

DATA SHEET

SUNGMUN CODE : HADR-10S-TR(LG)
DESCRIPTION : ROTARY DIP SWITCH

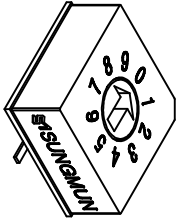
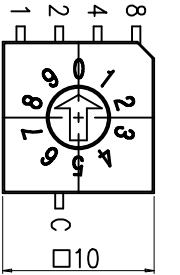
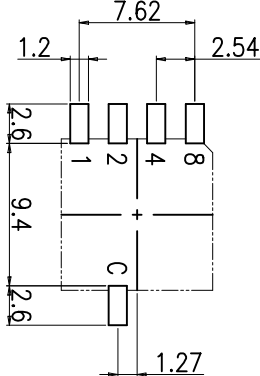
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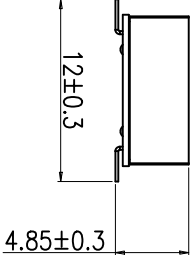
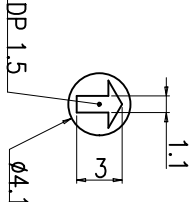
REV. NO.	DATE	REVISION	DR	CH	APP
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SPECIFICATION

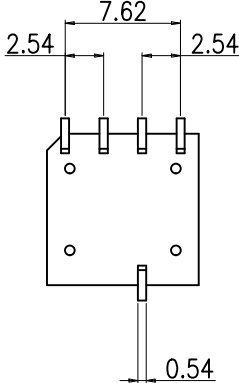
1. Rating : 25mA, DC 12V (Switching)
25mA, DC 24V (None-Switching)
2. Contact Resistance : 100mΩ Max
3. Insulation Resistance : 100MΩ Min at DC 250V
4. Operating Force : 700gf Max
5. Life cycle : 10,000 steps
6. Sealing : IP67 (Dust & Water proof)
7. Packing : 50pcs Tube / 600pcs Reel Packing



P.C.B DIMENSION (Top View)



ACTUATOR



Reel 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

DIN ISO-2768-1m									
Ranges		0.5-3	3-6	6-30	30-120	120-400			
Tolerance		±0.1	±0.1	±0.2	±0.3	±0.5			
SUNGUMUN ELECTRONICS CO.,LTD									
DRAW/DESIGNED		H.S LEE		CHECKED		K.N KIM		APPROVED	
2023-09-18		2023-09-18 <th colspan="2">2023-09-18</th> <td colspan="2">2023-09-18</td> <th colspan="2">2023-09-18</th>		2023-09-18		2023-09-18		2023-09-18	
UNIT		mm		G.TOL		—		TITLE	
SCALE		N:S		MODEL NO.		HADR-10S		REV.	
SIZE		A4		DRAW NO.		HADR-10S(LG)-01		01	

1. Description:

This specification describes "10X10 slim size of Rotary Dip Switches" which is U&H series.

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

2. Rating:

2-1 None-Switching : 25 mA, DC 24V

2-2 Switching : 25 mA, DC 12V

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.	100mΩ max.
4-3	Insulation Resistance	250V DC, 1minute ±5seconds	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.

 SUNG MUN ELECTRONICS	“U/H” SERIES ROTARY DIP SWITCH SPECIFICATION (10X10)	Rev. 03 P : 2 / 4
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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

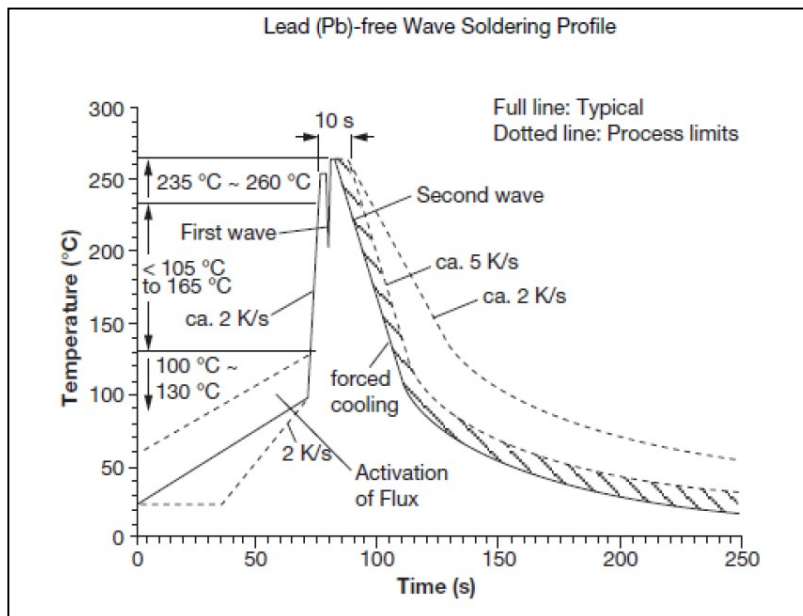
6. Environmental Characteristics

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°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: 85°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

