



PN: A0100008FM062AR

DWG #:DB25-017 Rev 0.2

SPECIFICATION

PRODUCT: Loudspeaker

STETRON PART NUMBER: A0100008FM062AR

DESCRIPTION: ϕ 102mm \times 102mm/8ohms/RoHS

RFQ: QB24132

STETRON APPROVALS	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE	CS	RS	
DATE	06-Nov-25	06-Nov-2025	

CUSTOMER APPROVAL	SIGNATURE	DATE

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REVISION HISTORY

Rev Level	Date	Description	Page #	Changed By
0.0	26-Sept-25	Original	All Pages	CS
0.1	14-Oct-25	Frequency Range update, Reliability Tests (high temp, low temp)	Pages 2, 4	CS
0.2	06-Nov-25	Updated Storing/Op temperatures, Added Packaging	Pages 5, 8	CS

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Preliminary Specification

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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. 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: Above atmospheric test conditions are for acoustic parameters only

4. Electrical Requirements

4.1 Rated Impedance 8 ± 15% Ω (1.0KHz/1Vrms)

4.2 Rated Power 4.0W (RMS)

4.3 Max Power 6.0W (RMS)

4.4 Polarity When a positive DC current is applied to the speaker terminal marked “+” the diaphragm shall move forward.

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5. Acoustical Requirements

5.1 Sound Pressure Level

93 ± 3 dB (on IEC 268-5 Baffle in anechoic chamber @ 1W/1m @ avg at 600, 800, 1k, 2k Hz)

5.2 Resonant Frequency (F₀)

490 Hz ± 20% @ 1V_{rms} constant voltage - free air

5.3 Total Harmonic Distortion (THD)

Max 7% @ 4.0W/1.0m at 1kHz

5.4 Effective Frequency Range

F₀ to 5k Hz (SPL-10dB) @ 1W/1m per IEC 60268-5

Frequency Range (for reference)

Speaker can produce sound @4W minimum power from 200Hz to 10kHz

5.5 Buzz and Rattle

No audible buzzing shall occur at ≥0.3m distance when 5.65V_{rms} sine wave from F₀ to 5kHz is applied to the speaker.

