



**APPROVAL SHEET**  
**FOR**  
**PIEZO BUZZER**

**常州富鸿达电子有限公司**

**CHANG ZHOU FHD ELECTRONICS CO., LTD.**

MODEL No.: BP1230S-40

OUR PART No.:

DOCUMENT No

| CUSTOMER | APPROVED | CHECKED |
|----------|----------|---------|
|          |          |         |

Add: Xujia Industrial Park, ZhenLu Town, Changzhou City, Jiangsu China.

江苏省常州市天宁区郑陆镇工业大道 2 号

Tel:+86-519-83822009

Fax:+86-519-88739926

Email: sales@czfhd.com; <http://www.czfhd.com>

|  |            |                 |              |             |  |
|--|------------|-----------------|--------------|-------------|--|
| <b>Specification for Piezoelectric Ceramic Buzzer<br/>SMD Type</b> |            |                 |              | Page 2 of 7 |  |
|  |            |                 |              | Des.        |  |
| <b>Model No.:</b>  | BP1230S-40 | <b>Part No.</b> | 019-1230A-SP | Wang Min    |  |
|  |            |                 |              | 8/18/2021   |  |
|  |            |                 |              | 8/18/2021   |  |

### 1. Document revision history

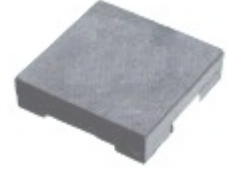
| 修改时间 | 版本 | 修改页次 | 修改内容 | 确认人 |
|------|----|------|------|-----|
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |
|      |    |      |      |     |

| Specification for Piezoelectric Ceramic Buzzer<br>SMD Type |  |            |          | Page 3 of 7  |
|--|--|------------|----------|--------------|
| Model No.:   |  | BP1230S-40 | Part No. | 019-1230A-SP |
|  |  |            |          | Des.         |
|  |  |            |          | Wang Min     |
|  |  |            |          | 8/18/2021    |
|  |  |            |          | Chk.         |
|  |  |            |          | 8/18/2021    |

## 2. Technical Parameter

### Measuring condition

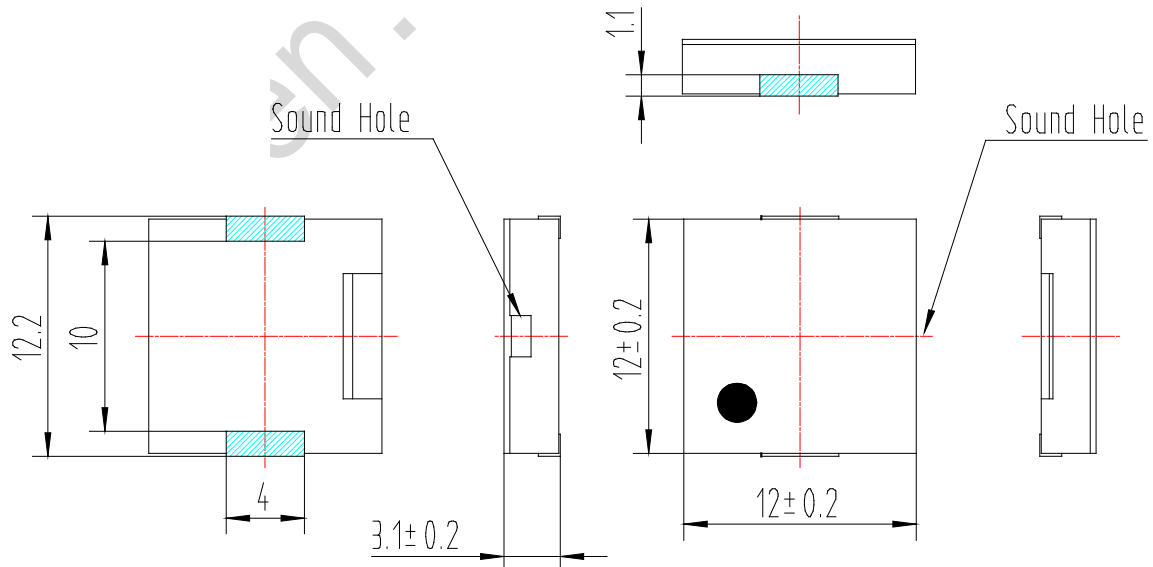
Part shall be measured under a condition (Temperature: 5~35°C, Humidity: 45% ~ 85%R.H., Atmospheric pressure: 860 ~ 1060hPa) unless the standard condition (Temperature: 25±3°C, Humidity: 60±10%R.H. Atmospheric pressure: 860 ~ 1060hPa) is regulated to measure.



