

Description/描述

The LTC1245TSK series Time-Lag square Surface Mount fuse are designed for high-end cloud computing servers, telecom base station power supplies, blockchain servers, and new energy vehicle battery management systems, RoHS compliant. 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 gold plated.

Features/特征

- Time-lag
- High current rating available
- Low temperature de-rating
- Tape and Reel for automatic placement
- Small size(12.45mm*4.5mm)
- Wide operating temperature range(-55°C to 125°C)
- RoHS compliant
- Conflict free metals
- Wide range of current rating available

Applications/应用

- 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

Electrical Characteristics/电气特性

% of Ampere Rating	Opening Time at 25°C
100%	T > 4hrs
350%	T < 10s

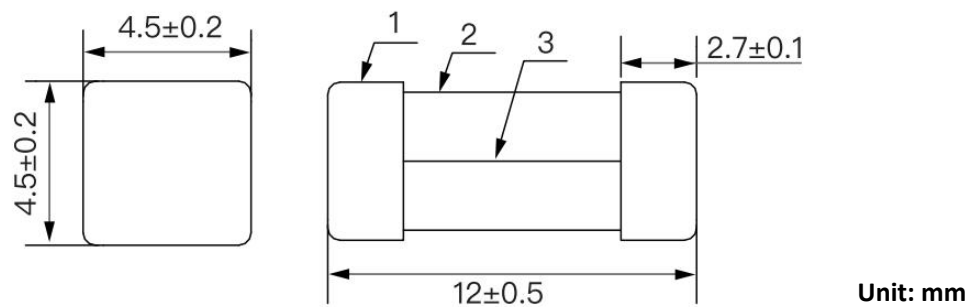
Agency Approvals/ 认证

Agency	Agency File Number	Ampere Range
	PENDING	

Performance Specifications/电性参数

Part Number	Rated Current (A)	Rated Voltage	Breaking Capacity	DCR ($\Omega/m\Omega$)	Voltage drop (mv)	I^2t ($A^2\text{sec}$)
LTC1245-0500TSK	0.50	250Vac 125Vac 125Vdc 80Vdc 72Vdc 63Vdc 60Vdc 32Vdc	80V / 72V / 63V / 60V / 32Vdc & 1KA @ 35A~100A 80V / 72V / 63V / 60V / 32Vdc & 800A @ 500mA~30A 125Vac & 500A @ 35A~100A 125Vac / 250Vac & 300A @ 10A~50A 125Vac / 250Vac & 150A @ 500mA~30A	0.3-0.45 Ω	214-301	0.325
LTC1245-1100TSK	1.00			0.19-0.26 Ω	399-257	1.4
LTC1245-1125TSK	1.25			89-116m Ω	159-213	1.0
LTC1245-1600TSK	1.60			58-85m Ω	124-177	2.82
LTC1245-1200TSK	2.00			48-61m Ω	138-173	14.8
LTC1245-1250TSK	2.50			70-90m Ω	220-321	23.1
LTC1245-1315TSK	3.15			24-33m Ω	90-134	57.6
LTC1245-1400TSK	4.00			21-28m Ω	117-164	76.8
LTC1245-1500TSK	5.00			16-24m Ω	113-161	110
LTC1245-1630TSK	6.30			10-15m Ω	96-117	278
LTC1245-1800TSK	8.00			7.0-8.9m Ω	66-92	282
LTC1245-2100TSK	10.0			4.5-6.7m Ω	49-88	390
LTC1245-2150TSK	15.0			3.0-4.1m Ω	50-72	473
LTC1245-2200TSK	20.0			2.4-3.5m Ω	57-89	960
LTC1245-2250TSK	25.0			1.9-2.8m Ω	56-96	16.25
LTC1245-2300TSK	30.0			1.3-1.9m Ω	48-71	2610
LTC1245-2400TSK	40.0			1.0-1.5m Ω	50-81	640
LTC1245-2500TSK	50.0			0.8-1.2m Ω	66-80	1000
LTC1245-2600TSK	60.0			0.7-1.1m Ω	70-107	1281.6
LTC1245-2700TSK	70.0			0.60-0.84m Ω	65-103	3779.5
LTC1245-2800TSK	80.0			0.51-0.77m Ω	81-88	3330
LTC1245-3100TSK	100			0.4-0.49m Ω	70-81	16000

