

# 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

贴片保险丝 (6125.2410.1808)

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



### 表面贴装保险丝 125V72V63V

产品名称: STE/STS 系列 2410/6125/1808 慢断型

Product Type: STE/STS Series 2410/6125/1808 *Time-Lag*

*Surface Mount Fuse 125V72V63V*

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Specifications are subject to change without notice

Revised: 2020

## 1. 产品特性及应用范围 / Description, Features and Applications

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。

### Descriptions:

REOMAX 6125 series slow-blow square Surface Mount fuses are ceramic tube/end cap constructions, RoHS compliant, Halogen Free and lead(Pb) exempts of the requirements of RoHS Directive(2002/95/EC), with U.S. (UL/CSA) safety agency approvals. Provide board level primary and secondary circuit protection in a wide variety of applications. With excellent inrush current withstanding capability, excellent reliability for thermal and mechanic shock, also have a high reliability and stable solder ability, end caps are available in gold/silver/nickel plated.

### Features:

- Time-Lag (Slow-Blow)
- Wide range of current rating available
- Low temperature de-rating
- Tape and Reel for automatic placement
- Small size(6.1mm\*2.5mm)
- Wide operating temperature range
- RoHS compliant
- Conflict free metals

### Applications:

- LED lighting
- LCD backlight inverter
- PC server
- Wireless base station
- Digital camera
- Notebook PC
- Portable Devices
- Cooling fan system
- White goods
- Industrial equipment
- Battery devices
- Power supply
- Storage system
- Game console
- Medical equipment
- LCD/PDP devices
- Networking devices
- Telecom system
- Office equipment
- Automotive devices

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

2.1 执行标准：遵循 UL 248-14。

Standards: In accordance with UL 248-14.

### 2.2 认证范围 Certification:

安规标准 Agency	认证范围 Ampere Range	证书编号 Agency File Number
UL	50mA ~ 40A	E340427(JDYX2)
cUL	50mA ~ 40A	E340427(JDYX8)

## 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	分断能力 Breaking Capacity	冷阻值 Nominal Cold Resistance (Ohms)	熔化热能 I <sup>2</sup> T Melting Integral (A <sup>2</sup> .S)	安规认证 Agency Approvals			
						UL <sup>®</sup>	CUL <sup>®</sup>	CQC	△
STE0160	160mA	125VAC/DC	50A@300VAC 50A@250VAC 200A@125VAC	2.300	0.058	●	●	○	○
STE0200	200mA			1.650	0.062	●	●	○	○
STE0250	250mA			1.450	0.065	●	●	○	○
STE0300	300mA			0.850	0.191	●	●	○	○
STE0315	315mA			0.650	0.202	●	●	○	○
STE0375	375mA			0.610	0.330	●	●	○	○
STE0400	400mA			0.580	0.338	●	●	○	○
STE0500	500mA			0.320	0.475	●	●	○	○
STE0600	600mA			0.265	0.775	●	●	○	○
STE0630	630mA			0.256	0.986	●	●	○	○
STE0700	700mA			0.230	2.105	●	●	○	○
STE0750	750mA			0.225	2.240	●	●	○	○
STE0800	800mA			0.203	2.380	●	●	○	○
STE1100	1A			0.128	3.690	●	●	○	○
STE1125	1.25A			0.092	3.760	●	●	○	○
STE1150	1.5A			0.085	6.765	●	●	○	○
STE1160	1.6A			0.075	6.805	●	●	○	○
STE1200	2A			0.038	12.150	●	●	○	○
STE1250	2.5A			0.035	16.025	●	●	○	○
STE1300	3A			0.026	21.560	●	●	○	○
STE1315	3.15A			0.025	25.750	●	●	○	○
STE1350	3.5A			0.023	30.050	●	●	○	○
STE1400	4A			0.019	43.208	●	●	○	○
STE1500	5A			0.013	55.250	●	●	○	●
STE1600	6A			0.011	75.245	●	●	○	●
STE1630	6.3A			0.010	93.550	●	●	○	●
STE1700	7A			0.009	97.120	●	●	○	●
STE1800	8A			0.0078	108.750	●	●	●	●
STE2100	10A	0.0066	118.380	●	●	●	●		
STE2120	12A	0.0045	140.080	●	●	○	●		
STE2150	15A	0.0030	210.680	●	●	●	●		
STS2160	16A	72VDC	500A@72VDC	0.0028	215.250	●	●	○	●
STS2200	20A	72VDC	500A@72VDC	0.0020	358.080	●	●	●	●
STS2250	25A	72VDC	500A@72VDC	0.00158	465.170	●	●	○	●
STS2300	30A	72VDC	500A@72VDC	0.00145	989.650	●	●	○	●
STS2400	40A	63VDC	500A@63VDC	0.00120	1050.780	●	●	○	●

