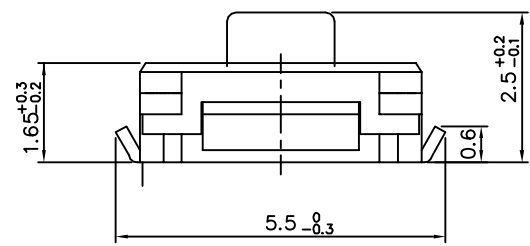
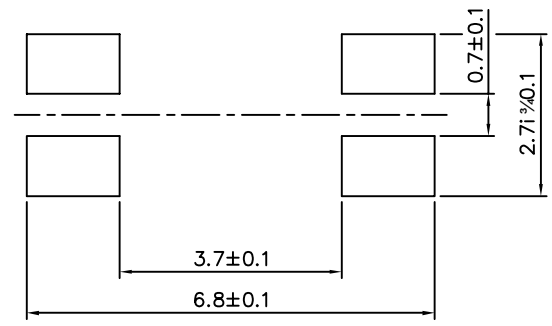


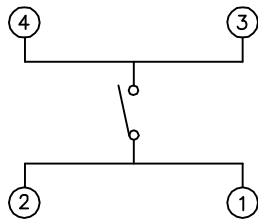
P.C.B DIMENSION



NOTE

1. RATING : 50mA, DC12V Max
2. CIRCUIT : 1C - 1P.
3. OPERATING FORCE : 250±50gf
4. CONTACT RESISTANCE : 100mΩ Max
5. TRAVEL : 0.7±0.15m/m
6. SOLDER THICKNESS : 0.15±0.03mm
7. PACKAGE : 3,000PCS

CIRCUIT DIAGRAM



PART NO		PART NAME		Q'TY	MATERIAL		STANDARD	DISPOSITION	REMARKS
△					TRIGON- OMETRY	UNIT	SCALE 10	SMD TACT SWITCH	
△					APPD	CHKD	DSGD		
△									
△									
△									
NO		CORRECTION						MODEL	INT-1430U25B

1. GENERAL SPECIFICATION

- 1.1 SWITCH ACTION : PUSH-ON TYPE S.P.S.T
 1.2 SWITCH RATING : DC12V 50mA
 1.3 OPERATION TEMPERATURE RANGE: -40 ~ +85°C
 1.4 PRESERVATIVE TEMPERATURE RANGE SINGLE CONDITION : -40~+85°C
 TAPIG CONDITION : -20~+60 °C
 1.5 APPEARANCE AND DIMENSIONS : SEE OUTSIDE DRAWING PAGE
 1.6 STANDARD CONDITIONS UNLESS OTHERWISE SPECIFIED, THE TEST AND MEASUREMENTS SHALL BE CARRIED OUT AS FOLLOWS :

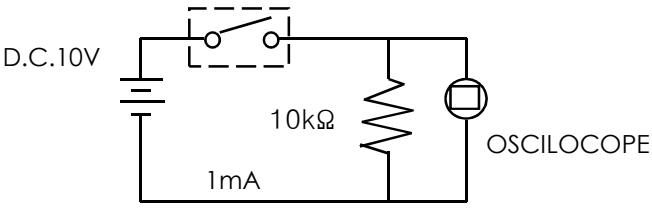
AMBIENT TEMPERATURE : 5~35°C
 RELATIVE HUMIDITY : 45~85%
 AIR PRESSURE : 86~106kPa

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 : 65±5%
 AIR PRESSURE : 86~105kPa

