

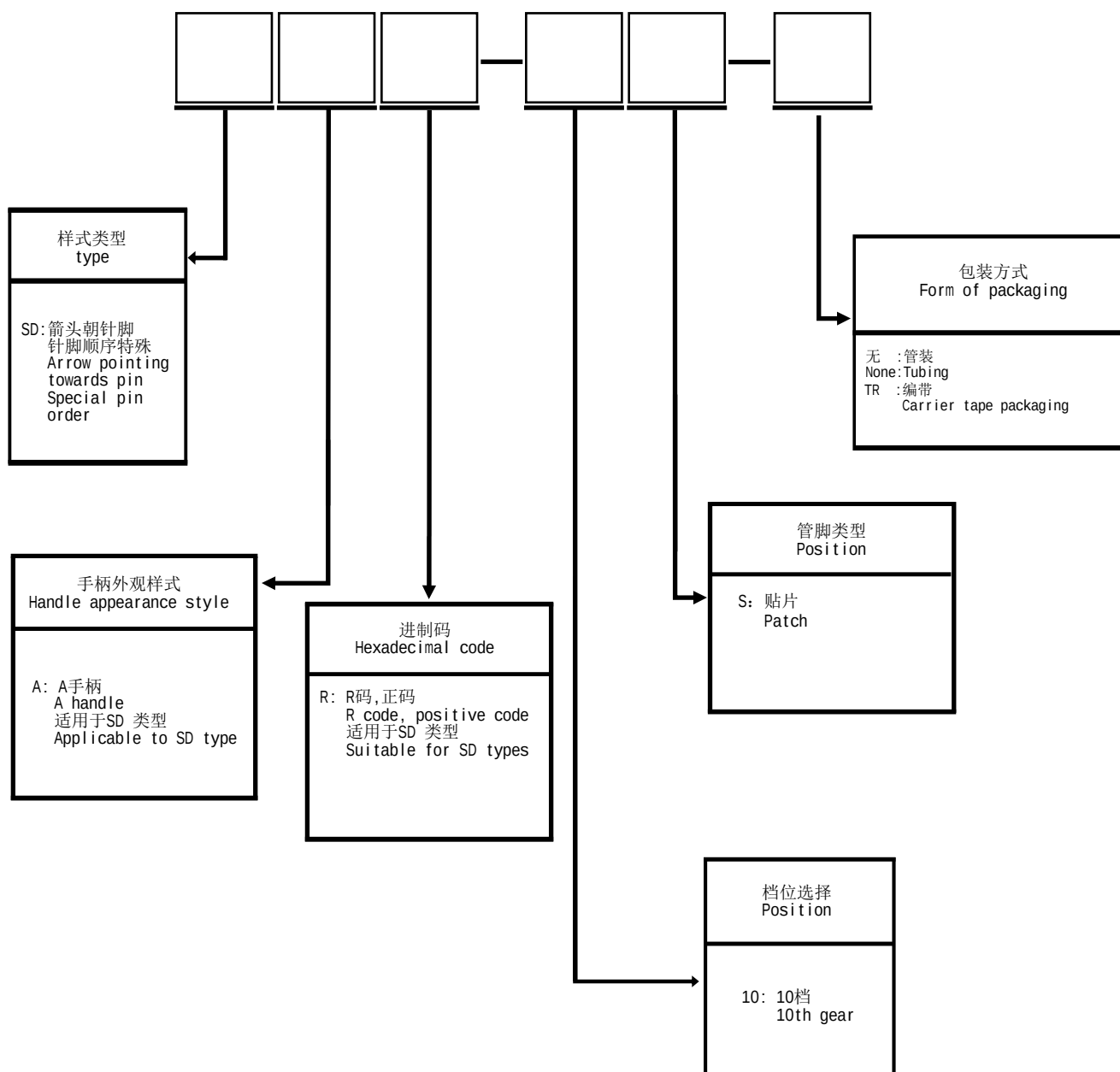
- 规格书 -

产品型号: SMZ-SDAR-10S-TR

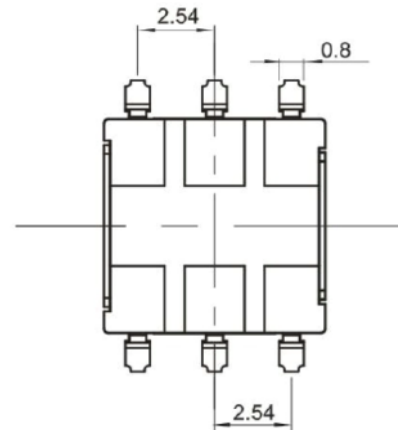
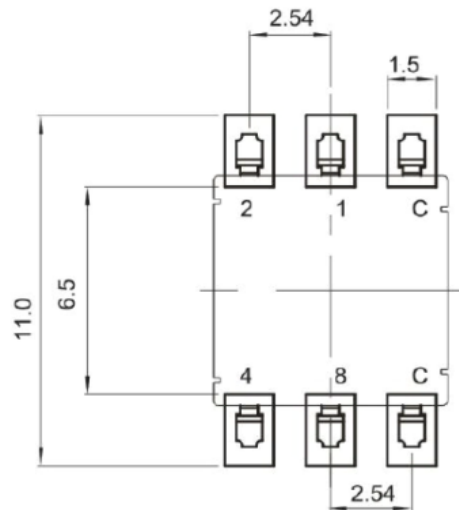
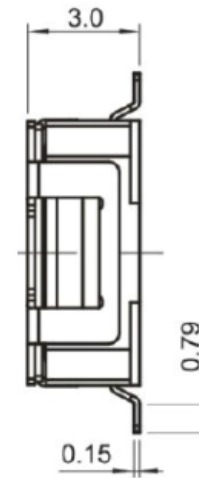
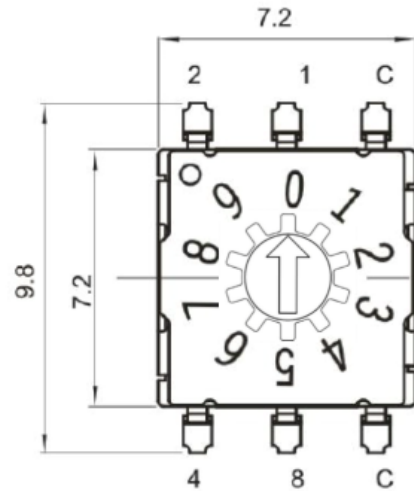
产品名称: 旋转编码开关

SM SWITCH CO.,LTD

Add : 江苏省无锡市新吴区圣丰联智谷7栋5楼
韩国京畿道富川市三鹊路22号富川科技园103-506栋
TEL : +86-510-8591-9217
H.P : 138-6177-3466
E-mail : liuqianqian@simaokj.com
Web : WWW.SIMAOKJ.CN



- Please check the type of switch according to the type specification.



		Real Coded				
		C	1	2	4	8
		0	1	2	4	8
10 P o s i t i o n	0	●				
	1	●	●			
	2	●		●		
	3	●	●	●		
	4	●			●	
	5	●	●		●	
	6	●		●	●	
	7	●	●	●	●	
	8	●				●
	9	●	●			●
16 P o s i t i o n	A	●		●		●
	B	●	●	●		●
	C	●			●	●
	D	●	●		●	●
	E	●		●	●	●
	F	●	●	●	●	●

D'SGD	H.S LEE	 		TITLE: MINIROTARY DIP SWITCH	
		CO	mm	MODELNO: SMZ-SDAR-10S-TR	
CHKD	J.S KIM	Scale	1:1	SM SWITCH CO.,LTD	
APPD	Y.D WANG	Rev	A/0		



迷你旋转编码开关
产品规格书
MINI ROTARY DIP SWITCH
SPECIFICATION

Rev. 7
P: 1/5

1. 规格:

Style:

本规范描述“旋转开关”主要用作信号开关电气设备具有一般要求的机械和电气特性。
This specification describes "Rotary Switch" mainly used as signal switch of electric devices with the general requirements of mechanical and electrical characteristics.

