

规格书 Specification

品名
Model name

HND-3015A

PROPRIETARY
Huaneng Electronic co.,Ltd.

CONFIDENTIAL
Huaneng Electronic co.,Ltd.

| | |
|----------------|--|
| Version # | Spec V1.0 |
| 制作日期 Date | 2018/03/13 |
| 准备 Prepared | Yang shu yin Acoustic specialist,R&D Dept. |
| 审核 Approved | Zhang chang hua Executive Manager,R&D Dept. |



江苏华能电子有限公司

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

1.适用范围：本规范适用于HND-3215蜂鸣器。

This specifications apply the HND-3215 buzzer.

2.基本规格/General specification

| 项目/Item | 规格/Spec | 条件/Condition |
|---------|---|--------------------------|
| 1 | 额定电压 Rated voltage | 12VDC |
| 2 | 工作电压 Operation voltage | 3-24VDC |
| 3 | 声压 Sound Pressure Level=SPL | Min 85dB Typical 90dB |
| 4 | 振荡频率 Oscillation frequency | 3900±500Hz |
| 5 | 响应时间 Response time | Max 50mS |
| 6 | 工作温度范围 Range of operation temperature | -20~+80℃ |
| 7 | 保存温度范围 Range of preservation temperature | -30~+85℃ |
| 8 | 引线强度 Terminal strength | 10N |
| 9 | 外部尺寸 Externals size | Φ32*15 |
| 10 | 重量 Mass | 4g |

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

最低工作电压
Lowest operation voltage

声压 ≥85dB
SPL ≥85dB

拉负荷方向的终端轴
Pull load on the direction of the
terminal axis

参阅附图
Refer to the attached drawing

☆标准状态：常温（15~35℃），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℃),Humidity(25~85%RH),Air pressure(860~1060hPa)

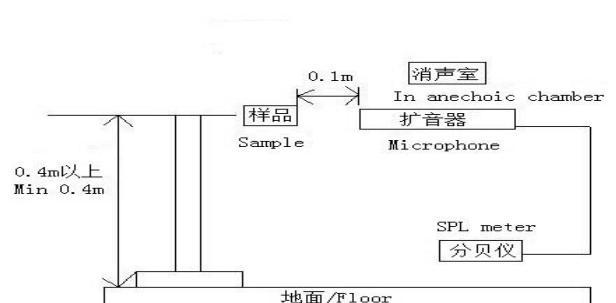
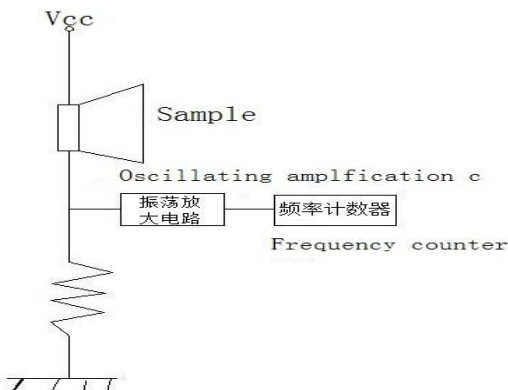
In case of doubtful judgment,the test is re-performed under Basic State.

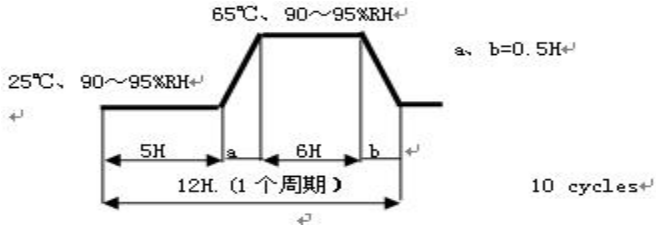
☆基本情况：温度。（20±2℃），湿度（60~70%相对湿度），空气压力（860~1060hpa）

Basic State: Temp.(20±2℃),Humidity(60~70%RH),Air pressure(860~1060hPa)

