



# 产品规格书

## PRODUCT SPECIFICATION

客户名称 CUSTOMER: \_\_\_\_\_

产品型号 MODEL: HNR-1407A

客户型号 USER'S MODEL: \_\_\_\_\_

日期 DATE: 2021-12-3

江苏华能电子有限公司			客户回签		
HUAWHA			CUSTOMER		
SERVE RATITY			CUSTOMER RATIGY		
拟制	审核	批准	检验	审核	批准
REPORT	CHECKED	APPROVED	TEST	CHECKED	APPROVED
申丽华	工稿章用章	张长华			

**1.基本规格/General specification**

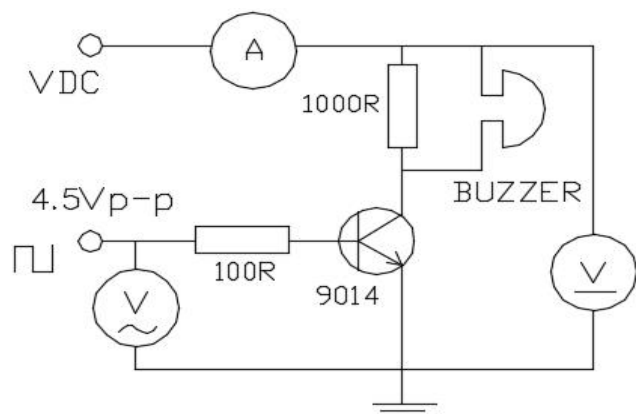
项目/Item		规格/Spec	条件/Condition
1	额定电压 Rated voltage	3Vo-p	
2	工作电压 Operation voltage	1-30Vo-p	
3	声压 Sound Pressure Level=SPL	Min 85dB	测试环境：标准状态，标准驱动电路， 额定电压 测试距离：0.1m Standard State,Standard Drive Circuit. Rated voltage,Distance at 0.1m
4	电流 current	Max5mA	
5	振荡频率 Oscillation frequency	4000Hz	
6	电容量 Capacitance at 1000Hz (nF)	12±30%	
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)	φ 14*H7.5	参阅附图 Refer to the attached drawing
10	重量 Mass	0.8g	
11	材质 Housing Material	PBT	

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

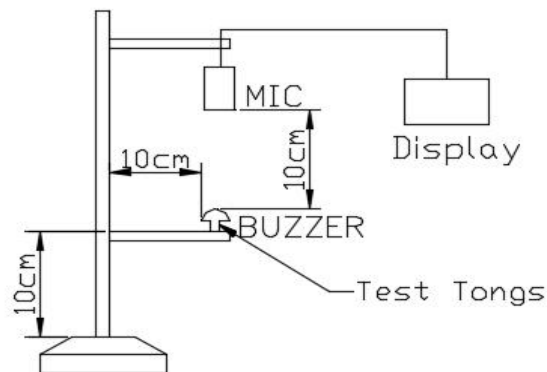
**驱动电路/Recommended Driving Circuit**

**设置 Recommended Setting**

Resonant frequency, 1/2 duty cycle. Square wave.  
Signal amplitude should be large enough to saturate the transistor.

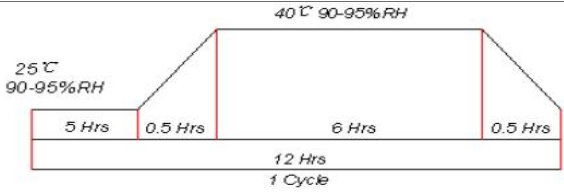
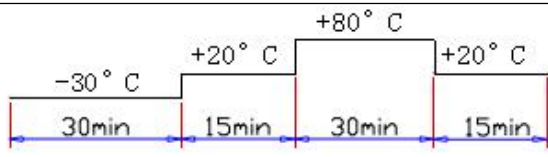


