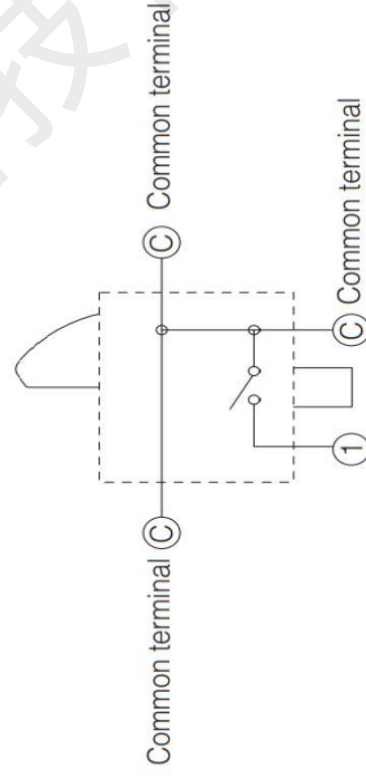
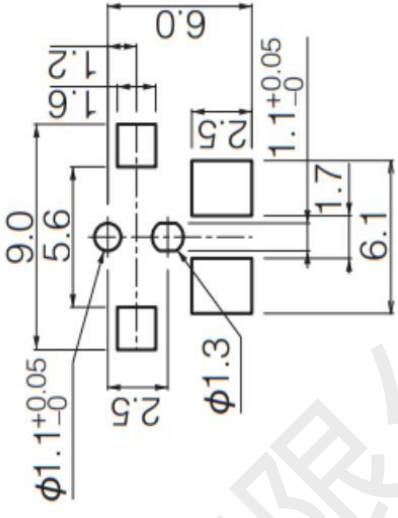
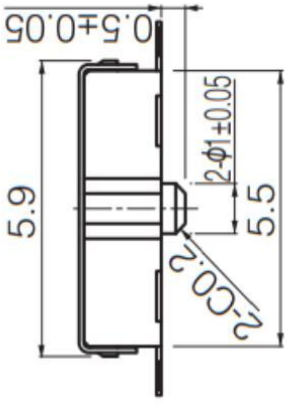
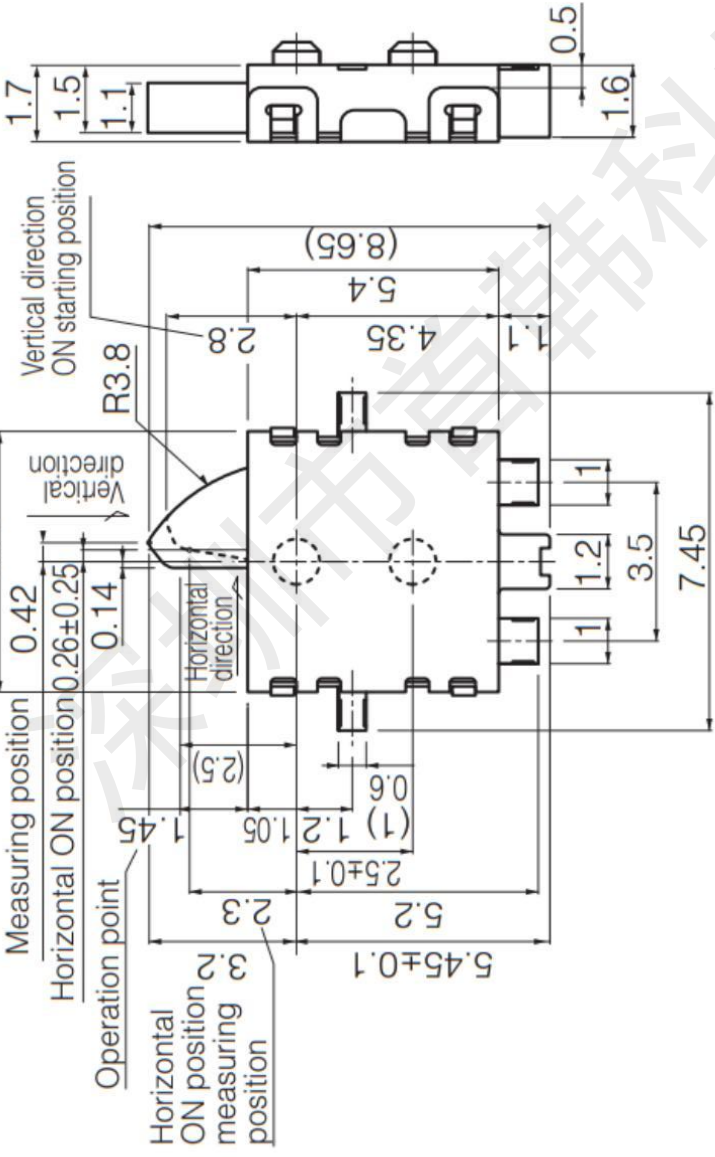


