SPECIFICATION

PRODUCT: Loudspeaker

STETRON PART NUMBER: W200004FP815AKR

DESCRIPTION: Woofer, 216mm/4 ohms/RoHS

RFQ: QB22122-V1

STETRON APPROVALS	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE	RS	CS	CS
DATE	21-Aug-2025	29-Aug-2025	29-Aug-2025

CUSTOMER APPROVAL	SIGNATURE	DATE

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REVISION HISTORY

Rev Level	Date	Description	Page #	Changed By
0.0	15-May-2025	Original	All Pages	RS
0.1	26-May-2025	Updated OD of speaker	Pg. 6	RS
0.2	16-June-2025	Added lead wires and connector	Pg. 6	RS
0.3	21-Aug-2025	Update lead wire configuration and added packaging	Pg. 6 and 7	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% (@150 Hz/1Vrms)
4.2 Rated Power	100.0W (RMS)
4.3 Max Power	120.0W (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	88 ± 3 dB (on IEC 268-5 Baffle in anechoic chamber @ 1W/1m avg. @ 80, 100, 150, and 200Hz)
5.2 Resonant Frequency (F_0)	43 ± 20% Hz @ 1Vrms constant voltage – free air
5.3 Frequency Range	F_0 to 1.8 kHz (SPL -10dB) @ 1W/1m
5.4 Buzz and Rattle	No audible buzzing shall occur at ≥0.3m distance when 20 Vrms) sine wave from Fo to 1.8kHz is applied to the speaker.

