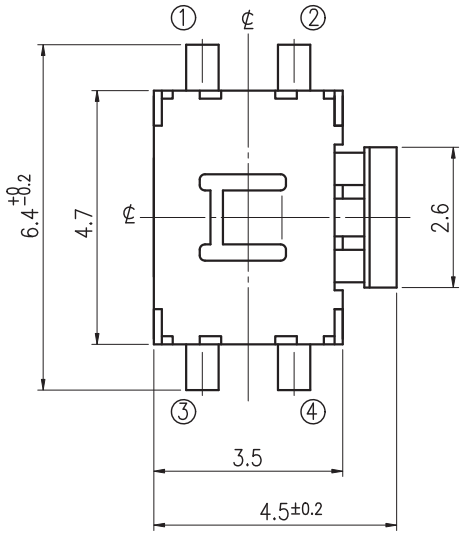
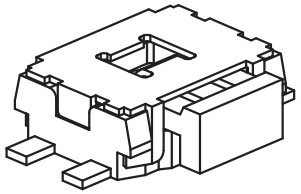
RoHS Compliance

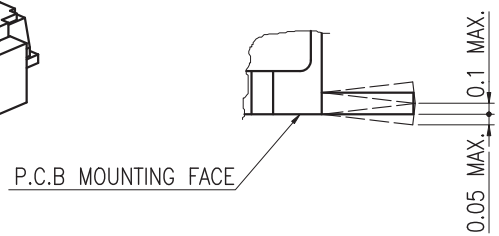
T-MEC
TAIWAN MISAKI ELECTRONICS CO., LTD.
ISSUED
2010.03.11
RD DCC

REVISIONS							
Rev	DESCRIPTION	DATE	DRAWER	Rev	DESCRIPTION	DATE	DRAWER
A	Initial Drawing	2009.10.28	Jane Shen	C			
B				D			

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

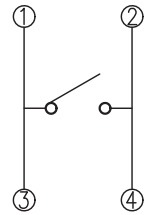




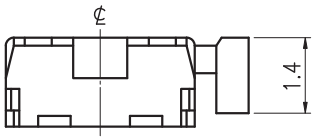


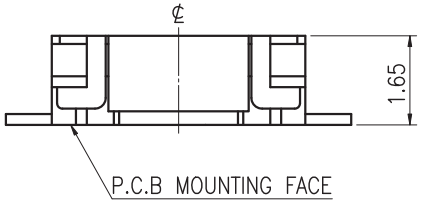
TERMINALS DETAIL (20/1)

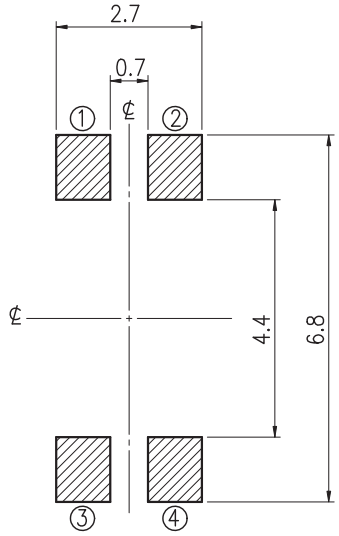
SCHEMATIC



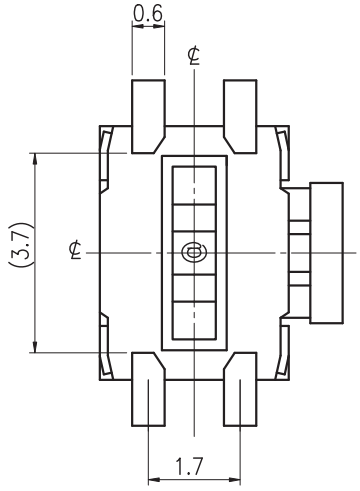
P.C.B MOUNTING PLAN







HATCHED AREA SHOWS SOLDERING LAND



MODEL NO.	OPERATING FORCE	STROKE	LIFE/CYCLES
NTC316–AB1G–A160T	160±50gf	0.25±0.1mm	200,000
NTC316–AB1G–A220T	220±50gf	0.3 +0.1 −0.2 mm	100,000

