



PN: D0906004FP128AKR

DWG #:DB21-031 Rev0.2

SPECIFICATION

PRODUCT: Loudspeaker

STETRON PART NUMBER: D0906004FP128AKR

DESCRIPTION: Φ 9 x 6 inches/4 ohms/RoHS

RFQ: QB20128

STETRON APPROVALS	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE	<i>RS</i>	<i>CS</i>	
DATE	28-Mar-2022	28-Mar-2022	

CUSTOMER APPROVAL	SIGNATURE	DATE

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REVISION HISTORY

Rev Level	Date	Description	Page #	Changed By
0.0	26-July-2021	Original	All Pages	CS
0.1	01-Dec-2021	Added gasket to front of spkr.	Pg. 6	RS
0.2	28-Mar-2022	Updated frame dimension and removed preliminary spec	All pgs.	RS

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**1. Scope**

This document contains the required electrical, acoustic, mechanical and reliability information for a loudspeaker.

2. Environmental Requirements

This loudspeaker including all components, solder joints and glue must be RoHS compliant and meet the customer's known requirements for banned or restricted substances.

3. Environmental test conditions

	Standard Conditions	Preferred Conditions
Temperature	15 to 35°C	20 ± 2°C
Humidity	25 to 75%	63 to 67%
Air Pressure	86 to 106kPa	86 to 106kPa

Note: Conditions for Acoustic tests only

4. Electrical Requirements**4.1 Rated Impedance**

4Ω ±20% (@150Hz/1Vrms)

4.2 Rated Power

6 W (RMS)

4.3 Max Power

10 W (RMS)

4.4 Polarity

When a positive DC current is applied to the positive terminal of the speaker the diaphragm shall move forward.

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5. Acoustical Requirements

5.1 Sound Pressure Level

90 ± 3 dB (on IEC 268-5 Baffle in anechoic chamber @ 1W/1m avg. @ 0.5, 0.6, 0.8 and 1 kHz)

5.2 Resonant Frequency (F₀)

100 ± 20% Hz @ 1V_{rms} constant voltage – free air

5.3 Frequency Range

F₀ to 7kHz (SPL -10dB) @ 1W/1m

5.4 Buzz and Rattle

No audible buzzing shall occur at ≥0.3m distance when 6 W power (4.89 V_{rms}) sine wave from F₀ to 1000 Hz is applied to the speaker. Sweep time is 3Sec.

*See Test circuit (Fig 1), Frequency Response (Fig 2), and Impedance (Fig 3) below.

