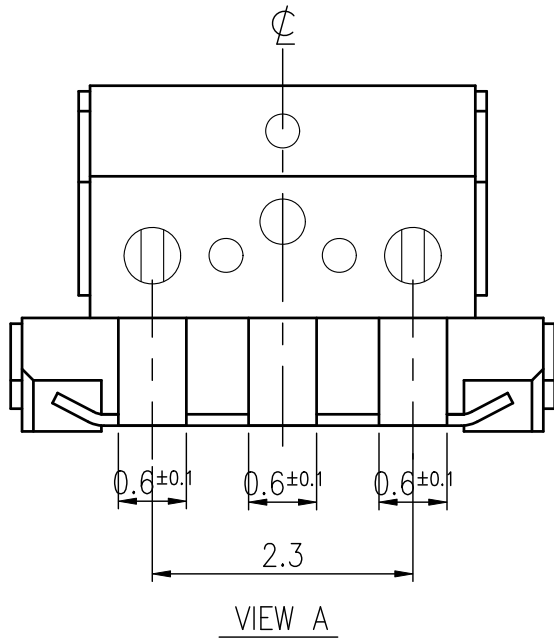
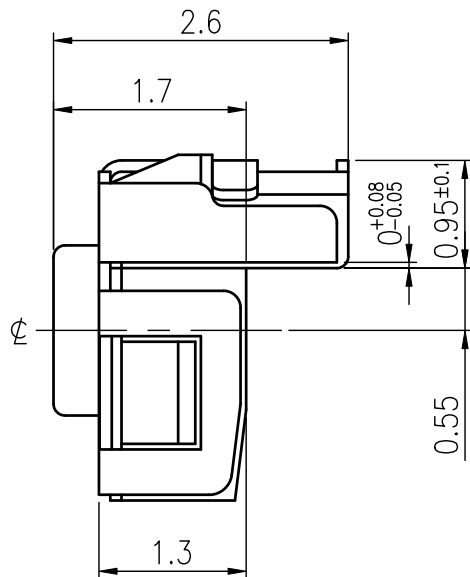
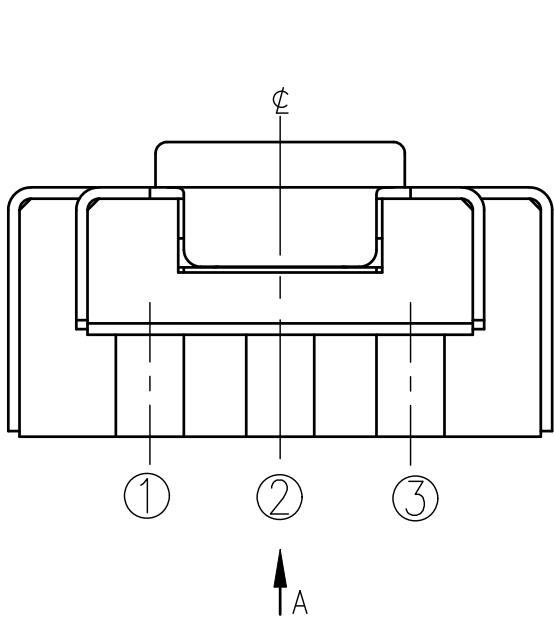
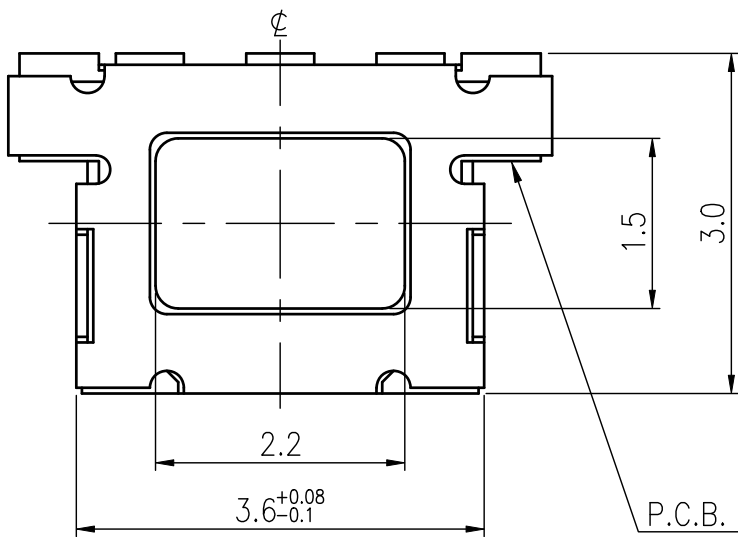
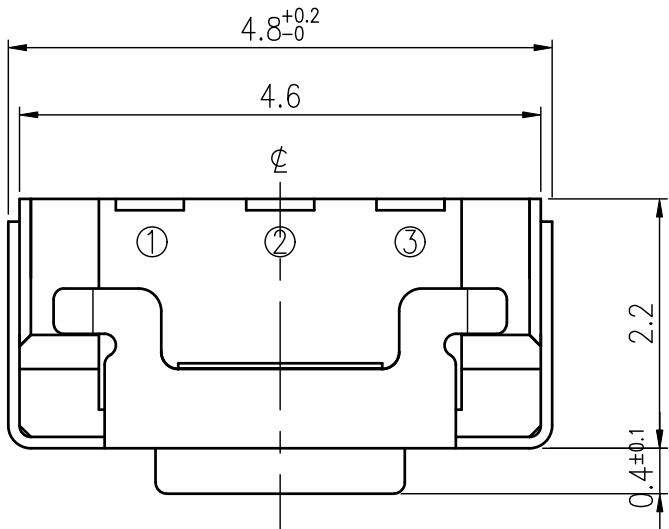


