Miniature Speaker

Material

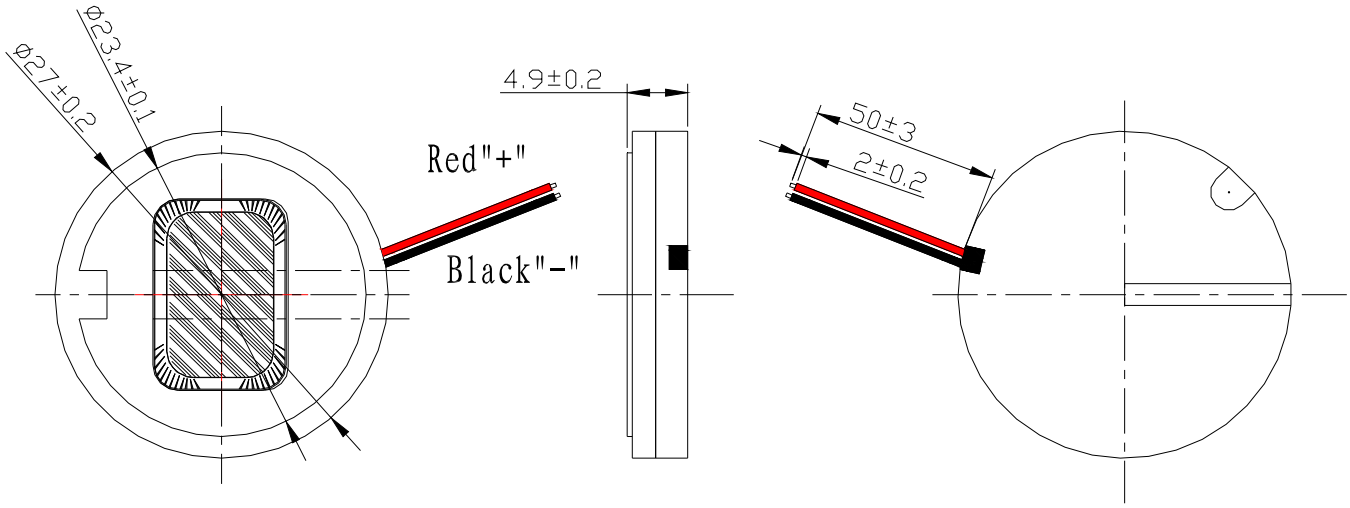
Frame & Front cover - PPA
Diaphragm - PEEK
Voice coil - Copper Wire
Solder Joints - SUS (stainless steel)
Plate - SPCC
Magnet - NdFeB
Yoke - SPCC
Plastic - PC & ABS

Fixing

Wire: 1571 32# Red & Black

Specification

Rated Impedance	8±20 %Ω
Rated Power	800 mW
Maximum Power	1 W
Resonant Frequency (According to IEC 268-5)	850±15%Hz/2.53 Vrms
Frequency Range	500 Hz ... 20 KHz
Sound Pressure Level at 0.8W/0.1m at 2kHz	90±3 dB
Operating Temperature Min.	-25 °C
Operating Temperature Max.	75 °C
Total harmonic distortion (at 2KHz/0.8W/100mm)	≤10 %Max
Weight	3 g



