

# 规格书

## Specification

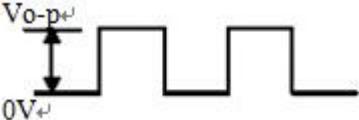
SN12-1P 1.5V

Version #	Spec V1.0
制作日期 Date	2017/12/20
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承认 Approved	Qian baolong Executive Manager, R&D Dept.

1.适用范围: 本规范适用于 SN12-1P 1.5V 蜂鸣器。

This specifications apply the SN12-1P 1.5V buzzer.

2.基本规格/General specification

项目/Item		规格/Spec	条件/Condition
1	额定电压 Rated voltage	1.5V	
2	工作电压 Operation voltage	1~3 V	
5	振荡频率 Oscillation frequency	2048Hz	
6	直流电阻 Direct Current Resistance	16±4 欧	
7	工作温度范围 Range of operation temperature	-20~+85°C	
8	保存温度范围 Range of preservation temperature	-40~+85°C	
9	平均消费电流 Average consumption current	Max 30mA	应用额定电压、额定频率方波，1/2 责任标准状态。 Applying rated voltage, rated frequency Square wave,1/2 duty subject to standard state
10	声压 Sound Pressure Level=SPL	85dB	距离 10 厘米, 施加额定的电压, 额定的频率方波, 1/2duty 到标准状态 Distance at 10cm,applying rated voltage, rated frequency square wave,1/2duty subject to standard state.
11	重量 Mass	2g	
12	材质	PPO	

☆标准状态: 常温 (15~35°C), 湿度 (25~85% 相对湿度), 空气压力 (860~1060hpa)

在假设的情况判断, 测试是一基本状态下进行。

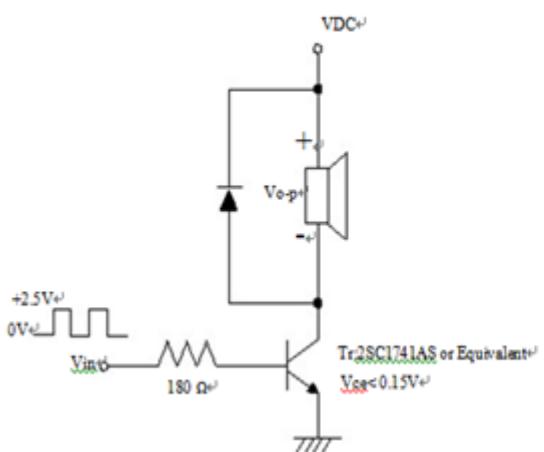
Standard State: Ordinary Temp(15~35°C), Humidity(25~85% RH), Air pressure(860~1060hPa)

In case of doubtful judgment, the test is re—performed under Basic State.

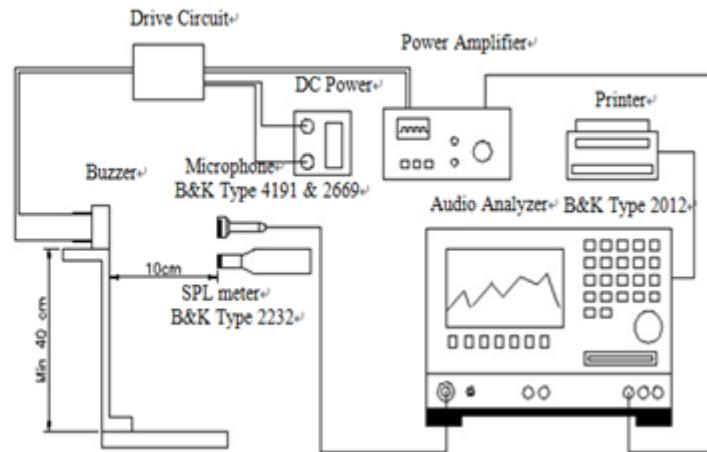
☆基本情况: 温度。(20±3°C), 湿度 (60~70% 相对湿度), 空气压力 (860~1060hpa)