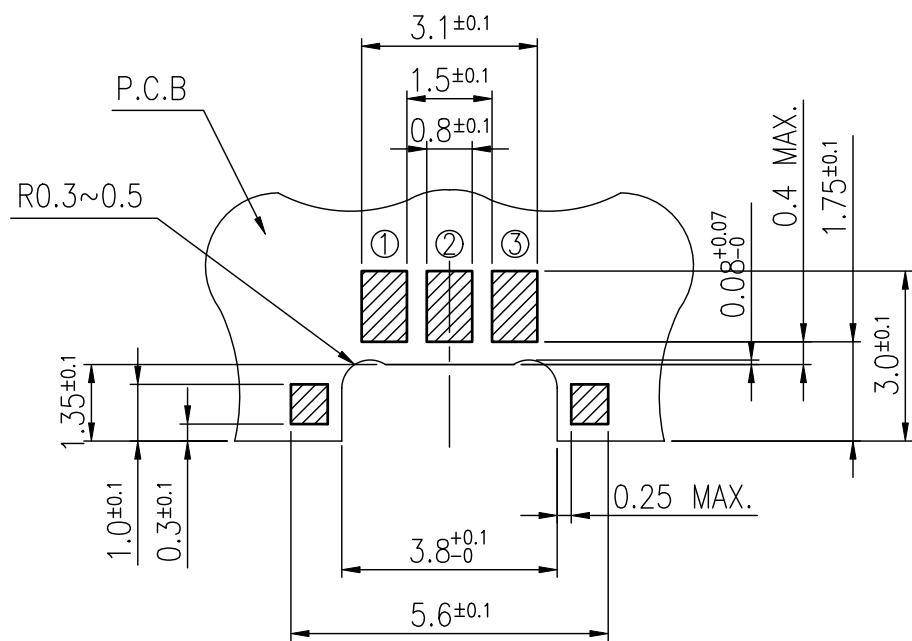
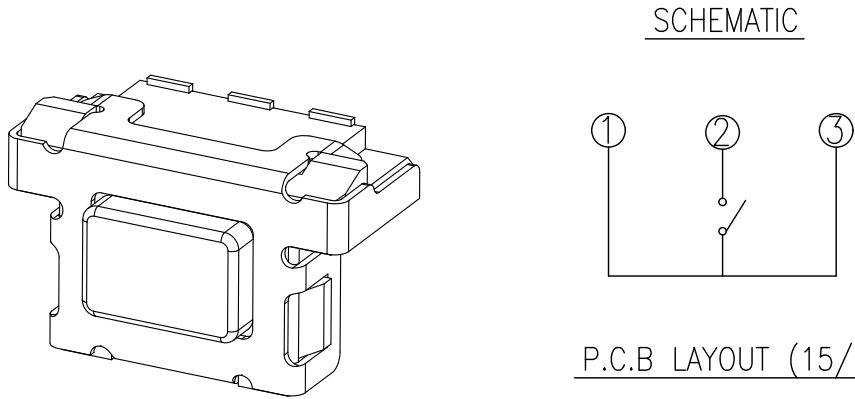
RoHS Compliant

