



东莞市健阳达电子有限公司
DONGGUAN CHIPSEN ELECTRONICS TECHNOLOGY CO., LTD

承 認 書
SPECIFICATION FOR APPROVAL

客 戶 名 稱 :
(CUSTOMER.)

零 件 名 稱 :
(DESCRIPTION)

TACT SWITCH

貴 公 司 料 號 :
(CUSTOMER PT/NO.)

健 阳 达 料 號 :
(J.Y.D PT/NO.)

TS-4417 贴片开关 250gf

提 樣 編 號 :
(SAMPLES SUBMIT NO.)

S20170829001

發 行 版 本 :
(ISSUE REVISION.)

A/0

貴公司承認印鑑

(APPROVED BY) :

本公司發行印鑑

(APPROVED BY) :

(确认后请回传)

日期 :
DATE

2017

年
YEAR

08

月
MONTH

29

日
DAY

东莞市晶森电子科技有限公司

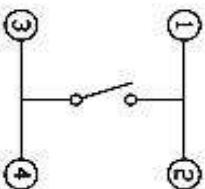
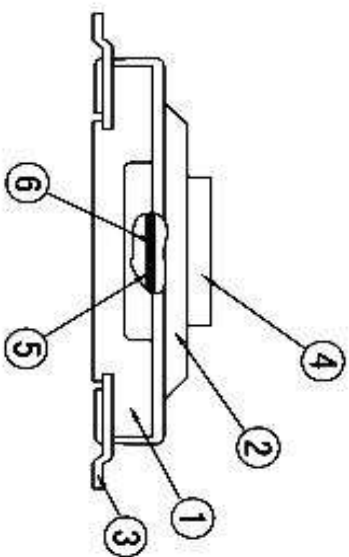
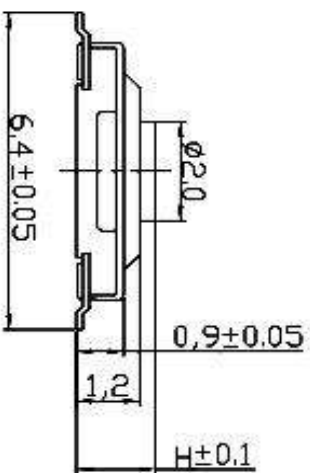
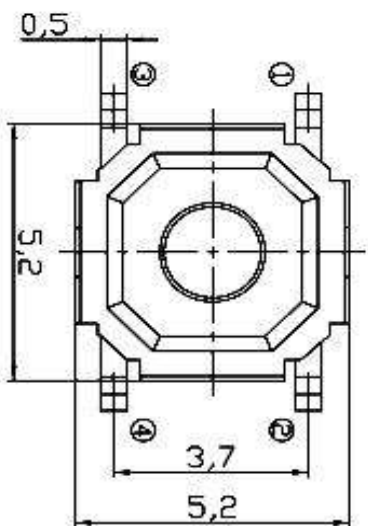
东莞市健阳达电子有限公司

公司地址:廣東東莞市常平鎮岗梓大埔工業區

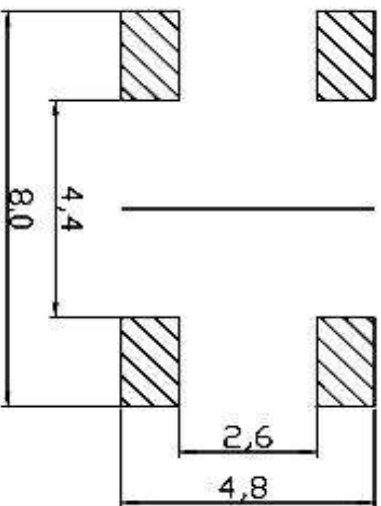
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Circuit Diagram



PCB Board

H	1.5	1.7	3.1	4.3	其它
	✓	✓			

[illegible]



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TACT SWITCH 检验标准:

MODEL SERIES NAME 系列名稱			TACT SWITCH
MODEL NO 產品型號		TS-4417贴片开关	
1、RATING 額定值		DC 24V 0.1A	
2、ELECTRICAL CHARACTERISTICS 電氣性能規格			
ITEM 項目		TEST CONDITIONS 測試條件	PERFORMANCE 規格
2.1	CONTACT RESISTANCE 接觸電阻	MEASURED AT 1KHZ SMALL CURRENT (100MA OR LESS) 在1KHZ 微小電流(100MA 以下) 測試	20MΩ MAX 20毫歐以下
2.2	INSULATION RESISTANCE 絕緣電阻	APPLY A VOLTAGE OF 500V DC SHALL BE APPLIED FOR 1MIN AFTER WHICH MEASUREMENT BE MADE: (1) BETWEEN TERMINALS (2) BETWEEN INDIVIDUAL TERMINALS AND FRAME 輸入500V DC 電壓1分鍾, 按以下接觸方法測試: (1) 排腳相互之間; (2) 排腳與外殼之間.	100MΩ MIN 100兆歐以上
2.3	DIELECTRIC STRENGTH 耐電壓	AC 500V rms (50-60HZ) FOR 1 MIN TRIP CURRENT: 0.5MA (1) BETWEEN TERMINALS (2) BETWEEN INDIVIDUAL TERMINALS AND FRAME 輸入 AC 500V (50-60HZ) 電壓1分鍾, 感度電流為0.5MA, 按以下接觸方法測試: (1) 排腳相互之間; (2) 排腳與外殼之間.	WITHOUT DAMAGE TO PARTS ARCING OR BREAKDOWN, ETC. 沒有絕緣破裂等異常
3、MECHANICAL CHARACTERISTICS 機械性能規格			
ITEM 項目		TEST CONDITIONS 測試條件	PERFORMANCE 規格
3.1	OPERATING FORCE 動作力		250gf ± 50gf
3.2	TERMINAL STRENGTH 端子強度	A STATIC LOAD OF 300gf SHALL BE APPLIED TO THE TERMINAL FOR 15 SEC. IN ANY DIRECTION 在排腳前端任意一個方向加300gf 力度測試, 時間為15秒	ELECTRICAL CHARACTERISTICS SHALL BE SATISFIED WITHOUT DAMAGE OR EXCESSIVE LOOSENESS OF TERMINALS 在排腳中沒有裂開, 鬆動等異常, 滿足於機械、電器性能
3.3	DISPLACEMENT OF ACTUATOR (KNOB) 柄強度	A STATIC LOAD OF 10N(1KGF) SHALL BE APPLIED TO THE OF THE ACTUATOR (KNOB) AND THEN DISPLACEMENT SHALL BE MEASURED TO THE DIR ECTION OF THE ARROW 在柄的前端施加1KGF 的度, 位移應沿印記的方向上定	THE LEVER SHALL HAVE NO SERIOUS DEFORMATION AND FUNCTION IS NORMALLY 柄部無嚴重變形, 可以正常工作



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4、ENDURANCE CHARACTERISTICS 耐久性

ITEM 項目		TEST CONDITIONS 測試條件	PERFORMANCE 規格
4.1	LIFE TEST 壽命試驗	ENDURANCE WITHOUT LOADING : A SWITCH SHALL BE SUBJECTED TO 100,000 CYCLES AT A SPEED OF 15 TO 18 CYCLES PER MINUTE WITHOUT LOADING 無負荷: 在無負荷的條件下以每分鐘15-18回的速度進行100,000次的測試	(1) CONTACT RESISTANCE 接觸電阻100MΩ MAX 100毫歐以下 (2) INSULATION RESISTANCE 絕緣電阻50MΩ MIN 50毫歐以上 (3) WITHSTAND VOLTAGE 耐電壓 AC 500V 1 MINUTE AC 500V 1分鐘 (4) OPERATING FORCE 動作力 ±30% INITIAL VALUE 變化範圍初始值 ±30% (5) WITHOUT DAMAGE TO PARTS ARCING OR BREAKDOWN ETC 測試後外表無損傷, 並且滿足機械性能
4.2	SOLDERABILITY TEST 可焊性試驗	THE TOP OF THE TERMINALS SHALL BE DIPPED 2MM THE SOLDER BATH OF 230±5°C FOR 3±0.5 SECONDS 端子頂部被浸入錫焊池中2MM 深溫度為230±5°C 時間為3±0.5秒	THE AREA OF SOLDERING SHOULD BE OVER 75% 焊接面積要有75%以上
4.3	RESISTANCE TO SOLDERING HEAT TEST 耐焊性試驗	SOLDER BATH METHOD: SOLDER TEMPERATURE 260±5°C IMMERSION TIME 3±0.5 SECI IMMERSION DEPTH UP TO THE SURFACE OF THE BOARD 1.6MM DIMENSIONS OF COMPONENT HOLES IN THE PRINTED WIRING BOARD SHALL BEING ACCORDANCE WITH THOSE SPECIFIED IN THE SPECIFICATION 焊爐焊接的時候溫度控制260±5°C, 過爐時間3±0.5秒, 於(基板)厚度為1.6MM	WITHOUT DEFORMATION OF CASE OR EXCESSIVE LOOSENESS OF TEMINALS ELECTRICAL CHARACTERISTICS SHALL BE SATISFIED 本體無變形, 能滿足於機械, 電器性能
4.4	COLD TEST 耐冷試驗	THE SWITCH SHALL BE STORED AT A TEMPERATURE OF -40±3°C FOR 48 HOURS, THEN THE SWITCH SHALL BE MAINTAINED AT STANDARD ATMOSPHERIC CONDITIONS FOR 1 HOUR AFTER WHICH MEASUREMENT SHALL BE MADE 放置在溫度 -40±3°C 中48小時後, 再放置常溫常濕 中1小時來進行測試	THERE SHALL BE NO DEFORMATION OR CRACKS IN MOLDED PART 外觀無異常, 滿足於機械, 電器性能



