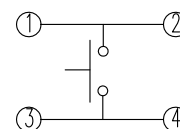
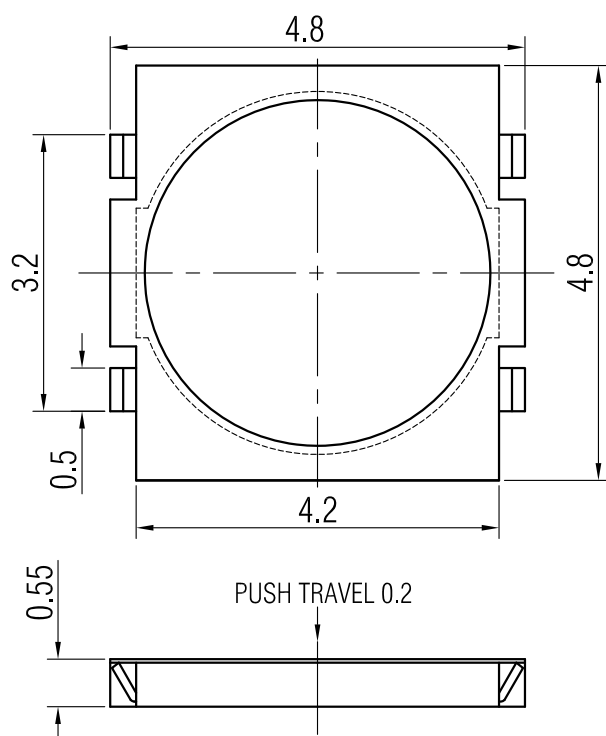
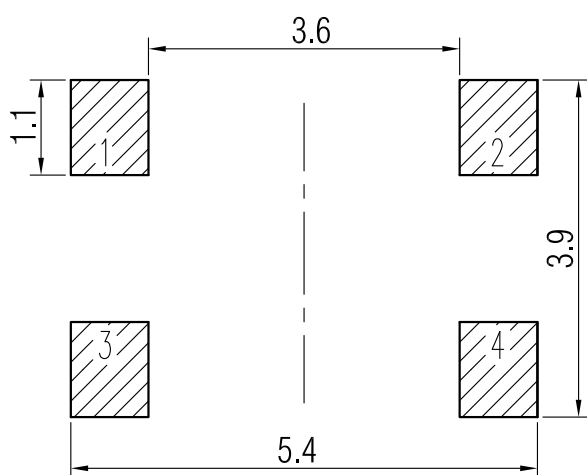


SYMB	REVISION	DATE	APVD.	SYMB	REVISION	DATE	APVD.	VERSION: 2	F2A-66-1/1
								MODE	Tactile Feedback
								TIMING	
								LINE(S)	CIRCUIT
								1	1P1T
									STROKE
									0.2

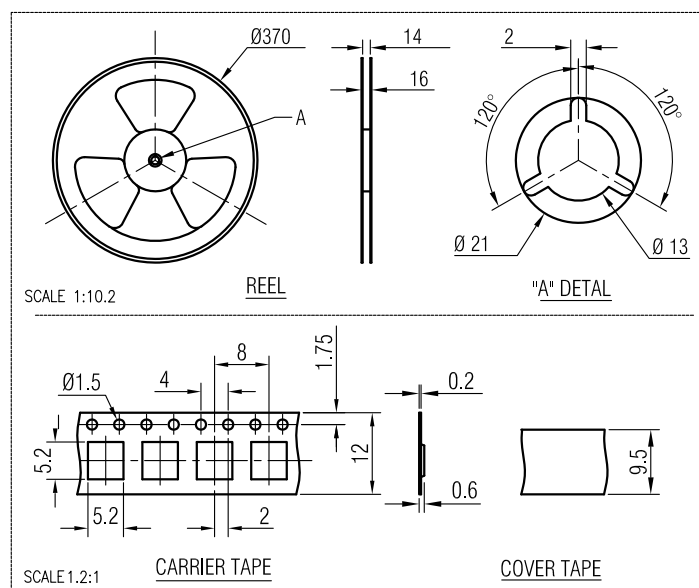
Without any banned substance! Compliance with RoHS!