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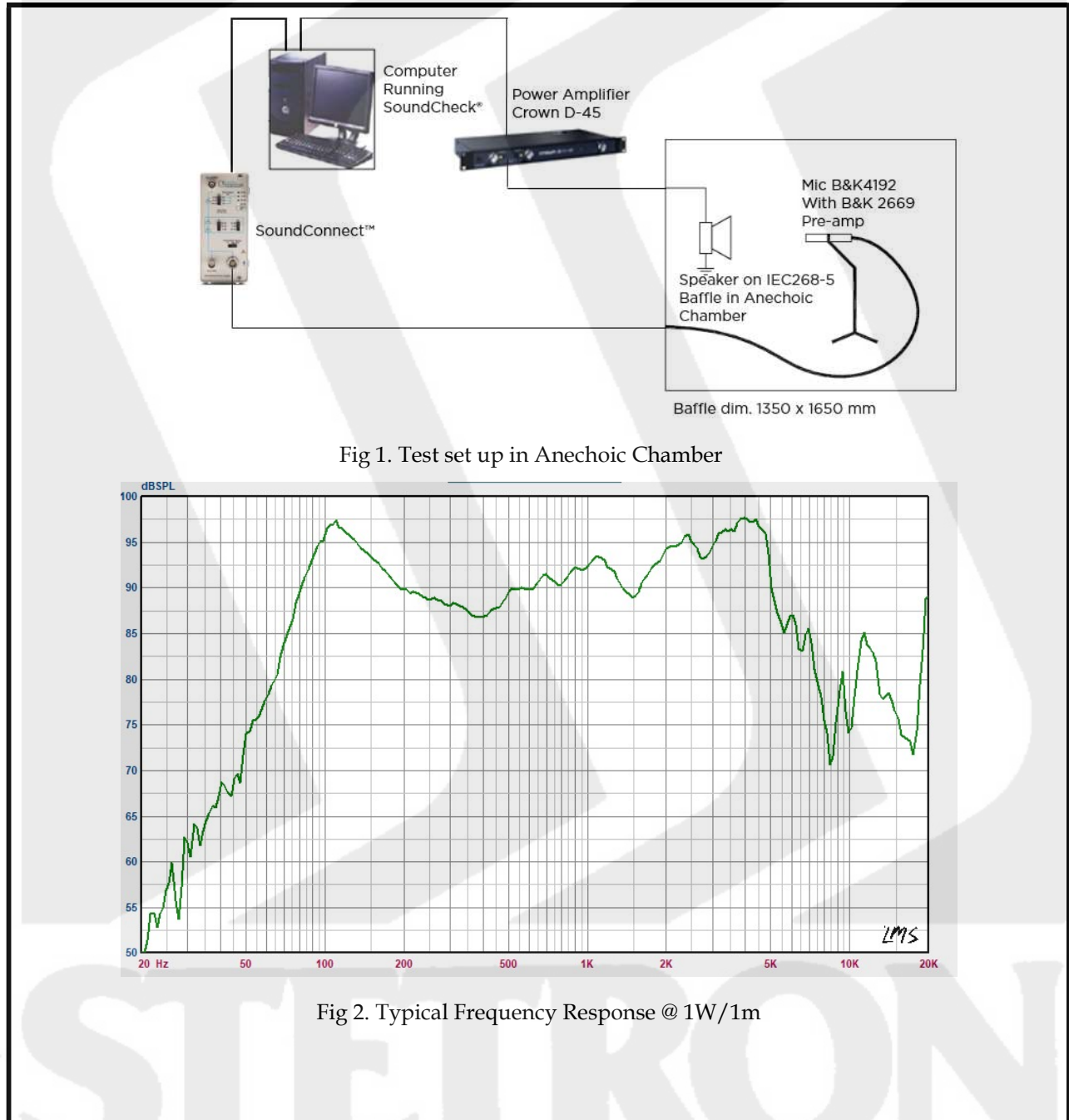
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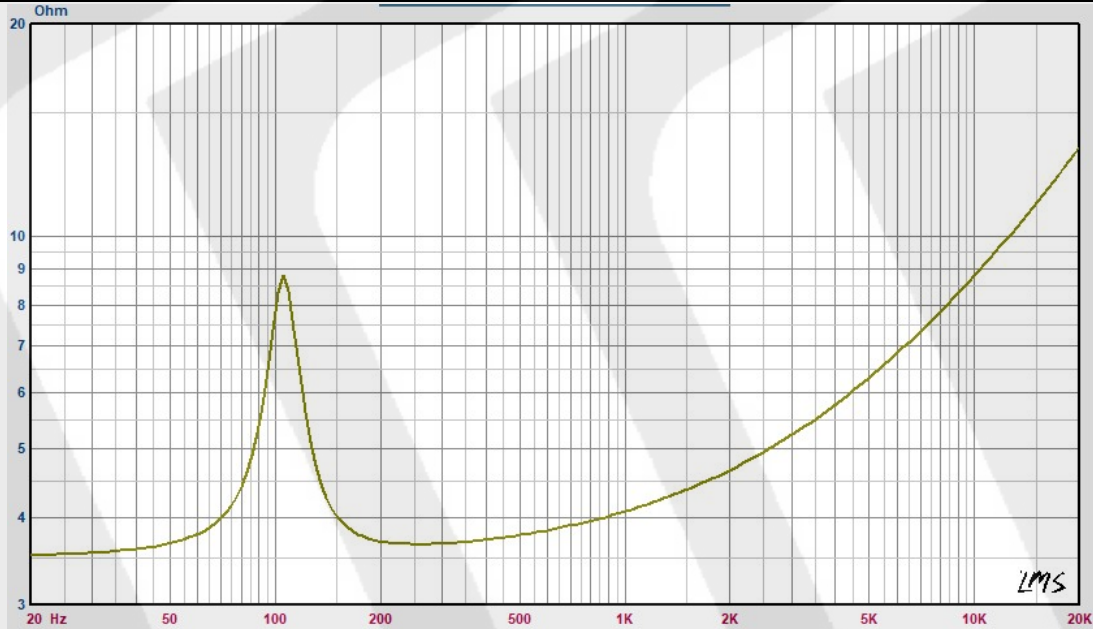


Fig. 3 Typical Free air impedance with 1Vrms

6. Reliability

6.1 High Temperature

Speakers are exposed in the high temperature chamber at $70 \pm 2^\circ\text{C}$, R.H $25\% \pm 5\%$ for 16 hrs.