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

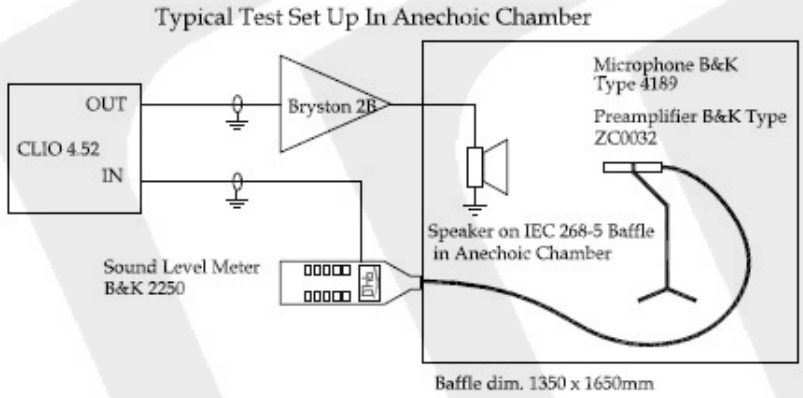


Fig 1. Test set up in Anechoic Chamber

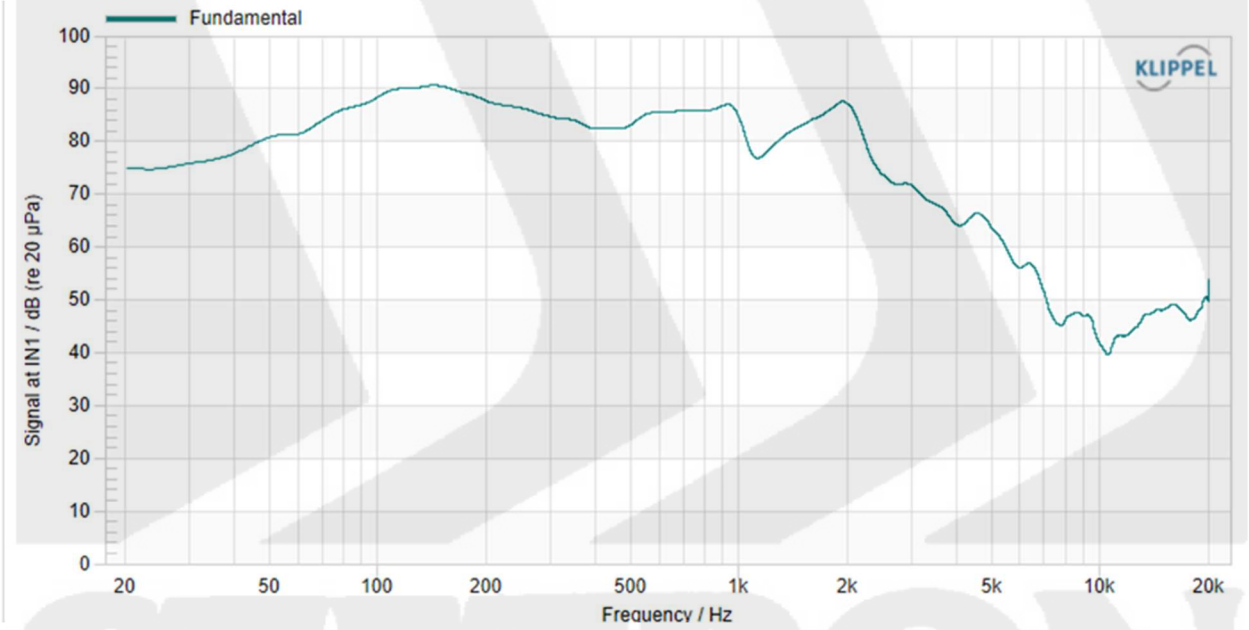


Fig 2. Typical Frequency Response @ 1W/1m

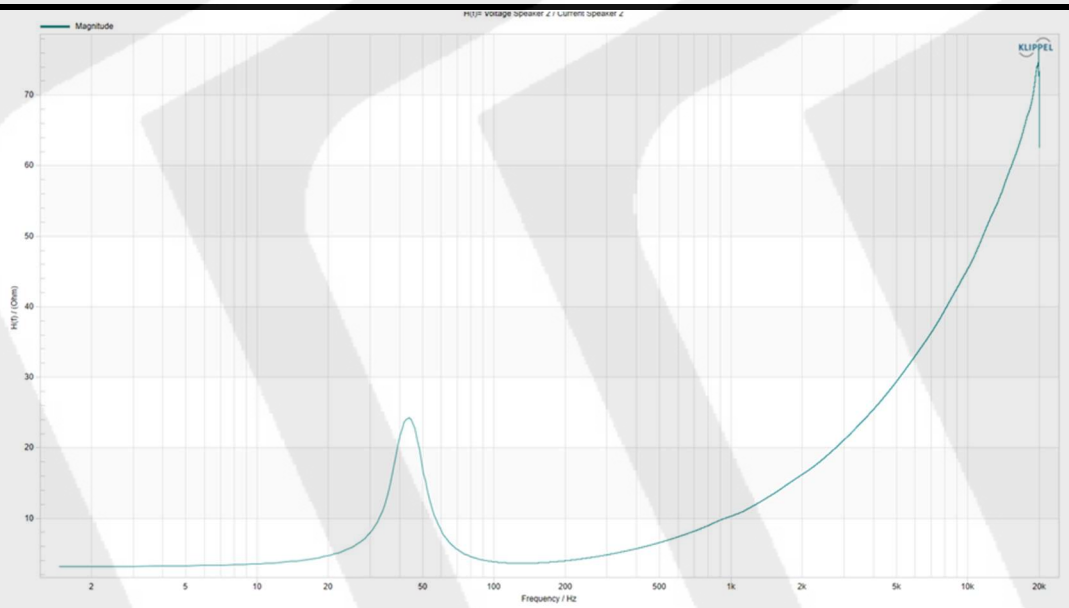


Fig 3. Typical Free air impedance with 1Vrms

6. Reliability

6.1 High Temperature

Speakers are exposed in the high temperature chamber at +70 ± 2°C, R.H 25% ± 5% for 16 hrs.

6.2 Low Temperature

Speakers are exposed in the low temperature chamber at -25 ± 2°C (humidity random) for 16 hrs.

6.3 Humidity

Speakers are exposed to 25 ± 2°C, R.H 95% ± 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.

6.4 Rated Power

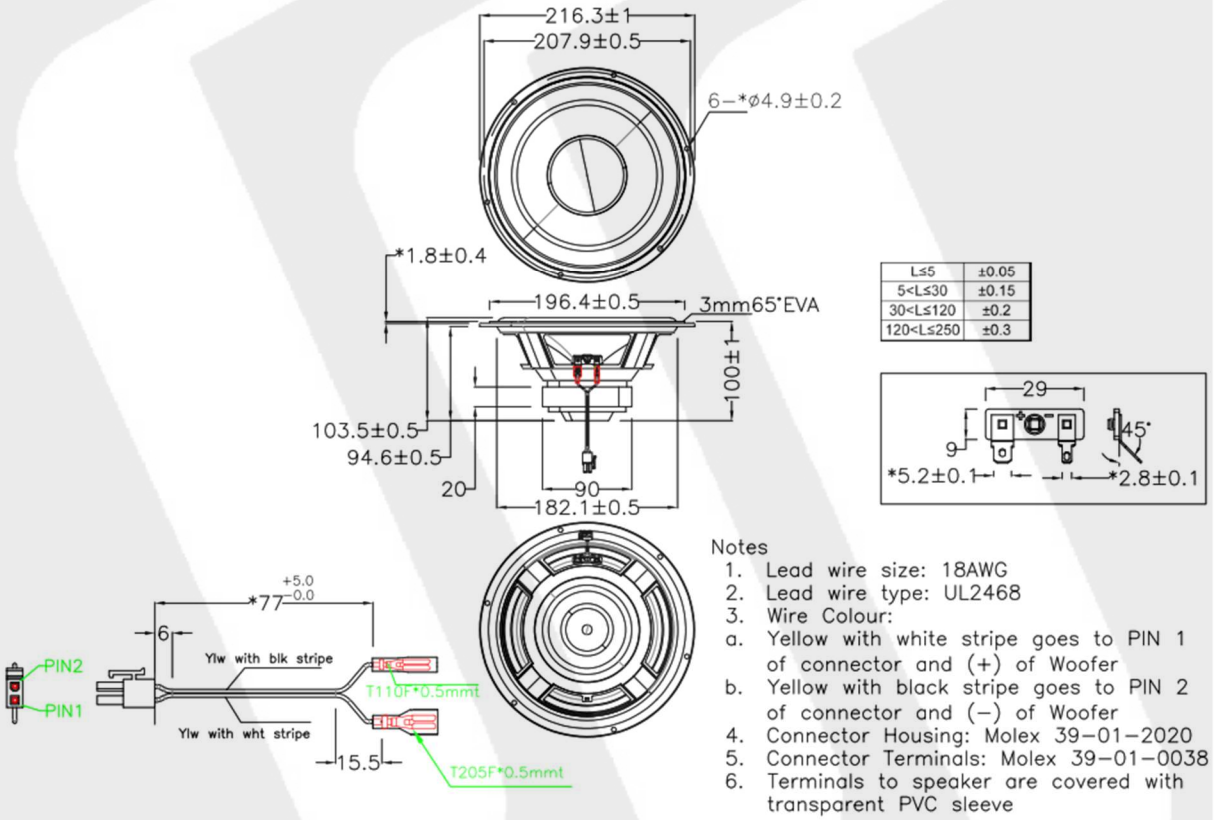
Speakers are exposed continuously to 100 W pink noise with low cut filter for 96 hrs.