For Reference Only



REVISIONS							
Rev	DESCRIPTION	DATE	DRAWER	REV	DESCRIPTION	DATE	DRAWER
A	Initial Drawing	2020.07.23	Jane Shen	C			
B				D			

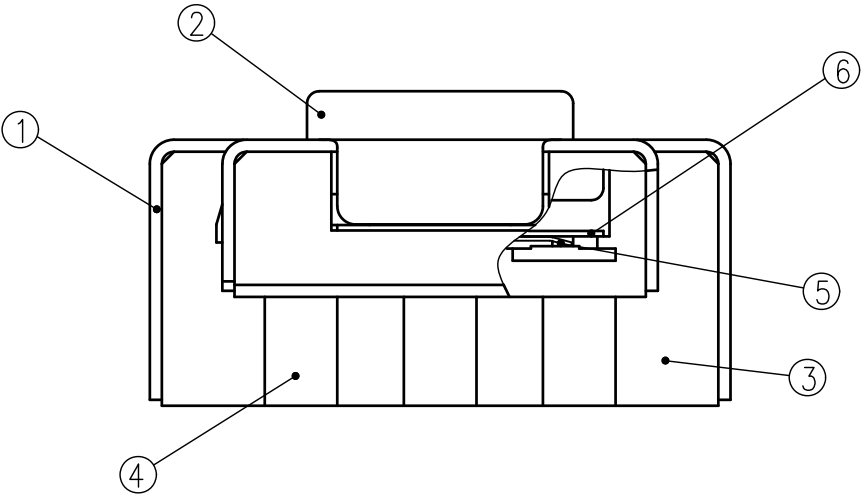
SPECIFICATIONS			
RATING	DC15V 20mA	TIMING	
CONTACT RESISTANCE	100mΩ MAX.	OPERATION (TORQUE)	
INSULATION RESISTANCE	DC100V - 100MΩ MIN.	STROKE (ANGLE)	0.15±0.1 mm
WITHSTAND VOLTAGE	AC250V - 1 MINUTE	LIFE	200,000 CYCLES
REMARKS:			



MODEL NO.	OPERATION
NTC313-DK1G-A160T	160±50 gf
NTC313-DK1G-A350T	350±80 gf

TOLERANCES UNLESS OTHERWISE SPECIFIED ±0.2		SIGNATURES		DATE	MODEL
		DRAWN	Jane Shen	2020.07.23	TITLE TACT SWITCH
	UNIT mm	CHECKED			NO. SEE MODEL NO.
	SCALE 15/1	REVIEWED			
		APPROVALS	Qiuyuan Chuang	2020.07.23	

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6	TAPE	1	POLYIMIDE	
5	CONTACT PLATE	1	STAINLESS STEEL PLATE	Ag PLATING
4	TERMINAL	3	COPPER ALLOY	Ag PLATING OVER Ni PLATING
3	FRAME	1	LIQUID CRYSTAL POLYMER	BLACK COLOR
2	STEM	1	LIQUID CRYSTAL POLYMER	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 2020.06.17
				CHK'D
				REV'D
				APP'D Qiuyuan Chuang 2020.06.17
SYM	DESCRIPTION	DATE	APPROVED	TITLE TACT SWITCH
				NO. NTC313-DK1G-A160T
				DWG NO. NTC313-K01
				TAIWAN MISAKI ELECTRONICS CO.,LTD.

SPECIFICATIONS FOR TACT SWITCH

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Model: NTC313-(DK,EK)1G- 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: -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: 15V D.C. , 20mA.

