



Version No.:2014023

Spec. No.: SFA-MTS

# Specification for approval

**Product Type: MTS Series *Time-Lag Radial Lead Micro Fuse***



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## 1. Scope of Application

This product is suitable for various kinds of electronic devices' circuit over current protection. Widely used in industrial of Battery Charges, Consumer Electronics, Power supplies, Industrial Controllers, etc.

## 2. Standards and Agency Approvals

2.1 Standards : In accordance with IEC60127-1, IEC60127-3 Standard sheet4, GB9364.1-1997, GB9364.3-1997.

### 2.2 Certification:

Agency	Ampere Range	Agency File Number
UR	50mA ~ 6.3A	E340427(JDYX2)
C-UR	50mA ~ 6.3A	E340427(JDYX8)
VDE	50mA ~ 6.3A	40039420
CQC	50mA ~ 6.3A	CQC11012061981
PSE	50mA ~ 6.3A	PSE13020693
KC	50mA ~ 6.3A	SU05045-14001/SU05045-14002/SU05045-14003

### 2.3 Catalogue No. ● Approved / ○ Pending

Catalog No.	Ampere Rating	Voltage Rating	Max Voltage Drop (mv)	I <sup>2</sup> TMelting Integral(A <sup>2</sup> .S)	Agency Approvals				
MTS0050A	50mA	250V	555	0.02	●	○	○	○	○
MTS0100A	100mA	250V	355	0.11	●	○	○	○	○
MTS0125A	125mA	250V	323	0.12	●	○	○	○	○



MTS0160A	160mA	250V	296	0.17	●	○	○	○	○
MTS0200A	200mA	250V	272	0.21	●	○	○	○	○
MTS0250A	250mA	250V	251	0.41	●	○	○	○	○
MTS0315A	315mA	250V	237	0.63	●	○	○	○	○
MTS0400A	400mA	250V	211	1.22	●	○	○	○	○
MTS0500A	500mA	250V	202	2.34	●	●	●	●	●
MTS0630A	630mA	250V	191	2.88	●	○	○	○	○
MTS0800A	800mA	250V	172	3.92	●	○	○	○	○
MTS1100A	1A	250V	200	5.77	●	●	●	●	●
MTS1125A	1.25A	250V	200	8.34	●	○	○	○	○
MTS1160A	1.6A	250V	190	13.60	●	○	○	○	○
MTS1200A	2A	250V	170	25.90	●	●	●	●	●
MTS1250A	2.5A	250V	170	42	●	○	○	○	○
MTS1315A	3.15A	250V	150	58	●	●	●	●	●
MTS1400A	4A	250V	130	92	●	○	○	○	○
MTS1500A	5A	250V	130	140	●	●	●	●	●
MTS1630A	6.3A	250V	130	208	●	○	○	○	○
MTS1800A	8A	250V	100	265	○	○	○	○	○
MTS2100A	10A	250V	100	295	○	○	○	○	○

### 3. Product Marking

The fuses shall have the following markings:

Example:

	MTS	T	1A	250V	
①	②	③	④	⑤	⑥



①	Trade Mark:	
②	Series Type Name:	<b>MTS</b>
③	Electrical Characteristic symbol:	<b>T</b> ( <i>symbol for Time-Lag</i> )
④	Rated Current (A):	___A 或 or ___mA
⑤	Rated Voltage (V):	<b>250V</b>
⑥	Approval Marks:	

**Note:**

*Size and position of the markings shall not be provided.*

#### 4. Appearances and Configuration

##### 4.1

There shall not be any remarkable stain, rust or crack on the appearances,  
Markings shall be easily legible.

##### 4.2

Configuration: Radial leaded Sub-Miniature Fuse.

