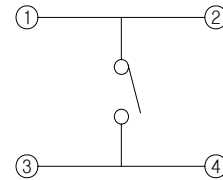
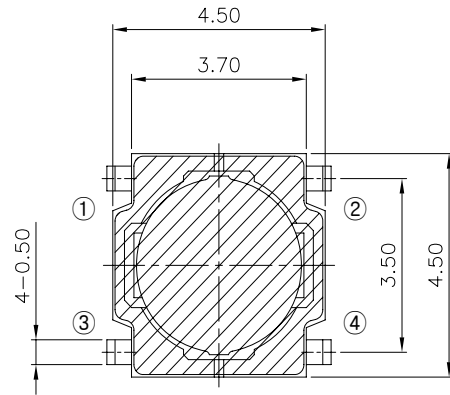
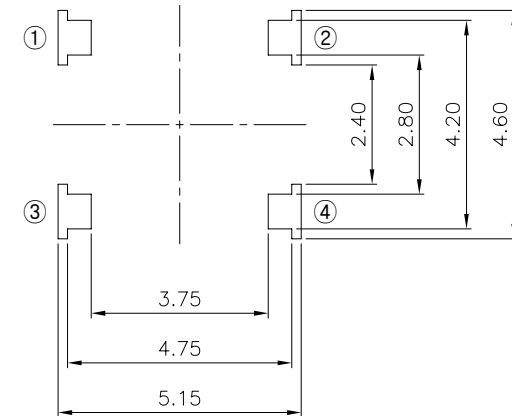
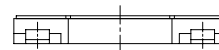
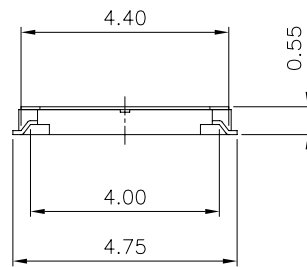


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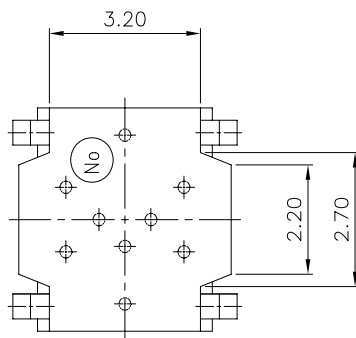
RevNo	Revision note	Date	Signature



CIRCUIT DIAGRAM



P.C.B MOUNTING SOLDER LAND DIMENSION



NOTE

1. RATING : 20mA, 15V DC
2. TRAVEL : 0.2±0.1 mm
3. CONTACT RESISTANCE : 200mΩ Max.
4. GENERAL TOLERANCE : ± 0.2
5. MANUFACTURING SPECIFICATION WOULD BE ACCORDANCE WITH JT 0143LF

ERP CODE	O/FORCE	CASE COLOR	LIFE CYCLES	REMARK
110011152043	160 ± 50gf	BLACK	500,000	

Designed by G.S.KIM			Unit	mm	Scale	10/1	Date	2007.11.19
Checked by								
Approved by T.H.OH	Item	Thin type Tactile switch	Tool	A-Cad	Sheet	1/1	Rev.	2
Model YTP-1152EM	Drawing name	ASSEMBLY						

	SPECIFICATION	PAGE
	THIN TYPE TACTILE SWITCH	1 / 5

1. GENERAL

1.1 Application : This specification is applied to low current circuit tactile switch for electronic equipment.

1.2 Operating temperature range : $-20 \sim 70^{\circ}\text{C}$ (normal humidity, normal press)

1.3 Storage temperature range : $-25 \sim 80^{\circ}\text{C}$ (normal humidity, normal press)

1.4 Test conditions

Tests and measurements shall be made in the following standard conditions unless otherwise specified : Normal temperature (temperature $5 \sim 35^{\circ}\text{C}$)

Normal humidity (relative humidity $45 \sim 85\%$)

Normal pressure (pressure $860 \sim 1060 \text{ mbars}$)

In case any question arises from the judgement made, tests shall be conducted in the following conditions : Temperature ($20 \pm 2^{\circ}\text{C}$)

Relative humidity ($65 \pm 5\%$)

