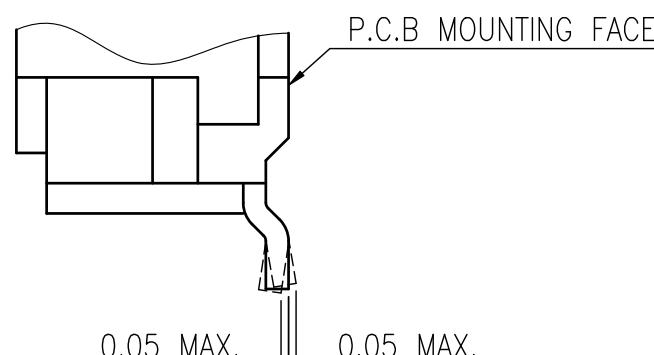
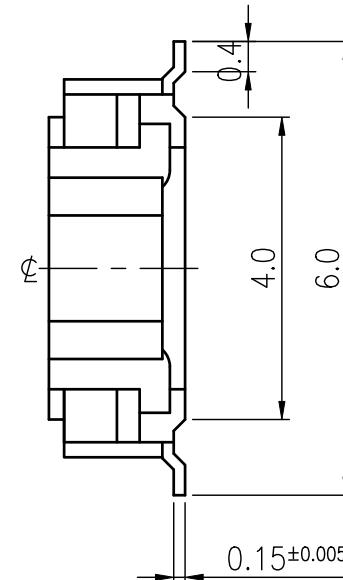
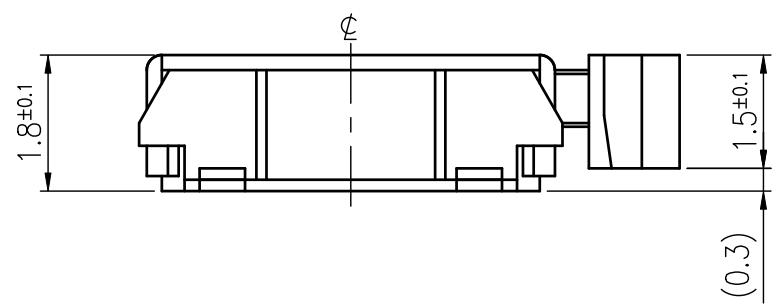
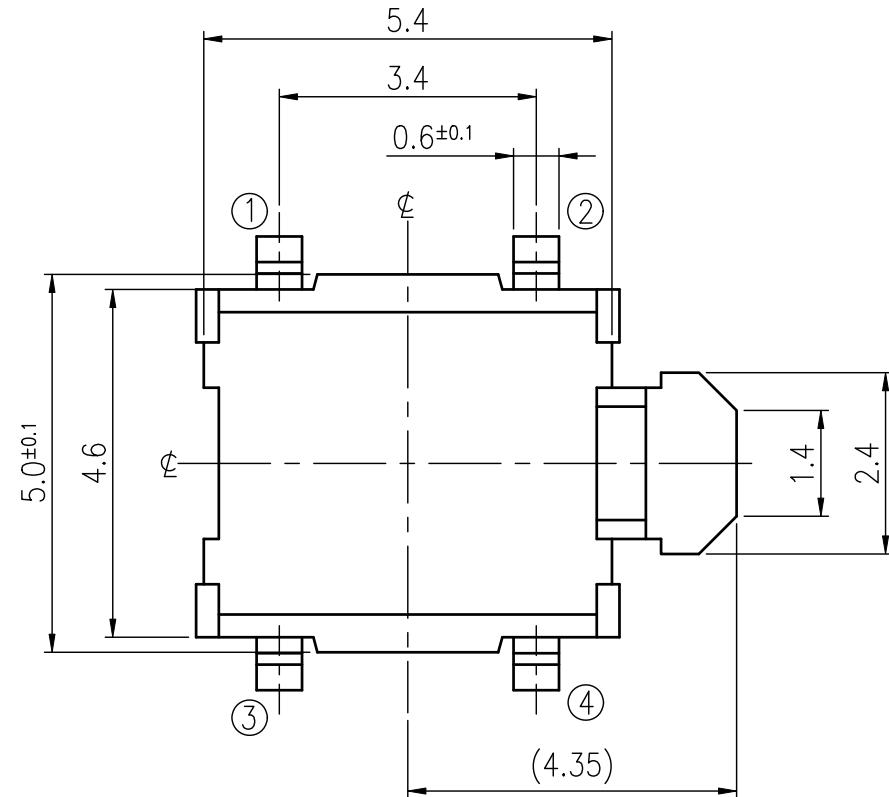


