

Description/描述

The LTC1032TSK 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
200%	T < 60s

Agency Approvals/ 认证

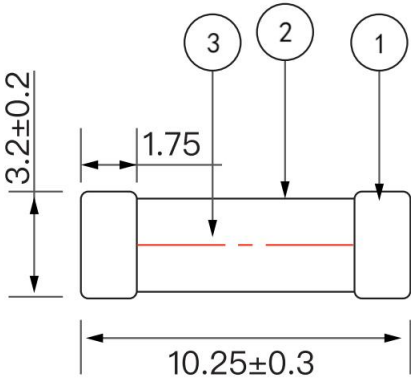
Agency	Agency File Number	Ampere Range
	E549536	50mA~60A

Performance Specifications/电性参数

Part Number	Rated Current (A)	Rated Voltage	Breaking Capacity	DCR ($\Omega/m\Omega$)	Voltage drop (mv)	I^2t ($A^2\text{sec}$)
LTC1032-0050TSK	0.05	125Vac 250Vac 350Vac 400Vac	50A @ 400V 50A @ 350V 50A @ 250V 50A @ 125V	24-44.2 Ω	2370-3560	0.0043
LTC1032-0080TSK	0.08			15-26 Ω	2160-3440	0.0096
LTC1032-0100TSK	0.10			7.8-10.1 Ω	1330-1720	0.014
LTC1032-0125TSK	0.125			3.4-5.7 Ω	680-1140	0.031
LTC1032-0160TSK	0.16			1.5-2.3 Ω	652-835	0.044
LTC1032-0200TSK	0.20			1.3-2.05 Ω	560-780	0.068
LTC1032-0250TSK	0.25			1.10-1.95 Ω	384-681	0.081
LTC1032-0315TSK	0.315			0.66-1.22 Ω	286-472	0.308
LTC1032-0400TSK	0.40			0.56-1.11 Ω	274-399	0.4
LTC1032-0500TSK	0.50			245-335m Ω	163-223	0.8
LTC1032-0630TSK	0.63			212-308m Ω	175-254	1.27
LTC1032-0800TSK	0.80			131-223m Ω	143-236	3.84
LTC1032-1100TSK	1.00			112-138m Ω	134-203	3.8
LTC1032-1125TSK	1.25			78-98m Ω	119-149	9.84
LTC1032-1150TSK	1.50			52-70m Ω	94-135	9.45
LTC1032-1160TSK	1.60			50-67m Ω	92-127	9.73
LTC1032-1200TSK	2.00			39-52m Ω	82-126	14.4
LTC1032-1250TSK	2.50			30-45m Ω	88-132	29.38
LTC1032-1315TSK	3.15			17-24m Ω	76-116	51.6
LTC1032-1400TSK	4.00			16.5-21m Ω	81-118	67.2
LTC1032-1500TSK	5.00			12.8-19m Ω	70-132	105
LTC1032-1630TSK	6.30	32Vdc 60Vdc 72Vdc 125Vac 250Vac	100A @ 250Vac 100A @ 125Vac 100A @ 125Vdc 400A @ 72Vdc 1000A @ 60Vdc 1000A @ 32Vdc	9.5-13m Ω	71-96	226
LTC1032-1800TSK	8.00			6.8-9.4m Ω	63-92	262
LTC1032-2100TSK	10.0			5-6.3m Ω	60-75	400
LTC1032-2120TSK	12.0			2.86-4.94m Ω	51-68	317
LTC1032-2150TSK	15.0			2.79-3.13m Ω	48-63	495
LTC1032-2160TSK	16.0			3.0-3.4m Ω	48-66	512
LTC1032-2200TSK	20.0			2.0-2.8m Ω	47-66	880
LTC1032-2250TSK	25.0			1.8-2.5m Ω	49-68	1313
LTC1032-2300TSK	30.0			1.15-1.65m Ω	48-68	2160

Part Number	Rated Current (A)	Rated Voltage	Breaking Capacity	DCR (Ω/mΩ)	Voltage drop (mv)	I² t (A² sec)
LTC1032-2350TSK	35.0	60Vdc 72Vdc 250Vac	150A @ 250Vac 180A @ 72Vdc 500A @ 60Vdc	1.16-1.60mΩ	55-69	3308
LTC1032-2400TSK	40.0			1.2-1.5mΩ	51-66	3040
LTC1032-2500TSK	50.0			0.92-1.18mΩ	63-70	3500
LTC1032-2600TSK	60.0			0.58-0.78mΩ	51-69	5000

Product Dimensions (mm)/产品尺寸



Unit: mm

Material Details/材料详情

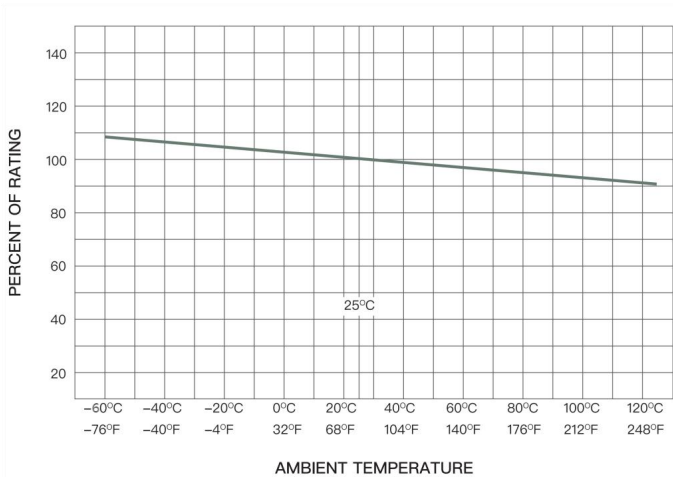
NO.	Part Name	Material
1	End Caps 铜帽	Gold Plated Brass Cap 铜镀金
2	Body 管体	Cetamic Tube 陶瓷管
3	Fuse element 熔丝	Alloy Wire 合金线

