

# APPROVAL SHEET



## FHD ELECTRONICS CORPORATION

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

COMMODITY : PIEZO TRANSDUCER

FHD SERIAL NO. : \_\_\_\_\_

FHD PART NO. : T12147-P4000G-J

REMARK : \_\_\_\_\_

Approved by	J.J.	Prepared by	HY Shen
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<b>Customer Approval</b>			
<b>Approved</b>		<b>Rejected</b>	

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**FHD ELECTRONICS CORPORATION**

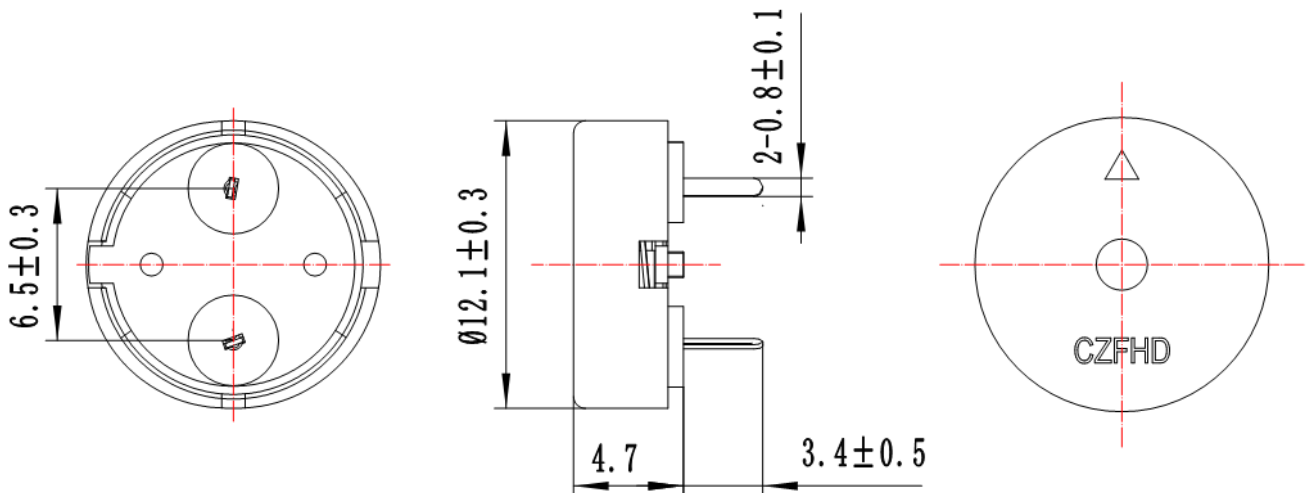
**REVISIONS**

**PRODUCT PART NO. : T12147-P4000G-J**

DATE	REVISER	REV.	DESCRIPTION	REMARK
2021/1/13	HY SHEN	1	Initial edition	

**A. PART NO.: T12147-P4000G-J****B. SPECIFICATION**

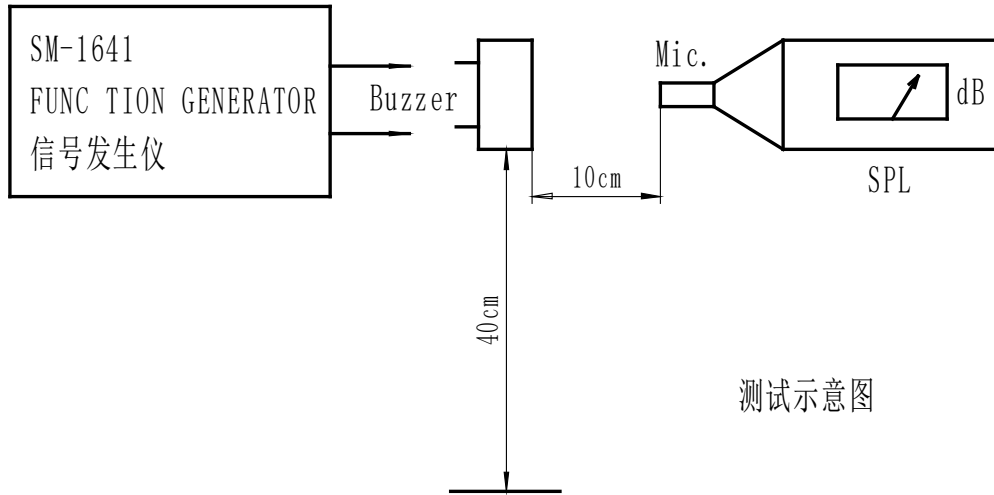
No.	Item	Unit	Specification	Condition
1	Oscillation Frequency	KHz	4.0 ± 0.5	square wave
2	Max Input Voltage	Vp-p	20 max	
3	Rated Voltage	Vp-p	5	
4	Rated Current	mA	MAX. 3	at 4KHz 50% duty Square Wave 5Vp-p
5	Sound Pressure Level	dB	MIN. 75 at 10cm	at 4KHz 50% duty Square Wave 5Vp-p
6	Capacitance	pF	12000 ± 30%	at 1KHz
7	Operating Temperature	°C	-20 ~ +70	
8	Storage Temperature	°C	-30 ~ +80	
9	Dimension	mm	Dia. 12.1 x H 4.7	See appearance drawing
10	Weight (MAX)	gram	0.6	
11	Housing Material		PBT ( Black )	
12	Environmental Protection Regulation		RoHS	