1.1 操作/存储温度范围: $-30^{\circ}\text{C} \sim +80^{\circ}\text{C} / -40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Operating / Storage Temperature Range : $-30^{\circ}\text{C} \sim +80^{\circ}\text{C} / -40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

2. 电流范围:

Current Range

2.1 未工作状态: 100 mA, 50V DC None-Switching : 100 mA, 50V DC

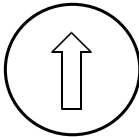
2.2 工作状态: 25 mA, 24V DC Switching : 25 mA, 24V DC

3. 操作类型: 旋转

Type of Actuation : Rotating

4. 测试顺序:

Test Sequence:

电 气 性 能 P E R F O R M A N C E E L E C T R I C	项目 ITEM	描述 DESCRIPTION	试验条件 TEST CONDITIONS	要求 REQUIREMENTS
	1	目测 Visual Examination	通过目测检查, 无需任何压力和测试 By visual examination check without any out pressure & testing.	应无影响产品使用能力的缺陷 There shall be no defects that affect the serviceability of the product
	2	接触电阻 Contact Resistance	①在与每个开关及相关的两个端子之间进行测量 To be measured between the two terminals associated with each switch pole ②测量应采用1kHz电流接触电阻计 Measurements shall be made with a 1kHz shall current contact resistance meter	100mΩ max. (initial)
	3	绝缘电阻 Insulation Resistance	250V DC, 1分钟 ± 5秒 250V DC, 1minute ± 5seconds	100MΩ min
	4	介质耐压 Dielectric withstanding Volotage	250V AC (50Hz或60Hz) 应施加在所有 相邻端子之间以及端子和框架之间1分钟 250V AC(50Hz or 60Hz) shall be applied between all the adjacent terminal and between the terminal and the frame For 1 minute	不得有击穿或闪络现象 There shall be no breakdown or flashover
	5	动作力 Operation Force	应用于操作方向 Applied in the direction of operation 	120gf ± 80gf



迷你旋转编码开关
产品规格书
MINI ROTARY DIP SWITCH
SPECIFICATION

Rev. 7
P: 2/5

机械性能
M
A
C
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C
E

6

工作寿命
Operation
Life

应在以下试验后进行测量:
1) 100mA, 42V直流电阻负载
2) 操作速率: 15~20次循环/分钟
3) 平均无故障寿命: 5000次
Measurements shall be made following the test set forth below:
1) 100mA, 42V DC resistive load
2) Rate of operation: 15~20cycles/minute
3) Average fault-free life: 5,000 steps

1) 如第3、4、项所示
2) 接触电阻: 最大200mΩ
3) 试验后的最终结果
1) As shown in item 3,4
2) Contact Resistance: 200mΩ max
3) Final-after test

7

低温测试
Resistance
Low
Temperature

在进行以下试验后, 样品应在正常温度和湿度条件下放置一小时
测量前:
1) 温度: $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$
2) 时间: 96小时
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: $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$
2) Time: 96 hours

如项目2~5所示
As shown in item 2~5

8

高温测试
Resistance
High
Temperature

在进行以下试验后, 样品应在正常温度和湿度条件下放置一小时
在进行测量之前:
1) 温度: $+85^{\circ}\text{C} \pm 2^{\circ}\text{C}$
2) 时间: 96小时
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: $+85^{\circ}\text{C} \pm 2^{\circ}\text{C}$
2) Time: 96 hours

1) 如项目3~5
2) 所示, 接触电阻: 最大200mΩ
1) As shown in item 3~5
2) Contact Resistance: 200mΩ max

9

湿度测试
Resistance
Humidity

在进行以下试验后, 样品应在正常温度和湿度条件下放置一小时
测量前:
1) 温度: $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$
2) 相对湿度: 90~95%
3) 时间: 96小时
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: $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$
2) Relative humidity: 90~95%
3) Time: 96 hours

