



请承认书

Version No.: V2.0

常州昊翔电子有限公司  
Changzhou HaoXiang Electronic Co., LTD

客户名称

CUSTOMER NAMED : \_\_\_\_\_

产品名称

COMMODITY : PIEZO BUZZER

产品型号

MODEL NO : TDA-112-4800Hz(1.3mm)

客户料号

PART NO : \_\_\_\_\_

|    |    |    |                 |
|----|----|----|-----------------|
| 审核 | 秦皓 | 主办 | 唐俐雅 Sept.6,2018 |
|----|----|----|-----------------|

|       |  |    |  |
|-------|--|----|--|
| 客户承认栏 |  |    |  |
| 承认    |  | 拒收 |  |
|       |  |    |  |

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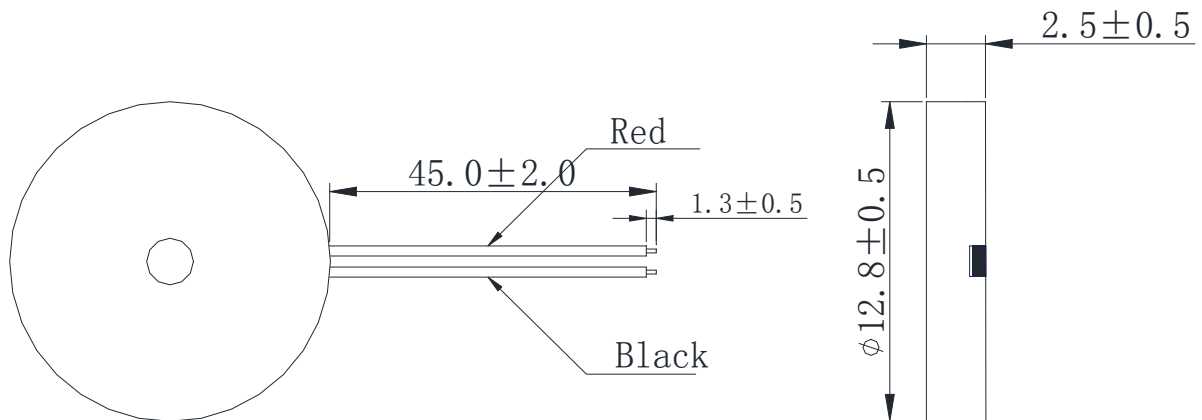
## A. SCOPE

This specification applies piezo buzzer, **TDA-112-4800Hz(1.3mm)**

## B. SPECIFICATION

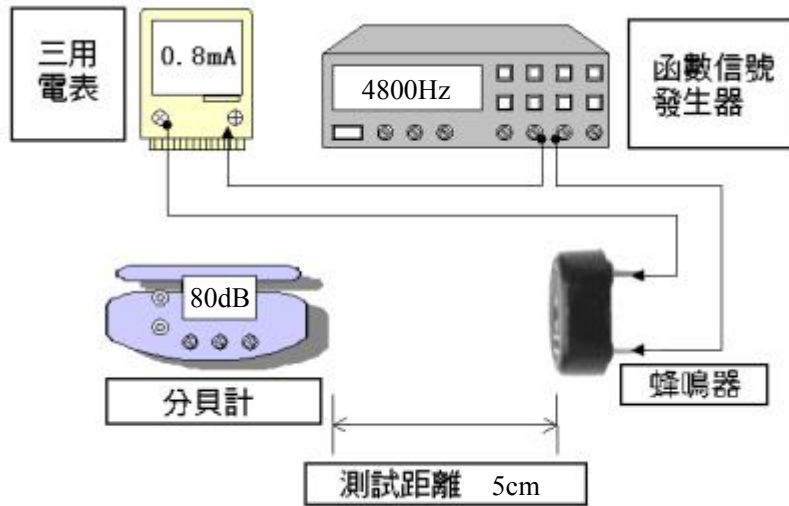
| No. | Item                                | Unit | Specification   | Condition              |
|-----|-------------------------------------|------|-----------------|------------------------|
| 1   | Oscillation Frequency               | Hz   | 4800            | square wave            |
| 2   | Operating Voltage                   | Vp-p | 25 max          |                        |
| 3   | Current Consumption                 | mA   | MAX. 2          | at 5Vp-p               |
| 4   | Sound Pressure Level                | dB   | MIN. 80         | at 10cm 9Vp-p 4800Hz   |
| 5   | Operating Temperature               | °C   | -20 ~ +60       |                        |
| 6   | Storage Temperature                 | °C   | -30 ~ +70       |                        |
| 7   | Dimension                           | mm   | Ø12.8xH2.5      | See appearance drawing |
| 8   | Weight (MAX)                        | gram | 1.5             |                        |
| 9   | Housing Material                    |      | ABS757( Black ) |                        |
| 10  | Leading Pin                         |      | UL1571 AWG32#   | See appearance drawing |
| 11  | Environmental Protection Regulation |      | RoHS            |                        |