Pressure ($860 \sim 1060 \text{ mbars}$)

2. Appearance, style, and dimensions

2.1 Appearance : There shall be no defects that affect the serviceability of the product.

2.2 Style and dimensions : Shall conform to the assembly drawings.

3. Type of actuation : Tactile feedback

4. Contact arrangement : 1 poles 1 throws (Details of contact arrangement are given in the assembly drawings.)

5. Maximum ratings : DC 15V 20mA

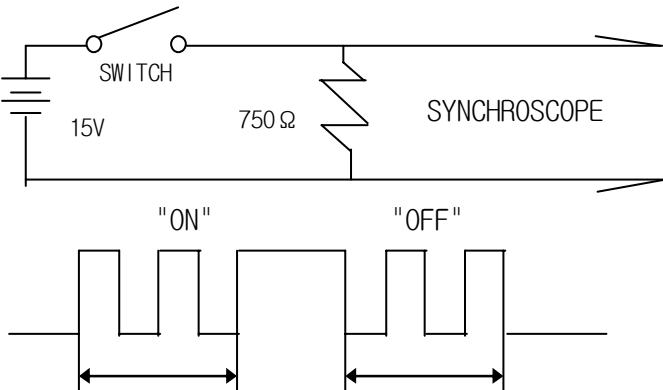
6. Performance

6.1 Electrical Performance

	PROPERTY	TEST CONDITIONS	PERFORMANCE
6.1.1	Contact resistance	Measured at DC 5V 10mA or by ohmmeter allowing a small current at 1KHz with a load of twice of the actuating force.	* $200\text{m}\Omega$ max.
6.1.2	Insulation resistance	DC 100V is applied between across terminals and between terminals and cover for 1 minute \pm 5 seconds.	* $50\text{M}\Omega$ min.

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	SPECIFICATION	PAGE
	THIN TYPE TACTILE SWITCH	2 / 5

	PROPERTY	TEST CONDITIONS	PERFORMANCE
6.1.3	Dielectric with standing voltage	AC 250V (50~60Hz) is applied between across terminals and between terminals and cover for 1 minute.	* No insulation defect shall be observed.
6.1.4	Bounce	<p>Lightly striking the center of the dome contact at rate encountered in normal use (3 to 4 operation per sec.) bounce shall 'be tested at "On" and "Off".</p> 	* 10m sec max.

6.2 Mechanical Performance

	PROPERTY	TEST CONDITIONS	PERFORMANCE
6.2.1	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 dome contact, the maximum load required for the dome contact to come to a stop shall be measured.	* As per individual manufactured drawing.
6.2.2	Travel	Placing the switch such that the direction of switch operation is vertical and then applying a static load twice the operating force to the center of the dome contact the travel distance for the dome contact to come to a stop shall be measured.	* As per individual manufactured drawing.
6.2.3	Return force	The sample switch is installed such that the direction of switch operation is vertical and upon depression of the dome contact in its center the whole travel distance, the force of the dome contact to return to its free position shall be measured.	* As per individual manufactured drawing.

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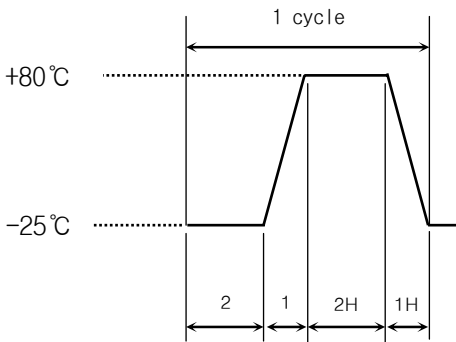
	SPECIFICATION	PAGE
	THIN TYPE TACTILE SWITCH	3 / 5

