soberton inc.

SP DYNAMIC SPEAKER UNIT

Acoustic Product Specification

Product Number: SP-3205

Release | Revision: B/2017

CONTENTS

This document contains the technical specifications for the dynamic speaker unit.

Dynamic Speaker Electroacoustic Characteristics

Sound Pressure Level

92±3dB SPL @0.5, 0.8, 1.0 and 2.0KHz in average (0dB SPL=20μPa)
Measuring Condition: 0.1W (Sine wave) 10cm measured with baffler shown in Fig.1

AC Impedance

8±15%Ω (@ 2 KHz 1V) without baffler

Frequency Response Curve

As shown in Figure 2

Response Frequency

550 ± 20%Hz @ 1V. (Without Baffler)

Input Power (Nominal and Maximum)

Rated Noise Power: 0.8W

Short Term Max Power: 1.2W must be normal at a white noise (1W, F0 ~ 20KHz) for one minute

Operation Test

Must be free audible noise (buzzes and rattles)

300 ~ 8KHz frequency range, input level up to 2.53Vrms

Distortion

Less than 10% @1KHz , 0.1M , 0.8W frequency range, input level up to 0.8W

General Specifications

Operating Temperature Range

-20℃~+55℃

Standard Test Conditions

Temperature 17℃~25℃

Relative Humidity 45%~80%(RH)

Dimension

Ø32 x 5.2mm

IP Level

No rating

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Reliability Tests

The sound pressure as specified will neither deviate more than ±3dB from the initial value, nor have any significant damage after any of following testing.

High Temperature Test

High Temperature +60±2℃

Duration 96 hours

Low Temperature Test

Low Temperature -20±2℃

Duration 96 hours

Heat Shock Test

High Temperature +60±2℃

Low Temperature -20±2℃

Changeover Time <30 seconds

Duration 1 hour

Cycle 100

Humidity Test

Temperature +40±2℃

Relative Humidity 90%~95%

Duration 96 hours

Temperature Cycle Test

Temperature -20℃ +60℃

Duration 45 minutes 45 minutes

Temperature gradient 1~3℃/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℃

Relative humidity 45% ~ 85%

Atmospheric pressure 860mbar to 1060mbar

Standard Test Fixture

Input Power 0.1W (0.89V)

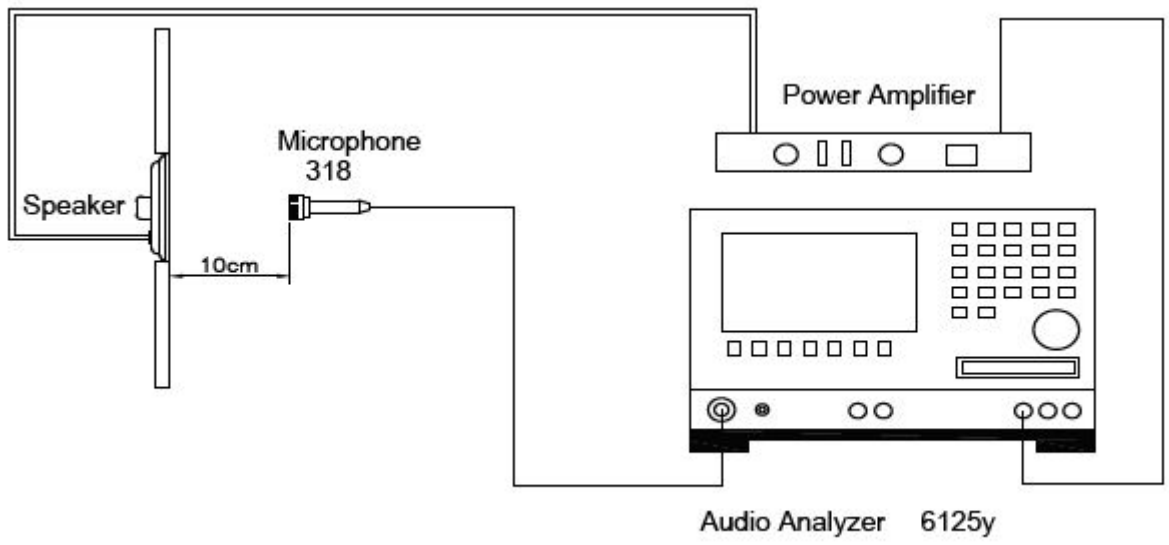
Zero Level -dB

Mode TSR

Potentiometer Range 50dB

Sweep Time 0.5sec

Standard Test Condition of Speaker (Fig, 1)