- \*: These catalog no. cold resistance and I2t value are pending due to fuse elements shall be customized;
- DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C;
- Typical Pre-arching I2t are calculated at 10\*In Current or 8ms;
- Min Interrupting Rating: 1.35\*In.

### 3. 产品标示 / Product Marking

保险丝上需有下列标示 / The fuses shall have the following markings

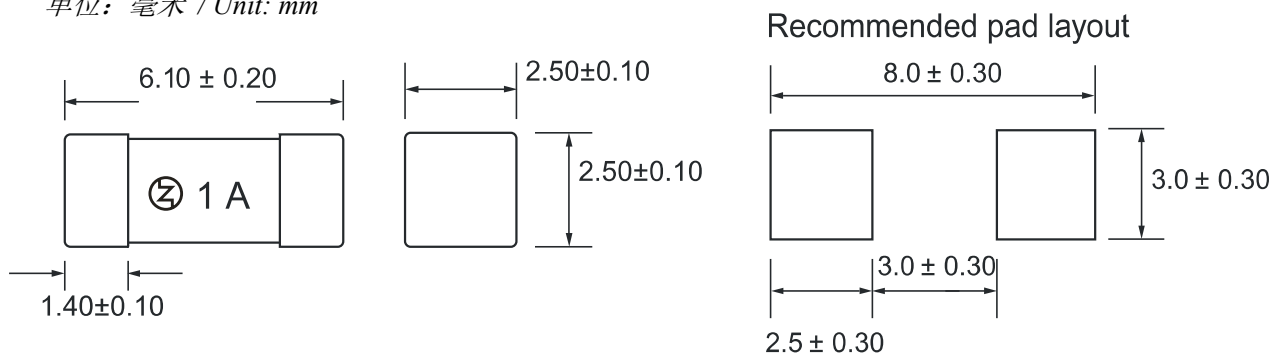
示例 Example:

Ⓡ	1A	①	制造厂商标识/REOMAX Trade Mark: Ⓡ
①	②	②	额定电流/Rated Current (A): ___A 或 or ___mA

注: 对于标示的大小和位置没有规定 / Note: Size and position of the markings shall not be provided.

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

单位: 毫米 / Unit: mm



### 5. 材料明细 / Material Details

编号 NO.	零件名称 Part Name	材质 Material
①	端帽 End caps	黄铜镀金 Au Plated Brass Cap
②	主体 Body	陶瓷管 Non-Transparent Square Ceramic Tube
③	熔丝 Fuse element	合金 Cu-Ag Alloy wire

### 6. 产品特性 / Product Characteristics

编号 NO.	项目 Item	内容 Content	参考标准 Reference standards
1	产品标识	Brand, Ampere Rating	REOMAX marking standards