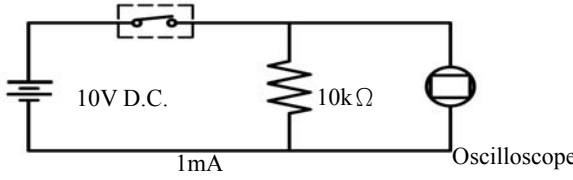
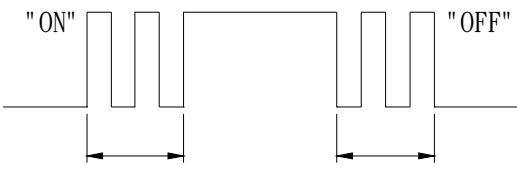
5. Electrical Performance:

No.	Items	Test conditions	Specifications
5.1	Contact Resistance	Shall be measure at 1kHz±200Hz (MAX. 20mV, MAX. 40mA.) or 1 A, 5V D.C. By voltage drop method.	100mΩ Max.
5.2	Insulation Resistance	Shall be measured by applying 100V 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.

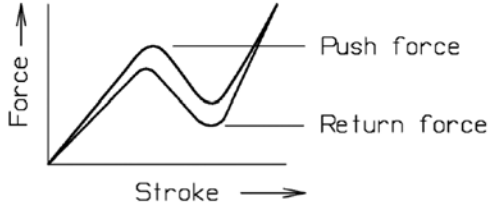
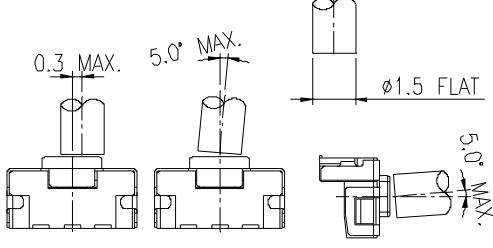
			APPROVED BY	REVIEWED BY	CHECKED BY	DESIGNED BY	SPEC NO.
						Jane Shen	SE-TC77N
							PAGINATE
A	NEW RELEASE						
SYM	DISCRIPTION	DATE					1/5

SPECIFICATIONS FOR TACT SWITCH

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No.	Items	Test conditions	Specifications
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>10V D.C. 10kΩ 1mA Oscilloscope</p>  <p>"ON" "OFF"</p>	<p>ON: 10m sec Max. OFF: 10m sec Max.</p>

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>  <p>Force → Push force Return force Stroke →</p>  <p>0.3 MAX. 5.0° MAX. Ø1.5 FLAT 5.0° MAX.</p>	<p>Push force:</p> <p>160±50f 350±80f</p>

APPROVED BY

REVIEWED BY

CHECKED BY

DESIGNED BY

SPEC NO.

Jane Shen

SE-TC77N

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SYM DISCRIPTION

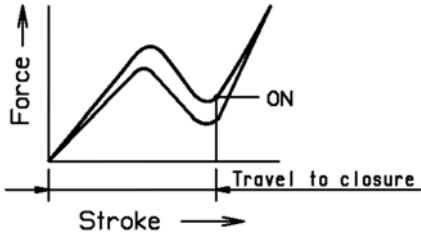
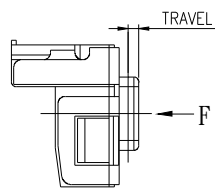
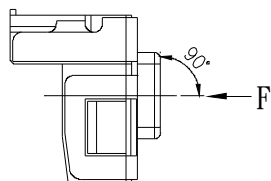
DATE

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SPECIFICATIONS FOR TACT SWITCH

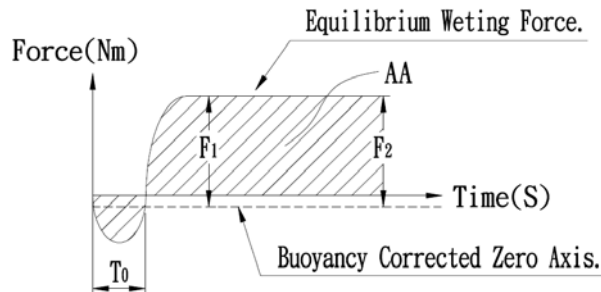
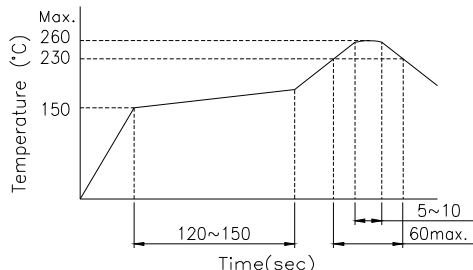
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No.	Items	Test conditions	Specifications
6.2	Travel	<p>Placing the switch such that the direction of switch operation is vertical and then applying a below static load to the center of the stem, the travel distance for the switch to come to a stop shall be measured.</p>  	0.15± 0.1mm.
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 15 seconds.</p> 	No damage. (Electrical and mechanical)

