



PN: A0200004FP200AKR

DWG #:DB20-028 Rev0.2

SPECIFICATION

PRODUCT: Loudspeaker

STETRON PART NUMBER: A0200004FP200AKR

DESCRIPTION: Φ 200mm / 4 ohms / 10W / RoHS

RFQ: QB19200

STETRON APPROVALS	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE	RS	CS	
DATE	28-June-2023	29-June-2023	

CUSTOMER APPROVAL	SIGNATURE	DATE

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REVISION HISTORY

Rev Level	Date	Description	Page #	Changed By
0.0	17-July-2020	Original	All Pages	RS
0.1	26-Sept-2022	General spec update	All Pages	RS
0.2	28-June-2023	Added packaging and removed preliminary stamp	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% (@250Hz/1Vrms)

4.2 Rated Power

10.0W (RMS)

4.3 Max Power

15.0W (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

$90 \pm 3\text{dB}$ (on IEC 268-5 Baffle in anechoic chamber @ $1\text{W}/1\text{m}$ avg. @ 0.2, 0.4, 0.6, and 1.0 kHz)

5.2 Resonant Frequency (F_0)

$70 \pm 20\%$ Hz @ 1V_{rms} constant voltage – free air

5.3 Frequency Range

F_0 to 5 kHz (SPL -10dB) @ $1\text{W}/1\text{m}$

5.4 Buzz and Rattle

No audible buzzing shall occur at $\geq 0.3\text{m}$ distance when 10W power ($6.32\text{V}_{\text{rms}}$) sine wave from F_0 to 2kHz is applied to the speaker.

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

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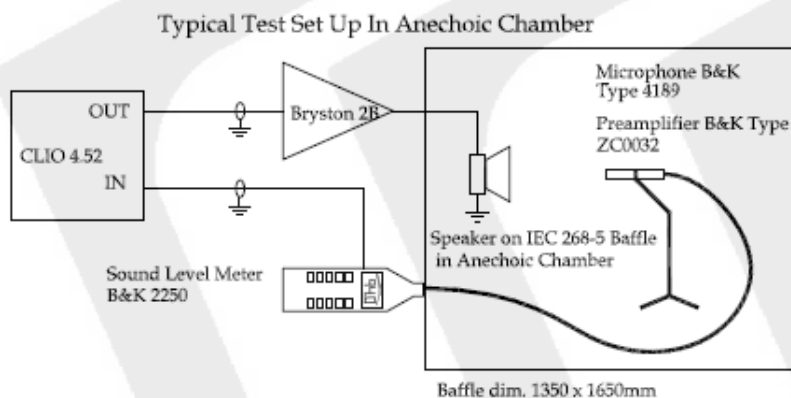