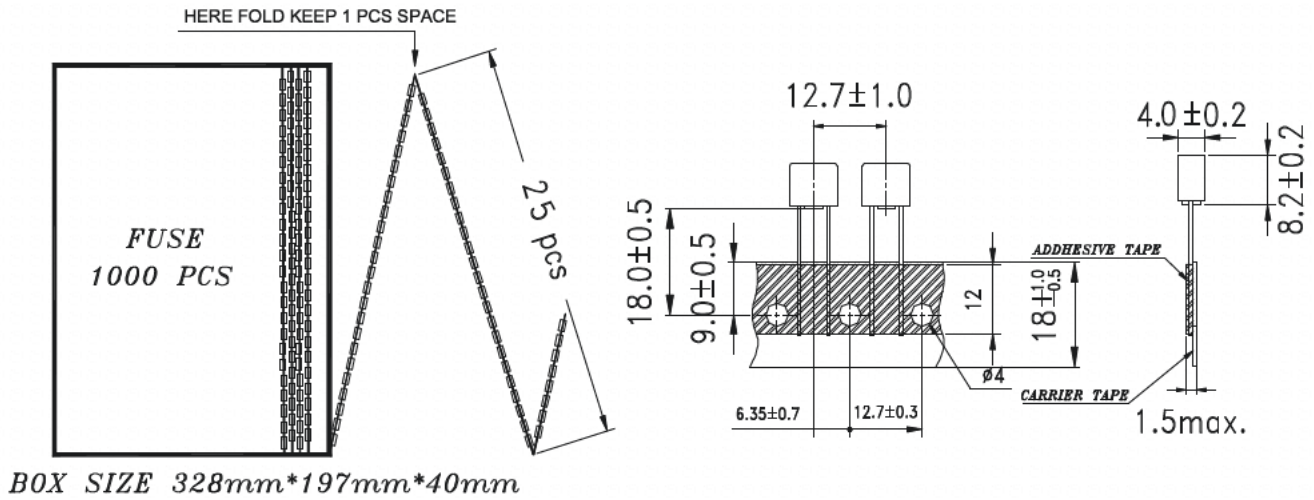
##### 4.3

Color: Black or brown.





### 5. Dimensions and Structure



### 6. Material Details

NO.	Part Name	Material
①	Cap	Black or Brown Thermoplastic Polyamide PA 6.6, UL 94 V-0
②	Base	Black or Brown Thermoplastic Polyamide PA 6.6, UL 94 V-0
③	Fuse element	Alloy
④	Lead wire	Copper, Tin-plated



## 7. Product Characteristics

### 7.1 Lead Pull Strength

5N for  $10 \pm 1$  Seconds

### 7.2 Lead Thrust Strength

2N for  $10 \pm 1$  Seconds

### 7.3 Solder ability

Wave :  $260^{\circ}\text{C}$ ,  $\leq 3\text{s}$ ;

Soldering Iron:  $350 \pm 10^{\circ}\text{C}$ ,  $\leq 1\text{s}$ .

### 7.4 Soldering Heat Resistance

Wave :  $260^{\circ}\text{C}$ , 10s;

Soldering Iron:  $350^{\circ}\text{C}$ , 3s.

## 8. Electrical Characteristics

### 8.1 Test Condition

All electrical test is to be conducted with the ambient air at a temperature of  $25 \pm 5^{\circ}\text{C}$ .

### 8.2 Interrupting Rating:

Breaking Capacity: 35A or  $10I_n$  whichever is greater at 250V AC.

The insulation resistance value of fuse is greater than  $0.1\text{M}\Omega$  after breaking capacity testing.

### 8.3 Rising Temperature Test:

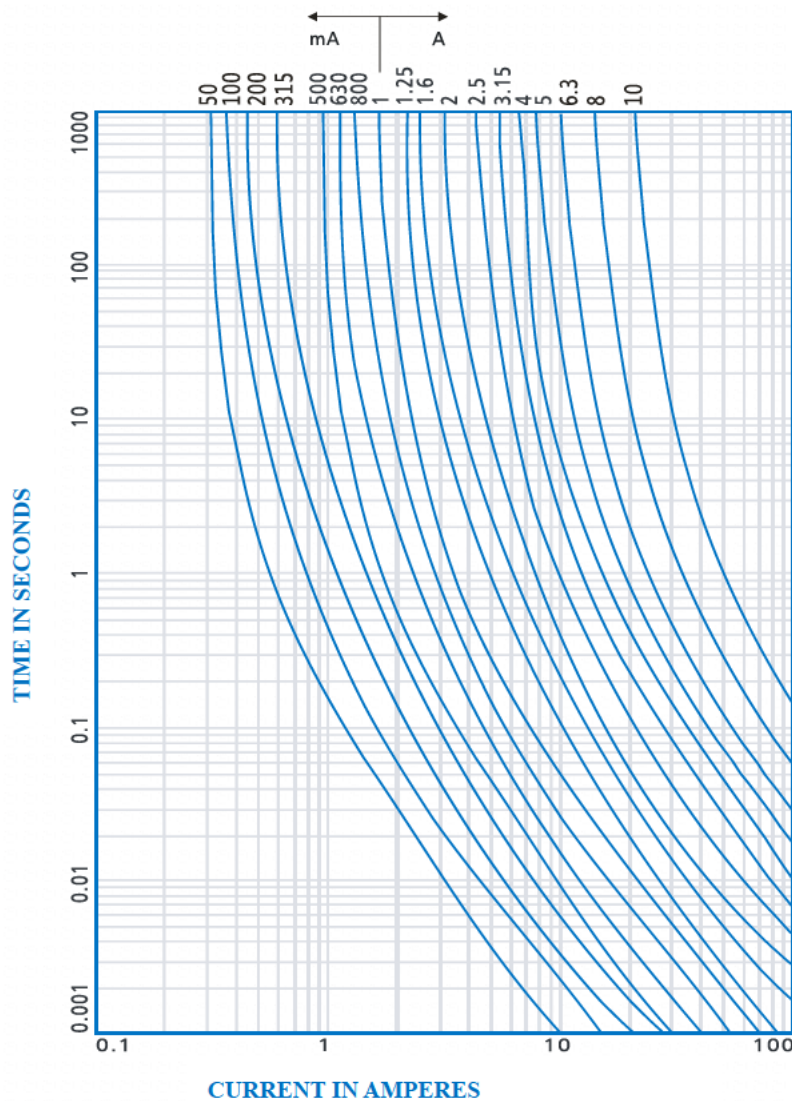
Under the ambient temperature of  $25 \pm 5^{\circ}\text{C}$ , through 1.5 times the rated current for 15 minutes, then every 15 minutes, add an increase of 0.1 times the rated current. When operates, the temperature rise in any part of fuse should not exceed  $135^{\circ}\text{C}$ .



