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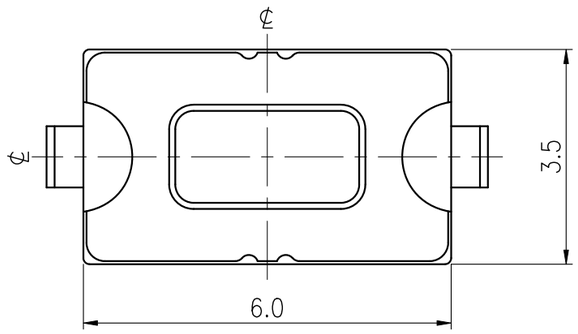
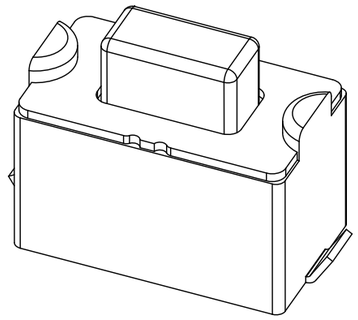
T-MEC
TAIWAN MISAKI ELECTRONICS CO., LTD.
ISSUED
2012.11.21
RD DCC

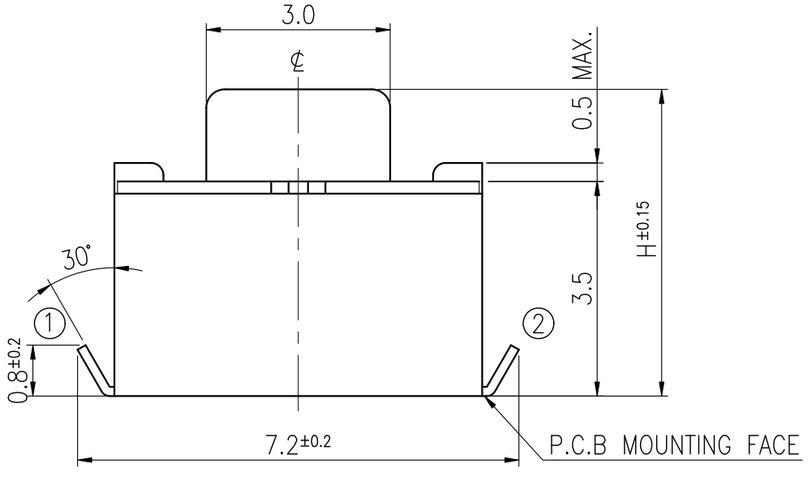
REVISIONS							
Rev	DESCRIPTION	DATE	DRAWER	Rev	DESCRIPTION	DATE	DRAWER
A	Initial Drawing	2010.03.04	Catherine Lee	C	Change the cover shape.	2012.08.03	Catherine Lee
B	Change the frame shape.	2011.10.17	Catherine Lee	D	Update dimensions.	2012.11.09	Catherine Lee

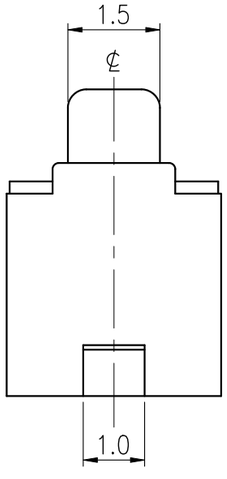
SPECIFICATIONS			
RATING	DC12V 50mA	TIMING	
CONTACT RESISTANCE	100mΩ MAX.	OPERATION (TORQUE)	
INSULATION RESISTANCE	DC500V – 100MΩ MIN.	STROKE (ANGLE)	0.25±0.1 mm
WITHSTAND VOLTAGE	AC250V – 1 MINUTE	CONTACT RESISTANCE	1Ω MAX.
REMARKS:		(AFTER	CYCLES LIFE TEST)



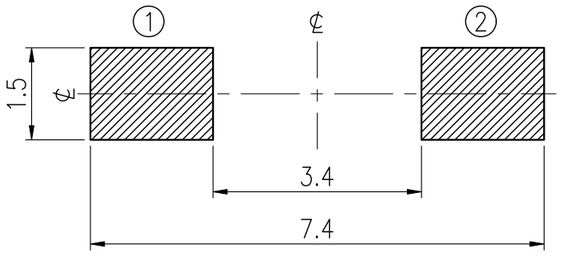


SCHEMATIC





P.C.B LAYOUT



MODEL NO.	OPERATING FORCE	H	LIFE
NTC003-CC1J-A160T	160±50 gf	4.3	50,000
NTC003-CC1J-B160T		5.0	
NTC003-CC1J-A260T	260±70 gf	4.3	30,000
NTC003-CC1J-B260T		5.0	
NTC003-CC1J-A360T	360±90 gf	4.3	50,000
→ NTC003-CC1J-B360T		5.0	

