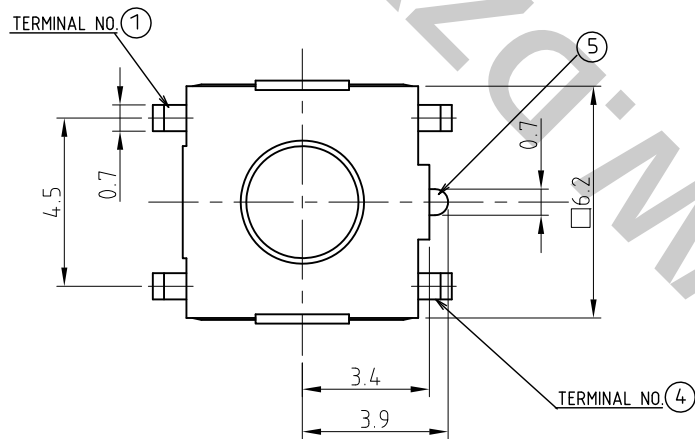
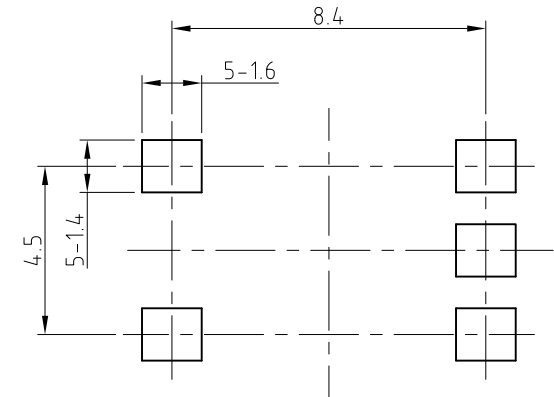
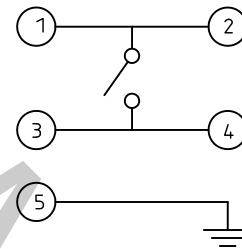


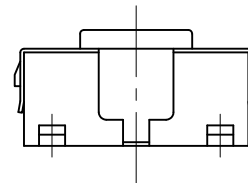
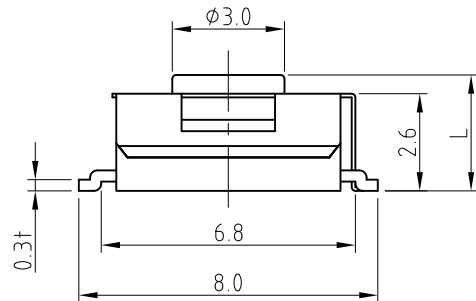
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CIRCUIT DIAGRAM



P.C.B LAND DIMENSION



NOTE.

1. TRAVEL : 0.25 +0.2/-0.1
2. CONTACT RESISTANCE : 50 mΩMAX
3. GENERAL TOLERANCE : ±0.3
4. MANUFACTURING SPECIFICATION
WOULD BE ACCORDANCE WITH JT0115LF

JTP1161A		4.3	BLACK	160 ±50gf	
JTP1161		3.1	BLACK	160 ±50gf	
MODEL NAME	CODE NO.	L	STEM COLOR	O/FORCE	REMARKS

Designed by			Unit	Scale	N/S	Date	2010.03.18
Checked by							
Approved by							
Item	TACTILE SWITCH						
Model	JTP 1161 SERIES						

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	TACT SWITCH	1 / 4

1. GENERAL

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

1.2 Operating temperature range : -20 ~ 70℃, 45 ~ 85% RH

1.3 Storage temperature range : -30 ~ 80℃. However, 96 hours maximum for continuous storage over a range -20 ~ -30℃ and a range 70 ~ 80℃.

1.4 Test conditions : The standard test conditions shall be 5 ~ 35℃ in temperature, 45 ~ 85% RH and 860 ~ 1060mbar in atmospheric pressure.
Should any doubt arise in judgement, tests shall be conducted at 20±2℃, 65±5% RH and 860 ~ 1060mbar.

2. RATED VOLTAGE AND CURRENT.

DC 12V 50mA

3. ELECTRICAL PERFORMANCE

	PROPERTY	TEST CONDITIONS	PERFORMANCE
3.1	Contact arrangement		* 1 pole, 1 throw.
3.2	Contact resistance	Measured at DC 5V 10mA or by ohmmeter allowing a small current at 1kHz with 150% of actuating force.	* As per individual manufactured drawing.
3.3	Insulation resistance	DC 100V is applied between terminals and between terminals and cover for 1minute ±5seconds.	* greater than 100MΩ.
3.4	Dielectric strength	AC 250V (50 ~ 60Hz) is applied between terminals and between terminals and cover for 1 minute.	* No insulation defect shall be observed.
3.5	Bounce	Measured by lightly striking the center of the stem at a rate of 3 operations/sec..	* less than 5 msec.

