



## SPECIFICATION OF PRODUCT 承认书

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

DESCRIPTION: Piezo Buzzer

FUSHENG P/N: FSD-2312W

CUSTOMER P/N: \_\_\_\_\_

DATE: \_\_\_\_\_

| CUSTOMER | APPROVER   | CHECKER  |
|----------|------------|----------|
|          | Yunqing Wu | Bing Yan |

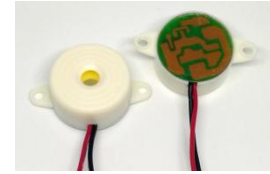
### 泰州福声电子科技有限公司

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电话: 0086-523-86219066 传真: 0086-523-81601108

邮箱: sales@electronic-tech.cn

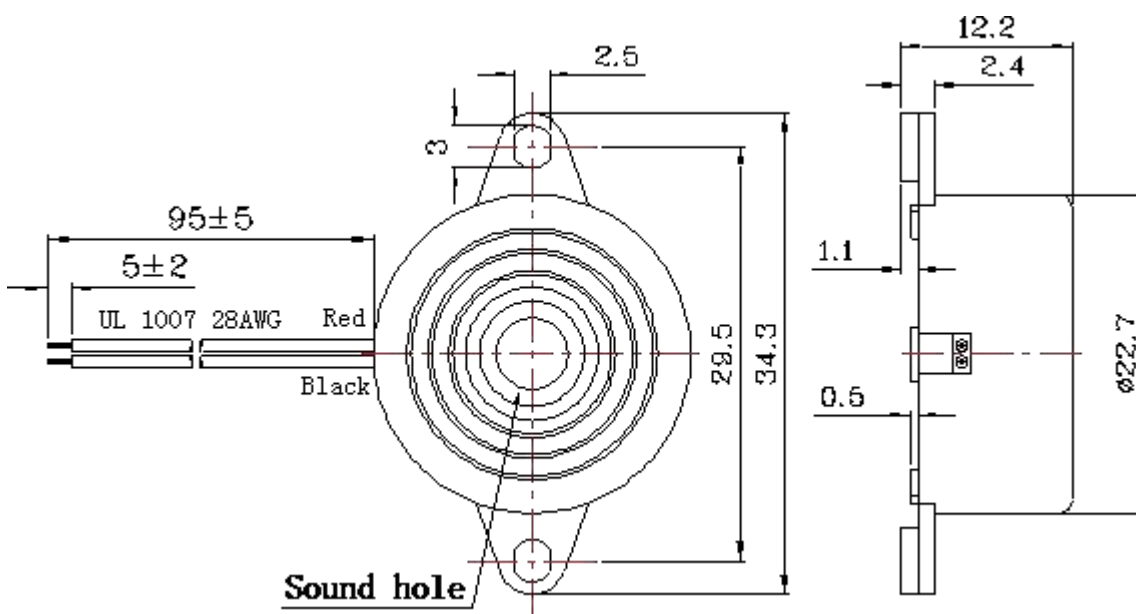
网址: [www.tzfsdz.com](http://www.tzfsdz.com)



## 1. SPECIFICATION 规格

| No. | Item                                | Unit | Specification | Condition                |
|-----|-------------------------------------|------|---------------|--------------------------|
| 1   | Oscillation Frequency               | Hz   | 4000          |                          |
| 2   | Operating Voltage                   | VDC  | 3 ~ 24        |                          |
| 3   | Rated Voltage                       | VDC  | 12            |                          |
| 4   | Current Consumption                 | mA   | MAX. 10       | at Rated Voltage         |
| 5   | Sound Pressure Level                | dB   | MIN. 85       | at 10cm at Rated Voltage |
| 6   | Operating Temperature               | °C   | -20 ~ +70     |                          |
| 7   | Storage Temperature                 | °C   | -30 ~ +85     |                          |
| 8   | Dimension                           | mm   | Φ23.0 x H12   | See appearance drawing   |
| 9   | Weight (MAX)                        | gram | 4             |                          |
| 10  | Housing Material                    |      | ABS( Black )  |                          |
| 11  | Leading Pin                         |      | Wire Type     | See appearance drawing   |
| 12  | Environmental Protection Regulation |      | RoHS          |                          |