TOLERANCES UNLESS OTHERWISE SPECIFIED ±0.1			SIGNATURES	DATE	MODEL
			DRAWER Catherine Lee	2012.11.09	TITLE: TACT SWITCH
			CHECKED		
	UNIT mm	SCALE 10/1	REVIEWED		NO.: SEE MODEL NO.
			APPROVALS Dennis Hung	2012.11.09	

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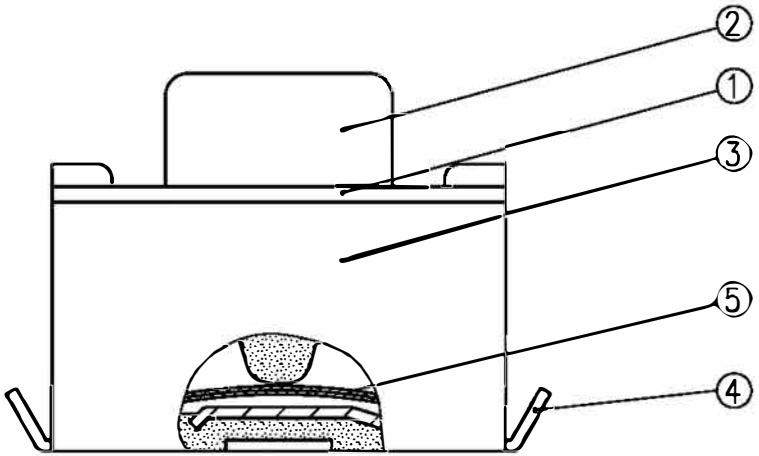

NO.	PART NAME	Q'TY	MATERIAL	SPECIFICATION
5	CONTACT PLATE	2	STAINLESS STEEL PLATE	Ag–CLAD
4	TERMINAL	2	COPPER ALLOY	Ag–PLATING
3	FRAME	1	LIQUID CRYSTAL POLYMER	COLOR: ☐BLACK(H:4.3mm) ☐NATURE(H:5.0mm)
2	STEM	1	LIQUID CRYSTAL POLYMER	COLOR: ☐BLACK(160 gf) ☐NATURE(260 gf) ☐SALMON(360 gf)
1	COVER	1	STAINLESS STEEL PLATE	

Dennis Hung 2011.10.17

Jamie Li 2011.10.17

SYM	DESCRIPTION	DATE	APPROVED
	A260		

SIGNATURES	DATE
DRAWN Catherine Lee	2011.10.17
CHK'D	
REV'D	
APP'D	

MODEL

TITLE TACT SWITCH

NO. NTC003–CC1J–B360T

DWG NO. TC03–28

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SPECIFICATIONS FOR TACT SWITCH

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Model: NTC003 Series

1. Test condition:

Standard test conditions shall be 5~35℃ 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℃ in temperature, 60~70% RH in Humidity and 86~106 kpa in atmospheric pressure.

2. Operating temperature range: -40 ~ +85℃

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

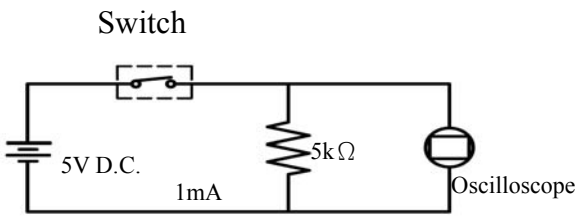
3. Construction:

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 1 A, 5V D.C. By voltage drop method.	100mΩ Max.
5.2	Insulation Resistance	Shall be measured by applying 500V D.C. Between all terminals and between the terminals and the frame for 1 minute ± 5 seconds.	100 MΩ Min.
5.3	Withstand Voltage	250V 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	Lightly striking the center of the stem at a rate encountered in normal use (3 to 4 operations per sec.) 	ON: 10m sec Max. OFF:10m sec Max.