TOLERANCES UNLESS OTHERWISE SPECIFIED ±0.1			SIGNATURES		DATE	MODEL
			DRAWER	Jane Shen	2009.10.28	TITLE: TACT SWITCH
			CHECKED			
	UNIT mm	SCALE 10/1	REVIEWED			NO.: See Model No.
			APPROVALS			

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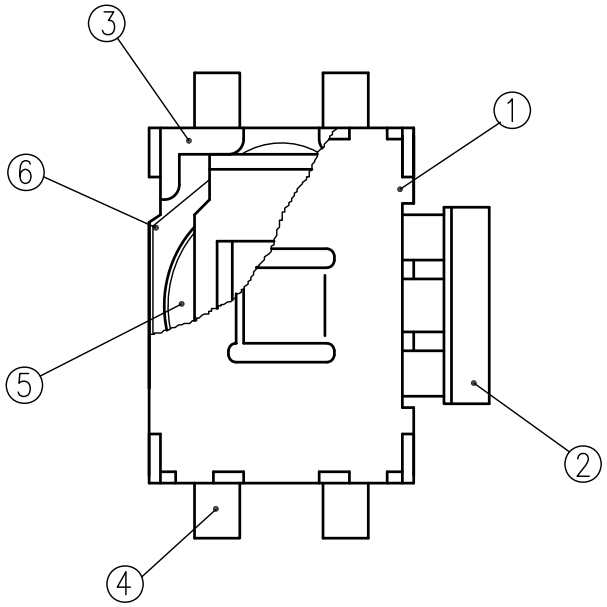

NO.	PART NAME	Q'TY	MATERIAL	SPECIFICATION
6	TAPE	1	POLYIMIDE	
5	CONTACT PLATE	1	STAINLESS STEEL PLATE	Ag-CLAD
4	TERMINAL	4	COPPER ALLOY	Ag-PLATING or Ag-CLAD
3	FRAME	1	POLYAMIDE RESIN + GLASS FIBRE	☐A/BLACK, ■B/WHITE COLOR
2	STEM	1	POLYAMIDE RESIN + GLASS FIBRE	☐160/WHITE, ■220/BLACK COLOR
1	COVER	1	STAINLESS STEEL PLATE	

SYM	DESCRIPTION	DATE	APPROVED

SIGNATURES		DATE
DRAWN	Jane Shen	2008.06.27
CHK'D	Jamie Li	2008.06.27
REV'D	Ken Lin	2008.06.27
APP'D	Fred Chen	2008.06.28

M O D E L

TITLE: TACT SWITCH

NO.: NTC316-AB1G-A220T

DWG NO.: TC316-04

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SPECIFICATIONS FOR TACT SWITCH

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MODEL:NTC316 SERIES

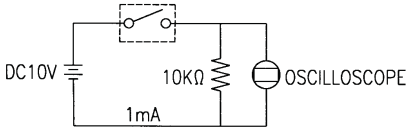
1. TEST CONDITIONS:
   STANDARD TEST CONDITIONS SHALL BE 5～35℃ IN TEMPERATURE, 45～85%RH IN HUMIDITY AND 86～106kPa IN ATMOSPHERIC PRESSURE. SHOULD ANY DOUBT ARISE IN JUDGMENT, TESTS SHALL BE CONDUCTED AT 20±2℃ IN TEMPERATURE, 60～70%RH IN HUMIDITY AND 86～106kPa IN ATMOSPHERIC PRESSURE.

2. OPERATING TEMPERATURE RANGE: －40～+85℃ , STORAGE TEMPERATURE RANGE: -40~+85℃

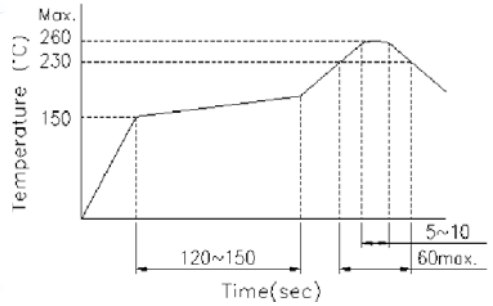
3. CONSTRUCTION:
   3.1 SHAPE AND DIMENSION ARE SUBJECT TO ATTACHED DRAWING REGULATION.
   3.2 APPEARANCE: WHOLE SHOULD BE A GOOD COMPLETION, NO RUST, NO CRACK AND GOOD PLATING.