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SPECIFICATIONS FOR TACT SWITCH

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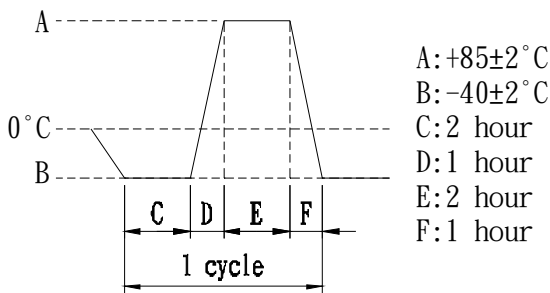
No.	Items	Test conditions	Specifications							
6.4	Solderability	Test Temperature : 235 ± 5℃ Immersion Angle : 90° Immersion Speed : 1 mm/sec. Immersion Depth : 0.1mm Dwell Time : 5 seconds	Conform to the criteria in the left table.							
		<div></div> <table><tr><th>Para.</th><th>Criteria</th></tr><tr><td>Tb</td><td>≤ 1 second</td></tr><tr><td>F1</td><td>50% of maximum theoretical wetting force at or before two seconds</td></tr><tr><td>F2</td><td>No less than 90% of the F1 Value</td></tr><tr><td>AA</td><td>Area calculated using sample buoyancy and 50% maximum theoretical force</td></tr></table>		Para.	Criteria	Tb	≤ 1 second	F1	50% of maximum theoretical wetting force at or before two seconds	F2
Para.	Criteria									
Tb	≤ 1 second									
F1	50% of maximum theoretical wetting force at or before two seconds									
F2	No less than 90% of the F1 Value									
AA	Area calculated using sample buoyancy and 50% maximum theoretical force									
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. Item 5.1~5.4 shall be satisfied. Item 6.1~6.2 shall be satisfied.							
		<div></div>								

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SYM	DISCRIPTION	DATE					

SPECIFICATIONS FOR TACT SWITCH

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7. Weather Performance:

No.	Items	Test conditions	Specifications
7.1	Humidity Test	(1) Temperature: $60\pm 2^{\circ}\text{C}$. (2) Relative humidity: 90~95% (3) Duration of test: 500 Hour. (4) Take off drop water. (5) Standard conditions after test: 1 Hour.	Contact resistance: 1Ω Max Item 5.2~5.4 shall be satisfied. Item 6.1~6.2 shall be satisfied.
7.2	Heat Test	(1) Temperature: $85\pm 2^{\circ}\text{C}$. (2) Duration of test: 500 Hour. (3) Standard conditions after test: 1 Hour.	
7.3	Cold Test	(1) Temperature: $-40\pm 2^{\circ}\text{C}$. (2) Duration of test: 500 Hour. (3) Take off drop water. (4) Standard conditions after test: 1 Hour.	Contact resistance: 1Ω Max Item 5.2~5.4 shall be satisfied. Item 6.1~6.2 shall be satisfied.
7.4	Temperature cycle	(1) Test cycle: 20 cycles. (2) Standard conditions after test: 1 Hour.  <p>A: $+85\pm 2^{\circ}\text{C}$ B: $-40\pm 2^{\circ}\text{C}$ C: 2 hour D: 1 hour E: 2 hour F: 1 hour</p>	

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: 200,000 times.	Contact Resistance: 2Ω MAX. Bounce: 20m sec Max.(ON,OFF) Operating Force: Within $\pm 30\%$ of specifications. Item 5.2 shall be satisfied. Item 6.2 shall be satisfied.