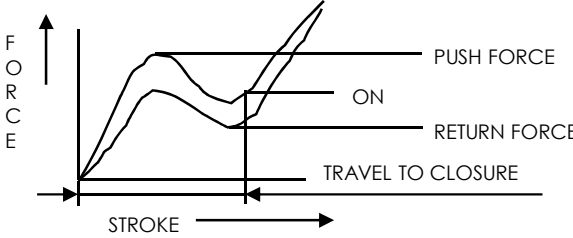
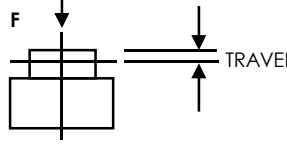
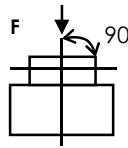
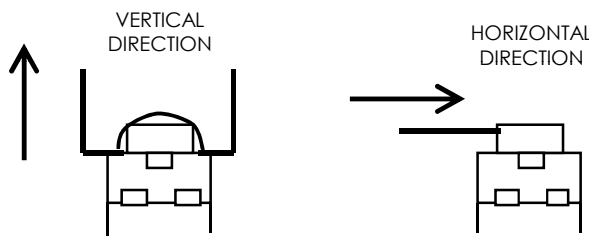
2. PERFORMANCE

2.1 ELECTRICAL CHARACTERISTICS

NO	ITEM	TEST CONDITION	PERFORMANCE
2.1.1	CONTACT RESISTANCE	PUSH FORCE : (OPERATION FORCE) × 2 1kHz, 20mV, 5~50mA MEASUREMENT TOOL : CONTACT RESISTANCE METER (1kHz, 20mV, 5~50mA)	100mΩ MAX.
2.1.2	INSULATION RESISTANCE	DC100V(BETWEEN TERMINALS)	100MΩ MIN.
2.1.3	WITHSTAND VOLTAGE	A.C.250V FOR 1MINUTE. (BETWEEN TERMINALS)	NO INSULATION DESTRUCTION
2.1.4	BOUNCING	OPERATION SPEED : 3~4 TIMES/S  SWITCH BOUNCING TEST CIRCUIT	BOTH ON 10ms MAX. BOTH OFF 10ms MAX.

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2.2 MECHANICAL CHARACTERISTICS

NO.	ITEM	TEST CONDITION	PERFORMANCE
2.2.1	OPERATION FORCE	PUSH BY RECOMMEN OPERATING CONDITION.(4.2) 	PUSH FORCE 160 OR 250±50gf RETURN FORCE 10gf MIN.
2.2.2	TRAVEL TO CLOSURE	$F=(\text{OPERATION FORCE})\times 2$ 	0.7±0.15mm
2.2.3	PUSH STRENGTH	50N FOR 60 SEC. 	NO DAMAGE (ELECTRICAL AND MECHANICAL)
2.2.4	PULL STRENGTH		VERTICAL DIRECTION : 50gf MIN. HORIZONTAL DIRECTION : 50gf MIN.
2.2.5	VIBRATION TEST	1) AMPLITUDE : 1.5mm 2) SWEEP RATE : 10-55-10Hz FOR 1 MINUTE 3) VIBRATION DIRECTION : X, Y, Z(3 DIRECTIONS) 4) TIME : EACH DIRECTION 2 HOURS(TOTAL 6 HOURS)	NO. 2. 1 AND 2.2.1 TO 2.2.2 SHALL BE SATISFIED
2.2.6	SOLDERING HEAT TEST	MOUNT THE SWITCH ON P.W.B BY ADHESIVE 1) REFLOW PRESS 2 TIMES.(REFER TO SECTION 3.1) 2) STANDARD CONDITIONS AFTER TEST : 24 HOURS	CONTACT RESISTANCE 100mΩ MAX. NO. 2.1.2 TO 2.1.4 AND NO. 2.2.1 TO 2.2.2 SHALL BE SATISFIED.
2.2.7	SOLDERBILITY	TEMPERATURE : 230±5°C SOLDERING TIME : 2±0.5 SEC.	70% OR MORE OF SURFACE AREA OF THE PORTION IMMERSED IN SOLDER SHALL BE COVERED BY NEW SOLDER

