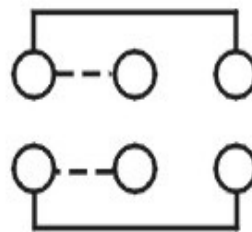
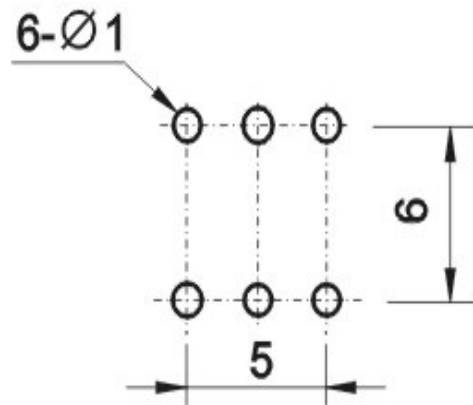
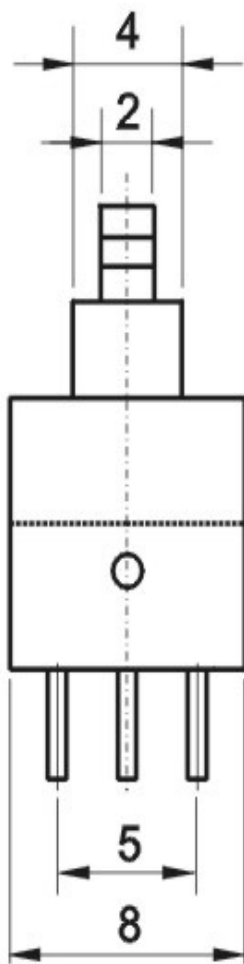
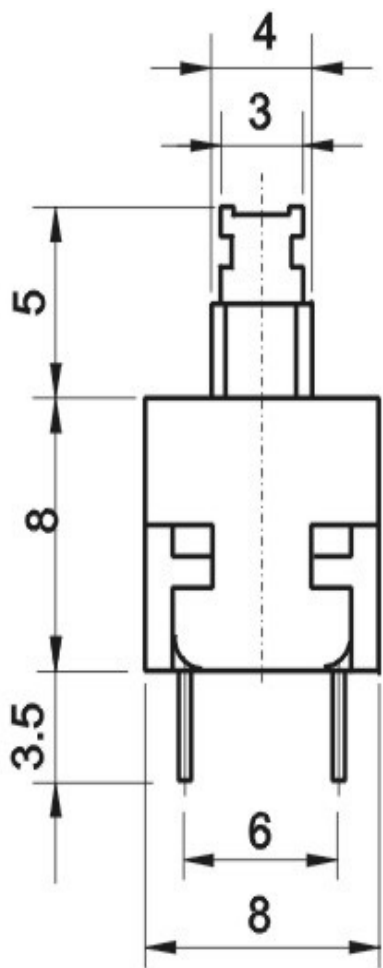


CAD FILE:



### SPECIFICATION

Temperature	-40-+70
Rated Load	DC50V 0.5A
Contact Resistance	0.02
Insulation Resistance	100M
Withstand Voltage	AC 250V(50Hz)/min
Actuating Force	100-350g
Life	100000

Memo:

TOLERANCE UNLESS SPECIFIED			
WITHIN: OVER :			
	ISSUE	DATE	

TITLE £ ° UNIT:mm

MODEL£ PBS-2202 SCALE:5:1

东莞市运发实业有限公司

# 規 格 書

## SPECIFICATION

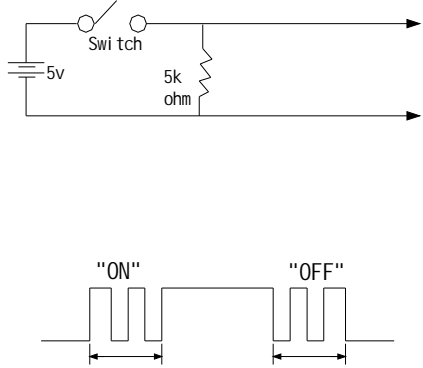
MODEL TYPE: 系列類型	MODEL NO: 型號	DATE: 日期
TACT SWITCH	PBS-2201	2018 年 11 月 07 日

