

- 规格书 -

产品型号: SMZ-SDCR-04S-TR

产品名称: 旋转编码开关

SM SWITCH CO.,LTD

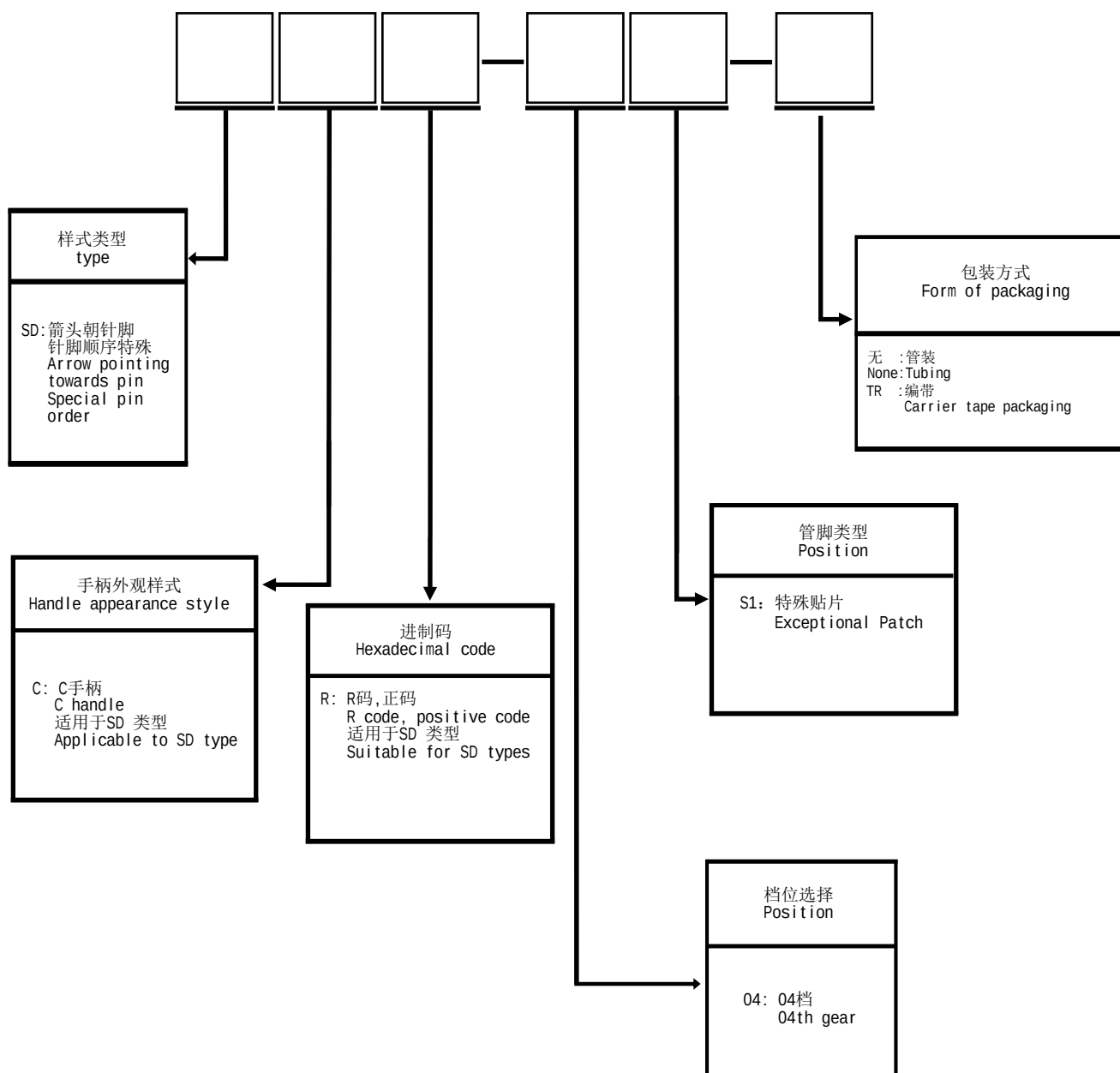
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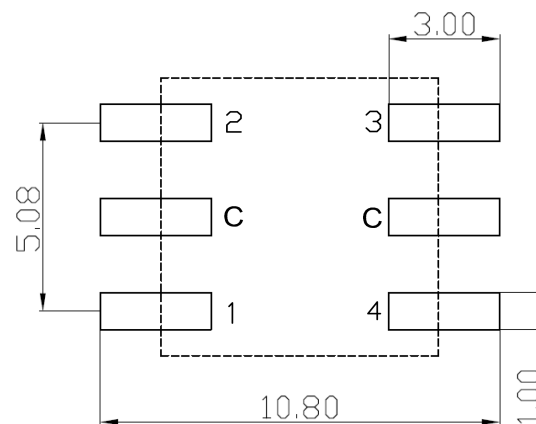
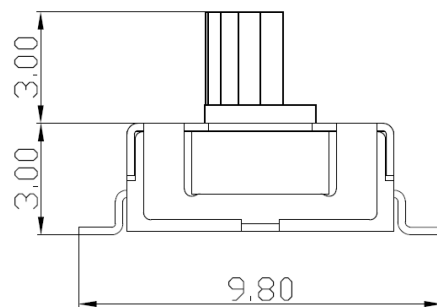
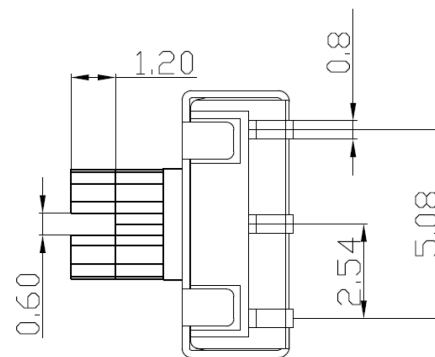
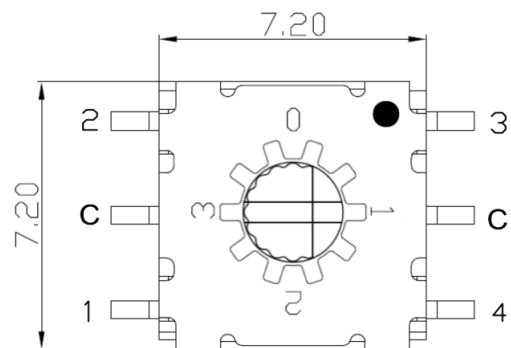
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- Please check the type of switch according to the type specification.