CIRCUIT DIAGRAM



Recommended PAD Layout $\Phi \pm 0.05$
TOP VIEW



PACKING DETAIL

<QTY: PCS/REEL>

TYPE	TACT SWITCH		UNIT	mm	9				
SERIES	TSKB-485509		SCALE	14:1	8				
PART NO.	TSKB-485509-XXX		DATE	12/04/06	7				
SPEC. NO.	SETD01700		PAGE	1/6	6				
DRAWN	CHECKED	APVD.	TOLERANCE		5				
			ANGLE	$\pm 3^{\circ}$	4	DUSTPROOF FILM	POLYIMIDE FILM	1	NATURE
			UP TO 1	± 0.1	3	TERMINAL 1,2/3,4	PBS	4	Ag PLATED
			ABOVE 1 ~ 5	± 0.2	2	CONTACT	SUS	1	Ag CLAD
			ABOVE 5 ~50	± 0.3	1	CASE	LCP	1	WHITE
SANWIN ELECTRONIC TECHNOLOGY CO. LTD.					NO.	NAME	MATERIAL	QTY.	FINISHING

產品規格書				檔編號No. :	頁數Page
SPECIFICATION				SETD01511-01	P2/6
產品類別Type:	輕觸開關Tact Switch			Prepared	Checked
產品系列Series:	TSKB-485509	版本Version:	1	李	任
產品編號Part No.:	TSKB-485509-250	日期Date:	2012/4/16	晓斌	明华
梁成元					
1. 通則 General Characteristics:					
1.1 應用範圍 Application range: 此產品規格書適用於輕觸開關TSKB-485509。 This product specification is applied to the TSKB-485509 Tact Switch.					
1.2 使用環境條件 Acclimatization: 使用溫度範圍 Operating Temperature rang:-20°C ~ 70°C 保存溫度範圍 Preservative Temperature:-30 ~ 80°C					
1.3 測試條件Test Conditions: 若沒有特別說明,則試驗條件如下: Unless otherwise specified,the atmospheric for marking measurements and tests are as follows: 溫度 Temperature:20±2°C 相對濕度 Relative Humidity:45 ~ 85% 氣壓 Air pressure:86 ~ 106Kpa 如對判定產生疑義,則試驗按以下條件進行: However,if the decision based on the measurements suspicion conditions, the following conditions shall be employed: 溫度 Temperature:20±2°C 相對濕度 Relative Humidity:65±5% 氣壓 Air pressure:86 ~ 106Kpa					
2. 外觀和安裝尺寸 Appearance & Mounting Dimensions:					
2.1 外觀 Appearance: 產品外觀良好,無破損、銹蝕、裂紋和鍍層缺陷。 The switch shall have good finishing,and no rust,crack plating defects.					
2.2 安裝尺寸Mounting dimensions: 應符合產品設計要求,詳見成品圖。 Should comply with the design requirements of products, see the finished product drawing.					
3. 驅動方式Operate Mode:					
按鈕式:中間方向(如成品圖所示) Push Button:Center (as assembly drawing shown).					
4. 回路方式 Circuit Mode:					
如成品圖所示(as assembly drawing).					
5. 額定負荷及壽命 Rating and Ooerating life.					
額定負荷 Rating:DC 12V,50mA Max 機械壽命 Mechanical life:100,000次					
6 電氣性能Electrical Characteristics					
專案Item	測試條件Test Method			標準Criteria	
0.1 接觸電阻 Contact Resistsnce	以10mA 5V DC 或者 1KHz±200Hz(20mV max , 50mA max) 下採用電壓降法測量。 Shall be measure at 1KHZ±200Hz (20mV max,50mA max) or DC 5V 10mA by voltage drop method.			常態 Normal 100mΩ以下 100mΩ max 氣候及壽命試以後 After climate and life test. 200mΩ以下 200mΩ max	

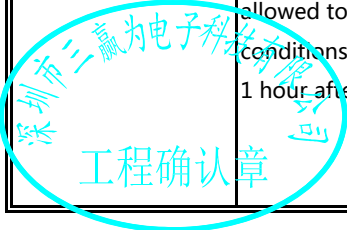
產品規格書				檔編號No. :	頁數Page
SPECIFICATION				SETD01511-01	P3/6
產品類別Type:		輕觸開關Tact Switch		Prepared	Checked
產品系列Series:		TSKB-485509	版本Version:	1	李 任 梁 曉斌 明華 成元
產品編號Part No.:		TSKB-485509-250	日期Date:	2012/4/16	
6.2 絕緣阻抗 Insulation Resistance		在相互絕緣的所有端子之間及各接線端子與外露 的非載流金屬零件之間加載100V DC ,持續時間60±5S. DC 100V voltage is applied between each pair of terminals andbetween the terminal and the metalframefor 60±5S.		常態 Normal 100MΩ以上 100MΩ Min 氣候及壽命試以後 After climate and life test. 10MΩ以上 10MΩmin	
6.3 抗電強度 Dielectric Strength		在相互絕緣的所有接線端子之間加載250V (50 ~ 60Hz洩漏電流10mA) 的交流電 , 各接線端子與外殼或非載流金屬零件之間加載250V(50 ~ 60Hz)電流 洩漏2mA交流電 , 持續時間60±5S。 AC 250V(50-60Hz)2mA alternate current load is applied between open terminals connected with wires or250V (50-60Hz),2mA Alternate current load for 60±5S.		無擊穿和飛弧現象 The switch without dielectric breakdown and fly arc phenomenon.	
7 機械性能 Mechanical Charateristics					
專案Item		測試條件Test Method		標準 Criteria	
7.1 操作力 Operating Force		按規定的操作方法給操作柄施加壓力 Push by recommended operating condition. 		中間方向center: 250±80gf.	
7.2 行程 Travels		開關發生轉換後, 操作元件末端之間與初始位置之間的距離。 Distance from the end of operating component to the position when switch is being transformed. 		中心正按Center push: 0.2±0.1mm	

