



深圳市首韩科技有限公司

SHENZHEN SHOUHAN TECHNOLOGY CO., LTD

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承 认 书
SPECIFICATION FOR APPROVAL

客 户 Customer:

产品名称 Project:

自锁开关


规格型号 Part No:

5.8 ZSGT

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 | 张栋 | |
| 批准/Approved | 罗孝金 | |



1. 一般特性 General Characteristics

- 1.1 额定值(Rating Value): DC30V/0.1A
- 1.2 工作温度(Work Temperature Range): $-10^{\circ}\text{C} \sim 70^{\circ}\text{C}$
- 1.3 存贮温度(Store Temperature Range): $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$
- 1.4 正常测试条件(未有特殊说明量测在以下条件进行):

General test condition (Tests and measurements shall be made under the following standard conditions unless otherwise specified):

正常温度: $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$ 相对湿度: 45%~85% RH 气压: 8,600~10,600 帕
Temperature: $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$ Relative humidity: 45%~85% Air pressure: 8,600~10,600 pa

2. 产品外观及尺寸要求 Appearance & Dimension Requirement

- 2.1 产品外形结构紧凑, 无配合不良.
The structure of product is compact, and assembly of parts has no badness.
- 2.2 产品塑胶部件无严重缩水、披锋、欠注、斑点、破损或变形现象.
The plastic parts of product have no serious defects such as very serious shrink, scarcity, fleck, disrepair, transmutation, etc.
- 2.3 产品引脚和外壳无严重氧化、脏污、变形、毛刺或电镀不良.
Lead feet and shell have no serious defects such as oxidation, smudge, disrepair, burr, defects on plating.
- 2.4 开关操作顺畅, 节奏感强, 无明显卡塞现象.
Operating switch is unhindered, rhythmmed, and there is not palpable clag.
- 2.5 产品结构及尺寸参见产品规格图纸.
Construction and dimensions: Refer to individual product drawing.

3. 电气特性 Electronic Characteristics

| No. | 项 目 Item | 测 试 方 法 Test Method | 测 试 设 备 Equipment | 特 性 要 求 Requirements |
|-----|--------------------------------------|--|---------------------------------------|--|
| 3.1 | 接触电阻 Contact Resistance | 在低电流 ($\leq 100\text{mA}$) 条件下测试. Measured at low current (100mA or less). | 低电阻测试仪 Low Resistance Meter | 100m Ω max |
| 3.2 | 绝缘阻抗 Insulation Resistance | 测试相邻引脚之间, 引脚与外壳之间的绝缘阻抗(DC 500V). Measurement shall be made between adjacent terminals, between terminal and shell(DC 500V). | 绝缘测试机 Insulation Resistance Tester | 100M Ω min |
| 3.3 | 耐压测试 Dielectric Withstand Voltage | 输入一定电压(50-60Hz, 电压值 AC 500V)1 分钟, 漏电流为 2mA, 测试邻近端子间. Apply certain voltage (50-60Hz, AC 500V) for 1 minute between adjacent contacts of the connector with 2mA leakage sensitivity. | 耐压测试机 Puncture Tester | 没有绝缘破坏. 电弧等异常. No arcing, break down and damaging insulation. |

4. 机械特性 Mechanical Characteristics

| No. | 项目 Item | 测试方法 Test Method | 测试设备 Equipment | 特性要求 Requirements |
|-----|------------------------|---|------------------------------------|----------------------|
| 4.1 | 操作力 Operation Force | <p>逐渐施力操作开关按键，测量开关到达全部工作行程时所需的最大操作力度。</p> <p>Operate the keystroke of the switch and then increase press strength gradually, Measured maximum operation force while the travel of the switch is full.</p> | <p>测力计</p> <p>Force Gauge</p> | 150±50gf |
| 4.2 | 行程 Full travel | <p>垂直操作开关按键，量测开关顶端最大移动距离。</p> <p>Operate the keystroke of the switch vertically, the travel distance of keystroke moving from its free position to maximum moving distance shall be measurement.</p> | <p>游标卡尺</p> <p>Vernier Caliper</p> | 2.0±0.15mm |