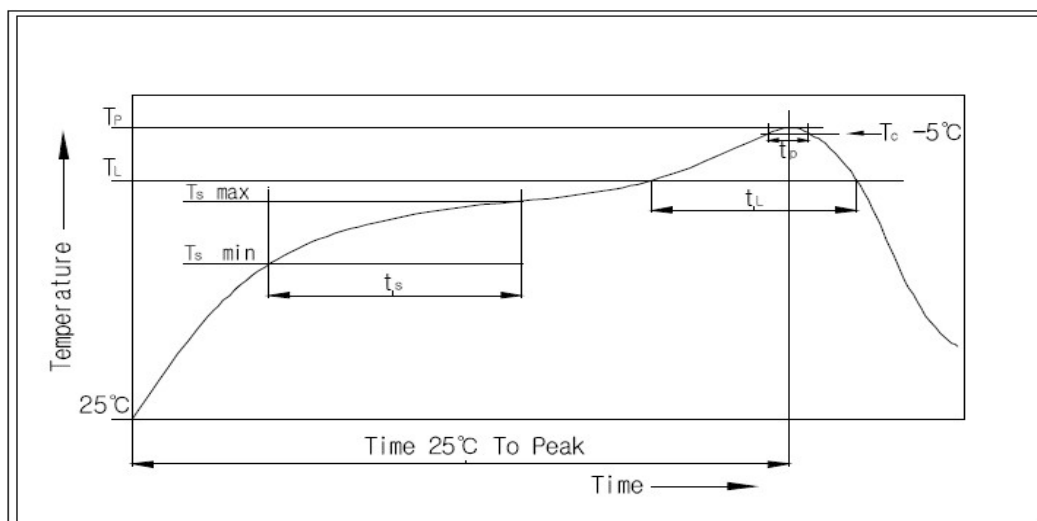
7. This item is "RoHS" Compliant

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

9. Wave Soldering Conditions:



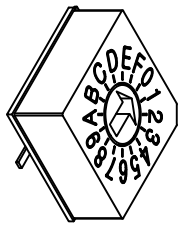
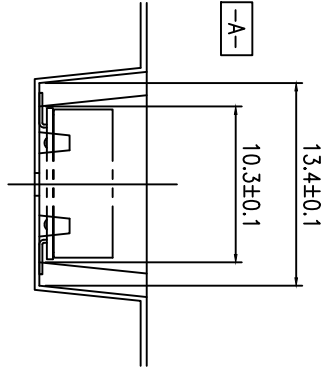
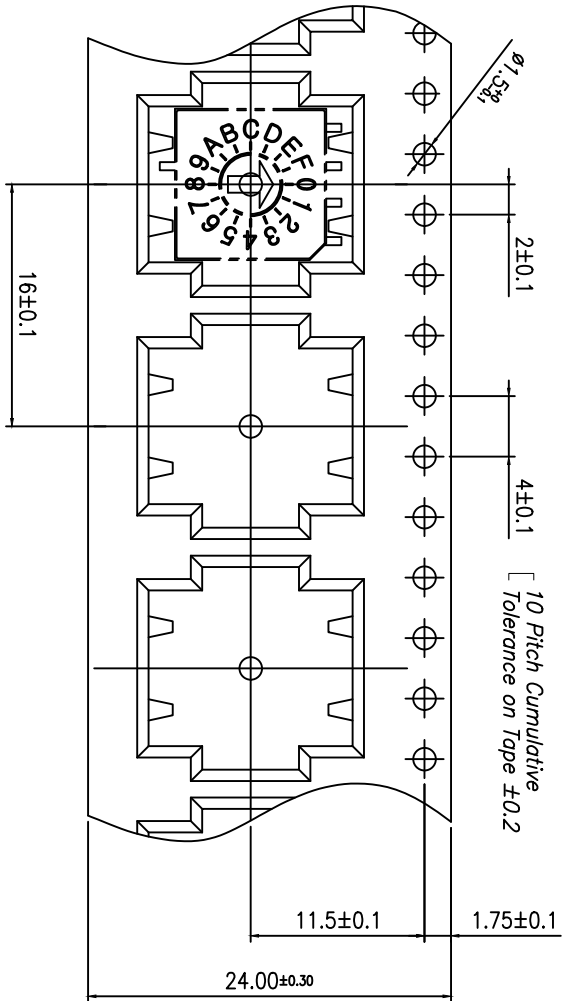
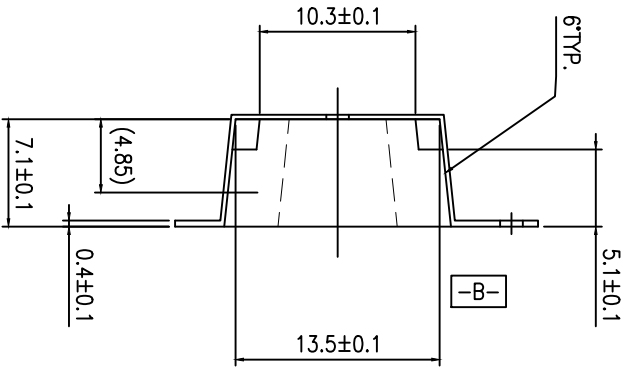
10. Reflow Soldering Conditions: (SMD type only)



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)	5~10 seconds
Ramp-Down Rate	6°C/sec max
Time 25°C to Peak Temperature	8 minutes max

REV NO.	DATE	REVISION	DR	CH	APP
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Units(pcs)
600

- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. 10 SPROCKET HOLE PITCH CUMULATIVE TOL ± 0.2
 2. CAMBER NOT TO EXCEED 1mm IN 100mm.
 3. MATERIAL : BLACK CONDUCTIVE POLYSTYRENE.
 4. A_o & B_o MEASURED ON A PLANE 0.3mm ABOVE THE BOTTOM OF THE POCKET.
 5. K_o 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.

DRAW/DESIGNED	CHECKED	APPROVED	G.TOL	TITLE	
K.N KIM	W.J LEE	K.I LEE	±0.3	H/HA/F Series S SMD Reel Packing	
2022-06-22	2022-06-22	2022-06-22	UNIT mm	MODEL NO.	REV.
			SIZE A4	TR-H/HA/F Series-00S0-03	03