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

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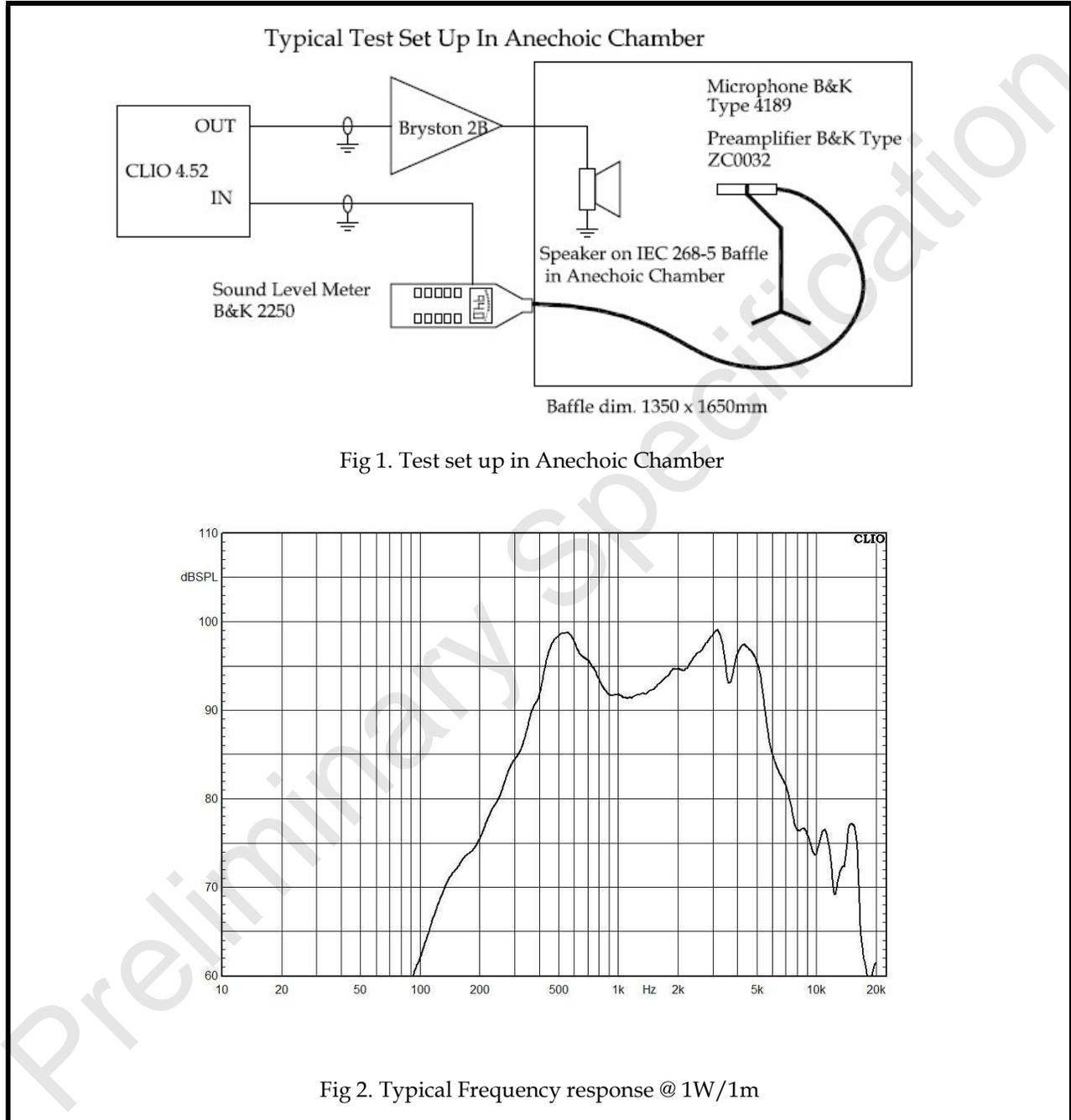
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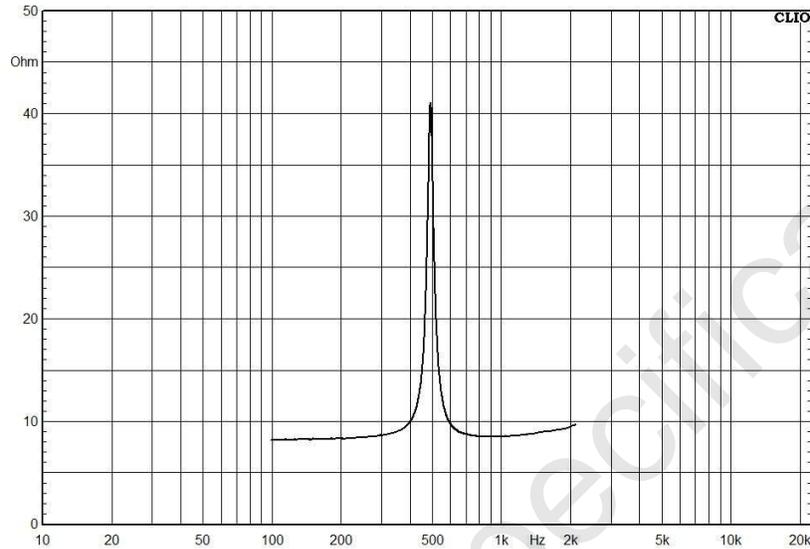


Fig 3. Typical Impedance Curve in Free Air @ 1Vrms input

6. Reliability

6.1 High Temperature

Speakers are exposed to $66^{\circ}\text{C} \pm 5^{\circ}\text{C}$, R.H. random for 96 hrs.

6.2 Humidity

Speakers are exposed to $40^{\circ}\text{C} \pm 3^{\circ}\text{C}$, R.H. 90 - 95% for 96 hrs.

6.3 Low Temperature

Speakers are exposed to $-40^{\circ}\text{C} \pm 5^{\circ}\text{C}$, R.H. random for 96 hrs.