Test Circuit

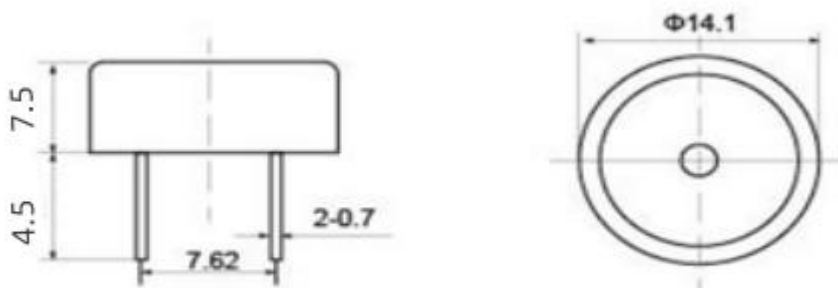


Test Equipis

## 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							
4	温度变化试验 Temperature Cycle Test	 <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>振幅为 0.75mm，频率为 10~30~10Hz，三个不同轴方向各振动 1 小时，试验后测量。</p> <p>Sounder shall be measured after being applied vibration of amplitude of 0.75mm with 10 to 30 to 10Hz band of vibration frequency to each of 3 perpendicular directions for 1 hour.</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.						
9	回流焊测试 Soldering Test	<table border="1"> <thead> <tr> <th>温度 Temp.(℃)</th> <th>时间 Time(Sec.)</th> <th>可焊接次数 Times</th> </tr> </thead> <tbody> <tr> <td>245±15</td> <td>180℃预热 40~70秒 245℃ 3秒 above 180℃ time 40~70</td> <td>3</td> </tr> </tbody> </table>	温度 Temp.(℃)	时间 Time(Sec.)	可焊接次数 Times	245±15	180℃预热 40~70秒 245℃ 3秒 above 180℃ time 40~70	3
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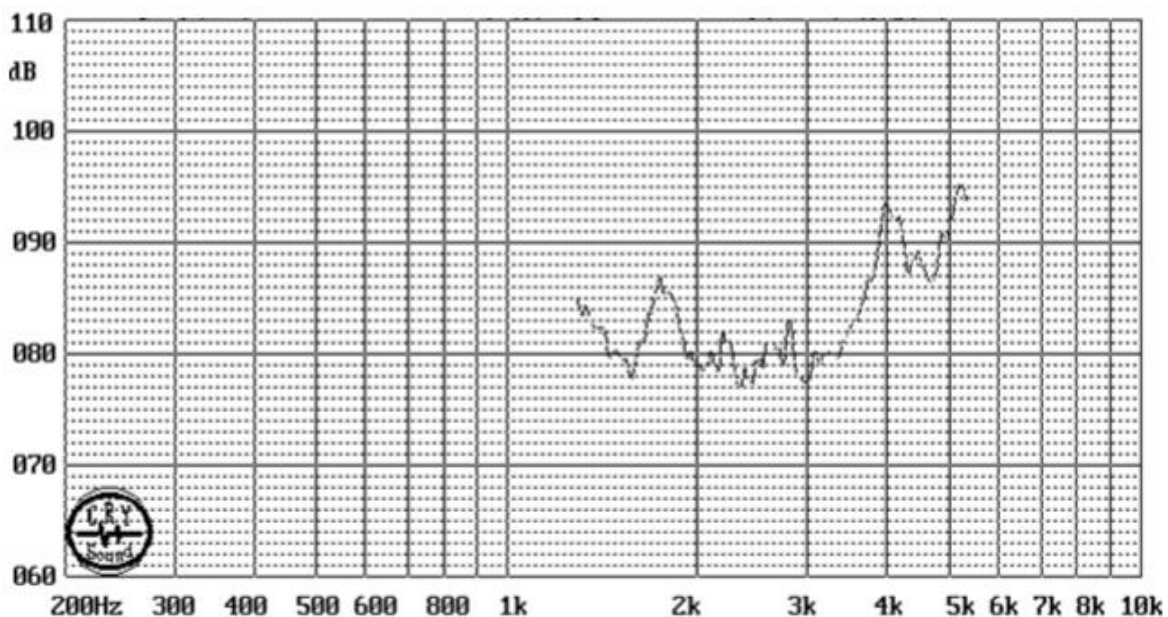
### 4.尺寸图 Dimension



\*Unit: mm; Tolerance:  $\pm 0.5$ mm Except Specified

\*Housing Material: BlackPBT

### 5.频率响应/Frequency Response



5.0Vo-p 50% duty Square wave, 10cm