Fig 1. Test set up in Anechoic Chamber

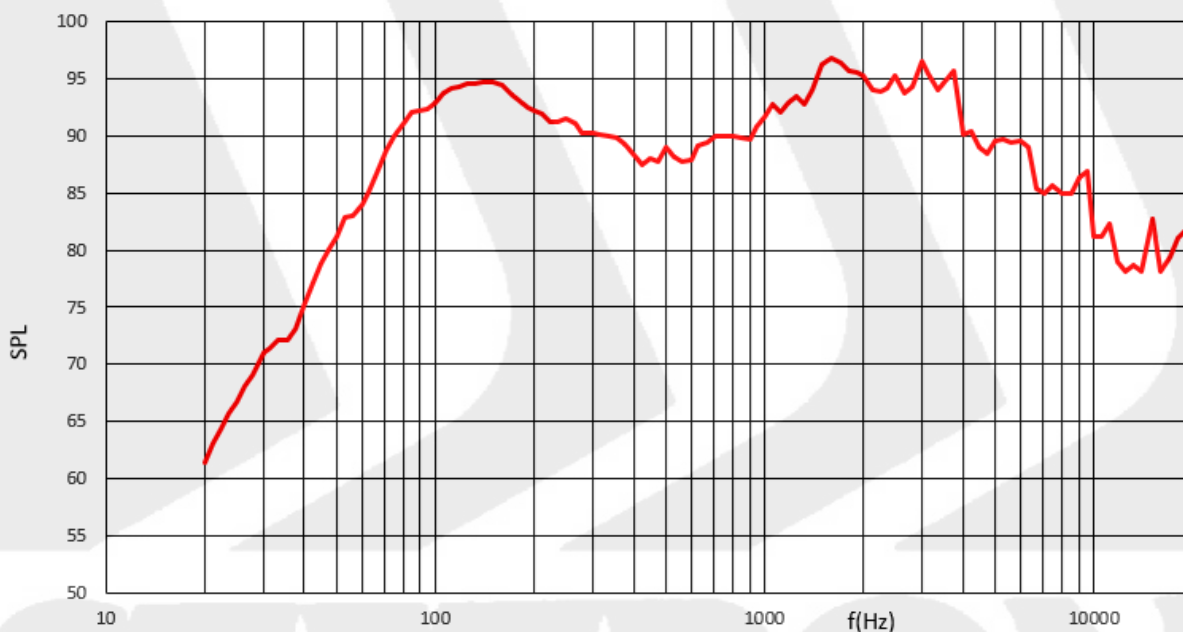


Fig 2. Typical Frequency Response @ 1W/1m

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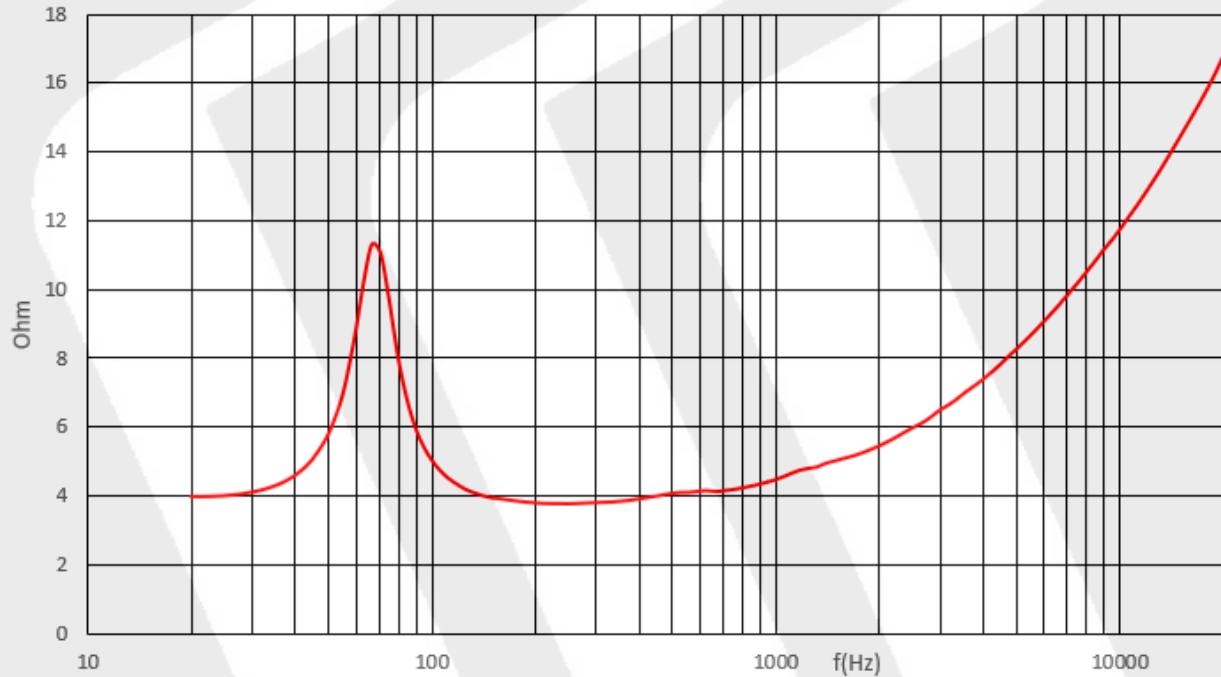


Fig 3. Typical Free air impedance with 1Vrms

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.