1) 如第4项所示
2) 接触电阻: 最大200mΩ
3) 绝缘电阻: 最小10MΩ
1) As shown in item 4
2) Contact Resistance: 200mΩ max
3) Insulation Resistance: 10MΩ min

10

焊接条件
Solder
Condition

1. 手工焊接3s/350℃
Iron Soldering 3s / 350℃
2. 波峰焊5s/280℃
Wave Soldering 5s / 280℃
3. 回流焊 5s~10s/260℃
Reflow Soldering 10s / 260℃

11

储存条件
Storage
conditions

保管时尤其应注意避开高湿高温和有腐蚀性气体的环境。如需要长时间保存, 请放置在常温干燥处。
When storing, special attention should be paid to avoiding environments with high humidity, high temperature, and corrosive gases. If it needs to be stored for a long time, please place it in a dry place at room temperature.

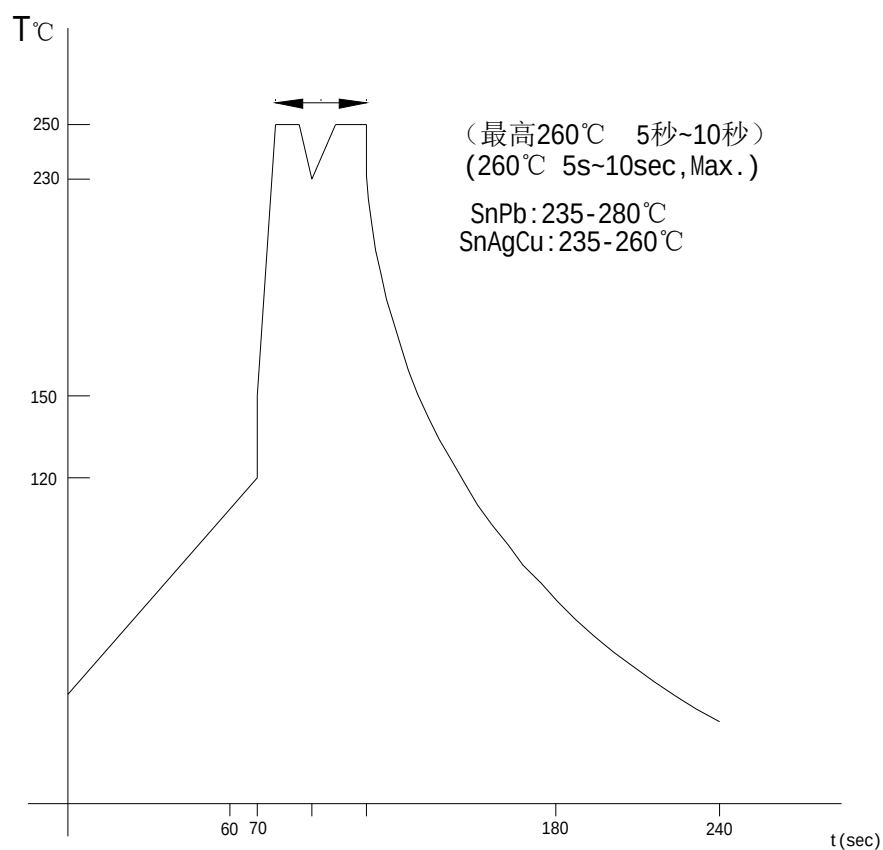
5. 该项目符合"ROHS"
This item is "ROHS" Compliant

