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# DESCRIPTION 变更记录

Model Type: 类型型号:	
Part No.: 料号:	

No.: 序号:	REV: 版本:	MARK: 标记:	DESCRIPTION: 变更记录:	CHANGED: 变更人:	DATE: 日期:

# SPECIFICATION 规格书

<b>Model Type:</b> 类型型号:	<b>TACT SWITCH</b>	<b>WRITTEN</b> 制作	<b>CHECKED</b> 审核	<b>APPROVED</b> 批准
<b>Part No.:</b> 料号:				

## 1. Scope / 适用范围

This specification is applied to FLIP SWITCH SERIES which is used for electric products.  
本规格书适用于电子产品上的轻触开关系列。

## 2. Rated / 额定值

2-1. Practical temperature range: -10°C to +60°C

适用温度范围: -10°C to +60°C

Humidity range: 85% RH.MAX.

湿度范围: 85% RH.MAX.

2-2. Preservation temperature range: -40°C to +80°C

保存温度范围: -40°C to +80°C

Humidity range: 85% RH.MAX.

湿度范围: 85% RH.MAX.

2-3. Rated voltage and current: 12V DC , 50mA

额定电压和额定电流: 12V DC , 50mA

2-4. Appearance : No scratches、soil、rust or discoloration shall be observed.

外观: 表面无划伤、脏污、生锈或变色等现象。

## 3. Construction / 说明

3-1.Outline And Dimension / 外观和尺寸

Outline and dimension of the switch shown be as attached assembled drawing.

开关的外观和尺寸应与附件图纸相符。

3-2.Part And Material 部件和材料

The parts and materials shown be in material identification sheet and certification of material.

部件和材料应与材料清单规格一致。

## 4. Electrical efficiency / 电气特性

Item 项目	Property 特性	Test condition 测试条件	Performance 判定
4-1	Withstand voltage 耐电压	The switch shall be withstanding 250V (AC 50/60Hz RMS) between mutually insulated pin contacts for one minute. 在相互绝缘的接触角之间, 开关能承受250V电压(AC 50/60Hz RMS)并持续1分钟。	No dielectric breakdown shall occur.
4-2	Insulation resistance 绝缘阻抗	Using a 500 volts DC insulation resistance meter between mutually insulated terminals or metal parts. 在相互绝缘的端子之间或金属部件之间, 插座应能承受施加的500V直流电压。	100 MΩ MIN. 最小100 兆欧
4-3	Contact resistance 接触阻抗	Between terminals of the jack to be made a closed circuit. 插座两个端子之间组成一个闭合的回路	100 mΩ MAX. 最大100 毫欧

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## 5. Mechanical efficiency 机械特性

Item 项目	Property 特性	Test condition 测试条件	Performance 判定
5-1	Press force 动作力	Measured with force-measuring device . Push the button slowly. 用克力计测试。慢慢地按下按钮。	1.6N(About 160gf) to 2.1N(About 210kgf) Use any press force 1.6N(大约 160gf) to 2.1N(大约 210gf) 任意选用
5-2	Terminal strength 端子强度	Every terminal shall be capable of withstand a force of 30N (About 3kgf) for 5 seconds. 每个端子都应能承受30N(大约3kgf)的力，并持续15秒。	Without loosing and breakdown, but deformation of terminal is accepted. 无松脱、破损等现象，但是端子变形可以接受。

## 6. Durability /

Item 项目	Property 特性	Test condition 测试条件	Performance 判定
6-1	Life test 寿命测试	The life test shall consist of 20000 cycles of pushing the button, at a rate of 20 to 30 cycles per minutes under no load. 在没有负载的条件下，以每分钟20-30次的频率，均速按下按钮20000次。	The switch shall be comply with paragraphs 4-1 and 5-2. After life test, Press force: 1.6N(About 160gf) to 2.5N(About 250gf) Insulation resistance: 10 M $\Omega$ or more Contact resistance: less than 200 m $\Omega$ 能满足项目4-1和5-2。 寿命测试后， 动作力： 1.6N(大约160gf)至2.5N(大250gf) 绝缘电阻：最小10兆欧 接触电阻：不超出200毫欧

