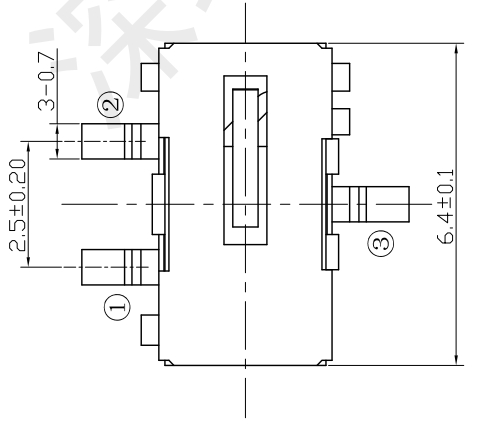
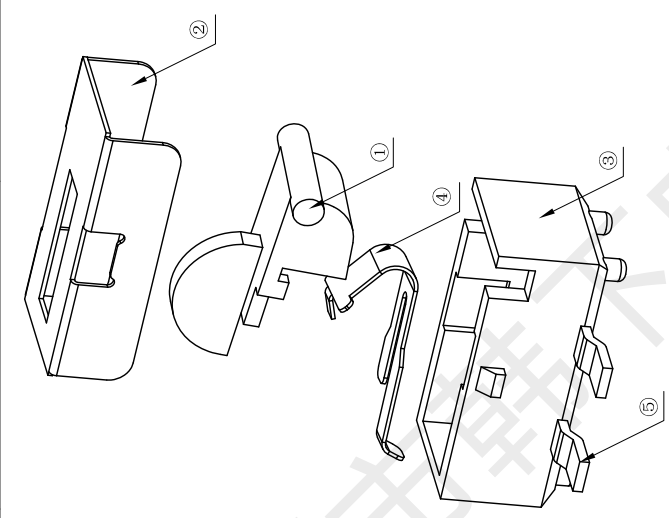
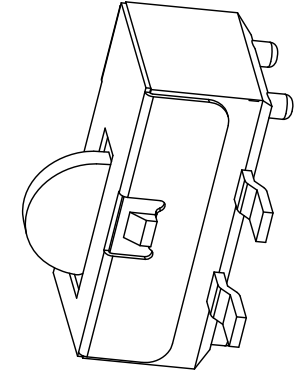
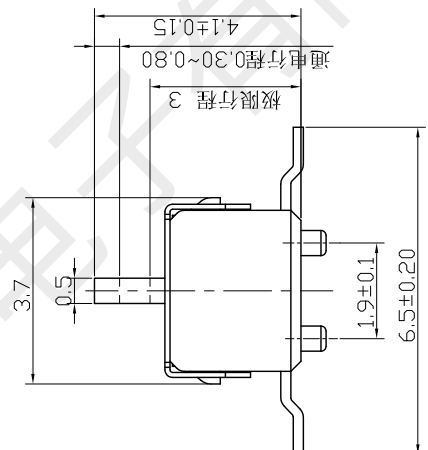


| | | | | |
|---|---|---|---|---|
| A | B | C | D | E |
| 1 | 2 | 3 | 4 | 5 |
| A | B | C | D | E |
| 1 | 2 | 3 | 4 | 5 |
| A | B | C | D | E |
| 1 | 2 | 3 | 4 | 5 |
| A | B | C | D | E |
| 1 | 2 | 3 | 4 | 5 |
| A | B | C | D | E |
| 1 | 2 | 3 | 4 | 5 |
| 6 | 6 | 6 | 6 | 6 |

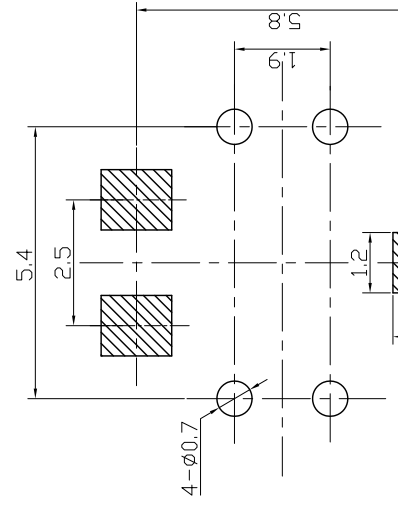


垂直方向操作位置 0.89±0.50
水平方向操作位置 3.2

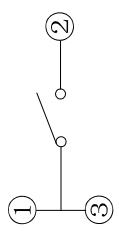


技术要求

- 额定电压: 16V (DC)
额定电流: 0.5A
- 开关绝缘电阻: $\geq 50M\Omega$
- 开关接触电阻: $\leq 200m\Omega$
- 耐压: AC 250V (50Hz)/min
- 动作力: $30g \pm 20g$
- 开关的使用寿命要求 ≥ 20000 次循环。
- 未注尺寸公差按 GB/T1804-m 级精度要求。