Dimensions Unit: mm±0.2

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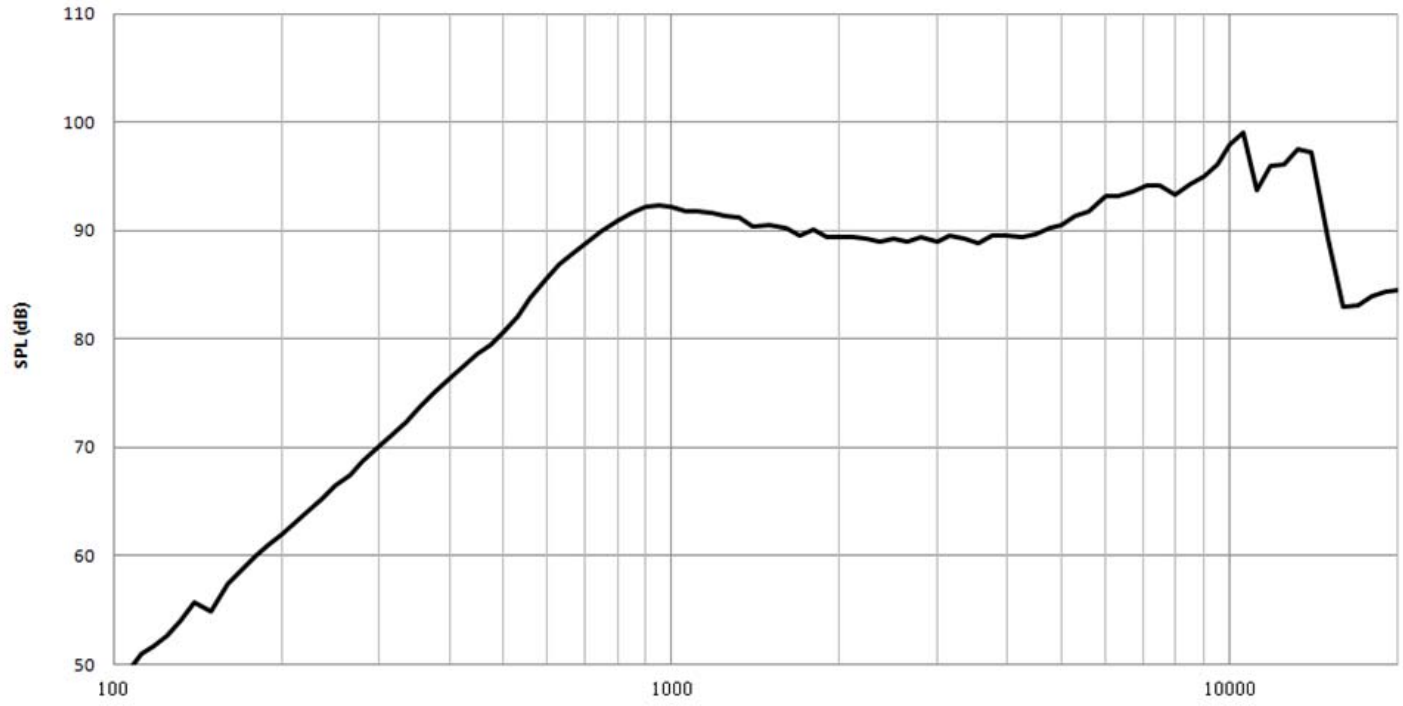
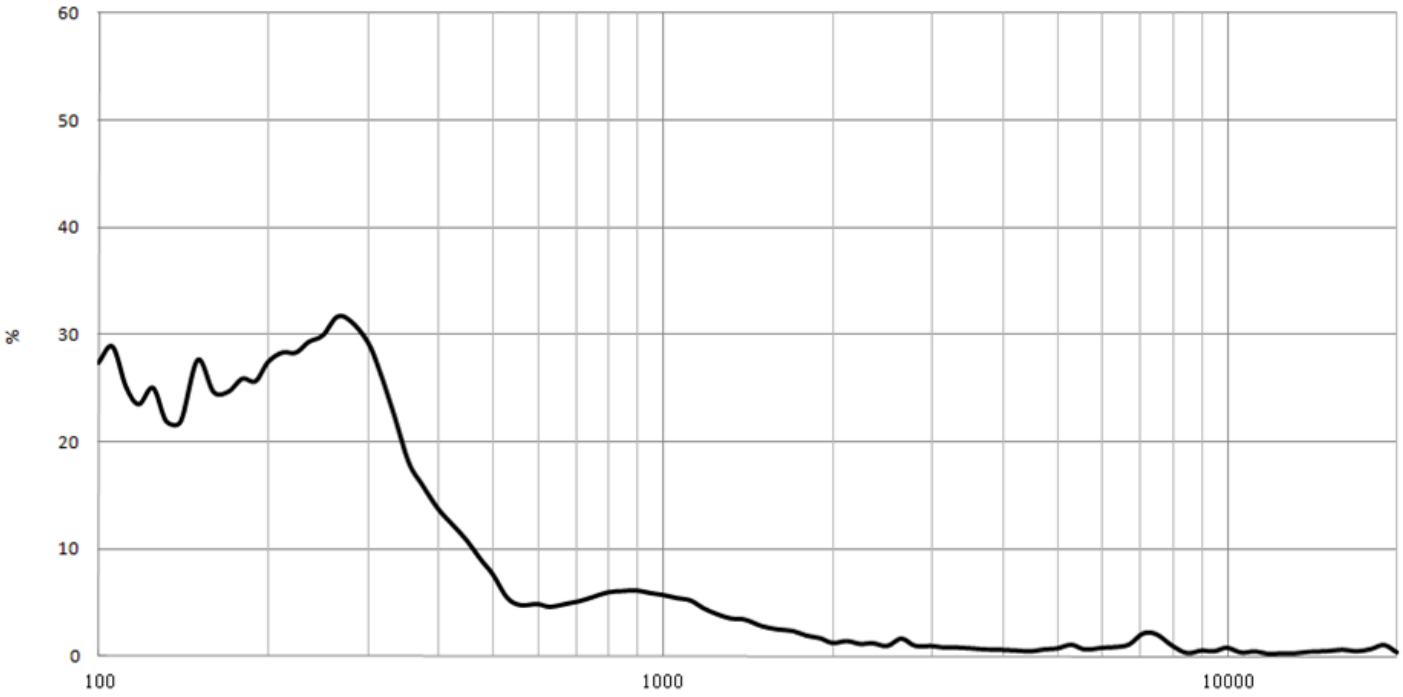
Frequency Response Curve



