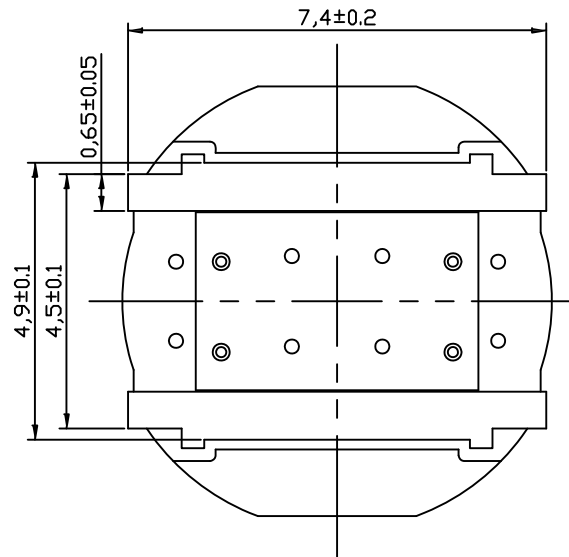
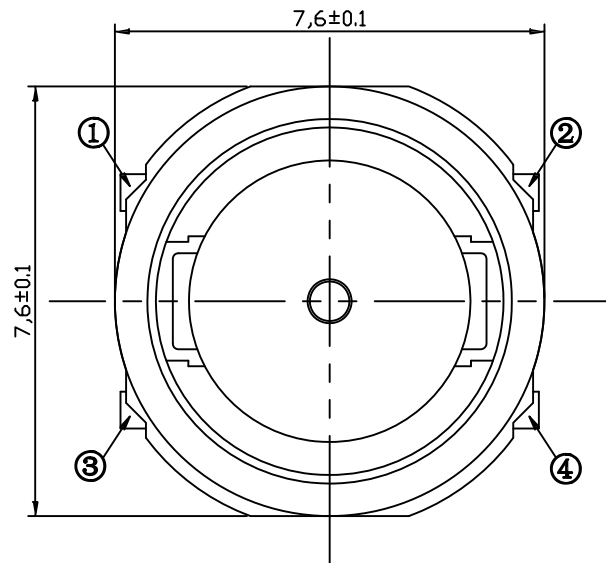
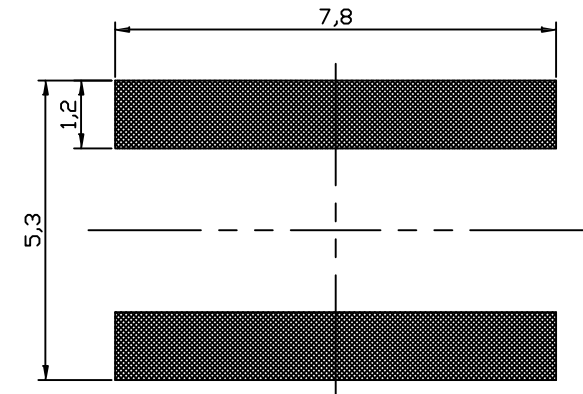
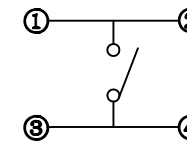


**P.C.B MOUNTING PATTERN DIMENSION**

the following soldering are recommended for reflow soldering



**CIRCUIT DIAGRAM**



**SPECIFICATION**

NO	Item	Parameter
1	Rated Current	50mA 12V DC
2	Contact Resistance	≤ 100mΩ
3	Press Force	260±50gf
4	Stroke	0.25±50gf
5	Insulation Resistance	≥100MΩ
6	Dielectric intensity	AC 250V20Hz 1Min
7	Life	100,000 cyc

No	Part Image	Part Name	QT'Y	Material	Specification
1		Film	1	Yellow	KTC
2		Stem	1	Black	PA
3		Shrapnel	1	Benss	Stainless steel silver coating
4		Base	1	Black	LCP
5		Terminal	1	Silvery white	Phosphor copper plating silver

PROJECTION		<b>RDI</b> Research Develop Innovate RDI, Inc. 333 North Bedford Road, Suite 135, Mount Kisco, NY 10549	
SCALE	N/A	TITLE	
TOLERANCE EXCEPT AS NOTED	N/A	Low profile SMD tact switch, RoHS Compliant	
DEC. INCHES	N/A	DR. Tina	DATE 02/21/19
DEC. MILLIMETERS	±0,5	CK. BM	REF. PART NO. RTS-022C-260-NL
ANG.	N/A	PRE-SW	DRAWING NO. 4855
			SIZE F
			REV. -
			SHEET 1 OF 3

