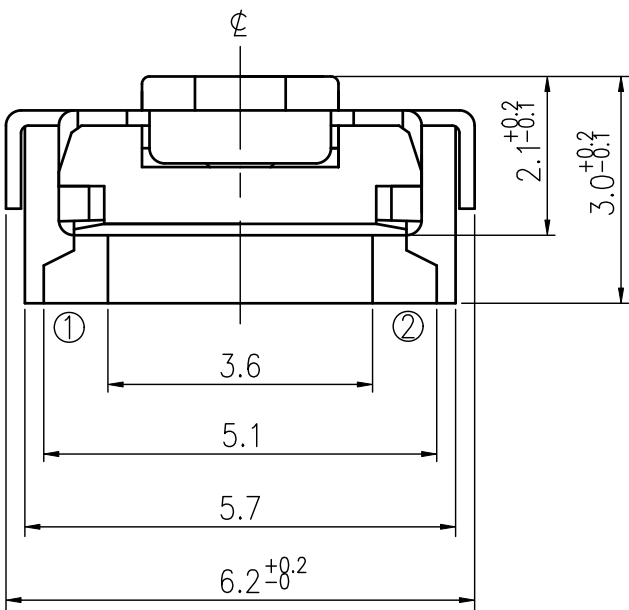
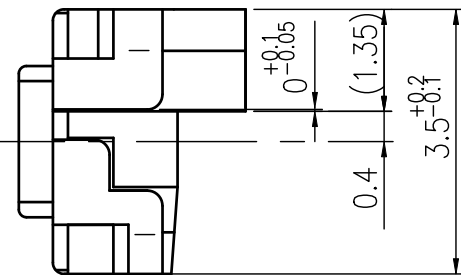
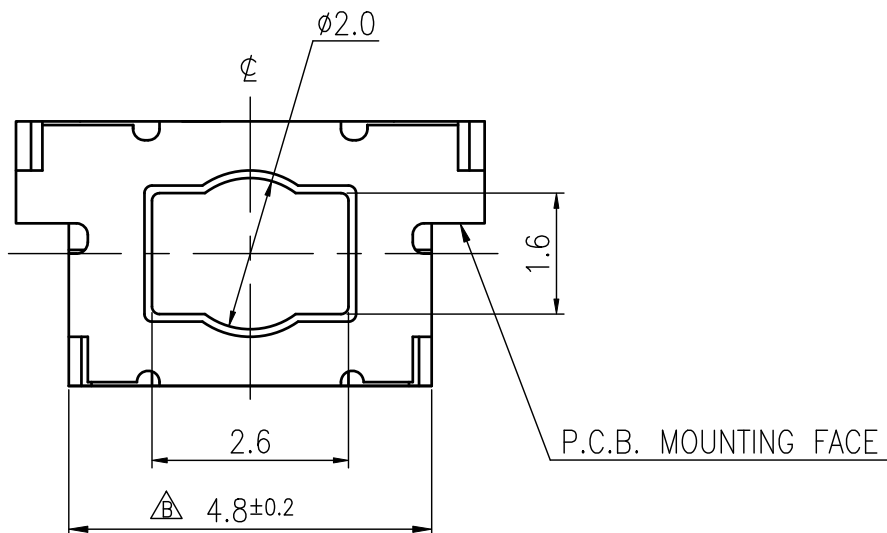
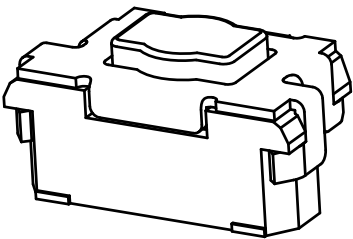
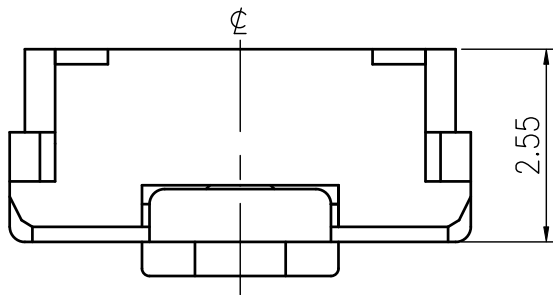


