




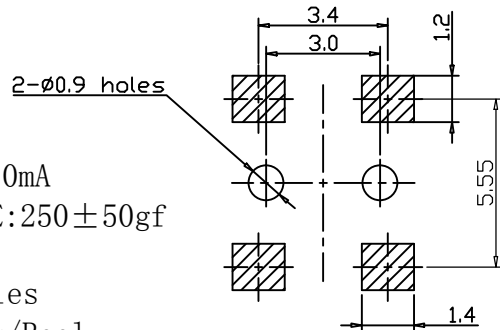
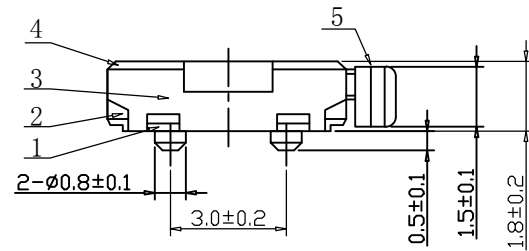
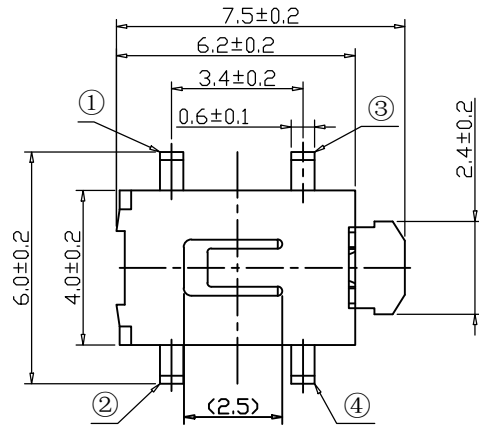
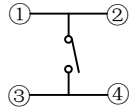
东一部品仕样承认书

APPROVAL SHEET

客 户 CUSTOMER	
客户产品编码/规格 PRODUCT SPECIFICATION	
品 名 PART NAME	Tact Switch
型 号 MODEL	TP-1113-EE1325
制 样 DSGD BY	龚秋静
审 核 CHKD BY	谷达财
批 准 APPD BY	杜光明
送 样 日期 SENDING DATE	 日期: 2012-02-17
承 认 印 APPD PRINT	

深 圳 市 东 一 部 品 电 子 有 限 公 司
TONE PARTS ELECTRONICS CO., LTD
ADD: 深圳市龙岗区坪地镇黄竹工业区
HUANGZHU INDUSTRIAL PARK PINGDI TOWN
LONGGANG AREA SHENZHEN CITY CHINA
TEL: 0755-84097606 84097626
FAX: 0755-84090796
HTTP://www.toneparts.com
E-mail:tone@toneparts.com

CIRCUIT DIAGRAM

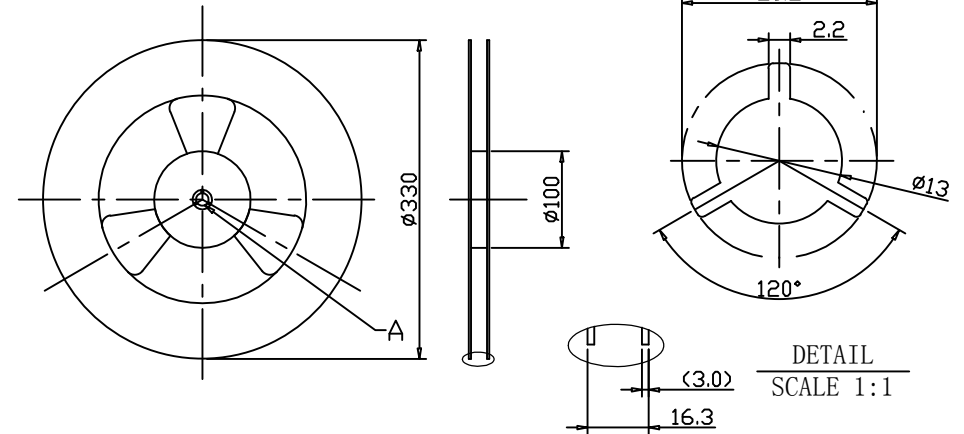
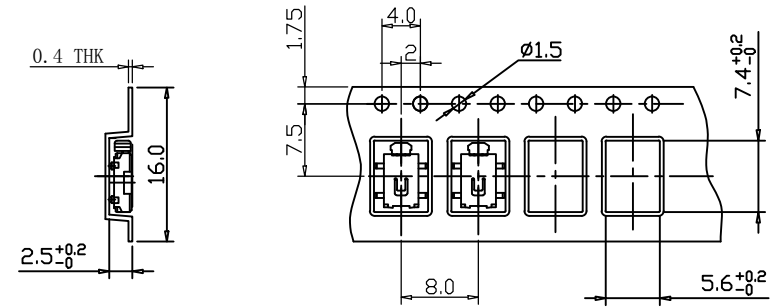