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TERMINAL DETAIL (20/1)

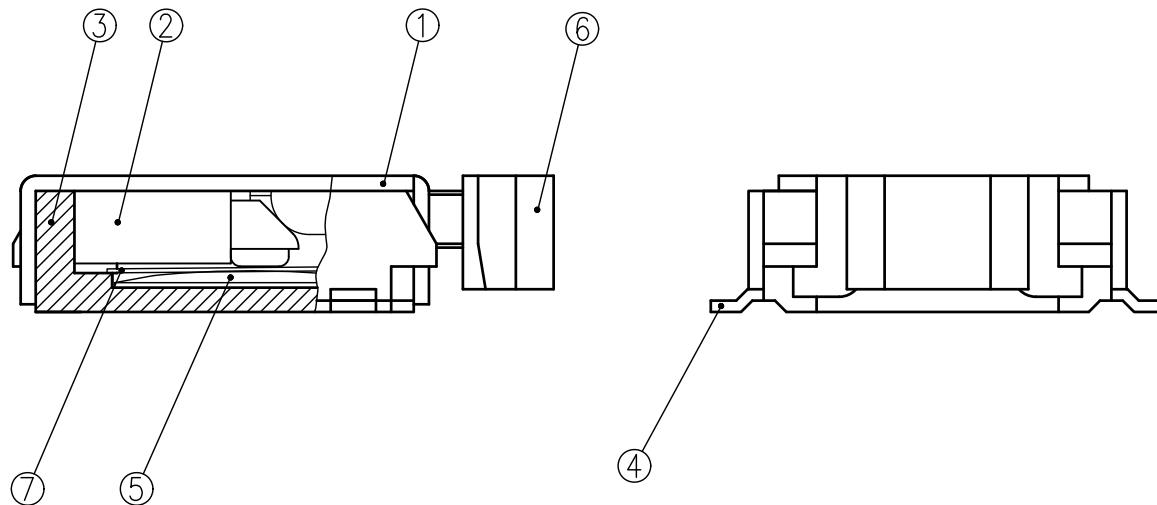
TOLERANCES UNLESS OTHERWISE SPECIFIED ±0.3			SIGNATURES		DATE	MODEL
DRAWER	Jane Shen		2019.11.27	TITLE		
	CHECKED					
REV	DESCRIPTION	DATE	DRAWER	REV	DESCRIPTION	DATE
A	Initial Drawing	2019.11.27	Jane Shen	C		
B				D		
SPECIFICATIONS						
RATING	DC12V 50mA	TIMING				
CONTACT RESISTANCE	500mΩ MAX.	OPERATION (TORQUE)				
INSULATION RESISTANCE	DC500V-100MΩ MIN.	STROKE (ANGLE)	0.2±0.12 mm			
WITHSTAND VOLTAGE	AC250V-1 MINUTE	LIFE	50,000 CYCLES			
REMARKS:						
SCHEMATIC						
P.C.B. LAYOUT						
HATCHED AREA SHOWS SOLDERING LAND						

MODEL NO.	OPERATING FORCE
NTC315-AF1G-A180T	180 <sup>+80</sup> <sub>-40</sub> gf
NTC315-AF1G-A350T	350±80gf



TAIWAN MISAKI ELECTRONICS CO., LTD.

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NO.	PART NAME	Q'TY	MATERIAL		SPECIFICATION		
					SIGNATURES	DATE	M O D E L
					DRAWN Jane Shen	2019.11.27	TITLE TACT SWITCH
					CHK'D		
					REV'D		
					APP'D Qiyuan Chuang	2019.11.27	NO. NTC315-AF1G-A180T
SYM	DESCRIPTION	DATE	APPROVED				
	TAIWAN MISAKI ELECTRONICS CO.,LTD.				DWG NO. TC315-13		

# SPECIFICATIONS FOR TACT SWITCH

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Model: NTC315-A(E,F)1G\_SERIES

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:

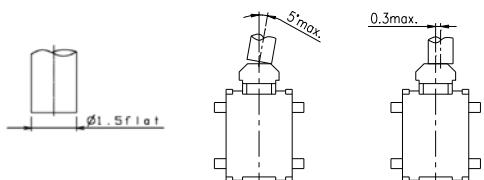
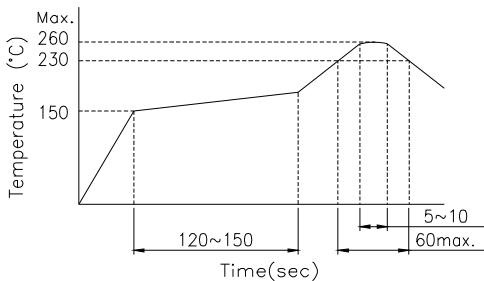
No.	Items	Test conditions	Specifications
5.1	Contact Resistance	Shall be measure at 1kHz±200Hz (MAX. 20mV, MAX. 50mA.) or 1 A, 5V D.C. By voltage drop method.	500mΩ Max.
5.2	Insulation Resistance	Shall be measured by applying 500V D.C. Between all terminals and between the terminals and the frame for 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	<p>Lightly striking the center of the stem at a rate encountered in normal use ( 3 to 4 operations per sec.)</p> <p>Switch</p>	<p>ON: 10m sec Max. OFF:10m sec Max.</p>

			APPROVED BY	REVIEWED BY	CHECKED BY	DESIGNED BY	SPEC NO.
							SE-TC04N
	No.: 6.3 UPDATE	2020.06.29	Qiuyuan Chuang			Jane shen	PAGINATE
A	NEW RELEASE	2017.07.27					
SYM	DISCRIPTION	DATE					1/3

# SPECIFICATIONS FOR TACT SWITCH

RoHS Compliant

## 6. Mechanical Performance:

No.	Items	Test conditions	Specifications
6.1	Operating Force	<p>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.</p> 	$180^{+80}_{-40}$ gf. $350 \pm 80$ gf
6.2	Travel	<p>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.</p> 	$0.2 \pm 0.12$ mm.
6.3	Push Strength	<p>Placing the switch such that the direction of switch operation is vertical and then a below station load shall be applied in the direction of stem operation.</p> <p>3kgf for 60 seconds.</p> 	No damage. (Electrical and mechanical)
6.4	Solderability	<p>Soldering temperature: <math>235 \pm 5</math> °C.</p> <p>Soldering time: <math>2 \pm 0.5</math> seconds.</p>	75% or more of surface area of the portion immersed in solder shall be satisfied.
6.5	Solder Heat Resistance	<p>(1) Manual soldering temperature:            Temperature: <math>350</math> °C Max.            Time: 3 Sec. Max.</p> <p>(2) Reflow Soldering:            Number of reflow pass: 2 cycles.</p> 	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-TC04N
	No.: 6.3 UPDATE	2020.06.29	Qiyuan Chuang			Jane Shen	PAGINATE
A	NEW RELEASE	2017.07.27					
SYM	DISCRIPTION	DATE					2/3

# SPECIFICATIONS FOR TACT SWITCH

RoHS Compliant

## 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: 500mΩ 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: 20 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><math>20\pm5^{\circ}\text{C}</math></td> <td>1 Hour</td> </tr> <tr> <td><math>-40\pm2^{\circ}\text{C}</math></td> <td>1 Hour</td> </tr> <tr> <td><math>20\pm5^{\circ}\text{C}</math></td> <td>1 Hour</td> </tr> <tr> <td><math>85\pm2^{\circ}\text{C}</math></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:

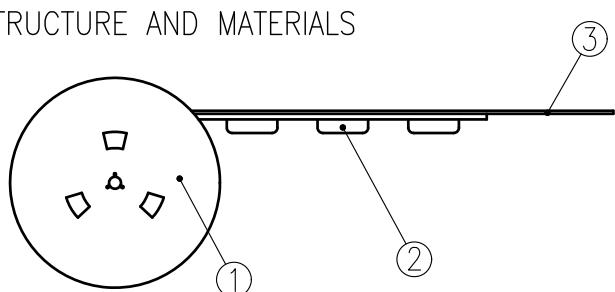
No.	Items	Test conditions	Specifications
8.1	Life Test (Without Load)	(1) Operating speed: 120 cycles/minute. (2) Push force: Maximum value of operation force. (3) Operation number: 50,000 times.	Contact Resistance: $1\Omega$ MAX.  Bounce: 20m sec Max.(ON,OFF)  Operating Force: Within $\pm30\%$ of specifications. Of item 5.2 shall be satisfied. Of item 6.2 shall be satisfied.