### 8.4 Operating Characteristics

% of Ampere Rating( $I_n$ )	Blowing Time
150%* $I_n$	(60 min Minimum)
210%* $I_n$	(2 min Max)
275%* $I_n$	(400 ms~10 s)
400%* $I_n$	(150 ms~3 s)
1000%* $I_n$	(20 ms~150 ms)

### 8.5 Average Time Current Curves







### 9. Environmental Characteristic 9.1

Operating Temperature

-55°C ~ +125°C。

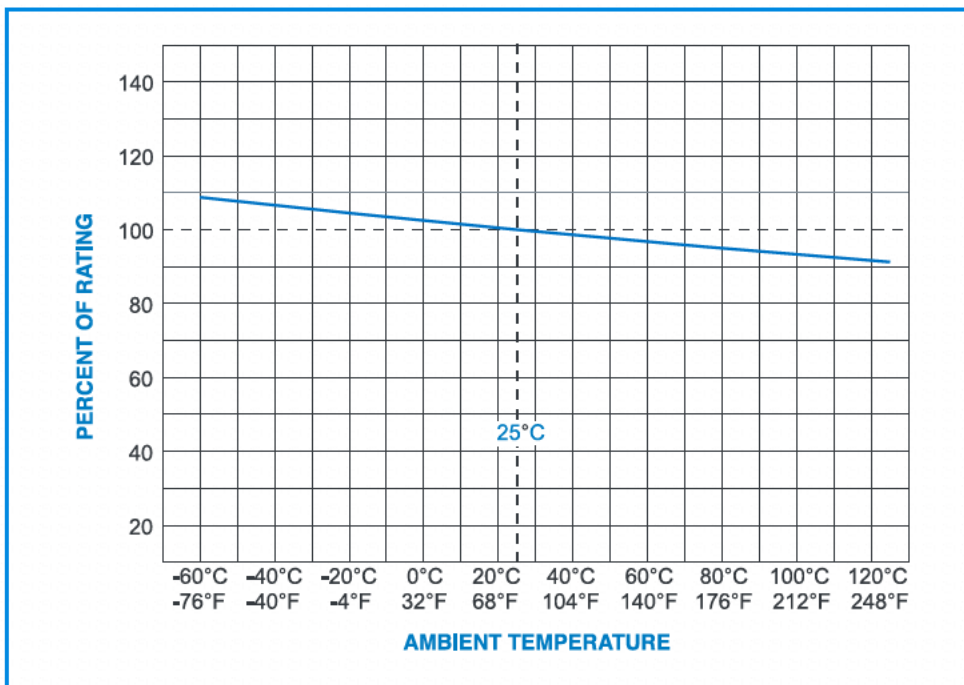
### 9.2 Stock Condition

Humidity: Relative humidity  $\leq$  75% store 3 years average.

### 9.3

When choosing the fuse's specification, if the operating environmental temperature beyond the scope from 20~30°C, engineer should consider the environmental temperature's affection to fuses.

