# APPROVAL SHEET

**FHD ELECTRONICS CORPORATION**

CUSTOMER NAME : _____

COMMODITY : MAGNETIC TRANSDUCER

FHD PART NO. : T858540-M2700Z-SH

CUSTOMER PART NO. : _____

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

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

# FHD ELECTRONICS CORPORATION

| REVISIONS | | | | |
|---|---|---|---|---|
| **PRODUCT PART NO. : T858540-M2700Z-SH** | | | | |
| **DATE** | **REVISER** | **REV.** | **DESCRIPTION** | **REMARK** |
| 2021/3/19 | HY SHEN | 1 | Initial edition | |
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# A. PART NO.: T858540-M2700Z-SH

# B. SPECIFICATION

**Measuring condition**

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

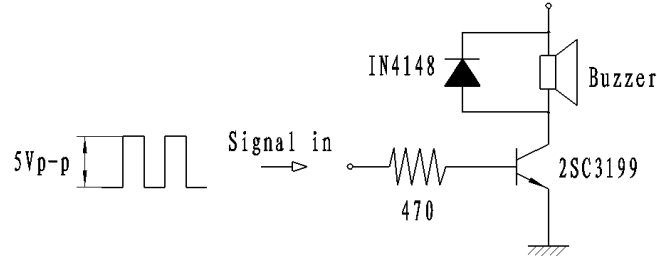| No. | Item | Unit | Specification | Condition |
|---|---|---|---|---|
| 1 | Oscillation Frequency | Hz | 2700 | square wave |
| 2 | Operating Voltage | Vo-p | 2.5 ~ 4.5 | |
| 3 | Rated Voltage | Vo-p | 3.6 | |
| 4 | Coil Resistance | Ω | 16±3 | |
| 5 | Current Consumption | mA | MAX. 100 | At 2700Hz 50% duty Square Wave 3.6Vo-p |
| 6 | Sound Pressure Level | dB | MIN. 85 | At 2700Hz 50% duty Square Wave 3.6Vo-p @ 10cm |
| 7 | Operating Temperature | ℃ | -20 ~ +70 | |
| 8 | Storage Temperature | ℃ | -40 ~ +85 | |
| 9 | Dimension | mm | 8.5x8.5x4.0 | See appearance drawing |
| 10 | Weight (MAX) | gram | 0.4 | |
| 11 | Housing Material | | LCP ( Black ) | |
| 12 | Connection | | SMD (Tin Plated Brass) | See appearance drawing |
| 13 | Environmental Protection Regulation | | RoHS | |

# C. APPEARANCE DRAWING
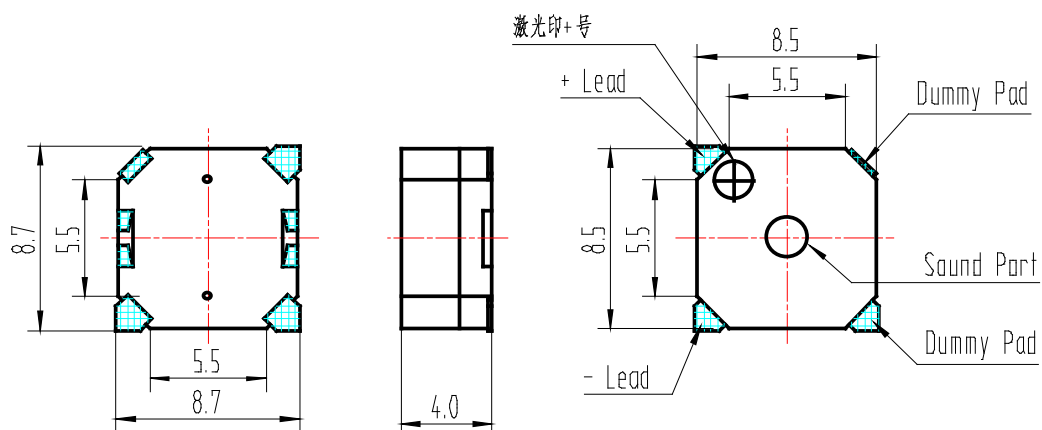


Tolerance: ± 0.3mm Except Specified
Terminal plate: 3 soldering pads, Tin Plating Brass

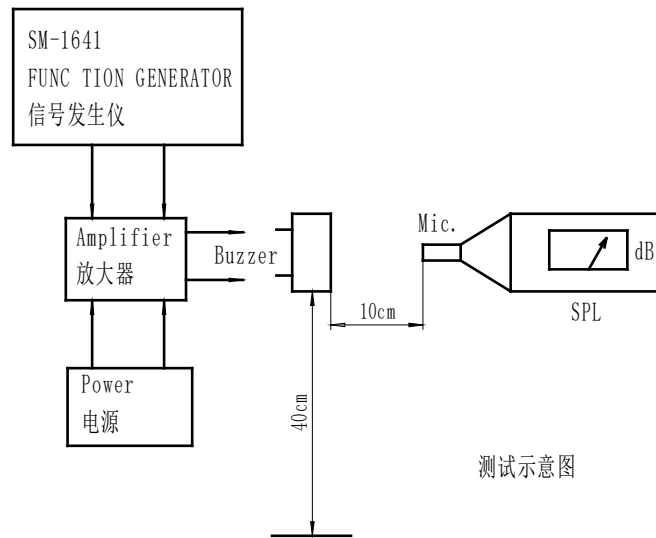# D. ELECTRICAL AND ACOUSTICAL MEASURING CONDITION

**Recommended Driving Circuit:**

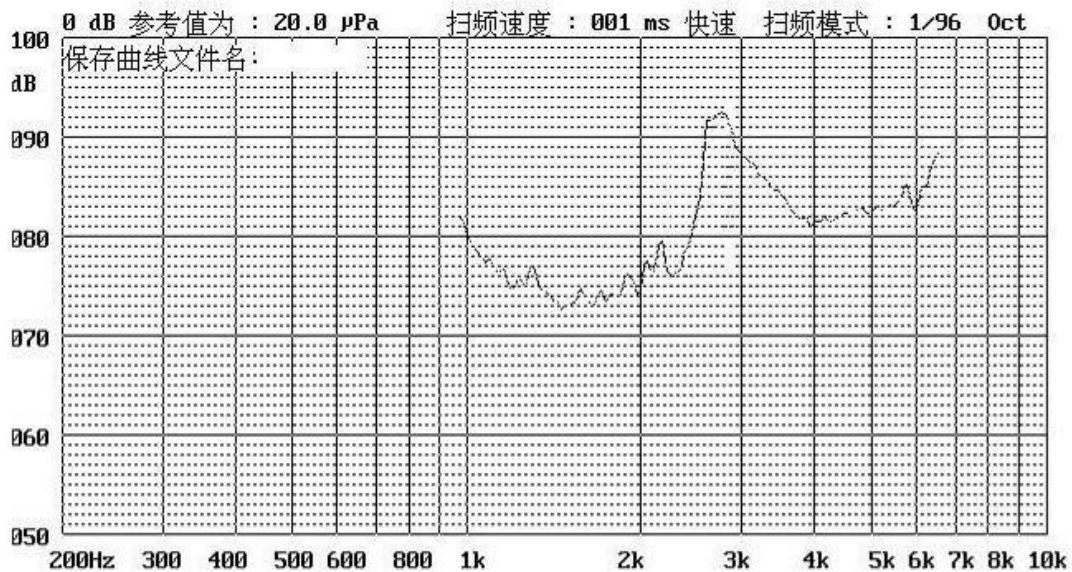Resonant frequency, 1/2 duty cycle.    Square Wave.

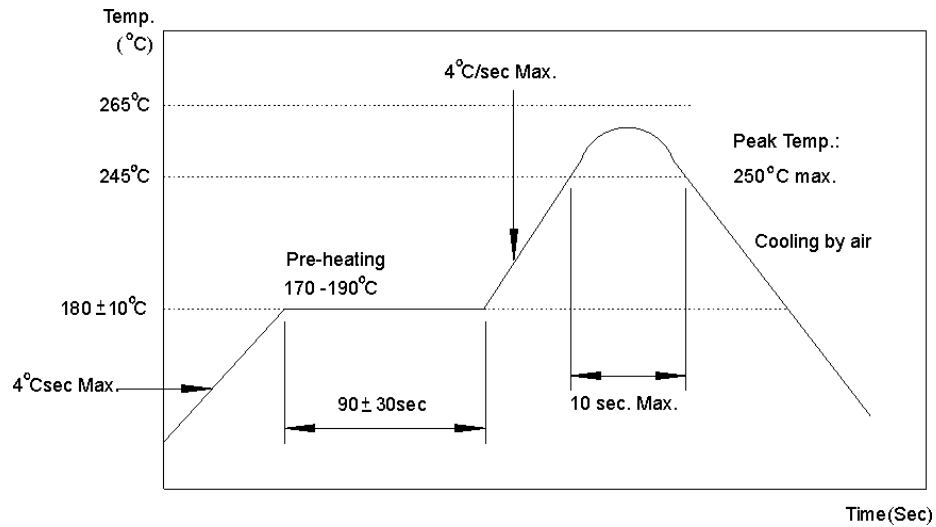Signal amplitude should be large enough to saturate the transistor.

IN4148    Buzzer

5Vp-p    Signal in    470    2SC3199

**Recommended Setting:**

SM-1641
FUNC TION GENERATOR
信号发生仪

Amplifier
放大器    Buzzer    Mic.    dB

Power
电源    10cm    SPL

40cm

测试示意图

# E. TYPICAL FREQUENCY RESPONSE CURVE

0 dB 参考值为 : 20.0 μPa    扫频速度 : 001 ms 快速    扫频模式 : 1/96 Oct
保存曲线文件名:

| 100 dB | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 090 | | | | | | | | | | |
| 080 | | | | | | | | | | |
| 070 | | | | | | | | | | |
| 060 | | | | | | | | | | |
| 050 | | | | | | | | | | |

200Hz  300  400  500 600  800  1k      2k      3k      4k    5k 6k 7k 8k 10k

3.6Vo-p 50% duty square wave, 10cm

# F. SURFACE MOUNTING CONDITION

1. Recommendable reflow soldering condition is as follows

Temp.
(°C)

4°C/sec Max.

265°C

245°C

Peak Temp.:
250°C max.

Cooling by air

Pre-heating
170 -190°C

180±10°C

4°Csec Max.

90±30sec

10 sec. Max.

Time(Sec)

**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.

2. Soldering Pattern

+ Lead    2.3    4.8    2.3    Dummy Pad

2.3

4.8

2.3

- Lead    Dummy Pad
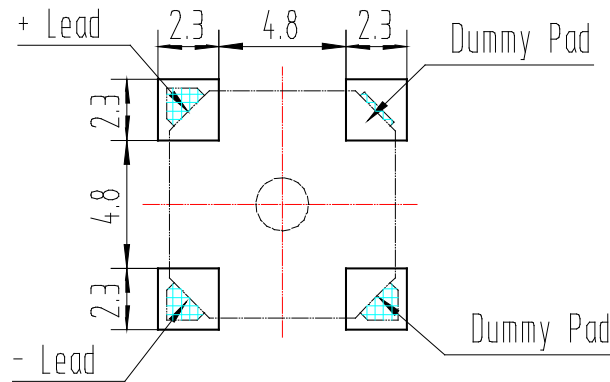
# G.   LOT NUMBER NOMINATION

## XX X X

The number of orders in the same month. 10Kpcs/batch is the maximum quantity.

A: Jan. B: Feb C: Mar. D: Apr. E: May F: Jun.

G: Jul. H: Aug. I: Sept. J: Oct. K: Nov. L: Dec.

Year

# H. 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

### 1. Ordinary Temperature Life Test

The part shall be subjected to 96 hours at 25±10℃. 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 +85℃ for 96 hours.

### 3. Low Temperature Test

The part shall be capable of withstanding a storage temperature of -40℃ for 96 hours.

### 4. Humidity Test

Temperature:+40℃±3℃　　Relative Humidity:90%～95% Duration: 48 hours and expose to room temperature for 6 hours

### 5. Temperature Shock Test

Temperature:60℃ /1hour→ 25℃/3hours→-20℃/1hour→ 25℃/3hours (1cycle)

Total cycle: 10 cycles

### 6. Drop Test

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

### 7. Vibration Test

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

### 8. Reflow Test

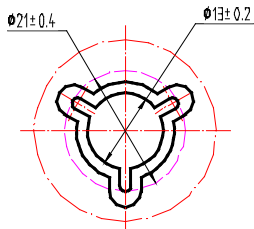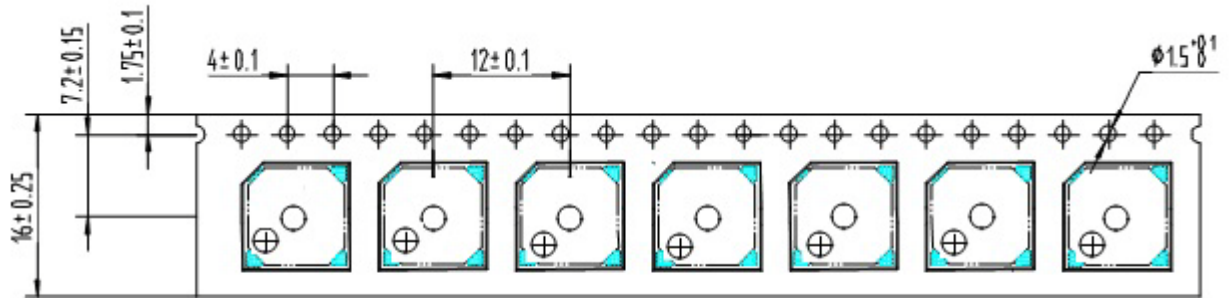Use recommendable reflow soldering condition (as shown in F.1)

(1) No abnormality should be found after reflow

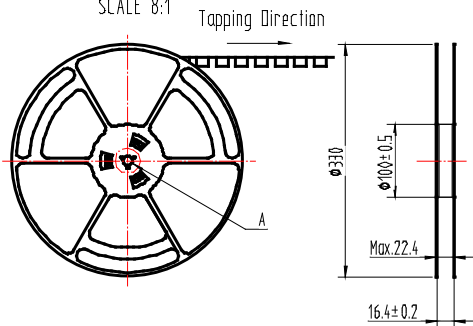(2) Good soldering to meet soldering requirements

**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 materials enter it.
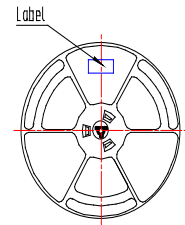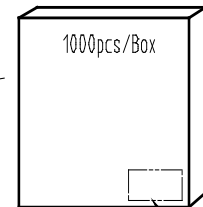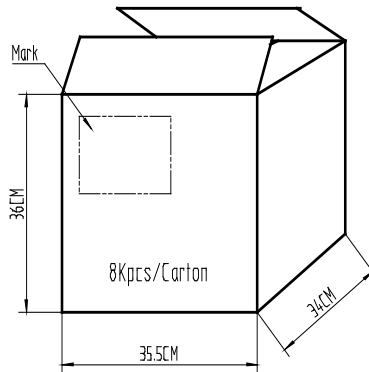
# I. PACKING INFORMATION



Tapping Direction

Label
```
P/N:
Model No.:
Qty.: 1000pcs
Lot No.: XXXX
```

Label

DETAIL: A
SCALE 8:1

Tapping Direction

Inside box

Mark

36CM

8Kpcs/Carton

35.5CM

34CM

1000pcs/Box

Lebel content

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