			APPROVED BY	REVIEWED BY	CHECKED BY	DESIGNED BY	SPEC NO.
							SE-TC04N
							PAGINATE
	No.: 6.3 UPDATE	2020.06.29					
A	NEW RELEASE	2017.07.27					
SYM	DISCRIPTION	DATE	Qiuyuan Chuang				3/3

# THE PACKING SPECIFICATIONS

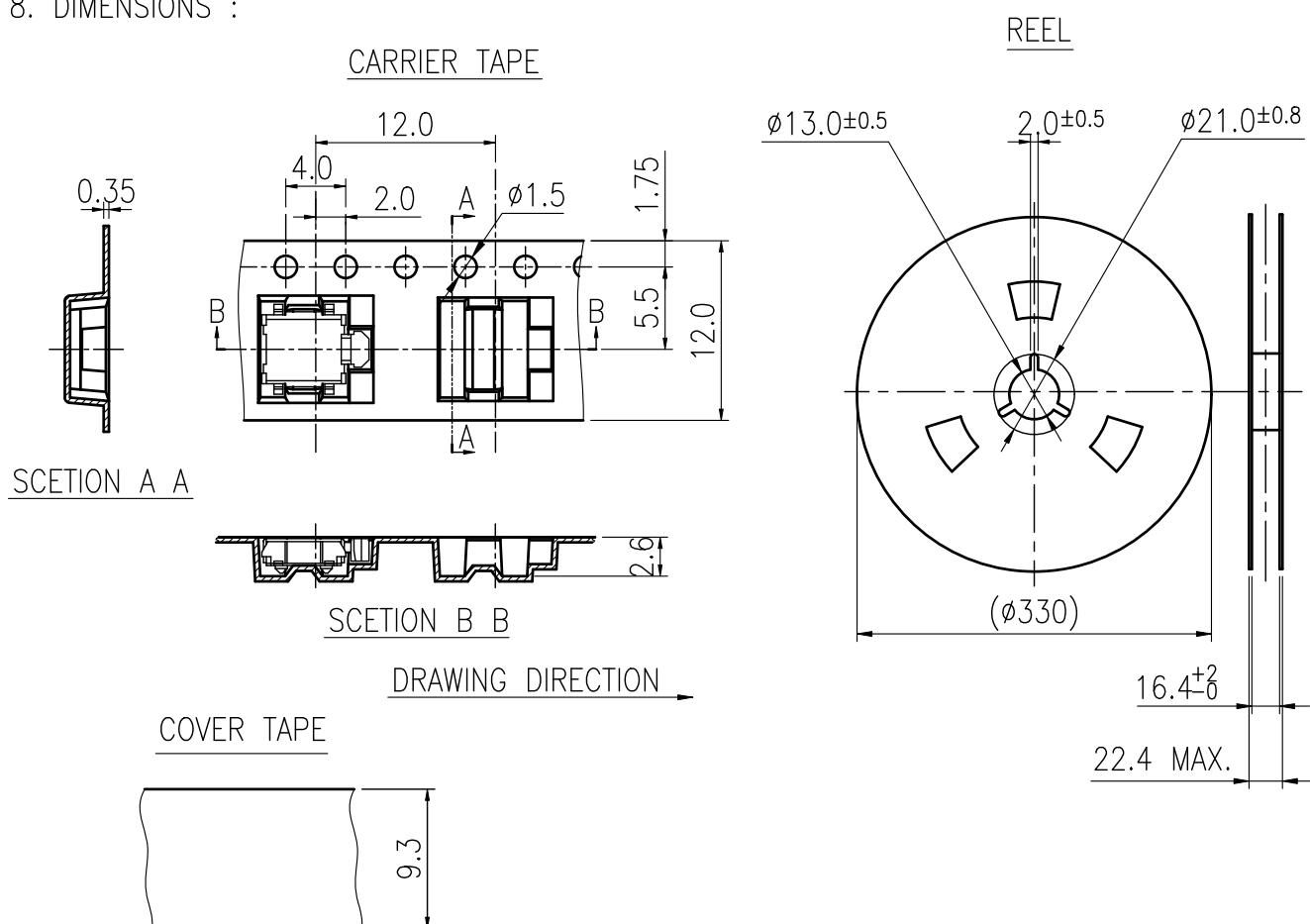
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## 1. STRUCTURE AND MATERIALS



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

- 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  $165^\circ \sim 180^\circ$ .
- THE PRODUCT IN THE POCKET OF CARRIER TAPE SHOULD BE PLACED IN A SPECIFIED CORRECT POSITION.
- TAPE AND REEL PER EIA-481.
- DIMENSIONS :



SYM	DESCRIPTION	DATE	APPROVED	APPROVED BY	REVIEWED BY	CHECKED BY	DESIGNED BY	MODEL NO.
								NTC315-A 1G-A OT
							Jane Shen	PAGINATE. 1/1
								SPEC NO. P-543