

DATA SHEET

SUNGMUN CODE : MSGR-10S-TR

DESCRIPTION : MINI ROTARY DIP SWITCH

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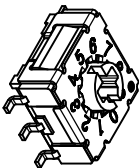
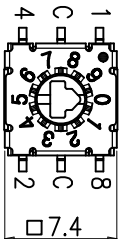
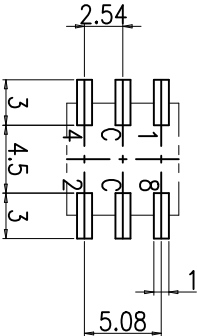
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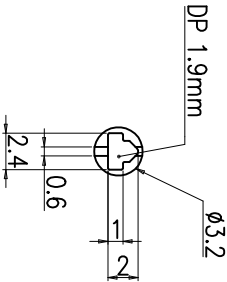
REV NO.	DATE	REVISION	DR	CH	APP
 A	23.10.13	DIN ISO-2768-1m tolerance applied	K.N KIM	W.J LEE	K.I LEE

SPECIFICATION

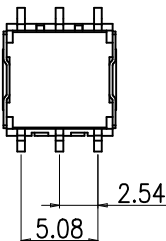
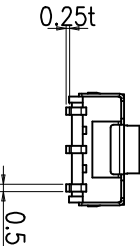
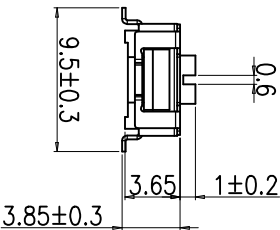
- Rating : 100mA, DC 42V (Switching)
400mA, DC 42V (None-Switching)
- Contact Resistance : 80mΩ Max
- Insulation Resistance : 100MΩ Min
- Operating Force : 120±30gf Max
- Life cycle : 25,000 steps
- Sealing : IP67 (Dust & Water proof)
- Packing : 70pcs Tube / 800pcs Reel Packing



P.C.B DIMENSION (Top View)



ACTUATOR



Reel Coded				
C	1	2	4	8
0	●			
1	●	●		
2	●		●	
3	●	●	●	
4	●			●
5	●	●	●	
6	●		●	
7	●	●	●	
8	●			●
9	●	●		

△	DIN ISO-2768-1m								
	DRAW/DESIGNED	CHECKED	APPROVED		G.TOL	TITLE			
	S.M PARK	J.P ROH	K.I LEE		±0.3△	MINI ROTARY DIP SWITCH			
	2020-11-27	2020-11-27	2020-11-27	UNIT	SCALE	MODEL NO.			
				mm	N:S				
Ranges	0.5~3	3~6	6~30	30~120	120~400				
Tolerance	±0.1	±0.1	±0.2	±0.3	±0.5				
							DRAW NO.	MSGR-10S-03	03
								REV.	

1. Style:

This specification describes "7.4X7.4 size of Mini Rotary Dip Switch" which is M series.

1.1 Operating / Storage Temperature Range : -60°C ~ +125°C

2. Rating:

2.1 None-Switching : 400 mA, DC 42V

2.2 Switching : 100 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. (initial)
4-3	Insulation Resistance	250V DC	100 MΩ 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	120gf•cm $\pm$ 30
5-2	Operation Life	Measurements shall be made following the test set forth below: 1)100mA, 42V DC resistive load 2)Rate of operation: 15~20 cycles/ minute 3)Step of operation: 25,000 steps	1)As shown in item 4-3,4-4 2)Contact Resistance: 200m Ω max 3)Final-after test