P. C. B. Layout

SPECIFICATION

1. RATING: DC 12V, 50mA
2. OPERATING FORCE: 250 ± 50 gf
3. TRAVEL: 0.25mm
4. LIFE: 30,000cycles
5. PACKAGE: 3000Pcs/Reel

REV.	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
A	NEW DWG	02/17/12	CJL	GDC	DGM



SCALE 1:10

DETAIL SCALE 1:1

6	KNOB	PA6T	1	BLACK
5	COVER	STAINLESS STEEL	1	NATURAL
4	CUST COVER	POLYAMIDE	1	NATURAL
3	CONTACT	STAINLESS STEEL	1	Ag-Plate
2	CASE	PA6T	1	BLACK
1	TERMINAL	BRASS	4	Ag-Plate
NO.	PARTS	MATERIALS	Q' TY	FINISH

TOLERANCES UNLESS OTHERWISE SPECIFIED	
WITHIN: $1.5\text{mm} \pm 0.1\text{mm}$	
OVER: $1.5\text{mm} \pm 0.2\text{mm}$	
DRAWN / DATE	JIALIN.CHEN 2012.02.17
CHECKED / DATE	DACAI.GU 2012.02.17
APPROVED /DATE	GUANGMING.DU 2012.02.17

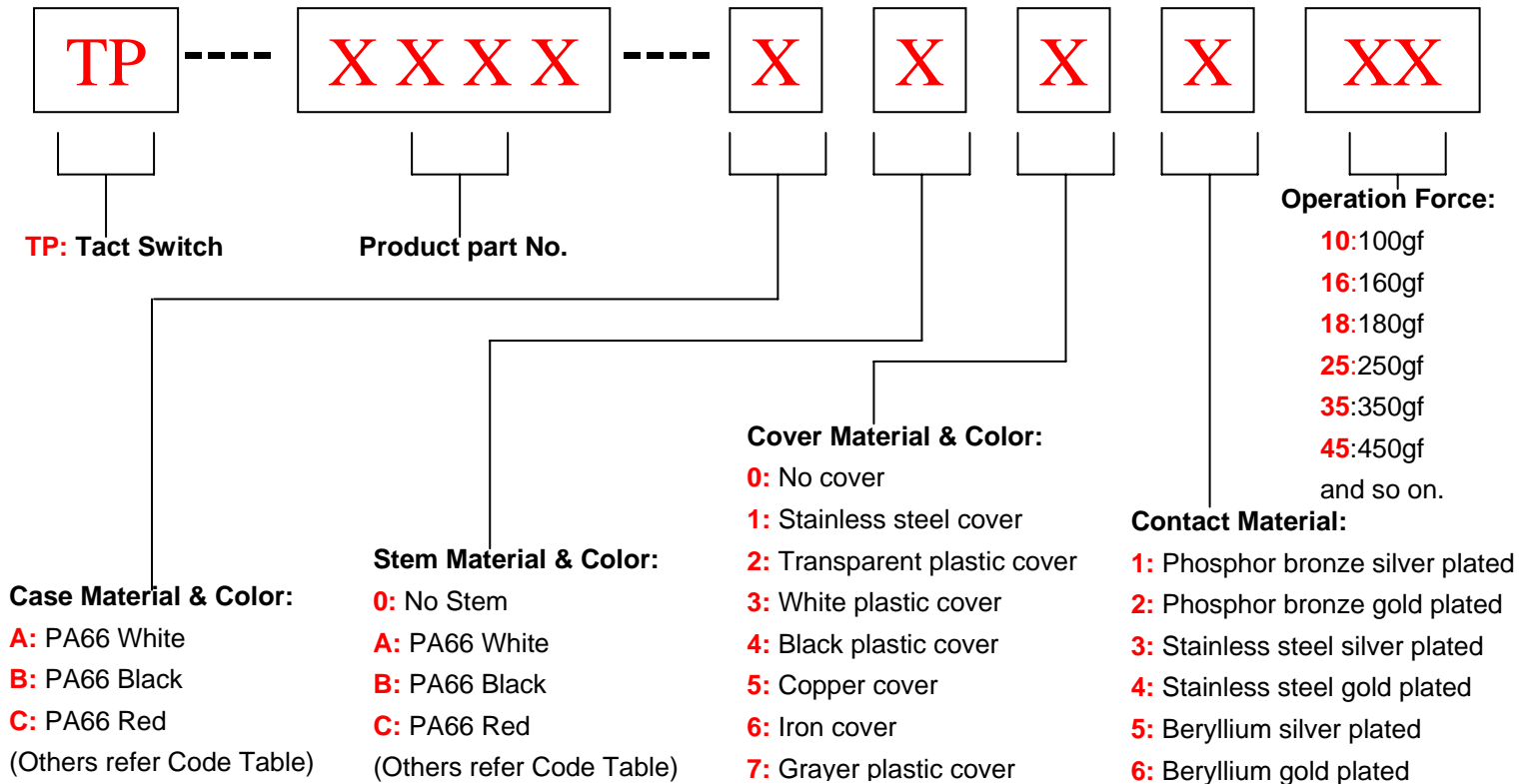
TACT SWITCH		
SCALE	UNIT	SHEET
1:1	mm	1 / 1
CUSTOMER DRAWING		

