



PN: A0100008FP12PA

DWG #:DB17-049 Rev0.4

## SPECIFICATION

PRODUCT: Loudspeaker

STETRON PART NUMBER: A0100008FP12PA

DESCRIPTION: 103 x 103 x 32.5mm/8ohms/RoHS

RFQ: QB13175-V12

STETRON APPROVALS	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE	<i>YL</i>	<i>RS</i>	
DATE	01-Nov-18	01-Nov-2018	

CUSTOMER APPROVAL	SIGNATURE	DATE

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### REVISION HISTORY

Rev Level	Date	Description	Page #	Changed By
0.0	10-July-2017	Original	All Pages	RS
0.1	27-Sep-2017	Updated dims for frame lip and front gasket	Pg. 5	RS
0.2	11-Oct-2017	Updated frame height and dimensions related to flange	Pg. 5	RS
0.3	18-Nov-2017	Add speaker marking	Pg. 5	YL
0.4	01-Nov-2018	Official Version Release	All Pages	YL



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**1. Scope**

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

**2. 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

**3. Electrical Requirements**

- 3.1 Rated Impedance** 8 Ω ±20% (1.0kHz/1Vrms)
- 3.2 Rated Power** 4.0W (RMS)
- 3.3 Max Power** 8.0W (RMS)

**4. Acoustical Requirements**

- 4.1 Sound Pressure Level** 93 ± 3dB (on IEC 268-5 Baffle in anechoic chamber @ 1W/1.0m avg @ 0.4, 1.4, 2.6 and 4.0 kHz)
- 4.2 Resonant Frequency (Fo)** 500 Hz ± 20% @ 1Vrms constant voltage – free air
- 4.3 Frequency Range** 500Hz to 5 kHz (SPL-10dB) @ 1W/1.0m

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**4.4 Buzz and Rattle**

No audible buzzing shall occur at  $\geq 0.3\text{m}$  distance when a rated power (5.65Vrms) sine wave from 500Hz to 5kHz is applied to the speaker.

