

规格书
Specification

品名
Model name

HY09-4TBE 3V

PROPRIETARY
Huayu Electronic co.,Ltd.

CONFIDENTIAL
Huayu Electronic co.,Ltd.

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*Components Operating Div.
Huayu Electronic co.,Ltd.*

1.基本规格/General specification

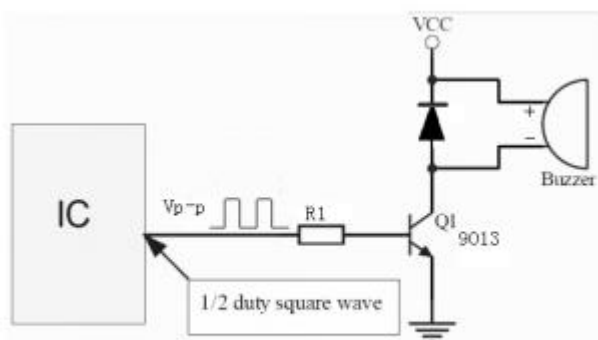
项目/Item	规格/Spec	条件/Condition
1 额定电压 Rated voltage	3Vo-p	
2 工作电压 Operation voltage	2-5Vo-p	
3 声压 Sound Pressure Level=SPL	Min 85dB	测试环境：标准状态，标准驱动电路， 额定电压 测试距离：0.1m Standard State,Standard Drive Circuit. Rated voltage,Distance at 0.1m
4 电流 current	Max50mA	
5 振荡频率 Oscillation frequency	2731±300HZ	
6 电阻 Coil Resistance	16±5Ω	
7 工作温度范围 Operating Temperature	-20~+70℃	
8 保存温度范围 Storage temperature	-30~+80℃	
9 外部尺寸 Externals size (mm)	Φ9*H4.2	参阅附图 Refer to the attached drawing
10 重量 Mass	0.8g	
11 材质 Housing Material		

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

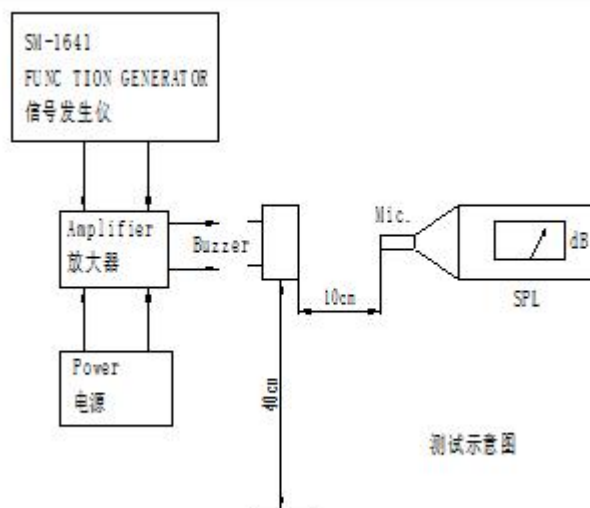
驱动电路/Recommended Driving Circuit

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

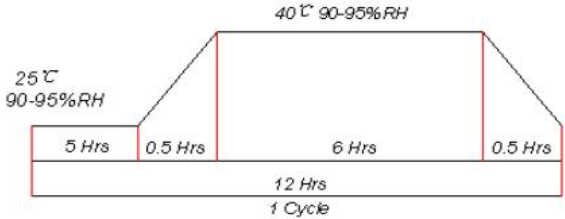
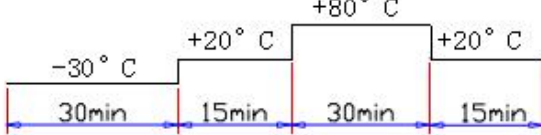
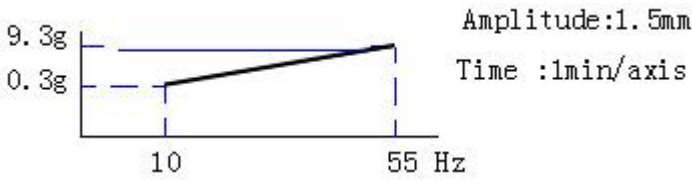
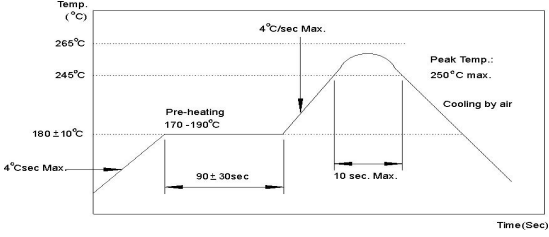
Signal amplitude should be large enough to saturate the transistor.