6.5 Max Power

Speakers are exposed to 120W pink noise (with 2kHz 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 ±3dB.

7. Mechanical Layout and Dimensions



Notes
1. Lead wire size: 18AWG
2. Lead wire type: UL2468
3. Wire Colour:
   a. Yellow with white stripe goes to PIN 1 of connector and (+) of Woofer
   b. Yellow with black stripe goes to PIN 2 of connector and (–) of Woofer
4. Connector Housing: Molex 39–01–2020
5. Connector Terminals: Molex 39–01–0038
6. Terminals to speaker are covered with transparent PVC sleeve

All dimensions in mm

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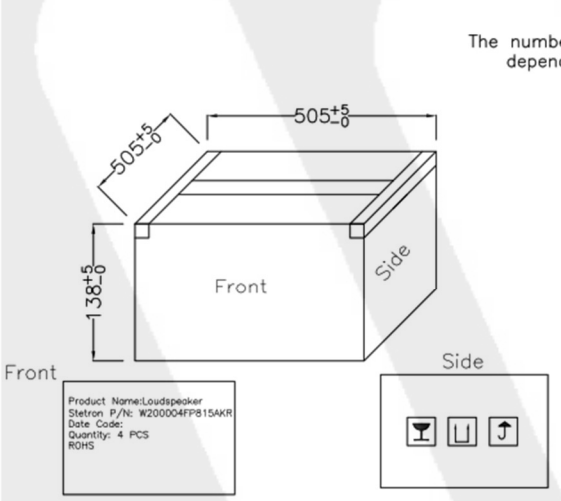
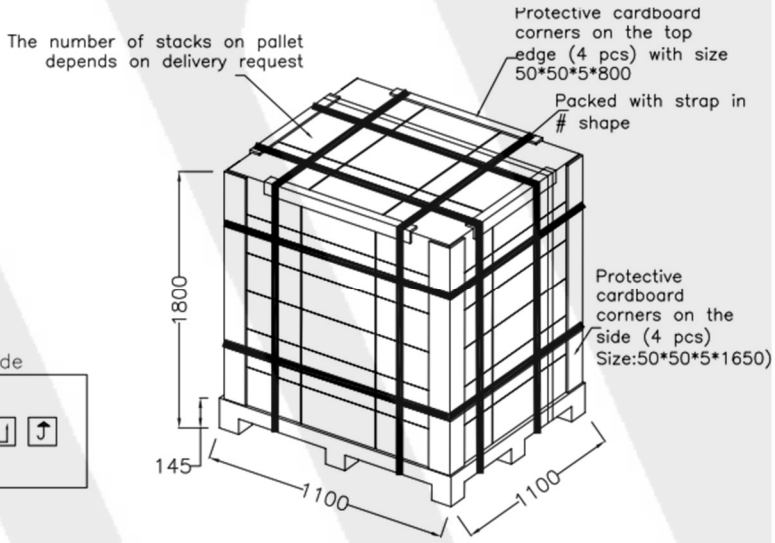
8. Packaging



Speakers packed with cone facing downwards. 1 speaker per compartment. 4 speakers per layer and 1 layer per box



Notes about the Pallet:
4 carton boxes/layer, 12 layers/pallet, 48 boxes in total
Gross weight is 6.8kg per box. One pallet weighs 326kg+/−10%, with 192 pcs in total.
When stacking, align lower boxes and stack upwards, do not interlock
Plastic film should be wrapped firmly with 3 rounds at least on the 4 sides and the top
Protective "corners" are used on the edges of pallet. pack the pallet with packing straps in "#" shape.

All dimensions in mm