

RoHS Compliant

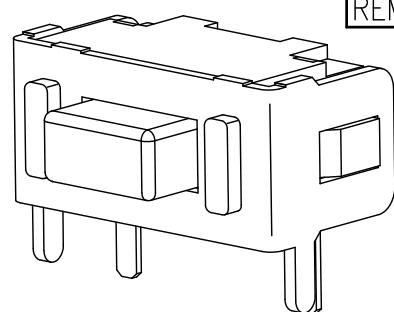
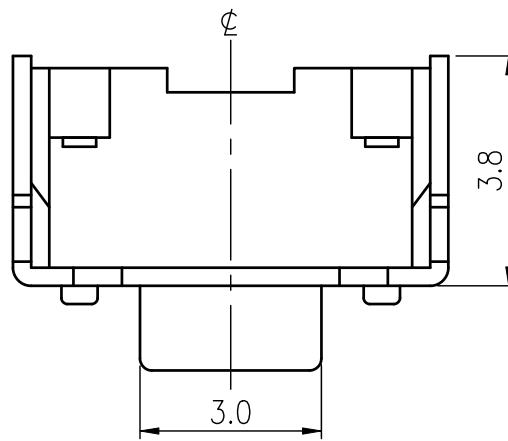


REVISIONS

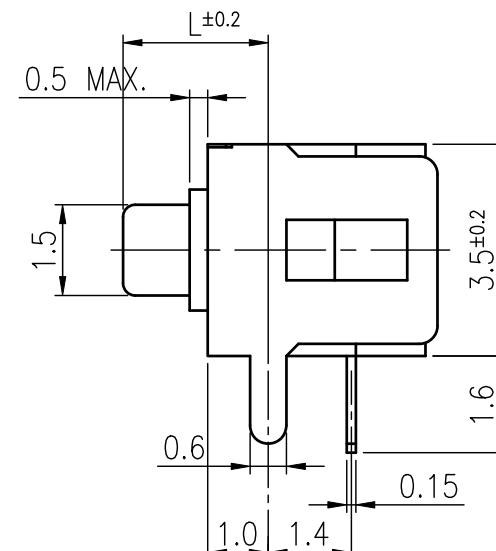
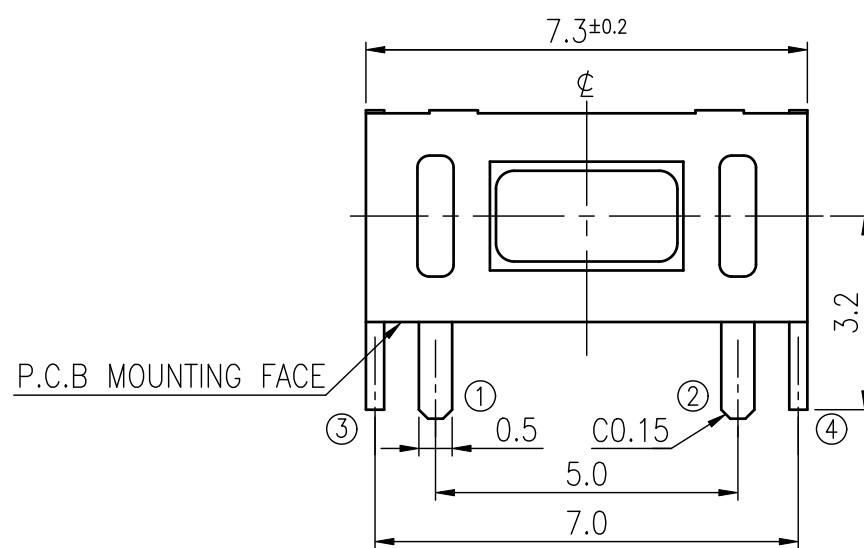
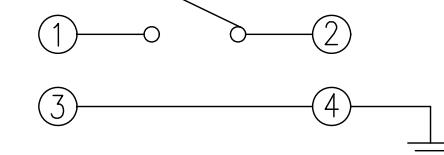
Rev	DESCRIPTION	DATE	DRAWER	Rev	DESCRIPTION	DATE	DRAWER
A	Initial Drawing	2015.02.10	Jane Shen	C			
B				D			

