



soberton inc.

RC DYNAMIC RECEIVER UNIT

Acoustic Product Specification

Product Number: RC-1106S



Release | Revision: C/2018

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Receiver Electroacoustic Characteristics

Sound Pressure Level

115±3dB SPL @1.0KHz Sine Wave 179mV with IEC318
Measuring condition: 1mW (Sine wave) measured with baffle shown in Fig.1

Frequency Response Curve

As shown in Figure 2

Input Power (Nominal and Maximum)

Rated Noise Power 10mW

Short Term Max Power: 20mW must be normal at a white noise for one minute

Operation Test

Must be free audible noise (buzzes and rattles)
(200 ~ 3.4KHz frequency range, input level up to 0.56Vrms)

General Specifications

Operating Temperature Range

-40°C ~ +80°C

Storage Temperature Range

-40°C ~ +85°C

Standard Test Conditions

Temperature 17°C~25°C

Relative Humidity 45%~80%(RH)

AC Impedance

32±15%Ω(@1KHz 1V) without baffle.

Dimension

11.0 x 6.0mm

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 @10mW input power.



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Measuring Method (Speaker Mode)

Standard Test Condition

Temperature 15 ~ 35°C

Relative humidity 45% ~ 85%

Atmospheric pressure 860mbar to 1060mbar

Standard Test Fixture

Input Power 1mW

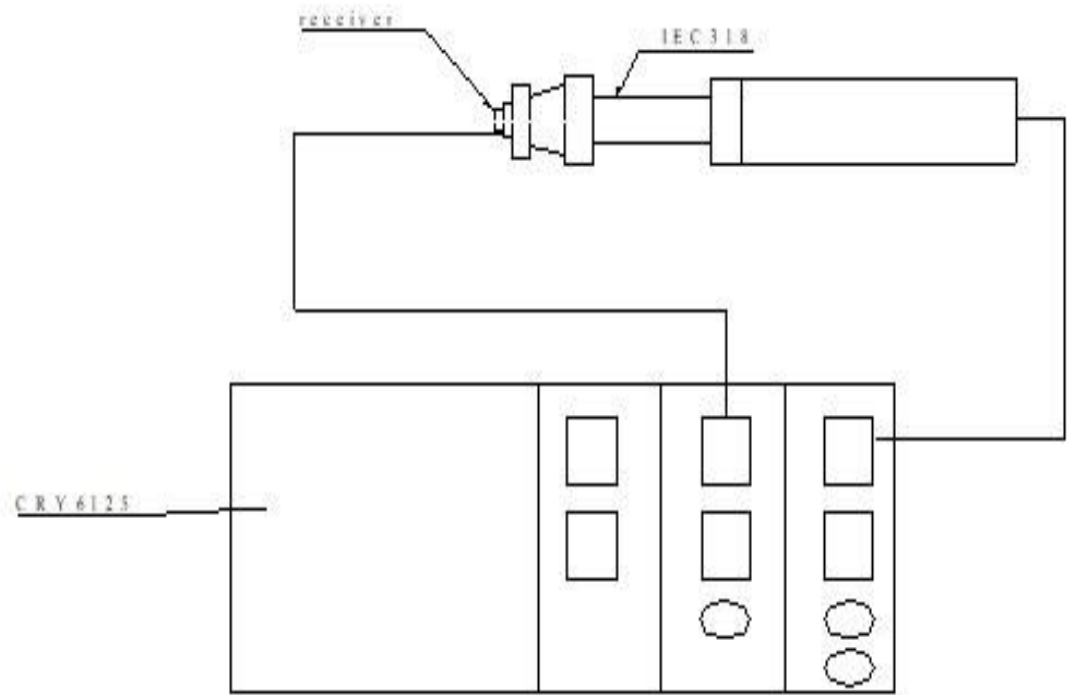
Zero Level -dB

Mode TSR

Potentiometer Range 50dB

Sweep Time 0.2sec

Standard Test Condition of Speaker (Fig. 1)





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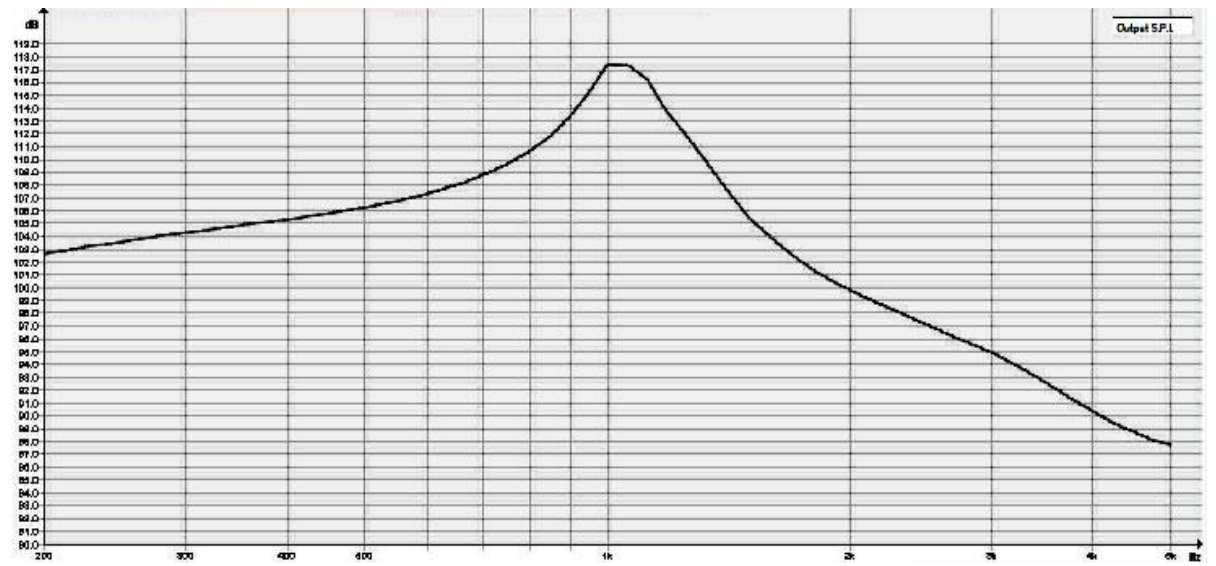
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Frequency Response Curve (Fig. 2)