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.	100 MΩ 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: 10 m sec. MAX. OFF: 10 m 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 WITHINDIVIDUAL SPECIFIED.
6.3	CONTROL STRENGTH	THE STATIC LOAD OF 3 Kgf SHALL BE APPLIED IN THE OPERATING DIRECTION OF THE CONTROL UINT FOR 1 MINUTE.	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.
6.5	SOLDER HEAT RESISTANCE	(1) HAND SOLDERING TEMPERATURE: 350 ℃ MAX. TIME: 3SEC. MAX. IRON HAVE TO BE 20W MAX. (2) REFLOW SOLDERING :  NUMBER OF REFLOW PASS : 2	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.

SYM	DISCRIPTION	DATE	APPROVED	APPROVED BY	CHECKED BY	DESIGNED BY	SPEC NO.
				2006.07.26	Jane Shen 2006.7.26	Betty Lu 2006.7.26	SE-TC20N PAGINATE 1/2

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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.	

	TEMPERATURE	DURATION OF TEST
1 CYCLE	20 ±5℃	1 HOUR
	—40 ±2℃	1 HOUR
	20 ±5℃	1 HOUR
	85 ±2℃	1 HOUR

8. DURABILITY:

8.1	LIFE TEST (WITHOUT LOAD)	200,000 CYCLES OF OPERATING SHALL BE PERFORMED CONTINUOUSLY AT THE RATE OF 2～3 CYCLES/SECOND	CONTACT RESISTANCE: LESS THAN 1Ω MAX. BOUNCE: ON: 20 m sec. MAX. OFF: 20 m sec. MAX OPERATING FORCE: WITHIN ±30% OF INITIAL VALUE. OF ITEMS 5.2 SHALL BE SATISFIED. OF ITEMS 6.2 SHALL BE SATISFIED.

9. ENVIRONMENTAL PROTECTION:

9.1	The product complies with the RoHS Directive.

SYM	DISCRIPTION	DATE	APPROVED

APPROVED BY	CHECKED BY	DESIGNED BY	SPEC NO.
2006.07.26	Jane Shen 2006.7.26	Betty Lu 2006.7.26	SE-TC20N PAGINATE 2/2

SPECIFICATIONS FOR TAPE AND REEL PACKAGING

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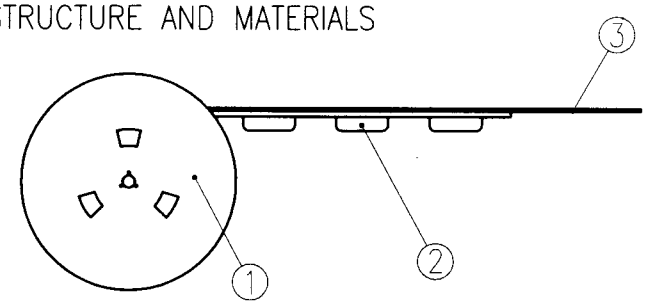
1.STRUCTURE AND MATERIALS

