

# 承 认 书

## SPECIFICATION FOR APPROVAL

客户名称

Customer name

客户料号

Customer material No.

产品名称

Product name

TBC 5\*20 玻璃管保险丝

产品型号

Product model

送样日期

Deliver date

年

月

日

### 本司确认 (TRX APPROVAL)

检验 Inspection	校对 Proofreading	批准 Approval	签章 Signature
唐军	唐盛华	罗雄	

### 客户确认 (CUSTOMER APPROVAL)

检验 Inspection	校对 Proofreading	批准 Approval	签章 Signature

确认结果Verify the results:

☐ 合格Qualified

☐ 不合格Unqualified

☐ 其他Other



# 规格承认书

## Specification for approval

产品名称: TBC 系列 慢断型 玻璃管保险丝

**Product Type: TBC Series *Time-Lag Glass Tube Fuse***

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## 1. 适用范围 / Scope of Application

本产品适用于各类电子设备电路的过流保护作用, 广泛应用于照明设备、电源设备以及适配器等领域。

This product is suitable for various kinds of electronic devices' circuit over current protection. Widely used in industrial of Lighting, Power supply and Adapter applications, etc.

## 2. 安规认证标准及编号 / Standards and Agency Approvals

2.1 执行标准: 遵循 IEC60127-1, IEC60127-3, GB9364.1, GB9364.3, CQC11-462125-2009.2。

Standards: In accordance with IEC60127-1, IEC60127-3, GB9364.1, GB9364.3.

### 2.2 认证范围 Certification:

额定电压 Voltage Rating	安规标准 Agency	认证范围 Ampere Range	证书编号 Agency File Number
250V	UR	200mA ~ 10A	E340427(JDYX2)
	C-UR	200mA ~ 10A	E340427( JDYX8)
	CCC	200mA ~ 10A	2016010207899506
	VDE	1A,2A,3.15A,5A,6.3A	40037363
	PSE	200mA ~ 10 A	PSE16021071
	KTL	200mA ~ 10 A	SU05052-16002/16001

### 2.3 目录编号 Catalogue No., ● 已认证 Approved / ○ 认证中 Pending

目录编号 Catalog No.	额定电流 Ampere Rating	额定电压 Voltage Rating	最大电压降 Max Voltage Drop (mv)	熔化热能 I <sup>2</sup> TMelting Integral(A <sup>2</sup> .S)	安规认证 Agency Approvals				
TBC0200A	200mA	250V	1500	0.1	●	○	○	○	○
TBC0250A	250mA	250V	1300	0.18	●	○	○	○	○
TBC0315A	315mA	250V	1100	0.3	●	○	○	○	○
TBC0400A	400mA	250V	1000	0.65	●	○	○	○	○
TBC0500A	500mA	250V	900	0.85	●	○	○	○	○



TBC0630A	630mA	250V	300	1.6	●	○	○	○	○
TBC0800A	800mA	250V	250	2.3	●	○	○	○	○
TBC1100A	1A	250V	150	3.5	●	●	●	●	●
TBC1125A	1.25A	250V	150	4.3	●	○	○	○	○
TBC1160A	1.6A	250V	150	7.2	●	○	○	○	○
TBC1200A	2A	250V	150	10	●	●	●	●	●
TBC1250A	2.5A	250V	120	22	●	○	○	○	○
TBC1315A	3.15A	250V	100	39	●	●	●	●	●
TBC1400A	4A	250V	100	54	●	○	○	○	○
TBC1500A	5A	250V	100	115	●	●	●	●	●
TBC1630A	6.3A	250V	100	200	●	●	●	●	●
TBC1800A	8A	250V	100	320	●	○	○	○	○
TBC2100A	10A	250V	100	510	●	○	○	○	○

### 3. 产品标示 / Product Marking

保险丝两端铜帽上需有下列标示。

The fuses cap shall have the following markings.