1. Rating 額定值: DC 50V 0.5A
2. CONSTRUCTION 構造
  - 2.1 Shape and dimensions are subject to drawing 形狀、尺寸依圖而確定。
  - 2.2 All part not allowed to exist rust、crack and poor plating.各部分應無生銹、裂痕、電鍍不良現象。
3. Standard test conditions shall be 5 to 35°C in temperature and 45 TO 85% in humidity.  
在溫度 5~35°C , 濕度 45~80% 標準狀態下測試。
4. Operating temperature range -40 to 70°C . 溫度-40~70°C 環境內使用。

專案 ITEM	測試條件 TEST CONDITIONS	要求 REQUIREMENT
5. Electronical performance 電氣性能		
5.1	<b>CONTACT RESISTANCE</b> 接觸電阻 Being measured at 1 KHz small current contact resistance meter. 用 1 千赫小電流接觸電阻儀測量。	100mΩ max 100 毫歐 以下。
5.2	<b>INSULATION RESISTANCE</b> 絕緣電阻 Measurements shall be made following application of DC 500 V potential across terminals and across terminals and frame for 1 minute. 在端子之間和端子與殼之間加 DC 500 V 條件下, 持續 1 分鐘測量。	100MΩ min 100 兆歐 以上。
5.3	<b>Withstand voltage</b> 耐電壓 AC 250 V(50Hz or 60 Hz)shall be applied across terminals and across teminals and frame for 1 minute. 在端子之間和端子與殼之間加 AC 250 V (50Hz 或 60Hz)條件下,持續 1 分鐘測量。	There shall be no breakdown. 無擊穿現象出現。
5.4	<b>On-off state</b> 通斷状态 Lightly striking the center of the stem at a rate encountered in normal use (2to 3 operations per sec), Bounce shall be tested at “ON”and “OFF”. 在正常使用中(以每秒钟 2~3 次週期)輕輕地在手柄中心加力,在通與斷瞬間測試抖動。	10 m sec max.

# 規格書

## SPECIFICATION

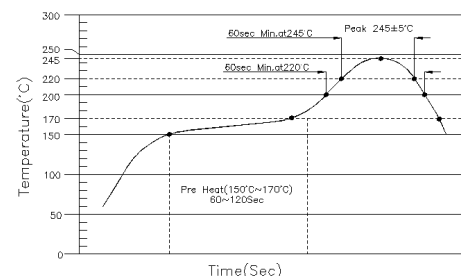
專案	ITEM	測試條件	TEST CONDITIONS	要求	REQUIREMENT
5.5	Circuit and Timing 回路及切換類型				
6. Mechanical performance 機械性能					
6.1	Operating force 動作力	Push at root of the knob. 在推動柄的末端測試。		100~350g	
6.2	Travel 行程	Placing the switch such that the direction of switch operation is vertical and then applying a static load twice the actuating force to the center of the stem, the travel distance for the stem to come to a stop shall be measured. 開關的動作方向為垂直放置開關,並以雙倍動作力的靜負荷作用推柄中心,測推柄從開始到停止的行程距離。		2.5mm	
6.3	Return force 返回力	The sample switch is installed such that the direction of switch operation is vertical and, upon depression of the stem in its center the whole travel distance, the force of the stem to return to its free position shall be measured. 開關的動作方向為垂直放置開關,在已有行程的推柄中心向上減小壓力,推柄回到自由位置時所測量到的力。		50gf min	
6.4	Actuator strength 推杆強度	A static load of 1kgf being applied in one direction of actuator for 1 minute. 一個 1 公斤靜負荷施加於推杆之一個方向持續一分鐘。		The deformation shall not be extreme and the actuator shall mechanically work normally. 推杆無變形, 可以正常操作。	

