



PN: D4242008NR10WER

DWG #:DB20-015 Rev0.4

## SPECIFICATION

PRODUCT: Loudspeaker

STETRON PART NUMBER: D4242008NR10WER

DESCRIPTION: 42 x 42 x 26.7 mm/8 ohms/5W/with mounting flange/RoHS

RFQ: QB20122

STETRON APPROVALS	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE	<i>RS</i>	<i>CS</i>	
DATE	04-Jan-2022	04-Jan-2022	

CUSTOMER APPROVAL	SIGNATURE	DATE

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### REVISION HISTORY

Rev Level	Date	Description	Page #	Changed By
0.0	29-April-2020	Original from DB14-016 Rev0.1	All Pages	YL
0.1	11-May-2020	Add screw holes on flange	Page 5	YL
0.2	08-July-2020	Update performance charts and response range	Page 2, 3	YL
0.3	7-Aug-2020	Removed preliminary stamp	All pgs.	RS
0.4	4-Jan-2022	Added alternate ACES connector	Pg. 5	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.

Note: Normal environmental conditions A.T. 15-35°C, H.M 25-75%,  
B.P. 86-106 kPa

**3. Electrical Requirements**

**3.1 Rated Impedance** 8Ω ±15% (1 kHz/1Vrms)

**3.2 Rated Power** 5.0W (RMS)

**3.3 Max Power** 6.0W (RMS)

**4. Acoustical Requirements**

**4.1 Sound Pressure Level** 81± 3dB (on IEC 268-5 Baffle in anechoic chamber @ 1.0W/1.0m avg. @ 0.8, 1.0, 1.2, and 1.5 kHz)

**4.2 Resonant Frequency (F<sub>0</sub>)** 160 Hz ± 20% @ 1Vrms constant voltage - free air

**4.3 Total Harmonic Distortion (THD)** <8% @250-10kHz, 1.0W/1.0m

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**4.4 Frequency Range**

Fo to 15KHz (SPL -10dB) @  
1W/1m

**4.5 Buzz and Rattle**

No audible buzzing shall occur at 0.3m distance when a rated power (6.32Vrms) sine wave from 160Hz to 2 KHz is applied to the speaker.

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

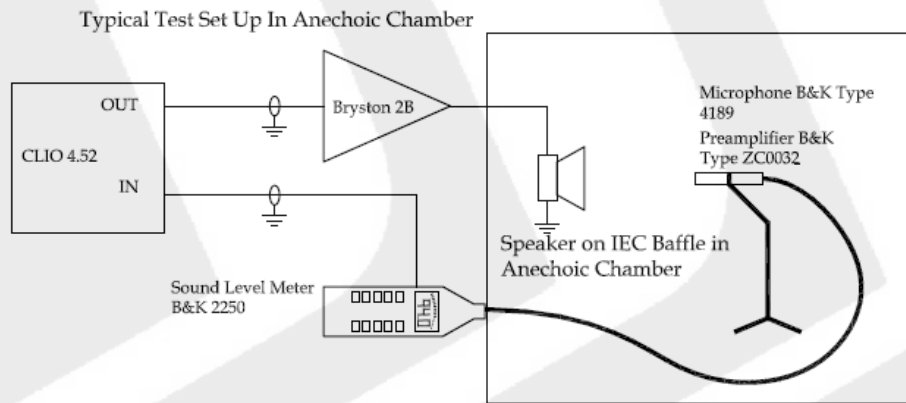


Fig 1. Test set up in Anechoic Chamber

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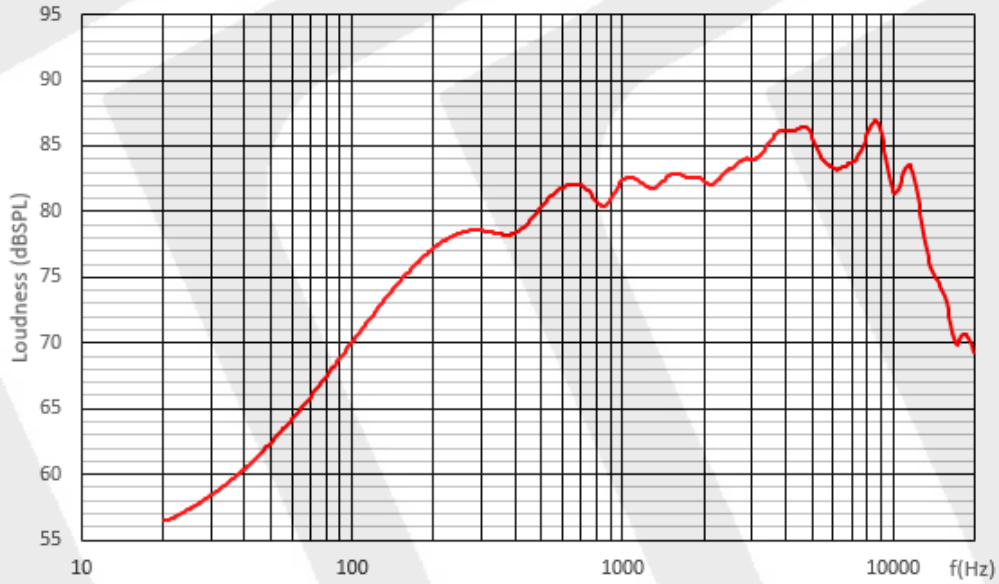


