T2R50	T	2.50A		24.5		
CT06V3T3R00	3	3.00A		20		
CT06V3T3R15	U	3.15A		19		
CT06V3T4R0	W	4.00A		13		
CT06V3T5R0	Y	5.00A		10		

\*Resistance was measured with less than 10% of rated current.

## 7.Pre-Arcing time

Rated Current	1.25xIn (Min)	2.0xIn (Max)	10.0xIn (Max)
<b>0.2~5A(Type F)</b>	1 hrs	120s	10ms

Note:

Pre-arcing time at 10 times rated current according to the following types:

Type FF: less than 1ms

Type F: from 1ms to 10ms

Type T: greater than 10ms to 100ms

Type TT: greater than 100ms to 1000ms



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## 8. Reliability Tests

Parameter	Requirement	Test Method	Reference Standard
Carrying capacity	No fusing	Rated current ,4hr	UL248-14
Fusing Time	Within 2 minute	200% of its rated current	IEC60127-4-9.2.1
Breaking capacity	Without permanent arcing 、 ignition 、 bursting of fuse	The rated voltage of the fuse and shall be maintained for 30 s after the fuse has operated.	IEC60127-1 IEC60127-4-9.3.1
Insulation Resistance	0.1MΩ and more	Measure with DC twice the rated voltage after breaking capacity	IEC60127-4-9.3.3
Bending Test	No mechanical damages	Distance between holding points: 90mm, Bending:3mm,1time ,30sec	IEC60115-1-4.33
Resistance to solder Heat	Δ R   < 20%	260°C ±5°C, 10±1second	IEC60028-2-58
Solderability	95% coverage minimum	235°C ±5°C, 2±0.2second (Solder : Sn96.5 / Ag3.0 / Cu0.5)	IEC60028-2-58
Temperature Rise	Δ T < 70°C	125% of its rated current, Measure of surface temperature rise	IEC60127-4-9.7
Resistance to Dry Heat	Δ R   < 20%	155°C ±5°C, 96 hrs	IEC60115-1-4.23.2 JIS C5201-1-4.23.2
Resistance to Solvent	No evident damages on protective coating and marking	15 s with a piece of cloth soaked in water and again for 15 s with a piece of cloth soaked in petroleum spirit.	IEC60127-1-6.2
Thermal Shock	Δ R   < 10%	-55°C/+25°C/+155°C/+25°C, 10 cycles	MIL-STD 202-107G
Humidity	Δ R   < 20%	40±2°C/90~95%RH,1000 hrs	MIL-STD-202G Method 103B

