

样品承认书

Specification For Approval

| | |
|---------------------------|----------------|
| 客户名称 Customer Name | |
| 品 名 Variety | 压电无源蜂鸣器 |
| 型 号 Part No | SFN-12055PA6.5 |
| 客户型号 The customer Part No | |
| 样品日期 Model Date | |

客户承认签署

| | | |
|----------------------|---------------------|----------------------|
| 签定结果: | | |
| 核准/ <i>Approved:</i> | 审核/ <i>Checked:</i> | 经办/ <i>Designed:</i> |
| | | |

海旭确认签署

| | | |
|----------------------|---------------------|----------------------|
| 核准/ <i>Approved:</i> | 审核/ <i>Checked:</i> | 经办/ <i>Designed:</i> |
| 丁爱勇 | 黄锡梅 | 刘倪汀 |

承认后请签回一份! *Thank you very much!*

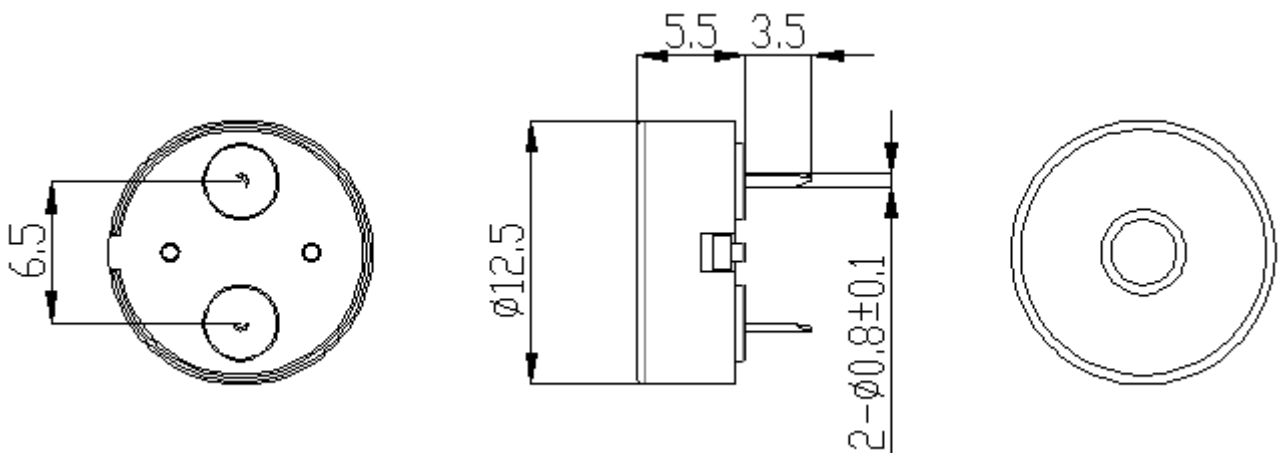
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Email: ZShaixu@163.com Web: <http://www.haixucn.com/>

型号 part No: SFN-12055PA6.5

性能参数 Electrical Characteristics

| | | |
|----|--|---|
| 1 | 最大工作电压 MAX Operating Voltage (Vp_p) | 30 |
| 2 | *在 10cm 处测试声压值 Sound Output at 10cm (dB) | ≥ 80 (at 4KHz Square Wave 5Vp-p) |
| 3 | *消耗电流 Current Consumption (mA) | ≤ 5 |
| 4 | 共振频率 Resonant Frequency (Hz) | 4000 |
| 5 | 电容量 Capacitance at 1000Hz (nF) | 12 \pm 30% |
| 6 | 工作温度 Operating Temperature ($^{\circ}$ C) | -20 \sim +70 |
| 7 | 储存温度 Storage Temperature ($^{\circ}$ C) | -30 \sim +80 |
| 8 | 单品重量 Weight (g) | 0.6 |
| 9 | 外壳材料 Housing Material | 黑色 Black PBT |
| 10 | 环保要求 Environmental Protection Regulation | RoHS |
| 11 | 焊接方式 Welding method | 手工焊接 Artificial welding / 波峰焊接 wave soldering |

外形图 DIMENSIONS (UNIT: mm) 未标注公差按 ± 0.5 mm 计算 Tolerance: ± 0.5 mm Except Specified