## C. APPEARANCE DRAWING

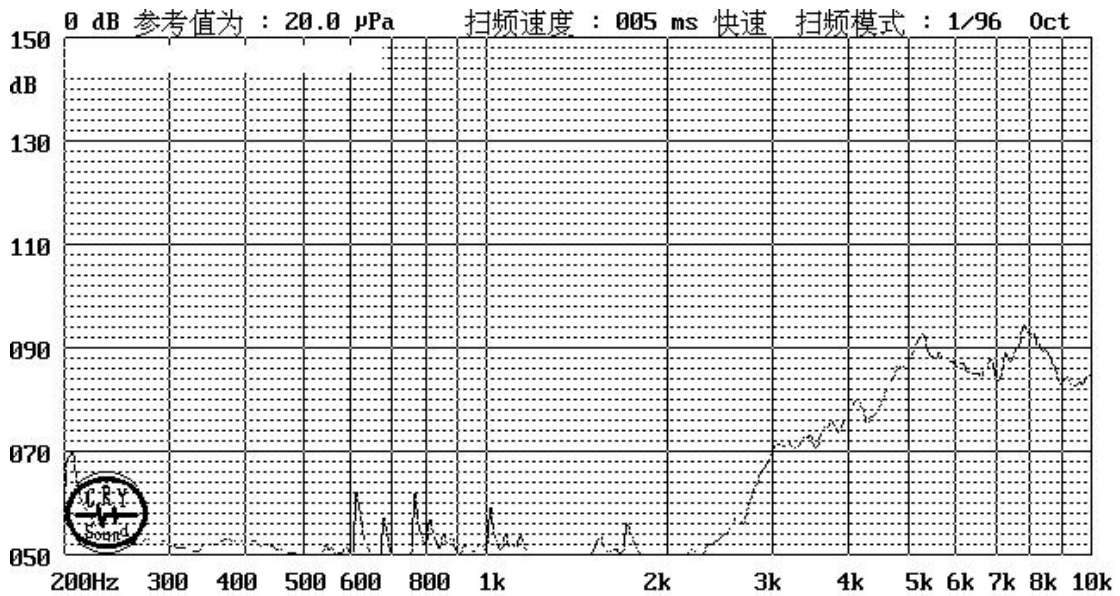


**Unit:mm Tolerance :  $\pm 0.5$ mm**

## D. RECOMMEND DIRVING CIRCUIT



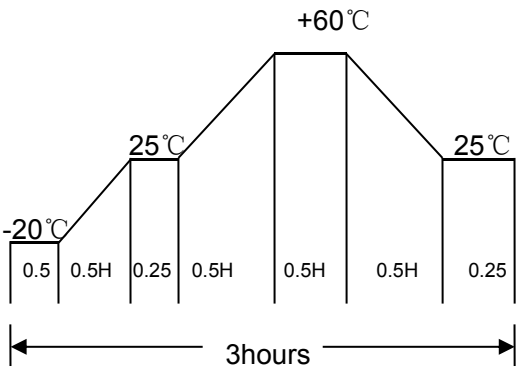
## E. FREQUENCY CURVE



## F. MECHANICAL CHARACTERISTICS

| NO | Item                      | Test Condition   | Evaluation standard  |
|----|---------------------------|--|--|
| 1  | Solderability             | Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in solder bath of $270\pm 5^{\circ}\text{C}$ for $3\pm 0.5$ seconds.                          | 90%min stripped wires shall be wet with solder.(except the edge of terminal)   |
| 2  | Soldering Heat Resistance | Stripped wires are immersed up to 1.5mm from insulation in solder bath of $300\pm 5^{\circ}\text{C}$ for $5\pm 0.5$ seconds or $260\pm 5^{\circ}\text{C}$ for $10\pm 1$ seconds. | No interference in operation   |
| 3  | Terminal Strength Pulling | The force $10\pm 1$ seconds of 9.8N is applied to each terminal in axial direction   | No damage and cutting off  |
| 4  | Vibration                 | Buzzer shall be measured after being applied vibration of 1.5mm with 10 to 55Hz band of vibration frequency to each of 3 per-pendicular directions for 2 hours.                  | The value of oscillation frequency and current consumption should be in $\pm 10\%$ compared with initial ones. The SPL should be in $\pm 10\text{dB}$ compared with initial one. |
| 5  | Drop test                 | Dropped naturally from 75cm height onto the surface of 40mm thick wooden board of 3 directions for 1times.   |  |

