



soberton inc.

RC DYNAMIC RECEIVER UNIT

Acoustic Product Specification

Product Number: RC-1504



Release | Revision: B/2018

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Dynamic Receiver Electroacoustic Characteristics

Sound Pressure Level

115±3dB SPL @1.0KHz Sine Wave 180mV with IEC318
Measuring Condition: 1mW (Sine wave) with baffler

Frequency Response Curve

As shown in Figure 2

Input Power (Nominal and Maximum)

Nominal Rated Power 10mW
Short Term Noise 15mW must be normal at a white noise (10mW, 200 ~ 3.4KHz) for one minute

Operation Test

Must be free audible noise (buzzes and rattles)
(200 ~ 3.4KHz frequency range, input level up to 0.6Vrms)

Distortion

Less than 10% @1KHz 10mW

General Specifications

Temperature Range

Operating Temperature -20°C~+60°C
Storage Temperature -30°C ~ +70°C

Standard Test Conditions

Temperature 17°C ~ 25°C
Relative Humidity 45% ~ 80% (RH)

AC Impedance

32±15%Ω(@2KHz 1V) without baffler

Dimension

ø15.0 x 3.9mm
WIRE 40mm UL1571 / AWG32#

IP Level

IP50



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Reliability Tests

The sound pressure as specified shall 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 $+60\pm 2^\circ\text{C}$

Duration 96 hours

Low Temperature Test

Low Temperature $-20\pm 2^\circ\text{C}$

Duration 96 hours

Heat Shock Test

High Temperature $+60\pm 2^\circ\text{C}$

Low Temperature $-20\pm 2^\circ\text{C}$

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 -20°C $+60^\circ\text{C}$

Duration 45 minutes 45 minutes

Temperature gradient 1 ~ 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 hour@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 180mWW

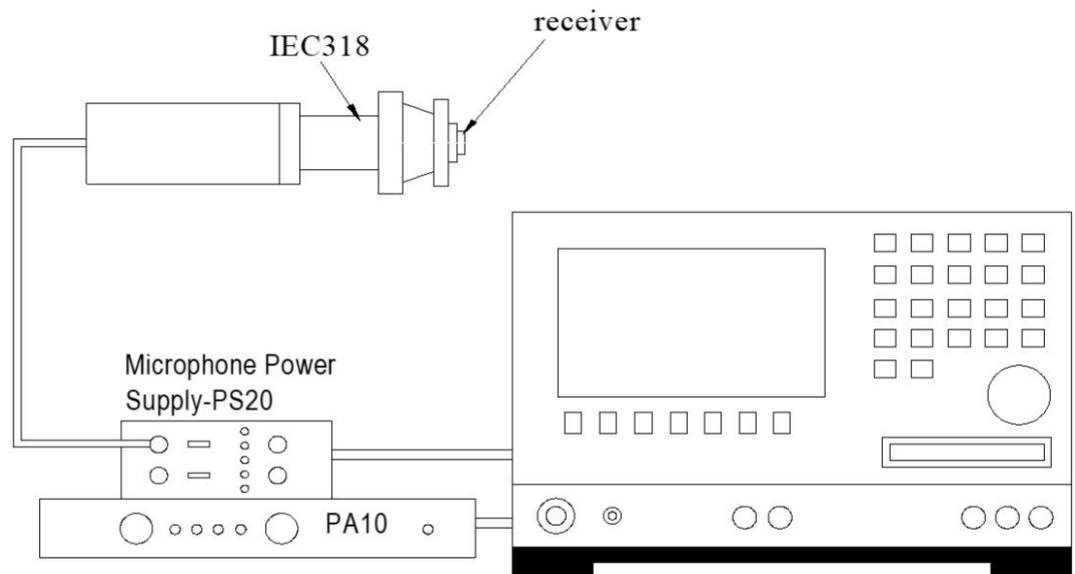
Zero Level -dB

Mode TSR

Potentiometer Range 50dB

Sweep Time 0.5sec

Standard Test Condition of Speaker (Fig. 1)