	Product Marking		
2	工作温度 Operating Temperature	-55°C to 125°C	IEC60068-2-1/2
3	可焊性 Solderability	T=240°C ± 5°C, t=3sec ± 0.5sec, Coverage ≥ 95%	MIL-STD-202, Method 208
4	耐焊接热 Resistance to Soldering Heat	10 sec at 260°C	MIL-STD-202, Method 210, Test condition B
5	绝缘阻抗 Insulation Resistance (after Opening)	10,000 ohms minimum	MIL-STD-202, Method 302, Test Condition A
6	热冲击 Thermal Shock	5 cycles, -65°C / +125°C, 15 minutes at each extreme	MIL-STD-202, Method 107, Test Condition B
7	机械冲击 Mechanical Shock	100G's peak for 6 milliseconds, 3cycles	MIL-STD-202, Method 213, Test I
8	振动试验 Vibration	0.03" amplitude, 10-55 Hz in 1 min. 2hrs each XYZ=6hrs	MIL-STD-202, Method 201
9	耐湿性 Moisture Resistance	10 cycles	MIL-STD-202, Method 106
10	盐雾试验 Salt Spray	5% salt solution, 48hrs	MIL-STD-202, Method 101, Test Condition B

## 7. 电气特性 / Electrical Characteristics

### 7.1 实验条件: Test Condition

所有测试环境温度均为 25±5°C。

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

### 7.2 分断能力 Interrupting Rating:

保险丝承受分断能力: 50A@250Vac, 200A@125Vac.

Breaking Capacity: 50A@250Vac, 200A@125Vac.

