



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

客 户 Customer:

\_\_\_\_\_

产品名称 Project:

轻触开关

\_\_\_\_\_

规格型号 Part No:

TS4538CJ

\_\_\_\_\_

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    | 刘学  |  |
| 批准/Approved | 罗孝金 |  |



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MODEL

TS4538CJ

|                               |                                    |  |  |
|-------------------------------|------------------------------------|--|--|
| SIRLES                        |                                    | 系列:FLIP SWITCHES(轻触开关)   |  |
| MODEL                         |                                    | 型号: TS4538CJ   |  |
| 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.APPEARANCE 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<br>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<br>100 兆欧以上.  |
| 5B                            | WITHSTAND VILTAGE<br>耐电压           | AC250V、50HZ、1min (imin(interrupting current ≤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<br>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<br>(100 m Ω 以下).  |
| 5D                            | SWITCH CONNECTION<br>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 betwcn open not more than 10ms.<br>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<br>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 ± 0.5mm  |
| 6C                            | DRIVE FORCE<br>驱动力                 | Being measure at across spring piece and across keystoke forergometer.用测力计在按键与弹片之间测量.  | Contact switch'sd drive dirive fouce was250 ± 30gf. 按键的开关驱动力为 250 ± 30gf     |



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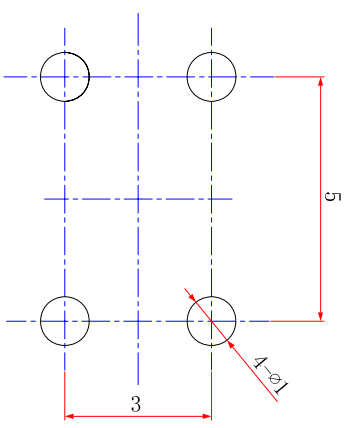
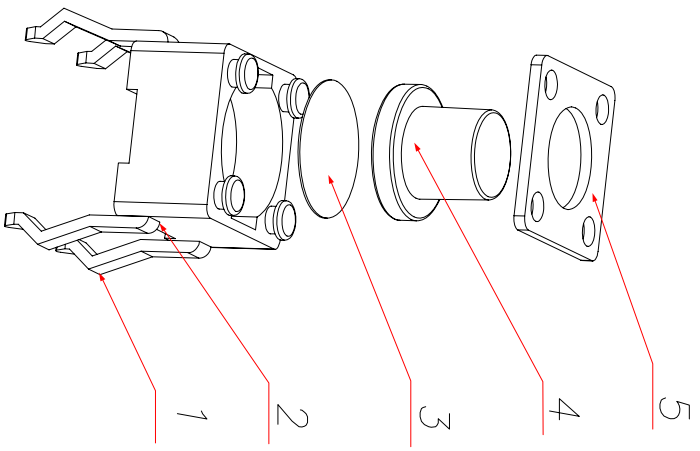
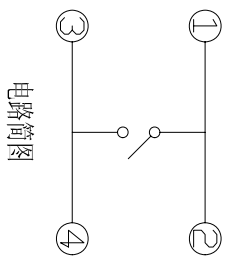
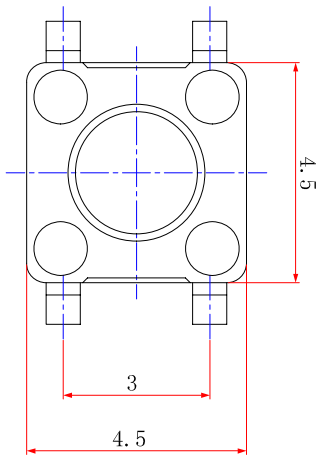
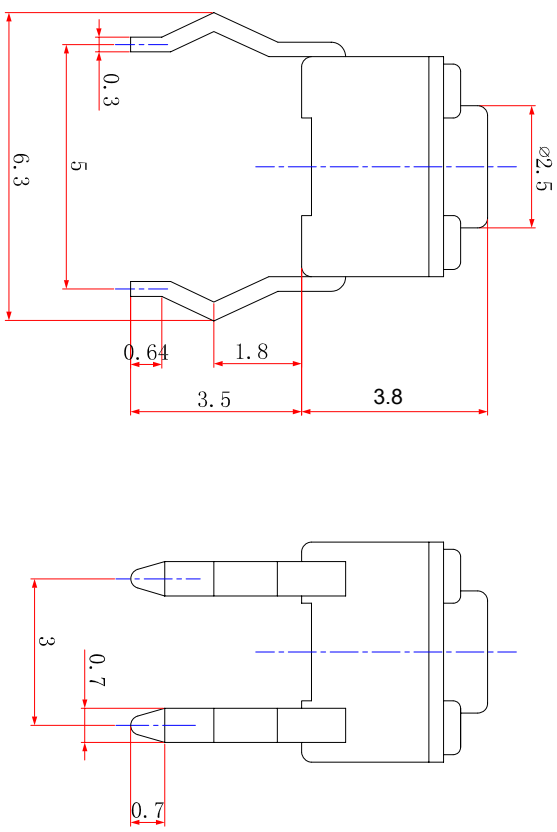
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MODEL

