



soberton inc.

SP DYNAMIC SPEAKER UNIT

Acoustic Product Specification

Product Number: SP-2618



Release | Revision: B/2018

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Dynamic Speaker Electroacoustic Characteristics

Sound Pressure Level

91±3dB SPL @0.8, 1.0, 1.2 and 1.5KHz in Average

Measuring Condition: 0.8W (Sine wave) 10cm measured with baffle shown in Fig.1

Frequency Response Curve

As shown in Figure 2

Response Frequency

650±20%Hz @ 1V (Without Baffle)

Input Power (Nominal and Maximum)

Rated Noise Power 0.8W

Short Term Max Power: 1.0W must be normal at a white noise (F0 ~20KHz) for one minute

Operation Test

Must be free audible noise (buzzes and rattles)

(300 ~ 6KHz frequency range, input level up to 2.53Vrms)

Distortion

Less than 10% @1KHz, 10cm, 0.8W

Polarity

Diaphragm shall be move forward when applies a positive DC. Current to the "+", the red wire is the "+".

General Specifications

Operating Temperature Range

-30°C~+70°C

Standard Test Conditions

Temperature 17°C ~ 25°C

Relative Humidity 45% ~ 80% (RH)

AC Impedance

8±15%Ω(@2KHz 1V without baffle).

Dimension

26.0 x 18.0 x H3.8mm

IP Level

IP50



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Reliability Tests

The sound pressure as specified will neither deviate more than $\pm 3\text{dB}$ from the initial value, nor have any significant damage after any of following testing.

High Temperature Test

High Temperature $+85\pm 2^\circ\text{C}$

Duration 96 hours

Low Temperature Test

Low Temperature $-40\pm 2^\circ\text{C}$

Duration 96 hours

Heat Shock Test

High Temperature $+85\pm 2^\circ\text{C}$

Low Temperature $-40\pm 2^\circ\text{C}$

Changeover time < 30 seconds

Duration 1 hour

Cycle 100

Humidity Test

Temperature $+40\pm 2^\circ\text{C}$

Relative Humidity 90%~95%

Duration 96 hours

Temperature Cycle Test

Temperature -40°C $+85^\circ\text{C}$

Duration 45 minutes 45 minutes

Temperature gradient $1 \sim 3^\circ\text{C}/\text{min}$

Cycle 25

Drop Test

Mounted with dummy set mass: 100 g

Height 1.5 m

Cycle 6 (1 each plain) Onto the concrete board

Load Test

Speaker mode: White noise (EIA filter) for 96 hours @ 0.8W input power



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Measuring Method (Speaker Mode)