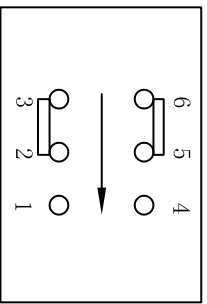
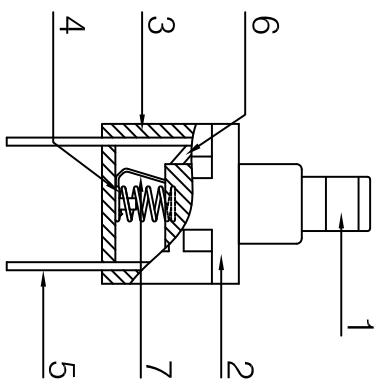
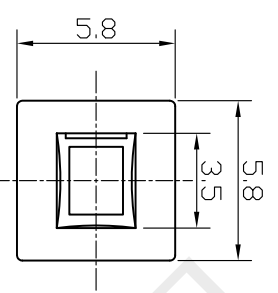
5. 可靠性测试 Reliability trial

| No. | 项目 Item | 测试方法 Test Method | 测试设备 Equipment | 特性要求 Requirements |
|-----|------------------------------|---|---------------------------------|---|
| 5.1 | 可焊性试验 Solder ability Test | <p>端子顶部被浸入焊锡炉中，温度为 230±5℃，时间 5±1 秒。</p> <p>The top of the terminals shall be dipped in the solder bath at 230±5℃ for 5±1 seconds.</p> | <p>控温锡炉</p> <p>Solder Stove</p> | <p>引脚至少 95%上锡。</p> <p>Ninety-five percent of terminals shall be dipped.</p> |
| 5.2 | 寿命试验 Operation Life | <p>开关在寿命试验设备上以约 90 次 / 分的速度连续被操作，具体次数见规格图示。</p> <p>Switch shall be operated continuously at about 90 cycles /min without load.</p> | <p>寿命试验机</p> <p>Life Tester</p> | <p>寿命：10,000 次</p> <p>实验后：</p> <p>绝缘电阻：10MΩ Min</p> <p>操作力：变化在±50%内</p> <p>开关外观及结构无损坏。</p> <p>Life test:10,000cycles</p> <p>After test:</p> <p>Insulation resistance: 10MΩ Min</p> <p>Operating force: Change should be within ±50% of specified value.</p> <p>No abnormalities shall be recognized in appearance and construction.</p> |

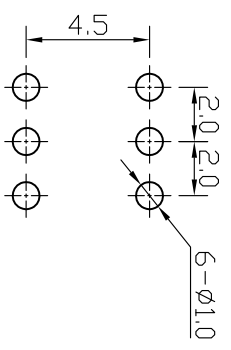
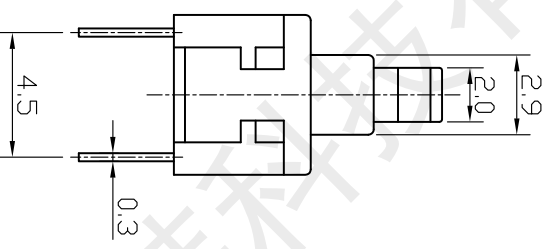
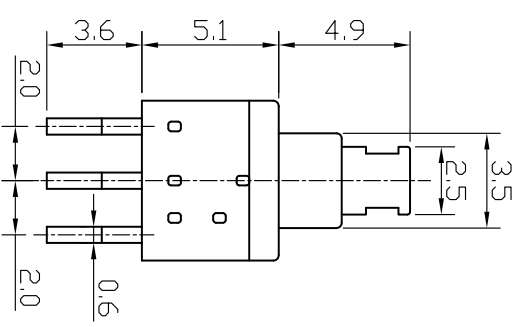
5. 可靠性测试 Reliability trial