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4.5	HEAT TEST 耐熱試驗	THE SWITCH SHALL BE STORED AT A TEMPERATURE OF $70 \pm 2^{\circ}\text{C}$ FOR 48 HOURS, THEN THE SWITCH SHALL BE MAINTAINED AT STANDARD ATMOSPHERIC CONDITIONS FOR 1 HOUR AFTER WHICH MEASUREMENT SHALL BE MADE 放置在溫度 $80 \pm 2^{\circ}\text{C}$ 中48小時後, 再放置常溫常濕中1小時來進行測試	THERE SHALL BE NO DEFORMATION OR CRACKS IN MOLDED PART 外觀無異常, 滿足於機械, 電器性能
4.6	HUMIDITY TEST 潮濕試驗	THE SWITCH SHALL BE STORED AT A TEMPERATURE OF $40 \pm 2^{\circ}\text{C}$ AND A HUMIDITY OF 90% TO 95% FOR 96 HOURS THEN THE SWITCH SHALL BE MAINTAINED AT STANDARD ATMOSPHERIC CONDITIONS FOR 1 HOUR AFTER WHICH MEASUREMENT SHALL BE MADE 放置 $40 \pm 2^{\circ}\text{C}$ 的相對濕度90%-95%環境中96小時後, 再將樣板放在正常環境1小時後進行測試 UNLESS OTHERWISE SPECIFIED THE STANDARD RANGE OF ATMOSPHERIC CONDITIONS FOR MAKING MEASUREMENTS	THERE SHALL BE NO DEFORMATION OR CRACKS IN MOLDED PART 外觀無異常, 滿足於機械, 電器性能
4.7	STANDARD ATMOSPHERIC CONDITIONS 測試標準狀態	AND TESTS ARE AS FOLLOWS: (1) AMBIENT TEMPERATURE: 5°C TO 35°C (2) RELATIVE HUMIDITY: 45% TO 85% (3) AIR PRESSURE: 86Kpa TO 106Kpa 在沒有指定的情況下測試溫度、濕度、氣壓如下: (1) 溫度為 $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$ (2) 濕度為 45% $\sim$ 85% (3) 氣壓為86Kpa $\sim$ 106Kpa	
4.8	PRACTICAL TEMPERATURE RANGE 使用溫度範圍	$-16^{\circ}\text{C} \sim +60^{\circ}\text{C}$ 在 $-16^{\circ}\text{C} \sim +60^{\circ}\text{C}$ 內使用	

5、規格及尺寸 ;參見圖紙

6.MATERIAL LISTING 材料清單

ITEM 項目	PART NAME 名稱	MATERIAL PART NAME 材料名稱	FINISH 表面状态
1	胶体/柄	LCP	黑灰色
2	端子	铜	镀银
3	接触片	铜	镀银