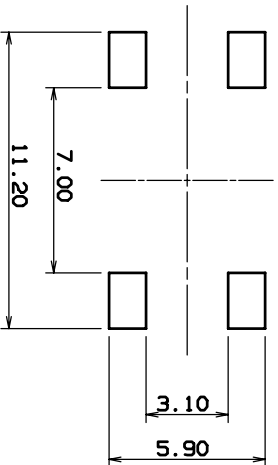
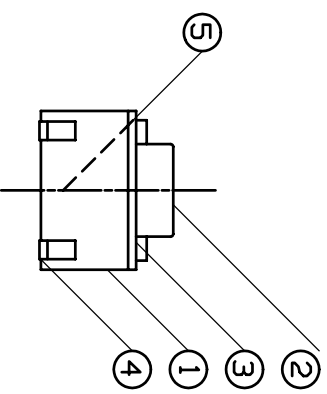
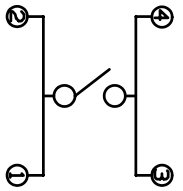


P.C.B LAND DIMENSIONS



CIRCUIT DIAGRAM



MODEL NO	^H^	1 REEL Q^TY
1102S	4.3	1,000 Pcs
1102SA	5.0	1,000 Pcs
1102SB	7.0	750 Pcs
1102SC	8.0	500 Pcs
1102SJ	8.5	500 Pcs
1102SD	9.5	500 Pcs
1102SE	7.3	750 Pcs
1102SF	12.5	250 Pcs
1102SF13	13.0	250 Pcs
1102SG	9.0	500 Pcs
1102S-11	11.0	400 Pcs

NOTE

1. TRAVEL : 0.25 +0.2/-0.1 mm
2. CONTACT RESISTANCE : 100ma Max
3. GENERAL TOLERANCE : ±0.2
4. OPERATING FORCE : 100, 130, 160, 250 ± 50gf

NO	PART NAME	Q^TY	MATERIAL	REMARK
1	CASE	1	ARLEN PA6T	BLACK
2	STEM	1	ARLEN PA6T	BLACK
3	COVER	1	SPTe	
4	TERMINAL	1	Brass	silver plated
5	CONTACT	1	Phosphor bronze	silver cladding

No.	PART NAME	Q^TY	MATERIAL	SCALE	MODEL	TREAT.	REMARKS
5				3RD ANGLE PROJECTION	1102S SERIES		
4				APPROVED	DESIGNED		
3				Y.B.LEE	S.B.LIM	Y.G.KIM	ASS^Y DIAGRAM
2							
1							
	NO.	DATE	NOTE	SIGN			DWG. NO.

TITLE	<b>PRODUCT SPECIFICATIONS</b>		
MODEL No.	<b>1102S TACT SWITCH (SMD TYPE)</b>		PAGE 1/4

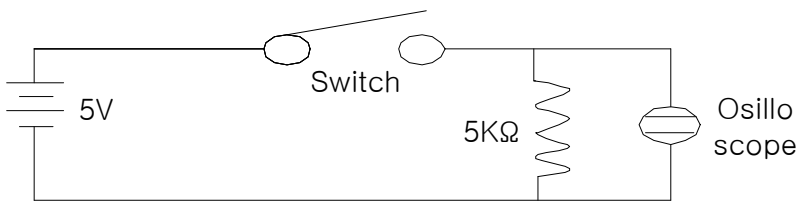
1. General

- 1.1 Switch rating DC 12V, 50mA
- 1.2 Operating temperature range -20°C ~ 70°C
- 1.3 Preservative temperature range -30°C ~ 80°C
- 1.4 Apperance and dimensions See outside drawing page
- 1.5 Standard conditions Unless otherwise specified, the test and measurements shall be carried out as follows:
- Ambient temperature : 5 ~ 35°C
- Relative humidity : 45 ~ 85%
- Air pressure : 86 ~ 106kPa (860 ~ 1060mbar)
- However, if doubt arises on the decision based on the measured values under the above-mentioned conditions, the following conditions shall be employed.
- Ambient temperature : 20±2°C
- Relative humidity : 60±5%RH
- Air pressure : 86 ~ 106kPa (860 ~ 1060mbar)