MODEL	TP-1113-EE1325
DWG NO.	
东一部品电子有限公司 TONE PARTS ELECTRONICS CO., LTD	



1). How To Order

Tact Switch Material No.



2). Code Table for Case & Stem's Material and Color

CODE	MATERIAL	COLOR	CODE	MATERIAL	COLOR
A	PA66	White	R	PA46	Black
B	PA66	Black	S	BRASS	Yellow
C	PA66	Red	T	PA66	Blue
D	PA6T	White	U	PA9T	Blue
E	PA6T	Black	V	C230	White
F	PA6T	Red	W	C230	Black
G	PA9T	White	Y	LCP	Gray
H	PA9T	Black	1	PA46	Coffee
J	PA9T	Red	2	PBT	Black
K	LCP	White	3	PA6T	Green
L	LCP	Black	4	PA6T	Coffee
M	SILICON	White	5	PC	Natural
N	SILICON	Black	6	POM	Black
P	SILICON	Blue	7	SILICON	Green
Q	PA46	White	8	SILICON	Red
9A	PA66	Gray	9B	PHENOL IC RESIN	Natural

	SPECIFICATION LIST	
	TACT SWITCH	SAMPLE : 1 EA 5

1 General

- 1.1 Switch rating As per individual specification (See outside drawing)
- 1.2 Operating temperature -20 to +70
- 1.3 Preservative temperature range -40 - 90
- 1.4 Appearance and dimensions See outside drawing page
- 1.5 Standard Conditions Unless otherwise specification ,the test and measurements shall be carried out as follows
- Ambient temperature :5-35
- Relative humidity :45-85%
- Air pressure :86-106Kpa(860-1060rbar)
- However if doubt arises on the decision based on measured values under the above-mentioned conditions, the following shall be employed.
- Ambient temperature :20+/-3
- Air pressure :86-106Kpa(860-1060rbar)

