

保电通 (东莞) 电子科技有限公司
PROTECTOM (DONGGUAN) ELECTRONIC TECHNOLOGY CO.,LTD

ES3T 1032

Brick SMD fuse

贴片保险丝规格书

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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.

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

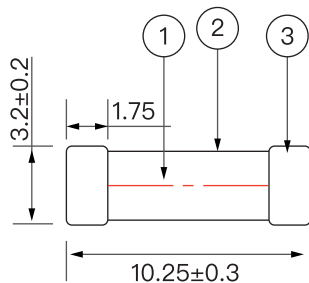
■ 执行标准: 遵循 UL248-1;UL248-14. Standards: In accordance with UL248-1;UL248-14.

■ 认证范围 Certification:

额定电压 Rated Voltage	安规标准 Agency	认证电流 Ampere Range	证书编号 Agency File Number
32V/60V/72V/125Vdc/250V	UR-CUR	50mA~60A	PENDING

结构及尺寸 / Dimensions and Structure

单位: 毫米 / Unit: mm



材料明细 Material Details

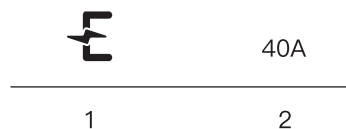
编号 NO.	零件名称 Part Name	材质 Material
1	熔丝 Fuse Wire	合金线 Alloy Wire
2	管体 Body	陶瓷管 Ceramic Tube
3	铜帽 Cap	铜镀金/银 Brass Gold/Silver plated

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. 保电通工厂标识/ PROTECTOM 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



产品特性 / Product Characteristic

零件编号 Part Number	额定电流 Rated current	额定电压 Rated voltage	分断能力 Breaking capacity	产品电阻 product resistance	I ² T (A ² T)	Safety Approval
						 US
ES3T0005	50mA	125V AC 250V AC 350V AC 400V AC	50A @ 125V 50A @ 250V 50A @ 350V 50A @ 400V	/	/	○
ES3T0008	80mA			/	/	○
ES3T0010	100mA			/	/	○
ES3T0012	125mA			/	/	○
ES3T0016	160mA			/	/	○
ES3T0020	200mA			/	/	○
ES3T0025	250mA			/	/	○
ES3T0031	315mA			/	/	○
ES3T0040	400mA			/	/	○
ES3T0050	500mA			/	/	○
ES3T0063	630mA			/	/	○
ES3T0080	800mA			/	/	○
ES3T0100	1.0A			/	/	○
ES3T0125	1.25A			/	/	○
ES3T0150	1.5A			/	/	○
ES3T0160	1.6A			/	/	○
ES3T0200	2.0A			/	/	○
ES3T0250	2.5A			/	/	○
ES3T0315	3.15A			/	/	○
ES3T0400	4.0A			/	/	○
ES3T0500	5.0A			/	49.5	○
ES3T0630	6.3A			/	53.9	○
ES3T0800	8.0A			/	114.3	○
ES3T1000	10.0A			/	/	○
ES3T1200	12A	32V DC 60V DC 72V DC 125V AC 250V AC	100A @1 25V ac 100A @ 125V dc 100A @ 250v ac 1000A @ 32V dc 1000A @ 60V dc 400A @ 72v dc	/	/	○
ES3T1500	15A			2.79mΩ~3.13mΩ	/	○
ES3T1600	16A			3.0mΩ~3.4mΩ	307	○
ES3T2000	20A			1.75mΩ~1.95mΩ	618	○
ES3T2500	25A			1.5mΩ~2.1mΩ	963	○
ES3T3000	30A			1.40mΩ~1.75mΩ	784	○
ES3T3500	35A	60V DC 72V DC 250V AC	150A @ 250V ac 500A @ 60V dc 180A @ 72V dc	1.16 mΩ~1.60 mΩ	1167	○
ES3T4000	40A			1.12mΩ~1.52mΩ	1348	○
ES3T5000	50A			0.92mΩ~1.18mΩ	2116	○
ES3T6000	60A			0.58mΩ~0.78mΩ	5000	○

● Approved ○ pending

外观及形状 / Appearances and Configuration

- 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.
- 形状：贴片式陶瓷管保险丝。
Configuration: SMD type Ceramic Fuse.