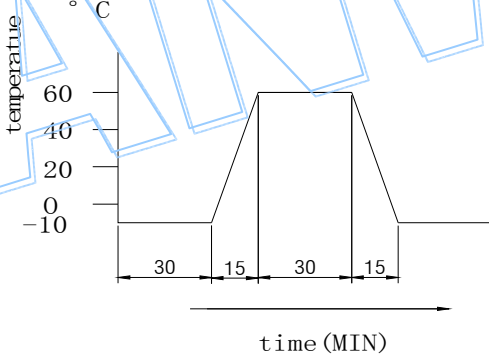
三贏為電子科技

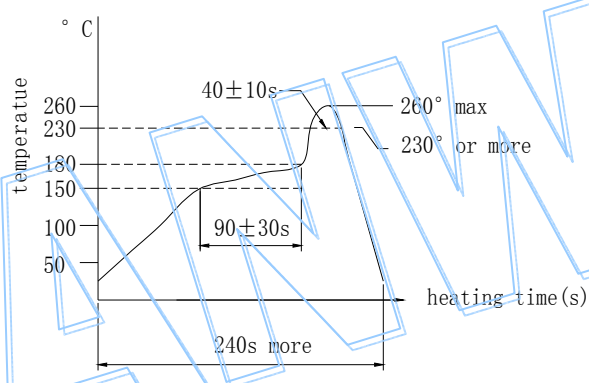
有限公司

工程确认章

產品規格書				檔編號No. :	頁數Page
SPECIFICATION				SETD01511-01	P4/6
產品類別Type:	輕觸開關Tact Switch			Prepared	Checked
產品系列Series:	TSKB-485509	版本Version:	1	李	任
產品編號Part No.:	TSKB-485509-250	日期Date:	2012/4/16	晓斌	明华
7.3 操作件強度 Operating Part Strength	置開關於正常安裝位置，在操作件中心施加與操作件動作相同方向的1kgf靜負荷，時間為60 ±5S。 Put the switch in the normal gearing position,Bring 1kgf pressure which direction is similar to the actuator operates direction in the tip of the actuator center ,time is 60±5S.			無機械和電氣損傷。 The switch shall be free from mechanical and electrical damage.	
7.4 振動 Vibration Proof	開關採用常規安裝方法牢固地安裝在實驗設備上，按下述參數進行實驗： 1) 振頻：10-55Hz 2) 振幅：1.5mm 3) 振動變化速率：10 ~ 55 ~ 10Hz 大約1分鐘 4) 變頻方法：線形方式 5) 振動方向：三個互相垂直的方向，其中一個方向為 操作元件運動的方向。 Switch shall be secured to a testing machine by a normal mountingdevice and method, Switch shall be measured after following test: 1)Vibration frequency range:10 ~ 55Hz. 2) Total amplitude:1.5mm 3)Sweep ratio:10 ~ 55 ~ 10Hz,Approx 1 minute 4)Method of changing the sweep vibration frequency linear. 5)Direction of vibration:Three perpendicular directions including actuating direction.			符合第6.1、6.2、6.3第7.1 條要求。 According to item 6.1、6.2、6.3 and 7.1 to examine.	
7.5 衝擊 Impact shock test	1)加速度 Acceleration : 80G 2)衝擊次數：六個方向3次，共18次 2)Cycle of test:3cycles each in 6 directions,for a total 18 cycles.				
8 耐候試驗 Weather Proof Characteristics					
專案Item	測試條件 Test method			標準Criteria	
8.1 高溫 Hot Proof	試件在80±2℃的溫控箱內保持48小時，然後在正常溫度和濕度下恢復1小時，並在此後的1小時內對試件進行測量，水滴應消失。 After testing at 80±2℃ for 48 hours,the switch shall be allowed to stand under normal temperature and humidity conditions for 1 hour and measurement shall be made with 1 hour after that,water drops shall be eliminated.			符合第6.1、6.2、6.3第7.1 條要求。 According to item 6.1、6.2、6.3 and 7.1to examine.	



