

DATA SHEET

SUNGMUN CODE : MSDR-16S (LG)

DESCRIPTION : ROTARY DIP SWITCH

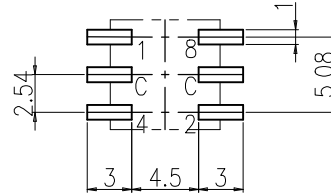
SUNGMUN ELECTRONICS CO., LTD.

Address 301-302, Bucheon Technopark 345, Seokcheon-ro, Ojeong-gu
Bucheon-si, Gyeonggi-do, Korea
TEL. +82-32-328-1941~4
FAX +82-32-328-1945
E-mail sungmun@sungmun.co.kr
Website www.sungmun.com

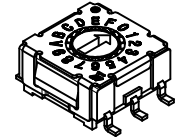
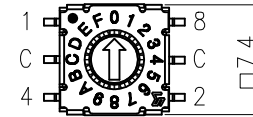
REV NO.	DATE	REVISION	DR	CH	APP
△					

SPECIFICATION

- Rating : 100mA, DC 42V (Switching)
400mA, DC 42V (None-Switching)
- Contact Resistance : 80mΩ Max
- Insulation Resistance : 100MΩ Min
- Operating Force : Max 250gf·cm
- Life cycle : 25,000 steps
- Sealing : IP67 (Dust & Water proof)
- Packing : 70pcs Tube / 1,300pcs Reel Packing

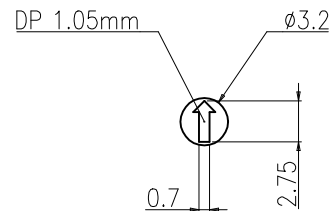


P.C.B DIMENSION (Top View)

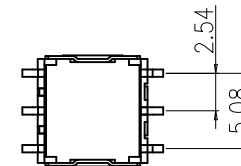
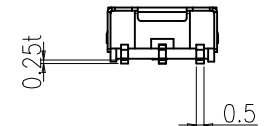
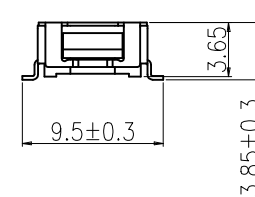


Real Coded						
	C	1	2	4	8	
0	●					0
1	●	●				1
2	●		●			2
3	●	●	●			3
4	●			●		4
5	●	●		●		5
6	●		●	●		6
7	●	●	●			7
8	●				●	8
9	●	●			●	9
10	●		●		●	A
11	●	●	●		●	B
12	●			●	●	C
13	●	●		●	●	D
14	●		●	●	●	E
15	●	●	●	●	●	F

16
P
o
s
i
t
i
o
n



ACTUATOR



DRAW/DESIGNED						CHECKED	APPROVED	UNIT	G.TOL	TITLE	MINI ROTARY DIP SWITCH	
H.S LEE						K.N KIM	W.J LEE		--			
2024-03-06						2024-03-06	2024-03-06	mm	N-S	MODEL NO.	MSDR-16S (LG)	REV.
Din ISO-2768-1m									SCALE	DRAW NO.	MSDR-16S(LG)-01	01
Ranges	0.5~3	3~6	6~30	30~120	120~400				SIZE			
Tolerance	±0.1	±0.1	±0.2	±0.3	±0.5				A4			

SUNGMUN ELECTRONICS CO.,LTD

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	250gf•cm max
5-2	Operation Life	Measurements shall be made following the test set forth below: 1)Rate of operation: 15~20 cycles/ minute 2)Step of operation: 25,000 steps	1)As shown in item 4-3,4-4 2)Contact Resistance: 200mΩ max 3)Final-after test

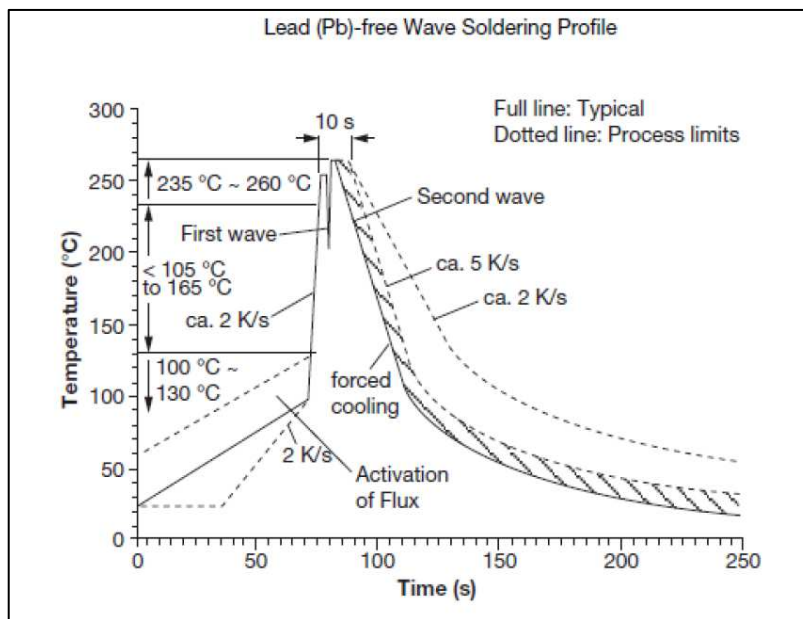
6. Environmental Characteristics

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 ±3°C 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: 125°C ±2°C 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°C ±2°C 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

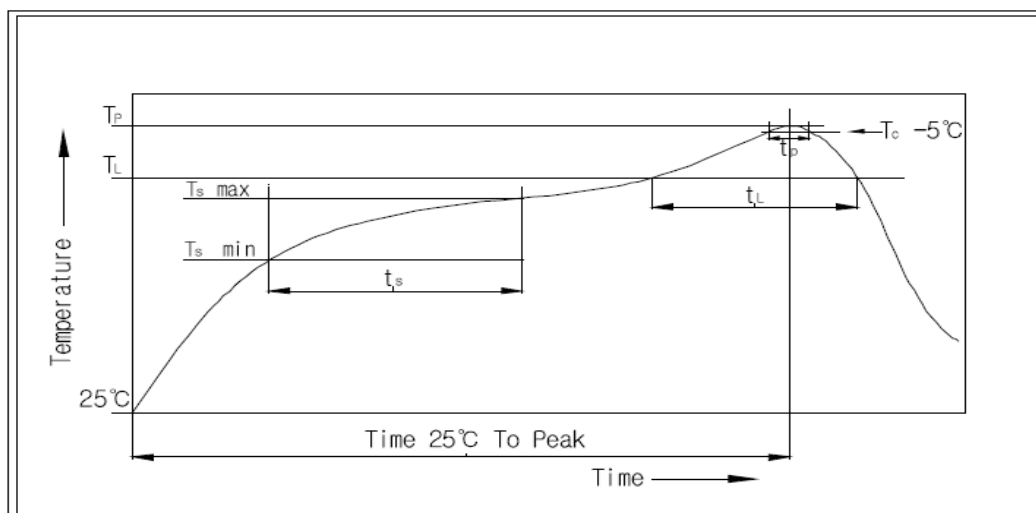
7. This item is "RoHS" Compliant

8. Manual Soldering : Max 350°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) - Temperature Max(Ts max) - Time (ts min to ts max)	150°C 200°C 60-180seconds
Time maintained above: - Temperature (TL) - Time (tL)	217°C 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