			APPROVED BY	REVIEWED BY	CHECKED BY	DESIGNED BY	SPEC NO.
			W. J. Hong	Dennis Hung	James Hung	Catherine Lee	SE-TC08N
			2010.03.05	2010.03.04	2010.03.04	2010.03.04	PAGINATE
A	NEW RELEASE						1/3
SYM	DISCRIPTION	DATE					

SPECIFICATIONS FOR TACT SWITCH

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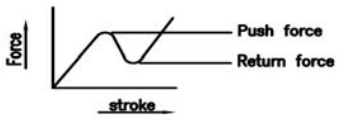
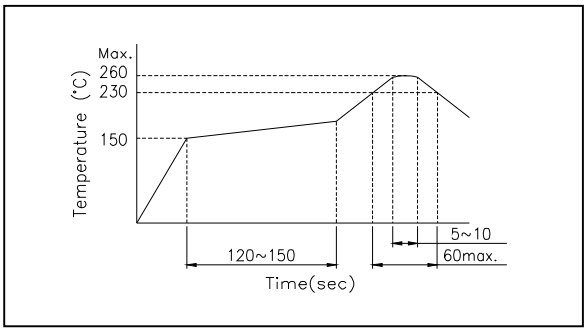
6. Mechanical Performance:

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. 	260 ± 70 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.	0.25 ± 0.1 mm.
6.3	Control Strength	The static load of 2kgf 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	Solder ability	Soldering temperature: 235±5℃. Soldering time: 2±0.5 seconds.	75% or more of surface area of the portion immersed in solder shall be satisfied.
6.5	Solder Heat Resistance	(1) Manual soldering temperature: Temperature: 350℃ Max. Time: 3 Sec. Max. (2) Reflow Soldering: Number of reflow pass: 2 cycles. 	Shall be free form 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.
			W. J. Hong	Dennis Hung	James Hung	Catherine Lee	SE-TC08N
			2010.03.05	2010.03.04	2010.03.04	2010.03.04	PAGINATE
A	NEW RELEASE						2/3
SYM	DISCRIPTION	DATE					

SPECIFICATIONS FOR TACT SWITCH

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7. Weather Performance:

<table>
<tr><th>No.</th><th>Items</th><th>Test conditions</th><th>Specifications</th></tr>
<tr><td>7.1</td><td>Humidity Test</td><td>(1) Temperature: 60±2℃.
(2) Relative humidity: 90~95%
(3) Duration of test: 500 Hour.
(4) Take off a drop water.
(5) Standard conditions after test: 1 Hour.</td><td rowspan="4">Contact resistance: 100mΩ Max
Of item 5.2~5.4 shall be satisfied.
Of item 6.1~6.2 shall be satisfied.</td></tr>
<tr><td>7.2</td><td>Heat Test</td><td>(1) Temperature: 85±2℃.
(2) Duration of test: 500 Hour.
(3) Standard conditions after test: 1 Hour.</td></tr>
<tr><td>7.3</td><td>Cold Test</td><td>(1) Temperature: -40±2℃.
(2) Duration of test: 500 Hour.
(3) Take off a drop water.
(4) Standard conditions after test: 1 Hour.</td></tr>
<tr><td>7.4</td><td>Temperature cycle</td><td>(1) Test cycle: 20 cycles.
(2) Standard conditions after test: 1 Hour.
<table>
<tr><th></th><th>Temperature</th><th>Duration of test</th></tr>
<tr><td rowspan="4">1 cycles</td><td>20±5℃</td><td>1 Hour</td></tr>
<tr><td>-40±2℃</td><td>1 Hour</td></tr>
<tr><td>20±5℃</td><td>1 Hour</td></tr>
<tr><td>85±2℃</td><td>1 Hour</td></tr>
</table></td></tr>
</table>

8. Durability:

No.	Items	Test conditions	Specifications
8.1	Life Test	(1) 5V D.C. , 5mA Resistance load. (2) Operating speed:120 cycles/minute. (2) Push force: Maximum value of operation force. (3) Operation number: 30,000 times.	Contact Resistance: 1Ω MAX. Bounce: 20m sec Max.(ON,OFF) Operating Force: Within ±30% of specifications. Item 5.2 shall be satisfied. Item 6.2 shall be satisfied.