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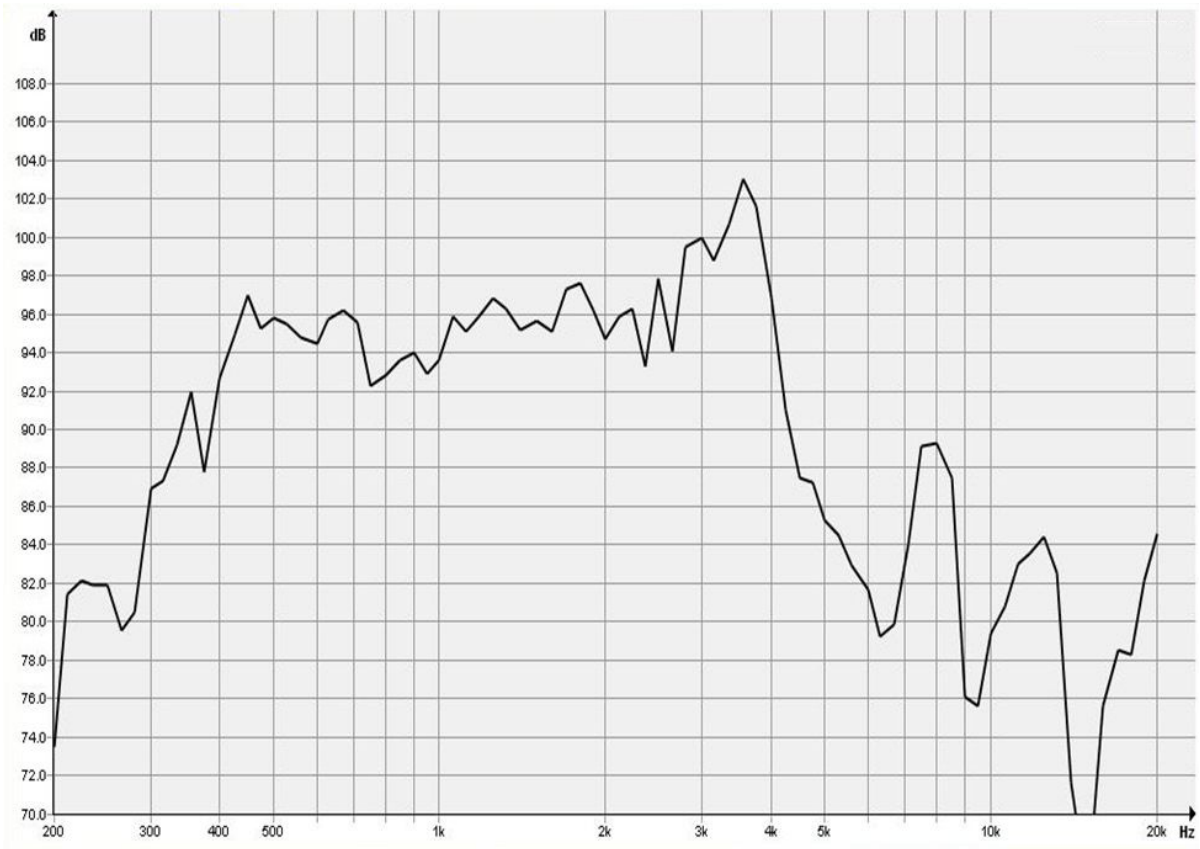
Frequency Response Curve (Fig. 2)



