



Version No.:2013001

Spec. No.: SFA-MTS

# Specification for approval

**Product Type: FMS Series *Fast-acting 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	Pending
CQC	50mA ~ 6.3A	Pending
PSE	50mA ~ 6.3A	Pending
KTL	50mA ~ 6.3A	Pending

### 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				
									
FMS0050A	50mA	350V	-	-	●	○	○	○	○
FMS0100A	100mA	350V	3500	-	●	○	○	○	○
FMS0125A	125mA	350V	2000	-	●	○	○	○	○



FMS0160A	160mA	350V	2000	-	●	○	○	○	○
FMS0200A	200mA	350V	1700	0.04	●	○	○	○	○
FMS0250A	250mA	350V	1400	0.06	●	○	○	○	○
FMS0315A	315mA	350V	1300	0.10	●	○	○	○	○
FMS0400A	400mA	350V	1200	0.20	●	○	○	○	○
FMS0500A	500mA	350V	1100	0.35	●	○	○	○	○
FMS0630A	630mA	350V	650	0.50	●	○	○	○	○
FMS0800A	800mA	350V	240	1.3	●	○	○	○	○
FMS1100A	1A	350V	200	1.6	●	○	○	○	○
FMS1125A	1.25A	350V	200	2.4	●	○	○	○	○
FMS1160A	1.6A	350V	190	4.6	●	○	○	○	○
FMS1200A	2A	350V	170	7.9	●	○	○	○	○
FMS1250A	2.5A	350V	170	12	●	○	○	○	○
FMS1315A	3.15A	350V	150	22	●	○	○	○	○
FMS1400A	4A	350V	130	29	●	○	○	○	○
FMS1500A	5A	350V	130	78	●	○	○	○	○
FMS1630A	6.3A	350V	130	97	●	○	○	○	○
FMS1800A	8A	350V	100	290	○	○	○	○	○
FMS2100A	10A	350V	100	430	○	○	○	○	○

### 3. Product Marking

The fuses shall have the following markings:

Example:

	FMS	F	1A	350V	
①	②	③	④	⑤	⑥





①	Reomax Trade Mark:	
②	Series Type Name:	<b>FMS</b>
③	Electrical Characteristic symbol:	<b>F</b> ( <i>symbol for Fast-Acting</i> )
④	Rated Current (A):	___A or ___mA
⑤	Rated Voltage (V):	<b>350V</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.

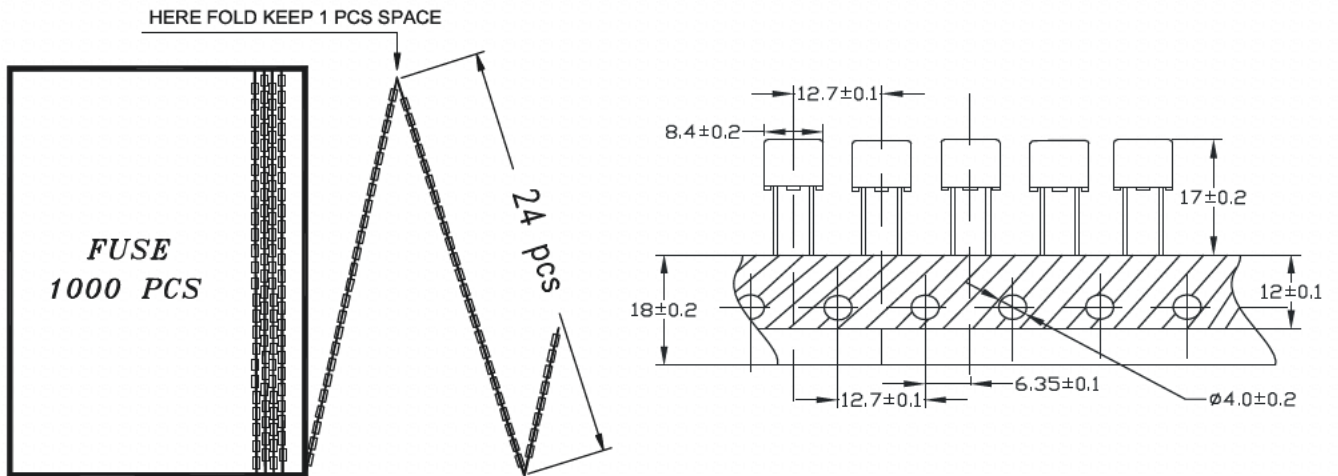
##### 4.3

Color: Black or brown.

