

APPROVAL SHEET



FHD ELECTRONICS CORPORATION

CUSTOMER NAME : _____

COMMODITY : Piezo Transducer

FHD PART NO. : T131325-P4100G-S

CUSTOMER PART NO. : _____

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

Customer Approval			
Approved		Rejected	

8104 Lynores Way, Plano, TX 75025

Tel: 469-409-2828 Cell: 408-693-5952

Email: sales@fhdmfg.com Website: www.fhdmfg.com

1. Technical Parameter

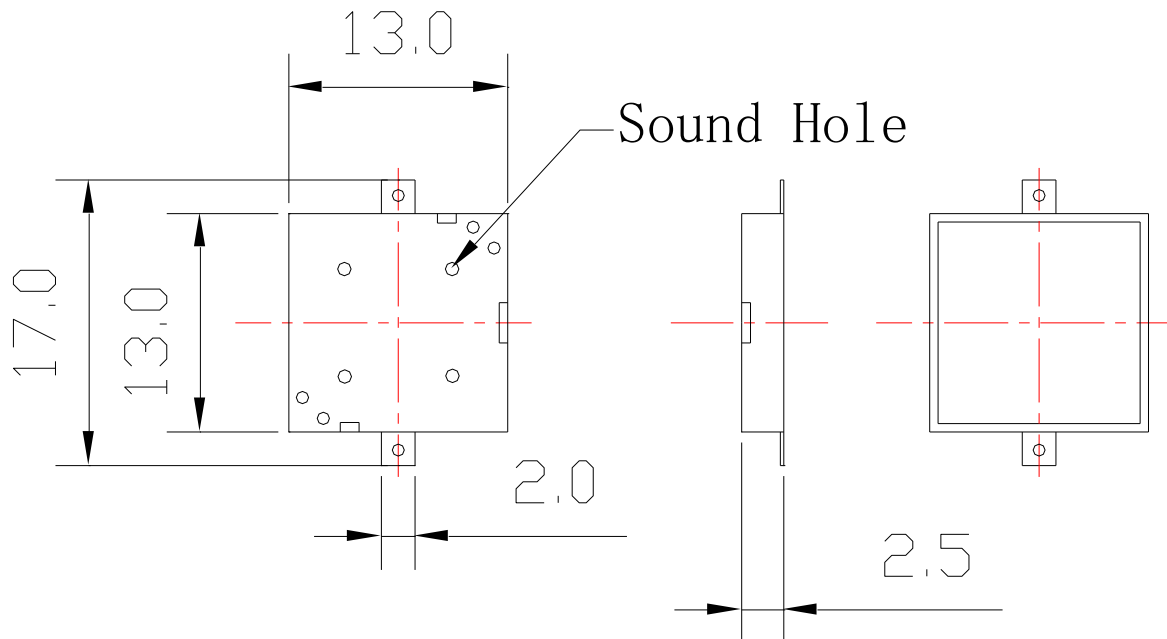


Measuring condition

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	Resonant Frequency	4100±500Hz
2	Operating Voltage	1~20Vp-p
3	Rated Current	Max.1mA ,at 4.1KHz 50% duty Square Wave 5Vp-p
4	Sound Output at 10cm	Min. 75dB,at 4.1KHz 50% duty Square Wave 5Vp-p
5	Capacitance	15000±30%pF at 1KHz
6	Operating Temperature	-20°C ~+70°C
7	Store Temperature	-30°C ~+80°C
8	Net Weight	Approx 0.5g
9	RoHS	Yes

2. Dimensions



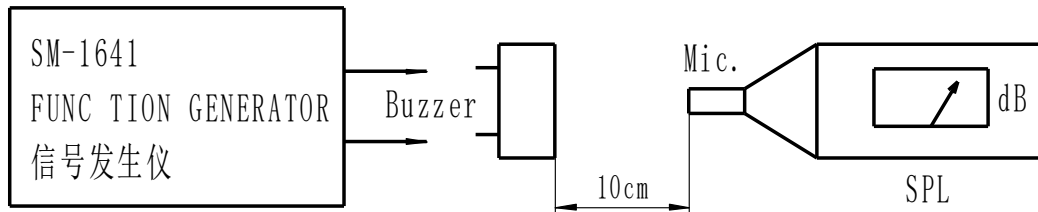
*Unit: mm; Tolerance: ±0.3mm Except Specified