## 9. Storage Conditions:

Temperature: 5°C~35°C, Humidity:40%~75%

## 10. Shelf Life:

2 years from manufacturing date

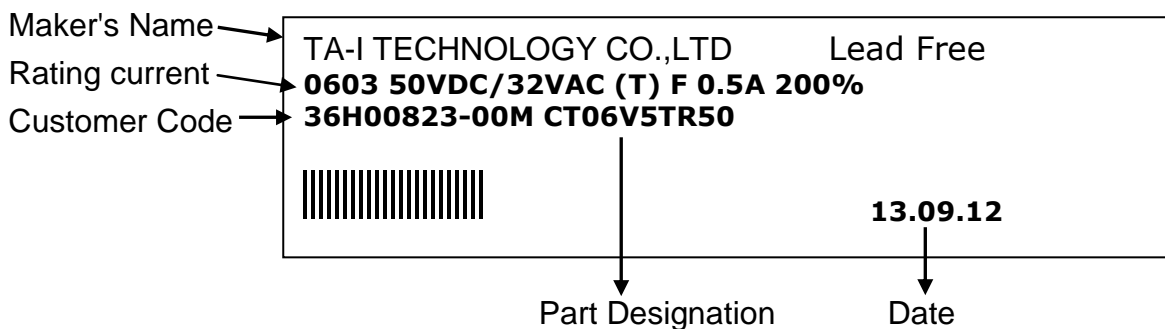
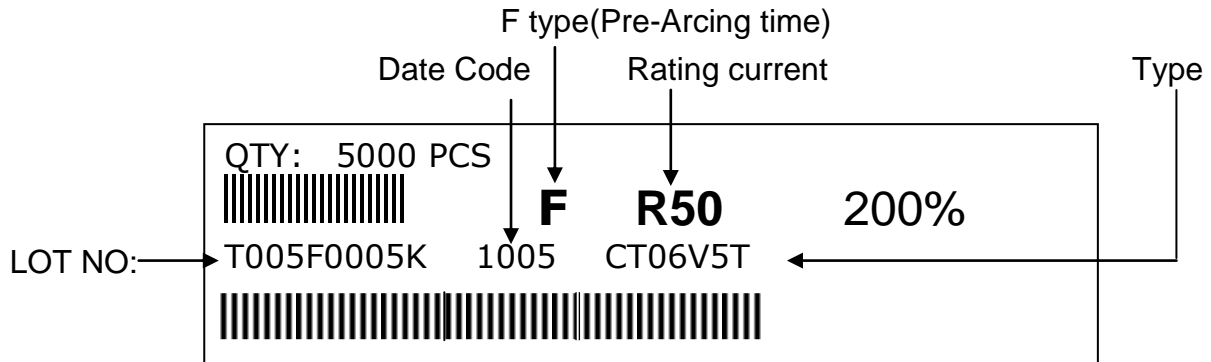


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## 11. Label

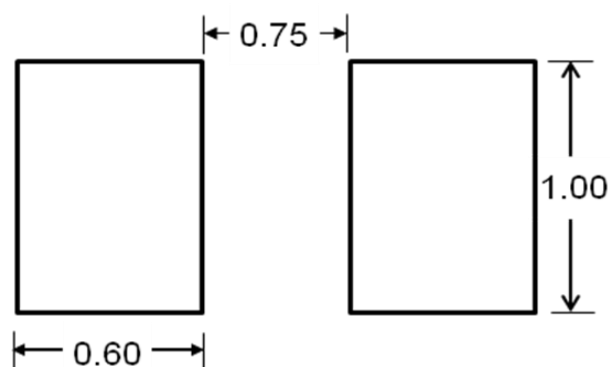


Part Designation

Date

Customer Label

## 12. Recommended land patterns



Unit:mm



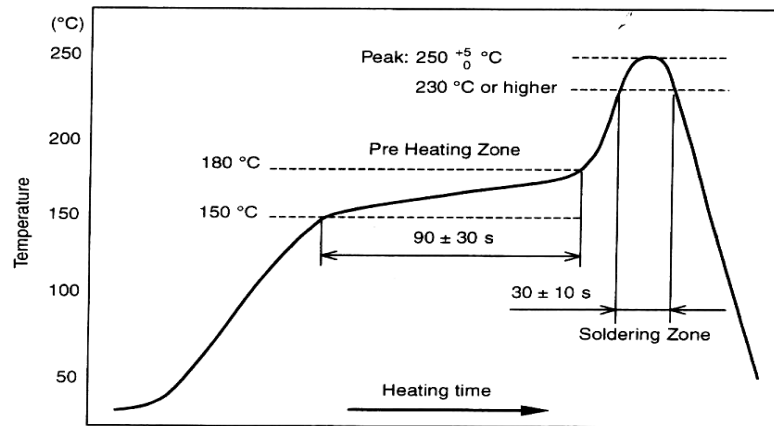
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## 13. Recommend IR – Reflow profile : (solder : Sn96.5 / Ag3 / Cu0.5)



Peak :  $250 \begin{matrix} +5 \\ -0 \end{matrix} ^\circ\text{C}$  , 5 sec

Pre – heat Zone : 150 to 180 °C , 90±30 sec

Soldering Zone : 230°C or higher , 30±10 sec

## 14. 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.

## 15.Approvals

IEC60127-1&IEC60127-4

## 15. 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 )

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