ECN#	DATE	SYM	REVISION RECORD	AUTH	BY
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**1. GENERAL SPECIFICATION**

- 1.1 Switch action : Tact Switch
- 1.2 Switch rating : DC 12V 50mA
- 1.3 Operation temperature range : -20°C ~ +85°C
- 1.4 Preservative temperature range : -40°C ~ +85°C
- 1.5 Appearance and dimensions : See outside drawing page
- 1.6 Standard condition : 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 be employed:

Ambient temperature : 20±2°C

Relative humidity : 65±5%

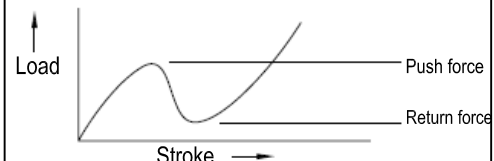
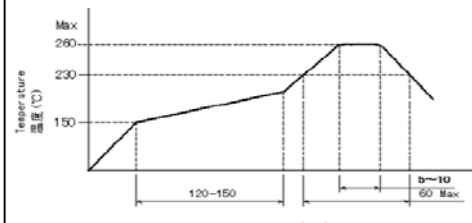
Air pressure : 86~106kPa(860~1060mbar)


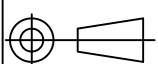
**2.PERFORMANCE**

**2.1Electrical characteristics**

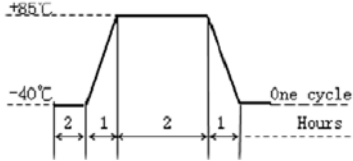
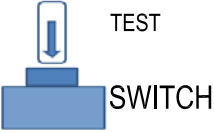
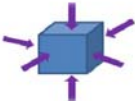
Item	Test condition	Performance	
2.1.1	Contact Resistance	Push force: (Operation force)X2. Measurement tool: Contact resistance meter (1kHz,20mV,5~50mA)	100mΩmax.
2.1.2	Insulation Resistance	DC100V(Between terminals) frame for 1 minute.	100MΩ min.
2.1.3	Withstand Voltage	AC 250V (Between terminals) frame for 1 minute.	No insulation destruction
2.1.4	Bouncing	Operation speed:3~4times/s	ON、OFF: 10ms max

**2.2. MECHANICAL SPECIFICATION**

	ITEMS	TEST CONDITIONS	CRITERIA
2.2.1	Operations Force	Push by recommended operating condition. 	Push force 260±50gf Return force 50gf Min
2.2.2	Travel to closure	Push by recommended operating condition F=(Operation force)x2	0.25±0.1mm
2.2.3	Push strength	30N (3Kgf) for 1 minute	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	Solder heat resistance	REFLOW SOLDERING: 	Without deformation of case or excessive looseness of electrical properties
2.2.6	Solderability	After sprated flux temperature: 245±5°C Soldering time: 3±0.5sec	90% or more of surface area of the portion immersed in solder shall be covered by new solder

PROJECTION		 <b>Research Develop Innovate</b>	
		RDI, Inc. 333 North Bedford Road, Suite 135, Mount Kisco, NY 10549	
SCALE	N/A	TITLE Low profile SMD tact switch, RoHS Compliant	
TOLERANCE EXCEPT AS NOTED	DR. Tina	DATE 02/21/19	REF. PART NO. RTS-022C-260-NL SHEET 2 OF 3
DEC. INCHES	N/A	CK. BM	PRE-SW DRAWING NO. 4855 SIZE F REV. -
DEC. MILLIMETERS	±0.5	THIS DOCUMENT IS OWNED BY, AND THE INFORMATION CONTAINED IN IT IS PROPRIETARY TO, RDI, BY RECEIPT HEREOF THE HOLDER AGREES NOT TO USE THE INFORMATION AND NOT TO DISCLOSE IT TO ANY THIRD PARTY, NOR REPRODUCE THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF RDI, AND AGREES TO RETURN THIS DOCUMENT FORTHWITH UPON REQUEST.	
ANG.	N/A		

