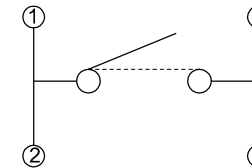
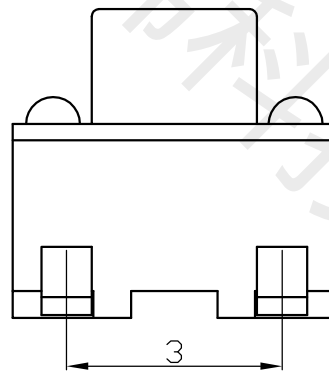
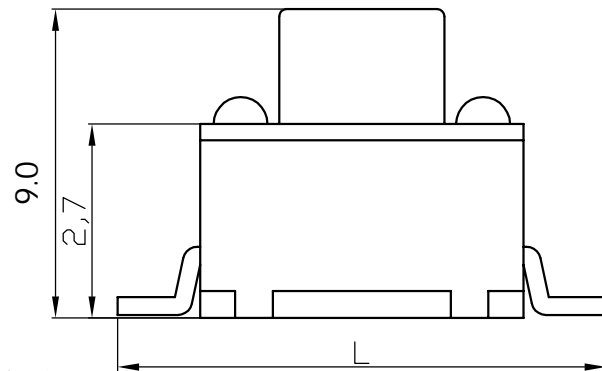
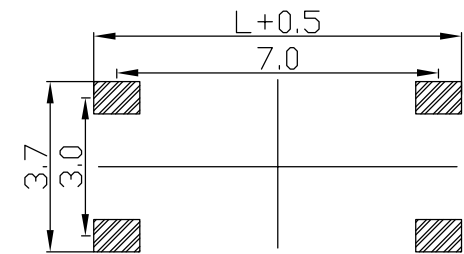


| 序号 | 零件名称 | 材质 |
|----|------|--------|
| 1 | 基座 | PPA/黄铜 |
| 2 | 弹片 | 进口不锈钢 |
| 3 | 盖板 | 黄铜 |
| 4 | 按钮 | PPA |
| | | |
| | | |

SCHEMATIC



Recommended P.C.B Layout



技术要求

1、ELECTRICAL CHARACTERISTICS(电气性能):

1.1 Rating(额定值): DC12V 50mA

1.2 Travel(行程): 0.25±0.1mm

1.3 Contact Resistance(接触电阻): 100mΩ Max

1.4 Life(寿命): 100,000 Cycles MIN(大于100,000次)

2、ELECTRICAL temperature rang(使用温度范围): -16° C~+60° C

| 单位 UNIT | mm | 一般公差 GENERAL TOLERANCE | |
|-----------------|-----|---------------------------|----------------------------|
| 制图 DRAW | 李春风 | L≤4 ±0.2 | 63<L≤250 ±0.5 |
| 设计 DESIGN | | 4<L≤16 ±0.3 | 250<L ±0.7 |
| 审核 CHECKED | 钟华华 | 16<L≤63 ±0.4 | 角注 ANGULAR DIMENSION ±0.5° |
| 标准化 STANDARD | | | |
| 批准 APPROVE | 罗孝金 | 重量 WT. | |
| | | 表面积 SA. | |



深圳市首韩科技有限公司

| | | | |
|-----------------|--------------------|-------------|-------------|
| 名称 NAME | 轻触开关 | | |
| 型号 Model No. | TS4590TP 160gf 022 | | |
| 料号 Part No. | | 张数 SHEET | 第1页, 共1页 |
| 视角 PROJ. | | 比例 SCALE | 版本 REV. |
| | | A4 | C图 C DWG |

标记
MARK.

ECN 编号/变更内容
ECN NO./DEFINITION

修改
REVISE

核准
APPROVE

日期
DATE

批准
APPROVE

罗孝金

重量
WT.

表面积
SA.

视角
PROJ.

比例
SCALE

版本
REV.

A4

C图
C DWG



深圳市首韩科技有限公司

SHENZHEN SHOUHAN TECHNOLOGY CO., LTD

Tel: 0755-27597601 Fax: 0755-27597491

承 认 书

SPECIFICATION FOR APPROVAL

商品编码 Part Code:

产品名称 Project:

轻触开关


规格型号 Part No:

TS4590TP 160gf 022

贵公司承认印 Approval signatures

| 料号/Part No. | 签章/Signatures |
|-------------|---------------|
| | |

日期 Date:

| | | |
|-------------|-----|--|
| 拟制/Drawn | 李春风 |  |
| 审核/Check | 钟华华 | |
| 批准/Approved | 罗孝金 | |

