



承认书 SPECIFICATION

文件编号: DGKD/JS-MSS-005

版 次: B/1

CUSTOMER NAME 客户名称: _____

CUSTOMER PARTS 客户编号: _____ 3060075

DESCRIPTION 产品系列: _____ MINI SLIDE SWITCH

KWAN DA MODEL NO 型号: _____ MSS22C02-G1.5 TR

KWAN DA PARTS NO 料号: _____ 4010522C0206G

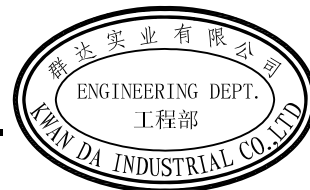
CUSTOMER MODEL NO 客户型号: _____

CUSTOMER PARTS NO 客户料号: _____

CUSTOMER APPROVED 客户承认	
<input type="checkbox"/> APPROVED 接受	<input type="checkbox"/> REJECTED 不接受
CHECKED BY 审核:	APPROVED BY 承认:
DATE 日期:	DATE 日期:

DRAWN BY 制 訂	CHECKED BY 核 對	APPROVED BY 審 批	DESIGN DEPARTMENT 設計單位	RoHS PRODUCT RoHS 產品
王振江	何 堅	周丽琼		
DATE: 2016-07-13	DATE: 2016-07-13	DATE: 2016-07-13		

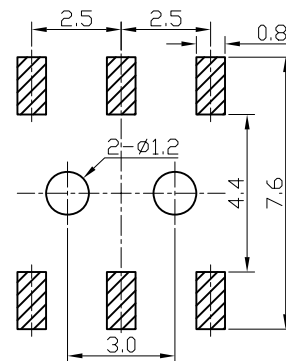
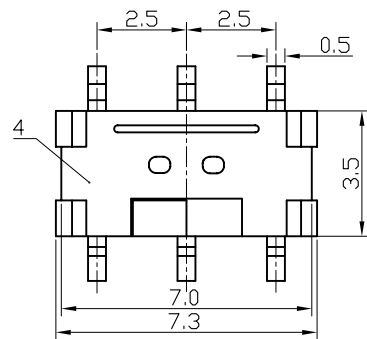
群達實業有限公司
KWAN DA INDUSTRIAL CO., LTD.



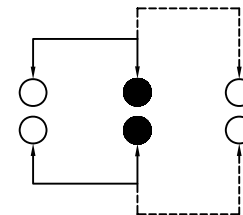
廣東省東莞市東城周屋工業區龍華路

LONG HUA RD.,ZHOU WU INDUSTRIAL DISTRICT,DONG CHENG,
DONG GUAN CITY, GUANG DONG PROVINCE,CHINA.

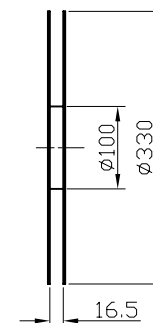
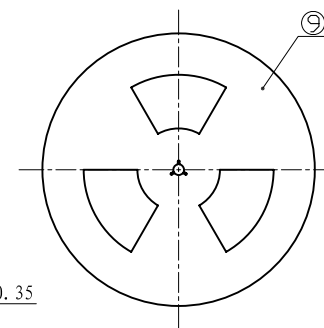
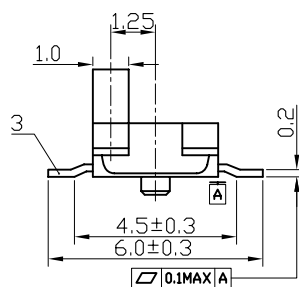
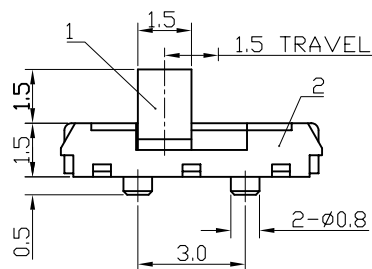
TEL: 0769-22252343 22252346 FAX: 0769-22267156