## 2. APPEARANCE DRAWING 尺寸图



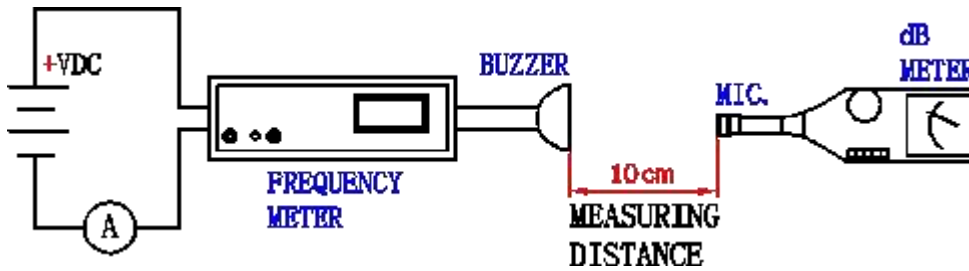
### 3. TESTING METHOD 测量方式

#### Standard Measurement conditions

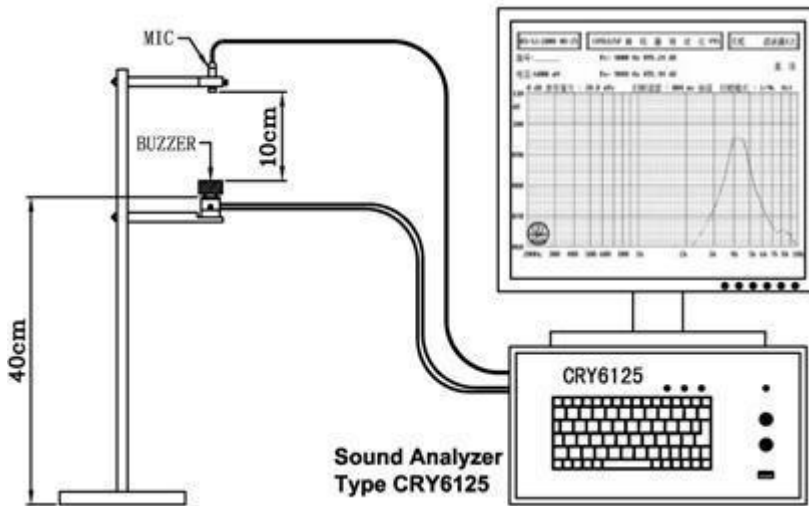
Temperature:  $25 \pm 2^\circ\text{C}$  Humidity: 45-65%

#### Acoustic Characteristics:

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

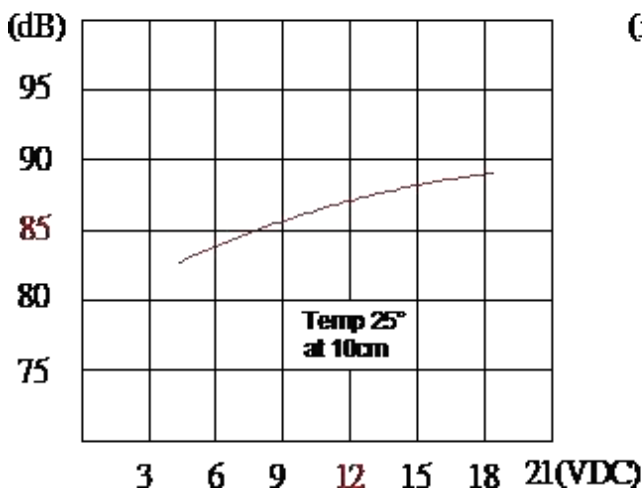


In the measuring test, buzzer is placed as follows:

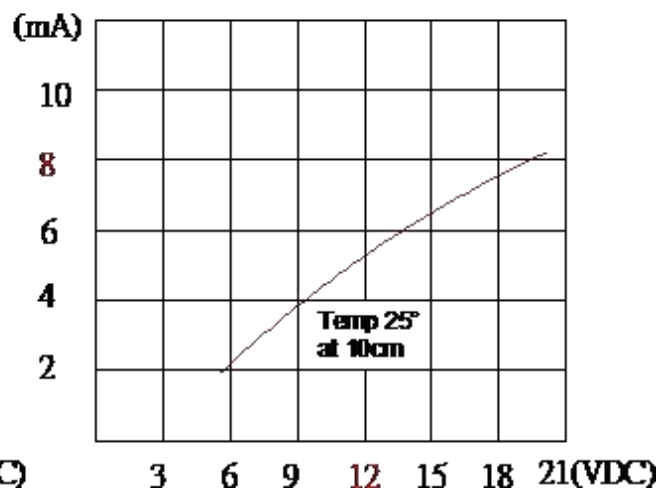


### 4. VOLTAGE / CURRENT / SOUND PRESSURE CHARACTERISTICS

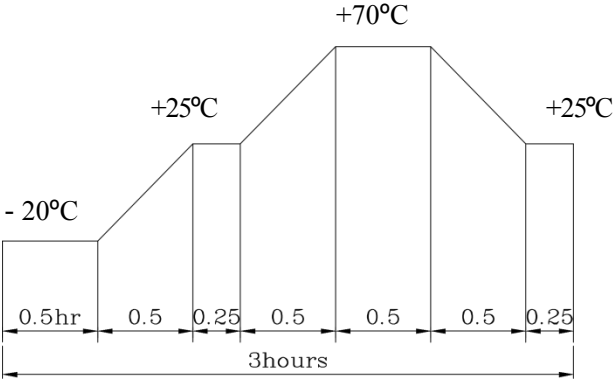
dB-V



mA-V



## 5. RELIABILITY TEST 可靠性测试

| NO. | ITEM                            | TEST CONDITION AND REQUIREMENT   |
|-----|---------------------------------|--|
| 1   | High Temperature Test (Storage) | After being placed in a chamber with 80 °C for 96 hours and then being placed in normal condition for 2 hours.<br>Allowable variation of SPL after test: 10dB.   |
| 2   | Low Temperature Test (Storage)  | After being Placed in a chamber with -30 °C for 96 hours and then being placed in normal condition for 2 hours.<br>Allowable variation of SPL after test: 10dB.  |
| 3   | Humidity Test                   | After being Placed in a chamber with 90-95% R.H. at 40 °C for 96 hours and then being placed in normal condition for 2 hours.<br>Allowable variation of SPL after test: 10dB.  |
| 4   | Temperature Cycle Test          | The part shall be subjected to 5 cycles. One cycle shall be consist of:<br> <p>The diagram shows a temperature cycle profile over 3 hours. It starts at -20°C for 0.5 hours, then ramps up to +25°C in 0.5 hours, holds at +25°C for 0.25 hours, ramps up to +70°C in 0.5 hours, holds at +70°C for 0.5 hours, ramps down to +25°C in 0.5 hours, holds at +25°C for 0.25 hours, and finally ramps down to -20°C in 0.25 hours. The total duration is 3 hours.</p><br>Allowable variation of SPL after test: 10dB. |
| 5   | Drop Test                       | Drop on a hard wood board of 4cm thick, any directions, 6 times, at the height of 75cm.<br>Allowable variation of SPL after test: 10dB.  |
| 6   | Vibration Test                  | 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 .<br>Allowable variation of SPL after test: 10dB.   |
| 7   | Solderability Test              | Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +300 °C for 3 1 seconds .<br>90% min. lead terminals shall be wet with solder<br>(Except the edge of terminals).  |
| 8   | Terminal Strength Pulling Test  | The force of 9.8N(1.0kg) is applied to each terminal in axial direction for 10 seconds.<br>No visible damage and cutting off.  |

### TEST CONDITION.

|                         |   |                           |                     |                           |
|-------------------------|---|---------------------------|---------------------|---------------------------|
| Standard Test Condition | : | a) Temperature: +5~ +35°C | b) Humidity: 45-85% | c) Pressure: 860-1060mbar |
| 一般测试条件                  | : | a) 温度 : +5 ~ +35°C        | b) 湿度 : 45-85%      | c) 气压 : 860-1060mbar      |
| Judgment Test Condition | : | a) Temperature: +25 ± 2°C | b) Humidity: 60-70% | c) Pressure: 860-1060mbar |
| 争议时测试条件                 | : | a) 温度 : +25 ± 2°C         | b) 湿度 : 60-70%      | c) 气压 : 860-1060mbar      |