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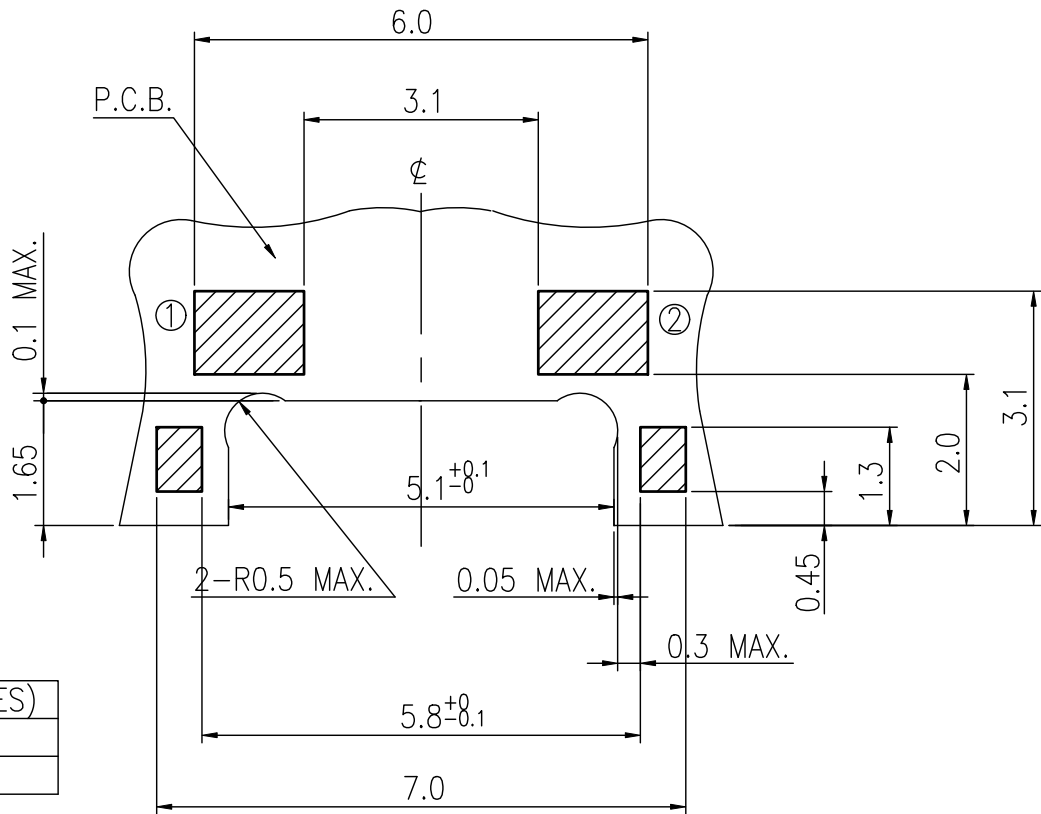
MODEL NO.	OPERATING FORCE	LIFE (CYCLES)
NTC302-AA1G-A120T	120±50gf	1,000,000
NTC302-AA1G-A160T	160±50gf	1,000,000

REVISIONS							
Rev	DESCRIPTION	DATE	DRAWER	Rev	DESCRIPTION	DATE	DRAWER
A	Initial Drawing	2008.12.18	Jane Shen	C			
B	Change Drawing	2014.06.23	Jane Shen	D			
SPECIFICATIONS							
RATING		DC12V 50mA		TIMING			
CONTACT RESISTANCE		100mΩ MAX.		OPERATION (TORQUE)			
INSULATION RESISTANCE		DC500V-100MΩ MIN.		STROKE (ANGLE)		0.15±0.1 mm	
WITHSTAND VOLTAGE		AC250V-1 MINUTE		CONTACT RESISTANCE		2Ω MAX.	
REMARKS:				(AFTER		CYCLES LIFE TEST)	

