

# APPROVAL SHEET



## FHD ELECTRONICS CORPORATION

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

COMMODITY : Piezo Transducer

FHD PART NO. : T440140-P1000A-L

CUSTOMER PART NO. : \_\_\_\_\_

|             |       |             |         |
|-------------|-------|-------------|---------|
| Approved by | Y. J. | Prepared by | HY Shen |
|-------------|-------|-------------|---------|

| Customer Approval |  |          |  |
|-------------------|--|----------|--|
| Approved          |  | Rejected |  |
|                   |  |          |  |

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# FHD ELECTRONICS CORPORATION

## REVISIONS

PRODUCT PART NO. : T440140-P1000A-L

| DATE       | REVISER | REV. | DESCRIPTION     | REMARK |
|------------|---------|------|-----------------|--------|
| 2019/10/21 | HY SHEN | 1    | Initial edition |        |
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## 1. Technical Parameter

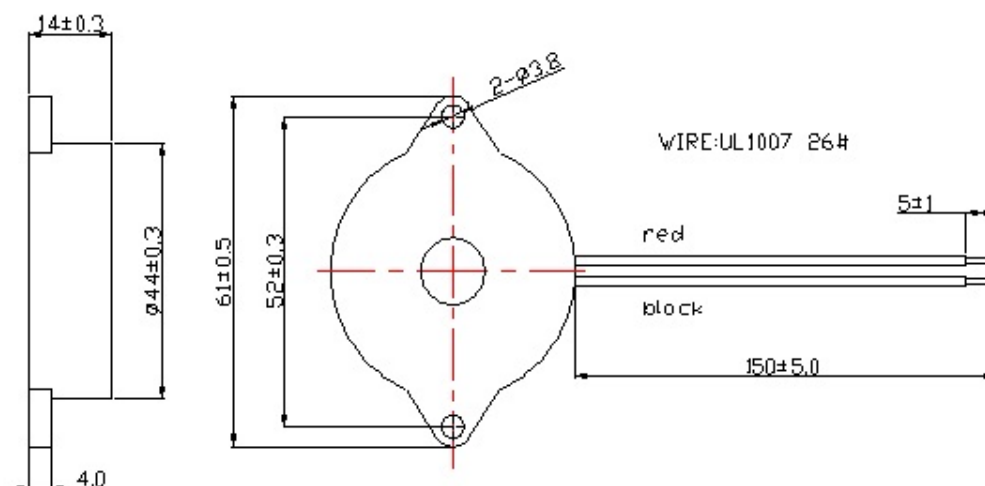


### Measuring condition

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 | <b>Resonant Frequency</b>    | 1000Hz ± 300Hz                                  |
| 2 | <b>Operating Voltage</b>     | 1~25Vp-p  |
| 3 | <b>Rated Current</b>         | Max.5mA ,at 1000Hz 50% duty Square Wave 12Vp-p  |
| 4 | <b>Sound Output at 10cm</b>  | Min. 85dB,at 1000Hz 50% duty Square Wave 12Vp-p |
| 5 | <b>Capacitance</b>           | 55000 ± 30% pF at 1KHz                          |
| 6 | <b>Operating Temperature</b> | -20°C ~+60°C                                    |
| 7 | <b>Store Temperature</b>     | -30°C ~+70°C                                    |
| 8 | <b>Net Weight</b>            | Approx 11g                                      |
| 9 | <b>RoHS</b>                  | Yes   |