安装尺寸图



电路原理图

| 序号 | 零件名称 | 数量 | 材质、规格 | 颜色、镀层 | 备注 |
|----|------|----|--------------|-------|----|
| ⑥ | 焊脚 | 3 | 黄铜 t=0.20mm | 镀银 | |
| ④ | 弹片 | 1 | 磷铜 t=0.07mm | 镀银 | |
| ③ | 基座 | 1 | LCP | 黑色 | |
| ② | 铁壳 | 1 | 不锈钢 t=0.10mm | 黑色 | |
| ① | 接柄 | 1 | PA46 | 黑色 | |

深圳市韩下电子有限公司
HANXIA

限位开关

HX KFC-V-105S-2

| | |
|----|-----------|
| 设计 | 黄彬 |
| 日期 | 2021-9-17 |
| 审核 | 张伟 |
| 日期 | 2021-9-17 |
| 批准 | 罗小春 |
| 日期 | 2021-9-17 |

版本:A1 单位:mm 比例:1:1



深圳市韩下电子有限公司

Shenzhen Hanxia Electronic Co., Ltd
Tel: 0755-33819206 Fax: 0755-27597491

承 认 书

SPECIFICATION FOR APPROVAL

客 户 Customer:

产品名称 Project:

限位开关

规格型号 Part No:

HX KFC-V-105S-2

贵公司承认印 Approval signatures

| 料 号/Part No. | 签 章/Signatures |
|--------------|----------------|
| | |

日期 Date:

| | | |
|-------------|-----|--|
| 拟制/Drawn | 黄彬 |  |
| 审核/Check | 张伟 | |
| 批准/Approved | 罗小春 | |



规格书 SPECIFICATION

1. 一般特性 General Characteristics

- 1.1 额定值(Rating Value): DC 16V 50mA
- 1.2 工作温度(Work Temperature Range): $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$
- 1.3 存储温度(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 | 200m 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。 Measurement shall be made between adjacent terminals, between terminal and shell. | 绝缘测试机 Insulation Resistance Tester | 50M Ω MIN |
| 3.3 | 耐压测试 Dielectric Withstand Voltage | 输入一定电压 (50~60Hz, 电压值 AC 250V) 1 分钟, 漏电流为 2mA, 测试邻近端子间。 Apply certain voltage (50~60Hz, AC 250V) 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> | 测力计 Force Gauge | 30±20gf |

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 260±5℃，时间 5±1 秒。</p> <p>The top of the terminals shall be dipped in the solder bath at 260±5℃ for 5±1 seconds.</p> | 控温锡炉 Solder Stove | <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> | 寿命试验机 Life Tester | <p>寿命:20000 次</p> <p>实验后:</p> <p>绝缘电阻: 10MΩ Min</p> <p>操作力: 变化在±50%内开关外观及结构无损坏。</p> <p>Life test:20000 cycles</p> <p>After test, 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> |
| 5.3 | 耐焊接热 Resistance to Soldering heat | <p>端子焊接部分浸入焊炉，焊炉温度 260± 5℃，焊接时间 5±1 秒。(焊接时不可于端子施加外力)。</p> <p>Terminals shall be dipped in the solder bath at 260±5℃ for 5±1 seconds without additional force for terminals.</p> | 控温锡炉 Solder Stove | <p>本体无变形，能满足于机械、电气性能。</p> <p>Appearance should be not damaged, electrical and mechanical characteristics shall be satisfied.</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 |
|-----|--------------------------------------|---|--|---|
| 5.4 | 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 $-20\pm 2^{\circ}\text{C}$ 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 $-20\pm 2^{\circ}\text{C}$ 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. |