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承 认 书

SPECIFICATION FOR APPROVAL

产 品 编 码
Material code:

产品名称 Project:

振动传感元件

规格型号 Part No:

SH-SW-C2

贵公司承认印 Approval signatures

料 号/Part No.	签 章/Signatures

日期 Date:

拟制/Drawn	李春风	
审核/Check	钟华华	
批准/Approved	罗孝金	

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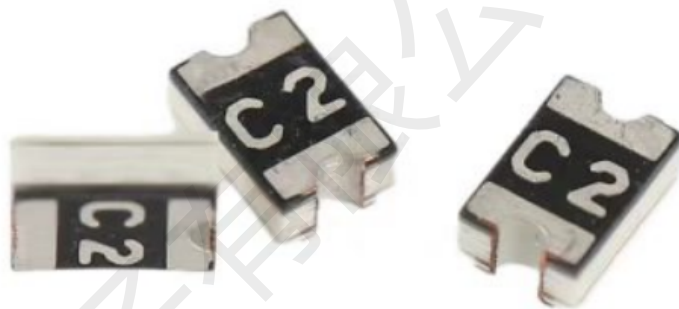
■ Function 功能:

- 1.Motion detecting
运动检测
- 2.Wake up function
唤醒功能

耐高温
高性能
贴片安装

■ Applications 应用产品:

- 1.Remote controller
遥控器
- 2.Automation equipment
自动化装置
- 3.GPS communication product
GPS通讯产品
- 4.Home appliances
家用电器
- 5.Automobile security equipment
汽车防盗设备



■ Features 产品特性

- 1.This product is roll ball type omni signal trigger sensing switch.

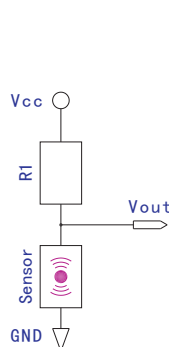
此产品为滚珠型全方位信号触发开关。

- 2.This product is a mechanical vibration sensor, the product at any azimuth angle trigger is in the ON or OFF state,When the product be shaken, the internal parts jitter, resulting in ON / OFF alternating pulse signal, thus trigger the circuit.

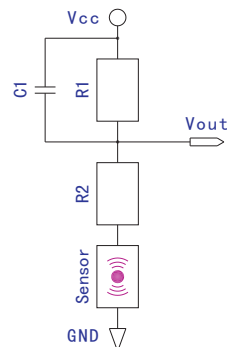
因本产品为机械式的震动传感元件，产品在任何方位角度时处于ON或者OFF的状态，当产品震动时，内部件抖动，产生ON/OFF交替的脉冲信号，从而触发电路。信号形式、触发概率见第4页。

- 3.MCU 信号处理方式:

- A、最灵敏方式，IO 电平变化中断处理即时响应；
- B、可调灵敏度方式：计数法，计数电平变化多少次才动作响应；
- C、可调灵敏度方式：计时法，如有电平变化时，延时多少时间后再次检测到有才动作响应。



基本电路



滤波电路

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■ Electrical characteristics 电器特性

1	Voltage	电压	<6V
2	Current	电流	2uA-10mA
3	Insulation resistance	绝缘电阻	>10MΩ
4	Trigger rate	触发率	100% (振幅 > 1mm, 频率: > 20Hz)
5	Trigger frequency	触发频率	>50Hz

Note: the trigger frequency refers to the number of pulse signals generated by the product during the continuous vibration (amplitude > 1mm, frequency: 20-100hz) for 1 second. (oscilloscope reading display)

注: 触发频率是指在1秒时间的持续震动 (振幅 > 1mm, 频率: 20-100Hz) 时, 产品产生的脉冲信号数量。(示波器读取显示)

■ Mechanical characteristics 机械特性

1	Temperature range	耐温范围	Operating: -20℃ to 70℃
2	Pull force of terminal	端子拉力	500gf for 1 minute
3	Salt mist test	盐雾测试	95% RH, 40℃ for 24 hours
4	Service life	使用寿命	200,000 times

■ Bill of material 材料列表:

1	Package	封装	PCB laminate material
2	Inner contact material	连接端	Gold-plated
3	Ball	滚珠	Brass, silver/gold-plated

■ 焊接特性Welding characteristics

1. 手工焊: 330℃±10℃, <3秒.