SCHEMATIC



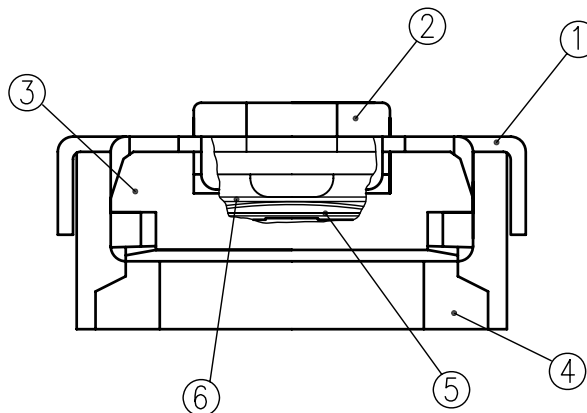
P.C.B MOUNTING PLAN



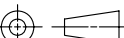
TOLERANCES UNLESS OTHERWISE SPECIFIED ±0.1			SIGNATURES		DATE	MODEL	
			DRAWER	Jane Shen	2014.06.23	TITLE TACT SWITCH	
			CHECKED	Jamie Li	2014.06.25		
	UNIT mm	SCALE 10/1	REVIEWED			NO. See Model No.	
			APPROVALS		Dennis Hung		

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6	TAPE	1	POLYIMIDE	
5	CONTACT PLATE	1	STAINLESS STEEL PLATE	Ag-CLAD
4	TERMINAL	2	COPPER ALLOY	Ag PLATING OVER Ni PLATING
3	FRAME	1	LIQUID CRYSTAL POLYMER + GLASS FIBRE	BLACK COLOR
2	STEM	1	LIQUID CRYSTAL POLYMER + GLASS FIBRE	BLACK COLOR
1	COVER	1	STAINLESS STEEL PLATE	Ag PLATING OVER Ni PLATING
NO.	PART NAME	Q'TY	MATERIAL	SPECIFICATION

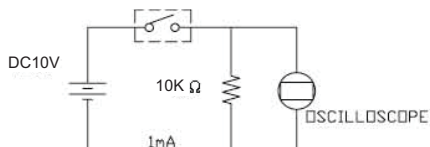
				SIGNATURES	DATE	M O D E L
				DRAWN Jane Shen	2008.01.21	TITLE TACT SWITCH
				CHK'D Max Chen	2008.01.21	
				REV'D Ken Lin	2008.1.21	NO. NTC302-AA1G-A120T
				APP'D <i>Fred Chen</i>	2008.01.21	
SYM	DESCRIPTION	DATE	APPROVED			DWG NO.
TAIWAN MISAKI ELECTRONICS CO.,LTD.						TC302-01

SPECIFICATIONS FOR TACT SWITCH

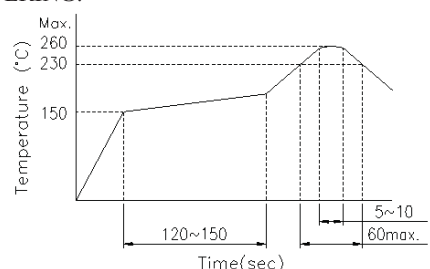
RoHS Compliant

MODEL: NTC302 SERIES

1. TEST CONDITIONS:
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 86~106kPa IN ATMOSPHERIC PRESSURE.
2. OPERATING TEMPERATURE RANGE: -40~+85℃, STORAGE TEMPERATURE RANGE: -40~+85℃
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: DC12V, 50mA
5. ELECTRICAL PERFORMANCE:

	ITEMS	TEST CONDITIONS	SPECIFICATIONS
5.1	CONTACT RESISTANCE	APPLYING A STATIC LOAD TWICE THE OPERATING FORCE TO THE CENTER OF THE STEM. SHALL BE MEASURED AT 1KHz±200Hz (MAX. 20mV, MAX. 50mA.) OR 1A, 5V DC. BY VOLTAGE DROP METHOD.	100mΩ MAX.
5.2	INSULATION RESISTANCE	SHALL BE MEASURED BY APPLYING 500 VDC. BETWEEN ALL TERMINALS AND BETWEEN THE TERMINALS AND THE FRAME FOR 1 MINUTE ± 5 SECONDS.	100MΩ MIN.
5.3	WITHSTAND VOLTAGE	250 VAC. (50~60Hz) 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.