公差等级 m(中等级)	0.5~3	>3~6	>6~30	>30~120
	±0.1	±0.1	±0.2	±0.3

尺寸分段	
------	--



- 技术要求
- 额定负荷: DC 5V 0.05~10mA
  - 绝缘电阻:  $\geq 100M\Omega$
  - 耐电压: AC100V 50Hz/1min
  - 电器寿命: 50000次
  - 环境温度:  $-10^{\circ} \sim +60^{\circ}$
  - 相对湿度:  $40^{\circ}C \leq 95\%$
  - 接触电阻:  $\leq 1\Omega$
  - 接触行程: 3.2 (2.15) mm
  - 动作力:  $\leq 0.3N$  (31gf)
  - 各零件无明显飞边, 配合要紧密, 不得有明显松动。
  - 未注公差尺寸均按GB1804-m级精度要求。

PWB mounting hole for reference

5	Terminal 接触端子	2	Brass	黄铜	Ag Plated 镀银	±0.2	Dimensional	±3°	Drawn	李春风	Checked	钟华华	Approved	罗孝金
4	Housing 底座	1	PA	PA	Black 黑色	Angular	Projection							
3	Spring 弹簧	1	Phosphor Bronze 磷铜	磷铜	Ag Plated 镀银									
2	Actuator 活动柄	1	PA	PA	Black 黑色									
1	Cover 盖子	1	Stainless Steel 不锈钢	不锈钢	Natural 原色									
No. Part Name 零件名称		QTY 数量	Material 材料	Finishing 备注										
<b>深圳市首韩科技有限公司</b>														
Title 检测开关		Model SH-3IR11T												
P/N		Date												
Unit:mm		REV.:A		Scale:5:1		Size:A4								



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:

限位开关

\_\_\_\_\_

规格型号 Part No:


SH-31R11T

\_\_\_\_\_

### 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	

规 格 书  
SPECIFICATION

## 1. 一般特性 General Characteristics

- 1.1 额定值(Rating Value): DC 5V 10mA
- 1.2 工作温度(Work Temperature Range):  $-10^{\circ}\text{C} \sim 60^{\circ}\text{C}$
- 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 &amp; 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	$1\ \Omega$ 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	$100\text{M}\ \Omega$ MIN
3.3	耐压测试 Dielectric Withstand Voltage	输入一定电压(50~60Hz,电压值 AC 100V)1分钟,漏电流为 2mA,测试邻近端子间。 Apply certain voltage (50~60Hz, AC 100V) 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	0.3N MAX

## 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 <math>260 \pm 5^\circ\text{C}</math>，时间 <math>5 \pm 1</math> 秒。</p> <p>The top of the terminals shall be dipped in the solder bath at <math>260 \pm 5^\circ\text{C}</math> for <math>5 \pm 1</math> 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: 50000 次</p> <p>实验后:</p> <p>绝缘电阻: <math>10\text{M}\Omega</math> Min</p> <p>操作力: 变化在 <math>\pm 50\%</math> 内开关外观及结构无损坏。</p> <p>Life test: 50000 cycles</p> <p>After test, Insulation resistance: <math>10\text{M}\Omega</math> Min</p> <p>Operating force: Change should be within <math>\pm 50\%</math> 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 <math>260 \pm 5^\circ\text{C}</math>，焊接时间 <math>5 \pm 1</math> 秒。(焊接时不可于端子施加外力)。</p> <p>Terminals shall be dipped in the solder bath at <math>260 \pm 5^\circ\text{C}</math> for <math>5 \pm 1</math> 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 90~96% 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 90~96% 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.

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