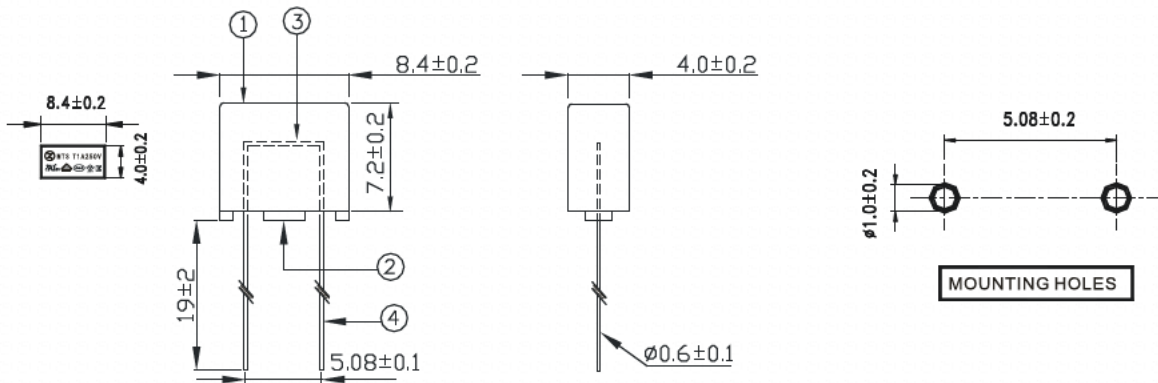




### 5. Dimensions and Structure



BOX SIZE 328mm\*197mm\*40mm



### 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 10In 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  $135^{\circ}\text{C}$ .