Product Characteristics/产品特性

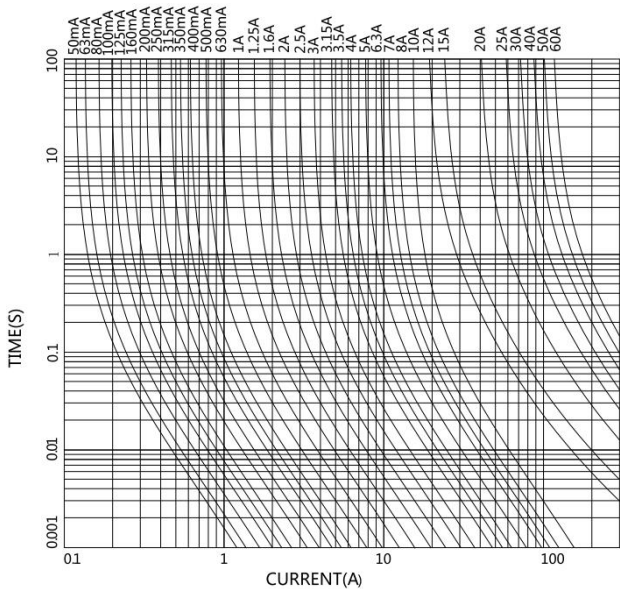
1. 外观不应出现显著的污点、裂纹，标识应该容易辨识。
There shall not be any remarkale stain and crack on the appearances, markings shall be easily legible.
2. 形状：贴片式陶瓷保险丝
Configuration: SMD type ceramic fuse
3. 引脚拉力强度/Lead Pull Strength: 10 牛顿 10±1 秒/ 10N for 10±1 Seconds
4. 实验条件/Test Condition: 所有测试环境温度为 25±5℃
All electrical test is to be conducted with the ambient air at a temperature of 25±5℃.
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



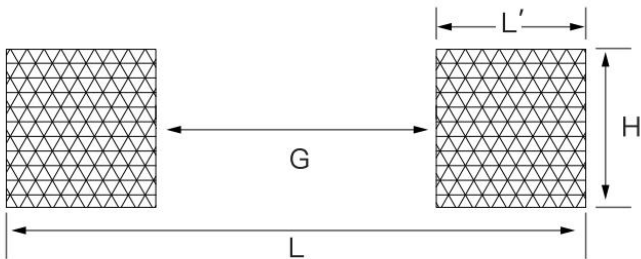
Average Time-Current Curve



- 使用温度范围/ Operating Temperature: -55°C ~ +125°C。
- 保存条件/Stock Condition: 温度在 10°C~40°C，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°C~40°C,relative humidity ≤75%
- 若操作环境温度超出 25±5°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 Temperature Rerating Curve。
When choosing the fuse's specification, if the operating environmental temperature beyond the scope from 20~30°C, engineer should consider theenvironmental temperature's affection to fuses. Please refer the Temperature Rerating Curve.

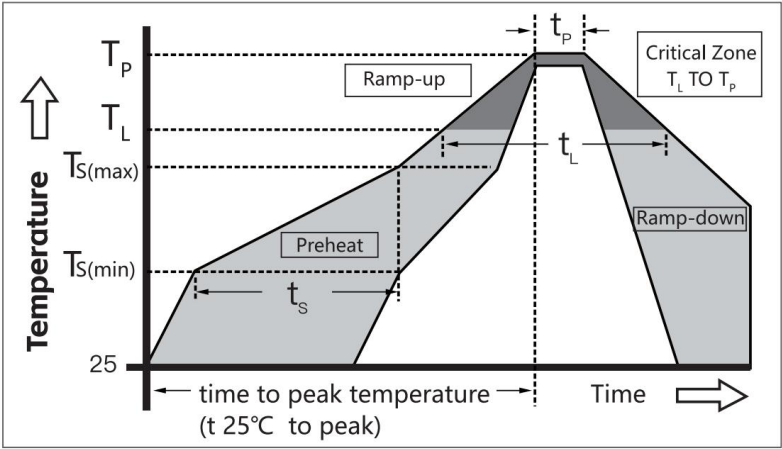
Soldering Parameters/焊接参数

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



/	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:
 - ① 回流焊/Infrared Reflow: 温度 Temperature 250°C; 时间 Time 5sec Max;
 - ② 波峰焊/Wave soldering: 温度 Temperature 250°C; 时间 Time 10sec Max;
 - ③ 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.



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 (Ts(max) to TP) 平均升温速度		3°C/second max
Preheat 预热	-Temperature Min(Ts(min)) 最低温度	150°C
	-Temperature Max(Ts(max)) 最高温度	200°C
	-Time(Ts(min) to Ts(max)) 预热时间	60~120 seconds
Reflow 回流焊	-Temperature(TL) 温度	217°C
	-Time(tL) 时间	20~40 seconds
Peak Temperature (TP) 峰值温度		250°C
Time within 5°C of actual Peak Temperature 实际峰值温度(Tp)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
LTC1032TSK	2000 pcs/reel

Part Number System/产品编号