示例 Example:

	TBC	T	--A	L	250V	
①	②	③	④	⑤	⑥	⑦

① 制造厂商标识/Reomax Trade Mark:

② 系列型号名称/Series Type Name: TBC

③ 电器特性符号/ Electrical Characteristic symbol: T (慢断型保险丝符号 / symbol for Time-Lag)

④ 额定电流/Rated Current (A): \_\_A 或 or \_\_mA

⑤ 分断容量符号/ Breaking Capacity symbol: L (低分断 / Low Breaking Capacity)

⑥ 额定电压/Rated Voltage (V): 250V

⑦ 认证符号/ Approval Marks:



**注意 / Note:** 对于标示的大小和位置没有规定, 认证标示根据电流有无认证标。

*Size and position of the markings shall not be provided. Certification mark according to the current certification mark*

*关于有引脚和无引脚请用文字表示 About with and without pin pin please use*

*关于特别电流引线直径问题请咨询协商 Please consultation for special current lead diameter problem*

#### 4. 外观及形状 / Appearances and Configuration

4.1 外观不应出现显著的污点、裂纹, 标识应该容易辨识。

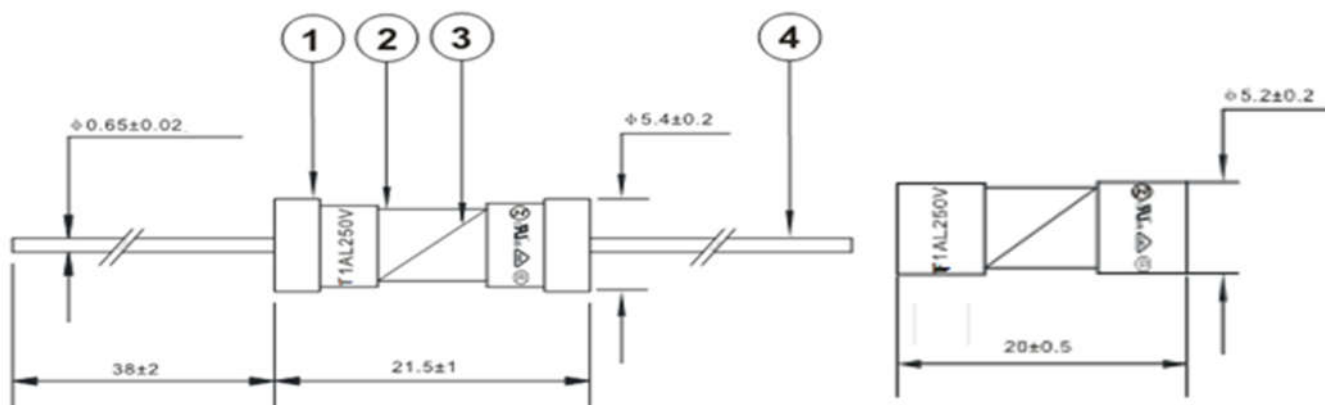
There shall not be any remarkable stain and crack on the appearances, markings shall be easily legible.

4.2 形状: 带直线引脚/无引脚小型玻璃管保险丝。

Configuration: No pin/Axial Leaded Miniature Glass Tube Fuse.

#### 5. 结构及尺寸 / Dimensions and Structure

单位: 毫米 / Unit: mm



#### 6. 材料明细 / Material Details

编号 NO.	零件名称 Part Name	材质 Material
①	铜帽 Cap	黄铜镀镍 Nickel Plated Brass
②	玻璃管 Body	玻璃管 Glass Tube
③	熔丝 Fuse element	合金 Alloy
④	引线 Lead wire	镀锡铜线 Tin Plated Copper



## 7. 产品特性 / Product Characteristics

### 7.1 引脚拉力强度 / Lead Pull Strength

5 牛顿 10±1 秒 / 5N for 10±1 Seconds

### 7.2 引脚推力强度 / Lead Thrust Strength

2 牛顿 10±1 秒 / 2N for 10±1 Seconds

### 7.3 可焊性 / Solder ability

波峰焊/Wave : 260℃, ≤3s;

烙铁焊/Soldering Iron: 350±10℃, ≤3s.

### 7.4 耐焊接热 / Soldering Heat Resistance

波峰焊/Wave : 260℃, 10s;

烙铁焊/Soldering Iron: 350℃, 5s.

## 8. 电气特性 / Electrical Characteristics

### 8.1 实验条件: Test Condition

所有测试环境温度为 25±5℃。

All electrical test is to be conducted with the ambient air at a temperature of 25±5℃.

### 8.2 分断能力 / Interrupting Rating:

保险丝承受分断能力: 在 250 伏交流电源下, 35A 或 10 倍的额定电流当中较大的。

分断能力测试后保险丝的绝缘阻抗值大于 0.1MΩ。

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

The insulation resistance value of fuse is greater than 0.1MΩ after breaking capacity testing.

### 8.3 温度上升试验 / Rising Temperature Test:

通 1.5 倍额定电流 15 分钟, 然后每隔 15 分钟增加 0.1 倍额定电流。测得熔断体断开时任何部位的温升不得超过 135℃, 周围环境温度为 25±5℃。

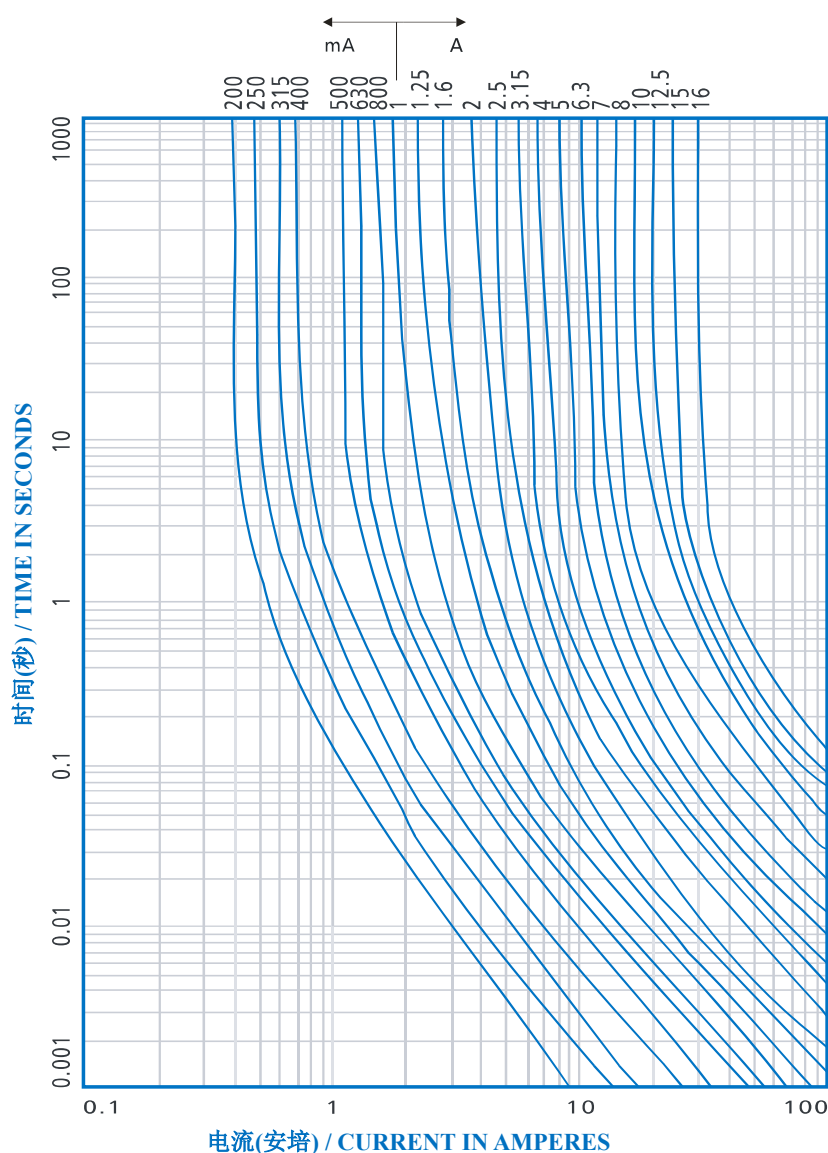
Under the ambient temperature of 25±5℃, through 1.5 times the rated current for 15 minutes, then every 15 minutes, add an increase of 0.1 times the rated current. When operates, the temperature rise in any part of fuse should not exceed 135℃.



#### 8.4 熔断时限 / Operating Characteristics

额定电流的% % of Ampere Rating(In)	熔断时间 Opening Time (200mA~10A)	熔断时间 Opening Time (12.5A~16A)
210%*In	小于 2 分钟 (2 min Max)	小于 5 分钟 (5 min Max)
275%*In	600 毫秒至 10 秒 (600 ms~10 s)	600 毫秒至 15 秒 (600 ms~15 s)
400%*In	150 毫秒至 3 秒 (150 ms~3 s)	150 毫秒至 5 秒 (150 ms~5 s)
1000%*In	20 毫秒至 300 毫秒 (20 ms~300 ms)	20 毫秒至 400 毫秒 (20 ms~400 ms)

#### 8.5 平均时间电流曲线图 / Average Time Current Curves





## 9. 环境特性 / Environmental Characteristic

### 9.1 使用温度范围 / Operating Temperature

-55℃~+125℃。

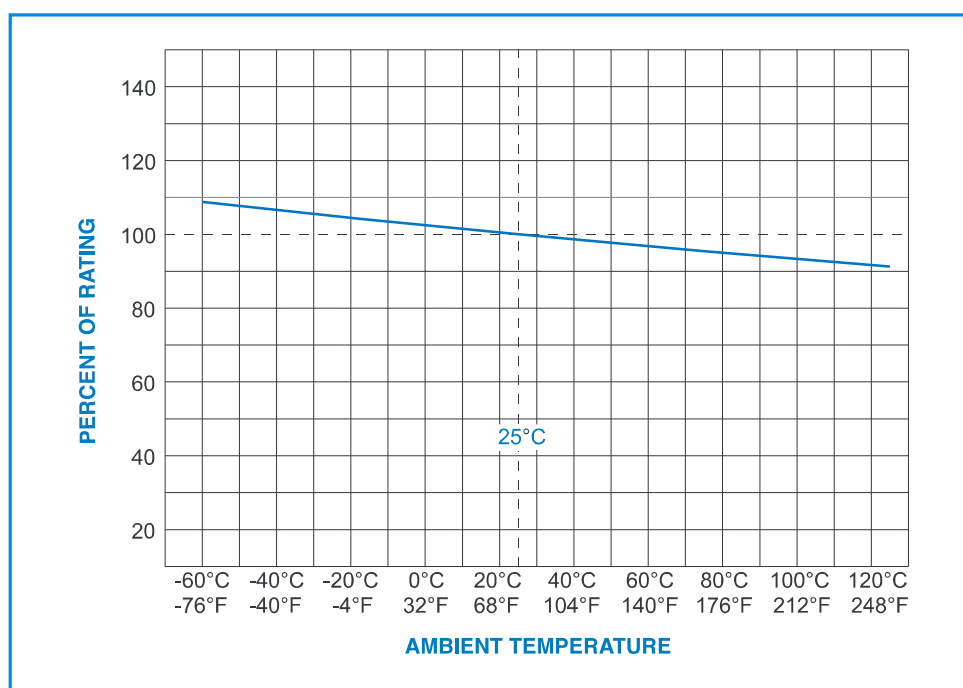
### 9.2 保存条件 Stock Condition

湿度：相对湿度 $\leq 75\%$ 平均可以存放 3 年。

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

### 9.3 若操作环境温度超出 $25\pm 5^\circ\text{C}$ 范围，在选用保险丝规格时，需考虑操作环境温度对保险丝的影响，请参照如下：温度-电流曲线图。

When choosing the fuse's specification, if the operating environmental temperature beyond the scope from  $20\sim 30^\circ\text{C}$ , engineer should consider the environmental temperature's affection to fuses. Please refer: Temperature Rerating Curve:



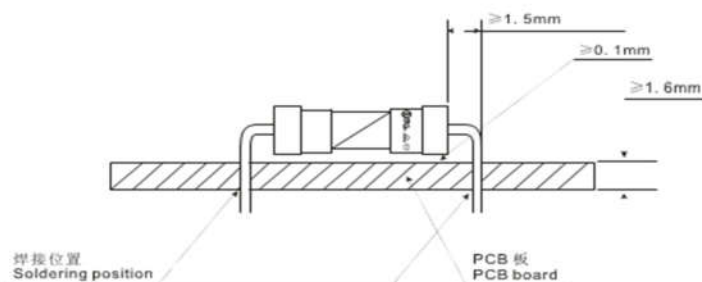
## 10. 安装建议 / Installation Recommendations

### 10.1 建议按照如下示意图方式进行安装。

Propose installation way as following picture.

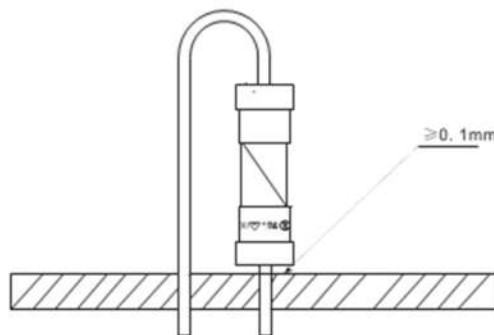
### A、卧式安装

Horizontal installation



### B、立式安装

Vertical installation



## 10.2 建议焊接参数 / Recommended Soldering Parameters

### A. 波峰焊参数 / Wave Parameters:

锡炉温度 / Solder Pot Temperature: 260°C Max

焊接时间 / Solder Dwell Time: 2~5s

### B. 手工焊参数 / Hand-Solder Parameters:

烙铁温度 / Solder Iron Temperature: 350±5°C

焊接时间 / Heating Time: 5s Max

## 11. 包装 / Packaging

### 11.1 包装袋/盒印明下列标示: / The following items indicated on the label:

产品料号、额定(电压、电流)、分断类型及安规名称。

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

包装材料均符合 RoHS/REACH/HF 的环保要求, 且包装材料不会和零件发生化学反应, 造成不良。

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 包装数量 / Packing Quantity

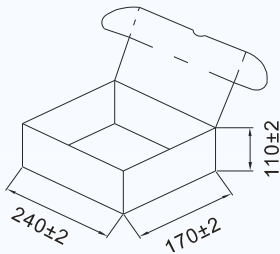
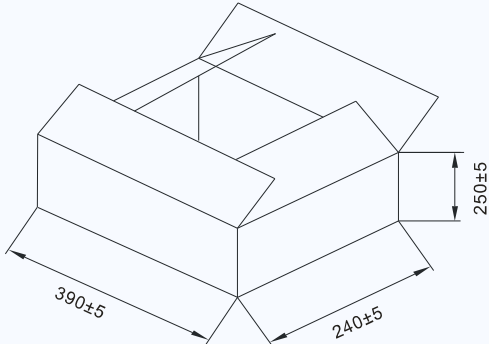
每胶袋 500/200 个保险丝 / Bulk 500/200 pcs in per poly bag;



每 10 胶袋 1 个内盒 / 10 poly bags in per inner box;  
每 4 个内盒 1 个外箱 / 4 inner boxes in per outer carton

### 11.3 包装箱尺寸 / Packing Size

单位: 毫米 / Unit: mm

A. 内盒 Inner box:	B. 外箱 Outer carton:
L240±2 * W170±2 * H110±2	L390±5 * W240±5 * H250±5
	

## 12. 其他 / Others

12.1 如果在使用中有超出本规格书的要求, 须经双方协商确认。

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

12.2 如果本规格书有不适当的情况, 须通过双方协商并由本公司修改。

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

## 附件 I: 安规证书 / Appendix I: Safety approval certificates