### 7.3 熔断时限 / Operating Characteristics

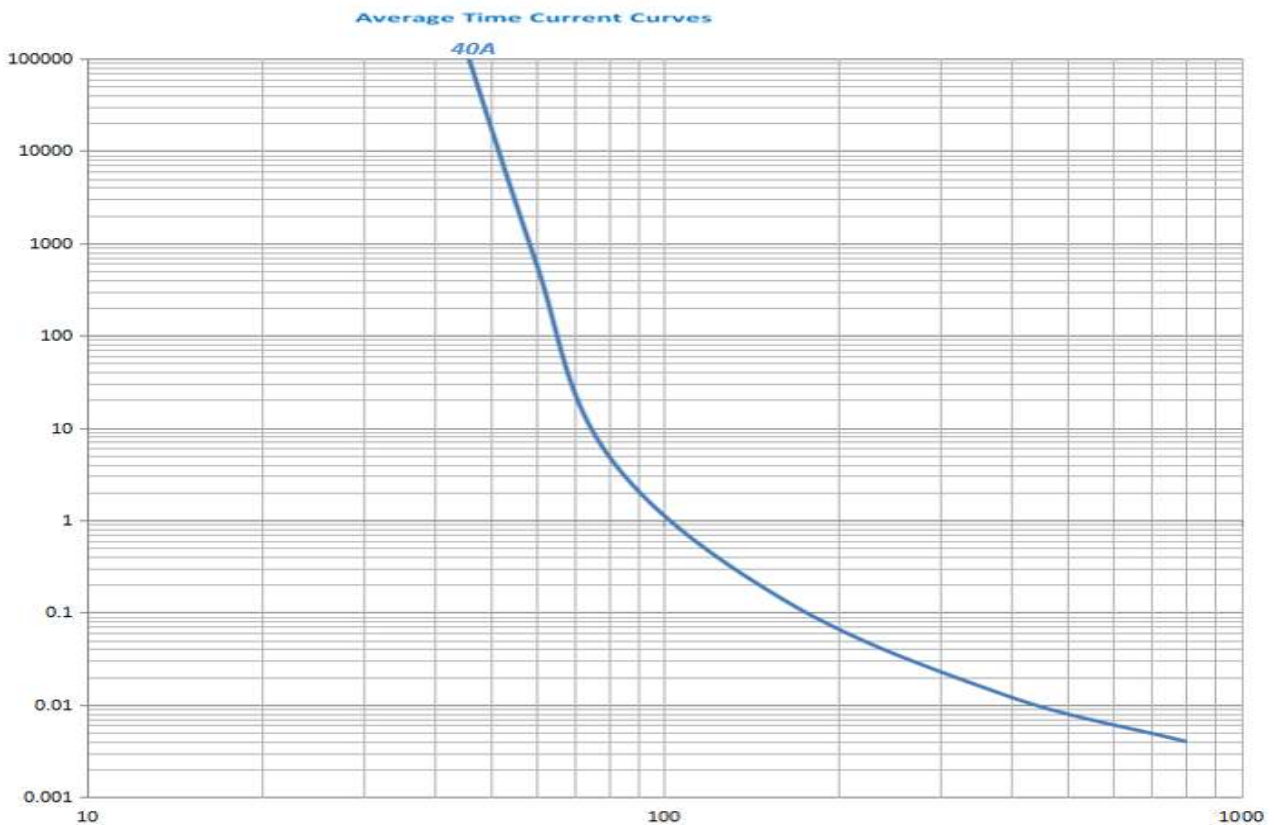
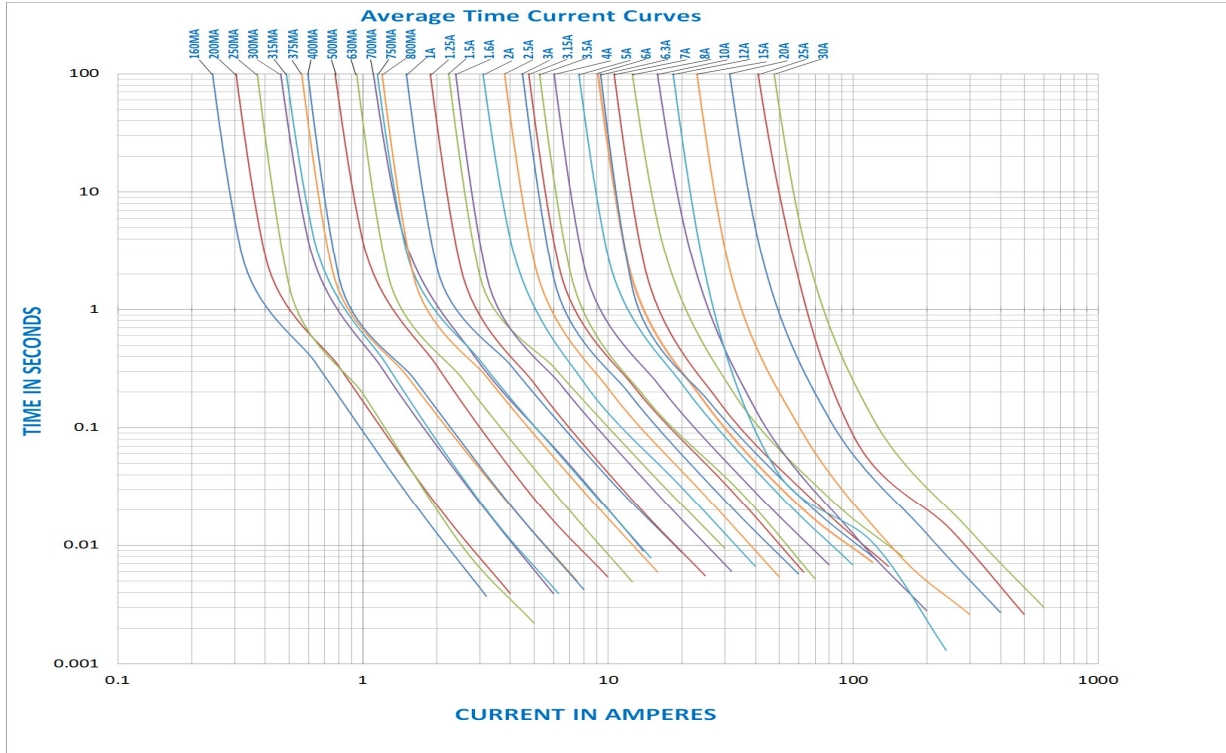
额定电流 Rated Current	额定电流的% % of Ampere Rating(In)	熔断时间 Blowing Time
160mA-40A	100% * In	大于 4 小时(4 hours Min)
500mA-40A	200% * In	小于 120 秒 (120 sec Max)

