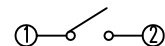
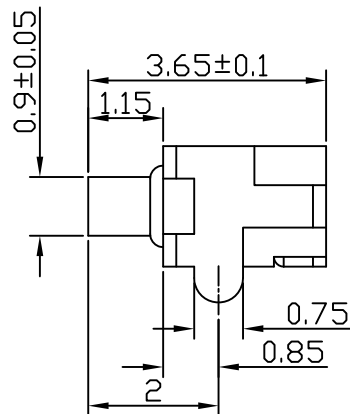
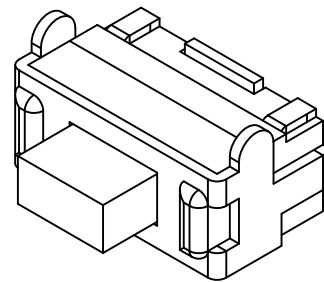
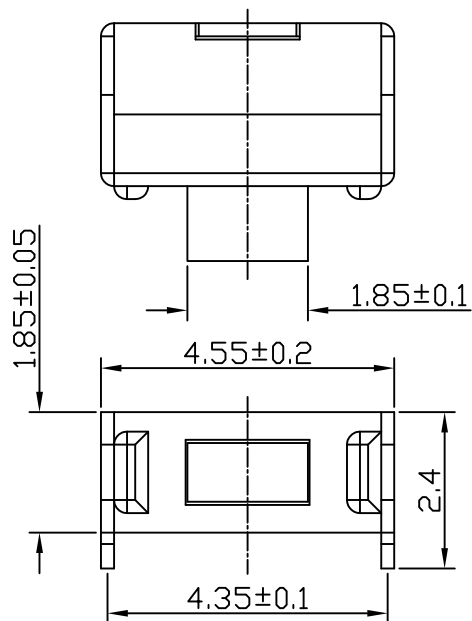
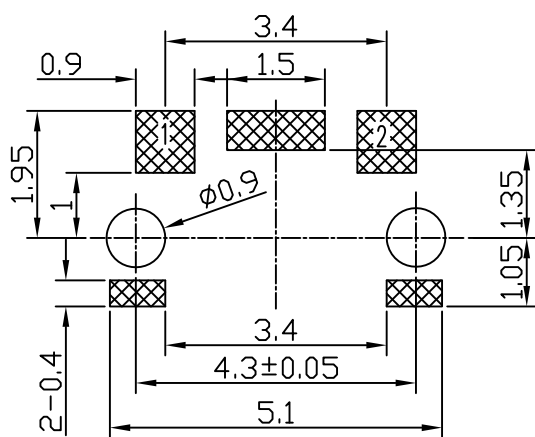
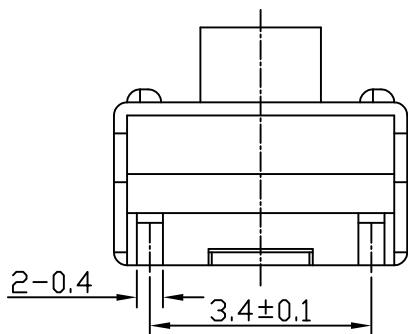


SYMB	REVISION	DATE	APVD.	SYMB	REVISION	DATE	APVD.	VERSION: 0	F2A-91-1/1
								MODE	Tactile Feedback
								TIMING	
								LINE(S)	CIRCUIT
								1	1P1T
									STROKE
									0.15

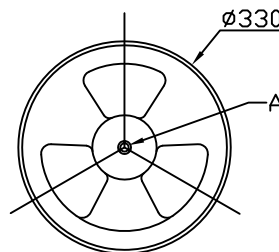
Without any banned substance! Compliance with RoHS!