P. C. B LAYOUT

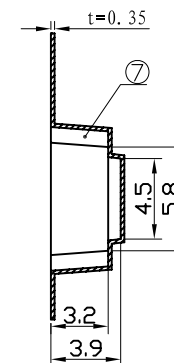


SCHEMATIC

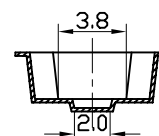


SCALE 1 : 20

NOTE: 1. COMPONENT LOAD PER 1400<REF> PCS.
(一盘装 1400 PCS)



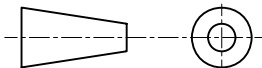
SCALE 1 : 2



KWAN DA INDUSTRIAL CO., LTD.

TITLE : MINI SLIDE SWITCH

MODEL : MSS22C02-G1.5 TR (W01008)



TOLERANCE
≤1.5mm ±0.1
>1.5mm ±0.2
>10.0mm ±0.3

ANGLE TOL
±2°

9	REEL	PS	1	
8	COVER TAPE	PS	1	
7	CARRIER	PS	1	
6	SPRING PLATE	SUS	1	NATURE
5	CONTACT	BeCu STRIP	2	Ag PLATED
4	COVER	SUS	1	NATURE
3	TERMINAL	BRASS STRIP	6	Ag PLATED
2	CASE	NYLON	1	BLACK
1	KNOB	NYLON	1	BLACK
NO.	PART NAME	MATERIAL	QTY	FINISHING

UNIT : MM		DWN.	王振江	DATE	2016-07-13
SCALE : 6 : 1		CHK'D	何坚	DATE	2016-07-13
VERSION	01	APPD.	周丽琼	DATE	2016-07-13

		SPECIFICATION		KWAN DA INDUSTRIAL CO.,LTD.	
承認書		群 达 实 业 有 限 公 司			
文件編號	DGKD/JS-MSS-005	版 本	B / 1	頁 碼	共 3 頁, 第 1 頁
DESCRIPTION 產品系列: MINI SLIDE SWITCH			DRAWN BY 制訂: 王 振 江		
MODEL NO 產品型號: MSS22C02			CHECKED BY 核對: 何 堅		
1. RATING 額定值: 0.1A 12V DC					
2. FUNCTION 接觸型式: 2P2T			APPROVED BY 審批: 周 丽 琼		
3. TIMING 時間特性: NON-SHORTING					
4. ELECTRICAL CHARACTERISTICS 電氣性能規格:					
ITEM 項目		TEST CONDITIONS 測試條件		PERFORMANCE 性能	
4.1	CONTACT RESISTANCE 接觸電阻	MEASURED AT SMALL CURRENT (100 mA OR LESS) 1000HZ 在微小電流 (100 mA) 以下測試		70mΩ MAX. 70 毫歐以下。	
4.2	INSULATION RESISTANCE 絕緣電阻	APPLY A VOLTAGE OF 100V DC SHALL BE APPLIED FOR 1 MIN AFTER WHICH MEASUREMENT BE MADE: (1) BETWEEN CONDUCTORS NOT TO BE CONTACT (2) BETWEEN INDIVIDUAL TERMINALS AND FRAME 輸入 100V DC 電壓 1 分鐘, 按以下接觸方法測試: (1) 不接觸的端子之間 (2) 端子與外殼之間		100MΩ MIN. 100 兆歐以上。	
4.3	DIELECTRIC STRENGTH 耐電壓	AC 100V rms (50-60HZ) FOR 1 MIN TRIP CURRENT: 0.5mA (1) BETWEEN CONDUCTORS NOT TO BE CONTACT. (2) BETWEEN INDIVIDUAL TERMINLS AND FRAME 輸入 AC 100V (50-60HZ) 電壓, 1 分鐘感度電流為 0.5mA, 按以下接觸方法測試: (1) 不接觸的端子之間 (2) 端子與外殼之間		WITHOUT DAMAGE TO PARTS ARCING OR BREAKDOWN ETC. 沒有絕緣破壞等異常。	
5. MECHANICAL CHARACTERISTICS 機械性能規格:					
ITEM 項目		TEST CONDITIONS 測試條件		PERFORMANCE 性能	
5.1	OPERATING FORCE 作動力	MEASUREMENT SHALL BE MADE AT THE NEAREST POINT OF THE COMPONENT OR AT THE POINT 3mm FROM THE TIP OF THE ACTUATOR (KNOB) . 在距離膠柄前端 3mm 作測定點。		180gf±100gf	
5.2	TERMINAL STRENGTH 端子強度	A STATIC LOAD OF 500gf SHALL BE APPLIED TO THE TERMINAL FOR 15 SEC. IN ANY DIRECTION . 在插腳前端任意一個方向加 500gf 力度測試, 時間為 15 秒。		ELECTRICAL CHARACTERISTICS SHALL BE SATISFIED WITHOUT DAMAGE OR EXCESSIVE LOOSENESS OF TERMINALS. 在插腳中沒有裂開、鬆動異常, 滿足於機械, 電器性能。	
5.3	DISPLACEMENT OF ACTUATOR (KNOB) 柄 強 度	A STATIC LOAD OF 9.8 N (1kgf) SHALL BE APPLIED TO THE TOP OF THE ACTUATOR (KNOB) AND THEN DISPLACEMENT SHALL BE MEASURED TO THE DIRECTION OF THE ARROW. 在柄的前端施加 9.8N (1kgf) 的力度, 位移應沿印記的方向上測定。		THE LEVER SHALL HAVE NO SERIOUS DEFORMATION AND FUNCTION IS NORMALLY. 柄部無嚴重變形, 可以正常工作。	
5.4	PRACTICAL TEMPERATURE RANGE 使用溫度範圍	-16℃~+60℃ 在-16℃~+60℃溫度內使用			



