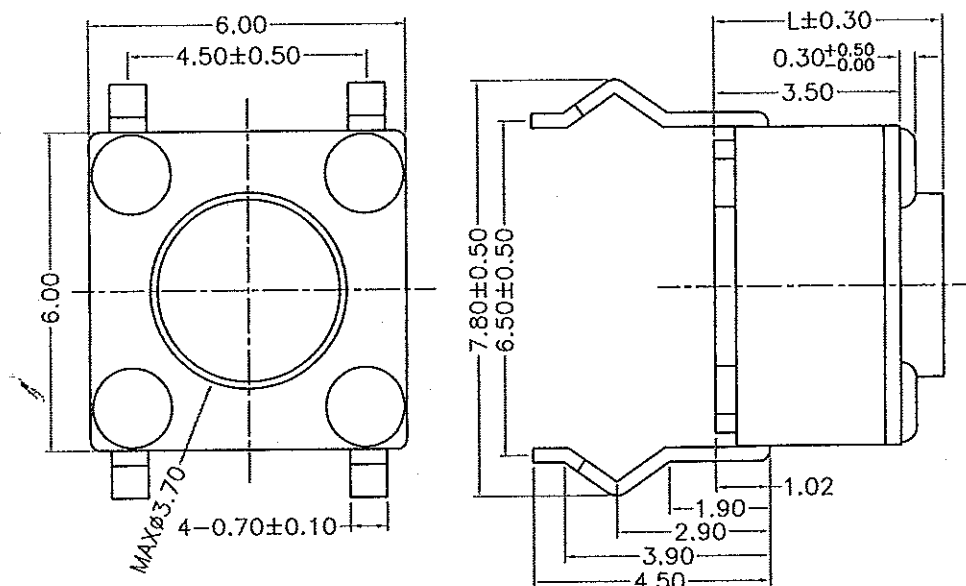


# APPEARANCE

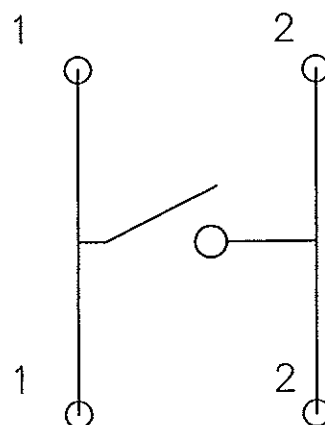
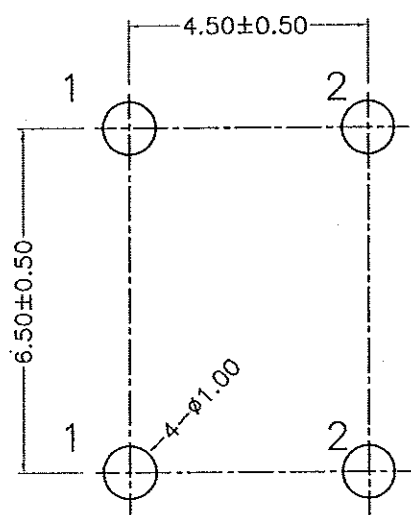
# DRAWING



MODEL	L
JTP-1230	4.30
JTP-1230A	5.00
JTP-1230B	9.50
JTP-1230C	8.00
JTP-1230D	13.0
JTP-1230E	7.00

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RECOMMEND P.C.B LAYOUT

CIRCUIT

未注角度  $\pm 10^\circ$

未注公差 0-10mm  $\pm 0.3$ mm

未注公差 10-60mm  $\pm 0.5$ mm

DRAWN	(Kav3, 2-2-2003)	MODEL NO	JTP-1230X
CHECKED	林 2-2-2007	SCALE	DRAWING NO
APPROVED	Leo Jan 2-2-2007	7:1	TEC-WI-E.WX-184
			REV B3
			SHEET/OF