Manual welding: 330℃±10℃, <3s.

2. 回流焊温度时间: 见第4页.

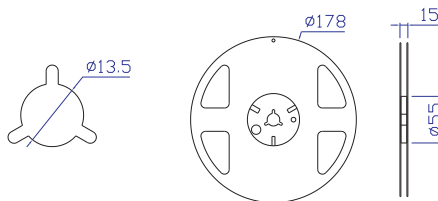
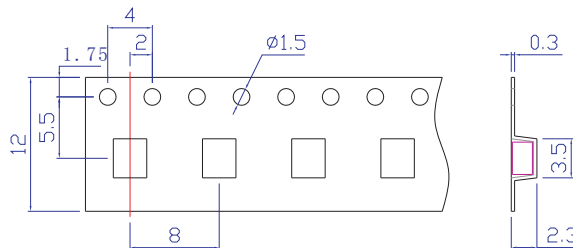
Reflow soldering humidity time: P4.

3. 焊锡: 无铅.

Solder tin: lead free.

4. 不可使用强酸、碱性助焊剂.

Do not use strong acid alkali flux.



1:2

1:10

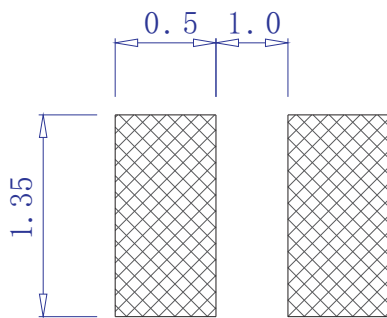
■ Packaging 包装
4000PCS/盘

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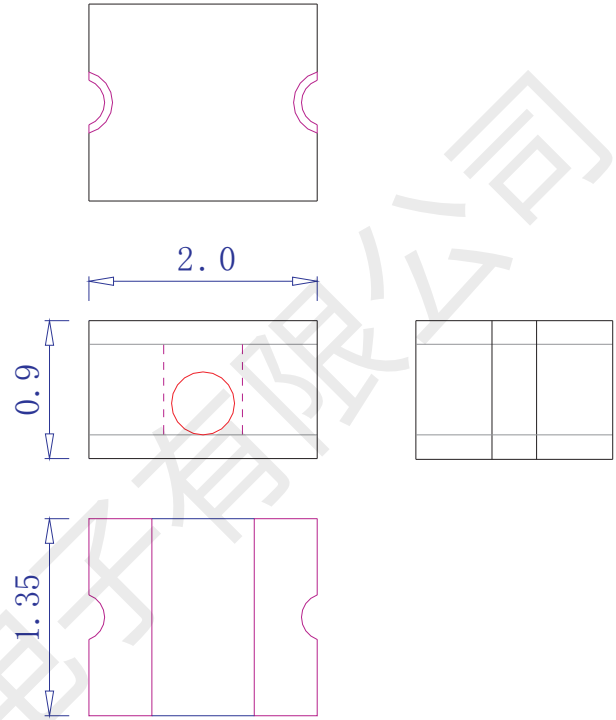
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■ SIZE尺寸

Unit: mm,
Tolerance ± 0.12



PCB Installation Position
PCB 焊位



■ Note 注意事项

1.If the product used for high security products and durability of extremely high equipment (such as life safety equipment, aviation facilities, disaster prevention device), please confirm whether a share, can seek advice our company for details.

如果该产品要用于高安全性产品及耐久性极高的设备中（如生命安全设备、航空设施、防灾装置），请确认是否合用，或咨询我司了解详情。

2.In case of fire, Please do not overload applicable.

请勿超负荷使用，以防发生火灾。

3.The welding temperature or time more than standard, can cause switch collapse.

焊接温度或时间超过规范时，会造成开关解体。

4.Do not use water solubility flux. May cause damage to the switch.

勿使用水溶性助焊剂、可能会造成开关损坏。

5.Do not use solvent wash switch.

勿使用溶剂清洗开关。

6.This switch conduction rate of 98% (conductivity rate per 100 times value switchactions, can good conduction ratio).

