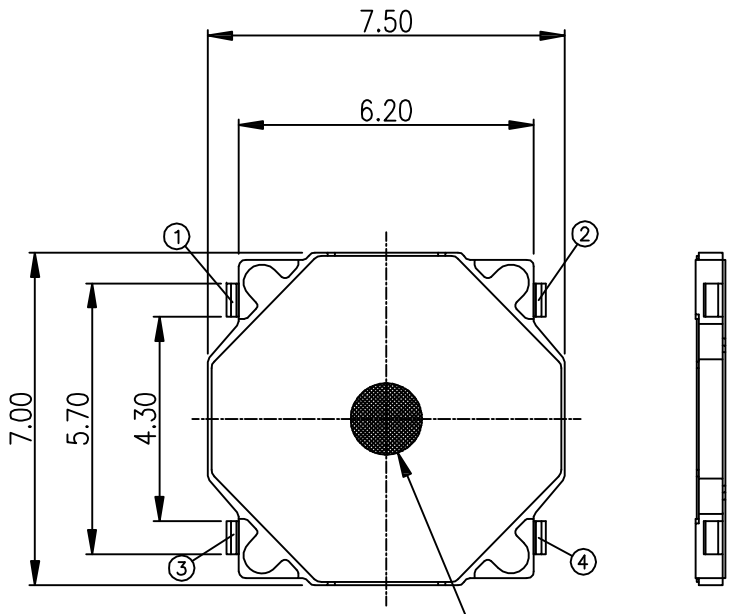
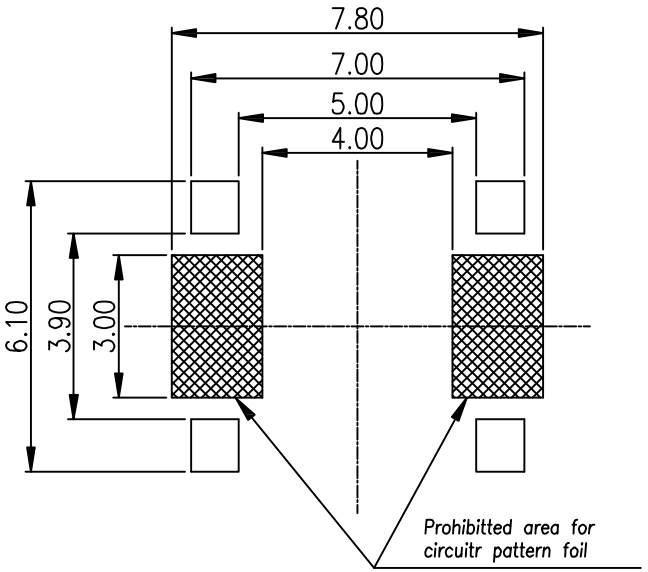
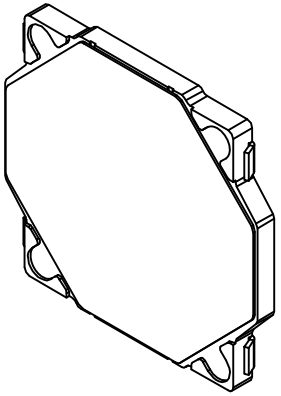
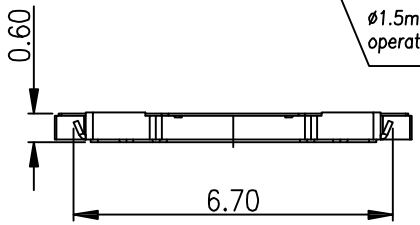
DWG. NO. SW-4860-F REV. "-"

PART NO. RTS-7570-XXX-NL

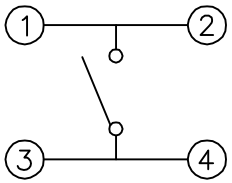








Circuit Daigram

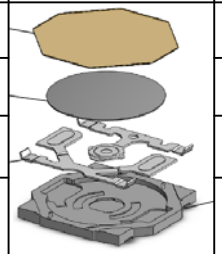


NOTE:
1. Genreal tolerances ±0.2mm.
2. Solder thickness : 0.10mm

Specifications :
1. Rating : 50mA,DC 12V Max.
2. Inital contact resistance : 500mΩ Max.
3. Insulation resistance : DC100V-10MΩ Min.
4. Dielectric strength : AC100V-1 minute.
5. Operating force : 160±60gf 200±60gf
6. Operaing life : 5,000,000 Min.