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*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.

6.4 Rated Power

Speakers are exposed continuously to 10W pink noise for 8 hrs with 50 Hz low cut filter.

6.5 Max Power

Speakers are exposed to 15W pink noise (with 50Hz low cut filter) for 1 minute on and 2 minutes off for a total of 10 cycles.

Note: After test 6.4-6.5 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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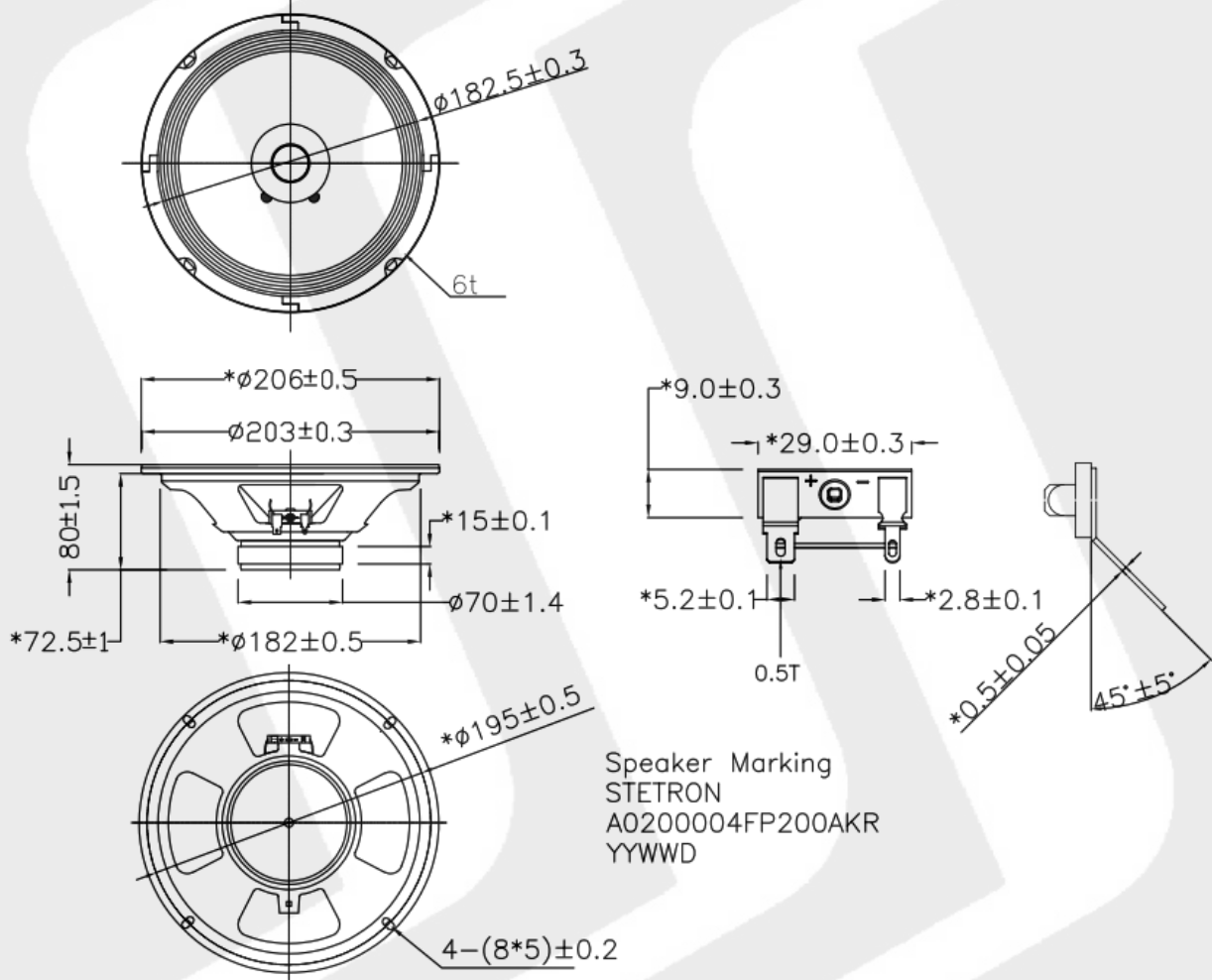
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7. Mechanical Layout and Dimensions