6.4 Rated Power

Speakers are exposed continuously to 4W (5.65Vrms) white noise (20 ~ 20K Hz) for 96 hrs.

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**6.5 Max Power**

Speakers are fed with 6W (6.92V_{rms}) white noise (20 ~ 20K Hz) for 1min.

*Note: After any of the above tests (6.1 to 6.5) leave speakers for 1 hr at room temperature and speakers must meet items 4.1, 5.1, 5.2 and 5.5

6.6 Drop Test

Speakers properly packaged in their shipping carton are dropped on each side of the carton except the top from a height of 80cm (Carton GW ≤ 10 kg) or 60 cm (10 kg < Carton GW ≤ 25 kg). After test there shall be no audible buzz or rattle and the speakers shall not exhibit any physical damage.

6.7 Transportation and Storage

T_{max} = +66°C, T_{min} = -40°C

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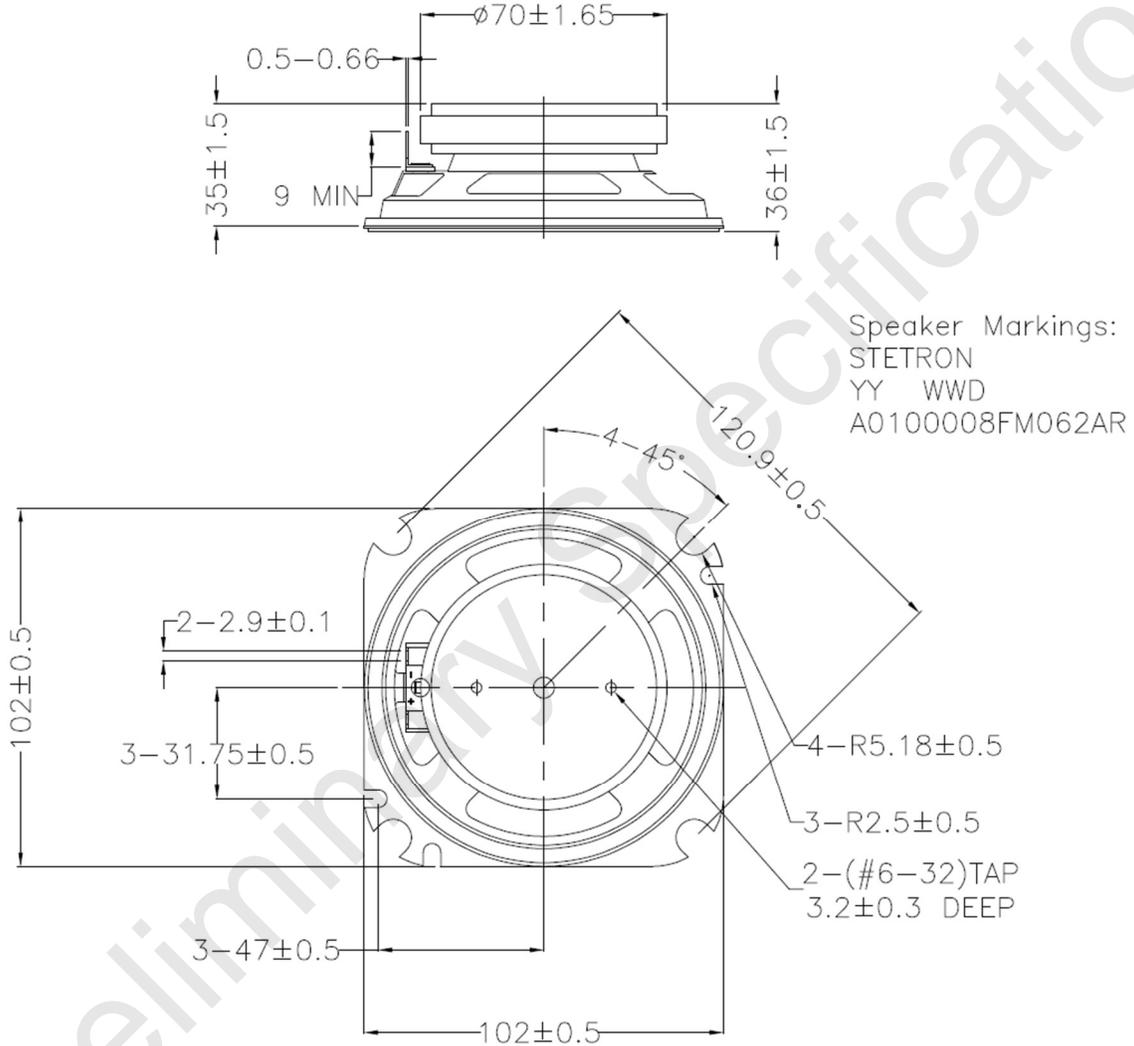
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7. Mechanical Layout and Dimensions