产品规格书 PRODUCT SPECIFICATION

| | | | |
|-------------------------------|------------------------------------|--|--|
| SIRLES | | 系列:TACT SWITCHES(轻触开关) | |
| MODEL | | 型号:TS4590TP 160gf 022 | |
| 1.RATING | | 额定值:50mA 12VDC | |
| 2.CONSTRUTION DIMENSION 结构尺寸 | | Apply to the appended drawing符:合附加图纸 | |
| 3.APEARANCE 外观 | | Have no remarkable damage,crack and rust etc无:明显损伤,裂纹,锈迹等. | |
| 4.CONTACTLOOP 接触回路 | | Monople loop:单通单极回路 | |
| ITEM 专案 | | TEST CONDITION 测试条件 | SPECIFICATION 规格 |
| 5.CAPABILITY OF ELECTRIC 电气性能 | | | |
| 5A | INSULATION RESISTANCE 绝缘电阻 | Measurements shall be made following Application of DC500V potential across terminals and across terminals and fuame for 1minute在,端子之间和端子与壳之间加 DC500V 条件下,持续 1 分钟测量. | 100M Ω min 100 兆欧以上. |
| 5B | WITHSTAND VILTAGE 耐电压 | AC250V、50HZ、1 min (imin(interrupting current) \leq 500uA). AC250V、50HZ、1 分钟(漏电流 500uA) | There shall be no briakdown 无击穿现象出现。 |
| 5C | CONTACT CIRCUIT 接触电路 | Addition 1.5-2 time force on the top of the keystrok and press the switch,DC50V100mA在按键顶端上等于作用力 1.5-2 倍的力按动开关,DC50V,10Ma. | 100m Ω Max (100m Ω 以下) . |
| 5D | SWITCH CONNECTION FLASH 开关接触点抖动 | Addition DC5V on the two side of switch,at a speed of 3-5time a sec.to press the switch在.开关的两端加 DC5V 的电压,以 3-5 次/秒的速度按动开关. | The flash time betwen open not more than 10ms. 开关在接通和断开时的接点抖动时间不大于 10 ms. |
| 6.MECHANICAL EFFICIENCY 机械性能 | | | |
| 6A | CONTACT STRENGTH 按键强度 | The contact shall be capable of a rorce of 5N for 5 seconds in any directions沿.开关动作方向可承受静能压力 5N, 保持 5 秒钟. | Switch electric andmechanical efficiency does not break 无损开关电气或者机械性能 |
| 6B | CONTACT JOURNEY | | 按键行程: 0.25 \pm 0.1mm |
| 6C | DRIVE FORCE 驱动力 | Being measure at across spring piece and across keystroke forergometer用.测力计在按键与弹片之间测量. | Contact switch'sd drive dirive fouce was160 \pm 50gf. 按键的开关驱动力为160 \pm 50gf |

产 品 规 格 书 PRODUCT SPECIFICATION

-2-

| | | | |
|---|--|--|---|
| 6D | CONNECTION STRENGTH 接线端强度 | A force of 1N being applying in any directions of the switch connection partt.在.接线端的作用方向施加 1N 的力. | Switch mechanical efficiency does not break.无损开关机械性能. |
| 6E | MECHANICAL LIFE 机械寿命 | Operatin at a rate of 30-50 cycles a minute. 以 30-50 次/分的驱动速度操作. | Life:100000cycles 寿命:100000次 |
| 7.ENVIRONME NT---RESISTANT EFFICIENCY 耐环境性能 | | | |
| 7A | CHANGE OF TEMPERATURE 温度变化 | The first temperature shall be 65°C ,2h and changed to-30°C, 2h, 5c ycles of above test. 先 65°C, 2h, 然后-30°C, 2h, 如此重复 3 次. | 1. The appearance should not break.外观应无损伤. 2. Contact resistance $\leq 100 M \Omega$ 接触电阻 $\leq 100M \Omega$ |
| 7B | HUMIDITY RESISTANT 耐湿热 | 40 \pm 2°C in temperature and 95%RH , Ruring thetest time without load; After testing the temperature should be 48h. 经 40 \pm 2°C, 相对湿度 95%, 试验期间, 开关不动作, 不带电负荷, 试验后恢复到常温 48h. | 3. Insulation resistance $\geq 100 M \Omega$. 绝缘电阻 $\geq 100M \Omega$ |
| 8.IOINTING EFFICIENCY 焊接性能 | | | |
| 8A | SOLDERABILITY 可焊性 | Temperature260 \pm 5°C ;Duration;3 \pm 0.5S:温度在 260 \pm 5°C, 持续 3 \pm 0.5S. | Solderability part should above 90% 可焊部分被焊料覆盖面应在 90% 以上. |
| 8B | SOLDER—RESISTANT 耐焊剂性 | Warm-up temperature:100°C,40S, 焊锡温度 260 \pm 5°C, 浸焊时间 3 \pm 0.5S. | Froth height of assist solder should under board and switch electric and mechanical efficiency does not break.助焊剂发泡不应超过印制板, 无损伤开关电气或机械动作性能. |
| 8C | JOINTING—RESISTANT 耐焊接热 | Jointing temperature: 260 \pm 5°C ,Duration of immersion: 5 \pm 1S. 焊锡温度 260 \pm 5°C, 浸焊时间5 \pm 1S | efficiency does not break 无损伤开关电气或机械动作性能 |
| 8D | NORMAL JOLNTING TIMES 正常焊接次数 | | ≤ 2 times 小于 2 次 |
| 9.NOTES | | | |
| 9A | The whole boxes of switch should keep in the temperature -30--80°C and less than 80%RH withont acidic, alkalescence, caustic gas in the environment of the storage. 整箱包装的开关, 应在温度为-30--80°C, 相对湿度不大于 80%, 周围的空气中没有酸性、 碱性或其他腐蚀性气体的库房内保管。 | | |
| 9B | Operating Temperature Range:-25to 70°C 操作温度的范围: -25 to 70°C | | |
| 9C | Switch should install in a correct method. 开关应按正确的安装方法进行正确安装使用。 | | |