## G. ENVIRONMENT TEST

| NO | Item             | Test Condition   | Evaluation standard   |
|----|------------------|--|---|
| 1  | High temp. test  | After being placed in a chamber at +70°C for 96 hours  | Being placed for 4 hours at 25°C, buzzer shall be measured. The value of oscillation frequency and current consumption should be in ±10% compared with initial one. The SPL should be in ±10dB compared with initial one. |
| 2  | Low temp. test   | After being placed in a chamber at -30°C for 96 hours  |   |
| 3  | Humidity test    | After being placed in a chamber at 40°C and 85±5% relative humidity for 96 hours   |   |
| 4  | Temp. cycle test | <p>The part shall be subjected to 5 cycles. One cycle shall be consist of:</p>  <p>The diagram shows a temperature profile over a 3-hour period. It starts at -20°C for 0.5 hours, then ramps up to 25°C over 0.5H. It dwells at 25°C for 0.25 hours, then ramps up to +60°C over 0.5H. It dwells at +60°C for 0.5H, then ramps down to 25°C over 0.5H. It dwells at 25°C for 0.25 hours, and finally ramps down to -20°C over 0.25 hours. A double-headed arrow at the bottom indicates the total duration is 3 hours.</p> |   |

## H. RELIABILITY TEST

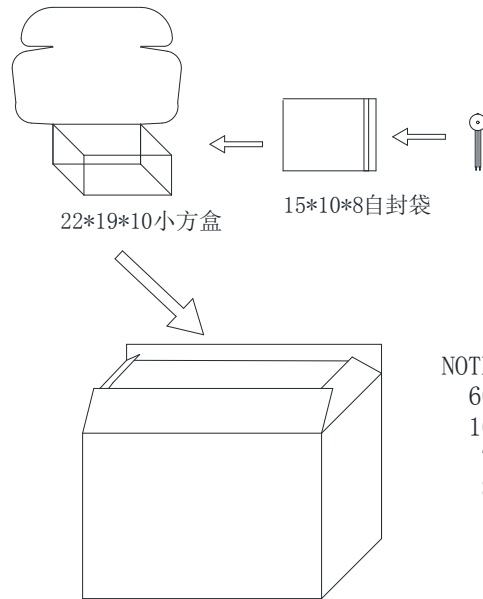
| NO | Item                | Test condition  | Evaluation standard   |
|----|---------------------|---|---|
| 1  | Operating life test | <ol style="list-style-type: none"> <li>Continuous life test<br/>96 hours continuous operation at 60°C with maximum rated voltage applied.</li> <li>Intermittent life test<br/>A duty cycle of 1 minute on, 5 minutes off, a minimum of 1000 times at room temp. (25±2°C) and maximum rated voltage applied</li> </ol> | Being placed for 4 hours at 25°C, buzzer shall be measured. The value of oscillation frequency and current consumption should be in ±10% compared with initial one. The SPL should be in ±10dB compared with initial one. |

### TEST CONDITION

**Standard Test Condition :** a) Temperature : +5 ~ +35°C    b) Humidity : 45-85%    c) Pressure : 860-1060mbar

**Judgment Test Condition:** a) Temperature : +25±2°C    b) Humidity : 60-70%    c) Pressure : 860-1060mbar

## I. PACKING STANDARD



NOTE:  
600pcs per valve bag  
10valve bag per inner box  
Total 3000PCS per box  
SIZE 40.5\*40\*47CM

## J. NOTE CAUTIONS

- a. Can not be applied DC bias voltage and a sounding body or pronunciation elements, otherwise its insulation resistance will decrease and the use of performance degradation.
- b. Can not be imposed over pronunciation body or pronunciation components allows the use of voltage range of the voltage on the.
- c. Please pay attention in welding process, don't let soldering flux invasion into the sound chamber , otherwise flux can cause defect conduction.
- d. Use should handle with care, avoiding direct pressure contact, or inadvertently falling down, to prevent the occurrence of fault, or the generation characteristics of abnormal movements.

## K. NOTICE ON PRODUCT STORAGE

- a. Please store the products in room where the temperature / humidity is stable. And avoid such places where there are large temperature changes. Please store the products under the following conditions :  
Temperature : -10 to +40 (degree C)  
Humidity : 15 to 85% R.H.
- b. Expire date (Shelf life) of the products is 6 months after delivery under the conditions of a sealed and an unopened package. Please use the products within 6 months after delivery.If you store the products for a long time (more than 6months), use carefully because the products may be degraded in the solder-ability and/or rusty. Please confirm solder-ability and characteristics for the products regularly.
- c. Please use the products immediately after the package is opened, because the characteristics may be reduced in quality, and/or be degraded in the solder-ability due to storage under the poor condition.