Product Dimensions (mm)/产品尺寸



Material Details/材料详情

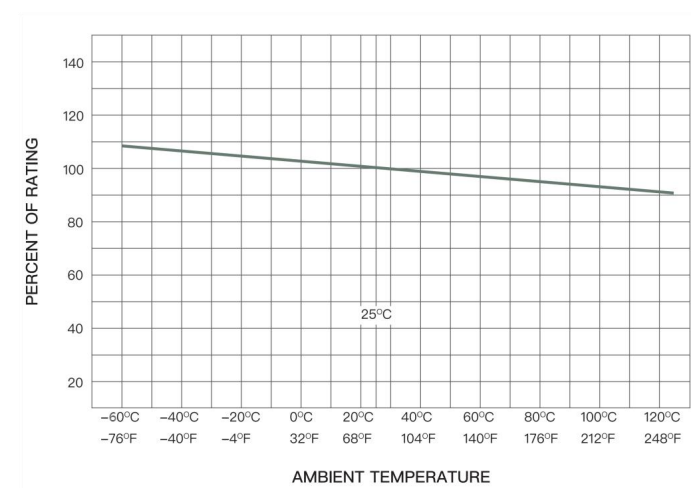
NO.	Part Name	Material
1	End Caps 铜帽	Gold Plated Brass Cap 铜镀金
2	Body 管体	Non-Transparent Square Cetamic Tube 陶瓷管
3	Fuse element 熔丝	Alloy Wire 银线或银带

Product Characteristics/产品特性

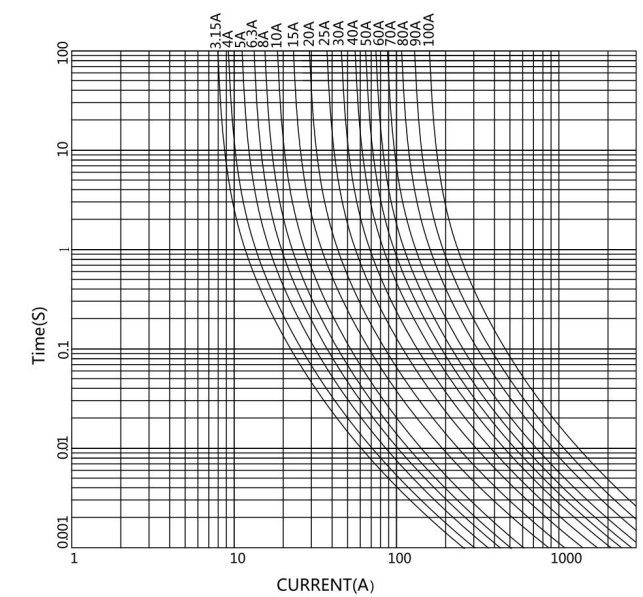
- 外观不应出现显著的污点、裂纹，标识应该容易辨识。
There shall not be any remarkale stain and crack on the appearances, markings shall be easily legible.
- 形状：贴片式陶瓷保险丝
Configuration: SMD type ceramic fuse
- 引脚拉力强度/Lead Pull Strength: 10 牛顿 10±1 秒/ 10N for 10±1 Seconds
引脚推力强/Lead Thrust Strength: 2 牛顿 10±1 秒/ 2N for 10±1 Seconds
- 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℃.
- 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 135℃,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 135℃ Rising temperature= The surface temperature-Ambient.