Standard Test Condition

Temperature 15 ~ 35°C

Relative humidity 45% ~ 85%

Atmospheric pressure 86KPa ~ 106KPa

Standard Test Fixture

Input Power 0.8W

Zero Level -dB

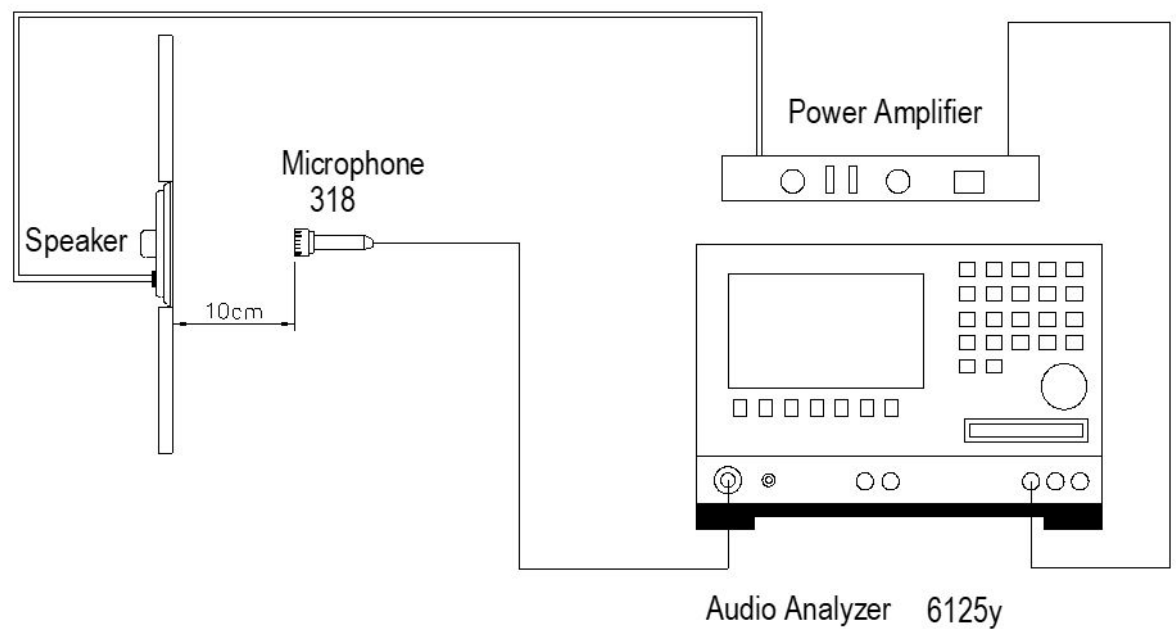
Mode TSR

Potentiometer Range 50dB

Sweep Time 0.5sec

Standard Test Condition of Speaker (Fig. 1)

Standard test condition of speaker





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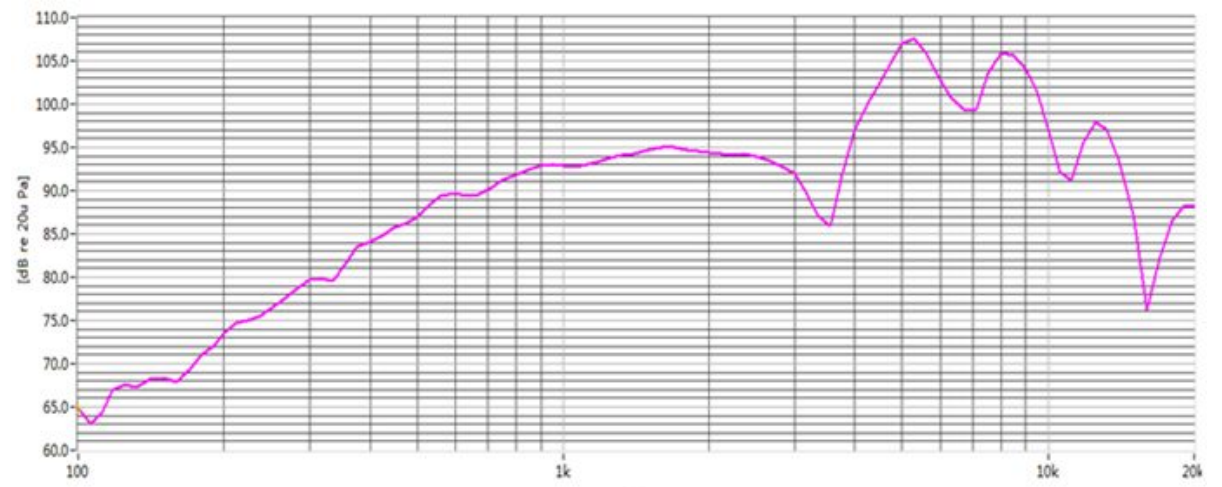
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Frequency Response Curve (Fig. 2)