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## 7. Solderability / 焊锡试验

Item 项目	Property 特性	Test condition 测试条件	Performance 性能
7-1	Resistance to soldering heat test 耐焊性试验	<p>The switch terminal shall be dipped in solder under the condition as specified below:                      Temperature of solder: 260±5°C.                      Dip time: 3±0.5 seconds.</p> <p>端子浸入锡炉里，按以下条件测试：                      焊锡温度:260±5°C                      浸入时间:3±0.5 秒</p>	<p>The switch shall be comply with paragraphs 4-1 and 5.                      Insulation resistance: 10 MΩ or more                      Contact resistance: less than 100 mΩ</p> <p>能满足项目4-1和5。                      绝缘电阻：最小10兆欧                      接触电阻：不超过200毫欧</p>
7-2	Soldering test 可焊性试验	<p>Temperature of solder: 230±5°C.                      Time of dip: 3±0.5 seconds.                      Length of dip: 2.5 mm( from top of terminal).</p> <p>焊锡温度: 230±5°C.                      浸入时间: 3±0.5 秒                      浸入深度: 2.5 mm(从端子顶部开始).</p>	<p>Areas of soldering shall be capable of 75% or more of dip terminal area.                      端子顶端沾锡面积要求达到75%以上.</p>

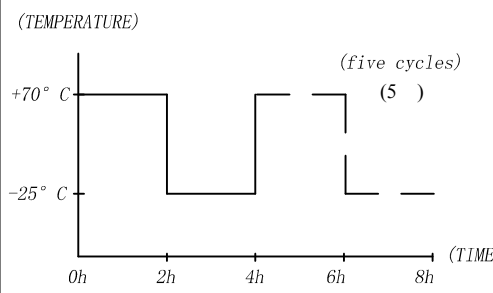
## 8. Environment test / 环境试验

Item 项目	Property 特性	Test condition 测试条件	Performance 性能
8-1	Cold test 低温测试	<p>The switch shall be subjected to temperature of -20±2°C for a period of 96 hours ,then shall be allowed to remain in room ambient conditions for 60 minutes.</p> <p>将开关放置在-20±2°C低温条件下持续96小时，然后在室温条件下静置60分钟。</p>	<p>The switch shall be comply with paragraphs 4-1 and 5.                      Insulation resistance:                      100 MΩ or more                      Contact resistance:                      less than 100 mΩ</p> <p>能满足项目4-1和5。                      绝缘电阻：最小100兆欧                      接触电阻：不超过100毫欧</p>
8-2	Heat test 高温试验	<p>The switch shall be subjected to temperature of 70±2°C for a period of 96 hours ,then shall be allowed to remain in room ambient conditions for 60 minutes.</p> <p>将开关放置在70±2°C高温条件下持续96小时，然后在室温条件下静置60分钟。</p>	

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Item 项目	Property 特性	Test condition 测试条件	Performance 性能
8-3	Humidity test 耐湿试验	<p>The switch shall be subjected to temperature of <math>40\pm 2^{\circ}\text{C}</math> and relative humidity of 90% to 95% for a period of 96 hours. Upon completion of the exposure, dew drops shall be blown out and removed from the jack, after which the switch shall conditioned at room ambient conditions for 30 minutes.</p> <p>将开关放置在温度为<math>40\pm 2^{\circ}\text{C}</math>，相对湿度为90~95%的环境下持续96小时。完成以上事项后，除去插座上的水珠，然后在室温条件下静置30分钟。</p>	<p>The switch shall be comply with paragraphs 4-1 and 5.</p> <p>Insulation resistance: <math>10\text{ M}\Omega</math> or more</p> <p>Contact resistance: less than <math>200\text{ m}\Omega</math></p> <p>能满足项目4-1和5。 绝缘电阻：最小10兆欧 接触电阻：不超过200毫欧</p>
8-4	Temperature cycling test 温度循环试验	<p>The switch shall be subjected to conditions as shown in below, and then shall returned and allowed to remain in ambient condition for 30 minutes.</p> <p>将开关放置于如下所示条件下进行试验，然后在室温条件下放置30分钟。</p> <p>(TEMPERATURE)</p>  <p style="text-align: center;">(five cycles) (5)</p> <p style="text-align: right;">(TIME)</p>	<p>The switch shall be comply with paragraphs 4-1 and 5.</p> <p>Insulation resistance: <math>100\text{ M}\Omega</math> or more</p> <p>Contact resistance: less than <math>100\text{ m}\Omega</math></p> <p>能满足项目4-1和5。 绝缘电阻：最小100兆欧 接触电阻：不超过100毫欧</p>

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## 9. Test condition / 测试条件

The test and measurement, unless otherwise specified, shall be carry out at a temperature of 5°C~35°C, ,relative humidity of 45%~85%, and atmospheric pressure of 86kPa~106kPa.

However, when any doubt arises on the judgment value under it, the test and measurement shall be carry out a temperature of 20±2°C, relative humidity of 60%~70%, and atmospheric pressure of 86kPa~106kPa.