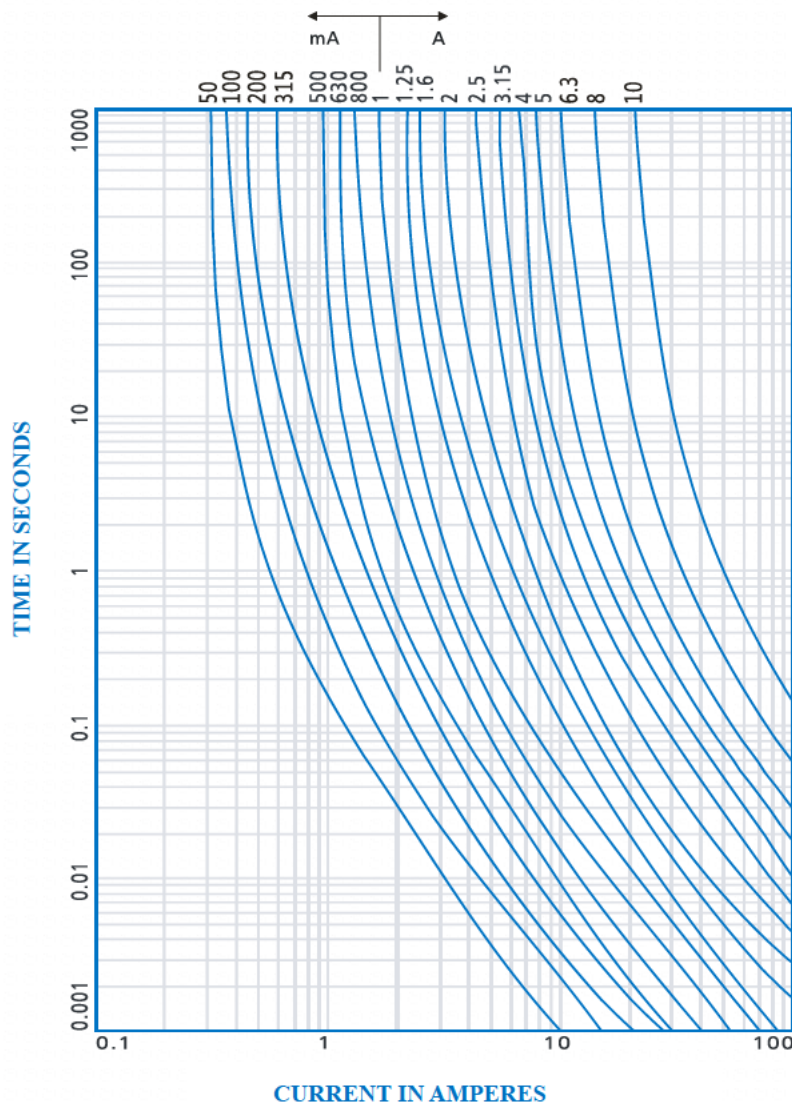




### 8.4 Operating Characteristics

% of Ampere Rating( $I_n$ )	Blowing Time
150%* $I_n$	(60 min Minimum)
210%* $I_n$	(30 min Max)
275%* $I_n$	(10 ms~3 s)
400%* $I_n$	(3 ms~3 ms )
1000%* $I_n$	(20 ms Max )