Environmental Characteristic/环境温度特性图

Temperature Derating Curve



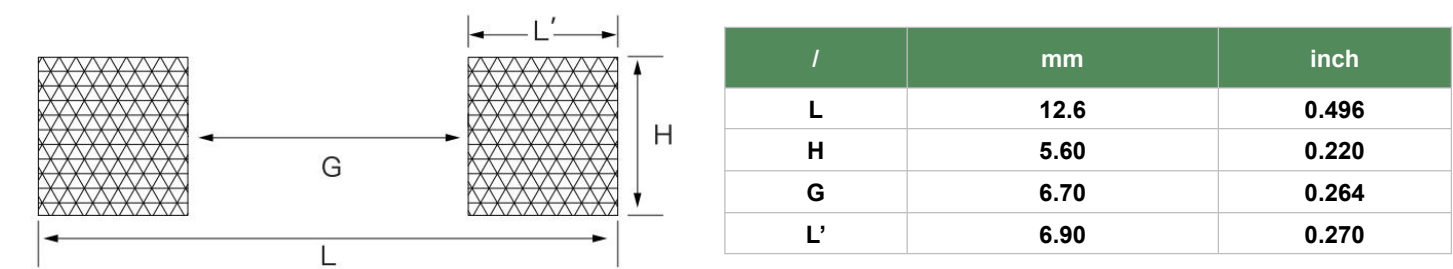
Average Time-Current Curve



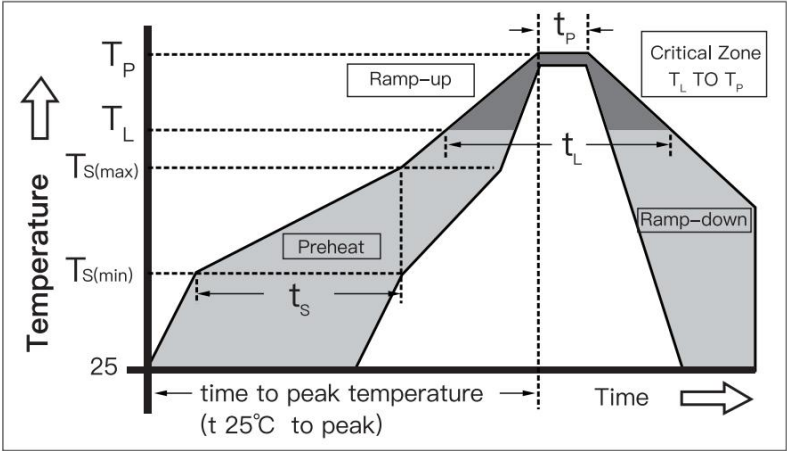
- 使用温度范围/ Operating Temperature: -55℃ ~ +125℃。
- 保存条件/Stock Condition: 温度在 10℃~40℃, 相对湿度≤75%平均可以存放 2 年。
Can be stored for 2 years under tight seal condition at temperature of 10℃~40℃,relative humidity ≤75%
- 若操作环境温度超出 25±5℃范围, 在选用保险丝规格时, 需考虑操作环境温度对保险丝的影响, 请参照 Temperature Rerating Curve。
When choosing the fuse's specifcation, if the operating environmental temperature beyond the scope from 20~30℃, engineer should consider theenvironmental temperature's affection to fuses. Please refer the Temperature Rerating Curve.

Soldering Parameters/焊接参数

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



- 建议焊接参数/Recommended Soldering Parameters:
 - ① 回流焊/Infrared Reflow: 温度 Temperature 250℃; 时间 Time 5sec Max;
 - ② 波峰焊/Wave soldering: 温度 Temperature 250℃; 时间 Time 10sec Max;
 - ③ 烙铁焊/Hand Soldering: 温度 Temperature 300℃; 时间 Time 2sec Max
- 烙铁避免接触铜帽 Soldering iron avoid touch Copper Cap.



回流焊接参考温度 (Recommended Reflow Profile)

Profile Feature 特征		Pb-Free Assembly 无铅焊锡
Average Ramp-Up Rate ($T_{s(max)}$ to T_p) 平均升温速度		3°C/second max
Preheat 预热	-Temperature Min($T_{s(min)}$) 最低温度	150°C
	-Temperature Max($T_{s(max)}$) 最高温度	200°C
	-Time(T_{smin} to T_{smax}) 预热时间	60~120 seconds
Reflow 回流焊	-Temperature(T_L) 温度	217°C
	-Time(t_L) 时间	20~40 seconds
Peak Temperature (T_p) 峰值温度		250°C
Time within 5°C of actual Peak Temperature 实际峰值温度(T_p)的±5°C范围内的时间		5 seconds
Ramp-Down Rate 降温		6°C/second max
Time 25°C to Peak Temperature 从 25°C到峰值温度时间		8 minutes max

Packing/包装

Part Number	Quantity & Packaging Code
LTC1245TSK	1000 pcs/reel

Part Number System/产品编号