|   |                       |  |
|---|-----------------------|--|
| 1 | Resonant Frequency    | 4000±500Hz                                   |
| 2 | Operating Voltage     | 1~25 Vp-p                                    |
| 3 | Rated Current         | Max.2mA ,at 4KHz 50% duty Square Wave 5Vp-p  |
| 4 | Sound Output at 10cm  | Min. 80dB,at 4KHz 50% duty Square Wave 5Vp-p |
| 5 | Capacitance           | 16000±20%pF at 120Hz                         |
| 6 | Operating Temperature | -30°C~+70°C                                  |
| 7 | Store Temperature     | -40°C~+85°C                                  |
| 8 | Net Weight            | Approx 0.5g                                  |
| 9 | RoHS                  | Yes  |

## 3. Dimensions

Unit: mm



\*Unit: mm; Tolerance: ± 0.3mm Except Specified

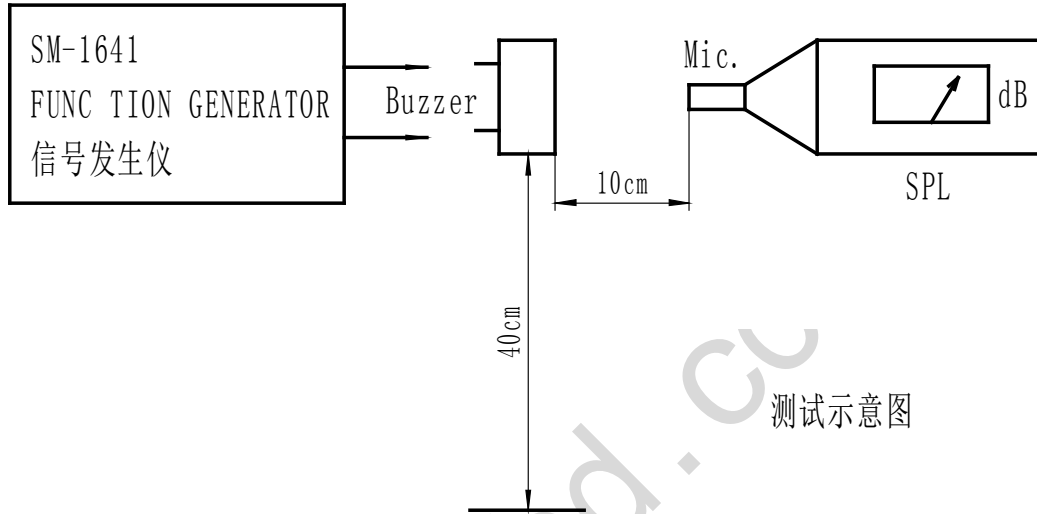
\*Housing Material: Black LCP

\*Terminal plate: 2 soldering pads, tin Plating Brass

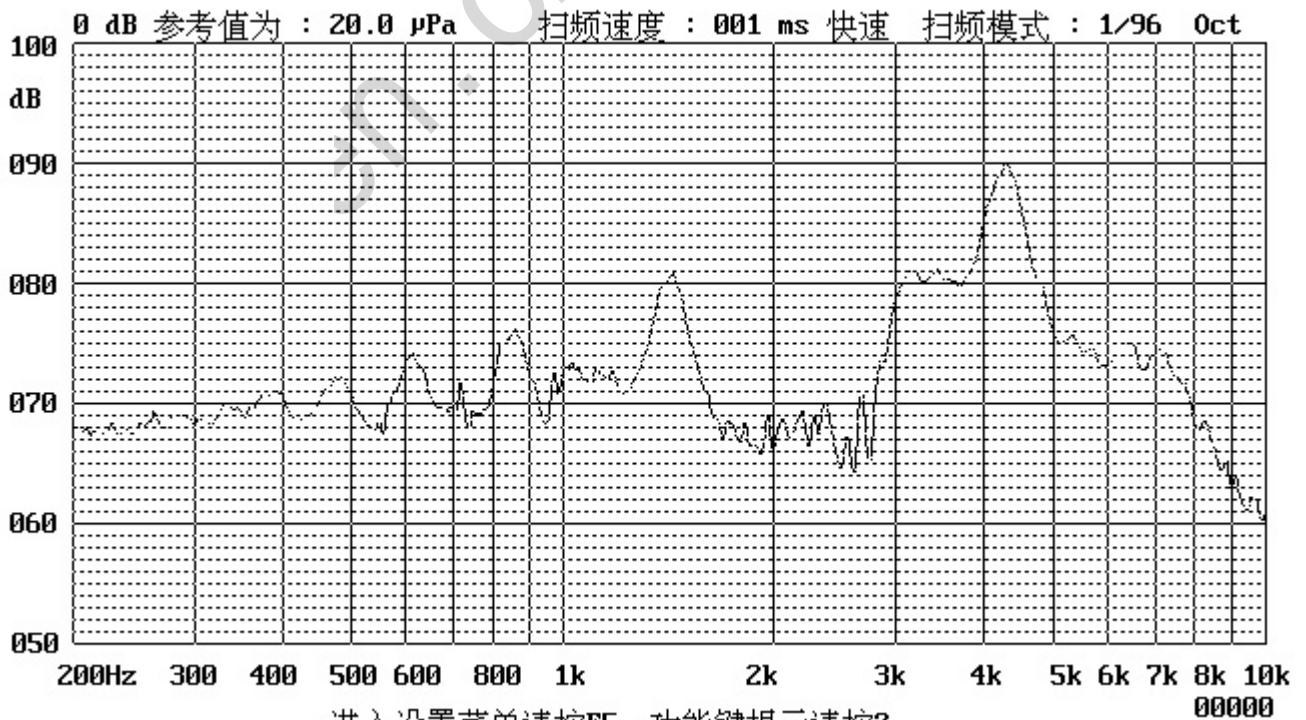