SPECIFICATION

承認書

KWAN DA INDUSTRIAL CO.,LTD.

群达实业有限公司

文件編號

DGKD/JS-MSS-005

版本

B / 1

頁碼

共 3 頁, 第 2 頁

5.5

STANDARD
ATMOSPHERIC
CONDITIONS
測試標準狀態UNLESS OTHERWISE SPECIFIED, THE STANDARD RANGE OF
ATMOSPHERIC
CONDITIONS FOR MAKING MEASUREMENTS 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 5~35°C

(2) 濕度為 45%~85%

(3) 氣壓為 86Kpa~106Kpa

6. ENDURANCE CHARACTERISTICS (耐久性):

ITEM 項目

TEST CONDITIONS 測試條件

PERFORMANCE 性能

6.1

MECHANICAL-LIFE
TEST
機械壽命SWITCH SHALL BE SUBJECTED TO 10,000 CYCLES AT A SPEED
OF 15~18 PER MINUTE WITHOUT LOAD.開關在無負荷的條件下以每分鐘 15~18 回的速度進行
10,000 次的測試。

1. CONTACT RESISTANCE: $\leq 200m\Omega$
2. INSULATION RESISTANCE: $\geq 50M\Omega$
3. UNDER A VOLTAGE 100V AC (50Hz)
WITHOUT DESTROYING AND LOSSING.
4. OPERATING FORCE $\pm 50\%$ SPEC.
5. NO DEFORMATION AND LOOSENESS

1. 接觸電阻: ≤ 200 毫歐
2. 絕緣電阻: ≥ 50 兆歐
3. 施加 50Hz 100V 的交流電壓無擊穿和
飛孤現象。
4. 作動力變化範圍規格值 $\pm 50\%$
5. 開關外觀無異常, 鉗合部分應牢
固, 緊固部分應無鬆動。

6.2

SOLDERABILITY
TEST
可焊性試驗THE TOP OF THE TERMINALS SHALL BE DIPPED 2mm IN THE
SOLDER BATH OF $240 \pm 5^\circ\text{C}$ FOR 3 ± 0.5 SECONDS.端子頂部被浸入錫焊池中 2mm 深, 溫度為 $240 \pm 5^\circ\text{C}$, 時間
為 3 ± 0.5 秒。