TS4538CJ

|   |   |  |  |
|---|---|--|--|
| 6D  | CONNECTION STRENGTH<br>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<br>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:50000cycles<br>寿命: 50000 次  |
| 7.ENVIRONME NT---RESISTANT EFFICIENCY 耐环境性能 |   |  |  |
| 7A  | CHANGE OF TEMPERATURE<br>温度变化   | The first temperature shall be 70 °C , 3h and changed to-25°C, 0. 5h, 5cycles of above test. 先 70°C, 3h, 然后-25°C, 0. 5h, 如此重复 5 次.   | 1. The appearance should not break. 外观应无损伤.<br>2. Contact resistance ≤ 100 M Ω<br>接触电阻 ≤ 100M Ω  |
| 7B  | HUMIDITY RESISTANT<br>耐湿热   | 40±2°C in temperature and 90-95%RH, Ruring the test time without load; After testing the temperature should be 24h. 经 40±2°C, 相对湿度 90-95%, 试验期间, 开关不动作, 不带电负荷, 试验后恢复到常温 24h. | 3. Insulation resistance ≥ 100 M Ω.<br>绝缘电阻 ≥ 100 M Ω  |
| 8.JOINTING EFFICIENCY 焊接性能                  |   |  |  |
| 8A  | SOLDERABILITY<br>可焊性  | Temperature 260±5°C ; Duration ; 3±0.5S: 温度在 260±5°C, 持续 3±0.5S.   | Solderability part should above 90%<br>可焊部分被焊料覆盖面应在 90% 以上.  |
| 8B  | SOLDER—RESISTANT<br>耐焊剂性  | Warm-up temperature: 100°C, 40S, 焊锡温度 260±5°C, 浸焊时间 5±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<br>耐焊接热  | Jointing temperature: 260 ± 5 °C , Duration of immersion: 5 ± 1S. 焊锡温度 260±5°C, 浸焊时间 5±1S  | efficiency does not break 无损伤开关电气或机械动作性能.  |
| 8D  | NORMAL JOLNTING TIMES<br>正常焊接次数   |  | ≤2times 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 withort 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:-20 to 70°C<br>操作温度的范围: -25 to 70°C   |  |  |
| 9C  | Switch should install in a correct method.<br>开关应按正确的安装方法进行正确安装使用。  |  |  |

| 尺寸范围  | 未注公差值 |
|-------|-------|
| 0~3   | ±0.1  |
| 3~6   | ±0.15 |
| 6~9   | ±0.2  |
| 9~12  | ±0.25 |
| 12~15 | ±0.3  |



| 序号 | 名称 | 材料        | 颜色 | 备注 |
|----|----|-----------|----|----|
| 1  | 嵌件 | 黄铜        | 镀银 |    |
| 2  | 底座 | PPA/PA66  | 黑色 |    |
| 3  | 簧片 | 不锈钢       |    |    |
| 4  | 帽头 | PA6T/PA66 | 黑色 |    |
| 5  | 盖板 | 黄铜        |    |    |

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CUSTOMER 名稱: 4.5插脚型-外形图  
COPY TITLE: 4.5插脚型-外形图

型號: TS4538CJ  
材料: A

圖號: A  
SCALE: 5:1 UNIT: mm A4

| 工程變更通知單<br>EN/DCN NO. | 版次<br>REV | 日期<br>DATE | 說明<br>DESCRIPTION | 改變<br>CHANGE | 承認<br>APPRO. | GENERAL TOLERANCE<br>UNLESS OTHERWISE NOTED | 設計<br>DESIGN | 校閱<br>CHECK | 承認<br>APPRO. |
|-----------------------|-----------|------------|-------------------|--------------|--------------|---|--------------|-------------|--------------|
|                       | PA        | 08/01/09   |                   |              |              |   |              |             |              |