6.3 Environmental Performance

	PROPERTY	TEST CONDITIONS	PERFORMANCE
6.3.1	Cold heat proof	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for one hour before measurements are made : (1) Temperature : $-25 \pm 3^{\circ}\text{C}$ (2) Time : 96hours (3) Waterdrops shall be removed.	* Contact resistance : 500m Ω max. * Insulation resistance : 10M Ω min. * Item 6.1.3 Item 6.1.4 Item 6.2.1 Item 6.2.2 Item 6.2.3
6.3.2	Dry heat proof	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for one hour before measurements are made : (1) Temperature : $80 \pm 3^{\circ}\text{C}$ (2) Time : 96hours	
6.3.3	Humidity	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for one hour before measurements are made : (1) Temperature : $40 \pm 3^{\circ}\text{C}$ (2) Time : 96hours (3) Relative humidity : 90 ~ 95% (4) Waterdrops shal	
6.3.4	THB	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for one hour before measurements are made : (1) Temperature : $85 \pm 2^{\circ}\text{C}$ (2) Time : 96hours (3) Relative humidity : 85% (4) Waterdrops shall be	

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	SPECIFICATION	PAGE
	THIN TYPE TACTILE SWITCH	4 / 5

	PROPERTY	TEST CONDITIONS	PERFORMANCE
6.3.5	Thermal cycling	 <p>: After the test conducted under 5 cycles the sample is allowed to stand under normal temperature and humidity conditions for 1hour, and the measurement is performed within 1hour.</p>	* The requirement in item 6 shall be met.

6.4 Endurance Performance

	PROPERTY	TEST CONDITIONS	PERFORMANCE
6.4.1	Operating life	<p>Measurements shall be made following the test set forth below :</p> <p>(1) DC 5V 5mA resistive load (2) Rate of operation : 1 ~ 2 operations per second (3) Depression : With a load of 150% of operating force (4) Cycles of operatio</p>	<p>* Contact resistance : 500mΩ max. * Insulation resistance : 10MΩ min. * Bounce : 10m sec max. * Actuating force : +30% or -30% of initial force. * Item 6.1.3 Item 6.2.2</p>

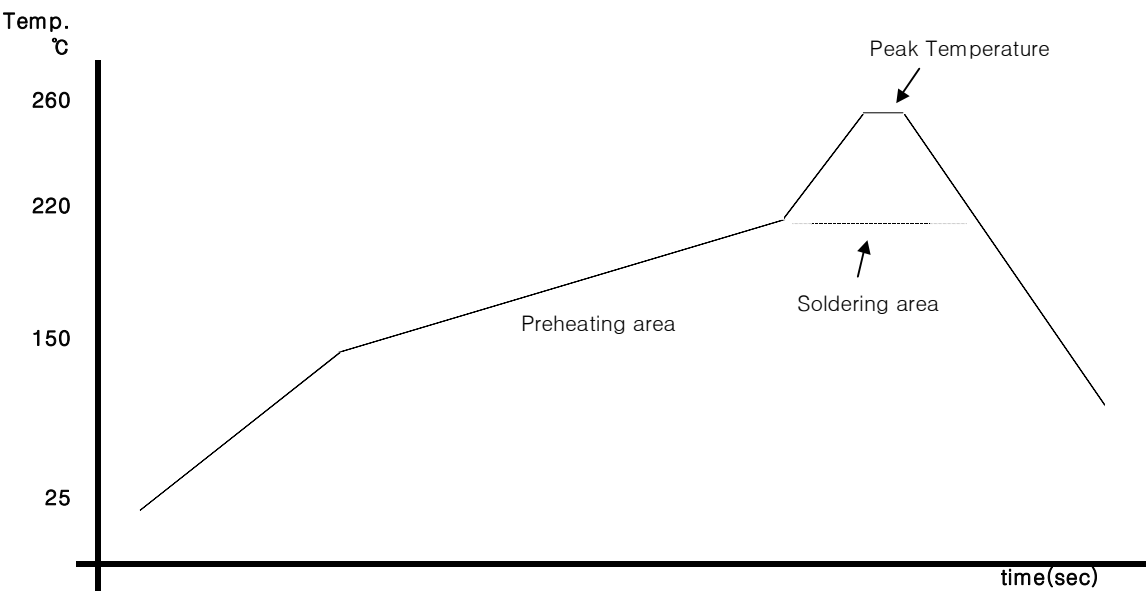
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ZONE	SYMB	DATE	APPD	CHKD	DSGD				