# 規格書

## SPECIFICATION

專案 ITEM	測試條件 TEST CONDITIONS	要求 REQUIREMENT
6.5	Terminal strength 端子強度	A static force of 500gf being applied in one direction on the tip of the terminal for 1 minute. 一個 500 克之靜負荷施加於端子頂部的一個方向持續一分鐘。
7. Durability 耐久性		
7.1	Soldering test 可焊性試驗	The tip of the terminals shall be dipped 2mm in the solder bath at a temperature of 230 ±5°C for 3±0.5sec. 端子頂部被浸入焊錫池 2mm 深，溫度 230±5°C 時間 3±0.5 秒。
7.2	Resistance to soldering heat test 耐焊性試驗	<p><b>R</b>□Solder bath method: solder temperature 245±5°C Immersion time 3±0.5 sec Immersion depth up to the surface of the board Thickness of PCB 1.6mm. 焊爐焊錫的溫度控制在 245±5°C，過爐焊接的時間 3±0.5 秒，於（基板）厚度為 1.6mm。</p> <p>□Soldering iron method: Bit temperature 350±10°C Application time 3±0.5 sec However excessive pressure shall not be applied to the terminal. 手焊接的時候溫度需控制在 350±10°C，時間為 3±0.5 秒，但不能在排腳上施加異常壓力。</p> <p>□Reflow Soldering Conditions: Preheat: Temperature on the copper foil surface should reach 180°C .2±0.3minutes after the P.C.B entered into the soldering equipment. Soldering heat: Temperature on the copper foil surface should reach the peak temperature of 260±5°C within 20 seconds after the P.C.B enter into soldering heat zone. 過回流焊條件：預熱：電鍍層表面的溫度應達到 180°C，2±0.3 分鐘後電路板進入回流焊設備。 回流焊溫度：電鍍層表面溫度最高為 180±5°C 且停留不超過 20 秒後電路板進入低溫焊接處。</p>
7.3	Lift test 壽命試驗	100,000 cycles of operation at a rate of 15-18 cycles per minute with unloading 無負載條件下，每分鐘 15-18 次的速度操做, 100,000 次。
		<p>(1)Contact resistance 接觸阻抗 200mΩ max. 200 毫歐 以下 Operating force 30% initial value 動作力變化範圍在初始值 30% 以內</p> <p>(1) Item 專案—5.2 (2) Item 專案—5.3 (3) Item 專案—5.4</p>

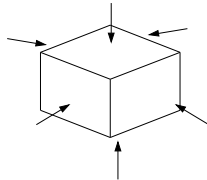
Without deformation of case or excessive looseness of terminals electrical characteristics shall be satisfied.  
本體無變形，滿足於機械、電氣性能