SPECIFICATIONS

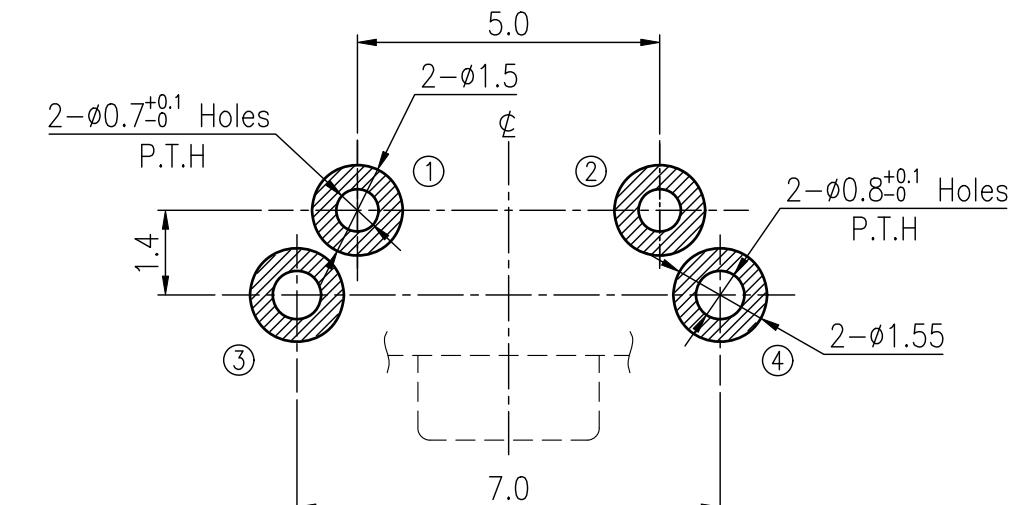
RATING	DC12V 50mA	TIMING	
CONTACT RESISTANCE	500mΩ MAX.	OPERATION (TORQUE)	
INSULATION RESISTANCE	DC500V-100MΩ MIN.	STROKE (ANGLE)	0.15±0.1mm
WITHSTAND VOLTAGE	AC250V-1 MINUTE	CONTACT RESISTANCE	1Ω MAX.
REMARKS:	(AFTER 100,000 CYCLES LIFE TEST)		



SCHEMATIC

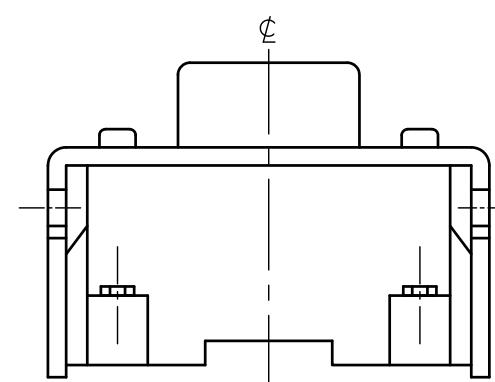


P.C.B LAYOUT



HATCHED AREA SHOWS SOLDERING LAND

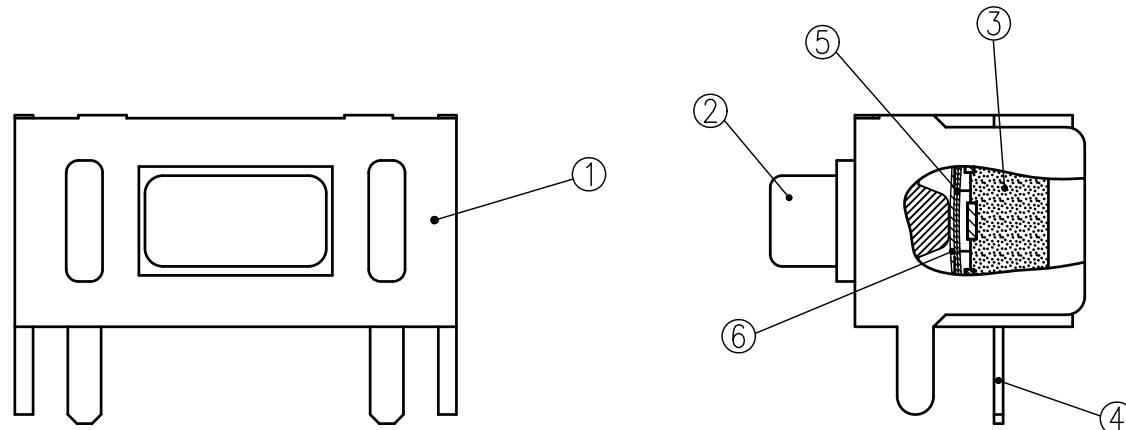
MODEL NO.	L	FORCE
NTC303-BD1T-L180T	1.7	180±50gf
NTC303-BD1T-M180T	2.4	
NTC303-BD1T-P180T	4.0	
NTC303-BD1T-L250T	1.7	250±50gf
NTC303-BD1T-M250T	2.4	