2. Performance

2.1 Electrical characteristics

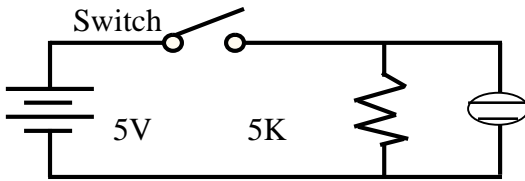
	Items	Test Conditions	Criteria
2.1.1	Contact resistance	Applying a static load twice the actuating force to the center of the stem ,measurements shall be made with a 1KHZ small-current contact resistance meter.	200m MAX
2.1.2	Insulation resistance	Measurements shall be made following application of DC 100V potential across terminals and frame for one minute.	200M MIN
2.1.3	Dielectric withstand in voltage	AC 250V(50HZ or 60HZ) shall be applied across terminals and frame for one minute.	There shall be no breakdown

						APPD 杜光明	CHKD 倪焕林	DSGD 洪宗保	TITLE TACT SWITCH
A	~	08.4.8	QMS	DZL	DGM	2008.4.18	2008.4.18	2008.4.18	DOCUMENT NO.
ZONE	SYMB	DATE	APPD	CHKD	DSGD				WI-RD0001

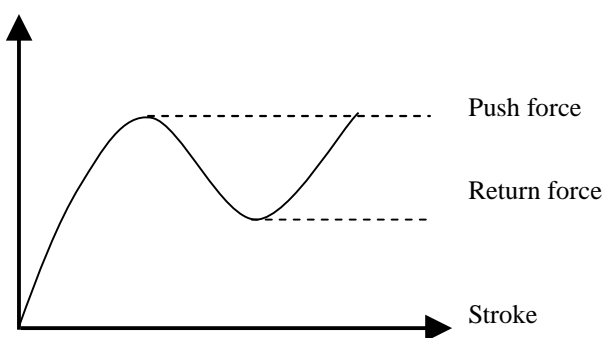
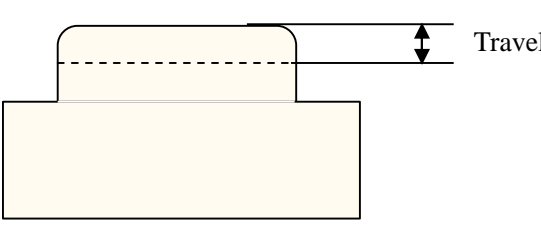
SPECIFICATION LIST

TACT SWITCH

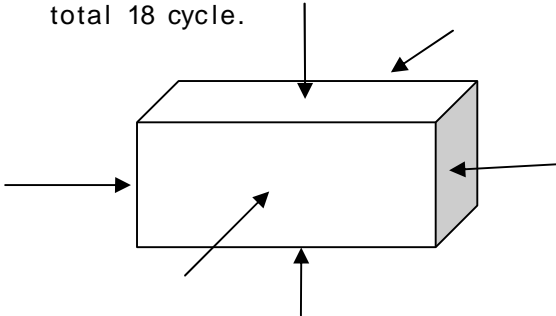
SAMPLE: 2 EA 5

Items	Test Conditions	Criteria
2.1.4 Bounce	Lightly striking the center of the stem a rate encountered in normal use(3 to 4 operations per second)bounce shall be tested at ON and OFF 	ON bounce :5ms Max OFF bounce:5ms Max

2.2 Mechanical characteristics

Items	Test Conditions	Criteria
2.2.1 Operating force	Push by recommended operating condition 	See product drawing
2.2.2 Travel	Push by recommended operating condition $F=(\text{Operation force}) \times 2$ 	Refer to individual product drawing.
2.2.3 Stop strength	A static load of 3Kgf shall be applied in the direction of stem operation for a period of 60 Seconds	No damage(Electrical and mechanical)

						APPD 杜光明 2008.4.18	CHKD 倪焕林 2008.4.18	DSGD 洪宗保 2008.4.18	TITLE TACT SWITCH
									DOCUMENT NO. VI-RD0001
A	~	08/4/18	QNS	DZL	DGM				
ZONE	SYMB	DATE	APPD	CHKD	DSGD				