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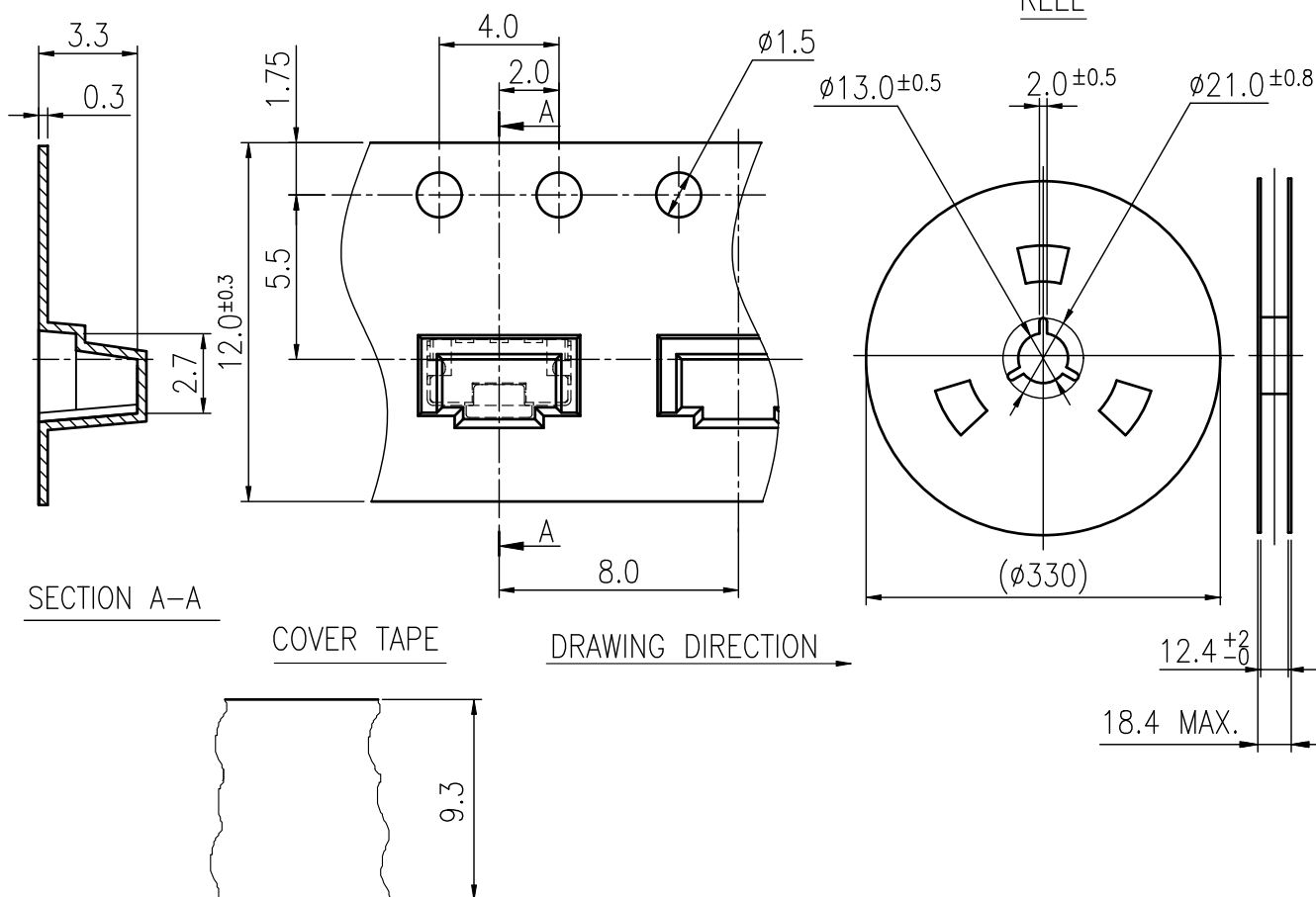
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STRUCTURE AND MATERIALS

Diagram illustrating the structure and materials of the device. The main structure shows a substrate (3) with a thin layer (2) on top. A circular inset provides a magnified view of the thin layer, showing three trapezoidal structures (1) and a central circular feature.

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

- CARRIER TAPE



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								PAGINATE. 1/1		SPEC NO. P-600	
SYM	DESCRIPTION	DATE	APPROVED								