TOLERANCES UNLESS OTHERWISE SPECIFIED ±0.1			SIGNATURES	DATE	MODEL
			DRAWER	Jane Shen	TITLE TACT SWITCH
CHECKED Jamie Li 2015.05.27			REVIEWED		
UNIT mm	SCALE 8/1	APPROVALS Dennis Hung			NO. See Model No.
				2015.05.27	

TAIWAN MISAKI ELECTRONICS CO., LTD.

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NO.	PART NAME	Q'TY	MATERIAL		SPECIFICATION	
6	TAPE	1	POLYIMIDE			
5	CONTACT PLATE		STAINLESS STEEL PLATE		Ag-PLATING	
4	TERMINAL	2	COPPER ALLOY		Ag-PLATING OVER Ni PLATING	
3	FRAME	1	LIQUID CRYSTAL POLYMER		COLOR: BLACK	
2	STEM	1	LIQUID CRYSTAL POLYMER		COLOR: <input type="checkbox"/> BLACK(180gf) <input checked="" type="checkbox"/> NATURE(250gf)	
1	COVER	1	CARBON STEEL PLATE		MATTE Sn PLATING OVER Ni PLATING	
SYM	DESCRIPTION	DATE	APPROVED	SIGNATURES	DATE	MODEL
				DRAWN Jane Shen	2015.02.10	TITLE TACT SWITCH
				CHK'D Jamie Li	2015.05.27	
				REV'D		NO. NTC303-BD1T-L250T
				APP'D Dennis Hung	2015.05.27	
				DWG NO.	NTC303-13	
TAIWAN MISAKI ELECTRONICS CO.,LTD.						

SPECIFICATIONS FOR TACT SWITCH

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Model:

1. Test condition:

Standard test conditions shall be 5~35°C in temperature, 45~85%RH in humidity and 86~106Kpa in atmospheric pressure. Should any doubt arise in judgment, tests shall be conducted at 20±2°C in temperature, 60~70% RH in Humidity and 86~106 kpa in atmospheric pressure.

2. Operating temperature range: -40 ~ +85°C

Preservative temperature range: Single condition: -40 ~ +85°C ; Taping condition: -20 ~ +60°C