Typical THD Curve



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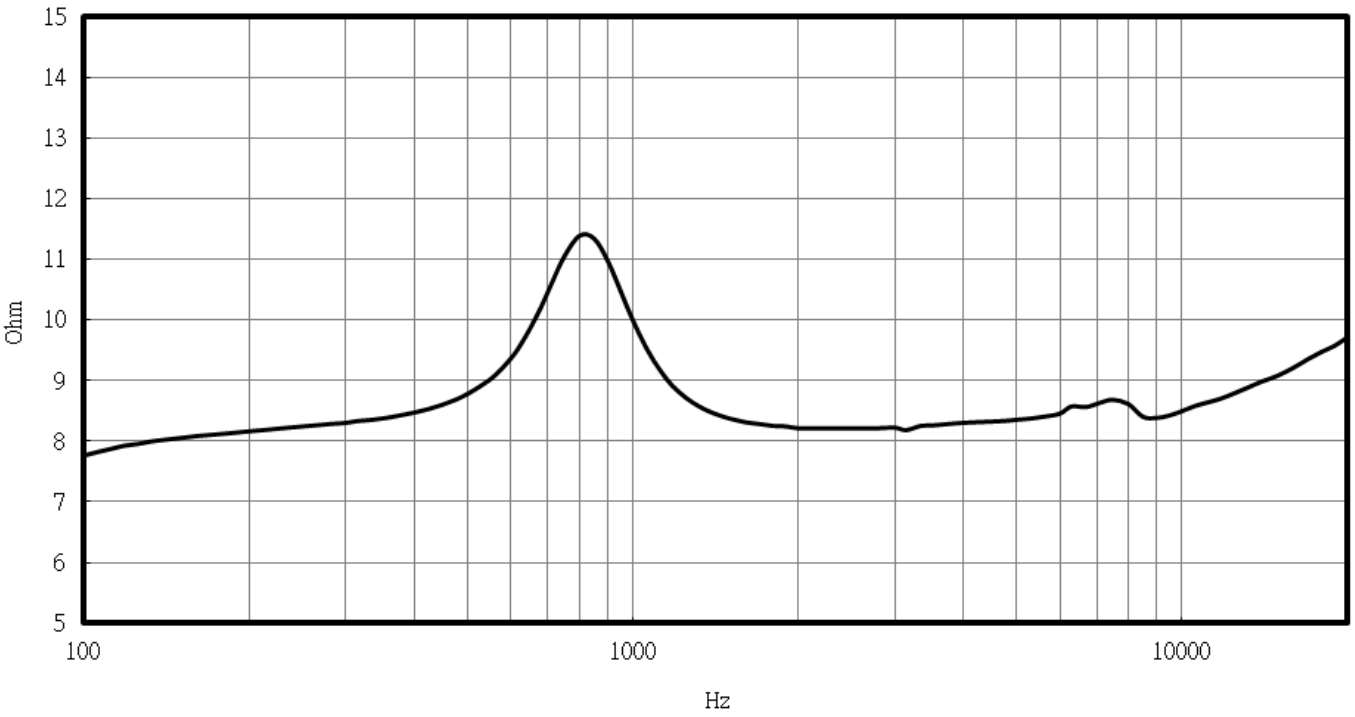
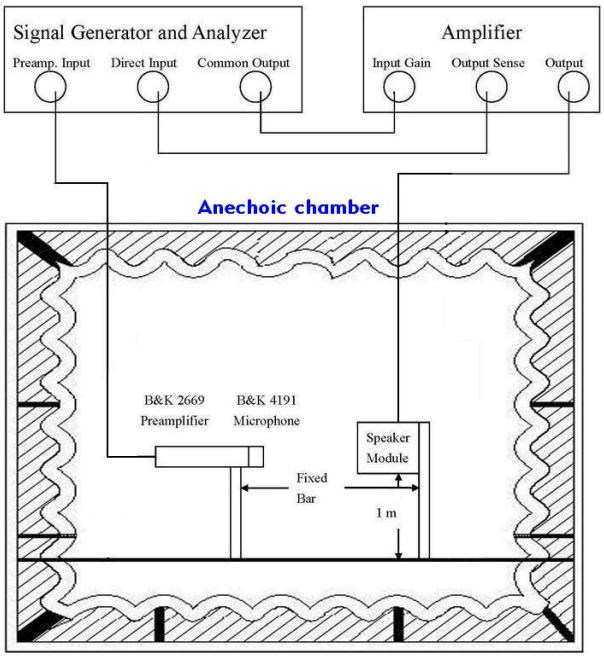
Typical Impedance Curve