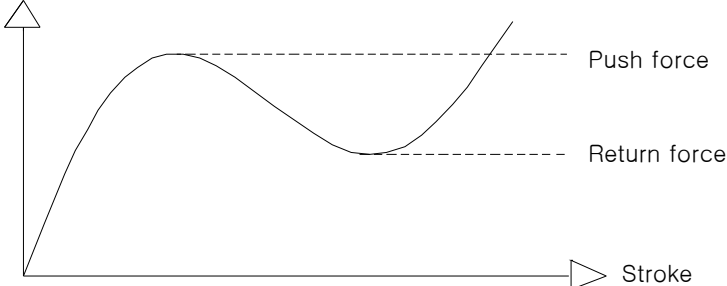
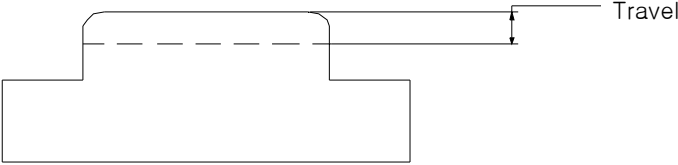
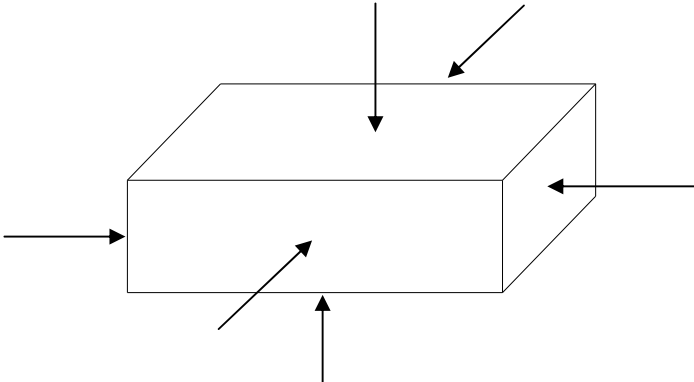
2. Performance

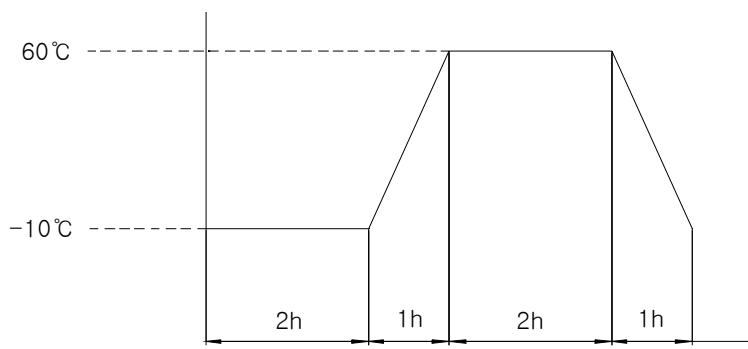
2.1 Electrical characteristics

	Items	Test conditions	Criteria
2.1.1	Contact resistance	Applying a static load twice the actuating force to the center of the stem, measurements shall be made with a 1kHz small-current contact resistance meter.	100mΩ MAX
2.1.2	Insulation resistance	Measurements shall be made following application of DC 100V potential across terminals and frame for one minute.	100MΩ MIN
2.1.3	Dielectric withstandin voltage	AC 250V (50Hz or 60Hz) shall be applied across terminals and frame for one minute.	There shall be no breakdown
2.1.4	Bounce	Lightly striking the center of the stem at a rate encountered in normal use (3 to 4 operations per sec.) bounce shall be tested at 'ON' and 'OFF'	10 msec MAX