### 8.5 Average Time Current Curves







## 9. Environmental Characteristic

### 9.1 Operating Temperature

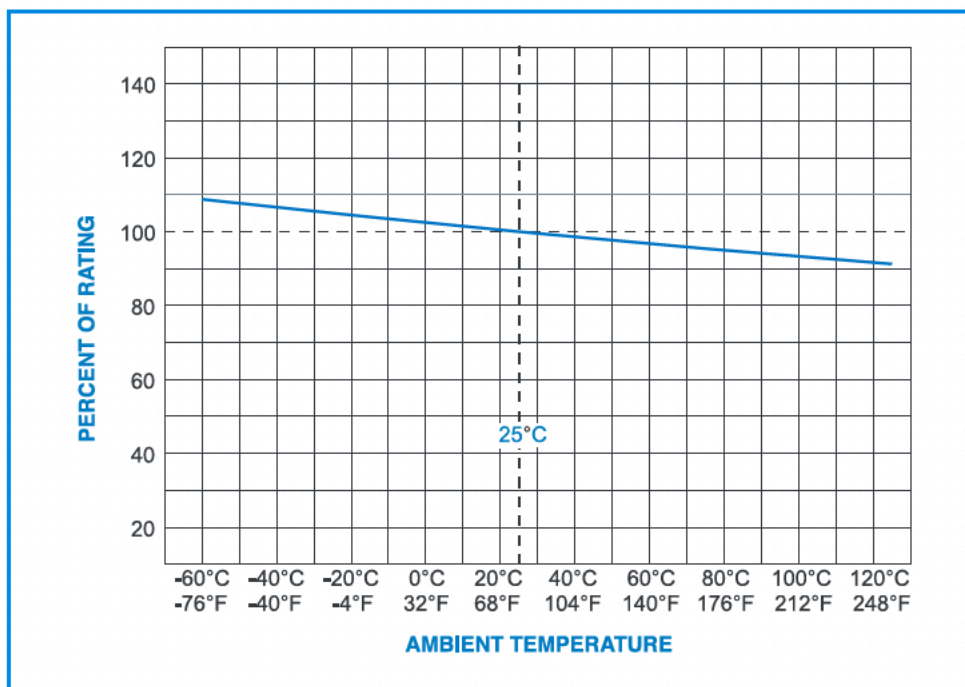
-55°C ~ +125°C。

### 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.

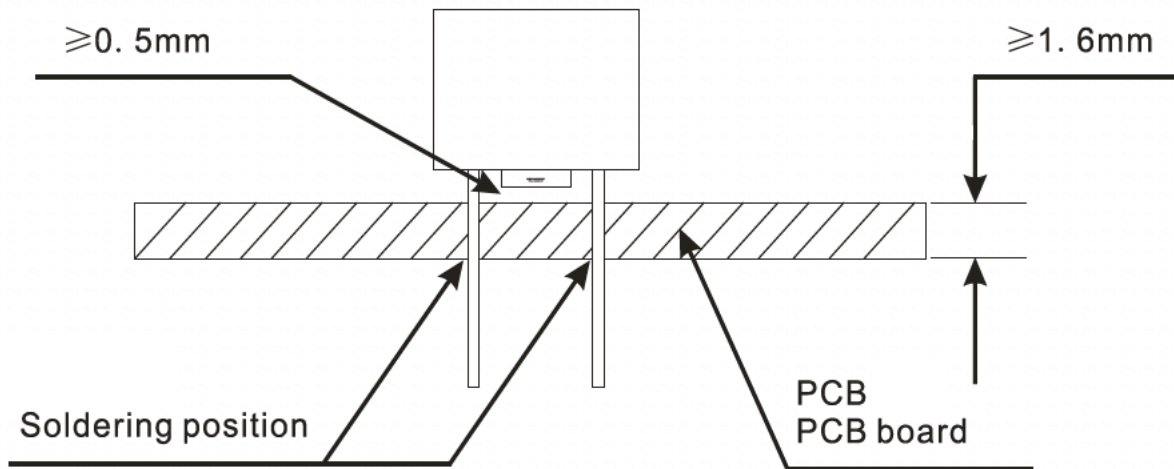
Please refer: Temperature Rerating Curve:



## 10. Installation Recommendations

### 10.1

Propose installation way as following picture.



## 10.2 Recommended Soldering Parameters

### A. Wave Parameters:

Solder Pot Temperature: 260°C Max

Solder Dwell Time: 2~5s B.

### Hand-Solder Parameters:

Solder Iron Temperature: 350±5°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;

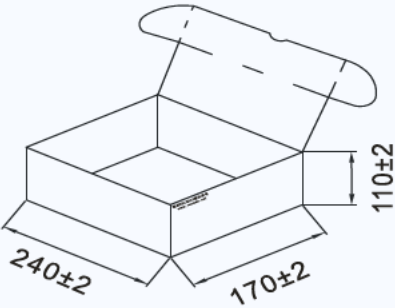
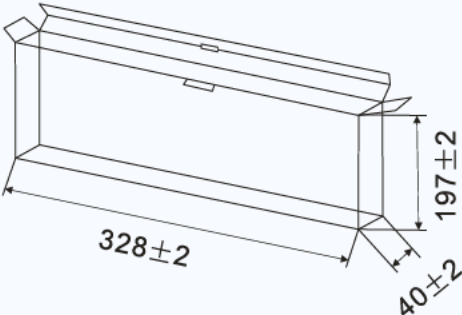
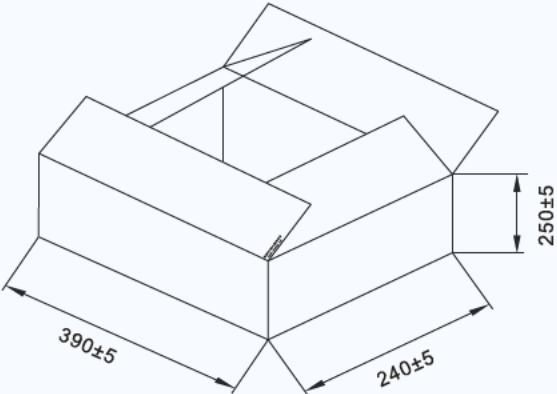
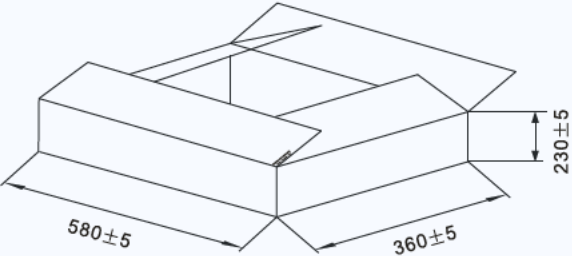
4 inner boxes in per outer carton

**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 In the event that an impropriety is found in this specification, *REOMAX ELECTRONIC CO., LTD.* shall amend it by mutual agreement between the parties.

## Appendix I: Safety approval certificates