160mA-400mA

210% \* In

小于 120 秒 (120 sec Max)

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

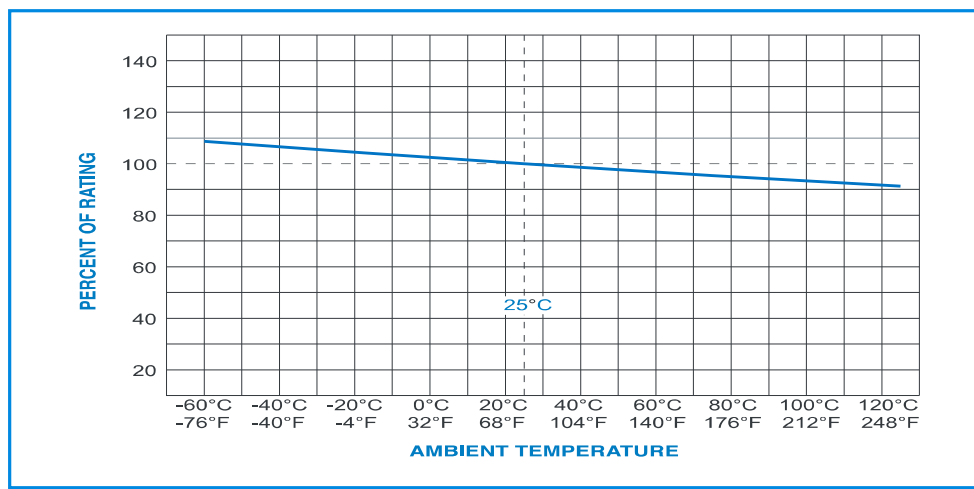


## 8. 环境特性 / Environmental Characteristic

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:



## 9. 建议焊接参数 / Recommended Soldering Parameters

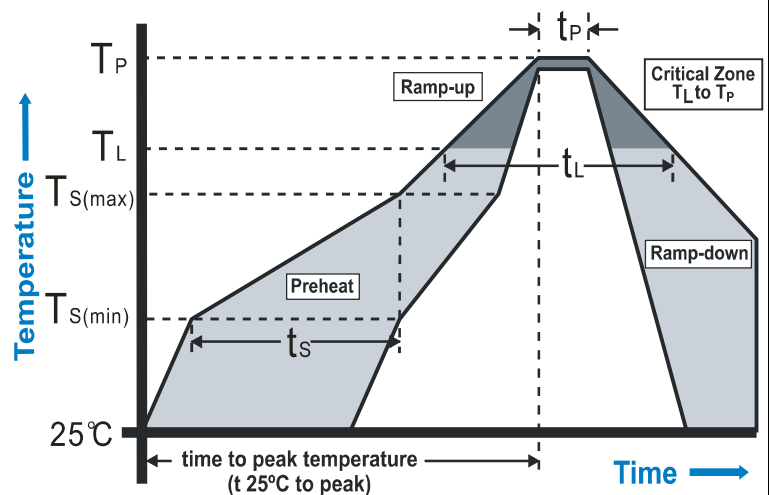
### A. 波峰/回流焊参数 / Wave /Reflow Soldering Parameters:

锡膏工艺 / Solder paste process.

