

INDIVIDUAL SPECIFICATION SHEET

Product Name: 塑封方形FUSE**Part Number:** SET Series**Revision:** B**Dongguan TLC Electronic Technology Co., LTD**

No.18,5th GaoLi Road,TangXia Town,DongGuan,GuangDong,P.R China 523710

TEL: 86-0769-3892 0511

FAX: 86-0769-8793 2077

Http: www.tlcet.com.cn

Rev.	Effective Date	Changed Contents
A	2016-11-9	New release
B	2020-6-11	Update Specifications

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PREPARED BY



APPROVED BY



SET 系列(慢断)保险丝规格书

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 UL248-1/14; IEC60127-1/3; GB9364.1/3。

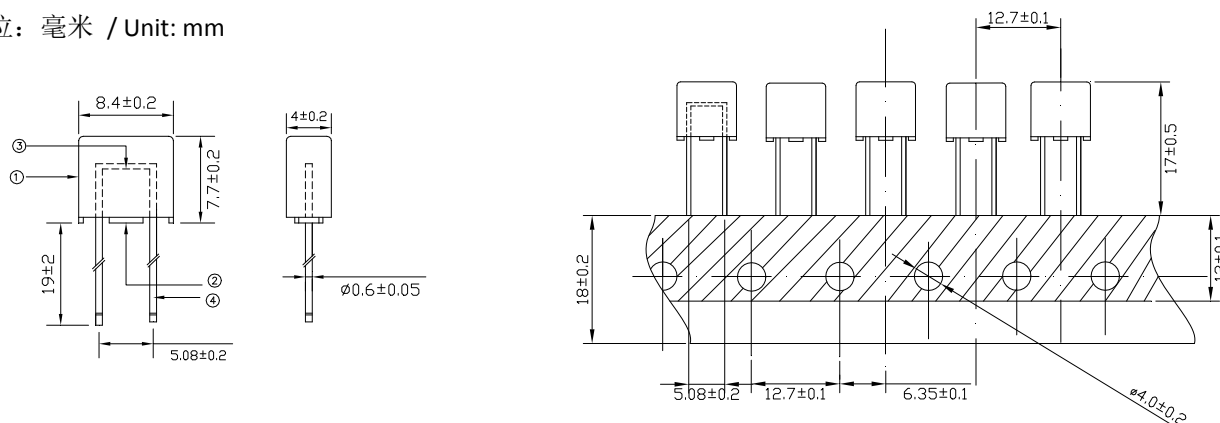
Standards: In accordance with UL248-1/14; IEC60127-1/3; GB9364.1/3。

2.2 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
250V/	UR-CUR	100mA ~ 20A	E467707
	TUV	125mA-10A	J50426507
	CCC	160mA/200mA/315mA/500mA/1A/1.25A/1.6A/ 2A/2.5A/3.15A/5A/6.3A/8A/10A	2019010207174851
	VDE	160mA/200mA/315mA/500mA/1.0A/1.6A/2.0A/ 2.5A/3.15A/4A/5A/6.3A	40038565
	PSE	160mA/200mA/315mA/500mA/1A/1.25A/1.6A/ 2A/2.5A/3.15A/5A/6.3A/8A/10A	PSE20021618/1619
	KC	160mA/200mA/315mA/500mA/1A/1.25A/1.6A/ 2A/2.5A/3.15A/5A/6.3A	SU05044-13001A/2A/3A/4A SU05044-18001A/2A

3. 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	外壳 Cap	尼龙料 PA66
②	内芯 Fuse Base	尼龙料 PA66
③	熔丝 Fuse element	合金 Alloy
④	引线 Lead Wire	铜镀锡 Copper tin plating

4. 产品标示 / Product Marking

保险丝两端铜帽或外壳上需有下列标示。

The fuses cap shall have the following markings.

示例 Example:



1 2 3 4 5 6

1. 标识/ Logo
2. 产品型号名称/Product Type Name
3. 电器特性符号/ Electrical Characteristic symbol
4. 额定电流/Rated Current(A): A 或 or mA
5. 额定电压/Rated Voltage(V)
6. 认证符号/Approval Marks

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

5. 产品特性/Product Characteristic

Rated Current	Rated Voltage	Maximum Voltage drop	Breaking Capacity	I ² T A ² s	Safety Approvals					
										
100mA	250V	350	UL 100A@250Vac TUV 120A@250Vac VDE 35A@250Vac & 10In@250Vac	0.06	●	○	○	○	○	○
125mA		300		0.08	●	○	○	○	○	●
160mA		280		0.1	●	●	●	●	●	●
200mA		260		0.2	●	●	●	○	●	●
250mA		240		0.3	●	●	●	○	●	●
315mA		220		0.4	●	●	●	●	●	●
400mA		200		0.5	●	○	○	○	○	●
500mA		190		0.9	●	●	●	●	●	●
630mA		180		1.2	●	○	○	○	○	●
750mA		170		2.2	●	○	○	○	○	●
800mA		160		3.9	●	○	○	○	○	●
1.0A		140		5.8	●	●	●	●	●	●
1.25A		130		12.8	●	○	●	●	●	●
1.6A		120		14.7	●	●	●	●	●	●
2.0A		100		21.9	●	●	●	●	●	●
2.5A		100		42.6	●	●	●	●	●	●
3.15A		100		72.9	●	●	●	●	●	●
4.0A		100		83.2	●	●	○	○	○	●
5.0A		100		148	●	●	●	●	●	●
6.3A		100		195	●	●	●	●	●	●
8.0A		100		215	●	○	●	○	●	●
10.0A		100		250	●	○	●	○	●	●
12.0A		100		272	●	○	○	○	○	○
12.5A		100		273	●	○	○	○	○	○
15.0A		100		295	●	○	○	○	○	○
16A		100		300	●	○	○	○	○	○
20A		100		400	●	○	○	○	○	○

6. 外观及形状 / Appearances and Configuration

6.1 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.

6.2 形状：带直线引脚方形保险丝。

Configuration: Square fuse with straight pin

6. 产品特性 / Product Characteristics

7.1 引脚拉力强度 / Lead Pull Strength

10 牛顿 10±1 秒 / 10N 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℃, <2s.

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:

35 安培或者 10 倍额定电流使用 250 伏交流电源(100mA~10A)。

35A or 10In at 250V AC(100mA~10A)

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:

温度上升试验: 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℃。

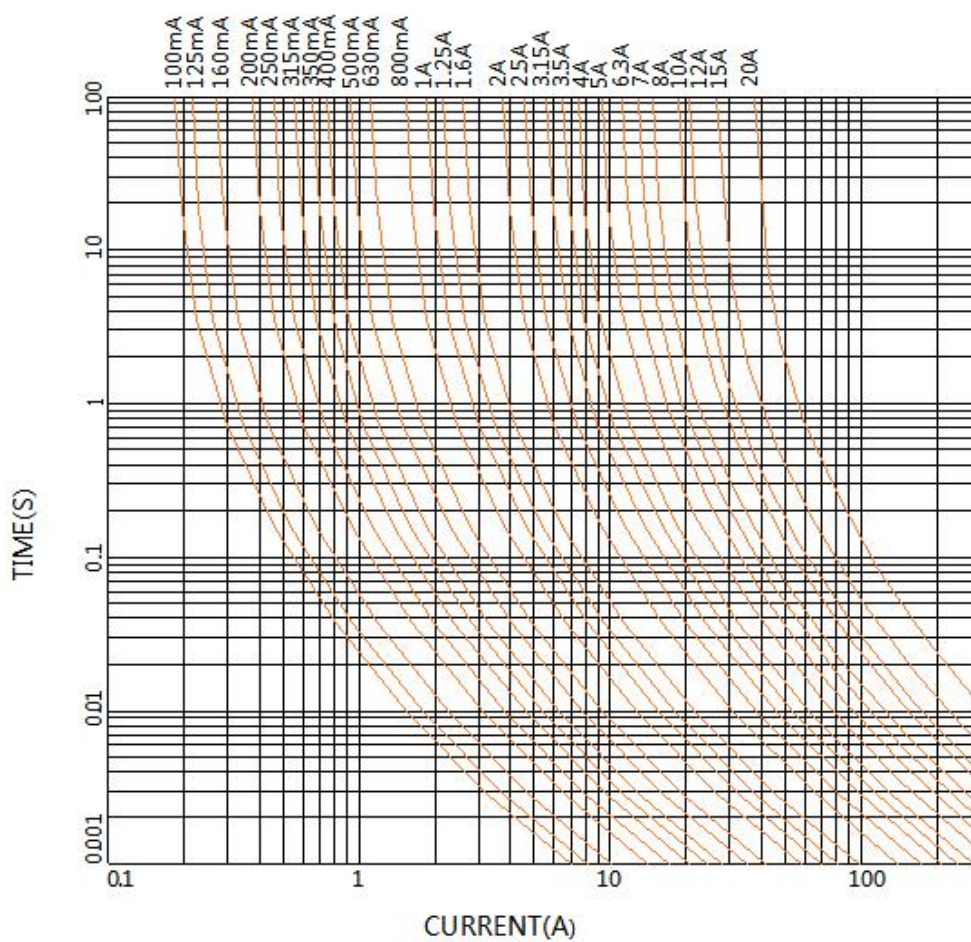
Under the ambient temperature of 25±5℃, through 1.5 times the rated current for 15 minutes, then every 15 minutes, add an increase of 0.1 times the rated current. When operates, the temperaturerise in any part of fuse should not exceed 135℃. Ambient Temterature is 25±5℃.

Rising temperature= The surface temperature-Ambient temperature

8.4 熔断时限 / Opening Time

额定电流 Rated current	熔断时间 Opening Time				
	150%	210%	275%	400%	1000%
100mA-6.3A	>1HS	<2min	400ms-10s	150ms-3s	20ms-150ms
8A-10A	>1HS	<5min	1s-20s	150ms-3s	20ms-150ms
12A-20A	>1HS	<5min	1s-50s	150ms-5s	20ms-150ms

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

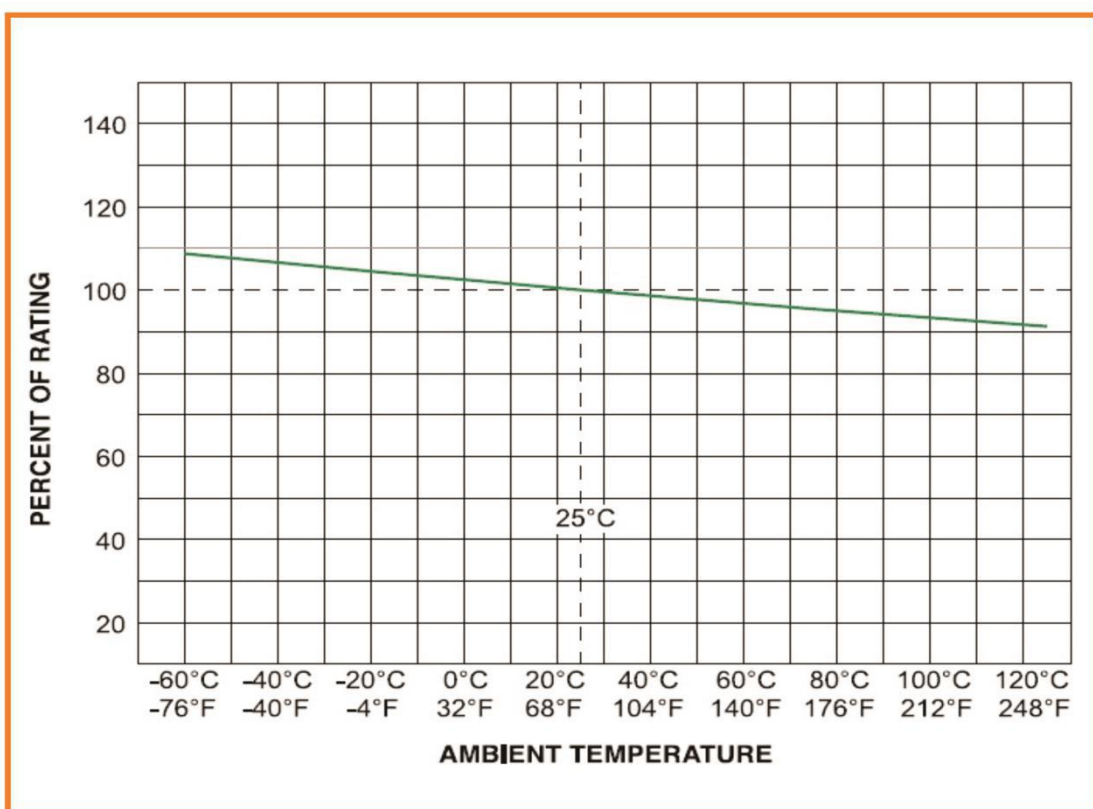
湿度：相对湿度 $\leq 75\%$ 平均可以存放 3 年。

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:

Temperature Rerating Curve



9.4 建议焊接参数 / Recommended Soldering Parameters

A. 波峰焊参数 / Wave Parameters:

锡炉温度 / Solder Pot Temperature: $260^{\circ}\text{C} \pm 10^{\circ}\text{C}$

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: $350 \pm 5^{\circ}\text{C}$

焊接时间 / Heating Time: 3s Max

10 包装 / Packaging

10.1 包装袋/盒印标签明下列标示: / 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.

10.2 包装数量 / Packing Quantity

每 1 个内盒 1000pcs / 1000pcs in per inner box;

散装根据客户要求/ Bulk according to customer requirements

附件 I: 安规证书和 SGS 证书 / Appendix I: Safety approval certificates and SGS approval