		INSPECTION LIST	
		TACT SWITCH	SAMPLE: 3 EA 5
Items	Test Conditions	Criteria	
2.2.4	Vibration test	(1) Amplitude :1.5mm (2) Sweep rate: 10-55-10HZ for1 minute (3) Sweep method: Logarithmic frequency sweep rate (4) Vibration direction :X .Y.Z(3 directions) (5) Time :Each direction 2hours(Total 6hours)	No 2.1and 2.2.1 to2.2.2 shall be satisfied
2.2.5	Impact shock test	(1) Acceleration: 80G (2) Cycle of test:3cycle each in 6 directions for a total 18 cycle. 	NO 2.1and 2.2.2 shall be satisfied
2.2.6	managerial Soldering Conditions	Soldering area:t/2 of P.W.B thickness (P.W.B :t=1.6) Soldering temperature: 260 Soldering time :5S MAX	No damage(Electrical and mechanical)

2.3 Climatic characteristics

Items	Test Conditions	Criteria
2.3.1	Cold test (1) Temperature : -30 +/-2 (2) Duration of test :96 hours (3) Take off a drop water (4) Standard condition after test :1 hour	Contact resistance: 100m max NO2.1.2 to2.1.4 and 2.2.1to 2.2.2 shall be satisfied
2.3.2	Heat test (1) Temperature:80+/-2 (2)Duration of test :96 hours (3)Standard condition after test :1 hour	Contact resistance 100m max NO2.1.2 to2.1.4 and 2.2.1to 2.2.2 shall be satisfied
2.3.3	Temperature cycle (1) Test cycled:5 cycles (2) Standard conditions after test: 1 hours (3) 1 cycle	Contact resistance 100m max NO2.1.2 to2.1.4 and 2.2.1to 2.2.2 shall be satisfied

						APPD 杜光明	CHKD 倪焕林	DSGD 洪宗保	TITLE TACT SWITCH
A	~	08/4/18	QNS	DZL	DGM	2008.4.18	2008.4.18	2008.4.18	DOCUMENT NO.
ZONE	SYMB	DATE	CHKD	CHKD	DSGD				WI -RD0001

	INSPECTION LIST	
	TACT SWITCH	SAMPLE: 4 EA 5

Items	Test Conditions	Criteria	
	<p>The graph shows a humidity test profile with four segments: a 2-hour hold at 80% RH, a 1-hour ramp down to 25% RH, a 2-hour hold at 25% RH, and a 1-hour ramp up back to 80% RH.</p>		
2.3.4	Humidity	<p>(1) Temperature: 60+/-2 (2) Relative humidity :90-95% (3) Duration of test :96 hours (4) Take off a drop water (5) Standard conditions after test :1 hours</p>	<p>Contact resistance 100m max NO2.1.2 to2.1.4 and 2.2.1to 2.2.2 shall be satisfied</p>
2.3.5	Operating life test	<p>(1)DC 5V,5mA resistance load (2)Operation speed: 2-3 cycles/second (3)Push force :maximum value of operation force (4)Cycle of operation :Refer to individual product drawing</p>	<p>Contact resistance 100m max Bounce:20m sec max Actuating force: 30% imtial force No 2.1.2 to 2.1.3 and 2.2.2 shall be satisfied</p>
2.3.6	Withstand HS	<p>(1) Density:3+/-1 PPM (2) Temperature :40+/-2 (3) Relative humidity :90-95% (4) Duration of test :24 hours (5) Standard conditions after test :1 hours</p>	<p>Contact resistance 100m max NO2.1.2 to2.1.4 and 2.2.1to 2.2.2 shall be satisfied</p>
2.3.7	Withstand SQ	<p>(6) Density:10+/-2 PPM (7) Temperature :40+/-2 (8) Relative humidity :90-95% (9) Duration of test :24 hours Standard conditions after test :1 hours</p>	<p>Contact resistance 100m max NO2.1.2 to2.1.4 and 2.2.1to 2.2.2 shall be satisfied</p>

						APPD 杜光明 2008.4.18	CHKD 倪焕林 2008.4.18	DSGD 洪宗保 2008.4.18	TITLE TACT SWITCH
A	~	08/4/18	QMS	DZL	DGM				DOCUMENT NO. WI-RD0001
ZONE	SYMB	DATE	CHKD	CHKD	DSGD				