## 2. Dimensions

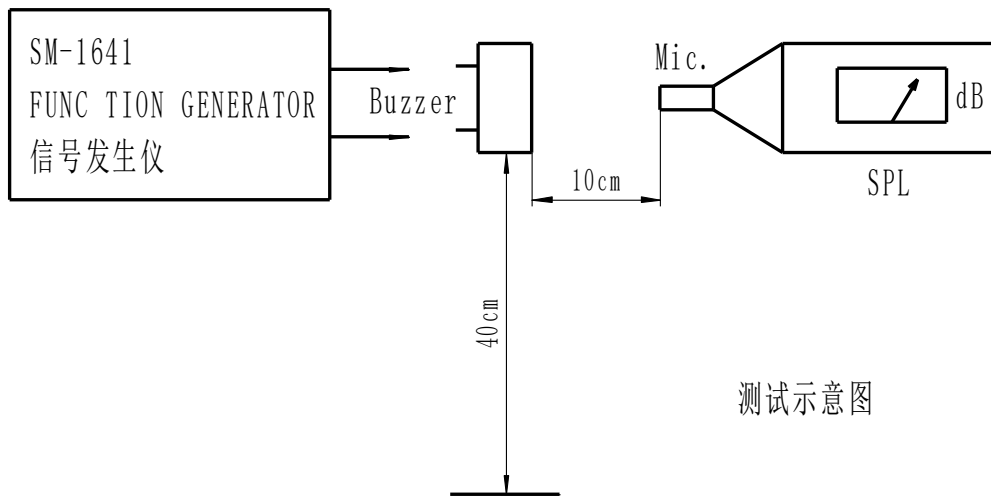


\*Unit: mm; Tolerance: ± 0.5mm Except Specified

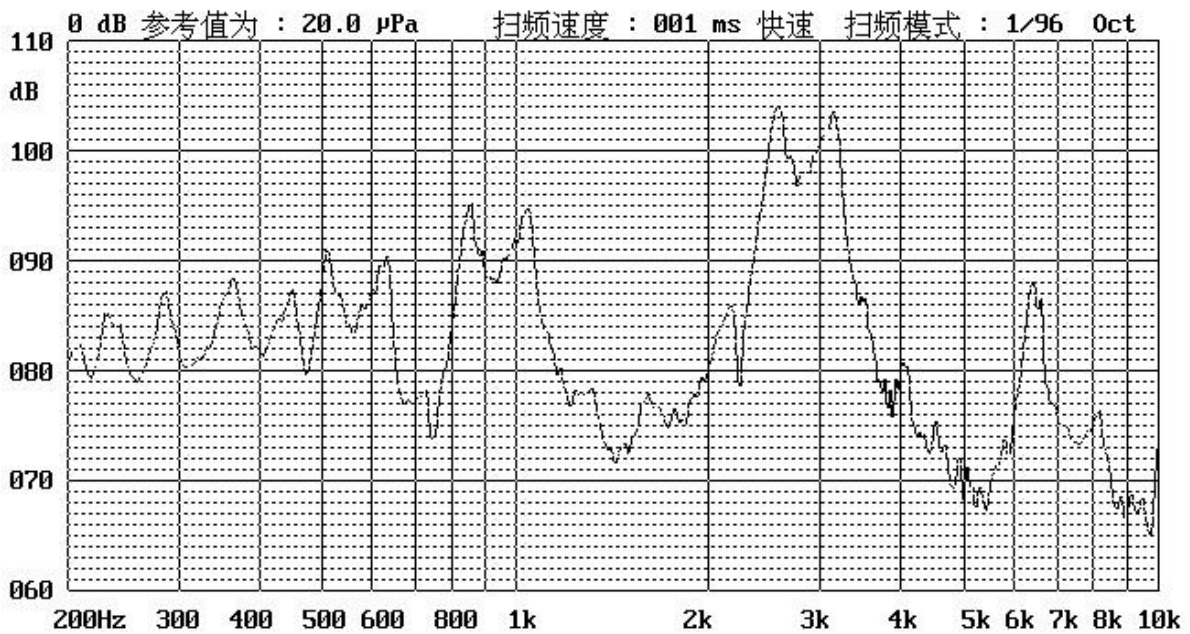
\*Housing material: black ABS

### 3. Electrical And Acoustical Measuring Condition

#### Recommended Setting



### 4. Frequency Response



12Vp 50% duty square wave, 10cm

## 5. 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 -5 dB from the initial value

### 5.1. 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.

### 5.2. High Temperature Test

The part shall be capable of withstanding a storage temperature of  $+70^{\circ}\text{C}$  for 96 hours.

### 5.3. Low Temperature Test

The part shall be capable of withstanding a storage temperature of  $-30^{\circ}\text{C}$  for 96 hours.

### 5.4. 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

### 5.5. 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

### 5.6. Drop Test

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

### 5.7. Vibration Test

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

#### 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 materials enter it.

## 6. . Packing Information (TBA)

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