| No. | 项 目 Item | 测试方法 Test Method | 测试设备 Equipment | 特性要求 Requirements |
|-----|--------------------------------------|---|--|---|
| 5.3 | 耐焊接热 Resistance to Soldering heat | 端子焊接部分浸入焊炉，焊炉温度 $260 \pm 5^{\circ}\text{C}$ ，焊接时间 5 ± 1 秒。（焊接时不可于端子施加外力）。 Terminals shall be dipped in the solder bath at $260 \pm 5^{\circ}\text{C}$ for 5 ± 1 seconds without additional force for terminals. | 控温锡炉 Solder Stove | 本体无变形，能满足于机械、电气性能。 Appearance should be not damaged, electrical and mechanical characteristics shall be satisfied. |
| 5.4 | 耐高温测试 Resistance to Heat Test | 放置在温度 $80 \pm 2^{\circ}\text{C}$ 环境中 96 小时后，再置于正常条件下 1 小时后测定。 The switch shall be stored at a temperature of $80 \pm 2^{\circ}\text{C}$ for 96 hours, Measurements shall be made after it be subjected to the standard conditions for 1 hour. | 高低温 试验机 High & Low Temperature Tester | 外观，机械及电气性能均符合要求。 Appearance, electrical and mechanical characteristics shall be satisfied. |
| 5.5 | 耐低温测试 Resistance to Cold Test | 放置在温度 $-25 \pm 2^{\circ}\text{C}$ 环境中 96 小时后，再置于正常条件下 1 小时后测定。 The switch shall be stored at a temperature of $-25 \pm 2^{\circ}\text{C}$ for 96 hours, Measurements shall be made after it be subjected to the standard conditions for 1 hour. | 高低温 试验机 High & Low Temperature Tester | 外观，机械及电气性能均符合要求。 Appearance, electrical and mechanical characteristics shall be satisfied. |
| 5.6 | 耐湿性测试 Resistance to Humidity Test | 放置于温度 $40 \pm 2^{\circ}\text{C}$ ，相对湿度为 $90 \sim 96\%$ 环境中 96 小时后，再置于正常条件下 1 小时后测定（注意要擦去水滴）。 The switch shall be stored at a temperature of $40 \pm 2^{\circ}\text{C}$, relative humidity $90 \sim 96\%$ for 96 hours, Measurements shall be made after it be subjected to the standard conditions for 1 hour (Wipe out water drip). | 恒温恒湿箱 Temperature & Humidity Tester Chamber | 外观，机械及电气性能均符合要求。 Appearance, electrical and mechanical characteristics shall be satisfied. |
| 5.7 | 盐雾实验 Salt Mist Test | 试件在下述实验后测量： 1. 温度： $35 \pm 5^{\circ}\text{C}$ 2. 盐溶液浓度： $5 \pm 1\%$ （质量百分比）， 3. 试验时间：24 小时， 4. 试验后，将盐沉积物用水冲掉。 The switch shall be checked after following test: 1. Temperature: $35 \pm 5^{\circ}\text{C}$ 2. Salt solution: $5 \pm 1\%$ (Solids by mass) 3. Duration: 24 hours, 4. After immersing, salt deposit shall be removed by running water. | 盐雾 试验机 Salt Spray Tester | 在金属件上没有严重腐蚀斑点。 No remarkable corrosion shall be recognized in metal parts. |

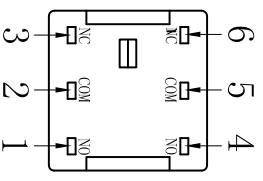
ABIDE BY ROHS



Circuit Diagram



PCB Layout Recommended



| | | | | | | |
|----------------|----------|---------|-------------------------|----------------|-----------|--------|
| 7 | Hookpin | 1 | Carbon Steel | | | |
| 6 | Contact | 2 | Copper-Silver Composite | | | |
| 5 | Terminal | 6 | Brass | Plating silver | | |
| 4 | Spring | 1 | Stainless Steel | | | |
| 3 | Base | 1 | PBT | Gray | UL 94HB | |
| 2 | Cover | 1 | POM | Black | UL 94HB | |
| 1 | Keystoke | 1 | POM | White | UL 94HB | |
| ITEM PART NAME | | TER'NO. | QTY. | MATERIAL | FINISHING | REMARK |

| | | | | |
|-----------|-----|------------|-----------------------|--|
| APPROVALS | | DATE | TITLE: | |
| DRAWN | 李春风 | 2005.10.29 | 5.8 ZSGT | |
| CHECKED | 张栋 | 2005.10.29 | | |
| APPROVALS | 罗孝金 | 2005.10.29 | PART NO. CPG585110D01 | |

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| ECN NO. | REV. | DATE. | DESCRIPTION. | CHANGE. | CHECK. | APPRO. | TOLERANCES ARE | ANGLE | UNIT: | SCALE: | PROJ. | SHEET |
| | A | | NEW | | | | $30^{\circ} \leq \angle < 90^{\circ}$ ± 0.30 $90^{\circ} \leq \angle < 120^{\circ}$ ± 0.20 $120^{\circ} \leq \angle < 150^{\circ}$ ± 0.15 $150^{\circ} \leq \angle < 180^{\circ}$ ± 0.10 | $\pm 2^{\circ}$ | mm | 3:1 | | 1 OF 1 |