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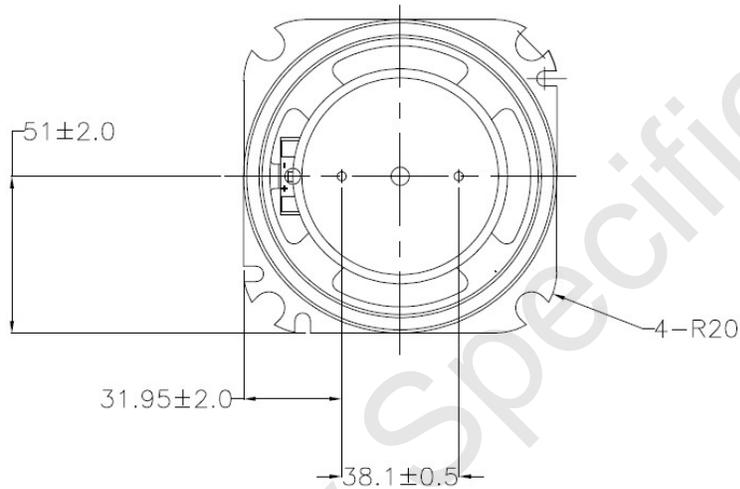
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All dimensions in mm

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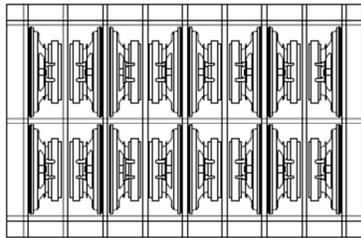


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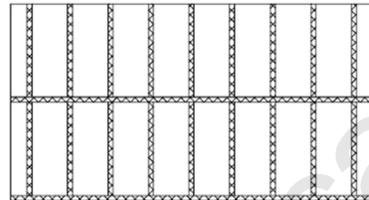
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8. Packaging

16 PCS/ LAYER INSIDE



1 COVER/CARTON



2 LAYERS/BOX, TOTAL 32 PCS

FACE B, D

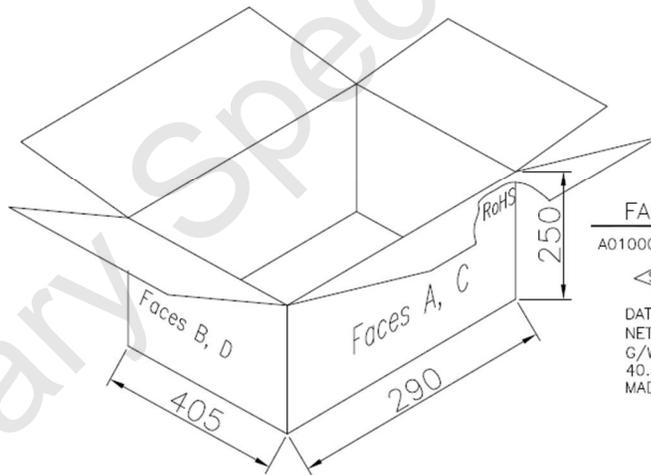
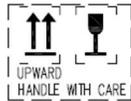
C/NO:

32 PCS



KEEP DRY USE NO HOOK

TOP LEFT CORNER OF
A, B, C, and D



FACE A, C

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DATE CODE:
NET/W: 11.2 KG
G/W : 12.2 KG
40.5×29×25 cm
MADE IN CHINA

All dimensions in mm

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