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DATA SHEET

SUNGMUN CODE : TSR-08S-TR

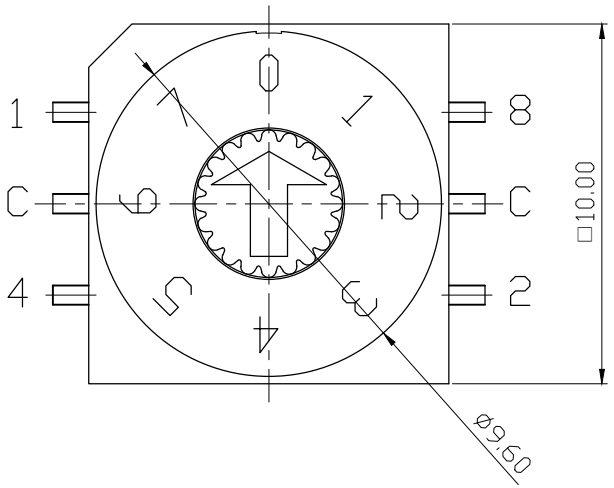
DESCRIPTION : ROTARY DIP SWITCH

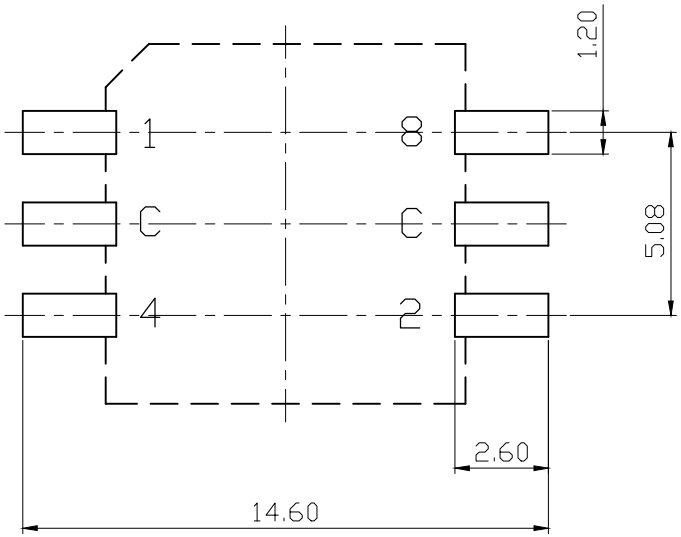
SUNGMUN ELECTRONICS CO., LTD.