设置 Recommended Setting



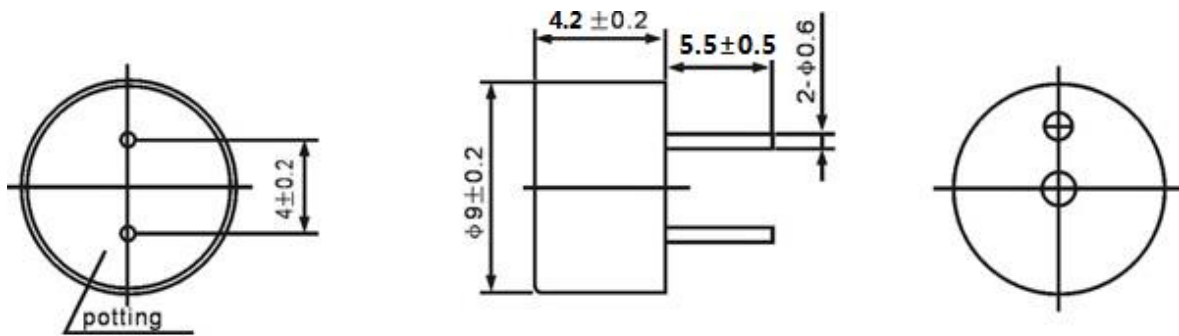
3. 可靠性规范/Reliability specification

	项目 ITEM	测试方法 TEST
1	高温试验 High Temperature Test	在+80°C±2°C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°C for 96 hours and then being placed in normal condition for 2 hours
2	低温试验 Low Temperature Test	在-20°C±2°C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°C 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 humidity test cycle. It starts with a 5-hour dwell at 25°C and 90-95% RH. This is followed by a 0.5-hour ramp up to 40°C and 90-95% RH. The test then holds at 40°C and 90-95% RH for 6 hours. Finally, there is a 0.5-hour ramp down to 25°C and 90-95% RH. The total cycle duration is 12 hours.</p>
4	温度变化试验 Temperature Cycle Test	 <p>The diagram shows a temperature cycle test profile. It consists of four temperature levels: -30°C (30min dwell), +20°C (15min dwell), +80°C (30min dwell), and +20°C (15min dwell). The transitions between levels are ramps. The test is repeated for 5 cycles without power, followed by a 2-hour recovery at room temperature.</p> <p>Make this test for 5 cycle without applying power, then expose to the room temperature for 2 hours 不加负载，按 5 次循环测试，然后在室温下恢复 2 小时</p>
5	振动试验 Vibration Test	 <p>The diagram shows a vibration test profile. The amplitude starts at 0.3g at 10 Hz and increases linearly to 9.3g at 55 Hz. The test is performed for 1 minute per axis. The amplitude is 1.5mm and the time is 1min/axis.</p> <p>Make this test for the directions of X, Y, Z for 2 hours each (total 6 hours). 振动频率 10-55Hz, 振幅 1.5mm, 在 X, Y, Z 3 个方向各 2 小时</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°C，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°C for 3±0.5 seconds.
9	回流焊测试 Soldering Test	 <p>The diagram shows a soldering test profile. It starts with a pre-heating phase at 180±10°C for 90±30 seconds. The temperature then rises at a maximum rate of 4°C/sec to a peak temperature of 250°C max. The peak temperature is held for 10 seconds max. Finally, the temperature is cooled by air.</p>