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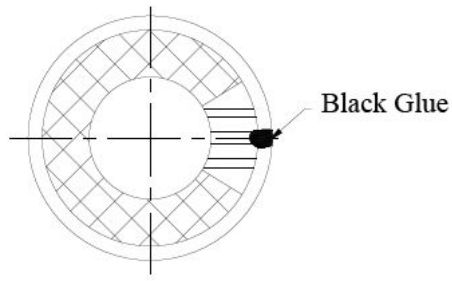
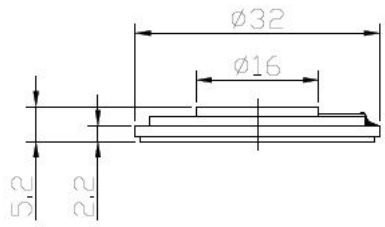
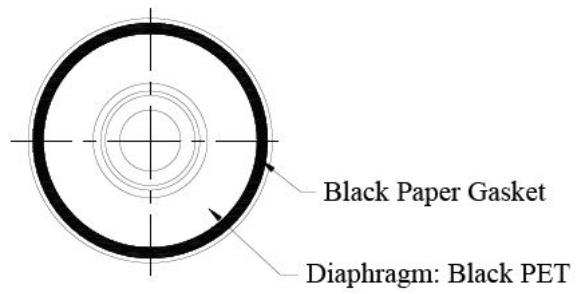
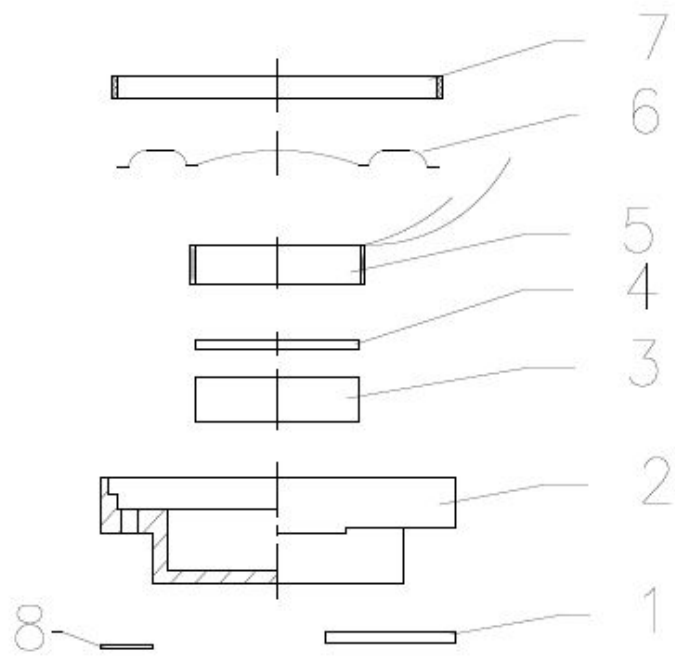
Dimensions

Tolerance: ±0.5 (unit: mm)









No.	Part Name	Material	Quantity
1	PCB	FR-4	1
2	Frame	SPCC	1
3	Magnet	Φ12.5×1.5-N38	1
4	Plate	φ12.7×0.8 SPCC	1
5	Voice Coil	13.3-2.0-7.4	1
6	Diaphragm	PET	1
7	Gasket	Black paper	1
8	Silk Screen	Black cloth	1

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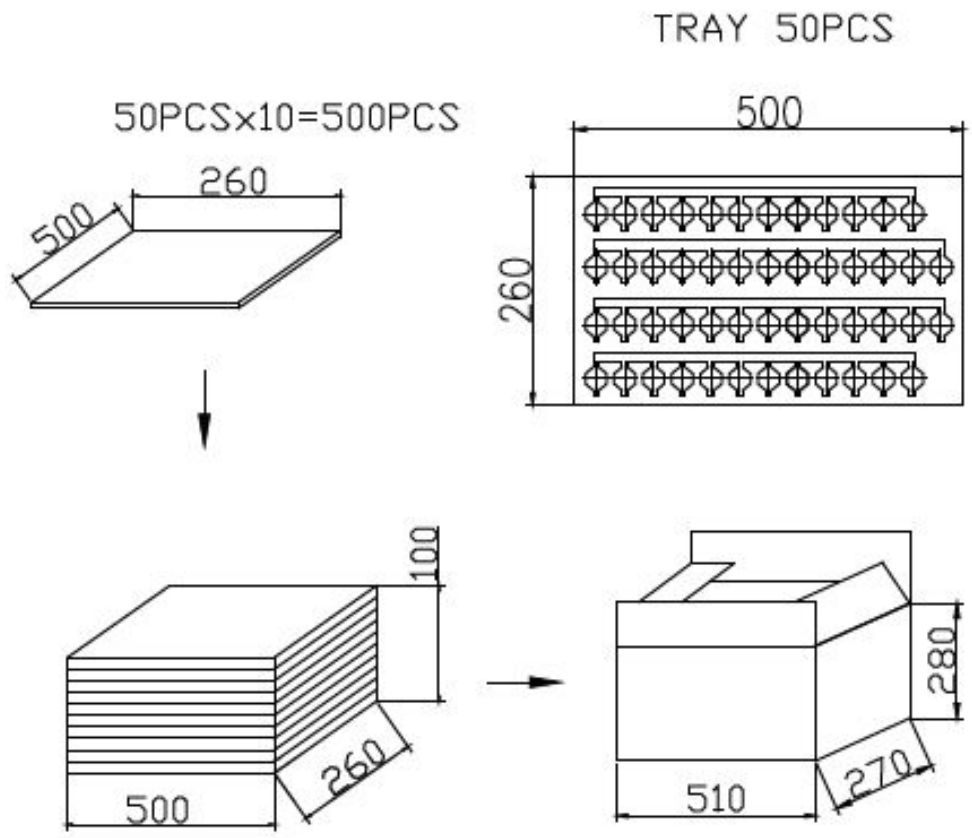
Packing



TRAY	500X260X10mm	1X50PCS=50PCS
CARTON BOX	510X270X280mm	20X50PCS=1000PCS