Basic State: Temp.(20±3°C), Humidity(60~70% RH), Air pressure(860~1060hPa)

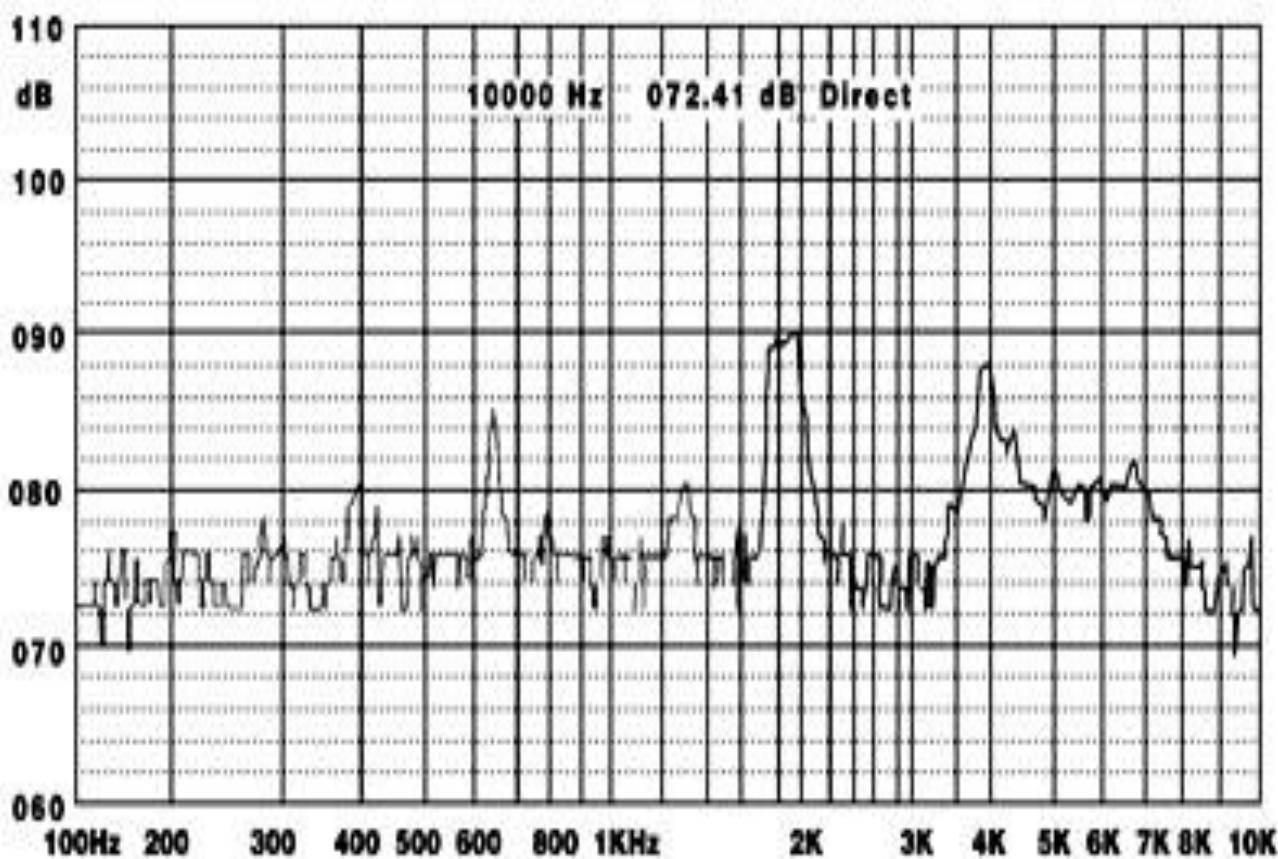
<标准驱动电路>/<Standard Drive Circuit>



<标准测试治具>/<Standard Test Fixture>



<频率响应曲线>/<Frequency Response Curve>

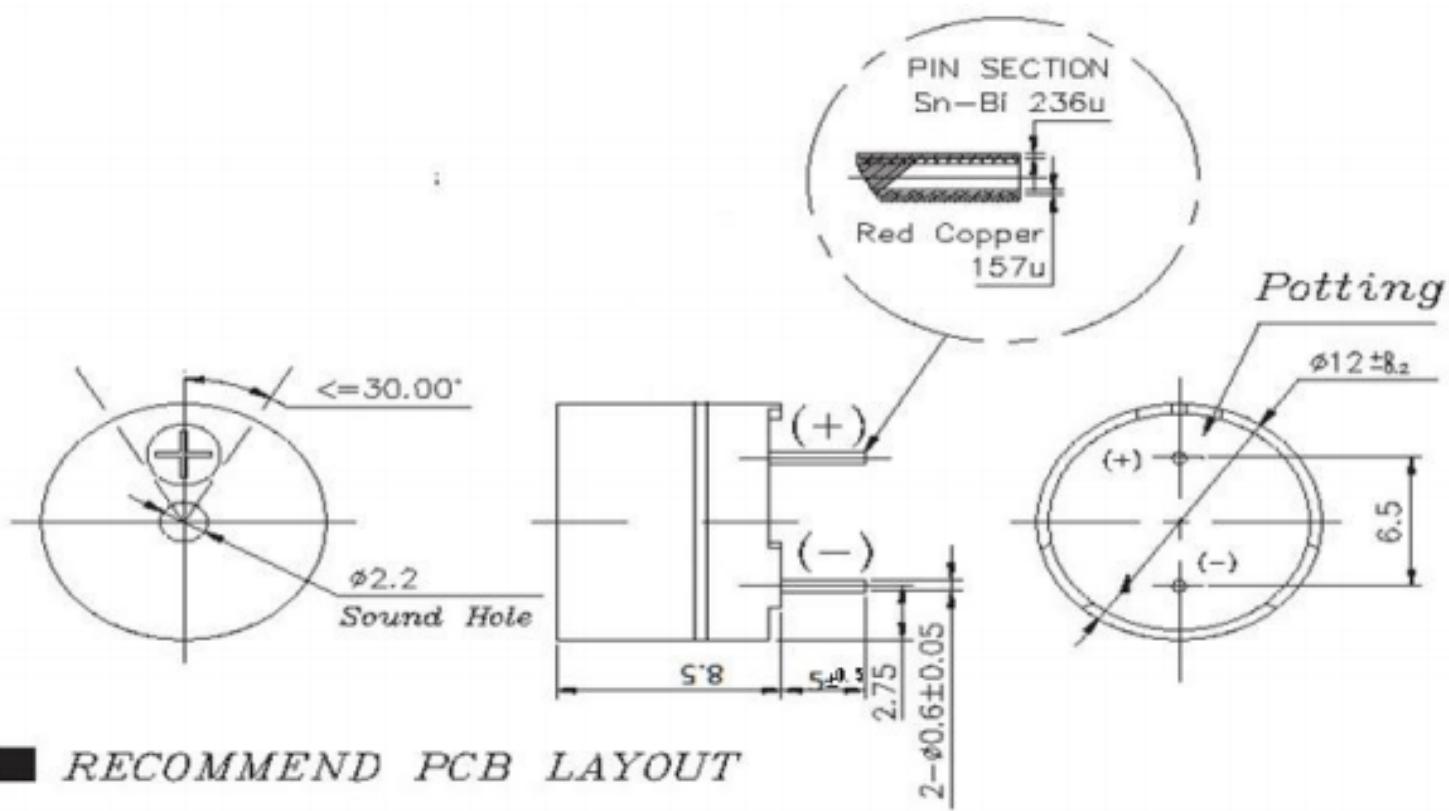


项目/Item		试验条件/Test condition	判断标准/Criteria
1	高温保存试验 High temperature Preservation	+85°C环境下放置96小时 Exposure to +85°C for 96 hrs.	经过测试, 符合规格, 没有任何不合格的外观和性能, 除了 S.P.L 的性能 S.P.L 应 77dB 或更多。 After the test the part shall meet specifications without Any degradation in appearance and performance except S.P.L
	低温保存试验 Low temperature preservation	-40°C环境下放置96小时 Exposure to -40°C for 96 hrs.	
3	耐温试验 Thermal Shock	<p>The diagram illustrates a thermal shock cycle. It starts at -40°C for 30min, followed by a transition period of 30min, and then returns to -40°C for another 30min. This sequence is labeled as 10 cycles. The total duration for one cycle is 12 hours.</p>	
