

## 1. 适用范围 / Scope of Application

本产品适用于各类电子设备电路初、次级电路板的过流保护，广泛应用于固态照明、电池充电、消费电子、电子镇流器、LED AC/DC 电源供应、网络通信、医疗仪器及工业控制器等领域。

This product is suitable for over-current protection of primary and secondary circuit boards of various electronic devices, and is widely used in solid-state lighting, battery charging, etc.

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

2.1 执行标准: 遵循 UL248-1;UL248-14。

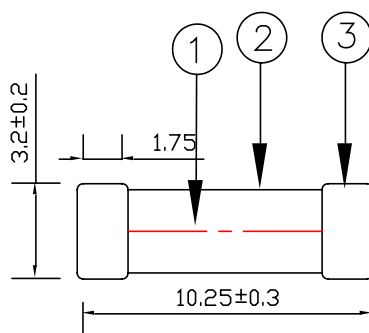
Standards: In accordance with UL248-1;UL248-14.

2.2 认证范围 Certification:

| 额定电压<br>Rated Voltage   | 安规标准<br>Agency | 认证电流<br>Ampere Range | 证书编号<br>Agency File Number |
|-------------------------|----------------|----------------------|----------------------------|
| 32V/60V/72V/125Vdc/250V | UR-CUR         | 12A~60A              | E358589                    |

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

单位: 毫米 / Unit: mm



## 材料明细 Material Details

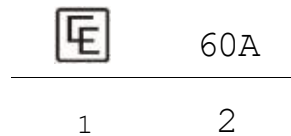
| 编号<br>NO. | 零件名称<br>Part Name | 材质<br>Material           |
|-----------|-------------------|--------------------------|
| 1         | 熔丝<br>Fuse Wire   | 合金银线<br>Silver Alloy     |
| 2         | 管体<br>Body        | 陶瓷管<br>Ceramic Tube      |
| 3         | 铜帽<br>Cap         | 铜镀金<br>Brass Gold plated |

## 5. 产品标示 / Product Marking

保险丝两端铜帽上或本体上需有下列标示。

The fuses cap or fuse body shall have the following markings.

示例 Example:



1. 标识/Logo

2. 额定电流/Rated Current:

**注意 / Note:** 对于标示的大小和位置没有规定。

Size and position of the markings shall not be provided



# 产品规格书

文件版本:Version

A/1

文件编号:No

型号 Type:1032 DBF

安规类型: Approve

UL

## 6. 产品特性 / Product Characteristic

| 额定电流<br>Rated<br>current | 额定电压<br>Rated<br>voltage         | 分断能力<br>Breaking<br>capacity  | 产品电阻<br>product<br>resistance | I <sup>2</sup> T<br>(A <sup>2</sup> T) | Safety<br>Aproval |
|--------------------------|----------------------------------|---|-------------------------------|--|-------------------|
|                          |                                  |   |                               |  |                   |
| 12A                      | 32V/60V<br>72V/125Vdc<br>250V ac | 100A@125V ac<br>100A@125V dc<br>100A@250v ac<br>1000A@32V dc<br>1000A@60V dc<br>400A@72v dc | /                             | /                                      | ●                 |
| 15A                      |                                  |   | /                             | /                                      | ●                 |
| 16A                      |                                  |   | /                             | /                                      | ●                 |
| 20A                      |                                  |   | 1.75mΩ~1.95mΩ                 | 961                                    | ●                 |
| 25A                      |                                  |   | /                             | /                                      | ●                 |
| 30A                      |                                  |   | 1.57mΩ~1.70mΩ                 | 784                                    | ●                 |
| 35A                      |                                  | /   | /                             | ●                                      |                   |
| 40A                      |                                  | 1.27mΩ~1.43mΩ   | 1988                          | ●                                      |                   |
| 50A                      |                                  | 0.92mΩ~1.18mΩ   | 2116                          | ●                                      |                   |
| 60A                      |                                  | /   | /                             | ●                                      |                   |

● Approved    pending

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

7.1 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.

7.2 形状：贴片式陶瓷管保险丝。

Configuration: SMD type Ceramic Fuse.

## 8. 产品特性 / Product Characteristics

8.1 引脚拉力强度 / Lead Pull Strength

10 牛顿 10±1 秒 / 10N for 10±1 Seconds

8.2 引脚推力强度 / Lead Thrust Strength



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2 牛顿 10±1 秒 / 2N for 10±1 Seconds

## 9. 电气特性 / Electrical Characteristics

### 9.1 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℃.

### 9.2 分断能力 / Interrupting Rating:

XA 安培使用 XV 伏交流电源(详见 6)

XA @XV (see the table 6)

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

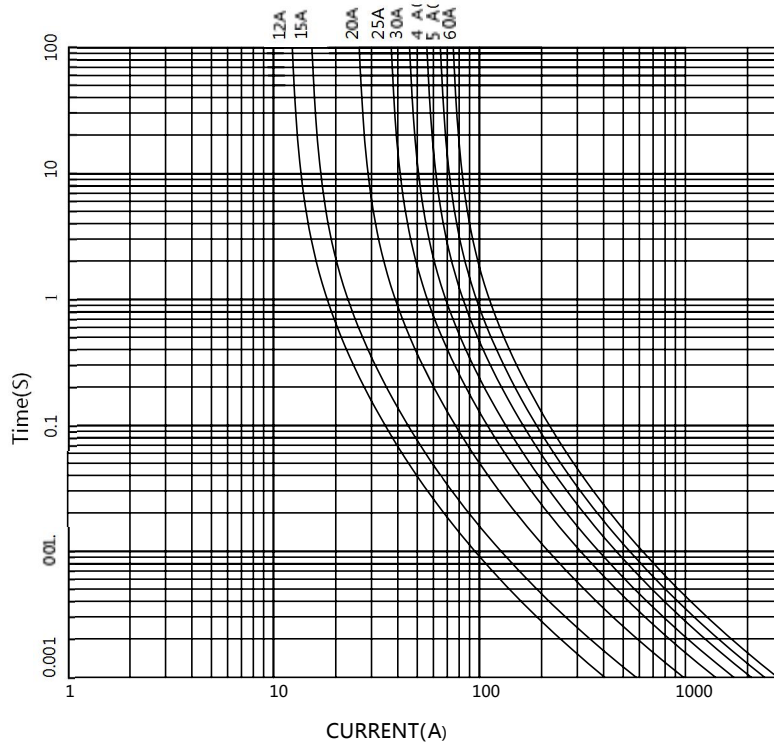
温度上升试验: 通 1.0 倍额定电流, 当温度稳定时(5 分钟测量 4 次, 且每次测量值与平均值相差不超过 2℃)。测得熔断体任何部位的温升不得超过 75℃, 周围环境温度为 25±5℃。