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

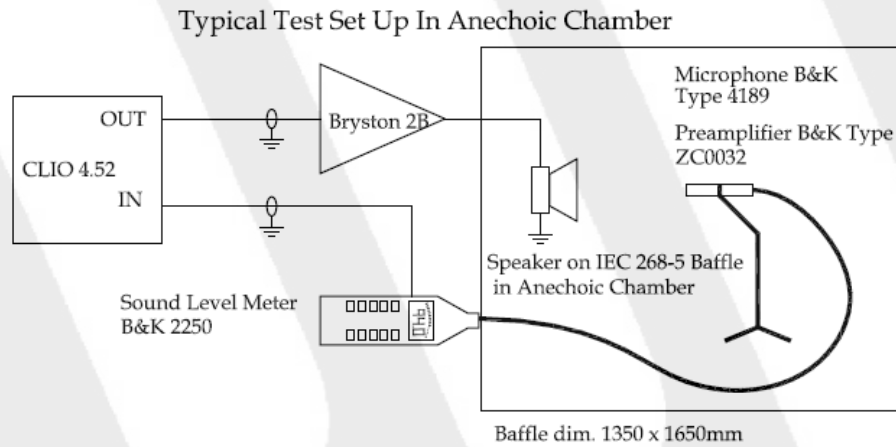


Fig 1. Test set up in Anechoic Chamber

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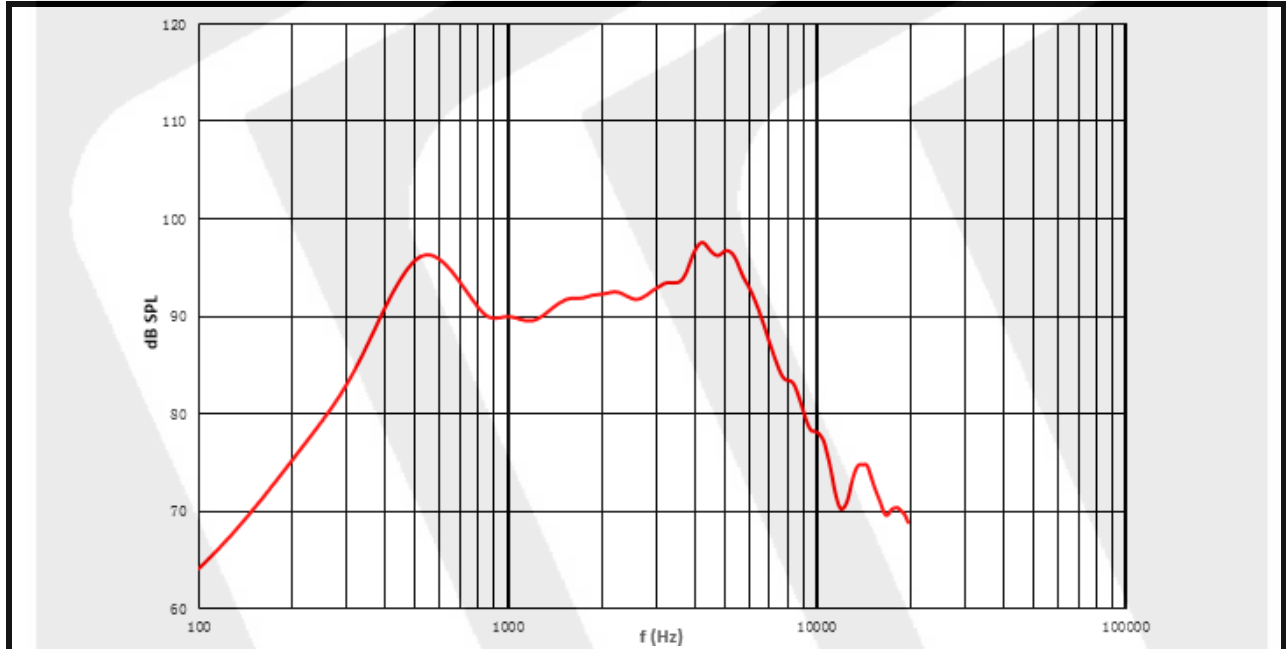


Fig 2. Typical Frequency response @ 1W/1m

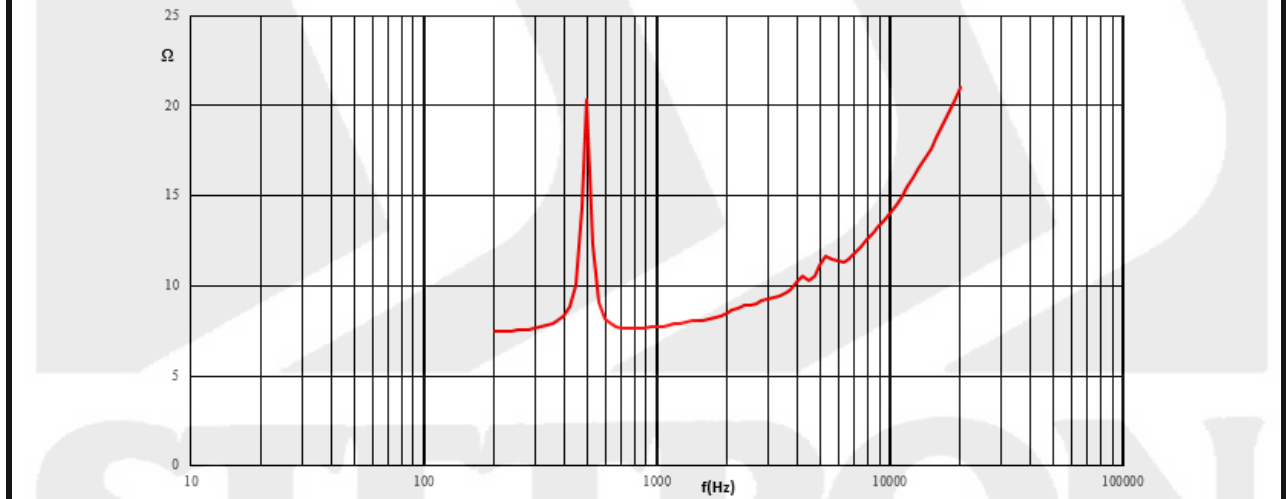


Fig 3. Typical Impedance Curve

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## 5. Reliability

### 5.1 High Temperature

Speakers are exposed to  $70^{\circ}\text{C} \pm 3^{\circ}\text{C}$ , RH (random) for 96 hrs.

### 5.2 Humidity

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

### 5.3 Low Temperature

Speakers are exposed to  $-25^{\circ}\text{C} \pm 3^{\circ}\text{C}$ ; RH (random) for 96 hrs.