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

焊接时间 / Solder Dwell Time: 5 seconds max

Reflow Condition		Pb-Free assembly
Average ramp-up rate ( $T_s(\text{max})$ to $T_p$ )		$5^\circ\text{C}$ /second max.
Preheat	Temperature Min ( $T_s(\text{min})$ )	$150^\circ\text{C}$
	Temperature Max ( $T_s(\text{max})$ )	$200^\circ\text{C}$
	Time (Min to Max) ( $t_s$ )	60-120 seconds
Reflow	Temperature ( $T_L$ )	$220^\circ\text{C}$
	Time Max ( $t_L$ )	60 seconds
Peak Temperature( $T_p$ )		$260^\circ\text{C}$ max
Ramp-down Rate		$5^\circ\text{C}$ /second max
Time $25^\circ\text{C}$ to peak Temperature ( $T_p$ )		8 minutes max



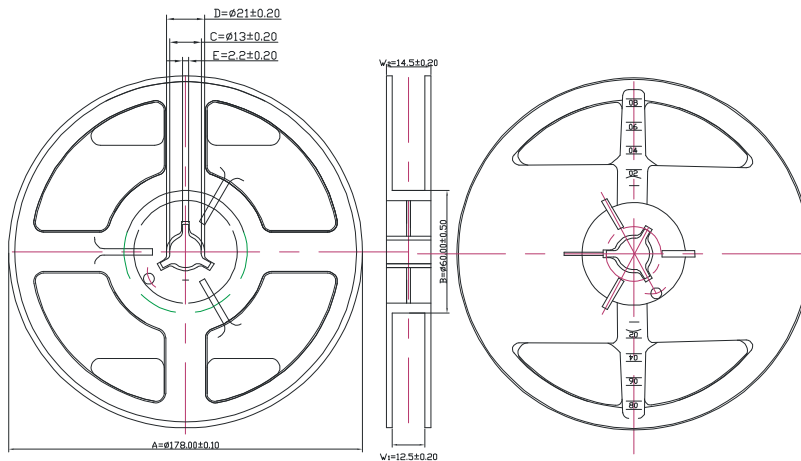
## B. 手工焊参数 / Hand-Solder Parameters:

烙铁温度 / Solder Iron Temperature:  $300 \pm 5^\circ\text{C}$

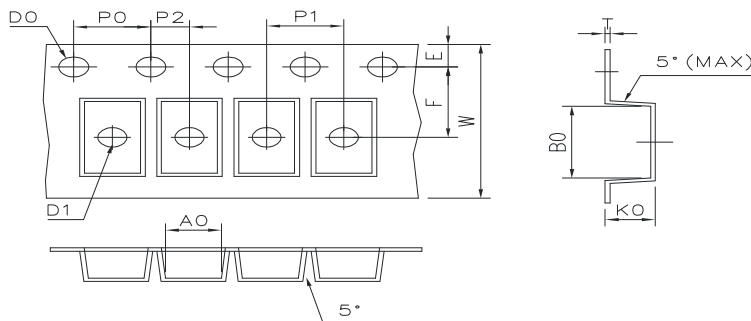
焊接时间 / Heating Time: 1~2 s Max

## 10. 包装 / Packaging

1500 个每卷 / 1,500 pcs in 7 inches dia. reel, 12mm wide tape, EIA Standard 481



Item	A	B	C	D	E	W1	W2
Spec.(mm)	178±0.10	60±0.50	13±0.20	21±0.20	2.2±0.20	12.5±0.20	14.5±0.20



Item	$A_0$	$B_0$	$D_0$	$D_1$	E	F
Spec.(mm)	$2.70 \pm 0.10$	$6.40 \pm 0.10$	$1.50 \pm 0.10$	$1.50 \pm 0.25$	$1.75 \pm 0.10$	$5.50 \pm 0.10$
Item	$K_0$	$P_0$	$P_1$	$P_2$	W	t
Spec.(mm)	$2.70 \pm 0.10$	$4.00 \pm 0.10$	$4.00 \pm 0.10$	$2.00 \pm 0.10$	$12.00 \pm 0.15$	$0.25 \pm 0.05$

## 11. 其他 / Others

11.1 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.

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