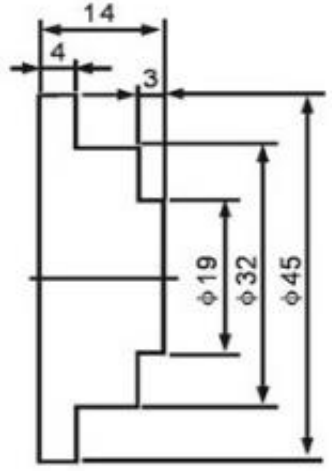
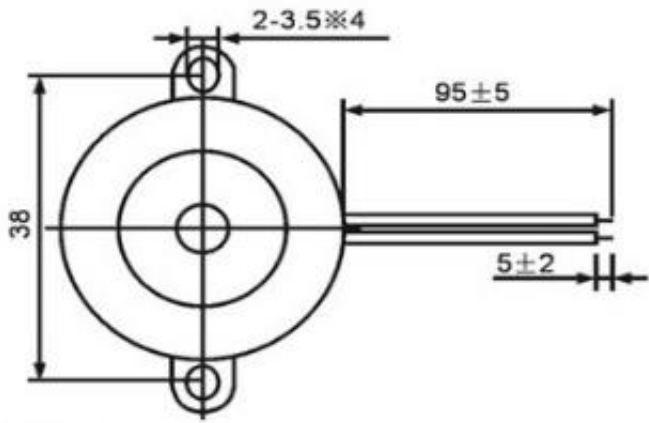
<标准驱动电路>/<Standard Drive Circuit>

<标标测试治具>/<Standard Test Fixture>



| 项目/Item | 试验条件/Test condition | 判断标准/Criteria | 引用规格 |
|--|---|---|------|
| 1 高温保存试验 High temperature Preservation | +85℃环境下放置48小时 Exposure to +85℃ for 48 hrs. | 经过测试,符合规格,没有任何不合格的外观和性能,除了是85分贝或以上(3300±500 Hz) After the test the part shall meet specifications without any degradation in appearance and performance except SPL. SPL shall be 85dB More. (at 3300±500 Hz) | |
| 2 低温保存试验 Low temperature preservation | -40℃环境下放置48小时 Exposure to -40℃ for 48 hrs. | | |
| 3 耐温试验 Thermal Shock |  10次周期 10 cycles | | |
| 4 温湿度试验 Thermal, Humidity Shock |  10 cycles | | |
| 5 常温寿命试验 Ordinary Temp. Life | 常温(25℃±10℃)电压12VDC连续测试48小时 Driving the sounder at 12VDC for 48hrs in the room temperature(25℃±10℃) | | |
| 6 高温寿命试验 High Temp. Life | 高温(+85℃)电压12VDC连续测试2小时 Driving the sounder at 12VDC for 2hrs in the low temperature(+85℃) | | |
| 7 低温寿命试验 Low Temp. Life | 低温(-40℃)电压12VDC连续测试2小时 Driving the sounder at 12VDC for 2hrs in the low temperature(-40℃) | | |
| 8 端子拉力试验 Lead strength | 10N的拉力在端子上拉10±秒 Pull load on the direction of the terminal axis for 10± sec. | | |
| 9 振动试验 Vibration | 10~55~10Hz正弦波测试1分钟, 振幅 1.52mm 最大91m/S ² 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 ² X, Y, Z 3Direction 2hrs each, Total 6hrs | | |
| 10 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 | |
| 11 波峰焊耐热试验 Wave solderheat resistance test | 262±10℃焊接温度。时间5±0.5sec Soldering into solderbath:Solder Temp. 262±10℃ Soaking Time: 5±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 Shall meet specifications without any degradation in appearance and performance | |
| 12 耐洗性试验 Washability | 溶剂: 去离子水, 溶剂温度: 55±5℃, 时间: 5±0.5分钟 Solvent: deionized water, Solvent temp: 55±5℃ Soaking time: 5±0.5minutes | | |
| 13 端子可焊性试验 Solderability | 40℃, 相对湿度90~95%RH放置48小时, 370±5℃焊接温度。时间: 6±0.5sec。 Pretreatment: 40℃, 90~95%RH*48hrs Soldering into solderbath:Solder Temp. 370±5℃ Soaking Time: 6±0.5sec | | |
| | | 端子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 | |

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| 一般公差 | ±0.3 |
| 角度公差 | |



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| | | | 审批 APPROVED | 张长华 | 材料 MATERIAL | PPO料 | 制造日期 DATE | 出图日期 | |
| | | | 检查 CHECKED | 杨树银 | 加工 TREATMENT | | 品名 NAME | APPEARANCE DRWG | |
| | | | 设计 DESIGNED | | 表面处理 SURF. FIN. | | | 产品名称 | HND-3215 |
| 日期 DATE | 变更号码 CHANGE NO. | 变更内容 CHANGE CONTENTS | 制图 DRAWN | 江苏华能电子有限公司 HUANENG Electronic Co, Ltd | | | 尺度 SCALE | 2/1 mm | 品号 CODE NO. |

产品曲线图