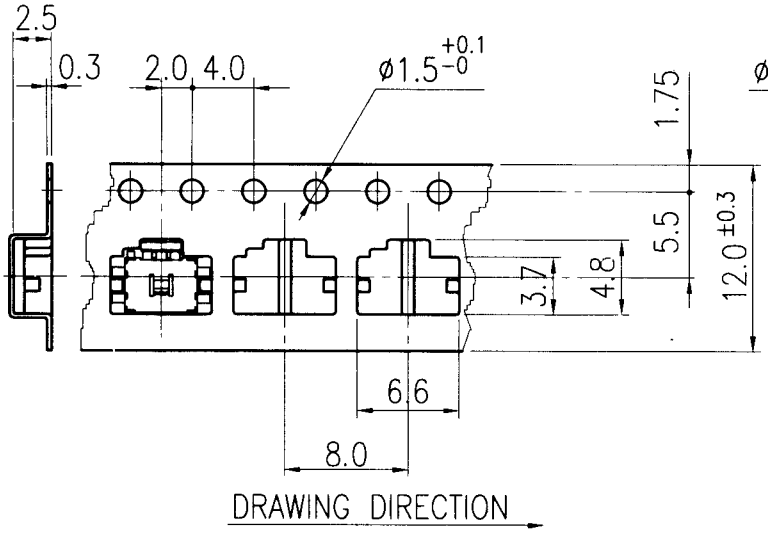


NO.	PARTS NAME	MATERIALS
③	COVER TAPE	POLYESTER
②	CARRIER TAPE	POLYSTYRENE
①	REEL	POLYSTYRENE

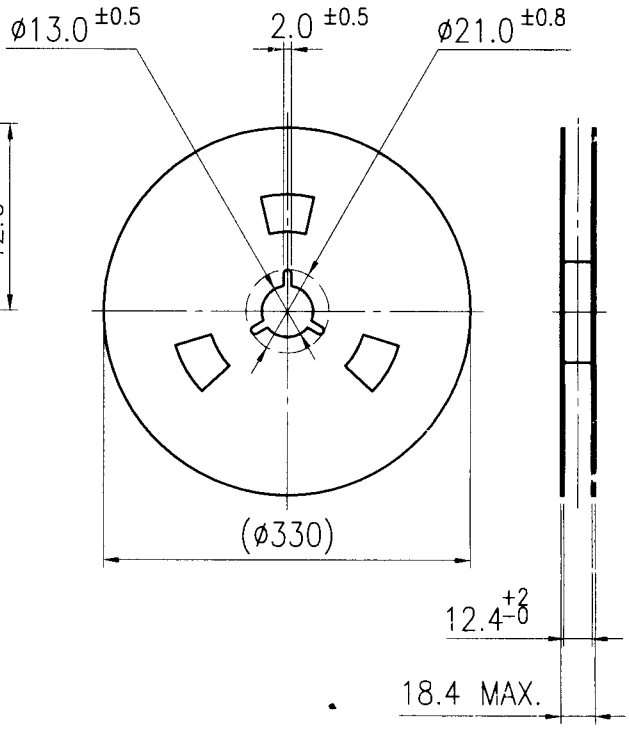
2. PACKAGING QUANTITY : 3,300 PCS/REEL
3. MORE THAN 10 EMPTY POCKETS SHOULD BE REMAINED AT BOTH ENDS OF THE CARRIER TAPE FOR EACH REEL.
4. SHORTAGE LESS THAN 10 PCS A REEL IS ACCEPTABLE BUT MORE THAN 3 RUNNING POCKETS SHORTAGE IS NOT ALLOWED.
5. STRIPPING STRENGTH OF COVER TAPE IS BETWEEN 10 gf TO 70 gf AND STRIPPING ANGLE SHOULD BE WITHIN 165° ~ 180 °.
6. THE SWITCH SHOULD NOT BE STAYED IN CARRIER TAPE WHEN CARRIER TAPE UPSIDE DOWN.
7. END OF CARRIER TAPE IS APART FROM REEL EASILY.
8. DIMENSIONS :

Tape and Reel per EIA-481.

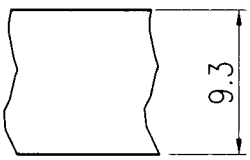
CARRIER TAPE



REEL



COVER TAPE



SYM	DISCRIPTION	DATE	APPROVED	APPROVED BY	CHECKED BY	DESIGNED BY	MODEL NO.	
				Lu	2004-12-24	Jane Shen DEC. 23, 2004	NTC316-AB1G-A160T	
							PAGINATE. 1/1	SPEC NO. P-68

TAIWAN MISAKI ELECTRONICS CO.,LTD.