When the 100% times of rating electric current passes the fuse, After reaching thermal balance, the temperature on the fuse surface rising is not higher than 75℃, Ambient Temperature is 25±5℃。 Rising temperature= The surface temperature-Ambient temperature

### 9.4 熔断时限 / Opening Time

| 额定电流的%<br>% of Ampere Rating | 熔断时间<br>Opening Time |
|------------------------------|----------------------|
| 100%                         | I=<30A:T>4hrs        |
|                              | I>30A:T>1hr          |
| 200%                         | T<60s                |

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



## 10. 环境特性 / Environmental Characteristic

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

-55℃~+125℃。

### 10.2 保存条件 Stock Condition

湿度: 相对湿度≤75%平均可以存放 3 年。

Humidity: Relative humidity ≤ 75% store 3 years in average.

### 10.3 若操作环境温度超出 25±5℃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。

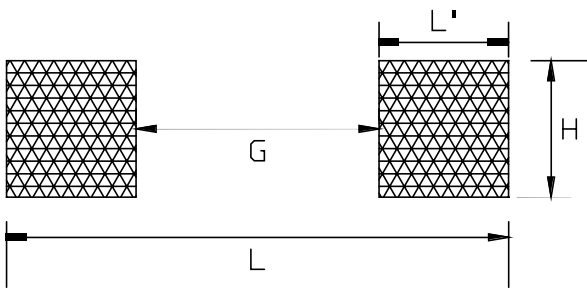
When choosing the fuse's specification, if the operating environmental temperature beyond the scope from 20~30℃, engineer should consider the environmental temperature's affection to fuses. Please

refer: Temperature Rerating Curve:

## 11. 安装建议 / Installation Recommendations

11.1 建议按照如下示意图方式进行安装。

Propose installation way as following picture.

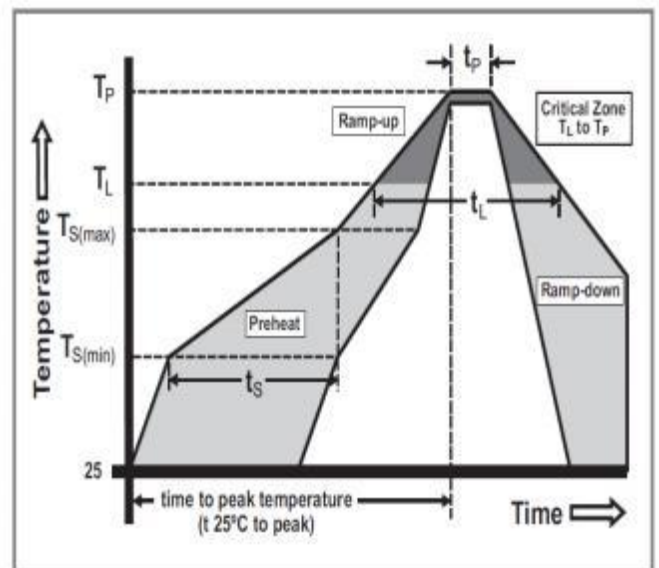


| /  | mm   | inch  |
|----|------|-------|
| L  | 12.6 | 0.496 |
| H  | 3.43 | 0.135 |
| G  | 6.10 | 0.240 |
| L' | 3.25 | 0.128 |

11.2 建议焊接参数 / Recommended Soldering Parameters

- A. 回流焊/Infrared Reflow : 温度 Temperature 250°C ; 时间 Time 5sec Max;
  - B. 波峰焊/ Wave soldering : 温度 Temperature 250°C ; 时间 Time 10sec Max;
  - C. 烙铁焊/Hand Soldering: 温度 Temperature 300°C ; 时间 Time 2sec Max
- 烙铁避免接触铜帽 Soldering iron avoid touch Copper cap

| Profile Feature   | Pb-Free assembly             |
|---|------------------------------|
| Average Ramp-up Rate (Tsmax to Tp)  | 3°C/sec Max.                 |
| Preheat<br>Temperature Min Ts(min)<br>Temperature Max Ts(max)<br>Time(Tsmin to Tsmax) | 150°C<br>200°C<br>60-120 sec |
| Peak Temperature(Tp)  | 250°C                        |
| Time within 5°C of actual Peak Temperature(Tp)  | 5 sec                        |
| Melting tin time(TL)  | 20sec~40sec                  |
| Ramp-down Rate  | 6°C/sec Max                  |





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Time25Cto peak Temperature

8minutes Max

回流焊接参考温度 Recommend Reflow profile

## 12. 包装 / Packaging

12.1 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.

12.2 包装数量 / Packing Quantity

每 2000pcs 一卷/Every 2000 PCS for 1 roll