P.C.B. DIMENSION

		Real Coded				
04 P o s i t i o n		C	1	2	3	4
	0	●	●			
	1	●		●		
	2	●			●	
	3	●				●

D'SGD	H.S LEE		TITLE: MINIROTARY DIP SWITCH	
CHKD	J.S KIM		MODELNO:	SMZ-SDCR-04S-TR
APPD	Y.D WANG	Scale	1:1	SM SWITCH CO.,LTD
		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

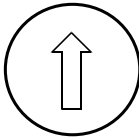
2.2 工作状态: 25 mA, 24V DC Switching : 25 mA, 24V DC

3. 操作类型: 旋转

Type of Actuation : Rotating

4. 测试顺序:

Test Sequence:

电气性能 ELECTRIC PERFORMANCE	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



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机械性能
M A C H I N E R Y
P E R F O R M A N 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℃ ± 3℃ 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℃ ± 3℃ 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℃ ± 2℃ 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℃ ± 2℃ 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℃ ± 2℃ 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℃ ± 2℃ 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.	

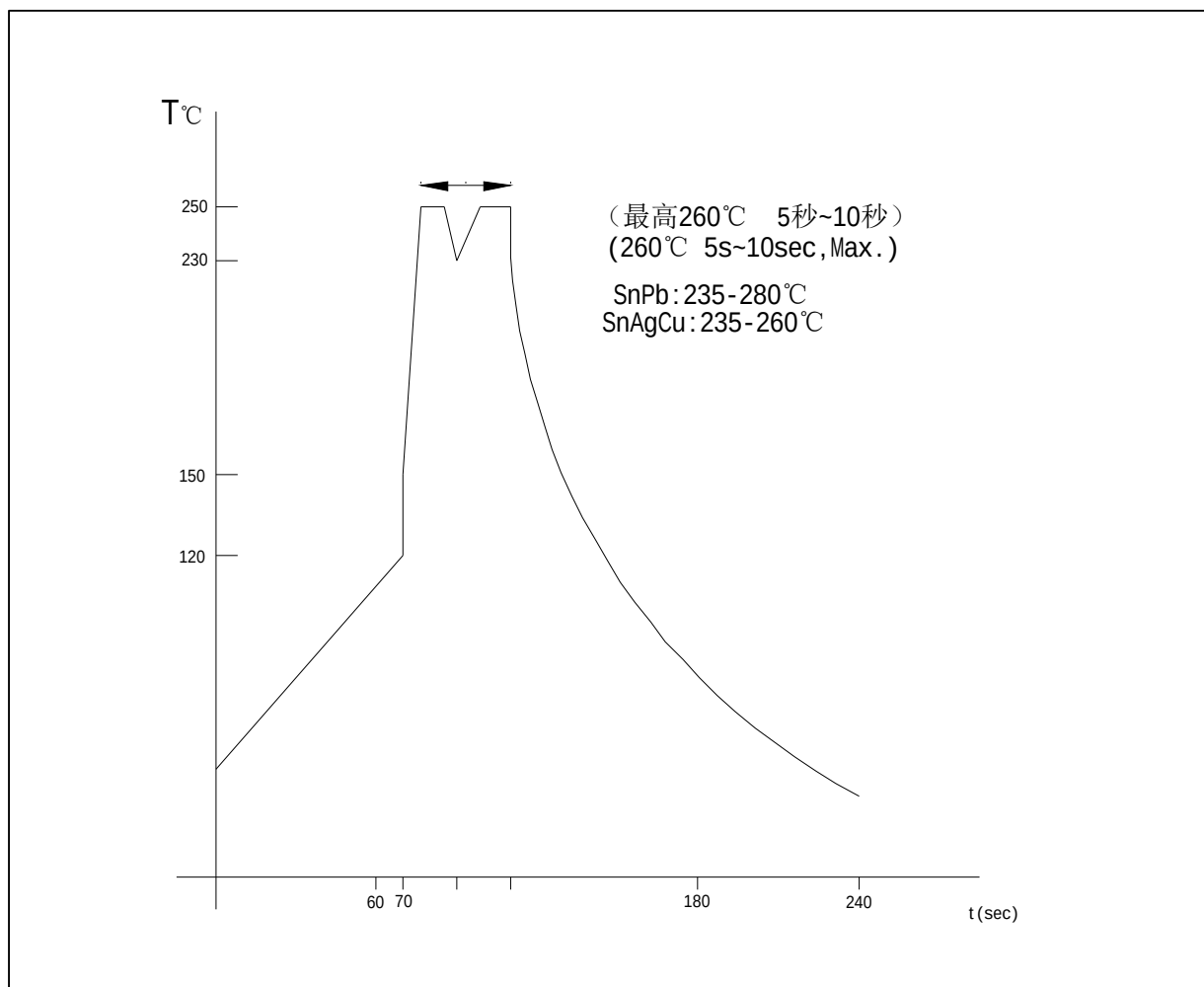
5. 该项目符合"ROHS"
This item is "ROHS" Compliant

6. 手工焊接
manual Soldering

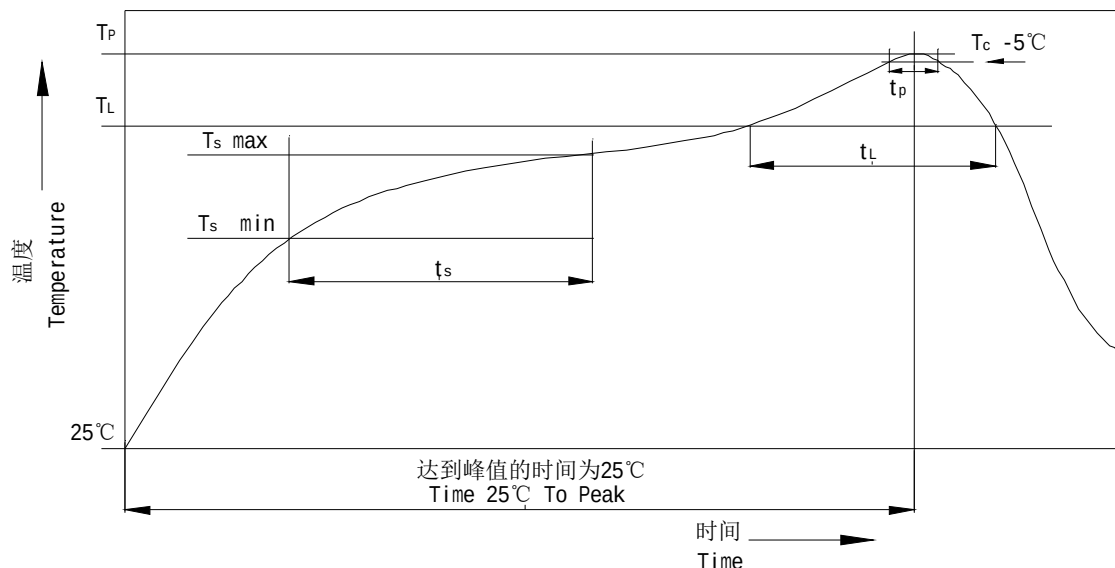
: 最高350℃最高3秒

: 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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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		