6. MECHANICAL PERFORMANCE:

6.1	OPERATING FORCE		SHALL BE IN ACCORDANCE WITH INDIVIDUAL SPECIFIED.						
6.2	STROKE	THE POSITION OF STEM TOP FROM REFERENCE LINE AT THE CHANGE POINT FROM “OFF” TO “ON”.	SHALL BE IN ACCORDANCE WITH INDIVIDUAL SPECIFIED.						
6.3	CONTROL STRENGTH	THE STATIC LOAD OF 3 Kg _f SHALL BE APPLIED IN THE OPERATING DIRECTION OF THE CONTROL UINT FOR 60 SECONDS.	SHALL BE FREE FROM EXTREME WOBBLE, VENT OR ELECTRICAL AND MECHANICAL ABNORMALITY. NOT DEFORMATION OF THE APPEARANCE.						
6.4	SOLDERABILITY	AFTER SPRATED FLUX. TEMPERATURE: 235 ±5℃, SOLDERING TIME: 3 ±0.5 SEC.	70% OR MORE OF SURFACE AREA OF THE PORTION IMMERSED IN SOLDER SHALL BE SATISFIED.						
6.4	SOLDER HEAT RESISTANCE	<div>(1) MANUAL SOLDERING:<table><tr><td></td><td>TEMPERATURE</td><td>TIME</td></tr><tr><td>Manual Soldering Temperature</td><td>350 ℃ max.</td><td>3 sec. max.</td></tr></table></div> <div>(2) REFLOW SOLDERING:<div></div></div> <div>NUMBER OF REFLOW PASS : 2</div>		TEMPERATURE	TIME	Manual Soldering Temperature	350 ℃ max.	3 sec. max.	SHALL BE FREE FROM PRONOUNCED DEFORMING IN APPEARANCE. OF ITEMS 5.1~5.4 SHALL BE SATISFIED. OF ITEMS 6.1~6.2 SHALL BE SATISFIED.
	TEMPERATURE	TIME							
Manual Soldering Temperature	350 ℃ max.	3 sec. max.							

				APPROVED BY	CHECKED BY	DESIGNED BY	SPEC NO.
				<i>Fred Chen</i>	Ken Lin	Jane Shen	SE-TC49N
				2007.10.19	2007.10.18	2007.10.16	PAGINATE
							1/2
SYM	DISCRPTION	DATE	APPROVED				

TAIWAN MISAKI ELECTRONICS CO., LTD.

SPECIFICATIONS FOR TACT SWITCH

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7. WEATHER PERFORMANCE:

7.1	HUMIDITY TEST	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.	CONTACT RESISTANCE 500mΩ MAX. OF ITEMS 5.2~5.4 SHALL BE SATISFIED. OF ITEMS 6.1~6.2SHALL BE SATISFIED											
7.2	HEAT TEST	1) TEMPERATURE : 85±2℃ 2) DURATION OF TEST : 500 HOUR. 3) STANDARD CONDITIONS AFTER TEST : 1 HOUR.												
7.3	COLD TEST	1) TEMPERATURE : -40±2℃ 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 CYCLES: 20 CYCLES. 2) STANDARD CONDITIONS AFTER TEST : 1 HOUR. <table><tr><td></td><td>TEMPERATURE</td><td>DURATION OF TEST</td></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>			TEMPERATURE	DURATION OF TEST	1 CYCLES	20 ±5℃	1 HOUR	—40 ±2℃	1 HOUR	20 ±5℃	1 HOUR	85 ±2℃
	TEMPERATURE	DURATION OF TEST												
1 CYCLES	20 ±5℃	1 HOUR												
	—40 ±2℃	1 HOUR												
	20 ±5℃	1 HOUR												
	85 ±2℃	1 HOUR												

8. DURABILITY:

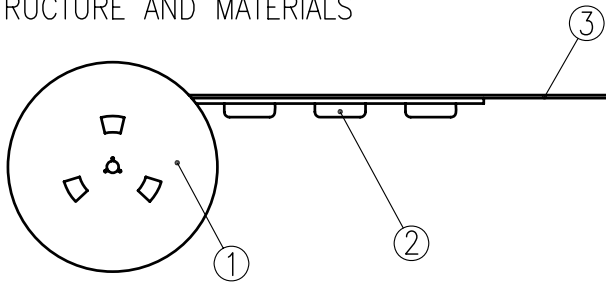
8.1	LIFE TEST	(1) OPERATION SPEED : 60 CYCLES/MINUTE. (2) PUSH FORCE : MAXIMUM VALUE OF OPERATION FORCE. (3) OPERATION NUMBER : 1,000,000 TIMES.	CONTACT RESISTANCE: LESS THAN 2Ω MAX. INSULATION RESISTANCE: MORE THAN 10MΩ MIN. BOUNCE: ON: 20 m sec. MAX. OFF: 20 m sec. MAX OPERATING FORCE: WITHIN ±30% OF SPECIFICATIONS. OF ITEMS 5.2 SHALL BE SATISFIED. OF ITEMS 6.2 SHALL BE SATISFIED.
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				APPROVED BY	CHECKED BY	DESIGNED BY	SPEC NO.
				<i>Fred Chen</i>	Ken Lin	Jane Shen	SE-TC49N
				2007.10.19	2007.10.18	2007.10.16	PAGINATE
							2/2
SYM	DISCRIPTION	DATE	APPROVED				