			APPROVED BY	REVIEWED BY	CHECKED BY	DESIGNED BY	SPEC NO.
			W. J. Hong	Dennis Hung	James Hung	Catherine Lee	SE-TC08N
						2010.03.04	PAGINATE
A	NEW RELEASE		2010.03.05	2010.03.04	2010.03.04		3/3
SYM	DISCRIPTION	DATE					

THE PACKING SPECIFICATIONS

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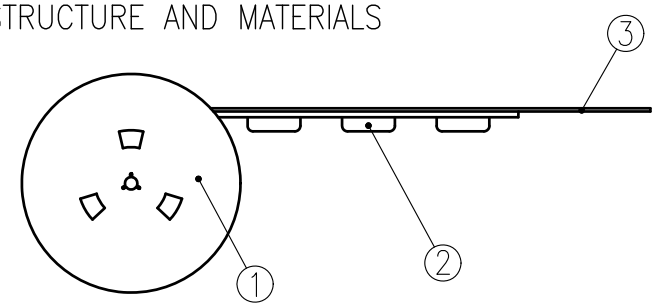
1.STRUCTURE AND MATERIALS



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

2. PACKAGING QUANTITY : 1,800 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 ACCETABLE 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 :

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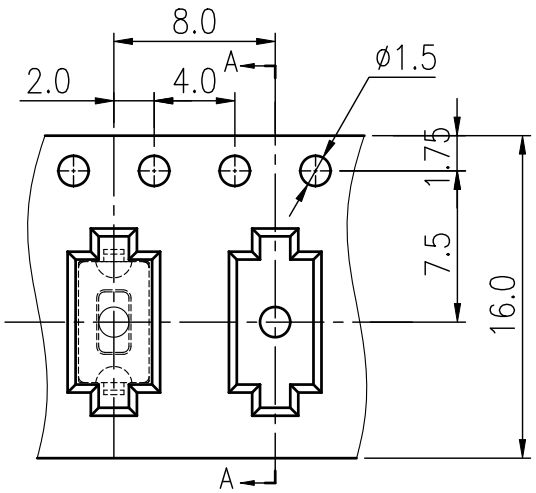
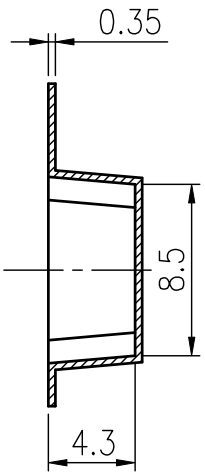
ISSUED
2018.07.17
RD DCC

CARRIER TAPE



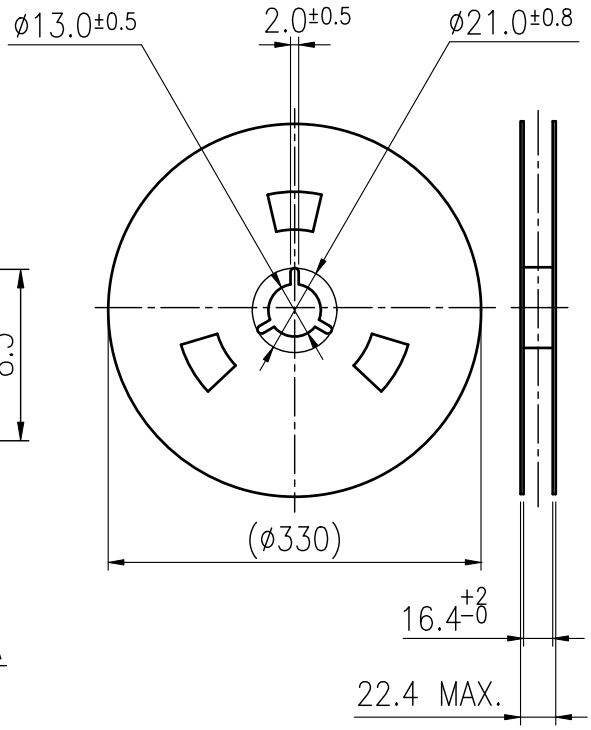
DRAWING DIRECTION

COVER TAPE



SECTION A A

REEL



SYM	DISCRIPTION	DATE	APPROVED	APPROVED BY	REVIEWED BY	CHECKED BY	DESIGNED BY	MODEL NO.	
				Dennis Hung			Jane Shen 2018	NTC003-C -A	
								PAGINATE. 1/1	SPEC NO. P-113

TAIWAN MISAKI ELECTRONICS CO.,LTD.