4	温湿度试验 Thermal, Humidity Shock	<p>The diagram shows a combined thermal and humidity shock cycle. It starts at 65°C, 90~95%RH for 5H, followed by a transition period 'a' (labeled 'a, b=0.5H'), then a drop to 25°C, 90~95%RH for 6H, followed by a transition period 'b', and finally a return to 65°C, 90~95%RH for 1H. This sequence is labeled as 10 cycles. The total duration for one cycle is 12 hours.</p>	S.P.L shall be 77dB or more.
5	常温寿命试验 Ordinary Temp. Life	常温 (25°C ± 10°C) 电压1.5VDC连续测试1000小时 Driving the sounder at 1.5VDC for 1000hrs in the room temperature (25°C ± 10°C)	
6	高温寿命试验 High Temp. Life	高温(+85°C) 电压1.5VDC连续测试500小时 Driving the sounder at 1.5VDC for 500hrs in the low temperature (+85°C)	
7	低温寿命试验 Low Temp. Life	低温(-20°C) 电压1.5VDC连续测试500小时 Driving the sounder at 1.5VDC for 500hrs in the low temperature (-40°C)	
8	振动试验 Vibration	10~55~10Hz正弦波测试1分钟, 振幅 1.52mm 最大91m/S <sup>2</sup> X, Y, Z三个方向每个2小时总计6小时  10~55~10Hz Sinewave, Sweep 1 min, Amplitude 1.52mm Max91m/S <sup>2</sup> X, Y, Z 3Direction 2hrs each, Total 6hrs	
9	自由掉落试验 Free drop	70cm高自由掉落到厚40mm的木板上, 每个方向一次 Free drop, 70cm height, on wood board (t40mm) X, Y, Z 3Direction 1time each, total 3times.	排除弯曲的针 Exclude bending of Pin