# 產品規格說明書

## PRODUCT SPECIFICATIONS

產品名稱： Product Name:	輕觸開關 TACT SWITCH
型號： Model No.:	JTP-123x

### I. 電器性能

#### ELECTRICAL CHARACTERISTICS

1.1 額定電壓 Rated Voltage	12V DC, 50mA
1.2 接觸回路 Contact Arrangement	單通單接觸 Single Pole, Single Throw
1.3 接觸電阻 Contact Resistance	以調校於 5V DC, 10mA 之電壓計或調較於 1,000Hz 頻率之電阻表量度測試，接觸電壓應少於 100mΩ (測試乃以 190 gf 力度壓向開關中心點。 Less than 100mΩ when tested by the voltmeter method at 5V DC, 10mA, or by an ohmmeter allowing a small current at 1,000 Hz. (Measurements to be made with a 190 gf load applied vertically at the center of the switch.)
1.4 絕緣電阻 Insulation Resistance	≥100MΩ
1.5 耐電壓 Dielectric Force	250V AC 1 min.
1.6 開關接點抖動 Bounce	以每秒鐘 3 次的速度按動開關，開關在接通和斷開時的接點抖動時間不大於 10ms。 Less than 10m sec (the key shall be struck lightly vertically at its center at a uniform cycling rate of 3 operations per second)

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# 產品規格說明書 PRODUCT SPECIFICATIONS

## II. 機械性能

### MECHANICAL CHARACTERISTICS

2.1 驅動力 Actuating Force	<input type="checkbox"/> 160gf ± 30gf <input type="checkbox"/> 190gf ± 30gf <input type="checkbox"/> 250gf ± 30gf
2.2 反彈力 Return Force	大於 30gf Greater than 30gf
2.3 止動力 Stop Strength	大於 3Kgf (3 秒) Greater than 3Kgf (3 seconds)
2.4 行程 Travel	0.25 + 0.2mm/-0.1mm
2.5 動作回路 Arrangement of Action	輕觸式回彈 Tactile Feedback
2.6 操作溫度 Operating Temp. Range	-20°C ~ 70°C, R. H. 45~85%
2.7 貯存溫度 Storage Temp. Range	-30°C ~ 80°C ; 若於 -20°C ~ -30°C 及 70°C ~ 80°C 之溫度範圍內持續貯存, 則不能多於 96 小時。 -30°C ~ 80°C, 96 Hours maximum for continuous storage over a range of -20°C ~ -30°C and range 70°C ~ 80°C
2.8 膠鈕強度 Stem Withdrawal Force	以按動開關的反方向拉, 膠鈕強度應在 500gf 以上。 Greater than 500gf (pulled vertically to the opposite direction of stem operation)

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# 產品規格說明書 PRODUCT SPECIFICATIONS

## III. 壽命及阻抗

### ENDURANCE

<p>3.1 操作壽命 Operating Life</p>	<p>以每秒鐘按動開關兩次，按動 100,000 迴以後，</p> <p>(a) 接觸電阻應少於 500mΩ；</p> <p>(b) 開關接觸抖動應少於 20m 秒</p> <p>Following 100,000 Cycles of operation cycling rate (2 operations per second),</p> <p>(a) Contact Resistance: less than 500mΩ;</p> <p>(b) Bounce: less than 20m sec.</p>
<p>3.2 濕度抵抗 Moisture Resistance</p>	<p>開關存放於 60°C ±2°, 90~95%相對濕度烤爐達 96 小時，存於室溫及常濕達三十分鐘後，應能達到以下規格：</p> <p>(a) 濕度阻抗：大於 10MΩ；</p> <p>(b) 耐電壓：與 1.5 項相同；</p> <p>(c) 接觸電阻：與 1.3 項相同</p> <p>Following exposure to 60°C ±2°C, 90-95% Relative Humidity environment in a test chamber for 96 hours and then, out of the chamber, to room condition of normal temperature and humidity for 30 minutes, the requirements set forth below shall be met.</p> <p>(a) Moisture Resistance: Greater than 10MΩ,</p> <p>(b) Dielectric Force: Same as section 1.5,</p> <p>(c) Contact Resistance: Same as section 1.3</p>