回流焊溫度曲圖

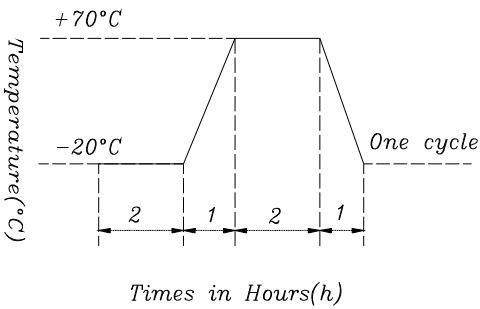
# 規 格 書

## SPECIFICATION

專案	ITEM	測試條件	TEST CONDITIONS	要求	REQUIREMENT
7.4	Vibration Resistanc 耐振動	<p>Measurements shall be made following the test set forth below: 按下列條件進行抗振動試驗</p> <p>(1)Range of oscillation:10 to 55Hz 頻率範圍</p> <p>(2)Amplitude,pk-to-pk:1.5 mm 振幅: 峰-峰 1.5mm</p> <p>(3)Cycle of sweep: 10-55-10Hz in one minute,approx. 掃描週期: 10-55-10Hz 約一分鐘內</p> <p>(4)Mode of sweep :Logarithmically sweep or uniform sweep. 掃描方式:對數掃描式恒定掃描</p> <p>(1) Direction of oscillation: 振動方向 Three mutually perpendicular directions,including the directionof stem travel. 3 個相互垂直方向,包括推柄行程方向</p> <p>(2) Duration of testing: 持續時間 2 hours each ,for a total of 6hours.每方向 2 小時,共 6 小時</p>	<p>Item 5.1</p> <p>Item 6.1</p> <p>Item 6.2</p>		
7.5	Impact shock Resistanc 抗衝擊	<p>Measurements shall be made following the test set forth below: 按下列條件進行衝擊試驗</p> <p>(1)Acceleration:80g 加速度</p> <p>(2)Cycles of test :3 cycles each in 6directions, for a total of 18cycles 試驗次數:每個方向 3 次,6 個方向共 18 次</p>		<p>Item 5.1</p> <p>Item 6.1</p> <p>Item 6.2</p>	
7.6	Salt Spray Test 鹽霧試驗	<p>The salt spray test shall be conducted at the following conditions :</p> <p>樣品按下列條件進行鹽霧試驗</p> <p>(1)Density(濃度): 溶液(5±1)% NaCl (品質百分比)</p> <p>(2)Temperature: 35±2℃ 溫度 : 35±2℃</p> <p>(3) Time: 24 hours 時間: 24 小時</p>	<p>金屬件無發黃、生銹</p> <p>Metal parts without turn yellow or rust</p>		

# 規格書

## SPECIFICATION

專案 ITEM	測試條件 TEST CONDITIONS	要求 REQUIREMENT
7.7	<p>vulcanzing teste 硫化試驗</p> <p>The vulcanzing test shall be conducted at the following conditions :</p> <p>(1)Density(濃度): 溶液 2% K<sub>2</sub>S 或 Na<sub>2</sub>S 濃度: 2%濃度的硫化鉀或硫化鈉溶液</p> <p>(2)Temperature: 35±2°C 溫度 : 35±2°C</p> <p>(3) Time: 45 second 時間: 45 秒</p>	<p>金屬件無變紅、變黑</p> <p>Metal parts without turn red or black</p>
7.8	<p>Heat test 耐熱試驗</p> <p>60±2°C for 72 hours, test after keeping in normal condition for 60 minutes. 在 60±2°C 環境中放 72 小時, 再放在正常環境中, 60 分鐘後進行測試。</p>	<p>(1) Contact resistance 500mΩ max. 接觸電阻 500 毫歐 以下</p> <p>(2) Insulation resistance 絕緣電阻 10MΩ min.10 兆歐以上</p> <p>(3) There shall be no sign of damage mechanically and electrically 無任何跡象顯示機械及 電氣性能之損壞。</p>
7.9	<p>Humidity test 耐濕試驗</p> <p>40±2°C 90-95%RH for 96 hours, test after keeping in normal condition for one or tow hours . 在 40±2°C 90—95%RH 環境中放 96 小時, 再放在正常環境中, 1-2 小時後進行測試。</p>	
7.10	<p>Cold test 耐冷試驗</p> <p>At -20±3°C for 72 hours, test after keeping in normal condition for 60 min. 在 -20±3°C 環境中放 72 小時, 再放在正常環境中, 60 分鐘後進行測試。</p>	
7.11	<p>Temperature cycling test 溫度交變試驗</p> <p>In FIG. For 5 cycles, test after keeping in normal condition for 30 min. 如圖示之環境中, 迴圈 5 次後, 再置於正常環境中, 30 分鐘後進行測試。</p> 	

### 8. Other precautions 其他注意事項

- (1) Following the soldering process, do not try to clean the switch with a solvent or the like.  
進行焊接過程中, 不可以用溶劑或類似品清洗開關;
- (2) Safeguard the switch assembly against flux penetration from its topside.  
防止助焊劑從開關的頂端滲入;
- (3) When the amendment of this specification comes into necessity, it shall be made by the mutual consultation and agreement between manufacturer and customer .  
當規格書需要修正時, 需客戶和廠方共同確認。