THE PACKING SPECIFICATIONS

RoHS Compliant

1.STRUCTURE AND MATERIALS



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

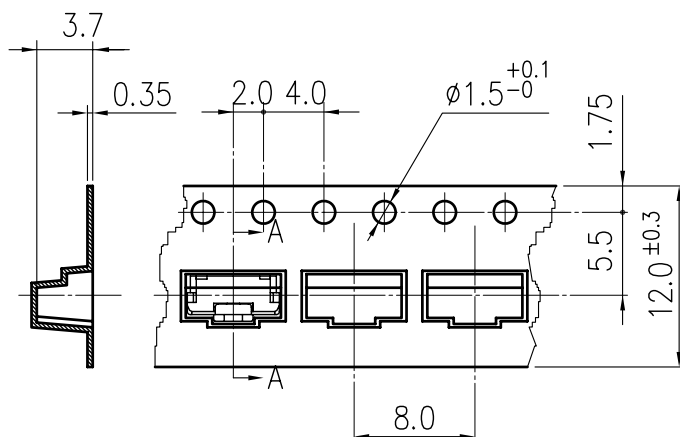
- PACKAGING QUANTITY : 2,000 PCS/REEL
- MORE THAN 10 EMPTY POCKETS SHOULD BE REMAINED AT BOTH ENDS OF THE CARRIER TAPE FOR EACH REEL.
- SHORTAGE LESS THAN 10 PCS A REEL IS ACCEPTABLE BUT MORE THAN 3 RUNNING POCKETS SHORTAGE IS NOT ALLOWED.
- STRIPPING STRENGTH OF COVER TAPE IS BETWEEN 10 gf TO **130 gf** AND STRIPPING ANGLE SHOULD BE WITHIN 165° ~ 180°.
- DIMENSIONS :



CARRIER TAPE

Tape and Reel per EIA-481.

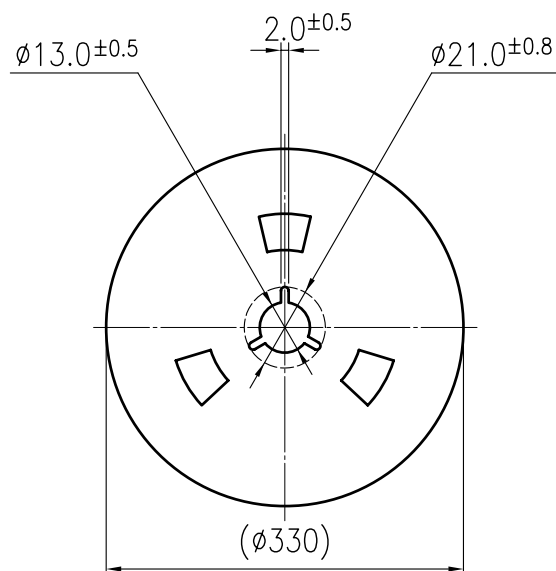
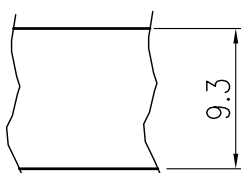
REEL



SECTION A A

DRAWING DIRECTION

COVER TAPE



12.4⁺²₋₀
18.4 MAX.

				APPROVED BY	REVIEWED BY	CHECKED BY	DESIGNED BY	MODEL NO.
				<i>Fred Chen</i>	Ken Lin	Max Chen	Jane Shen	NTC302-AA1G-A120T
				2008.01.21	2008.1.21	2008.01.21	2008.01.21	PAGINATE.
								1/1
								SPEC NO.
								P-360
SYM	DISCRIPTION	DATE	APPROVED					

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