| Specification for Piezoelectric Ceramic Buzzer<br>SMD Type |            |          |              | Page 4 of 7 |           |
|--|------------|----------|--------------|-------------|-----------|
|  |            |          |              | Des.        | Chk.      |
| Model No.:   | BP1230S-40 | Part No. | 019-1230A-SP | Wang Min    |           |
|  |            |          |              | 8/18/2021   | 8/18/2021 |

#### 4. Electrical And Acoustical Measuring Condition

##### Recommended Setting



#### 5. Frequency Response



进入设置菜单请按F5 功能键提示请按?

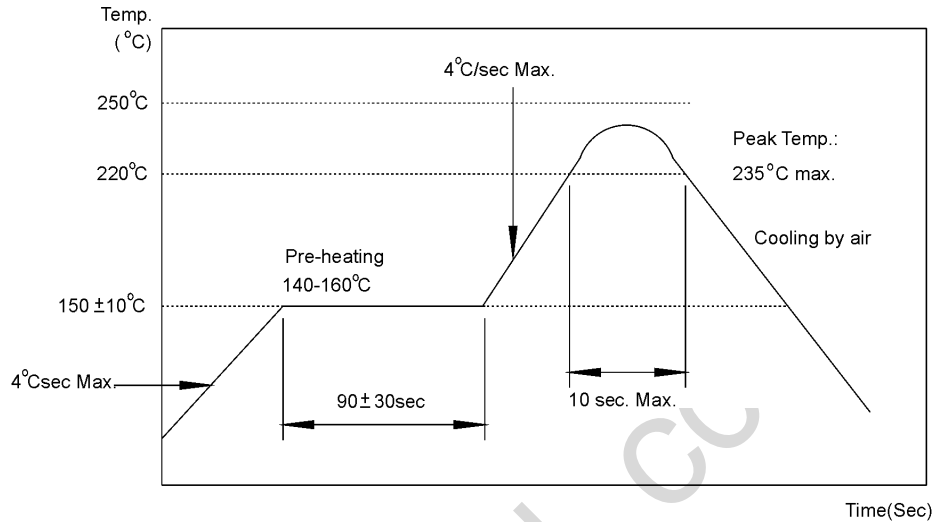
5Vp-p 50% duty Square wave,10cm

| Specification for Piezoelectric Ceramic Buzzer<br>SMD Type |            |          |              | Page 5 of 7 |           |
|--|------------|----------|--------------|-------------|-----------|
|  |            |          |              | Des.        | Chk.      |
| Model No.:   | BP1230S-40 | Part No. | 019-1230A-SP | Wang Min    |           |
|  |            |          |              | 8/18/2021   | 8/18/2021 |