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SUNGMUN ELECTRONICS

MARK	DATE	REMARKS
⚠		
⚠		

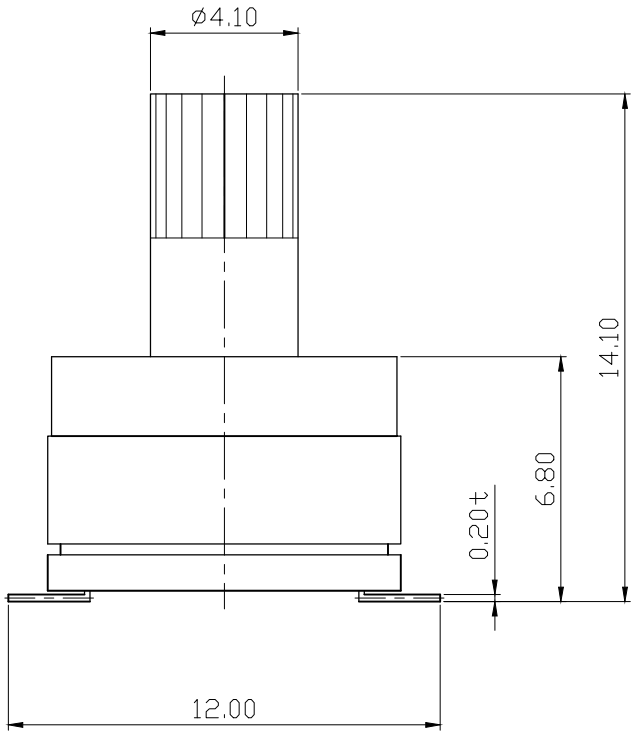


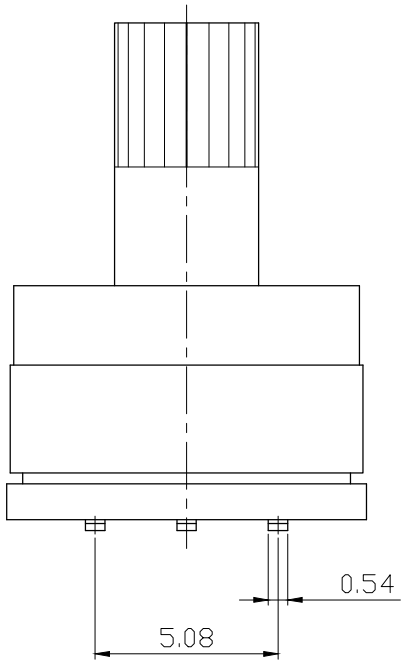


SPECIFICATION

1. Rating : 150mA, 42V DC (Switching)
   200mA, 42V DC (None-Switching)
2. Contact Resistance : 80mΩ Max
3. Insulation Resistance : 100MΩ Min
4. Operating Force : 700gf Max
5. Life cycle : 10,000 steps
6. Sealing : IP67

P.C.B DIMENSION (TOP VIEW)





		Real Coded				
		C	1	2	4	8
8 Position	0	●				
	1	●	●			
	2	●		●		
	3	●	●	●		
	4	●			●	
	5	●	●		●	
	6	●		●	●	
	7	●	●	●	●	

GENERAL TOLERANCE ±0.3 mm

APPD	CHKD	D'SGD	TITLE. ROTARY DIP SWITCH	
J.P ROH	S.M PARK	Y.N JEON 2019.03.15	MODEL NO. TSR-08S	REV 02
			SUNGMUN ELECTRONICS CO., LTD.	

SUNGMUN ELECTRONICS	ROTARY DIP SWITCH SPECIFICATION (10X10)	Rev. 06 P : 1 / 3

1. Description:

This specification describes "10X10 size of Rotary Dip Switches" which are S, T, F and Q series.

1-1 Operating / Storage Temperature Range : -40℃ ~ +85℃

2. Rating:

2-1 None-Switching : 200 mA, DC 42V

2-2 Switching : 150 mA, DC 42V

3. Type of Actuation : Rotating

4. Electrical Characteristics

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
4-1	Visual Examination	By visual examination check without any out pressure & testing.	There shall be no defects that affect the serviceability of the product.
4-2	Contact Resistance	① To be measured between the two terminals associated with each switch pole. ② Measurements shall be made with a 1kHz shall current contact resistance meter.	80mΩ max.
4-3	Insulation Resistance	250V DC, 1minute ±5seconds	100 ㏁ min.
4-4	Dielectric withstanding Voltage	250V AC(50Hz or 60Hz)shall be applied between all the adjacent terminal and between the terminal and the frame for 1 minute.	There shall be no breakdown or flashover.

5. Mechanical Characteristics

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
5-1	Operation Force	Operating direction shall be clockwise or counter clockwise direction	700gf•cm max
5-2	Operation Life	Measurements shall be made following the test set forth below: 1)150mA, 24V DC resistive load 2)Rate of operation: 15~20 cycles/ minute 3)Step of operation: 10,000 steps	1)As shown in item 4-3, 4-4 2)Contact Resistance: 200mΩ max