Fig 2. Typical Frequency Response @ 1W/1m

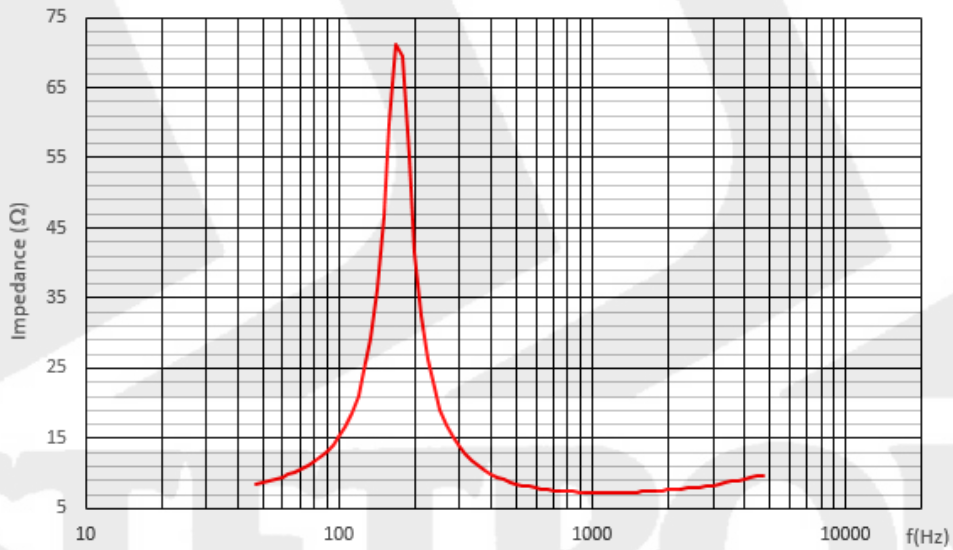


Fig 3. Typical Impedance Curve

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## 5. Reliability

### 5.1 High Temperature

Speakers are exposed to  $\frac{1}{4}$  rated noise power @  $55 \pm 2^\circ\text{C}$  for 16 hrs. After test leave speakers for 2 hrs at constant temperature. Speakers must meet the requirements of appearance and buzz and rattle. Complete testing within 1 hr after withdrawing.

### 5.2 Humidity

Speakers are exposed to  $40 \pm 2^\circ\text{C}$ , 90-95% for 48 hrs. After test leave speakers for 24 hrs at normal atmospheric conditions. Speakers must meet the requirements of appearance and buzz and rattle.

### 5.3 Low Temperature

Speakers are exposed to  $\frac{1}{4}$  rated noise power @  $-10 \pm 3^\circ\text{C}$  for 1 hr, then to  $-25 \pm 3^\circ\text{C}$  for 2 hrs. After test leave speakers for 4 hr at normal atmospheric conditions. Speakers must meet the requirements of appearance, buzz and rattle.

### 5.4 Rated Power

Speakers are exposed continuously to 5.0W (6.32V) white noise for 96 hrs. After test speakers must meet items 3.1, 4.1, 4.2 and 4.3.

### 5.5 Max Power

Speakers are exposed continuously to 6.0W (6.93V) simulant program signal for 1min on and 2 min off/ 10 cycles. After test speakers must meet items 3.1, 4.1, 4.2 and 4.3.

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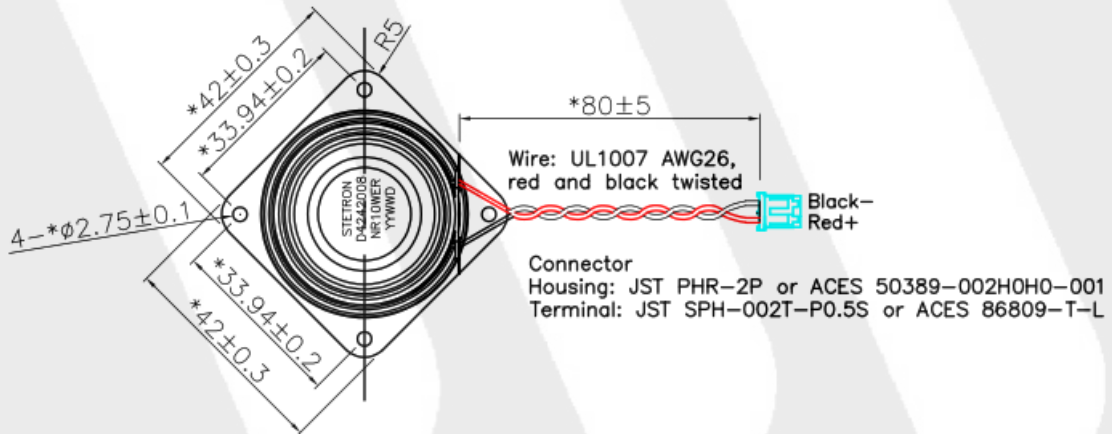
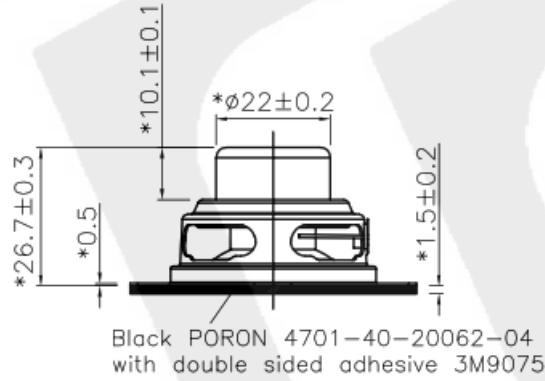
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### 6. Mechanical Layout and Dimensions



All dimensions in mm

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