INSPECTION LIST

TACT SWITCH

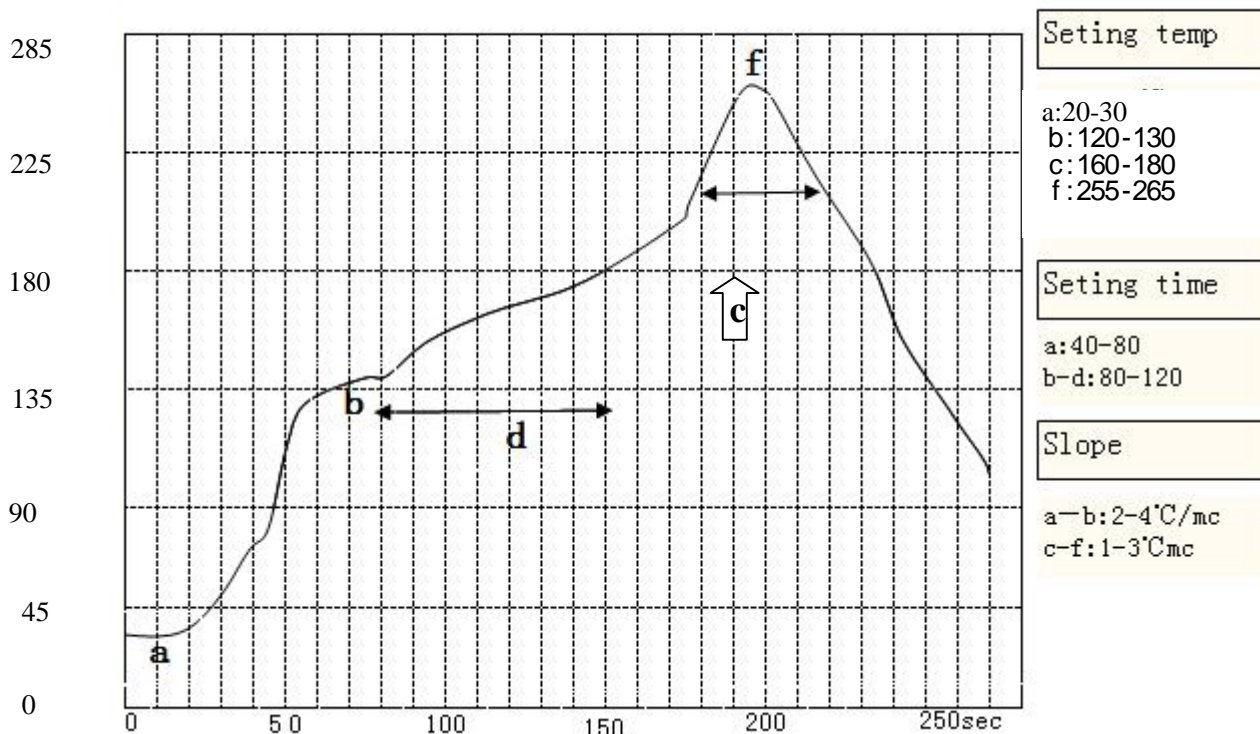
SAMPLE: 5 EA 5

3.Reflow soldering

1. Reflow soldering

Please practice according to below conditions

- 1.1)Thickness of printed circuit board shall be 1.6mm
- 1.2)Switch terminal and PCB upper face shall be free from flux prior to soldering.
- 1.3)Safeguard the switch assembly against flux penetration from its top side.



2). TEMPERATURE AND IMMERSING TIME

	TEMPERATURE	TIME(SEC)
DIP SOLLDERING	260+/-5	3+/-1
MANUAL SOLDERING	360+/-10	3+/-1

2.1). IMMERSION DEPTH: IMMERSION DEPTH UP TO THE SURFACE OF THE BOARD THICKNESS LT PRINTED WIRING BOARD 1.6mm.

2.2).WAVE SOLDERING

- (A) 260+/-5 5 SEC . MAX.
- (B) PRE-HEAT TIME SHALL BE 30 SECONDS MAX.TA 100 MAX.

						APPD	CHKD	DSGD	TITLE
						杜光明	倪焕林	洪宗保	TACT SWITCH
A	~	08/4/18	QNS	DZL	DGM	2008.4.18	2008.4.18	2008.4.18	DOCUMENT NO.
ZONE	SMB	DATE	CHKD	CHKD	DSGD				WI -RD0001