



# specification

## SHEET FOR APPROVAL

Part Name: YX-SMD5020P

Type: Magnetic Sounder

Customer Name: \_\_\_\_\_

Number of the Edition: \_\_\_\_\_



	Approved by	Checked by	Issued by
Signature		张爱琴	
Date			

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## 1. 基本规格/General specification

项目/Item		规格/Spec		条件/Condition
1	额定电压 Rated voltage	3.0Vo-p	5.0Vo-p	
2	工作电压 Operation voltage	2~4Vo-p	4~7Vo-p	
3	声压 Sound Pressure Level=SPL	Min 75dB		测试环境：标准状态，标准驱动电路，额定电压 测试距离：0.1m Standard State, Standard Drive Circuit. Rated voltage, Distance at 0.1m
4	电流 current	≤100ma	≤110ma	
5	振荡频率 Oscillation frequency	4000Hz		
	阻抗 Coil Resistance	12±3 Ω	30±3 Ω	
6	工作温度范围 Operating Temperature	-20~+70℃		
7	保存温度范围 Storage temperature	-30~+85℃		声压 ≥65dB SPL ≥65dB
8	外部尺寸 Externals size (mm)	5.0*5.0*2		参阅附图 Refer to the attached drawing
9	重量 Mass	0.6g		
10	材质 Housing Material	LCP		

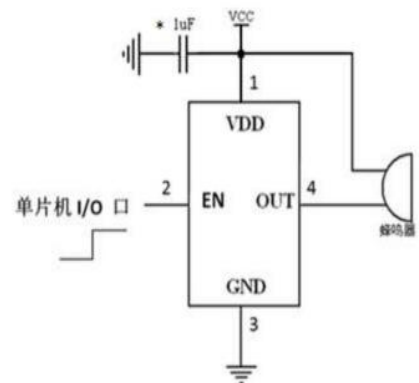
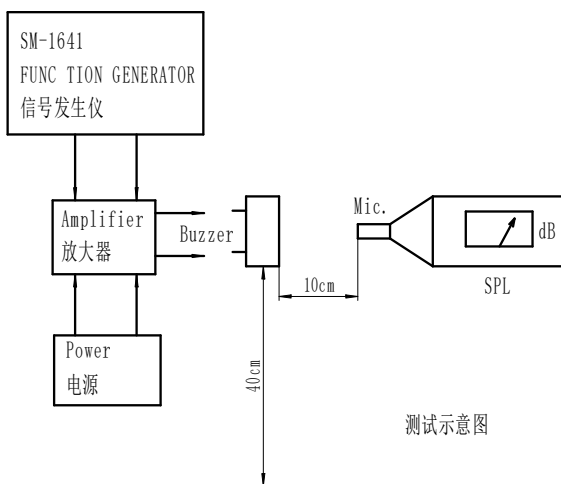
## 2. 电气和声学测试条件/Electrical And Acoustical Measuring Condition

### 驱动电路/Recommended Driving Circuit

### 设置 Recommended Setting

Resonant frequency, 1/2 duty cycle. Square wave.

Signal amplitude should be large enough to saturate the

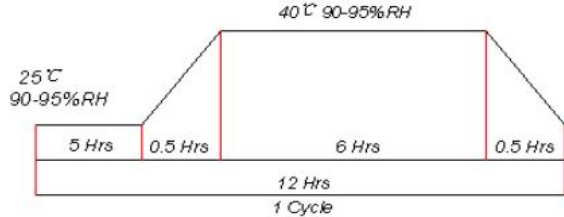
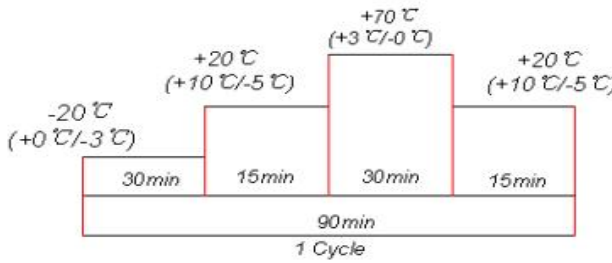
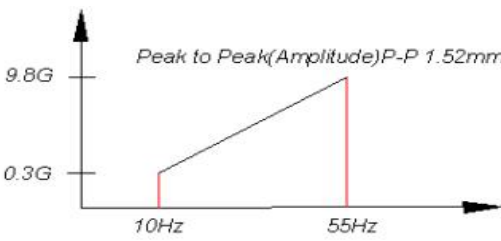


注：\*建议在芯片电源输入端增加1uF电源滤波电容。

transistor.