Block Diagram of Test Environment



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Test Conditions

Test ClimTest Climatic Condition

Ambient temperature: 15 °C ~ 35 °C, preferably at 20 °C
Relative humidity: 25% to 75%
Air pressure: 86kPa ~ 106kPa
Refer to IEC 268-1

Test environment

Test method of SPL, Frequency Response Curve and THD

The speaker module and B&K microphone module should be fixed on the fixed bar in the acoustic anechoic chamber. The distance between B&K 4191 microphone module and speaker module should be 10 cm. the driving signal is 2.53 Vrms sinusoidal signal and sweep from 20 Hz to 20k Hz with 1/12 Octave (ISO R40) sequence

General Reliability test

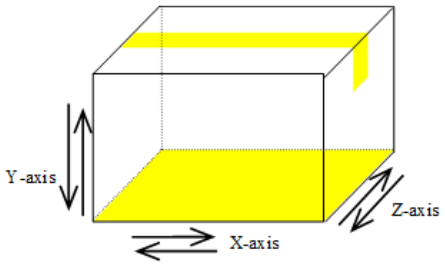
After reliability test, the samples shall be stored under climatic conditions such as normally exist in ordinary rooms or laboratories. Unless otherwise noted, the recovery period shall be 4 hours at least before performance testing. After reliability test, all samples must be meet the requirements specified in the document. The quantity of the test is 10 pcs if not stated otherwise.

Drop test

DUTs shall be mounted in a 100g fixture, drop samples 1.5m three times in each direction. Total - 18 times

Vibration

10 to 50 Hz within 1min / Amplitude 1.5mm / Duration: 30minutes in each of 3 axes.



Rated Noise Power

Input shall be simulated program signal in accordance with IEC 60268-1 with crest factor around 1.8 to 2.2 in rated frequency range with Rated Power for 100 hours. Temp.: 65 °C

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Test Conditions

Short-term Maximum Power

Input shall be simulated program signal in accordance with IEC 60268-1 with crest factor around 1.8 to 2.2 in rated frequency range. And the signal will be 1 second on, 59 second off, total 60 cycles (Refer to IEC 268-5).

Cold Test

Temp.: -25 °C / Duration: 16 hours.

Heat Test

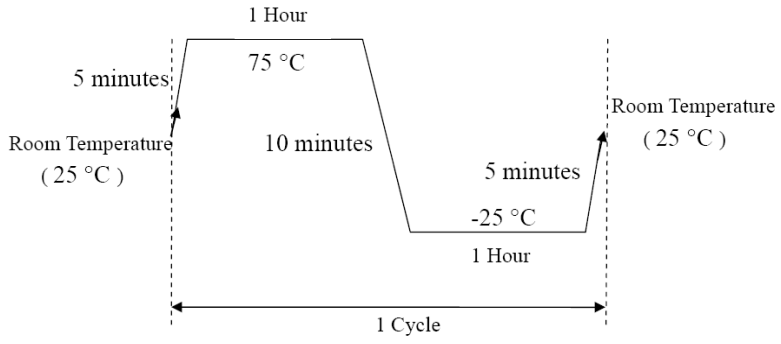
Temp.: 75 °C / Duration: 16 hours.

Humidity Test

Temp.: 40 °C / R.H.: 95 % / Duration: 48 hours.

Temperature Cycle Test

25 °C to 75 °C transition time: 5 minutes → 75 °C remains 1 hour → 75 °C to -25 °C transition time: 10 minutes→ -25 °C remains 1 hour → -25 °C to 25 °C transition time: 5 minutes (2 hours and 20 minutes per cycle) / 4 cycles



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