6. Environmental Characteristics

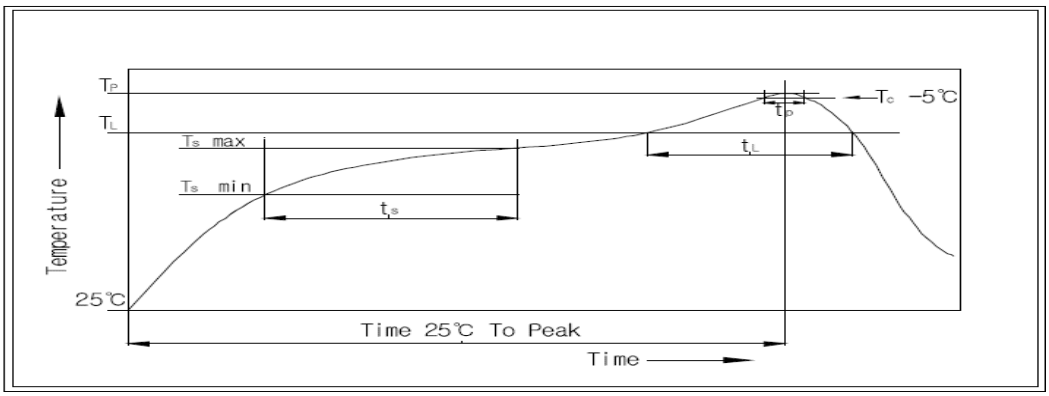
ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
6-1	Resistance Low Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made: 1)Temperature: -40℃ ±3℃ 2)Time: 96 hours	1)As shown in item 4-3, 4-4, 5-1 2)Contact Resistance: 200mΩ max
6-2	Resistance High Temperature	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: 85℃ ±2℃ 2)Time: 96 hours	1)As shown in item 4-3, 4-4, 5-1 2)Contact Resistance: 200mΩ max
6-3	Resistance Humidity	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: 40℃ ±2℃ 2)Relative humidity: 90~95% 3)Time: 96 hours	1)As shown in item 4-4, 5-1 2)Contact Resistance: 200mΩ max 3)Insulation Resistance: 10 MΩ min

7. This item is "RoHS" Compliant

8. Manual Soldering : Max 350℃, 3 sec.

9. Wave Soldering : Max 280℃, 5 sec.

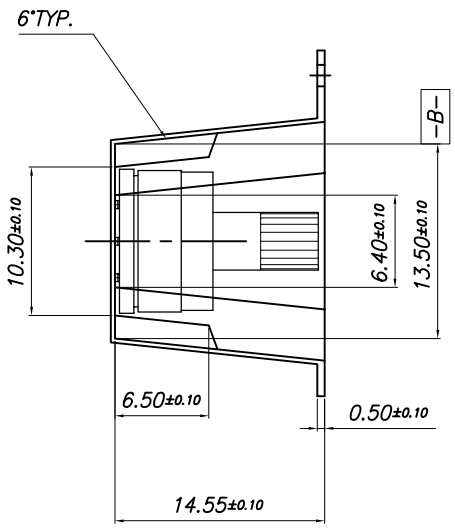
10. Reflow Soldering Conditions: (SMD type only)