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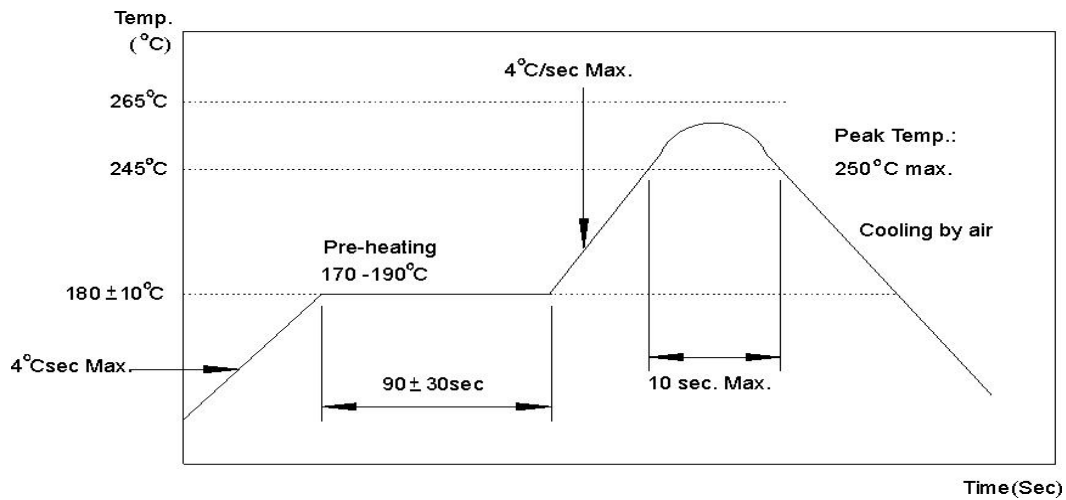
## 3. 可靠性测试/Reliability Test

	项目 ITEM	测试方法 TEST
1	高温试验 High Temperature Test	在+80℃±2℃储存温度下存放 96 小时，恢复 2 小时后测试 After being placed in a chamber with +80±2℃ for 96 hours and then being placed in normal condition for 2 hours
2	低温试验 Low Temperature Test	在-20℃±2℃储存温度下存放 96 小时，恢复 2 小时后测试 After being placed in a chamber with -20±2℃ for 96 hours and then being placed in normal condition for 2 hours
3	恒定湿热试验 Humidity Test	 <p>The diagram shows a trapezoidal cycle for humidity testing. The top horizontal segment is at 40°C 90-95%RH and lasts 6 Hrs. The bottom horizontal segment is at 25°C 90-95%RH and lasts 5 Hrs. The rising and falling ramps each last 0.5 Hrs. The total duration of one cycle is 12 Hrs.</p>
4	温度变化试验 Temperature Cycle Test	 <p>The diagram shows a temperature cycle with four segments: 1) -20°C (+0°C/-3°C) for 30min; 2) +20°C (+10°C/-5°C) for 15min; 3) +70°C (+3°C/0°C) for 30min; 4) +20°C (+10°C/-5°C) for 15min. The total duration of one cycle is 90min.</p>
5	振动试验 Vibration Test	 <p>The diagram shows a sine wave vibration profile. The amplitude is labeled as Peak to Peak (Amplitude) P-P 1.52mm. The frequency range is from 10Hz to 55Hz. The acceleration levels are 0.3G at 10Hz and 9.8G at 55Hz.</p>
6	跌落试验 Drop Test	70cm 高自由掉落到 40mm 的木板上，每个方向三次 Drop on a hard wood board of 40mm thick, any directions, three times, at the height of 70cm
7	插针的抗拉强度试验 Terminal Strength Pulling Test	插针承受 1.0kg 拉力，负荷时间 5s The force 5 seconds of 1.0kg is applied to each terminal.
8	可焊性试验 Solder ability Test	焊锡温度 255±5℃，浸润时间为 3±0.5s，试验后目测产品情况 Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of 255±5℃ for 3±0.5 seconds.

## 4.SOLDERING CONDITION

(1)Recommendable reflow soldering condition is as follows (Reflow soldering is twice)

**Note:** It is requested that reflow soldering should be executed after heat of product goes down to normal.



Heat resistant line

Used when heat resistant reliability test is performed

(2)Manual soldering

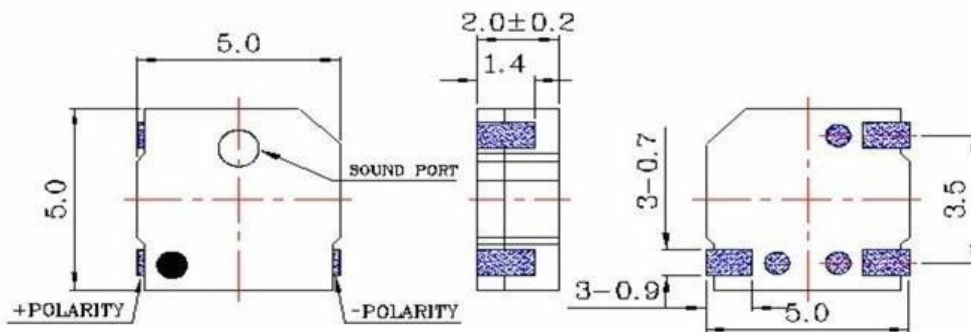
Manual soldering temperature 350°C within 5 sec

## 5.尺寸图 Dimension

\*Unit: mm; Tolerance: ± 0.3mm Except Specified

\*Housing Material: Black LCP

### 5.1 Soldering pattern



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## 5.2 频率响应/Frequency Response

3.0Vo-p 50% duty Square wave, 10cm