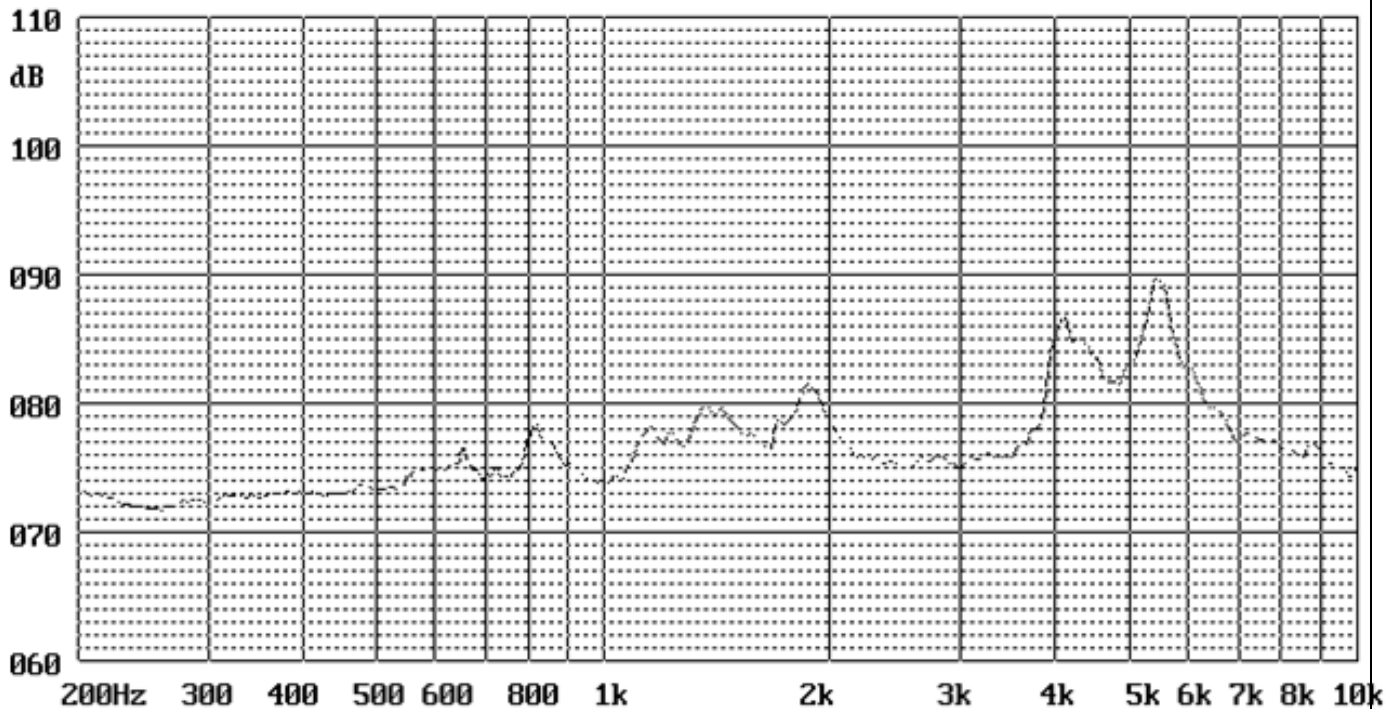
| 型号 part No: SFN-12055PA6.5 | | |
|----------------------------------|--|--|
| 可靠性测试 RELIABLY TEST | | |
| 项目 ITEM | 测试条件 TESTING CONDITION | 试验后要求 VARIANCE AFTER TEST |
| 高温试验 High Temperature Test | 放置 85±2℃ 96 小时，再室温放置 2 小时。 After being placed in a chamber with 85±2℃ for 96 hours and then being placed in natural condition for 2 hours. | 声压变化±10dB。 Allowable variation of SPL after test: ±10dB. |
| 低温试验 Low Temperature Test | 放置-30±2℃ 96 小时，再室温放置 2 小时。 After being Placed in a chamber with -30±2℃ for 96 hours and then being placed in natural condition for 2 hours. | 声压变化±10dB。 Allowable variation of SPL after test: ±10dB. |
| 恒湿试验 Humidity Test | 存放在温度: 60±5℃湿度: 90%--95%的环境里 96 小时，然后放置到室温下放置 2 小时后测试。 Stored in the temperature humidity: 60±5℃ 90%--95% environment for 96 hours, and then placed into storage at room temperature for 2 hours after the test. | 声压变化±10dB。 Allowable variation of SPL after test: ±10dB. |
| Temperature Cycle Test 温度循环试验 | 放置-30±2℃ 30 分钟、25℃±10℃放置 15 分钟，15 分钟后再将产品放入 +85±2℃30 分钟、常温 25℃±10℃放置 15 分钟，20 个循环后放置常温下 2 小时。 After being placed in a chamber with -30±2℃ for 30 minutes, products shall be placed at room temperature(25℃±10℃).After 15 minutes at this temperature, products shall be placed in a chamber at +85±2℃.After 30 minutes at this temperature, products shall be return to room temperature (25℃±10℃) for 15 minutes. After 20 above cycles, products shall be measured after being placed in natural condition for 2 hours. | 声压变化±10dB。 Allowable variation of SPL after test: ±10dB. |
| Drop Test 跌落试验 | 正面和侧面从 100mm 高度只有跌落在 4cm 厚度的木板上 3 次。 The front and side from a height of 100mm only drop in the 4cm thickness of theboard 3 times each. | 声压变化±10dB。 Allowable variation of SPL after test: ±10dB. |
| Vibration Test 振动试验 | After being applied vibration of amplitude of 1.5mm with 10 to 55 Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours. 频率 10~55Hz, 振幅 1.5mm, 3 个方向, 振动 2 小时。 | 声压变化±10dB。 Allowable variation of SPL after test: ±10dB. |
| Solderability Test 可焊性试验 | Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of 260±5℃ for 3±0.5 seconds (Except the edge of terminals). 端子在松香中浸入 5 秒并在 260±5℃锡中浸 3±0.5 秒 | 95% min. lead terminals shall be wet with solder 有 95%吃锡效果。 |