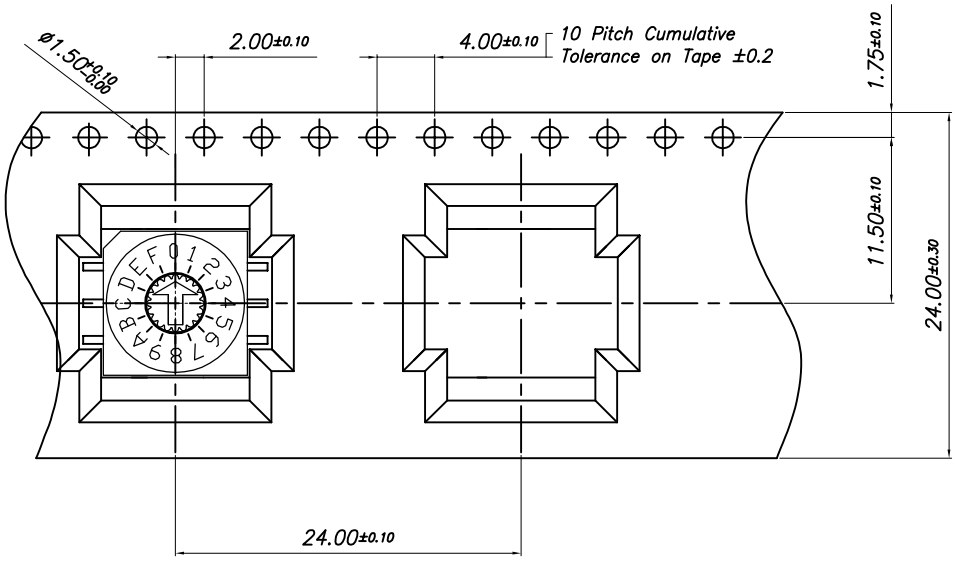


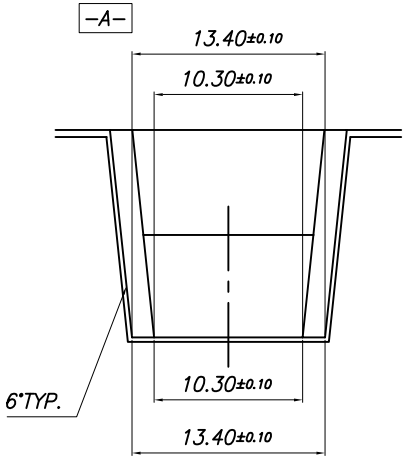
10-1 Condition for Soldering

Profile Feature	Pb-Free Assembly
Average Ramp-UP Rate(Ts max to TP)	3℃/second max
Preheat - Temperature Min(Ts min) - Temperature Max(Ts max) - Time (ts min to ts max)	 150℃ 200℃ 60-180seconds
Time maintained above: - Temperature (TL) - Time (tL)	 217℃ 60-150seconds
Peak/Classification Temperature(TP)	260℃ +0℃/ -5℃
Time within 5℃ of actual Peak Temperature(TP)	5~10 seconds
Ramp-Down Rate	6℃/sec max
Time 25℃ to Peak Temperature	8 minutes max

MOLD NO. 24M/M







NOTES: (UNLESS OTHERWIES SPECIFIED)

1. 10 SPROCKET HOLE PITCH CUMULATIVE TOL ±0.2
2. CAMBER NOT TO EXCEED 1mm IN 100mm.
3. MATERIAL : BLACK CONDUCTIVE POLYSTYRENE.
4. Ao & Bo MEASURED ON A PLANE 0.3mm ABOVE THE BOTTOM OF THE POCKET.
5. Ko MEASURED FROM A PLANE ON THE INSIDE BOTTOM OF THE POCKET TO THE TOP SURFACE OF THE CARRIER.
6. POCKET POSITION RELATIVE TO SPROCKET HOLE MEASURED AS TRUE POSITION OF POCKET, NOT POCKET HOLE.
7. ALL DIMENSIONS ARE IN MILLIMETERS.

Units(pcs)
180

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARW MILLIMETERS
TOLERANCE
DECIMALS ANGULAR
X.X ±0.13 ± 1°
X.XX ±0.10
DO NOT SCALE DRAWING
UNIT mm
THIRD ANGLE PROJECTION

SCALE	NON SCALE	TITLE	T Series SMD Reel Packing		
DATE	2016.01.29				
DRAWN	DESIGNED	CHECKED	APPROVED	CUSTOMER	
W.J LEE		J.P ROH	K.I LEE	MODEL NO	TS Series Reel
SUNGMUN ELECTRONICS CO.,LTD				DWG NO	S 000-00S0 Reel

A4 (210x297) m/m