CIRCUIT DIAGRAM

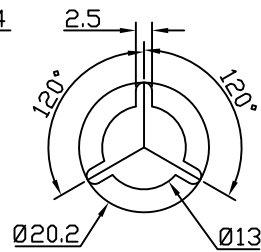


Recommended PAD Layout $\Phi \pm 0.05$
TOP VIEW

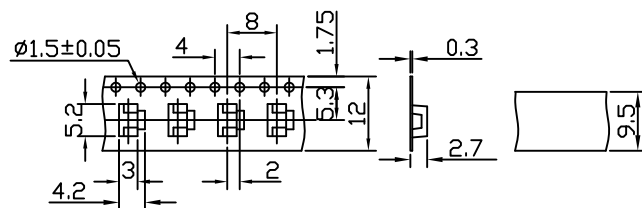


SCALE 1:10.2

REEL



"A" DETAIL



SCALE 1:2.1

CARRIER TAPE

COVER TAPE

PACKING DETAIL

<QTY:3000PCS/REEL>

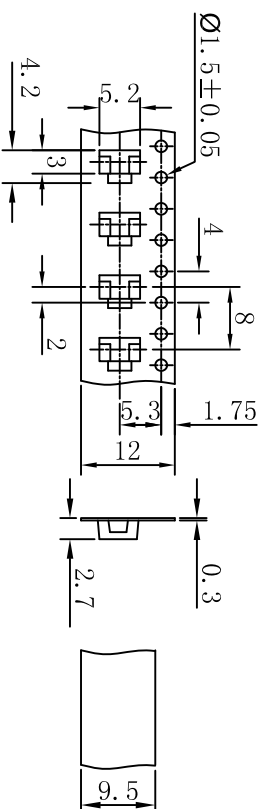
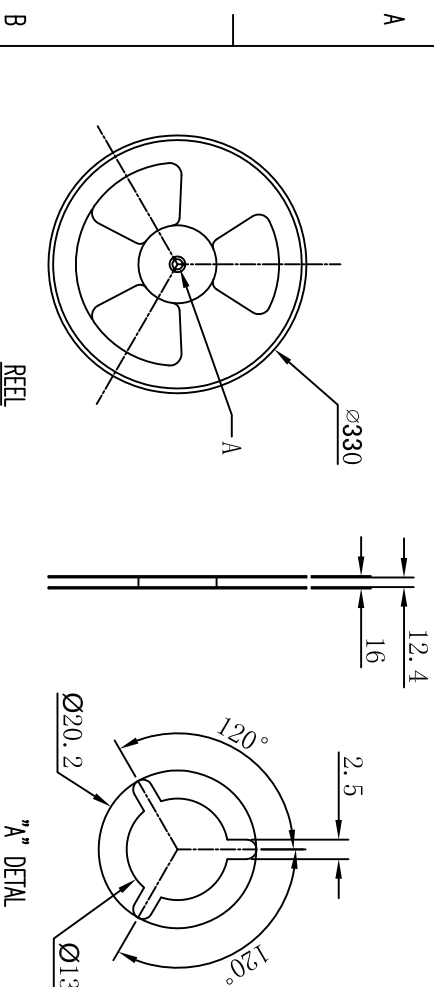
TYPE	TACT SWITCH	UNIT	mm	9				
SERIES	TSMH-251214	SCALE	8:1	8				
PART NO.	TSMH-251214-250-BLK-M1	DATE	18/12/08	7	TERMINAL 1,2	C5191	2	Ag PLATED
SPEC. NO.	SETD01549-04	PAGE	1/6	6	DUSTPROOF FILM	POLYIMIDE FILM	1	NATURE
DRAWN	CHECKED	APVD.	TOLERANCE	5	COVER	C5191	1	Ag PLATED
李	任	周	ANGLE	4	STEM	PA	1	BLACK
晓斌	明华	永安	UP TO 1	3	CONTACT	SUS	1	Ag CLAD
			ABOVE 1 ~ 5	2	HOUSE	PA	1	BLACK
			ABOVE 5 ~50	1	BASE	LCP	1	BLACK
SANWIN ELECTRONIC TECHNOLOGY CO. LTD.				NO.	NAME	MATERIAL	QTY.	FINISHING

產品規格書				檔編號No. :	頁數Page
SPECIFICATION				SETD01549-04	P2/6
產品類別Type:	輕觸開關Tact Switch			Prepared	Checked
產品系列Series:	TSMH-251214	版本Version:	0	李 晓斌	任 明华
產品編號Part No.:	TSMH-251214-250-BLK-M1	日期Date:	2018/8/24		
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TSMH-251214。 This product specification is applied to the TSMH-251214 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:50,000次					
6 電氣性能Electrical Characteristics					
專案Item	測試條件Test Method			標準Criteria	
6.1	以10mA 5V DC 或者 1KHz±200Hz(20mV max , 50mA max)			常態 Normal	
接觸電阻	下採用電壓降法測量.			100mΩ以下 100mΩ max	
Contact	Shall be measure at 1KHZ±200Hz (20mV max,50mA max)			氣候及壽命試以後	
Resistsnce	or DC 5V 10mA by voltage drop method.			After climate and life test.	
				200mΩ以下 200mΩ max	

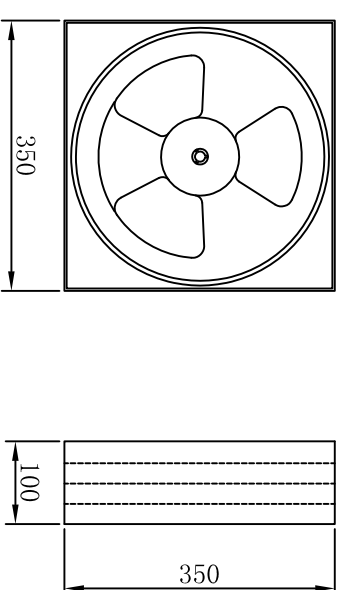
產品規格書				檔編號No. :	頁數Page
SPECIFICATION				SETD01549-04	P3/6
產品類別Type:	輕觸開關Tact Switch			Prepared	Checked
產品系列Series:	TSMH-251214	版本Version:	1	李	任
產品編號Part No.:	TSMH-251214-250-BLK-M1	日期Date:	2018/8/24	晓斌	明华
梁成元					
6.2 絕緣阻抗 Insulation Resistance	在相互絕緣的所有端子之間及各接線端子與外露 的非載流金屬零件之間加載100V DC ,持續時間60±5S. 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2mA) 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±50gf.	
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 start position when switch is being transformed.			中心正按Center push: 0.15±0.1mm	

產品規格書				檔編號No. :	頁數Page
SPECIFICATION				SETD01549-04	P4/6
產品類別Type:	輕觸開關Tact Switch			Prepared	Checked
產品系列Series:	TSMH-251214	版本Version:	1	李 晓斌	任 明华
產品編號Part No.:	TSMH-251214-250-BLK-M1	日期Date:	2018/8/24		
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.	
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.	

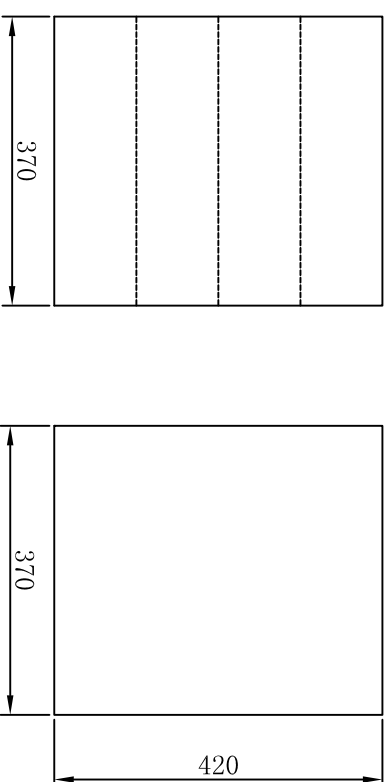
產品規格書				檔編號No.：	頁數Page	
SPECIFICATION				SETD01549-04	P5/6	
產品類別Type:	輕觸開關Tact Switch			Prepared	Checked	Approved
產品系列Series:	TSMH-251214	版本Version:	1	李 晓斌	任 明华	梁 成元
產品編號Part No.:	TSMH-251214-250-BLK-M1	日期Date:	2018/8/24			
8.2 恒定濕熱 Moisture Resistance	試件在60±2℃,90~95%RH的溫控箱內保持48小時，然後在正常溫度和濕度下恢復1小時，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±2℃,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.			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.		
8.3 低溫 Cold Proof	試件在-40±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 -40±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.					
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. temperature ° C 60 40 20 0 -10					



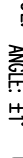
1. 卷带盘，每盘包装数量3000PCS.



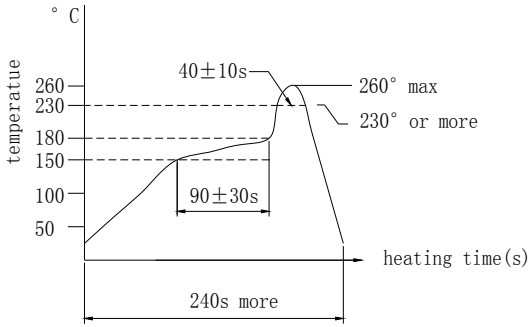
2. 内包装盒，规格350*350*100，每盒装5个卷带盘，每盒数量15000PCS.



3. 外包装箱，规格370*370*420，每箱内装4个内包装盒，每箱数量60000PCS.

PART NO. :	TSMH-251214		PART NAME:	包装规格书		DATE:	2019.01.02	ARCHIVE:	F10A-16
DRAWN	CHECKED	APVD.	TOL:	ANGLE: $\pm 1^\circ$ UP TO: ± 0.05		UNIT:	mm	VERSION:	00
李	任	周	ABOVE: $\pm 1-5 \pm 0.1$; OVER: ± 0.15		SCALE:	8:1	PAGE:	1/1	
晓斌	明华	永安			SPEC. NO.	SETD01549-04			
			FINISHING:						

SANWIN ELECTRONIC TECHNOLOGY CO.,LTD

產品規格書				檔編號No. :	頁數Page
SPECIFICATION				SETD01549-04	P6/6
產品類別Type:	輕觸開關Tact Switch			Prepared	Checked
產品系列Series:	TSMH-251214	版本Version:	1	李	任
產品編號Part No.:	TSMH-251214-250-BLK-M1	日期Date:	2018/8/24	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: $260 \pm 5^{\circ}\text{C}$; 2) 焊接時間: $5 \pm 1\text{S}$; 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: $260 \pm 5^{\circ}\text{C}$; 2) Soldering time: $5 \pm 1\text{S}$; 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 temperature in °C on the y-axis (50 to 260) versus heating time in seconds on the x-axis. The profile includes a preheat phase (90 ± 30s), a dwell phase (40 ± 10s) at approximately 180°C, a peak at 260°C max, and a cooling phase. A note indicates the temperature should be 230°C or more during the dwell phase.			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 Solderbilty	焊接溫度: $245 \pm 5^{\circ}\text{C}$ Solder temperature: $245 \pm 5^{\circ}\text{C}$. 浸漬時間: $3 \pm 0.5\text{S}$ 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.	