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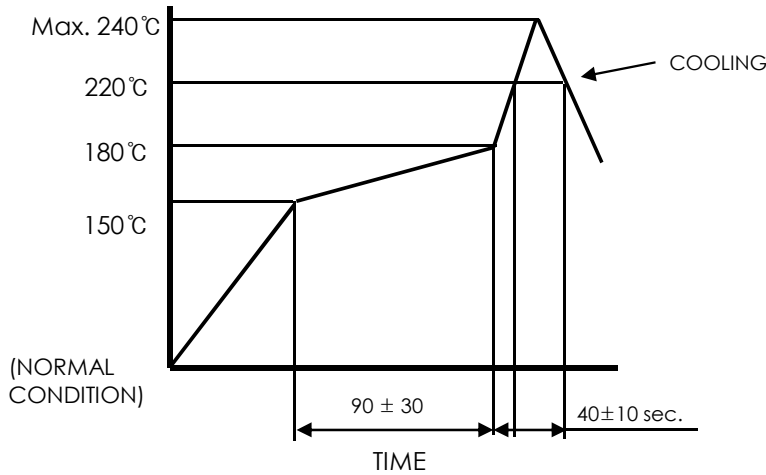
2.3 CLIMATIC CHARACTERISTICS

NO.	ITEM	TEST CONDITION	PERFORMANCE												
2.3.1	COLD TEST	1) TEMPERATURE : $-40\pm 2^{\circ}\text{C}$ 2) DURATION OF TEST : 500 h 3) TAKE OFF A DROP WATER. 4) STANDARD CONDITIONS AFTER TEST : 1 h	CONTACT RESISTANCE 200m Ω MAX. NO., 2.1.2 TO 2.1.4 AND NO. 2.2.1 TO 2.2.2 SHALL BE SATISFIED.												
2.3.2	HEAT TEST	1) TEMPERATURE : $85\pm 2^{\circ}\text{C}$ 2) DURATION OF TEST : 500 h 3) STANDARD CONDITIONS AFTER TEST : 1h	CONTACT RESISTANCE 200m Ω MAX. NO., 2.1.2 TO 2.1.4 AND NO. 2.2.1 TO 2.2.2 SHALL BE SATISFIED.												
2.3.3	TEMPERATURE CYCLE	1) TEST CYCLE : 20 CYCLES 2) STANDARD CONDITIONS AFTER TEST : 1 h <table border="1" style="margin-left: 20px;"> <thead> <tr> <th></th> <th>TEMPERATURE</th> <th>DURATION OF TEST</th> </tr> </thead> <tbody> <tr> <td rowspan="4" style="writing-mode: vertical-rl; transform: rotate(180deg);">C Y C L E</td> <td>$20\pm 5^{\circ}\text{C}$</td> <td>2~3 MINUTE</td> </tr> <tr> <td>$-40\pm 2^{\circ}\text{C}$</td> <td>1 h</td> </tr> <tr> <td>$20\pm 5^{\circ}\text{C}$</td> <td>2~3 MINUTE</td> </tr> <tr> <td>$85\pm 5^{\circ}\text{C}$</td> <td>1 h</td> </tr> </tbody> </table>		TEMPERATURE	DURATION OF TEST	C Y C L E	$20\pm 5^{\circ}\text{C}$	2~3 MINUTE	$-40\pm 2^{\circ}\text{C}$	1 h	$20\pm 5^{\circ}\text{C}$	2~3 MINUTE	$85\pm 5^{\circ}\text{C}$	1 h	CONTACT RESISTANCE 200m Ω MAX. NO., 2.1.2 TO 2.1.4 AND NO. 2.2.1 TO 2.2.2 SHALL BE SATISFIED.
	TEMPERATURE	DURATION OF TEST													
C Y C L E	$20\pm 5^{\circ}\text{C}$	2~3 MINUTE													
	$-40\pm 2^{\circ}\text{C}$	1 h													
	$20\pm 5^{\circ}\text{C}$	2~3 MINUTE													
	$85\pm 5^{\circ}\text{C}$	1 h													
2.3.4	HUMIDITY TEST	1) TEMPERATURE : $60\pm 2^{\circ}\text{C}$ 2) RELATIVE HUMIDITY : 90~95% 3) DURATION OF TEST : 500 h 4) TAKE OFF A DROP WATER. 5) STANDARD CONDITIONS AFTER TEST : 1 h	CONTACT RESISTANCE 200m Ω MAX. NO., 2.1.2 TO 2.1.4 AND NO. 2.2.1 TO 2.2.2 SHALL BE SATISFIED.												
2.3.5	ENDURANCE (SWITCHING ACTION)	1) D.C 15V 20mA RESISTANCE LOAD 2) OPERATION SPEED : 2~3 TIMES/S 3) PUSH FORCE : MAXIMUM VALUE OF OPERATION FORCE 4) OPERATION NUMBER : 1,000,000 TIMES	CONTACT RESISTANCE 20 Ω MAX. BOUNCING : 10 ms MAX. VARIATION RATE OF OPERATION FORCE SHALL BE WITHIN $\pm 30\%$ TO THE VALUE BEFORE TESTING NO. 2.1.2 AND 2.2.2 SHALL BE SATISFIED.												
2.3.6	WITHSTAND H ₂ S	1) DENSITY : 3 ± 1 ppm 2) TEMPERATURE : $40\pm 2^{\circ}\text{C}$ 3) RELATIVE HUMIDITY : 80% 4) DURATION OF TEST : 24 h 5) STANDARD CONDITIONS AFTER TEST : 1 h	CONTACT RESISTANCE 200m Ω MAX. NO., 2.1.2 TO 2.1.4 AND NO. 2.2.1 TO 2.2.2 SHALL BE SATISFIED.												