*Housing Material: Black LCP

*Terminal plate: 2 soldering pads, Gold Plating Brass (DAu)

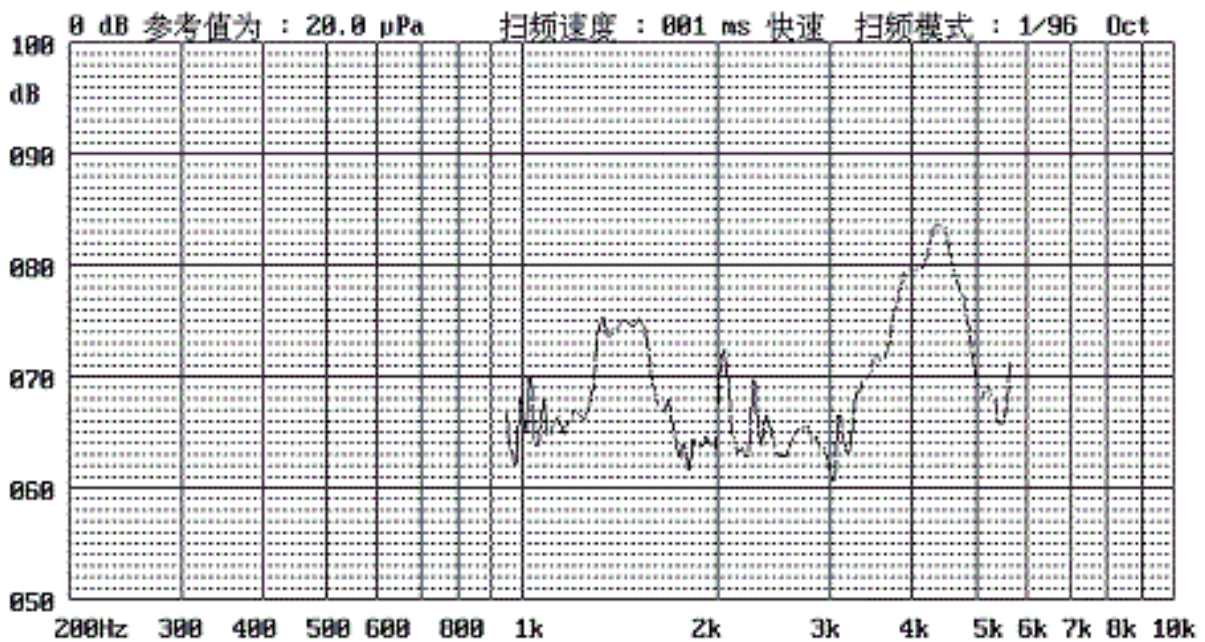
3. Electrical And Acoustical Measuring Condition