型号 part No: SFN-12055PA6.5

可靠性测试 RELIABLY TEST

| 项目 ITEM | 测试条件 TESTING CONDITION | 试验后要求 VARIANCE AFTER TEST |
|--|---|---|
| Continuous electricity test 连续通电试验 | Temperature: room temperature 25 °C Voltage: rated voltage 5 V Frequency: the rated frequency for 4 KHZ Time: 500 hours 温度: 室温 25°C 电压: 额定电压 5V, 频率: 额定频率 4KHz 时间: 500 小时 | 声压变化±10dB。 Allowable variation of SPL after test: ±10dB. |
| Terminal Strength Pulling Test 端子强度试验 | The force of 9.8N(1.0kg) is applied to each terminal in axial direction for 10 seconds. 在每个端子上施加 98N (1.0kg) 的轴向力 10 秒。 | No visible damage and cutting off. 端子没有明显的损坏和切断 |

Typical Frequency Response Curve (音频曲线图)



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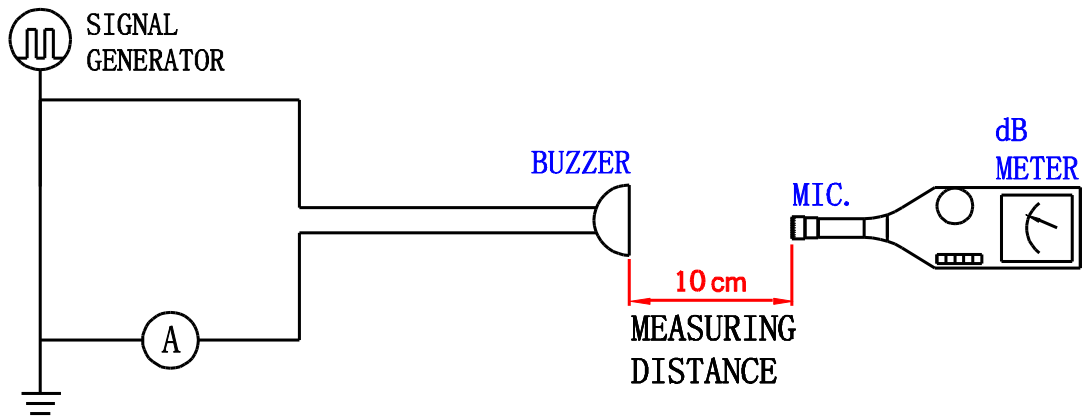
TESTING METHOD (测试方法)

Standard Measurement conditions

Temperature: $25 \pm 2^\circ\text{C}$ Humidity: 45-65%

Acoustic Characteristics:

The oscillation frequency, current consumption and sound pressure are measured by the measuring instruments shown below



In the measuring test, buzzer is placed as follows:

