



soberton inc.

# SP DYNAMIC SPEAKER UNIT

Acoustic Product Specification

Product Number: SP-5708



Release | Revision: A/2018

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## Dynamic Speaker Electroacoustic Characteristics

### Sound Pressure Level

96±3dB (0.1W 0.1M ) @ 0.6, 0.8, 1.0, 1.2KHz in average  
Test Set Up: Measuring conditions and procedures shown in Figure 1

### Frequency Response Curve

As shown in Figure 3

### Frequency Range

F0 Hz ~ 20 KHz

### Resonance Frequency

500Hz±20% at 1.0V

### Input Power (Nominal and Maximum)

Rated Noise Power 1.5W

Short Term Max Power: 2.0W must be normal at a white noise for one minute

### Distortion

Less than 5% at 1KHz (input 1.5W)

### Buzz & Rattle, Etc.

Must be normal sine signal at 3.46V from F0 Hz to 20KHz sweeping

### Polarity

When a positive D.C current is applied to terminal marked (+) diaphragm shall move forward

## General Specifications

### Temperature Range

Operating Temperature -20°C~+65°C

Storage Temperature -30°C~+70°C

### Standard Test Conditions

Temperature 17°C ~ 25°C

Relative Humidity 45% ~ 85% (RH)

### AC Impedance

8Ω±15% at 2KHz 1.0V

### Dimension

ø57.0 x H8.3mm

### IP Level

No rating



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## Reliability Tests

Sound pressure level of speaker difference shall be within  $\pm 3\text{dB}$  after test at 0.6, 0.8, 1.0, 1.2KHz average.

### High Temperature Test

High Temperature  $+65\pm 3^\circ\text{C}$

Duration 96 hours

### Low Temperature Test

Low Temperature  $-20\pm 3^\circ\text{C}$

Duration 96 hours

### Humidity Test

Temperature  $+40\pm 3^\circ\text{C}$

Relative Humidity 90%~96%

Duration 96 hours

### Temperature Cycle Test

Temperature  $-20^\circ\text{C}$   $+65^\circ\text{C}$

Duration 2 hours 2 hours

Cycle 5

### Drop Test

Height 1.5m

Duration 12 cycles

### Vibration Test

Vibration 10Hz~55Hz~10Hz Oct/min

Amplitude 1.5mm

Duration 2 hours in each of 3 axis

### Load Test

Speaker mode: White noise (EIA filter) for 96 hours @1.5W input power.



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## Measuring Method (Speaker Mode)

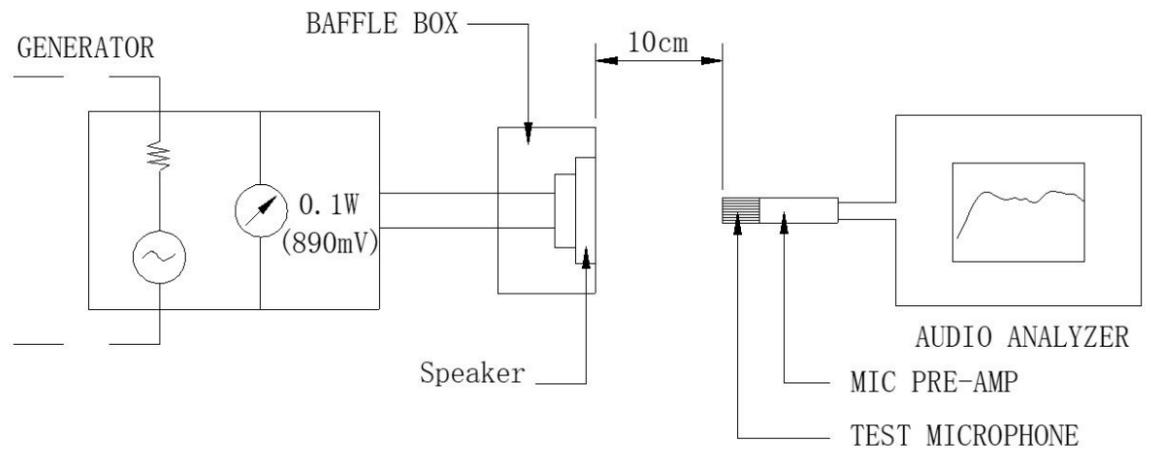
### Standard Test Condition

Temperature 15 ~ 25°C

Relative humidity 45% ~ 85%

Atmospheric pressure 860hpa to 1060hpa

### Standard Test Condition of Speaker (Fig. 1)





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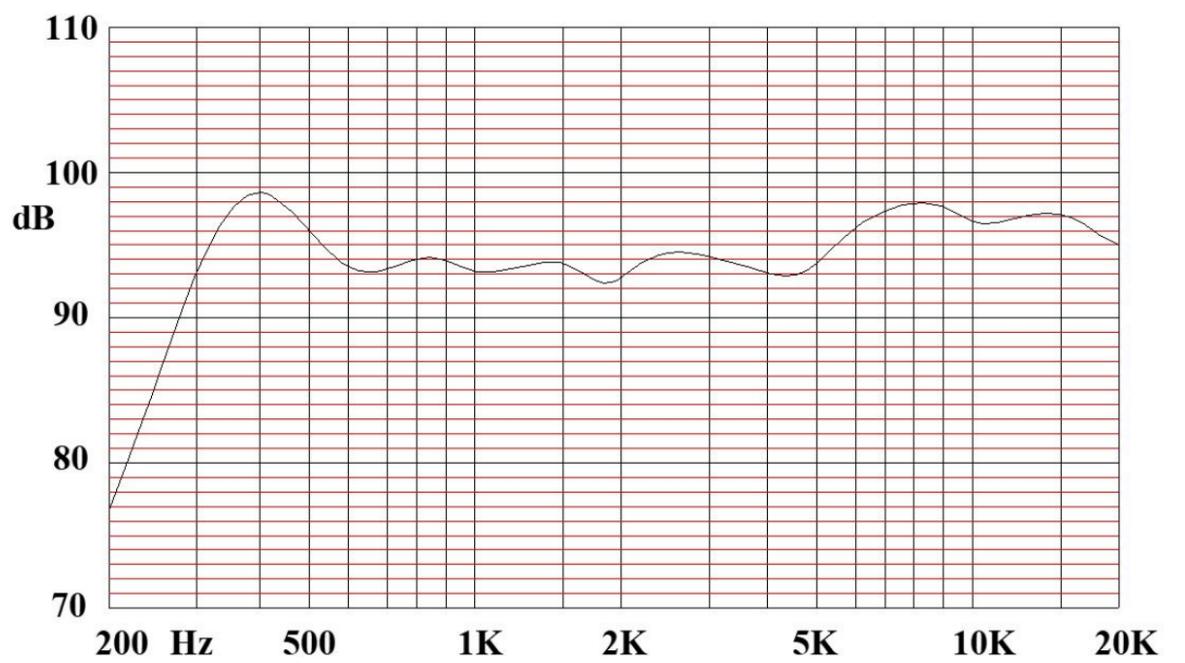
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## Frequency Response Curve (Fig. 3)

Frequency Resonance Mage dB re 20.00μPa





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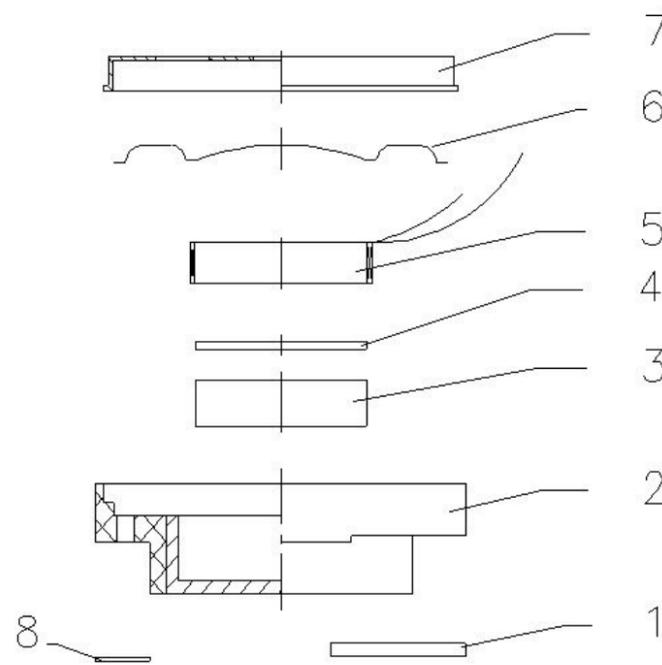
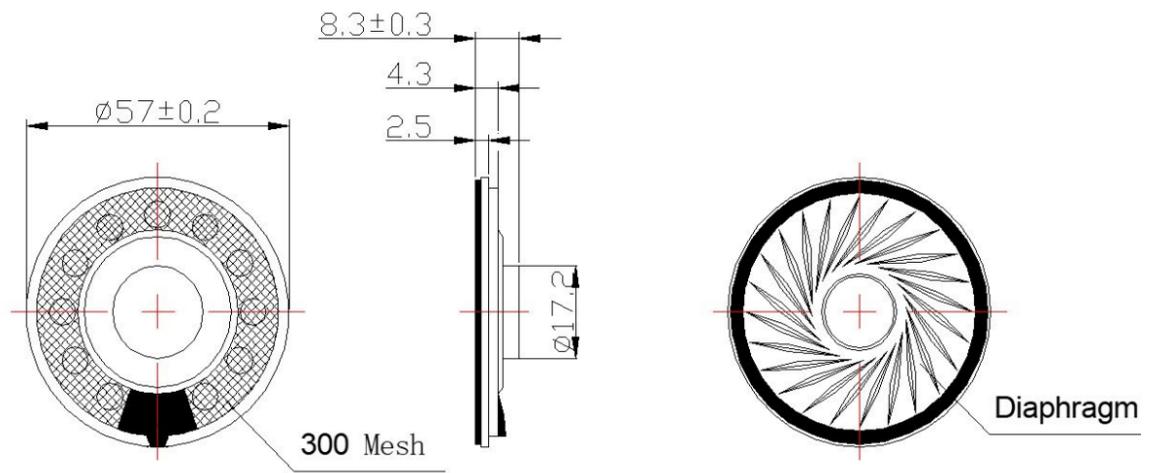
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## Dimensions

Tolerance:  $\pm 0.2$  (unit: mm)



No.	Part Name	Material	Quantity
1	PCB	FE-4	1
2	Frame	SPCC	1
3	Magnet	Nd Fe B	1
4	Plate	SPCC	1
5	Voice Coil	Polyurethane Enamelled Wire	1
6	Diaphragm	PET	1
7	Gasket	Paper	1
8	Silk Screen	Adhesive	1



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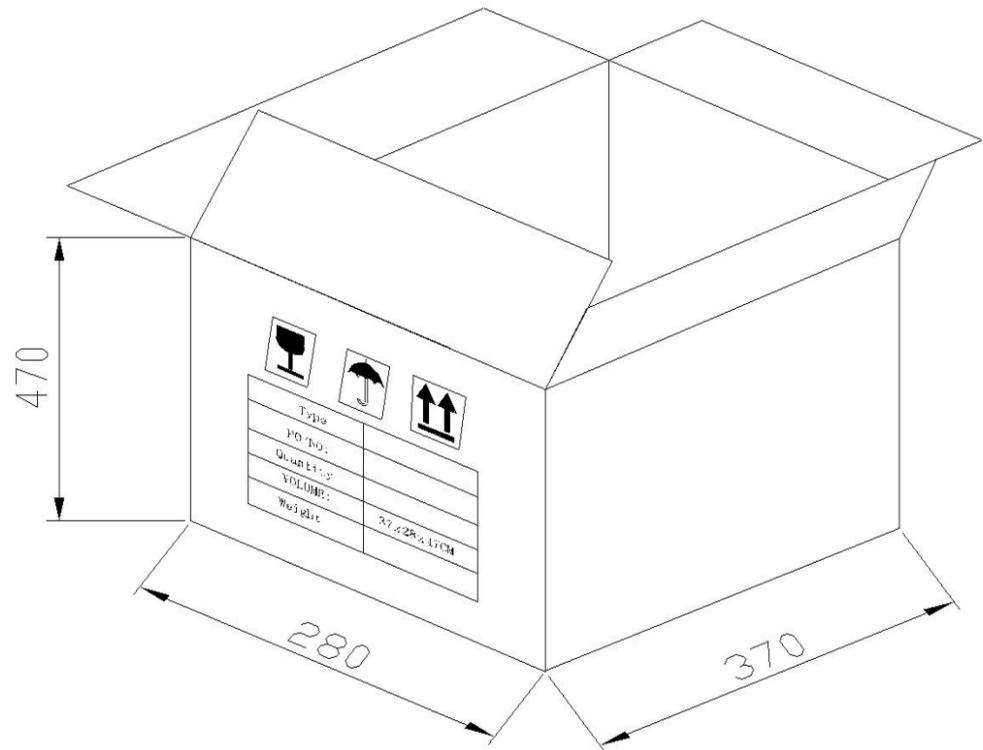
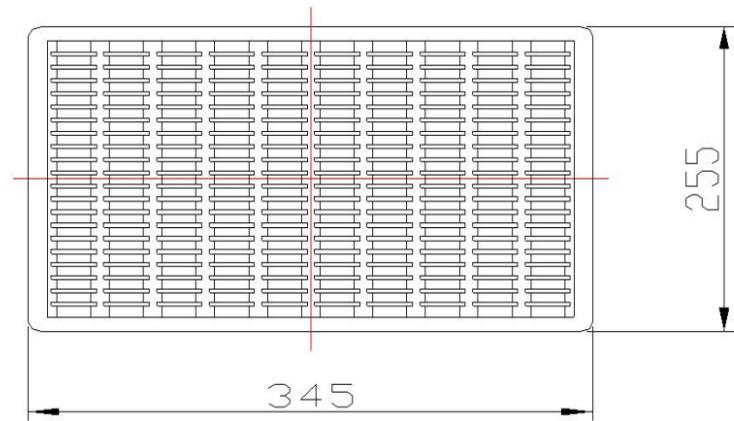
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## Packing



## Remarks

200 pcs per box

10 units per box

Total:2000 pcs per box

Size: 37 × 28 × 47cm