產品規格書				檔編號No. :	頁數Page
SPECIFICATION				SETD01511-01	P5/6
產品類別Type:	輕觸開關Tact Switch			Prepared	Checked
產品系列Series:	TSKB-485509	版本Version:	1	李	任
產品編號Part No.:	TSKB-485509-250	日期Date:	2012/4/16	晓斌	明华
8.2 恒定濕熱 Moisture Resistance	試件在$60\pm 2^{\circ}\text{C}$, 90~95%RH的溫控箱內保持48小時，然後在正常溫度和濕度下恢復1小時，並在此後的1小時內對試件進行測量，水滴應消失。 After testing at $60\pm 2^{\circ}\text{C}$, 90~95%RH for 48 hours, the switch shall be allowed to stand under normal temperature and humidity conditions for 1 hour and measurement shall be made with 1 hour after that, Water drops shall be eliminated.				
8.3 低溫 Cold Proof	試件在$-40\pm 2^{\circ}\text{C}$的溫控箱內保持48小時，然後在正常溫度和濕度下恢復1小時，並在此後的1小時內對試件進行測量，水滴應消失。 After testing at $-40\pm 2^{\circ}\text{C}$ for 48 hours, the switch shall be allowed to stand under normal temperature and humidity conditions for 1 hour and measurement shall be made with 1 hour after that, water drops shall be eliminated.				
8.4 溫度轉換 Temperature Cycling	試件按下述試驗條件試驗5個迴圈，然後在正常溫度和濕度下恢復1小時，並在此後的1小時內對試件進行測量，水滴應消失。 After 5 cycles of following conditions, the switch shall be allowed to stand under normal temperature and humidity conditions for 1 hour after that, Water drops shall be eliminated. 			符合第6.1、6.2、6.3第7.1條要求。 According to item 6.1、6.2、6.3 and 7.1 to examine.	
9 耐久性試驗 Durability Characteristics					
專案Item	測試條件 Test method			標準Criteria	
9.1 壽命試驗 Operating Life	1)在不帶負荷的條件下，在壽命測試設備上連續轉換100,000次，頻率：60次/分鐘。 1)100,000 cycles of operation shall be performed continuously cycles without load at a rate of 60 cycles per minute.			動作力：初始值的$\pm 30\%$ Operating force: within $\pm 30\%$ initialization value. 彈跳 10 ms Max Bounce 10 ms Max 其餘符合第6.1、6.2、6.3、7.1條 Etceteras according to item 6.1, 6.2, 6.3, 7.1 to examine.	

產品規格書				檔編號No. :	頁數Page
SPECIFICATION				SETD01511-01	P6/6
產品類別Type:	輕觸開關Tact Switch			Prepared	Checked
產品系列Series:	TSKB-485509	版本Version:	1	李	任
產品編號Part No.:	TSKB-485509-250	日期Date:	2012/4/16	晓斌	明华
梁成元					
10.焊接Soldering					
專案Item	測試條件 Test method			標準Criteria	
101 耐焊接熱 Solder Heat Resistance	試件在下述條件下進行試驗： 1) 焊接溫度:260±5℃； 2) 焊接時間：5±1S; 3) 熔錫面積：PCB板厚度的一半（PCB：t=1.6）。 Specimen shall be checked in the following conditions test: 1)Soldering temperature:260±5℃； 2)Soldering time:5±1S; 3)Soldering area：1/2 of PCB board thickness(PCB:t=1.6).			無機械和電氣損傷。 The switch shall be free from mechanical and electrical damage.	
10.2 回流焊 Reflow Soldering	 The graph shows a temperature profile for reflow soldering. The y-axis is temperature in °C (50 to 260), and the x-axis is heating time in seconds (0 to 240s more). The profile includes a pre-heat phase (90±30s), a dwell phase (40±10s), and a peak phase (260° max, 230° or more).			外觀無裂開、鬆動等異常現象，滿足於電氣性能。 Without deformation of frame or excessive looseness of terminals, Electrical performance shall be satisfied.	
10.3 可焊性 Solderbility	焊接溫度：245±5℃ Solder temperature: 245 ±5℃. 浸漬時間：3 ±0.5S Dipping time: 3 ±0.5 second.			超過90%的浸漬覆蓋焊接。 More than 90% of the dipping covered by solder.	