**C. APPEARANCE DRAWING**

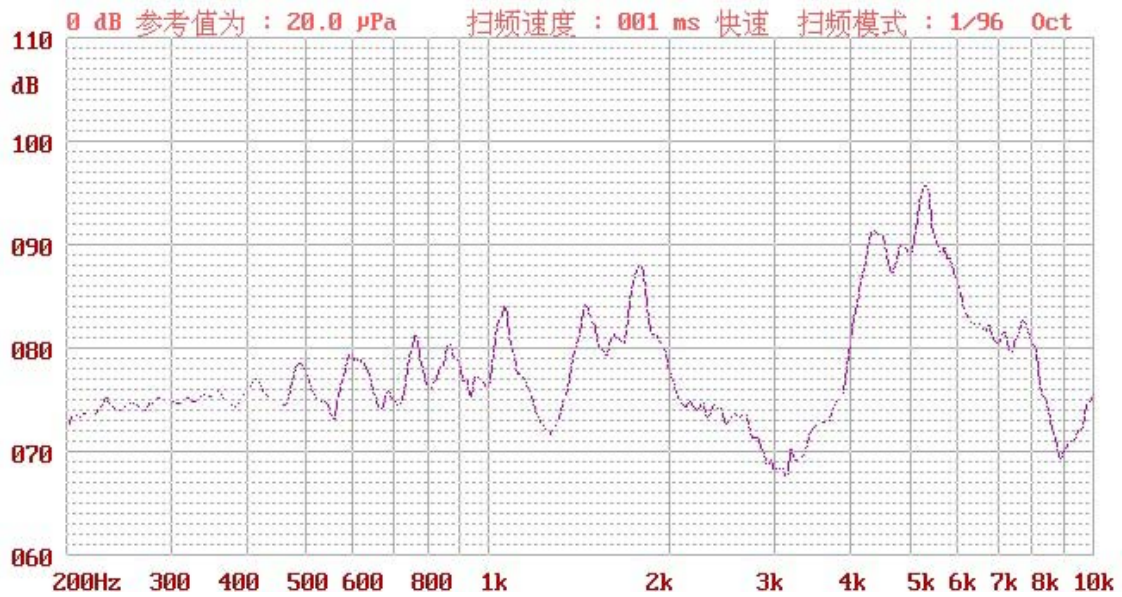
\*Unit: mm; Tolerance:  $\pm 0.5$ mm Except Specified

## D. TEST METHOD

Standard Measurement Conditions: Temperature:25±2°C Humidity:45-65%



## E. TYPICAL FREQUENCY RESPONSE CURVE



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

## F. 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 -5dB from the initial value

### 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.

### 2. High Temperature Test

The part shall be capable of withstanding a storage temperature of  $+80^{\circ}\text{C}$  for 96 hours.

### 3. Low Temperature Test

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

### 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. Temperature Shock Test

Temperature:  $70^{\circ}\text{C}/1\text{hour} \rightarrow 25^{\circ}\text{C}/3\text{hours} \rightarrow 30^{\circ}\text{C}/1\text{hour} \rightarrow 25^{\circ}\text{C}/3\text{hours}$  (1 cycle)

Total cycle: 10 cycles

### 6. Drop Test

Buzzer is packed in a standard Packaging and is dropped from height 75m on a 5cm thick hard wood or board, three sides, six plain.

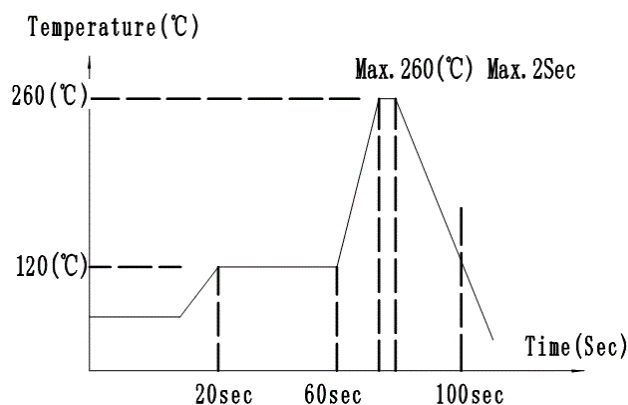
### 7. Vibration Test

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 material enter it.

## G. RECOMMENDED THE WAVE SOLDERING TEMPERATURE



## I. PACKING INFORMATION

包装要求	1.泡沫板	200PCS/板	料号：F6-703
	2.内盒	2000PCS/盒(10板/盒)	料号：F6-057/F6-058
	3.外箱	8000PCS/箱	外箱 40.5*40*19.5
	4.堆装料号：	F6-022	
备注：每一盒放 10 板，上面再放一张空泡沫板			