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4. MECHANICAL PERFORMANCE

	PROPERTY	TEST CONDITIONS	PERFORMANCE
4.1	Actuating force	A gradually increasing load is applied to the center of the stem.	* As per individual manufactured drawing.
4.2	Return force	After actuating, the load is gradually decreased until the stem returns to its free position.	* 160gf, 260gf : greater than 50gf. * 100gf, 130gf : greater than 30gf.
4.3	Stop strength	A static force of 3Kgf shall be applied to the direction of operation for 3 seconds.	* Shall be free from mechanical and electrical abnormalities.
4.4	Stem withdrawal force	A static load of 500gf is applied to the direction of pulling for 3 seconds.	* Shall be free from mechanical and electrical degradation.
4.5	Travel		* As per individual manufactured drawing.
4.6	Arrangement of action		* Tactile feed-back.

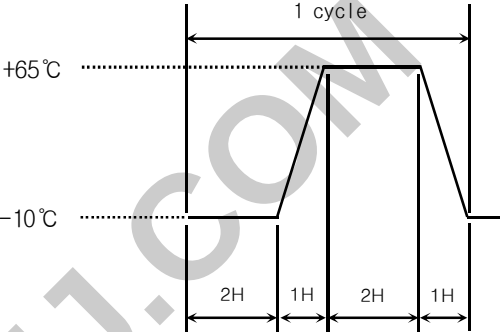
5. DURABILITY

	PROPERTY	TEST CONDITIONS	PERFORMANCE
5.1	Operating life	100,000cycles operation with a load of 150% of Actuating force a rate of 2 cycles/sec. With a resistive load supplying DC 12V 50mA.	* Contact resistance : 500mΩ max. * Bounce : 20msec max. * Actuating force : within ±30% of the initial value.
5.2	Shock resistance	An impact load of 30g is applied according to the method 205 , MIL-STD 202.	* The requirement in Item 3 and 4 shall be met.
5.3	Vibration resistance	The test is conducted according to the method 201, MIL-STD 202.	* The requirement in Item 3 and 4 shall be satisfied without any degradation in both apperance and actuation.

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6. WEATHER PROOF

	PROPERTY	TEST CONDITIONS	PERFORMANCE
6.1	Cold heat proof	After testing at -30℃ for 96hours, the sample is allowed to stand under normal temperature and humidity conditions for 1hour and measurement is performed within 1 hour after that. Water drops should be wiped off.	* The requirement in item 3 and 4 shall be met.
6.2	Dry heat proof	After testing at 85℃ for 96hours, the sample is allowed to stand under normal temperature for 1hour and measurement is performed within 1 hour after that.	
6.3	Damp heat proof	After test at 60±2℃ and 90 ~ 95% in relative humidity for 96hours, the sample is allowed to stand under normal temperature and humidity conditions for 1hour, and measurement is performed within 1 hour after that. Water drops should be wiped off.	* Insulation resistance : 10MΩ minimum. * Dielectric strength : same as item 3.4. * Contact resistance : same as item 3.2.
6.4	Thermal cycling	 1 cycle +65℃ -10℃ 2H 1H 2H 1H ; 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.	* The requirement in item 3 and 4 shall be met.

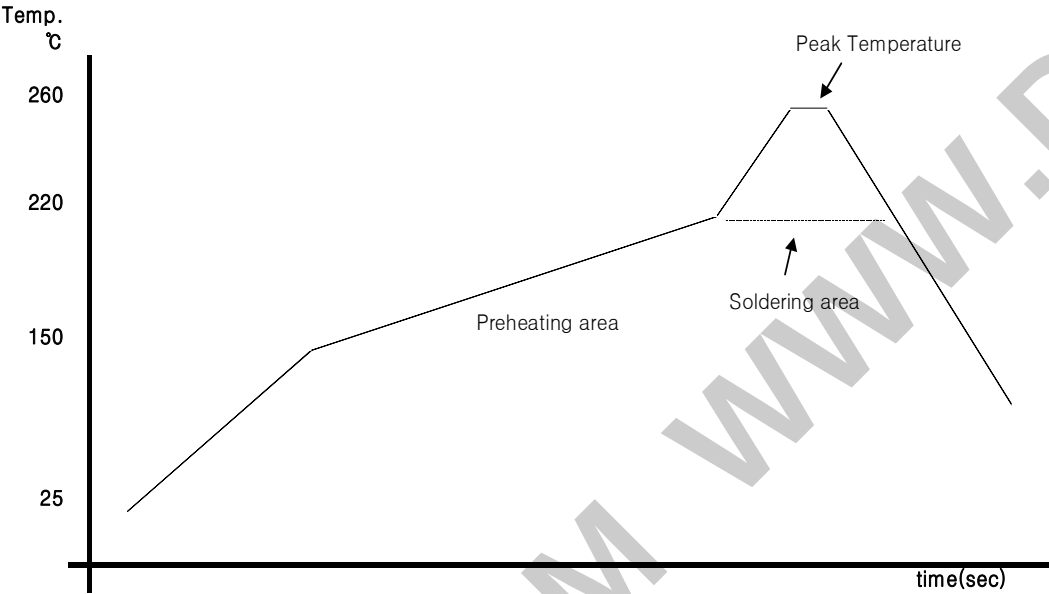
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7. REFLOW SOLDERING

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)



< Temperature profile >

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