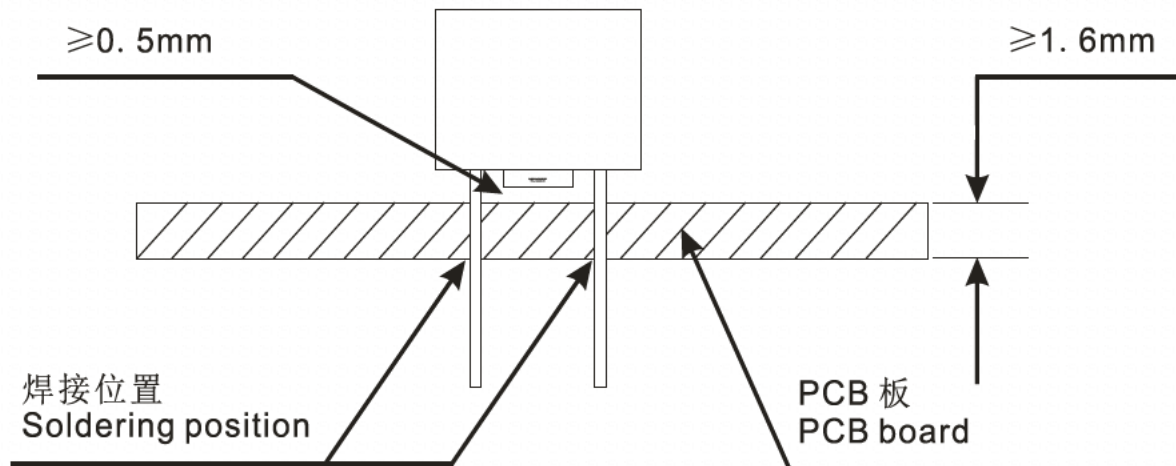
Please refer: Temperature Rerating Curve:



### 10. Installation Recommendations

#### 10.1

Propose installation way as following picture.



## 10.2 Recommended Soldering Parameters

### A. Wave Parameters:

Solder Pot Temperature:  $260^{\circ}\text{C}$  Max

Solder Dwell Time: 2~5s

### B. Hand-Solder Parameters:

Solder Iron Temperature:  $350 \pm 5^{\circ}\text{C}$  Heating

Time: 1~2 s Max

## 11. Packaging

### 11.1 The following items indicated on the label:

Catalog number, ratings (voltage, current), interrupting type and safety mark.

The packing material conforms to ROHS/REACH/HF environmental protection request. And the packing materials will not have the chemical reaction with the components.

### 11.2 Packing Quantity



**A. Bulk packing:**

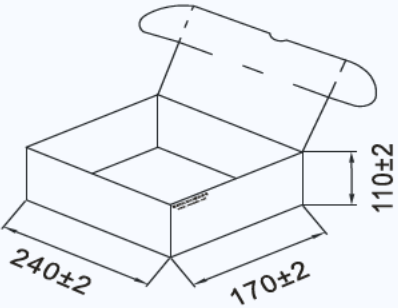
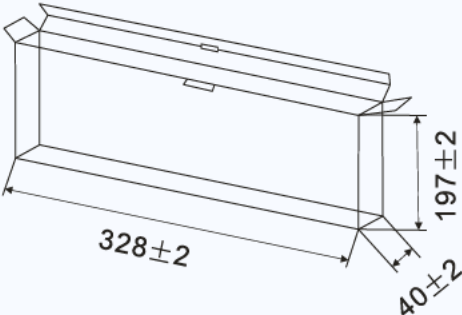
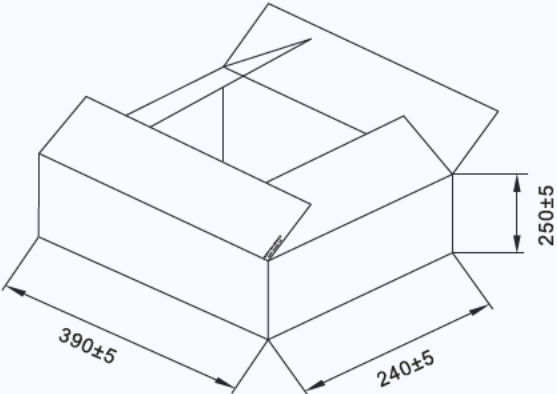
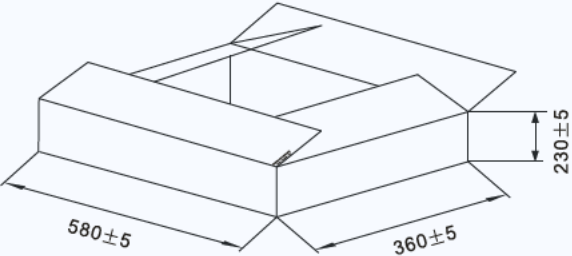
- Bulk 250 pcs in per poly bag;
- 10 poly bags in per inner box;
- 4 inner boxes in per outer carton

**B. Taped packing:**

- 1000 pcs per inner box
- 10 inner boxes per outer carton

**11.3 Packing Size**

*Unit: mm*

Inner box of packing type A:	Inner box of packing type B:
L240±2 * W170±2 * H110±2	L328±2 * W197±2 * H40±2
	
Outer carton of packing type A	Outer carton of packing type B
L390±5 * W240±5 * H250±5	L580±5 * W360±5 * H230±5
	



## 12. Others

### 12.1

In the event that an impropriety is found beyond this specification, it shall be fixed by mutual agreement between the parties.

### 12.2