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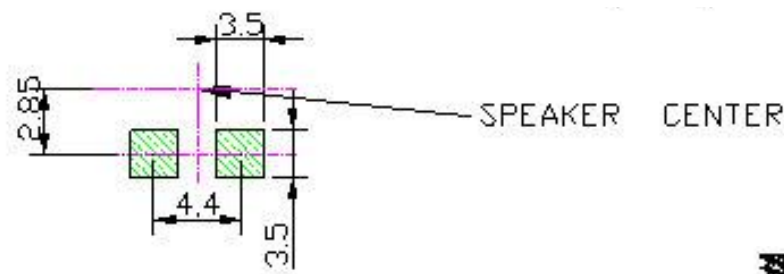
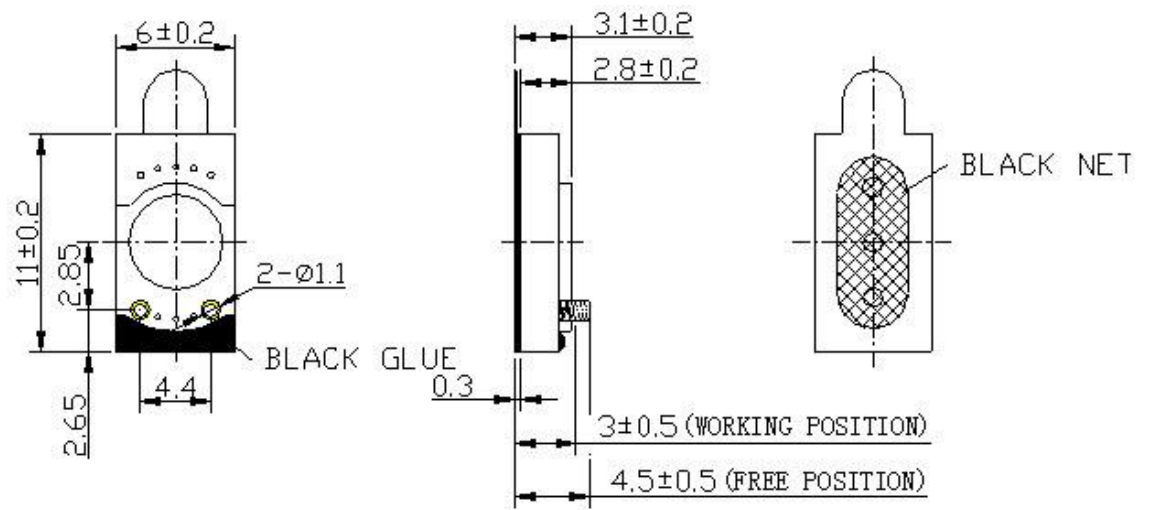
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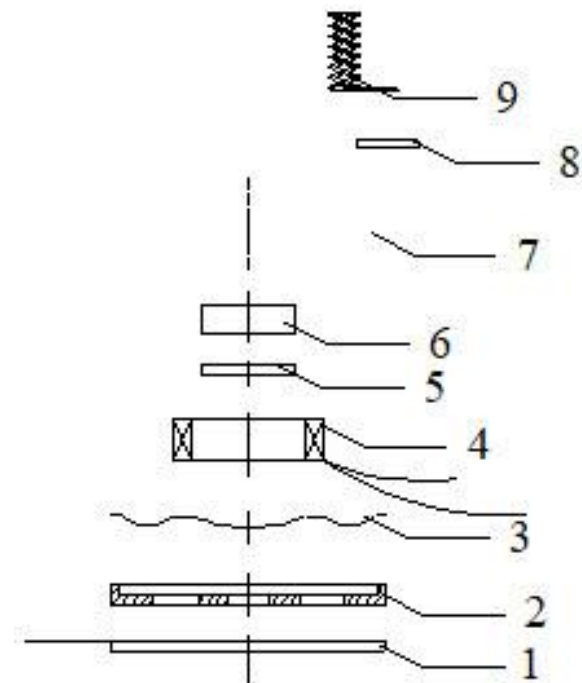
Packing

Dimensions

Tolerance: ± 0.5 (unit: mm)



PCB layout



No.	Part Name	Material	Quantity
1	Cap	SUS 304	1
2	Diagram	PEI	1
3	Magnet	$\phi 5.3 \times \phi 2.8 \times 0.9$ -N38	1
4	Plate	SPCC	1
5	Voice Coil	$\phi 2.0$ -0.025	1
6	Frame	PBT	1
7	PCB	FR-4	1
8	Gasket	Adhesive	1
9	Spring	Stainless	2



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