RDI PN- RTS-7570-XXX-NL

XXX= Actuating force: 160, 200 +/-60gf

No	Part Image	Part Name	QT'Y	Material	Specification
1		TAPE	1	KAPTON	NONE
2		CONTACT	1	Stainless Steel	Silver Plating
3		Terminal	1	Phosphorbronze	Silver Plating
4		Base	1	HIGH-TEMP Thermoplasitc LCP UL 94V-0	WHITE

ECN#	DATE	SYM	REVISION RECORD	AUTH	BY

PROJECTION

RDI Research Develop Innovate

RDI, Inc. 333 North Bedford Road, Suite 135, Mount Kisco, NY 10549

SCALE N/A	TITLE SMT tact switch, long life cycles, RoHS compliant			
TOLERANCE EXCEPT AS NOTED	DR. Tina	DATE 03/15/19	REF. PART NO. RTS-7570-XXX-NL	SHEET 1 OF 3
DEC. INCHES N/A	CK. BM	PRE- SW	DRAWING NO. 4860 / 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				

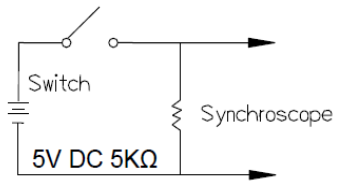
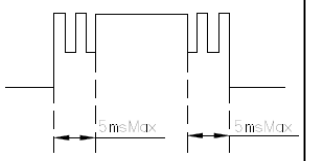
1.General

1.1 Operating Temperature Range: -40℃ ~ +85℃
1.2 Storage Temperature Range: -40℃ ~ +90℃
1.3 Test conditions
Unless otherwise specified, the test and measurements shall be carried out as follows.
Ambient temperature(環境溫度) : 5 ~ 35 ℃
Relative humidity(相對溼度) : 45 ~ 85 %
Air pressure(氣壓) : 86 ~ 106 kPa
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(環境溫度) : 20± 2℃
Relative humidity(相對溼度) : 65±5 %
Air pressure(氣壓) : 86 ~ 106 kPa

2. Rating: 12 V DC 50 mA

3. Type of Actuation: Tactile feedback.

4. Test Sequence

	ITEMS	TEST CONDITIONS	CRITERIA
Appearance			
4.1	Visual Examination	Test Conditions By visual examination check without any out pressure & testing.	Requirements There shall be no defects that affect the serviceability of the product.
Electrical Performance			
4.2	Contact Resistance	Applying a static load 1.5-2 times the operating force to the center of the stem, measurements shall be made with a 1 kHz small current contact resistance meter	500mΩ Max. (initial)
4.3	Insulation Resistance	100V DC, 1 minute ± 5 sec.	10MΩ Min.
4.4	Withstand Voltage	100V AC (50Hz or 60 Hz 2mA) shall be applied between all the adjacent terminals and between the terminal and the frame for 1 minute.	No dielectric breakdown shall be occurred
Mechanical Performance			
4.5	Bounce	3 to 4 operations at a rate of 1 cycles per second 	5 m seconds Max. 
4.6	Operation Force	Applied in the direction of operation.	1. 100±50gf 2. 160±50gf 3. 200±50gf
4.7	Stroke	Placing the switch such that the direction of switch operation is vertical and then gradually increasing the load applied to the center of the stem to a stop shall be measured	0.25 +0.15/-0.10mm
4.8	Control strength	The static load of 3Kg shall be applied in the operating direction of the control unit for 60 seconds.	1)As shown in item 4.4~4.7 2)Contact Resistance:500 mΩ Max. 3)Insulation Resistance:10 MΩ Min.
4.9	Solder Heat Resistance	1)Soldering Temperature: 260±5℃ 2)Duration of Solder Immersion: 5±1 sec 3)Frequency of Soldering Process 2times Max. (PCB is 1.6mm in thickness)	1)Shall be free from pronounced backlash and falling-off or breakage terminals 2)As shown in item 4.4、4.5 3)Contact Resistance:500 mΩ Max. 4)Insulation Resistance:10 MΩ Min .
Durability			
4.10	Life Test	Measurements shall be made following the test forth below: 1)5mA,5 V DC resistive load 2)Applying a static load the operating force to the center of the stem in the direction of operation 3)Cycle of Operation: 5,000,000cycles	1)Operating force:±50% of initial force 2)Contact Resistance:10Ω Max. 3)Insulation Resistance:10MΩ Min. 4)Bounce:10 m seconds Max.
Environmental Endurance			
4.11	Solder Heat Resistance	Shall be vibrated in accordance with Method 201A of MIL-STD-202F 1)Frequency: 10-55-10 Hz 1 minute/cycle. 2)Swing distance=1.5mm 3)Direction: 3 vertical directions including the direction of operation. 4)Test Time: 2 hours each direction.	As shown in item 4.2~4.5
4.12	Shock	Shall be shocked in accordance with Method 213B condition A of MIL-STD-202F 1)Acceleration: 80G. 2)Action Time : 11 ± 1 m sec. 3)Testing Direction: 6 sides. 4)Test cycle : 3 times in each direction	