							APPD.	CHKD.	DSGE.
PAGE	MARK	REVISION	DATE	APPD	CHKD	DSGE			

TITLE	<b>PRODUCT SPECIFICATIONS</b>		
MODEL No.	<b>1102S TACT SWITCH (SMD TYPE)</b>	PAGE 2/4	
<b>2.2. Mechanical characteristics</b>			
	Items	Test conditions	Criteria
2.2.1	Operating force	Push by recommended operating condition 	Refer to individual product drawing.
2.2.2	Travel	Push by recommended operating condition $F = (\text{Operation force}) \times 2$ 	Refer to individual product drawing.
2.2.3	Stop strength	A static load of 3kgf shall be applied in the direction of stem operation for a period of 60 seconds.	No damage (Electrical and mechanical)
2.2.4	Vibration test	(1) Amplitude : 1.5mm (2) Sweep rate : 10-55-10Hz for 1 minute. (3) Sweep method : Logarithmic frequency sweep rate. (4) Vibration direction : X.Y.Z (3 directions) (5) Time : Each direction 2 hours (Total 6 hours)	No 2.1 and 2.2.1 to 2.2.2 shall be satisfied.
2.2.5	Impact shock test	(1) Acceleration : 80G (2) Cycle of test : 3 cycles each in 6 directions for a total 18 cycles 	No 2.1 and 2.2.1 to 2.2.2 shall be satisfied.
2.2.6	Soldering heat test	Soldering area : $t/2$ of P.W.B thickness (P.W.B : $t = 1.6$ ) Soldering temperature : $260 \pm 5^\circ\text{C}$ Soldering time : $5 \pm 1$ sec	No damage (Electrical and mechanical)

TITLE	PRODUCT SPECIFICATIONS		
MODEL No.	1102S TACT SWITCH (SMD TYPE)		PAGE 3/4
2.3 Climatic characteristics			
	Items	Test conditions	Criteria
2.3.1	Cold test	(1) Temperature : $-30\pm 2^{\circ}\text{C}$ (2) Duration of test : 96 hours (3) Take off a drop water (4) Standard condition after test : 1 hour	Contact resistance :200m $\Omega$ max No 2.1.2 to 2.1.4 and 2.2.1 to 2.2.2 shall be satisfied.
2.3.2	Heat test	(1) Temperature : $80\pm 2^{\circ}\text{C}$ (2) Duration of test : 96 hours (3) Standard condition after test : 1 hour	Contact resistance :200m $\Omega$ max No 2.1.2 to 2.1.4 and 2.2.1 to 2.2.2 shall be satisfied.
2.3.3	Temperature cycle	(1) Test cycles : 5 cycles (2) Standard conditions after test : 1 hour (3) 1 cycle  	Contact resistance :200m $\Omega$ max No 2.1.2 to 2.1.4 and 2.2.1 to 2.2.2 shall be satisfied.
2.3.4	Humidity test	(1) Temperature : $60\pm 2^{\circ}\text{C}$ (2) Relative humidity : 90 ~ 95% (3) Duration of test : 96 hours (4) Take off a drop water (5) Standard conditions after test : 1 hour	Contact resistance :200m $\Omega$ max No 2.1.2 to 2.1.4 and 2.2.1 to 2.2.2 shall be satisfied.
2.3.5	Operating life test	(1) DC 5V, 5mA resistance load (2) Operation speed : 2 ~ 3 cycles/sec (3) Push force : maximum value of operation force (4) Cycle of operation : 50,000 cycles	Contact resistance : 200m $\Omega$ max Bounce : 10m sec max Actuating force : $\pm 30\%$ initial force No 2.1.2 to 2.1.3 and 2.2.2 shall be satisfied.
2.3.6	Withstand H <sub>2</sub> S	(1) Density : $3\pm 1$ ppm (2) Temperature : $40\pm 2^{\circ}\text{C}$ (3) Relative humidity : 90 ~ 95% (4) Duration of test : 24 hours (5) Standard conditions after test : 1 hour	Contact resistance :200m $\Omega$ max No 2.1.2 to 2.1.4 and 2.2.1 to 2.2.2 shall be satisfied.
2.3.7	Withstand SO <sub>2</sub>	(1) Density : $10\pm 2$ ppm (2) Temperature : $40\pm 2^{\circ}\text{C}$ (3) Relative humidity : 90 ~ 95% (4) Duration of test : 24 hours (5) Standard conditions after test : 1 hour	Contact resistance :200m $\Omega$ max No 2.1.2 to 2.1.4 and 2.2.1 to 2.2.2 shall be satisfied.

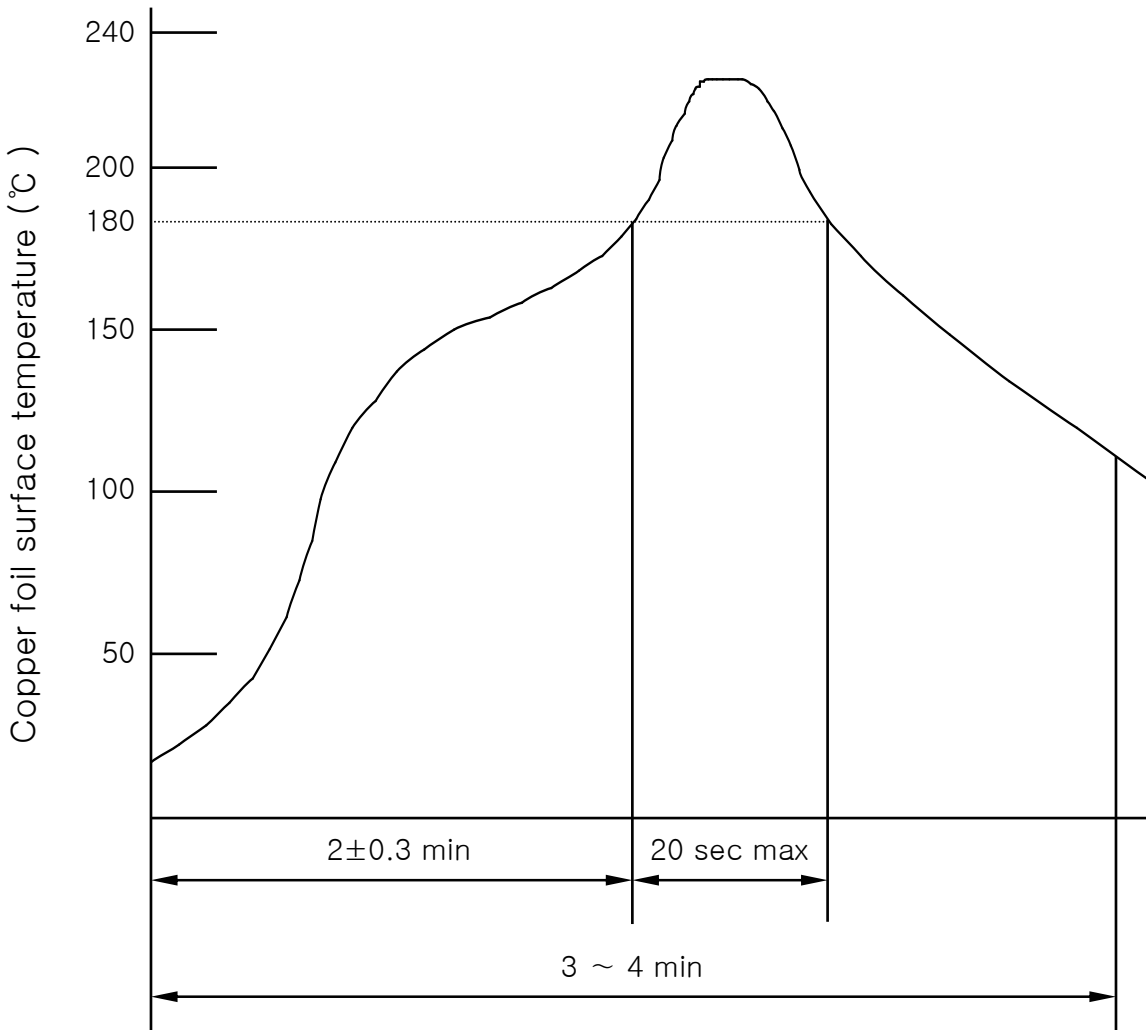
TITLE	<b>PRODUCT SPECIFICATIONS</b>	
MODEL No.	<b>1102S TACT SWITCH (SMD TYPE)</b>	PAGE 4/4

3. Recommended Reflow Soldering Condition

Reflow soldering conditions

Preheat : temperature on the copper foil surface should reach 180 °C, 2±0.3 minutes after the P.W.P entered into the soldering equipment.

Soldering heat : Temperature on ther copper foil surface should reach the peak temperature of 240 °C within 20 seconds after the P.W.B entered into soldering heat zone.



Time inside soldering equipment  
Temperature Profile