	SPECIFICATION	PAGE
	THIN TYPE TACTILE SWITCH	5 / 5

7. REFLOW SOLDERING

7.1 Reflow soldering conditions

- 1) Preheat ----- 150℃ ~ 200℃, 120 ±20 (sec)
- 2) Peak temperature --- 260℃ max. 10 (sec)
- 3) Soldering area temperature ----- 217℃, 90 ~ 120 (sec)



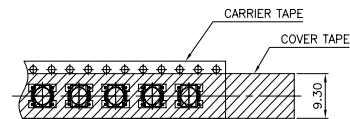
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ZONE	SYMB	DATE	APPD	CHKD	DSGD				

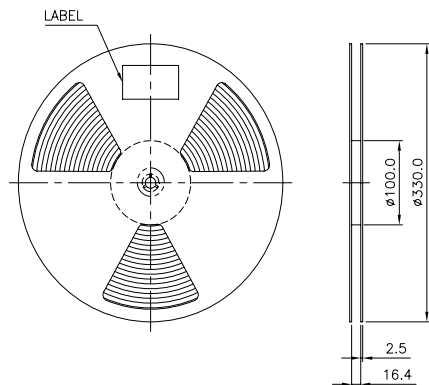
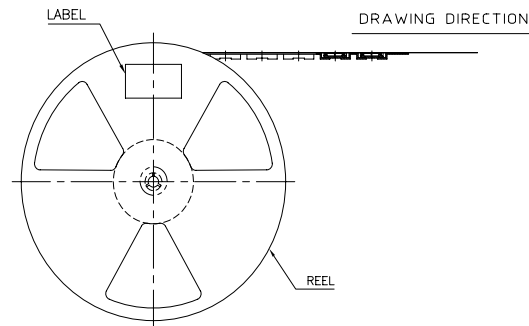
* THE DIRECTION OF PILOT HOLES *



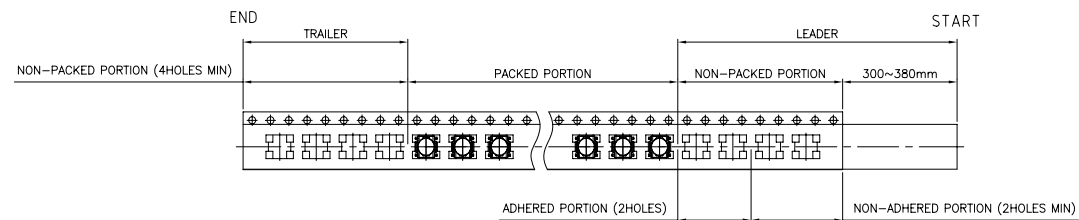
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A1	4.9±0.1 mm
B0	4.9±0.1 mm
B1	1.9±0.1 mm
K0	1.0±0.1 mm
K1	0.8±0.1 mm



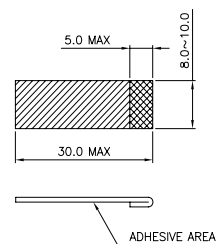
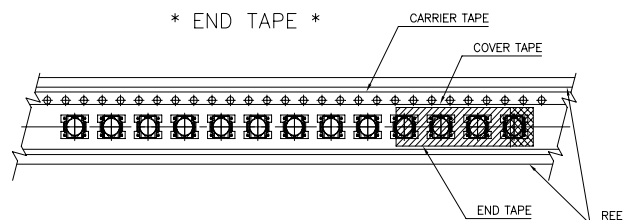
MODEL	CODE NO.	REMARKS
JTP 1152EM		



* THE SPECIFICATION FOR PACKAGING *



* END TAPE *



NOTE

1. 5,000 PCS SWITCHES PER 1 REEL
2. GENERAL TOLERANCE : ± 0.1
3. MATERIAL : CARRIER TAPE-POLYPROPYLENE,PC
OR POLYSTYRENE
COVER TAPE-POLYESTER
REEL-ABS
END TAPE COLOR-GREEN OR IVORY

RevNo	Revision note	Date	Signature

Designed by G.S.KIM					亚特联 YATEL	
Checked by						
Approved by T.H.OH		Unit mm	Scale 1/1	Date 2007.11.19		
Item	Thin type Tactile switch	Toolt A-Cad	Sheet 1/1	Rev. 1		
Model	YTP-1152EM	Drawing name EMBOSSSED TAPE ASSY				