All dimensions in mm

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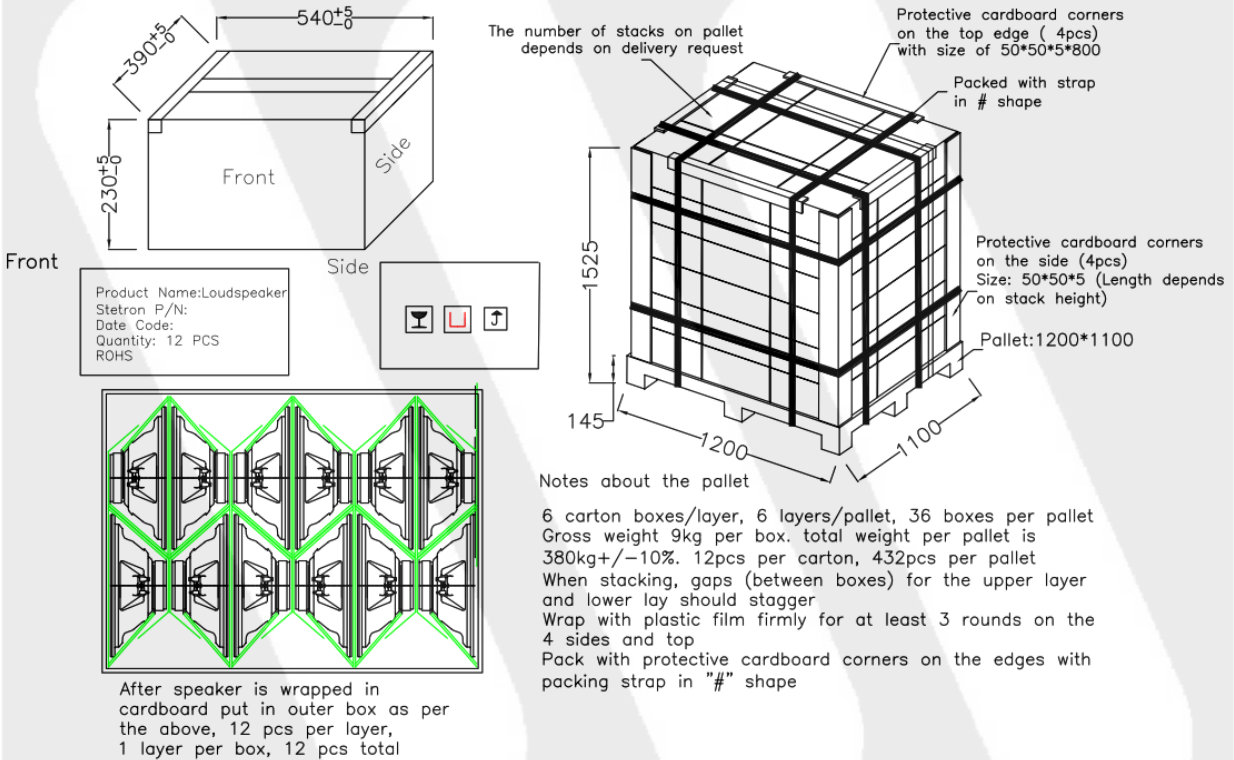
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8. Packaging



All dimensions in mm

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