ECN#	DATE	SYM	REVISION RECORD	AUTH	BY

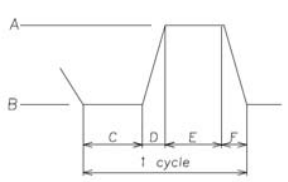
PROJECTION

RDI Research Develop Innovate

RDI, Inc. 333 North Bedford Road, Suite 135, Mount Kisco, NY 10549

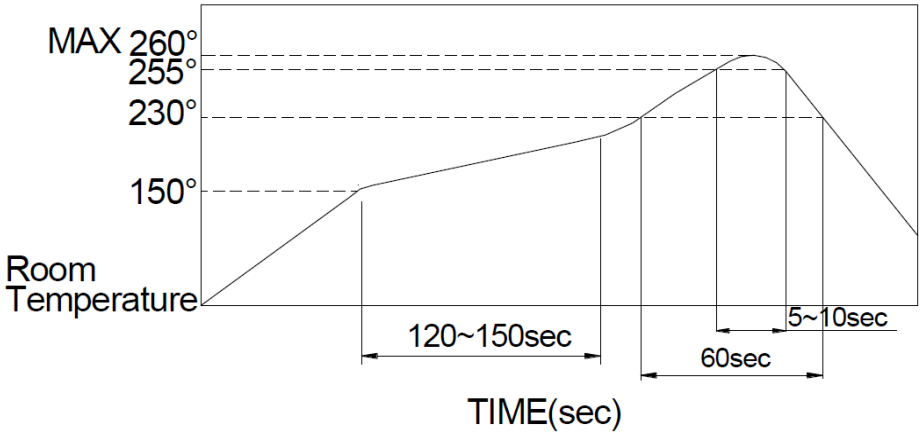
SCALE N/A	TITLE SMT tact switch, long life cycles, RoHS compliant			
TOLERANCE EXCEPT AS NOTED	DR. Tina	DATE 03/15/19	REF. PART NO. RTS-7570-XXX-NL	SHEET 2 OF 3
DEC. INCHES N/A	CK. BM	PRE- SW	DRAWING NO. 4860 / SIZE F	REV. -
DEC. MILLIMETERS ±0.5				
ANG. N/A				

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.

	ITEMS	TEST CONDITIONS	CRITERIA
4.13	Cold Resistance	Following the test set forth below the sampleshall be left in normal temperature and humidity conditions for an hour before measurements are made : 1)Temperature : -40℃±2℃. 2)Time: 96hours.	1)As shown in item 4.4~4.7 2)Contact resistance : Less than 500mΩ 3)Value insulation resistance: More than 10MΩ .
4.14	Heat Resistance	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made : 1)Temperature : 90℃±2℃ 2)Time: 96hours	
4.15	Humidity Resistance	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made : 1)Temperature : 60℃±2℃ 2)Relative Humidity :90~95% 3)Time: 96 hour	
4.16	Change of temperature	After 5cycles of following conditions, the switch shall be allowed to stand under normal room temperature and humidity conditions for 1 hr, and measurement shall be made within, 1 hr after that. Water drops shall be removed.  A= +90 ℃ B= - 40 ℃ C= 2 H D= 1 H E= 2 H F= 1 H	

5.Soldering Conditions

- SMT

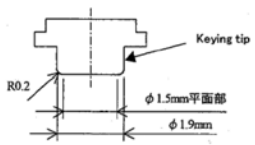


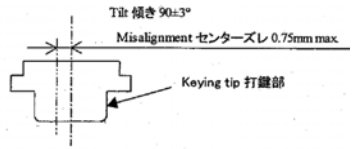
＊The condition mentioned above is the temperature on the Cu foil of the P.C.B surface. There are cases where board' s temperature greatly differs from switchs surface temperature depending on board' s material, size, thickness, etc. Care, therefore, should be used not to allow switch' s surface temperature to exceed 260℃.

＊ Manual Soldering
Soldering Temperature : Max.350℃
Continuous Soldering Time : Max. 5 seconds

＊Precautions in Handling :

1. Care should be exercised so that flux from the upper part of the printed circuit board does not adhere to the switch.
2. Don' t clean the switch body except with top tape sealed type, which can only spray of cleaning method from top of s/w.
3. Prohibited items and notes on mounting and operating conditions.
   3.1 Recommended shape of test pole 3.2 Recommended operating conditions





＊ Notes on storage conditions :
Do not store in the following environment or it may affect product's function and solderbility:

1. temperature of -10 (max)、+40 (min)℃& humidity at 85% (min)
2. environment withcorrosive gas
3. storage over 6 months
4. place of direct sunlight

* Store with proper packagingconditions and to avoidloading heavy force.

* We suggest to use theproducts within 3 months or at least 6 months.

* After opening the package,the restproducts must bestored in the appropriate moisture-proof &airtight environment

ECN#	DATE	SYM	REVISION RECORD	AUTH	BY

PROJECTION

RDI Research Develop Innovate

RDI, Inc. 333 North Bedford Road, Suite 135, Mount Kisco, NY 10549

SCALE N/A	TITLE SMT tact switch, long life cycles, RoHS compliant			
TOLERANCE EXCEPT AS NOTED	DR. Tina	DATE 03/15/19	REF. PART NO. RTS-7570-XXX-NL	SHEET 3 OF 3
DEC. INCHES N/A	CK. BM	PRE- SW	DRAWING NO. 4860 / 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				