3. Construction:

3.1 Shape and dimension are subject to attached drawing regulation.

3.2 Appearance: Whole should be a good completion, no rust, no crack and good plating.

4. Rating: 12V D.C. , 50mA.

5. Electrical Performance:

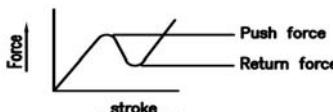
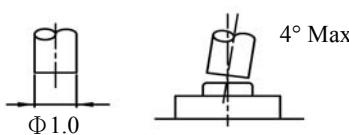
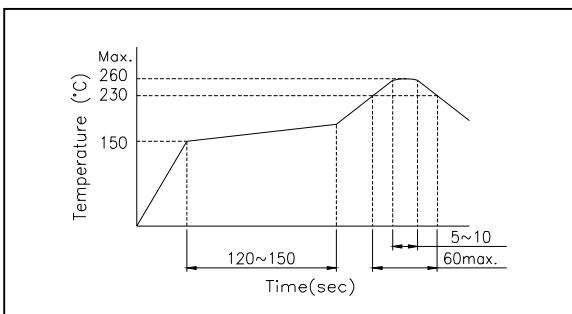
No.	Items	Test conditions	Specifications
5.1	Contact Resistance	Shall be measure at 1kHz±200Hz (MAX. 20mV, MAX. 50mA.) or <u>10mA</u> , <u>5V</u> D.C. By voltage drop method.	<u>500mΩ</u> Max.
5.2	Insulation Resistance	Shall be measured by applying <u>500V</u> D.C. Between all terminals and between the terminals and the frame for 1 minute ± 5 seconds.	<u>100MΩ</u> Min.
5.3	Withstand Voltage	<u>250V</u> A.C. (50~60Hz 2mA) shall be applied between all terminals and between the terminals and the frame for 1 minute.	No dielectric breakdown shall be occurred.
5.4	Bounce	<p>Lightly striking the center of the stem at a rate encountered in normal use (3 to 4 operations per sec.)</p>	<p>ON: <u>10m sec</u> Max. OFF: <u>10m sec</u> Max.</p>

			APPROVED BY	REVIEWED BY	CHECKED BY	DESIGNED BY	SPEC NO.
							SE-TC07N
A	NEW RELEASE			Magic Chen 2009.7.20		Ken Lin 2009.07.20	
SYM	DISCRIPTION	DATE	2009-07-20		Max Chen 2009.07.20		PAGINATE
							1/3

SPECIFICATIONS FOR TACT SWITCH

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6. Mechanical Performance:

No.	Items	Test conditions	Specifications
6.1	Operating Force	Placing the switch such that the direction of switch operation is vertical and then gradually increasing the load applied to the center of the stem, the maximum load required for the switch to come to a stop shall be measured. 	<u>250</u> ± <u>50</u> gf.
6.2	Travel	Placing the switch such that the direction of switch operation is vertical and then applying a below static load to the center of the stem, the travel distance for the switch to come to a stop shall be measured. 	<u>0.15</u> ± <u>0.1</u> mm.
6.3	Control Strength	The static load of <u>3kgf</u> shall be applied on top of the terminal in every direction for 1 minute, in any direction on condition of once for one terminal.	Shall be free from extreme wobble, vent or electrical and mechanical abnormality. Not deformation of the appearance.
6.4	Solderability	Soldering temperature: $235 \pm 5^\circ\text{C}$. Soldering time: 2 ± 0.5 seconds.	75% or more of surface area of the portion immersed in solder shall be satisfied.
6.4	Solder Heat Resistance	(1) Manual soldering temperature: Temperature: 350°C Max. Time: 3 Sec. Max. (2) Reflow Soldering: Number of reflow pass: 2 cycles. 	Shall be free from pronounced deforming in appearance. Of item 5.1~5.4 shall be satisfied. Of item 6.1~6.2 shall be satisfied.

			APPROVED BY	REVIEWED BY	CHECKED BY	DESIGNED BY	SPEC NO.
							SE-TC07N
							PAGINATE
A	NEW RELEASE			Magic Chen 2009.7.20	Max Chen 2009.07.20	Ken Lin 2009.07.20	
SYM	DISCRIPTION	DATE	2009-07-20				2/3

SPECIFICATIONS FOR TACT SWITCH

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7. Weather Performance:

No.	Items	Test conditions	Specifications												
7.1	Humidity Test	(1) Temperature: $60\pm2^{\circ}\text{C}$. (2) Relative humidity: 90~95% (3) Duration of test: 500 Hour. (4) Take off a drop water. (5) Standard conditions after test: 1 Hour.	Contact resistance: <u>500mΩ</u> Max Of item 5.2~5.4 shall be satisfied. Of item 6.1~6.2 shall be satisfied.												
7.2	Heat Test	(1) Temperature: $85\pm2^{\circ}\text{C}$. (2) Duration of test: 500 Hour. (3) Standard conditions after test: 1 Hour.													
7.3	Cold Test	(1) Temperature: $-40\pm2^{\circ}\text{C}$. (2) Duration of test: 500 Hour. (3) Take off a drop water. (4) Standard conditions after test: 1 Hour.													
7.4	Temperature cycle	(1) Test cycle: <u>20</u> cycles. (2) Standard conditions after test: 1 Hour.	<table border="1"> <thead> <tr> <th></th> <th>Temperature</th> <th>Duration of test</th> </tr> </thead> <tbody> <tr> <td rowspan="4">1 cycles</td> <td>$20\pm5^{\circ}\text{C}$</td> <td>1 Hour</td> </tr> <tr> <td>$-40\pm2^{\circ}\text{C}$</td> <td>1 Hour</td> </tr> <tr> <td>$20\pm5^{\circ}\text{C}$</td> <td>1 Hour</td> </tr> <tr> <td>$85\pm2^{\circ}\text{C}$</td> <td>1 Hour</td> </tr> </tbody> </table>		Temperature	Duration of test	1 cycles	$20\pm5^{\circ}\text{C}$	1 Hour	$-40\pm2^{\circ}\text{C}$	1 Hour	$20\pm5^{\circ}\text{C}$	1 Hour	$85\pm2^{\circ}\text{C}$	1 Hour
	Temperature	Duration of test													
1 cycles	$20\pm5^{\circ}\text{C}$	1 Hour													
	$-40\pm2^{\circ}\text{C}$	1 Hour													
	$20\pm5^{\circ}\text{C}$	1 Hour													
	$85\pm2^{\circ}\text{C}$	1 Hour													

8. Durability:

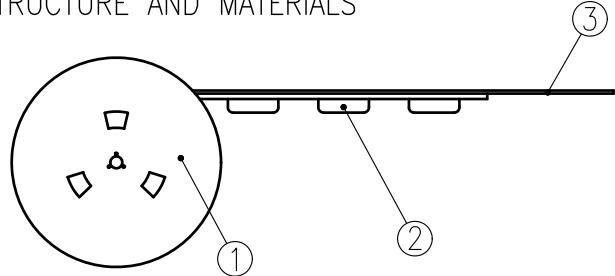
No.	Items	Test conditions	Specifications
8.1	Life Test	(1) 5V D.C. , 5mA Resistance load. (2) Operating speed:120 cycles/minute. (3) Push force: Maximum value of operation force. (4) Operation number: <u>100,000</u> times	Contact Resistance: <u>1Ω</u> MAX. Bounce: 20m sec Max.(ON,OFF) Operating Force: Within $\pm30\%$ of specifications. Of item 5.2 shall be satisfied. Of item 6.2 shall be satisfied.

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							SE-TC07N
A	NEW RELEASE			Magic Chen 2009.7.20		Ken Lin 2009.07.20	
SYM	DISCRIPTION	DATE	2009-07-20		Max Chen 2009.07.20		PAGINATE
							3/3

THE PACKING SPECIFICATIONS

RoHS Compliant

1. STRUCTURE AND MATERIALS



NO.	PARTS NAME	MATERIALS
③	COVER TAPE	POLYESTER
②	CARRIER TAPE	POLYSTYRENE
①	REEL	POLYSTYRENE

2. PACKAGING QUANTITY : 850 PCS/REEL

3. MORE THAN 10 EMPTY POCKETS SHOULD BE REMAINED AT BOTH ENDS OF THE CARRIER TAPE FOR EACH REEL.

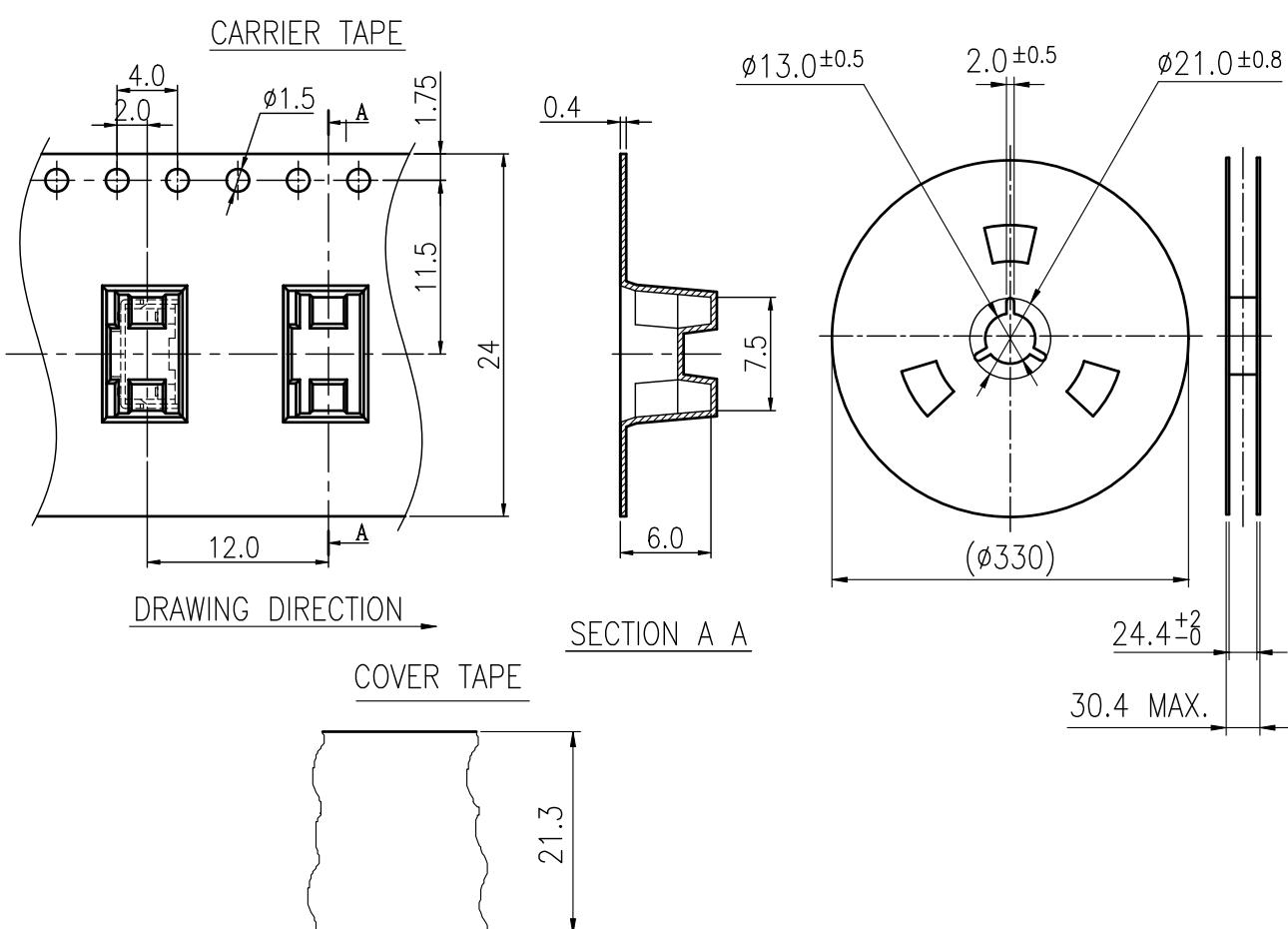
4. SHORTAGE LESS THAN 10 PCS A REEL IS ACCEPTABLE BUT MORE THAN 3 RUNNING POCKETS SHORTAGE IS NOT ALLOWED.

5. STRIPPING STRENGTH OF COVER TAPE IS BETWEEN 10 gf TO 130 gf AND STRIPPING ANGLE SHOULD BE WITHIN 165° ~ 180°.

6. THE PRODUCT IN THE POCKET OF CARRIER TAPE SHOULD BE PLACED IN A SPECIFIED CORRECT POSITION.

7. TAPE AND REEL PER EIA-481.

8. DIMENSIONS :



SYM	DISCRIPTION	DATE	APPROVED	APPROVED BY	REVIEWED BY	CHECKED BY	DESIGNED BY	MODEL NO.
				Qiu Yuan Chuang			Jane Shen	NTC303-B(D,Z)___-(A,L)
								PAGINATE. 1/1 SPEC NO. P-747