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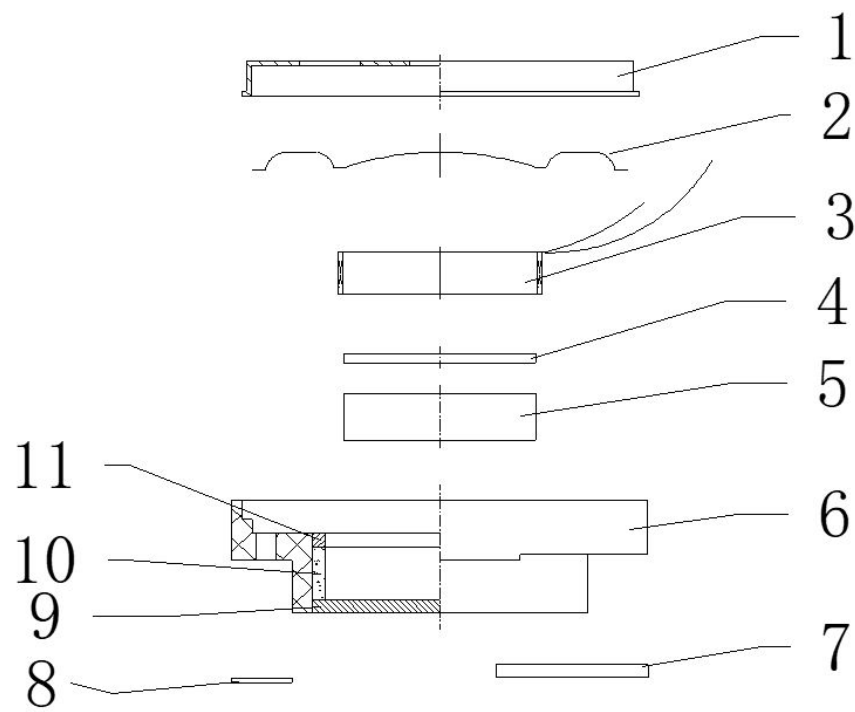
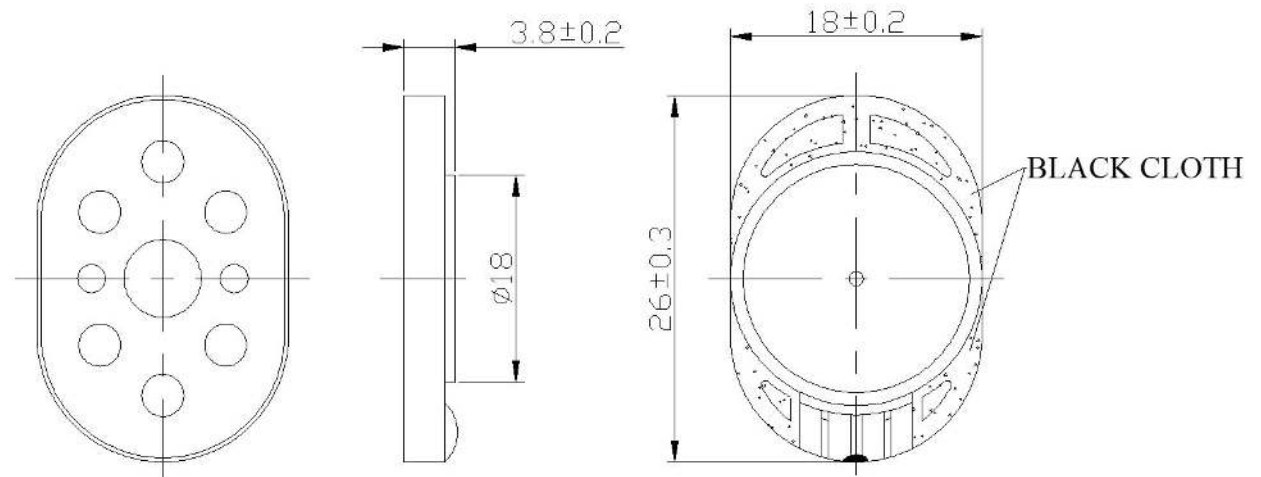
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Dimensions

Tolerance: ± 0.5 (unit: mm)



No.	Part Name	Material	Quantity
1	Cap	SUS 201	1
2	Diaphragm	PEN	1
3	Voice Coil	Cu	1
4	Plate 1	SPCC	1
5	Main Magnet	Nd Fe B	1
6	Frame	PBT+SPCC+ Nd Fe B	1
7	PCB	FR-4	1
8	Silk Screen 1	Adhesive	1
9	Plate 2	SPCC	1
10	Minor Magnet 2	Nd Fe B	1
11	Plate 3	SPCC	1



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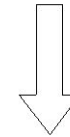
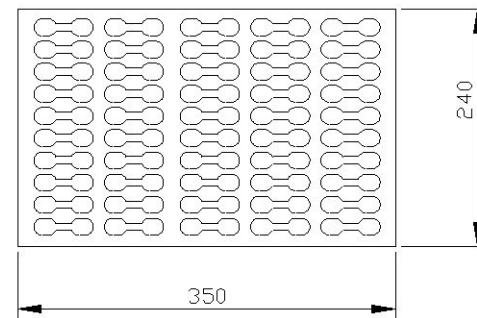
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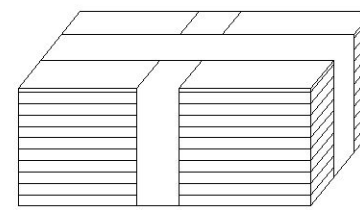
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100PCS



100 ×
10=1000PCS



1000 ×
2=2000PCS