Recommended Setting



测试示意图

4. Frequency Response

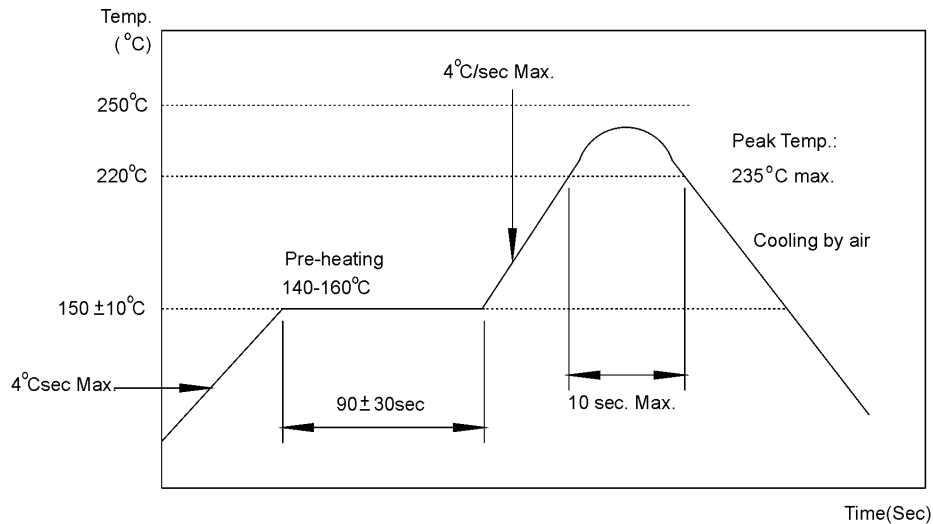


5Vp-p 50% duty Square wave, 10cm

5. Surface mounting condition

5.1 Reflow soldering

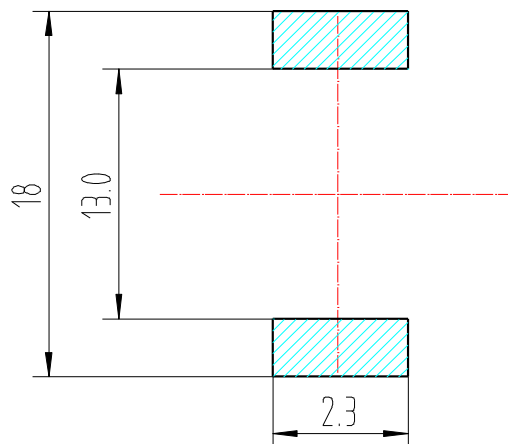
Recommendable reflow soldering condition is as follows.



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.

5.2 Soldering pattern



6. 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

6.1 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.

6.2 High Temperature Test

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

6.3 Low Temperature Test

The part shall be capable of withstanding a storage temperature of -30°C for 96 hours.

6.4 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

6.5 Temperature Shock Test

Temperature: 60°C /1hour \rightarrow 25°C /3hours \rightarrow -20°C /1hour \rightarrow 25°C /3hours (1cycle)
Total cycle: 10 cycles

6.6 Drop Test

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

6.7 Vibration Test

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

6.8 Reflow Test

Use recommendable reflow soldering condition (as shown in 5.1)

(1) No abnormality should be found after reflow

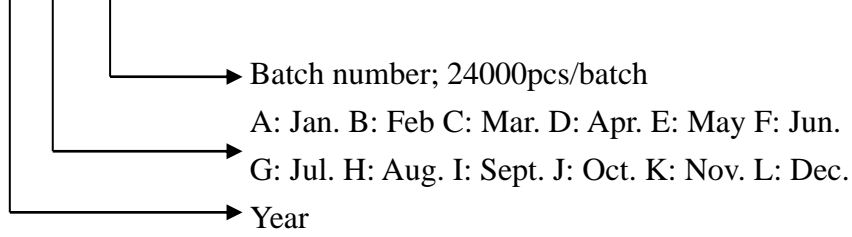
(2) Good soldering to meet soldering requirements

Note:

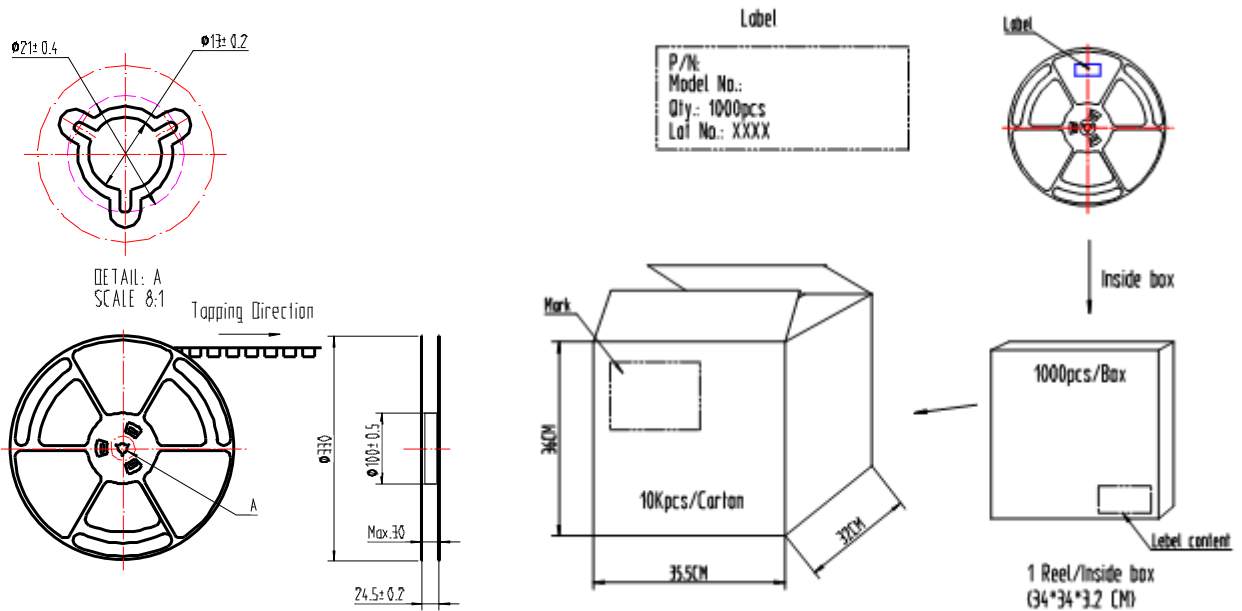
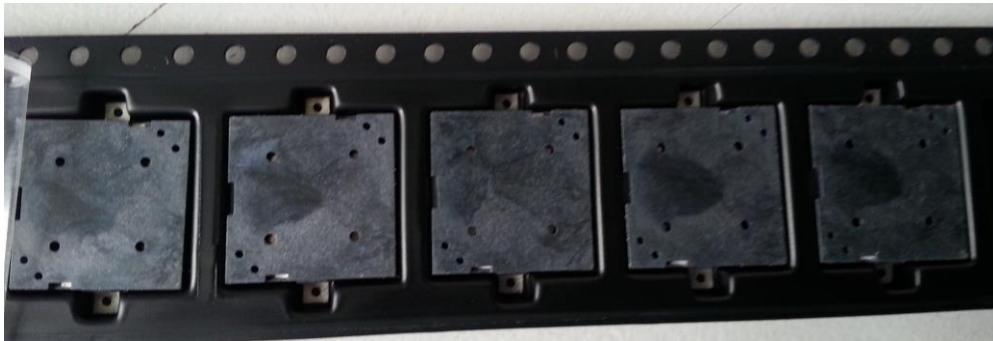
As this product is not protected from foreign material entering, please make sure that any foreign materials (e.g. magnetic powder, washing solvent, flux, corrosive gas) do not enter this product in your production processes. The functional degradation (e.g. SPL down) may occur if foreign material enter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

7. Lot Number Nomination

XX X XX



8. Packing Information



9. Shipping Label

For Reel and Inner Box:

FHD ELECTRONICS	
Commodity:	PIEZO BUZZER
Customer P/N:	
FHD P/N:	T131325-P4100G-S
P.O. Number:	
Quantity:	1000pcs
Lot Number:	
8104 Lynores Way, Plano, TX 75025 Tel: 469-409-2828 Cell: 408-693-5952 Email: sales@fhdmfg.com Website: www.fhdmfg.com	

For outer carton:

Side Mark

P.O. NO.:

Customer P/N:

FHD P/N: T131325-P4100G-S

LOT NO.:

DATE:

QTY: PCS

N.W.: KGS

G.W.: KGS

MEASUREMENT: 36 CM X 35.5 CM X 32 CM