电气特性 / Electrical Characteristics

- 实验条件：Test Condition 所有测试环境温度为 $25\pm5^{\circ}\text{C}$ 。
All electrical test is to be conducted with the ambient air at a temperature of $25\pm5^{\circ}\text{C}$.
- 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°C ）。测得熔断体任何部位的温升不得超过 75°C ，周围环境温度温度为 $25\pm5^{\circ}\text{C}$ 。
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°C , Ambient Temperature is $25\pm5^{\circ}\text{C}$. Rising temperature = The surface temperature–Ambient temperature

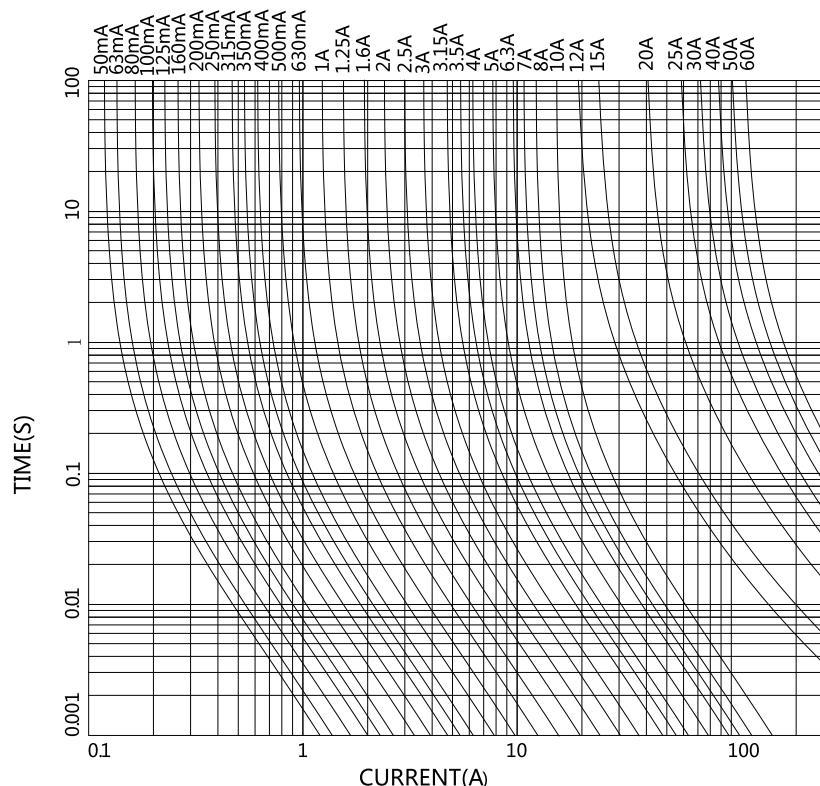
产品特性 / Product Characteristics

- 引脚拉力强度 / Lead Pull Strength
10 牛顿 10 $\pm$ 1 秒 / 10N for 10 $\pm$ 1 Second
- 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)

熔断时限 / Opening Time

额定电流的% % of Ampere Rating	熔断时间 Opening Time
100%	T>4hrs
200%	T<60s

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

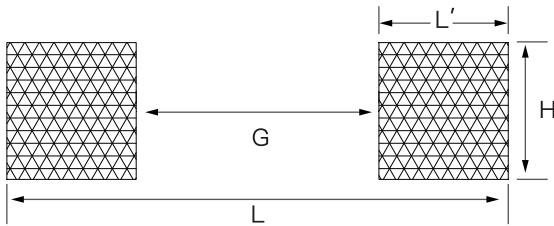


环境特性 / Environmental Characteristic

- 使用温度范围 / Operating Temperature
-55°C~+125°C。
- 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.
- 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 20~30°C, engineer should consider the environmental temperature's affection to fuses. Please refer: Temperature Rerating Curve:

安装建议 / Installation Recommendations

- 建议按照如下示意图方式进行安装。
Propose installation way as following picture.

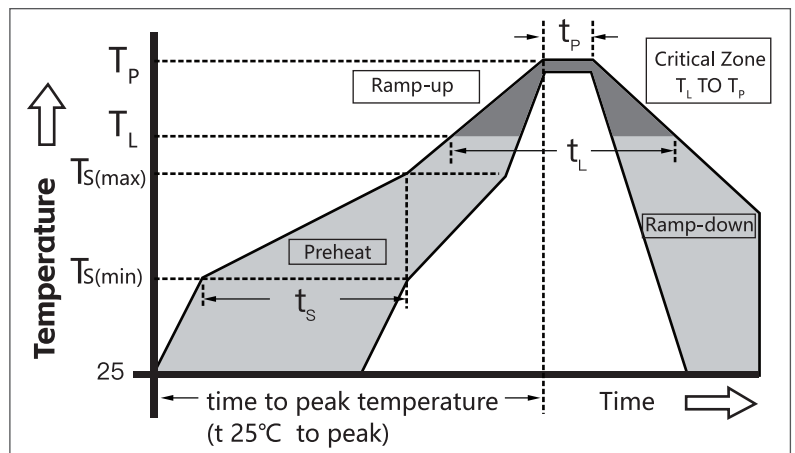


/	mm	inch
L	12.6	0.496
H	3.43	0.135
G	6.10	0.240
L'	3.25	0.128

- 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 Temperature Min Ts(min) Temperature Max Ts(max) Time(Tsmin to Tsmax)	150°C 200°C 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
Time 25°C to peak Temperature	8minutes Max



回流焊接参考温度 Recommend Reflow profile

包装 / Packaging

- 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.

- 包装数量 / Packing Quantity
每 2000pcs 一卷
Every 2000 PCS for 1 roll