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3. PRECAUTION

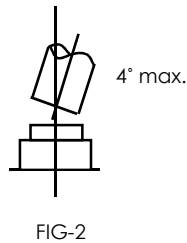
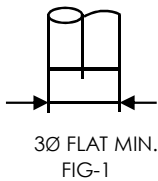
3.1 REFLOW SOLDERING CONDITION



- 1) RE-SOLDERING BY SOLDERING IRON SHALL BE ALLOWED UNDER 280°C MAX. 3 SEC. MAX. 1 TIME. SOLDERING IRON FOR RE-SOLDERING HAVE TO 20W MAX.

3.2 DESIGN INSTRUCTIONS

- 1) FOLLOW RECOMMENDED P.W.B PIERCING PLAN IN OUTSIDE DRAWING PAGE.
- 2) DESIGN KEY TOP AS FIG-1. DESIGN INCLINATION OF KEY TOP 4 DEG. MAX. AS FIG-2. TOLERANCE BETWEEN SWITCH AND KEY TOP IS WITHIN 0.3mm (RECOMMENDED OPERATING CONDITION)



3.3 NOTES

- 1) PLEASE BE CAUTIONS NOT TO GIVE EXCESSIVE STATIC LOAD OR SHOCK TO SWITCHES.
- 2) PLEASE BE CAREFUL NOT TO PILE UP P.W.B AFTER SWITCHES WERE SOLDERED.
- 3) PRESERVATION UNDER HIGH TEMPERATURE AND HIGH HUMIDITY OR CORROSIVE GAS SHOULD BE AVOIDED ESPECIALLY. WHEN YOU NEED TO PRESERVE FOR A LONG PERIOD, DO NOT OPEN THE CARTON.
- 4) DO NOT PUSH THE PLASTIC FILM WITH SHARP EDGE POLE. IT WILL CAUSE A FAILURE OF SEALING.
- 5) CLEANING
 - *IT FLUX OR SOLDER IS SCATTERED ON THE SURFACE OR CONTACT PORTION WHEN SOLDERING, CHARACTERISTICS OF THIS PRODUCT MAY BE DAMAGED.
 - *CLEANING AFTER SOLDERING IS NOT ALLOWED. WHEN CLEANING IS REQUIRED NECESSARILY, AFTER-FITTED SHOULD BE CONDUCTED.
- 6) AVOID THE USE OF THE SWITCH UNDER PUSHED ON CONDITION IS CONTINUED FOR A LONG TIME.
- 7) THERE IS A POSSIBLITY THE FLUX FROM SOLDER PASTE INFILTRATES INTO THE BODY IF PLENTY OF SOLDER PASTE WAS APPLIED BY SWITCH ON THE P.C.B. SO WE RECOMMEND TO USE OUR PROPOSED LAND DESIGN IN ORDER TO PREVENT ABOVE PROBLEM. ALSO PLEASE AVOID PUTTING ADDITIONAL LAND BY THE SWITCH ON THE P.C. B.

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