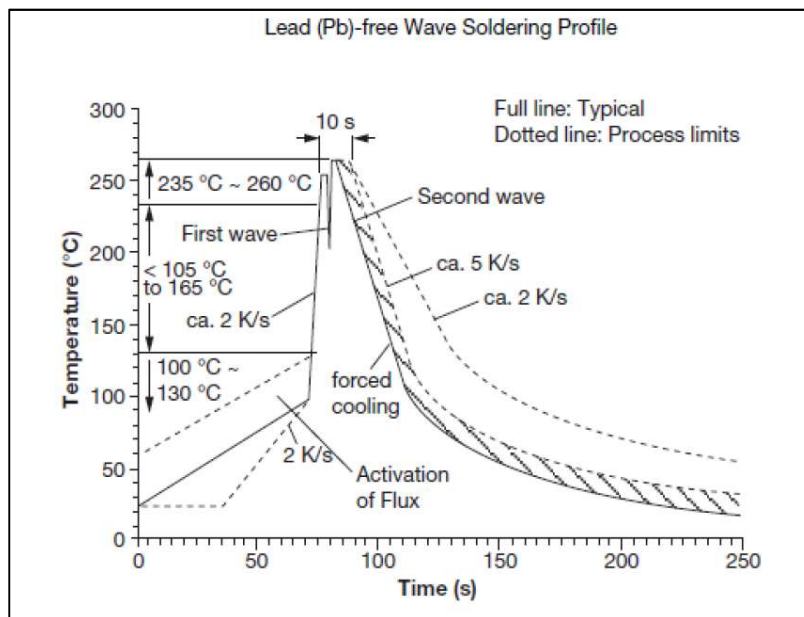
6. Environmental Characteristics

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: -60°C $\pm$ 3°C 2)Time: 96 hours	1)As shown in item 4-3, 4-4, 5-1 2)Contact Resistance: 200m Ω 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: 125°C $\pm$ 2°C 2)Time: 96 hours	1)As shown in item 4-3, 4-4, 5-1 2)Contact Resistance: 200m Ω 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°C $\pm$ 2°C 2)Relative humidity: 90~95% 3)Time: 96 hours	1)As shown in item 4-4, 5-1 2)Contact Resistance: 200m Ω max 3)Insulation Resistance: 10 M Ω min

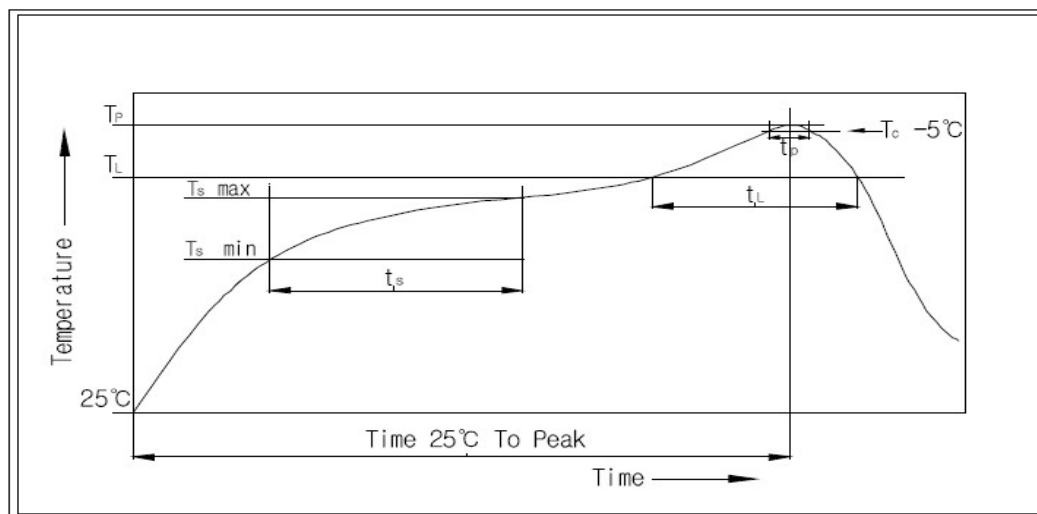
7. This item is "RoHS" Compliant

8. Manual Soldering : Max 350°C, 3 sec.

9. Wave Soldering Conditions:



10. Reflow Soldering Conditions: (SMD type only)

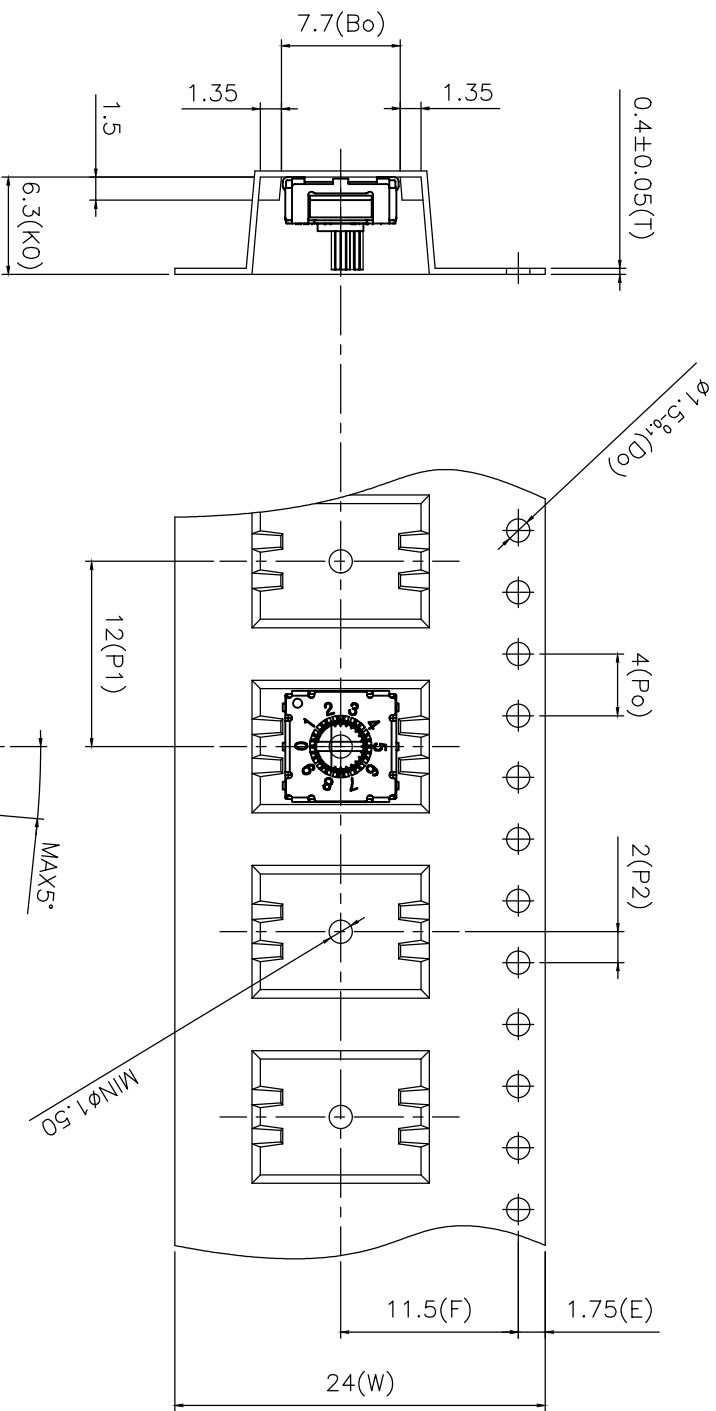


10-1 Condition for Soldering

Profile Feature	Pb-Free Assembly
Average Ramp-UP Rate(Ts max to TP)	3°C/second max
Preheat	
- Temperature Min(Ts min)	150°C
- Temperature Max(Ts max)	200°C
- Time (ts min to ts max)	60-180seconds
Time maintained above:	
- Temperature (TL)	217°C
- Time (tL)	60-150seconds
Peak/Classification Temperature(TP)	260°C +0°C/ -5°C
Time within 5°C of actual Peak Temperature(TP)	Min 30 seconds
Ramp-Down Rate	6°C/sec max
Time 25°C to Peak Temperature	8 minutes max

24MM

MRK.	DATE	REVISION	SIGN
△			



Notes:

1. 10 sprocket hole pitch cumulative tolerance ± 0.20
2. Camber not to exceed 1mm in 250mm
3. Material: Clear Polystyrene
4. Ao and 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. Pocket center and pocket hole center must be same position.

Units(pcs)

800

DRAW/DESIGNED	CHECKED	APPROVED	UNIT	G.TOL	TITLE
	J P NOH	K I LEE	mm	± 0.3	M Series SMD Reel Packing
2019-09-17	2019-09-17	2019-09-17	N:S	SCALE	MODEL
SUNGUM ELECTRONICS CO.,LTD			SIZE	DRAW NO.	TR-MSGIMD-00SUD-01
			A4	NO.	TR-MSGIMD-00SCUCJ-01
					SHEET
					1/1