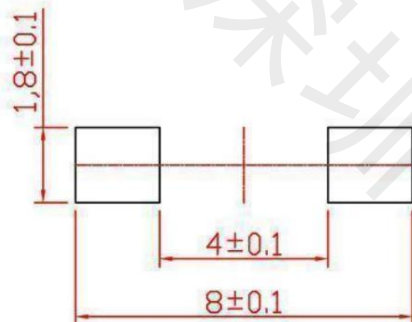
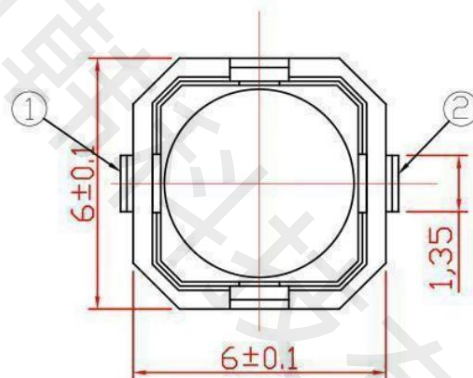
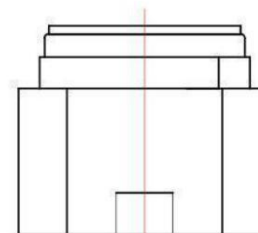
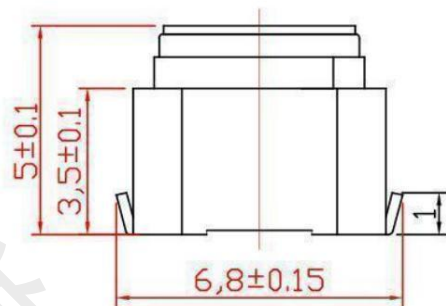




PCB. 焊接图

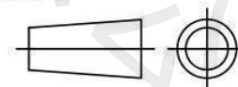


电路图

主要技术规格:

1. 额定值: 50mA DC12V
2. 接触电阻:  $\leq 100\text{m}\Omega$
3. 操作力:  $250 \pm 50\text{gf}$
4. 行程:  $1.5 \pm 0.2\text{mm}$
5. 绝缘电阻:  $\geq 100\text{M}\Omega$
6. 抗电强度: 250V 50HZ 1Min.
7. 寿命: 100,000 Cycles

第一视角



名称: 轻触开关

型号: TS665WS 250gf

| 序号 | 零件名称  | 材料规格 | 数量 | 备注          | 批准 | 罗孝金 | 2020.6.24 | 比例 | mm | 一般公差   | 角度    | ±0.5° |
|----|-------|------|----|-------------|----|-----|-----------|----|----|--------|-------|-------|
| 4  | 引脚、触点 | 磷铜   | 1  | 镀银          |    |     |           |    |    |        |       |       |
| 3  | 基座    | LCP  | 1  | 耐温280℃ (灰色) | 标记 | 处数  | 更改文件号     | 签名 | 日期 | 比例     | mm    | 一般公差  |
| 2  | 弹片    | 磷铜   | 1  | 覆银          | 设计 | 李春风 | 2020.6.24 | 单位 | mm | >0.5~2 | ±0.10 |       |
| 1  | 按钮    | LCP  | 1  | 耐温280℃ (灰色) | 审核 | 钟华华 | 2020.6.24 | 重量 |    | >2~5   | ±0.25 |       |
|    |       |      |    |             |    |     |           |    |    | >5~10  | ±0.30 |       |
|    |       |      |    |             |    |     |           |    |    |        |       |       |



深圳市首韩科技有限公司



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SHENZHEN SHOUHAN TECHNOLOGY CO., LTD

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## 承 认 书

### SPECIFICATION FOR APPROVAL

产 品 编 码

Material code:

产品名称 Project:

轻触开关

规格型号 Part No:

TS665WS 250gf

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 SWITCHE(轻触开关)                                                                                                                                               |                                                                                    |
| MODEL                         |                                    | 型号: TS665WS 250gf                                                                                                                                                   |                                                                                    |
| 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<br>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 $\Omega$ min<br>100 兆欧以上.                                                     |
| 5B                            | WITHSTAND VILTAGE<br>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<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.                                           | 100 m $\Omega$ Max<br>(100 m $\Omega$ 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 between 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:1.5 $\pm$ 0.2mm                                                               |
| 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 $\pm$ 50gf.<br>按键的开关驱动力为250 $\pm$ 50gf |

## 产 品 规 格 书

### PRODUCT SPECIFICATION

- 2 -

|                                             |                                                                                                                                                                                                                                      |                                                                                                                                                                                                            |                                                                                                                                              |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 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:100000cycles<br>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℃ ,2h and changed to-30℃ ,2h,5c ycles of above test . 先 65℃ ,2h,然后 -30℃ ,2h, 如此重复 3 次.                                                                                    | 1. The appearance should not break. 外观应无损伤.<br>2. Contact resistance $\leq 100 \text{ M } \Omega$ 接触电阻 $\leq 100 \text{ M } \Omega$          |
| 7B                                          | HUMIDITY RESISTANT 耐湿热                                                                                                                                                                                                               | 40 $\pm 2^{\circ}\text{C}$ in temperature and 95%RH ,Ruring thetest time without load; After testing the temperature should be 48h.经 40 $\pm 2^{\circ}\text{C}$ ,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 $\geq 100 \text{ M } \Omega$ . 绝缘电阻 $\geq 100 \text{ M } \Omega$                                                    |
| 8.IOINTING EFFICIENCY 焊接性能                  |                                                                                                                                                                                                                                      |                                                                                                                                                                                                            |                                                                                                                                              |
| 8A                                          | SOLDERABILITY<br>可焊性                                                                                                                                                                                                                 | Temperature260 $\pm 5^{\circ}\text{C}$ ;Duration;3 $\pm 0.5\text{S}$ :温度在 260 $\pm 5^{\circ}\text{C}$ ,持续 3 $\pm 0.5\text{S}$ .                                                                            | Solderability part should above 90% 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℃,40S,焊锡温度 260 $\pm 5^{\circ}\text{C}$ ,浸焊时间 3 $\pm 0.5\text{S}$ .                                                                                                                  | Froth height of assist solder should under board and switch electric and mechanical efficien- cy 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 $\pm 5^{\circ}\text{C}$ ,Duration of immersion: 5 $\pm 1\text{S}$ .焊锡温度 260 $\pm 5^{\circ}\text{C}$ ,浸焊时间5 $\pm 1\text{S}$                                                       | 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                                                                                                                                                                                                      |                                                                                                                                                                                                            | $\leq 2\text{times}$ 小于 2 次                                                                                                                  |
| 9.NOTES                                     |                                                                                                                                                                                                                                      |                                                                                                                                                                                                            |                                                                                                                                              |
| 9A                                          | The whole boxes of switch should keep in the temperature -30--80℃ and less than 80%RH withort acidic,alkalescence,caustic gas in the environment of the storage.<br>整箱包装的开关,应在温度为-30--80℃ ,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:-40 to 80℃<br>操作温度的范围: -40 to 80℃                                                                                                                                                                        |                                                                                                                                                                                                            |                                                                                                                                              |
| 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。                                                                                                                                                                   |                                                                                                                                                                                                            |                                                                                                                                              |