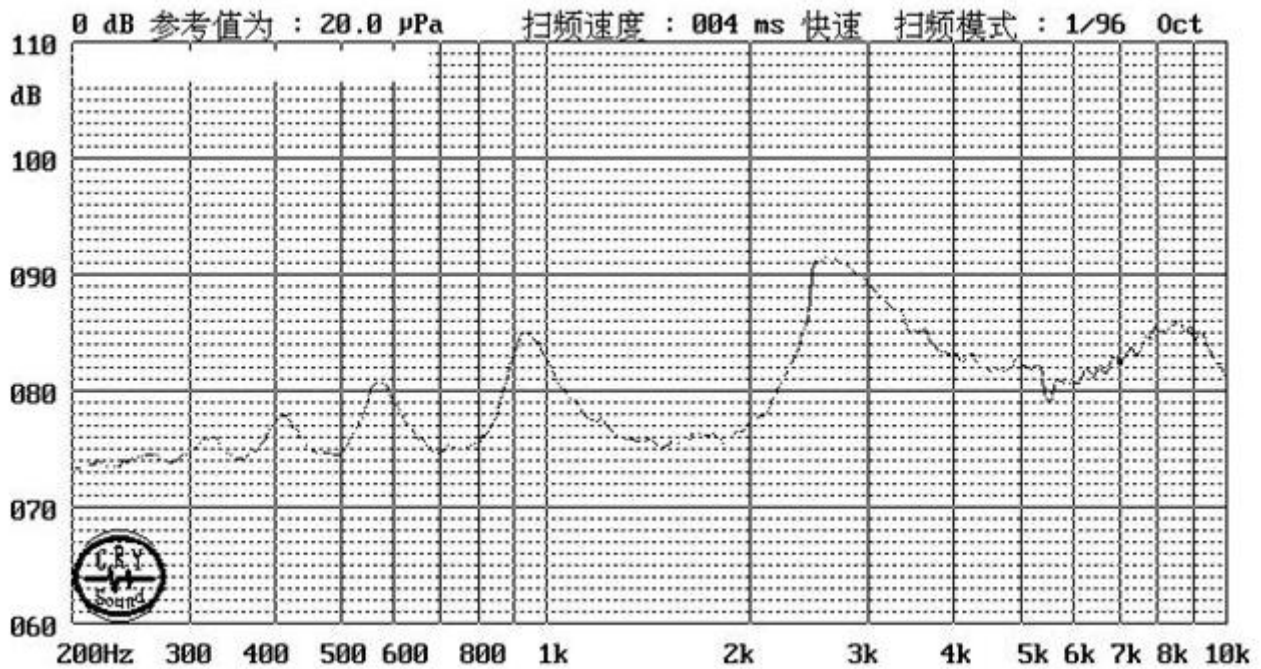
4. 尺寸图/Dimension

(UNT: mm)

Tolerance: $\pm 0.5\text{mm}$ Except Specified

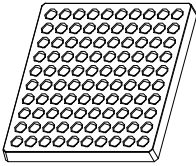
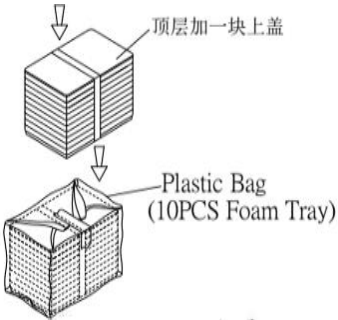
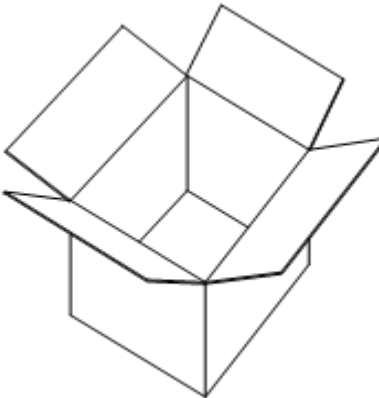


5. Frequency Curve 频率图



3Vo-p 50% duty Square wave, 10cm

6.Packing Method/包装图

Item	Drawing	Qty(pcs.)	Material	Specification (m m)
Packing		100 (10×10)	PE	78×78×20
MiddleBox		1000 (10×100)	Paper	780×780×110
OuterBox		10000 (10 × 1000)	Paper	500×420×270



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