除非另有指定，否则测试和测量温度在5°C~35°C，相对湿度在45%~85%，气压在86kPa~106kPa条件下进行。

当在这个条件下判定出现疑问时，测试和测量在20±2°C，相对湿度60%~70%，气压在86kPa~106kPa条件下进行。

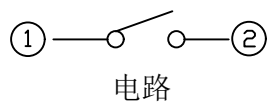
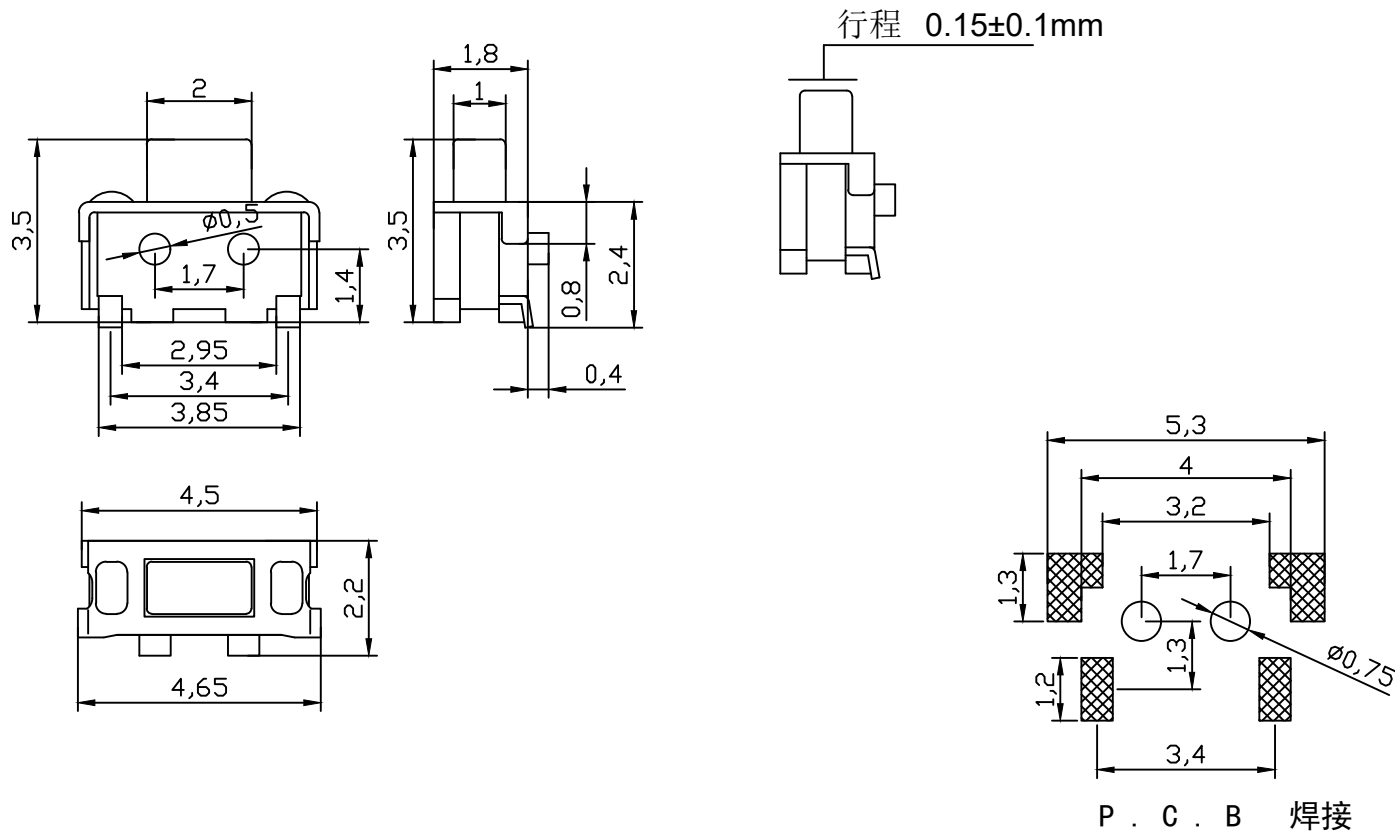
## 10. Amendment / 变更修正

When the amendment of this specification comes into necessity, it shall made by the mutual consultation and agreement between manufacture and customer.

当有必要对规格书进行变更修正时，应该在制造商和客户共同商议及同意后才可以进行。

This specification is state with Chinese & English, Chinese is preferential while doubt in interpretation.

\*操作力：180gf



名称	轻触开关		设计						
型号	2X4		制造				端子(注塑部件)	黄铜(镀银)	
			审核				基座	LCP(白色)	
比例	5:1	单位	mm	日期		UP TO 5	±0.2	弹片	不锈钢复银
						ABOVE 5~30	±0.3		
								推柄	LCP(黑色)
								盖子	黄铜(镀银)
								零件	材料