1. THE AREA OF SOLDERABILITY SHOULD
BE OVER 75%.
- 焊接面積要有 75% 以上。

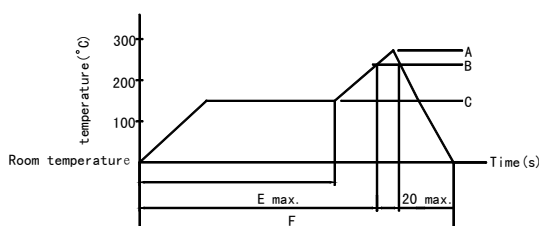
6.3

RESISTANCE TO
SOLDERING
HEAT TEST
耐焊性試驗

1. THE CONDITION MENTIONED ABOVE IS THE TEMPERATURE ON
THE MOUNTING SURFACE OF A PC BOARD. THERE ARE CASES WHERE
THE PC BOARD'S TEMPERATURE GREATLY DIFFERS FROM THAT
OF THE SWITCH, DEPENDING ON THE PC BOARD'S
MATERIAL, SIZE, THICKNESS, ETC. CARE SHOULD BE TAKEN TO
PREVENT THE SWITCH'S SURFACE TEMPERATURE FROM EXCEEDING
 250°C . 測試報告是以 PC 板銅箔面作基準, 因 PC 板分開之溫
差是直接受 PC 板之物料、大小、厚度等影響, 不論任何情
況及條件都需避免防止開關之表面溫度超過 250°C 。


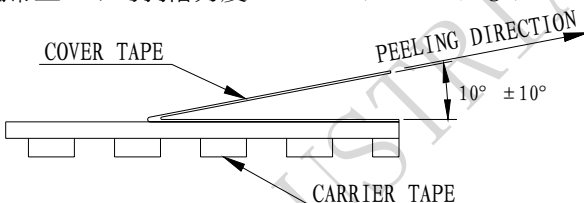
2. SOLDERING CONDITIONS DIFFER DEPENDING ON REFLOW
SOLDERING MACHINE. YOU ARE REQUESTED TO VERIFY THE
SOLDERING CONDITIONS THOROUGHLY BEFOREHAND. 條件變化
是直接受回流焊接儀器影響, 請注意, 其儀器是否正常。

3. TEMPERATURE PROFILE. 溫度示意图。



SERIES 系列	A (°C) 3s MAX	B (°C)
NYLON	250	240

WITHOUT DEFORMATION OF CASE OR
EXCESSIVE LOOSENESS OF TERMINALS.
ELECTRICAL CHARACTERISTICS SHALL BE
SATISFIED.
本體無變形, 能滿足於機械、電器性能。