### 5.4 Rated Power

Speakers are exposed continuously to rated power (5.65Vrms) white noise (20 Hz to 20 kHz) for 96 hrs.

### 5.5 Max Power

Speakers are fed with a white noise (20 Hz to 20 kHz) of 8W (8.0Vrms) for 1min.

\*Note: After any of the above tests (5.1 to 5.5) leave speakers for 1 hr at room temperature and speakers must meet items 3.1, 4.1, 4.2, and 4.4.

### 5.6 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  $\leq$  10 kg) or 60 cm ( $10 \text{ kg} < \text{Carton GW} \leq 25 \text{ kg}$ ). After test there shall be no audible buzz or rattle and the speakers shall not exhibit any physical damage.

### 5.7 Transportation and Storage

$T_{\text{max}} = +70^{\circ}\text{C}$ ,  $T_{\text{min}} = -25^{\circ}\text{C}$

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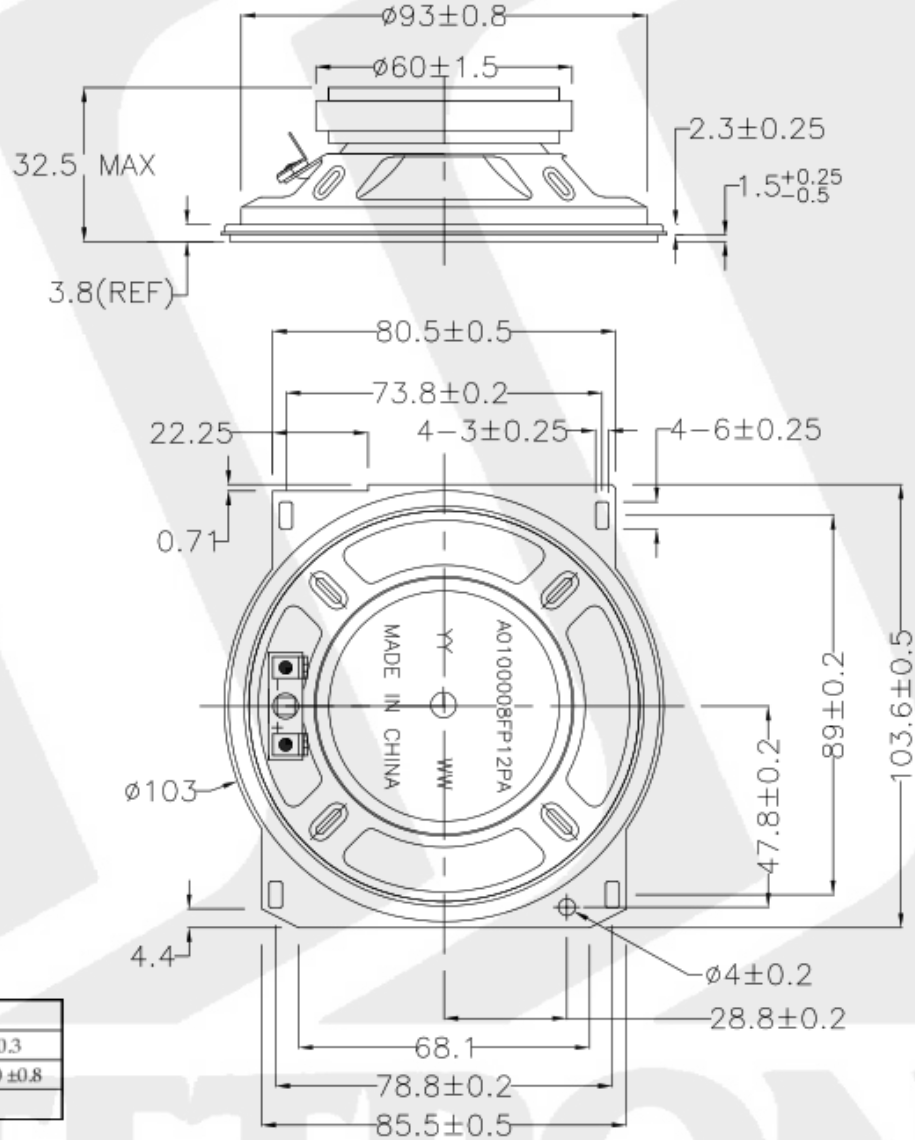
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### 6. Mechanical Layout and Dimensions



All dimensions in mm

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