本开关导通率为98%以上（导通率是指开关每100次动作中，可以良好导通的比率）。

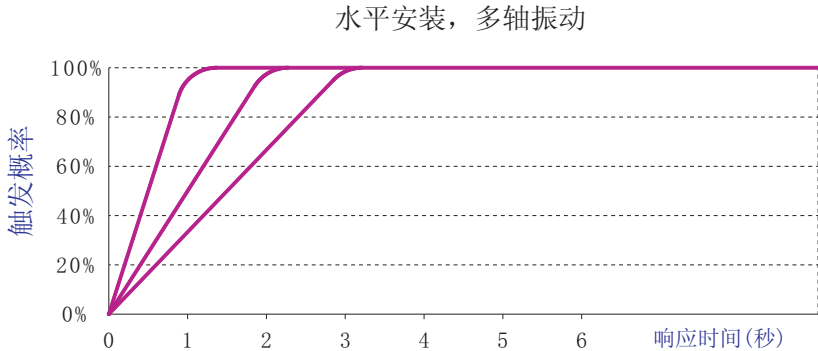
7. The company is only responsible for the defective problems of the product itself, return and exchange the defective products, and does not bear other joint and several expenses.

本公司只承担本产品本身不良问题,对不良品进行退换货,不承担其它连带费用责任。

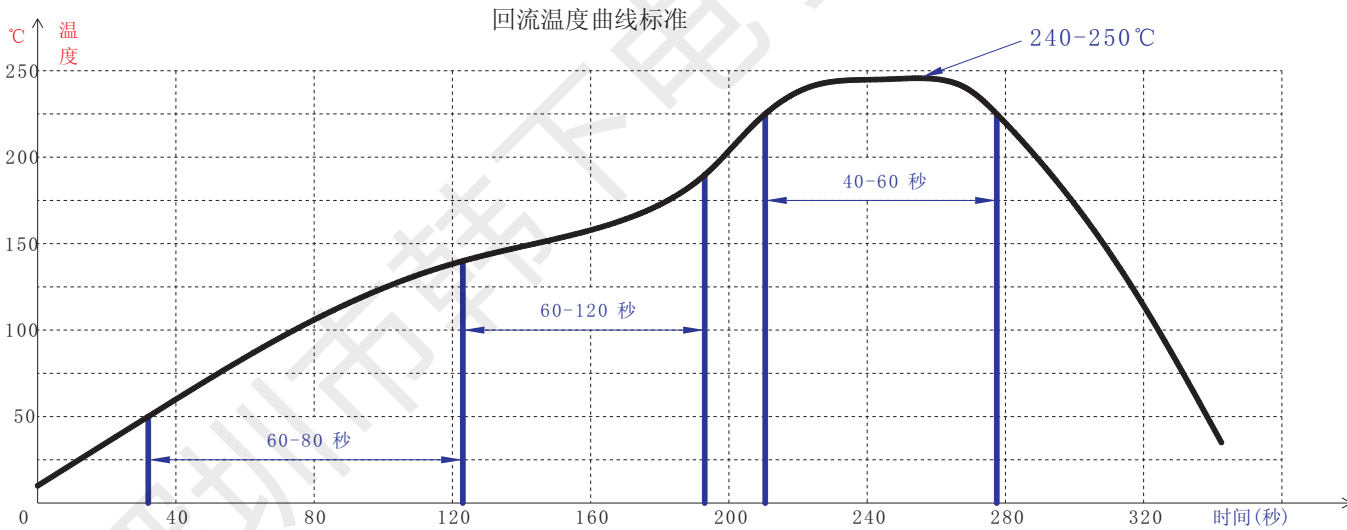
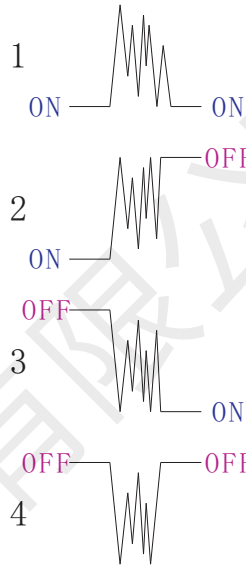
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脉冲信号形式: 4种



10-200Hz随机振动，振幅大于1mm。



管制要点

项目	温度范围(℃)	维持时间(秒)	温度斜率 (℃/秒)
预热区	50-140	60-80	< 3
恒温区	140-190	60-120	< 1
回流区	217以上	40-60	< 2
峰值温度	240-250℃		
冷却区	降温斜率 < 3℃/秒		
链速	70-85 cm/min		