Audio Analyzer Sound check 11.1



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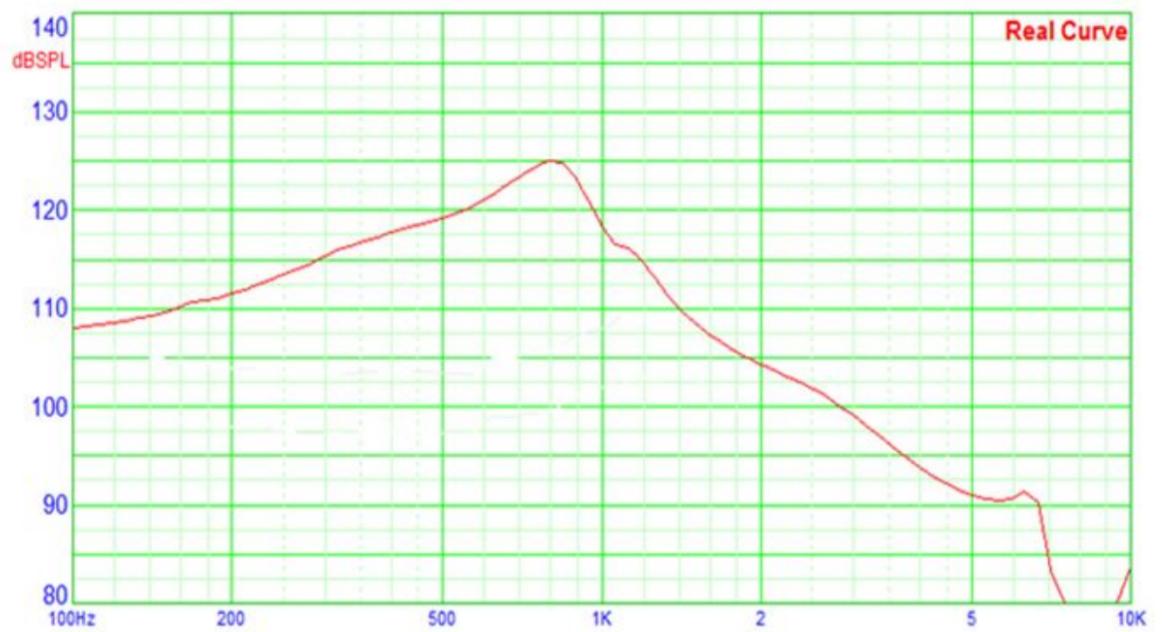
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Frequency Response Curve (Fig. 2)





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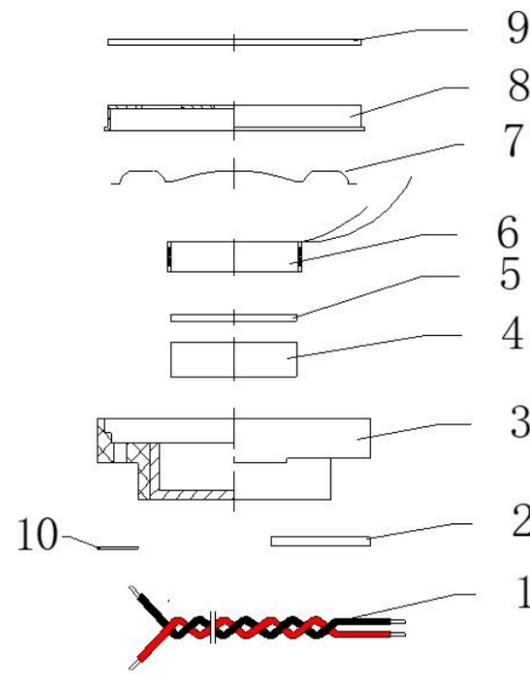
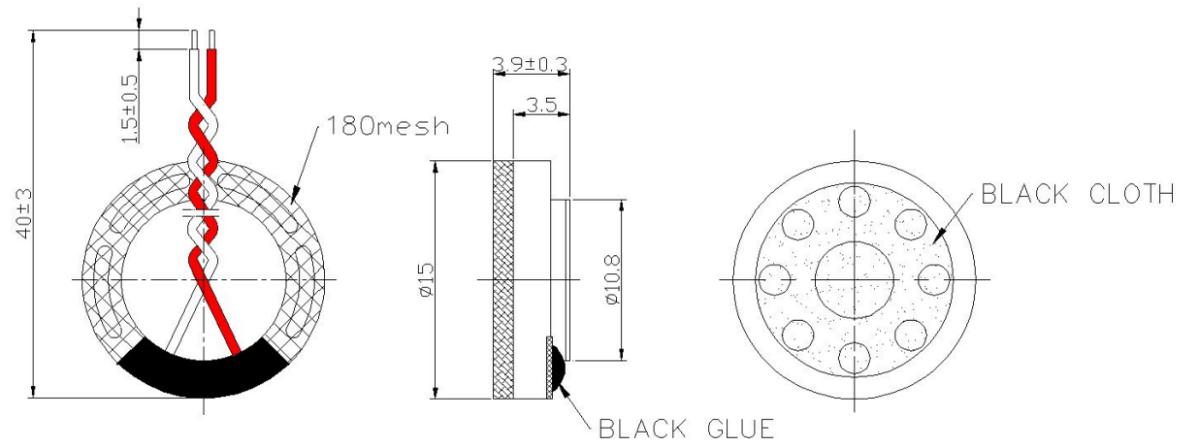
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Dimensions

Tolerance: ± 0.5 (unit: mm)

Wire: UL1571/AWG32#



| No. | Part Name | Material | Quantity |
|-----|---------------|------------------------|----------|
| 1 | Wire (40mm) | UL1571 AWG32# | 2 |
| 2 | PCB | 0.4 Tinned PCB | 1 |
| 3 | Frame | PBT | 1 |
| 4 | Magnet | Nd Fe B-N42 | 1 |
| 5 | Plate | SPCC | 1 |
| 6 | Voice Coil | Copper | 1 |
| 7 | Membrane | PEN | 1 |
| 8 | Cap | SUS304 | 1 |
| 9 | Screen Gasket | 0.4 Single-sided cloth | 1 |
| 10 | Damping Net | 180 mesh | 1 |



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