10	引脚可焊性试验 Solderability	40°C, 相对湿度90~95%RH放置240小时, 370±5°C焊接温度。浸泡时间: 6±0.5sec。  Pretreatment: 40°C, 90~95%RH*240hrs Soldering into solderbath: Solder Temp. 370±5°C Soaking Time: 6±0.5sec	引脚95%必须覆盖着焊料 95% surface of lead pins must be covered with fresh solder and no soldering holes Should be found
11	波峰焊耐热试验 Solder heat resistance	250±5°C焊接温度。浸泡时间3±0.5sec Soldering into solderbath: Solder Temp. 250±5°C Soaking Time: 3±0.5sec	经过测试, 符合规格, 没有任何不合格的外观和性能 After the test the part
12	耐洗性试验 Washability	溶剂: 去离子水, 溶剂温度: 55±5°C, 浸泡时间: 5±0.5分钟 Solvent: deionized water, Solvent temp: 55±5°C Soaking time: 5±0.5minutes	Shall meet specifications without any degradation in appearance and performance

13	引脚拉力试验 Lead strength	10N的拉力在引脚上拉10±1秒 Pull load on the direction of the terminal axis for 10±1 sec.	
14	绝缘电阻	测试设备：兆欧表，型号：ZC25-4 电压等级：500V	≥100兆欧
15	耐压测试	AC 500V 1分钟	无击穿

# \* WAVE SOLDER AND WASH ALLOWED.

## ■ DIMENSION



## ■ RECOMMEND PCB LAYOUT