<div>  <div> SPECIFICATION 承認書 </div> </div>		<div> KWAN DA INDUSTRIAL CO.,LTD. 群达实业有限公司 </div>			
文件編號	DGKD/JS-MSS-005	版本	B / 1	頁碼	共 3 頁, 第 3 頁
ITEM 項目		TEST CONDITIONS 測試條件			PERFORMANCE 性能
6.4	COLD TEST 耐冷試驗	THE SWITCH SHALL BE STORED AT A TEMPERATURE OF $-25\pm3^{\circ}\text{C}$ FOR 48 HOURS. AND THEN IT SHALL BE SUBJECTED TO THE CONTROLLED RECOVERY CONDITIONS FOR 1 HOUR AFTER WHICH MEASURE MENT SHALL BE MADE. 開關放置在溫度 $-25\pm3^{\circ}\text{C}$ 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。
6.5	HEAT TEST 耐熱試驗	THE SWITCH SHALL BE STORED AT A TEMPERATURE OF $70\pm2^{\circ}\text{C}$ FOR 48 HOURS. THEN THE SWITCH SHALL BE MAINTAINED AT STANDARD ATMOSPHERIC CONDITIONS FOR 1 HOUR AFTER WHICH MEASURMENT SHALL BE MADE. 開關放置在溫度 $70\pm2^{\circ}\text{C}$ 中測試 48 小時後, 再放置正常室溫中 1 小時來測定。			THERE SHALL BE NO DEFORMATION OR CRACKS IN MOLDED PART. 外觀無異常, 滿足於機械、電器性能。
6.6	HUMIDITY TEST 潮濕試驗	THE JACK SHALL BE STORED AT A TEMPERATURE OF $40\pm2^{\circ}\text{C}$ AND A HUMIDITY OF 90% TO 95% FOR 96 HOURS. THEN THE SWITCH SHALL BE MAINTAINED AT STANDARD ATMOSPHERIC CONDITION FOR 1 HOUR PROCEDURES BE MADE. 放置 $40\pm2^{\circ}\text{C}$ 的相對濕度為 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。			THERE SHALL BE NO DEFORMATION OR CRACKS IN MOLDED PART. 外觀無異常, 滿足於機械、電氣性能。
7.0	PEELING STRENGTH OF COVER TAPE 蓋帶剝離力度	PEELING STRENGTH OF OVER TAPE SHALL BE 0.1-12N (10.2-130gf) AND TESTED AS FOLLOWS. PEELING SPEED OF COVER TAPE SHALL BE 300MM/MIN 編帶上蓋帶的剝落力度 0.1-12N (10.2-130 gf) 			
8.0	CONSERVATION TEMPERATURE 保存溫度	THE SWITCHES' STORE CONDITIONS REQUIREMENT AND STORE TIME LIMIT: 1. THE SWITCHES PACKED IN THE CARTON BOARD BOXES AND WOODEN BOXES CAN BE TRANSPORTED BY ANY KINDS OF VEHICLES, BUT NEED AVOIDING BEING STRICEN BY RAIN, SNOW AND MECHANISM. 2. THE SWITCHES SHOULD BE KEPT UNDER THE BELOW CONDITIONS: THE TEMPERATURE IS KEPT WITHIN THE LIMITS OF SUBZERO THEN DEGREE CENTIGRADE TO FORTY DEGREE CENTIGRADE; THE RELATIVE HUMIDITY SHOULD BE NOT MORE THAN EIGHTY PERCENT AND THERE IS NO ACID , ALKALI, SULFIDE , OZONE, ALKALINE AIR AND ANY OTHER POISONOUS GAS AROUND THE STOREHOUSE. 開關保存條件要求和期限: 1、裝有產品的紙箱或木箱允許用任何方法運輸, 唯需避免雨雪直接淋襲和機械撞擊。 2、產品應存放在環境為 $-10\sim+40^{\circ}\text{C}$, 相對濕度不大於 80%, 周圍空氣不應有酸、堿、硫化物、臭氧、氨氣及其它對產品有害氣體的倉庫內。			
9.0	CHINA OF ORIGIN 原產國	MADE IN DONG GUAN CHINA. 中國東莞製造.			
10.0	ROHS COMPLIANT 符合 RoHS 指令	ON THE RESTRICTION OF THE USE OF CERTAIN HAZARDOUS SUBSTANCES IN ELECTRICAL AND ELECTRONIC EQUIPMENT, THE USE OF PROHIBITED SUBSTANCE IS LIMITED TO: (1) Cd <100ppm; (2) Pb, Hg, Cr(VI), PBB AND PBDE <1000ppm. (3) INCLUDE THE RANGE OF THAT RoHS RELEASE. 電子電氣設備中限制使用某種特定有害物質, 禁用物質允許最大含量值的 MCV: (1) Cd 為 <100ppm; (2) Pb, Hg, Cr(VI), PBB AND PBDE 為 <1000ppm. (3) 包括 RoHS 最新豁免的範圍.			MEET THE ABOVE REQUIREMENT. 符合要求.