## 6. Surface mounting condition

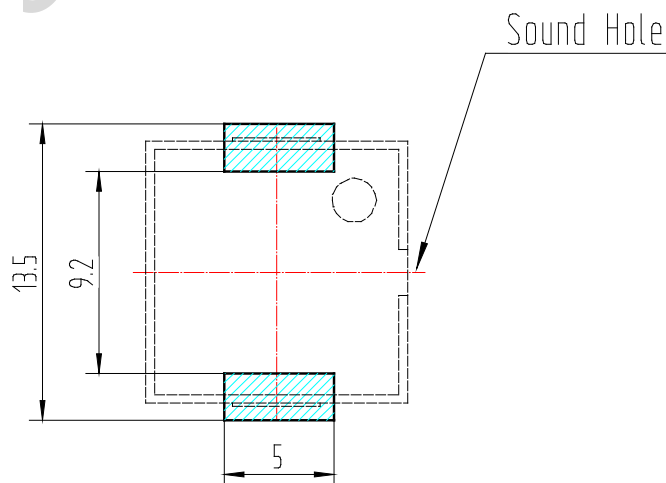
### 6.1 Reflow soldering

Recommendable reflow soldering condition is as follows.



- Note:** (1) In automated mounting of the SMD sound transducers on PCB, any bending, expanding and pulling forces or shocks against the SMD sound transducers shall be kept minimum to prevent them from electrical failures and mechanical damages of the devices.
- (2) In the reflow soldering, too high soldering temperatures and too large temperature Gradient such as rapid heating or cooling may cause electrical failures and mechanical damages of the devices.

### 6.2 Soldering pattern



| Specification for Piezoelectric Ceramic Buzzer<br>SMD Type |            |                 |              | Page 6 of 7 |           |
|--|------------|-----------------|--------------|-------------|-----------|
|  |            |                 |              | Des.        | Chk.      |
| <b>Model No.:</b>  | BP1230S-40 | <b>Part No.</b> | 019-1230A-SP | Wang Min    |           |
|  |            |                 |              | 8/18/2021   | 8/18/2021 |

## 7. Reliability Test

After any following tests the part shall meet specifications without any degradation in appearance and performance except SPL. SPL shall not deviate more than -10 dB from the initial value

### 7.1 Ordinary Temperature Life Test

The part shall be subjected to 96 hours at  $25 \pm 10^\circ\text{C}$ . Input rated voltage Resonant frequency, 1/2 duty Square wave.

### 7.2 High Temperature Test

The part shall be capable of with standing a storage temperature of  $+85^\circ\text{C}$  for 96 hours.

### 7.3 Low Temperature Test

The part shall be capable of with standing a storage temperature of  $-40^\circ\text{C}$  for 96 hours.

### 7.4 Humidity Test

Temperature:  $+40^\circ\text{C} \pm 3^\circ\text{C}$  Relative Humidity: 90%~95% Duration: 48 hours and expose to room temperature for 6 hours

### 7.5 Temperature Shock Test

Temperature:  $60^\circ\text{C}$  /1hour  $\rightarrow$   $25^\circ\text{C}$ /3hours  $\rightarrow$   $-20^\circ\text{C}$ /1hour  $\rightarrow$   $25^\circ\text{C}$ /3hours (1cycle)  
Total cycle: 10 cycles

### 7.6 Drop Test

Standard Packaging From 75cm (Drop on hard wood or board of 5cm thick, three sides, six plain.)

### 7.7 Vibration Test

Vibration: 1000cycles /min. Amplitude: 1.5mm, Duration: 1 hour in each 3 axes

### 7.8 Reflow Test

Use recommendable reflow soldering condition (as shown in 5.1)

- (1) No abnormality should be found after reflow
- (2) Good soldering to meet soldering requirements