**2.3. CLIMATIC CHARACTERISTICS**

	ITEMS	TEST CONDITIONS	CRITERIA
2.3.1	Cold test	1. Temperature: $-40\pm 2^{\circ}\text{C}$ 2. Duration of test: 96h 3. Take off a drop water 4. Standard conditions after test: 1h	Contact resistance : $100\text{m}\Omega\text{max}$ Insulation resistance : $100\text{M}\Omega\text{min}$ Withstand voltage : No. destruction. No.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: 96h 3. Standard conditions after test :1h	
2.3.3	Temperature cyclig test	According to following figure, after 5cycles, test after keeping in normal condition for 30min. 	
2.3.4	Humidity test	1. Temperature: $60\pm 2^{\circ}\text{C}$ 2. Relative humidity: $90\sim 95\%$ 3. Duration of test: 96h 4. Take off a drop water 5. Standard conditions after test: 1h	
2.3.5	Endurance (switching) action	1. Operation speed: 1time/s 2. Push force: Maximum value of operation force 3. Operation number: 100, 000 times 	Contact resistance : $200\text{m}\Omega\text{max}$ Bouncing : 20 ms max Insulation resistance: $100\text{M}\Omega\text{min}$ Withstand voltage :No. destruction. Variations rate of operation force shall be within $\pm 30\%$ to the value be fore testing 2.2.2 shall be satisfied
2.3.6	Withstand H2S	1. Density: $3\pm 1\text{ppm}$ 2. Temperature: $40\pm 2^{\circ}\text{C}$ 3. Relative humidity: $90\sim 95\%$ 4. Duration of test: 12h 5. Standard conditions after test: 1h	Contact resistance : $200\text{m}\Omega\text{max}$ Insulation resistance: $100\text{M}\Omega\text{min}$ Withstand voltage :No. destruction. No.2.2.1 to 2.2.2 shall besatisfied
2.3.7	Salt mist	At 5% Nacl liquor for 24 hours depend on $35^{\circ}\text{C}$ ,after washing ,keep in normal condition.	No remarkable corrosion shall be recognized in metal part.
2.3.8	Shock	Peak acceleration: $500\text{m}/\text{S}^2$ Pulse duration 11ms Test time-6direction,each 3 times total 18 times 	Contact resistance : $100\text{m}\Omega\text{max}$ Insulation resistance: $100\text{M}\Omega\text{min}$ Withstand voltage :No.destruction. No.2.2.1 to 2.2.2 shall be satisfied

**3.PRECAUTION**

**3.1SOLDERING CONDITION**

Item	Conditio
Preheat temperature	$110^{\circ}\text{C}$ max ( Embilomental temperature of soldering surface of P.C.B )
Preheat time	60 sec, max
Area of flux	1/2 max of P.C.B. thickness
Temperature of solder	$260\pm 5^{\circ}\text{C}$ max
Times of immersion	Within 5 sec
Soldering number	1 times
Printed wiring board	Single sided copper- clad laminates


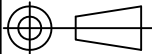
- 1) After switches were soldered, please be careful not to clean switches with solvent.
- 2) In the case of using soldering iron, soldering conditions shall be  $280^{\circ}\text{C}$  max and 3 sec max.
- 3) Right after switches were soldered ; please be careful not to load on the knobs of switches.

**3.2 DESIGN INSTRUCTIONS**

- 1) Follow recommended P.C.B. piercing plan in the outside drawing page.

**3.3 NOTE**

- 1) Please be cautious not to give excessive static load or shock to switches.
- 2) Please be careful not to pile up P.C.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) SMT were soldered. , thickness control 0.13mm MAX

PROJECTION		 <b>Research Develop Innovate</b> RDI, Inc. 333 North Bedford Road, Suite 135, Mount Kisco, NY 10549		
		TITLE Low profile SMD tact switch, RoHS Compliant		
SCALE N/A		SHEET 3 OF 3		
TOLERANCE EXCEPT AS NOTED		DR. Tina	DATE 02/21/19	REF. PART NO. RTS-022C-260-NL
DEC. INCHES N/A		CK. BM	PRE-SW	DRAWING NO. 4855 SIZE F REV. -
DEC. MILLIMETERS $\pm 0.5$		THIS DOCUMENT IS OWNED BY, AND THE INFORMATION CONTAINED IN IT IS PROPRIETARY TO, RDI, BY RECEIPT HEREOF THE HOLDER AGREES NOT TO USE THE INFORMATION AND NOT TO DISCLOSE IT TO ANY THIRD PARTY, NOR REPRODUCE THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF RDI, AND AGREES TO RETURN THIS DOCUMENT FORTHWITH UPON REQUEST.		
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