6. 手工焊接
manual Soldering

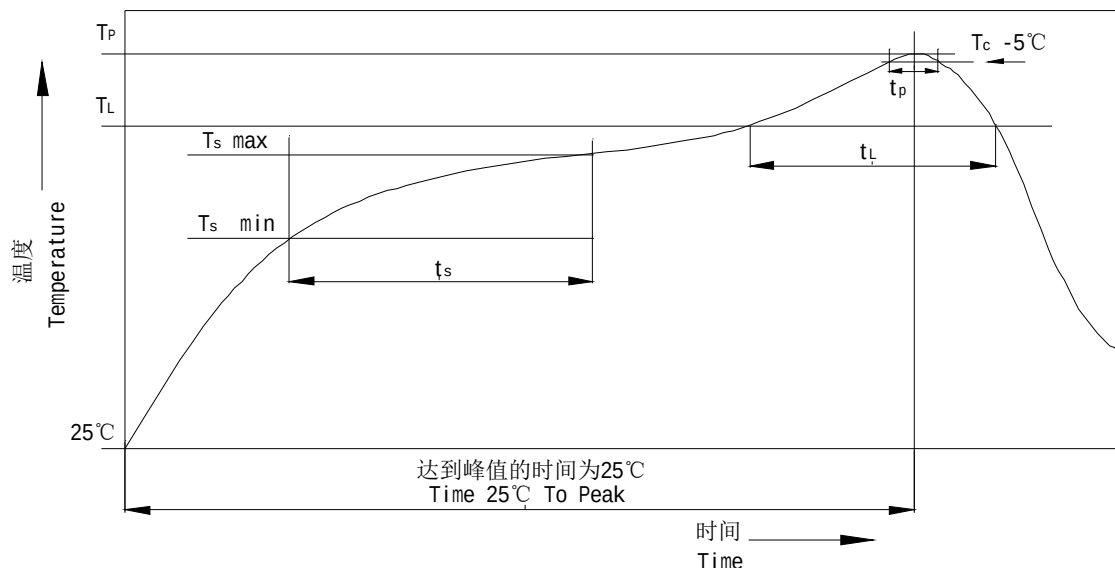
: 最高350℃最高3秒

: Max.350℃ Max.3sec

7. 波峰焊条件:
Wave Soldering Conditions:



8. 回流焊接条件:
Reflow Soldering Conditions:



1) 分类回流配置文件
Classification Reflow Profiles

配置功能 Profile Feature	无铅组件 Pb-Free Assembly
平均上升速率 (Ts最大值至TP) Average Ramp-UP Rate (Ts max to TP)	最大3°C/秒 3°C/second max
预热 - 最低温度 (Ts Min) - 最高温度 (Ts max) - 时间 (Ts Min至Ts Max) Preheat - Temperature Min (Ts min) - Temperature Max (Ts max) - Time (ts min to ts)	150°C 200°C 60-180秒 150°C 200°C 60-180seconds
保持在以上的时间: - 温度 (TL) - 时间 (tL) Time maintained above: - Temperature (TL) - Time (tL)	217°C 60-150秒 217°C 60-150seconds
峰值/分类温度 (TP) Peak/Classification Temperature (TP)	260°C+0°C/-5°C
实际峰值温度 (TP) 5°C以内的时间 Time within 5°C of actual Peak Temperature (TP)	最小30秒 min 30 seconds
缓降速率 Ramp-Down Rate	最高6°C/秒 6°C/sec max
达到峰值温度的时间为25°C Time 25°C to Peak Temperature	最多8分钟 8 minutes max



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产品规格书
MINI ROTARY DIP SWITCH
SPECIFICATION

Rev. 7
P: 5/5

9. 部件说明
ParList

序号 NO	部件名称 Part Name	数量 Q'ty	材质名称 Materials	表面处理 Treatment	备注 Remark
1	外壳 Cover	1	不锈钢 Stainless Steel		
2	弹片 spring plate	1	不锈钢 Stainless Steel		
3	辅助器 Guide Plate	1	不锈钢 Stainless Steel		
4	连接器 Contact	1	铜合金 Copper Alloy	镀层: 金 Plating: Gold	金 0.1 μm最大 镍 0.3 μm最大 Au 0.1 μm MAX Ni 0.3 μm MAX
5	接触引脚 Terminal	1	磷青铜 PHOSPHOR BRONZE	镀层: 金 Plating: Gold	金 0.1 μm最大 镍 0.3 μm最大 Au 0.1 μm MAX Ni 0.3 μm MAX
6	手柄 Rotor	1	LCP		
7	底座 Base	1	LCP		
8	O型圈 O-Ring	1	硅胶 Silicone		