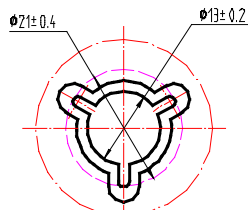
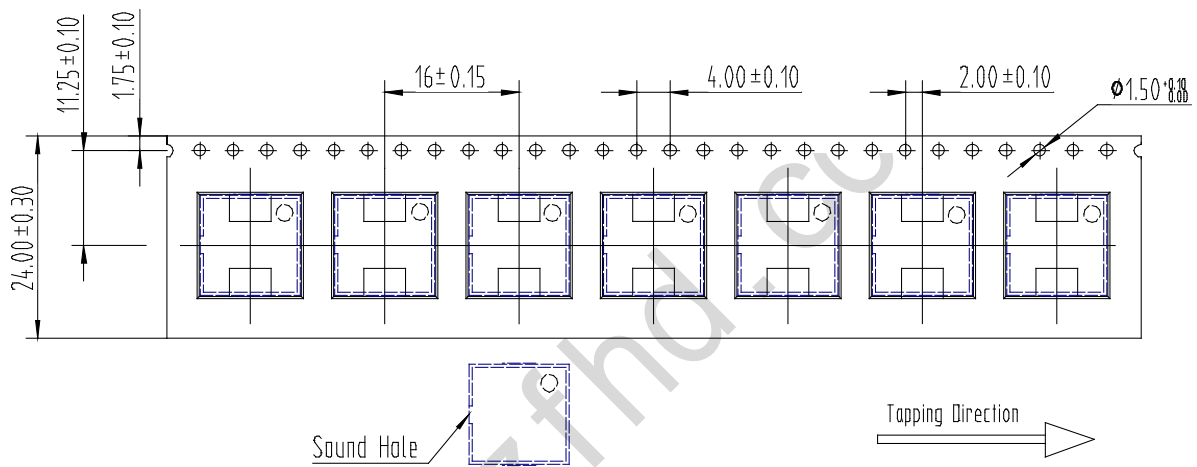
## Note:

As this product is not protected from foreign material entering, please make sure that any foreign materials (e.g. magnetic powder, washing solvent, flux, corrosive gas) do not enter this product in your production processes. The functional degradation (e.g. SPL down) may occur if foreign material enter it.

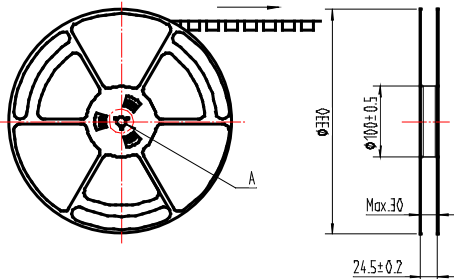
|  |            |          |              |             |  |
|--|------------|----------|--------------|-------------|--|
| <b>Specification for Piezoelectric Ceramic Buzzer<br/>SMD Type</b> |            |          |              | Page 7 of 7 |  |
|  |            |          |              | Des. Chk.   |  |
| Model No.:   | BP1230S-40 | Part No. | 019-1230A-SP | Wang Min    |  |
|  |            |          |              | 8/18/2021   |  |
|  |            |          |              | 8/18/2021   |  |

### 8. Packing

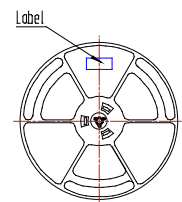
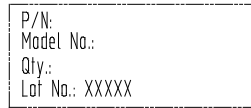
|        |  |
|--------|--|
| 包装     | 编带包装: 1000PCS/卷 载带料号: F6-S12301<br>外箱料号: F6-005; 外箱尺寸 35*32*36cm<br>内盒料号: F6-054; 内箱尺寸 76*45.5cm<br>每个载盘用一个大 PE 袋装好再放入内盒; PE 袋料号: F6-610 |
| 客户特殊要求 |  |



DETAIL: A  
SCALE: 8:1

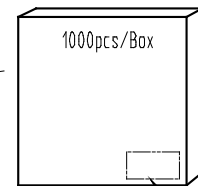
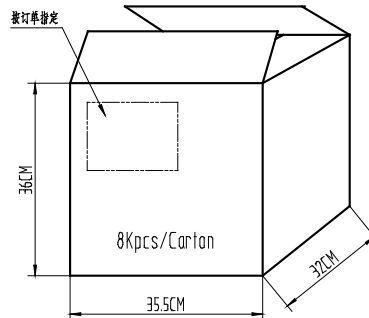


Label 如客户指定按客户要求



Inside box

如客户未指定, 正唛外箱左上角  
按订单排装



1 Reel/Inside box  
(34\*34\*3.2 CM)