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<p>3.3 高溫抵抗 Heat Resistance</p>	<p>開關貯放於 80°C 達 96 小時，然後取出放於室溫及常濕 30 分鐘後，應能達到項 1 及項 2 的各項規格。</p> <p>Following exposure to an 80°C environment in a test chamber for 96 hours and then, out of the chamber, to room condition of normal temperature and humidity for 30 minutes, the requirements in sections 1 and 2 shall satisfied.</p>
<p>3.4 低溫阻抗 Resistance to Low Temp</p>	<p>開關貯放於 -30°C 達 96 小時，然後取出放於室溫及常濕 30 分鐘後，應能達到項 1 及項 2 的各項規格。</p> <p>Following exposure to an -30°C environment in a test chamber for 96 hours and then, out of the chamber, to room condition of normal temperature and humidity for 30 minutes, the requirements in sections 1 and 2 shall satisfied.</p>
<p>3.5 溫度循環 Thermal Cycling</p> <div data-bbox="268 1377 539 1637" style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center; margin-top: 20px;"> <p>受 控 工 程 部</p> <p>2004年 2月12日</p> </div>	<div data-bbox="687 1077 1374 1391" style="text-align: center;"> </div> <p>開關經過五次溫度循環測試（如上圖為一個循環）後，應能達到項 1 及項 2 的各項規格。</p> <p>Following 5 cycles of a thermal cycling test of which is prescribed in the diagram above, the requirements in sections 1 &amp; 2 shall be met.</p>

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# 產品規格說明書

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3.6 衝擊抵抗 Shock Resistance	根據 MIL-STD-202 方案第 205 條之指示以 30g 之力量衝擊開關，開關應能符合項 1 及項 2 之各項要求。 Following application of an impact shock of 30g in accordance with the Method 205, MIL-STD-202, the requirements in section 2 and 3 shall be met.
3.7 震動抵抗 Vibration Resistance	根據 MIL-STD-202 方案第 201 條之指示測試開關，開關應能符合項 1 及項 2 之各項要求，而並沒有任何損害及變形。 Following the test conducted according to the Method 201, MIL-STD-202, the switch under test shall conform to the requirements of sections 1 & 2 without any sign of defect both in appearance and actuation.

### IV. 焊錫 (以波鋒鐸)

SOLDERING (IN CASE THE AUTOMATIC FLOW SOLDERING IS TO BE USED)

4.1 鐸錫溫度 Soldering Temp.	不能大於 255°C 255°C Max.
4.2 鐸錫時間 Soldering Time	持續浸錫時間不能多於 5 秒 Continuous dipping duration shall not exceed 5 seconds.
4.3 容許上錫次數 Permissible Soldering Time	不能多於 2 次，(第 2 次浸錫時必須待溫度下降至正常溫度方可進行。) 2 times maximum, (twice soldering would be dipped after the temperature goes down to a normal temperature)

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# 產品規格說明書

## PRODUCT SPECIFICATIONS

4.4 預熱溫度 Preheat Temperature	最大 100°C (必須視乎 PCB 板之可抵抗溫度) 100°C max (circumferential temperature of the PCB)
4.5 預熱時間 Preheat Time	不能多於 45 秒 45 seconds max.
4.6 鐸劑控制 Flux Streaming	鐸劑應控制至不能滲入裝有原件之 PCB 板上。 Flux streaming shall be controlled so that it shall not swell beyond the printed wiring board where components are installed.
4.7 其他注意事項 Other Precautions	(a) 鐸錫前不應於開關的端子及開關與 PCB 板的接觸面沾上鐸劑； (b) 開關在鐸錫後不宜清洗。 (a) Flux shall not be applied on switch terminals and the part mounting surface of the printed wiring board before soldering. (b) Do not wash the switch after soldering



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