6.2 Low Temperature

Speakers are exposed in the low temperature chamber at $-25 \pm 2^\circ\text{C}$ (humidity random) for 16 hrs.

6.3 Humidity

Speakers are exposed to $+25 \pm 2^\circ\text{C}$, R.H $95\% \pm 5\%$ for 16 hrs.

*Note: After any of tests 6.1 to 6.3 leave speakers for 1 hr at room temperature.

Speakers must pass pure sound listening and appearance tests.

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**6.4 Rated Power**

Speakers are exposed continuously to 6 W pink noise (with 100 Hz low cut filter) for 8 hrs.

6.5 Max Power

Speakers are exposed to 10 W pink noise (with 2kHz low cut filter) for 1 minute, rested for two minutes. This shall be repeated for 10 cycles.

*Note: after test items 6.4 and 6.5, leave speakers at room temperature for 1 hour. Speakers must pass pure sound listening, appearance test and the SPL should not deviate by more than $\pm 3\text{dB}$.

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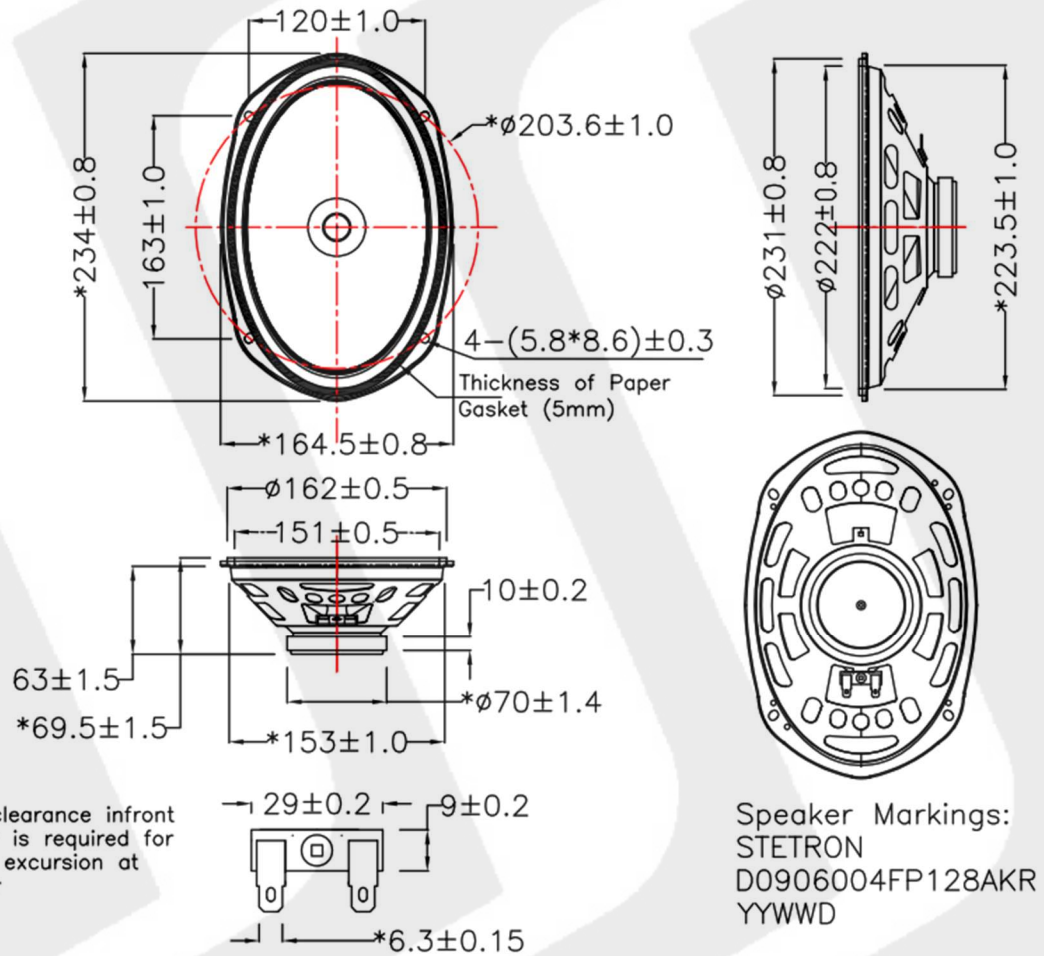
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7. Mechanical Layout and Dimensions



Unspecified Tolerance: $\pm 0.5\text{mm}$

All dimensions in mm

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