

BMR36S-4C Datasheet

1. Overview

BMR36S-4C is a compact full-range Balanced Mode Radiator (BMR®) drive unit. It combines the benefits of Tectonic bending wave technology and pistonic modes of operation. A square form factor maximizes the radiating area, optimizing audio performance within industrial design constrained products.

- Power Handling: 15 W

- 25.4 mm Voice Coil Diameter



Figure 1.1

**Product code and manufacture date is printed at the back of the return cup*

2. Applications

- Conferencing Systems
- IoT devices
- Bluetooth Audio
- Smart Speakers and TVs
- Exercise Equipment
- Soundbars and monitors

3. Preliminary Specifications

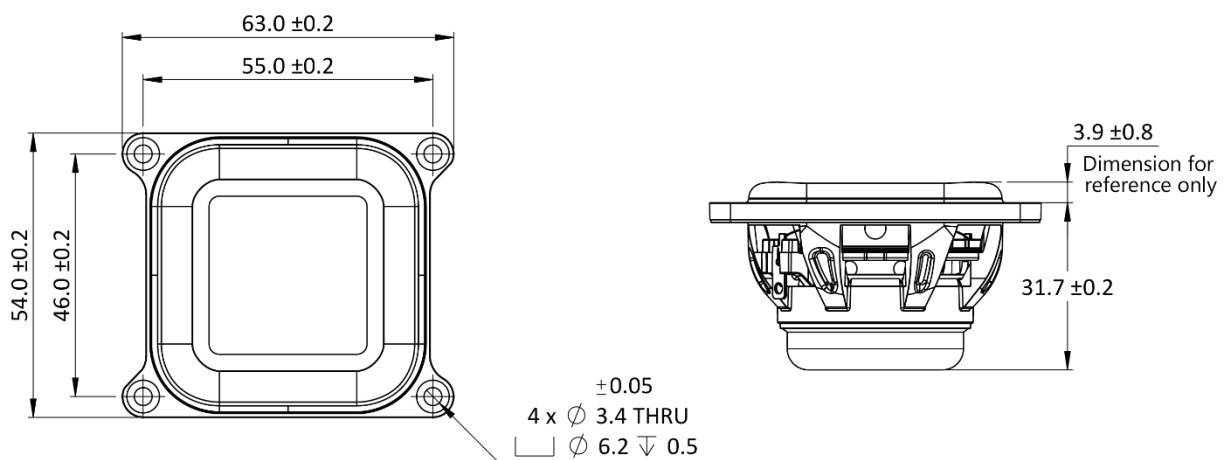
| Transducer Characteristics | | | Parameter | Nominal | Unit |
|---|-----------------------|----------|-----------|---------|-----------------|
| Frequency Response ($\pm 6\text{dB}$) | 150 Hz ~ 16 kHz | | Fs | 150 | Hz |
| Speaker Sensitivity (1 Watt / 1 meter) | 83.5 | dB | Sd | 17.1 | cm ² |
| Rated Maximum SPL (1 Meter) | 95.5 | dB | Mms | 2.19 | g |
| Speaker Nominal Impedance | 4 | Ω | Cms | 0.51 | mm/N |
| Voice Coil Diameter | 25.4 | mm | Rms | 0.46 | kg/s |
| Voice Coil Material | TIL | | Re | 3.6 | Ω |
| Diaphragm Material | Doped Paper Composite | | Bl | 3.8 | Tm |
| | | | Le | 70 | μH |
| | | | Qts | 0.50 | |

3.1. Operating Conditions

| | |
|---|-----------------------|
| Rated Noise Power (24 hours) <i>IEC268 Pink noise with 2nd order high-pass filter at 150Hz, 6dB crest factor, transducer in free air, ambient conditions – normal temperature and pressure</i> | : 15 W |
| Operating Ambient Temperature Range | : –20 to +55 °C |
| Max Linear Excursion* | : 4.2 mm Peak to peak |
| Mechanical Excursion Limit | : 10 mm Peak to peak |
| Max Surround Frontal Movement | : 2.66 mm |

*From Klippel LSI

3.2. Product Dimension



Note:

- Volume Displacement: 30 cc
- All dimensions are in mm

Figure 3.2.1 – External product dimensions

3.3. On-Axis SPL and Impedance (Measured)

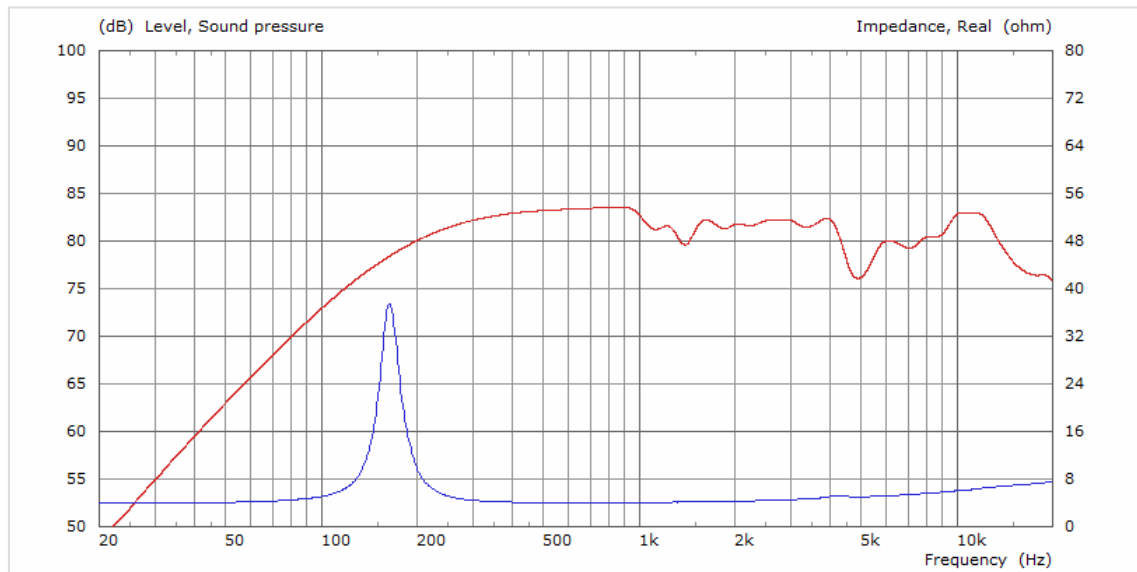


Figure 3.3.1 – Red: On-Axis SPL at 1W/1m (1/3-octave smoothed/spliced*/anechoic). Blue: Electrical Impedance

3.4. Sound Power Response (Measured over 0 – 90°)

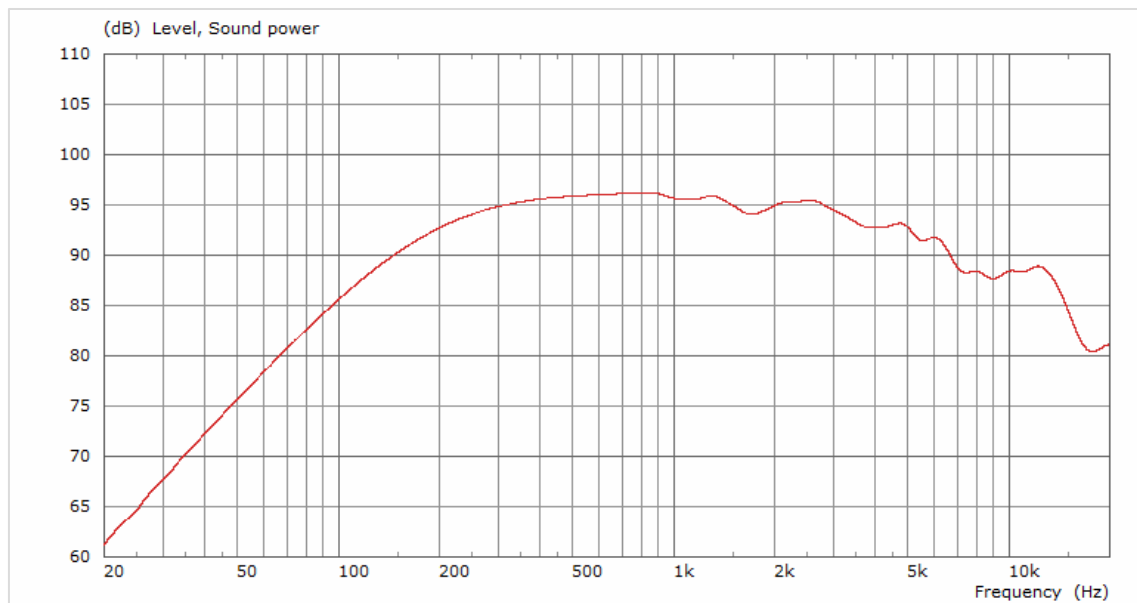


Figure 3.4.1 – Sound power calculated from SPL measurements, 1W/1m (1/3-octave smoothed)

**Anechoic acoustic measurement spliced to low frequency response derived from diaphragm scan using Polytec PSV500 scanning vibrometer*

3.5. Polar Response (Measured)

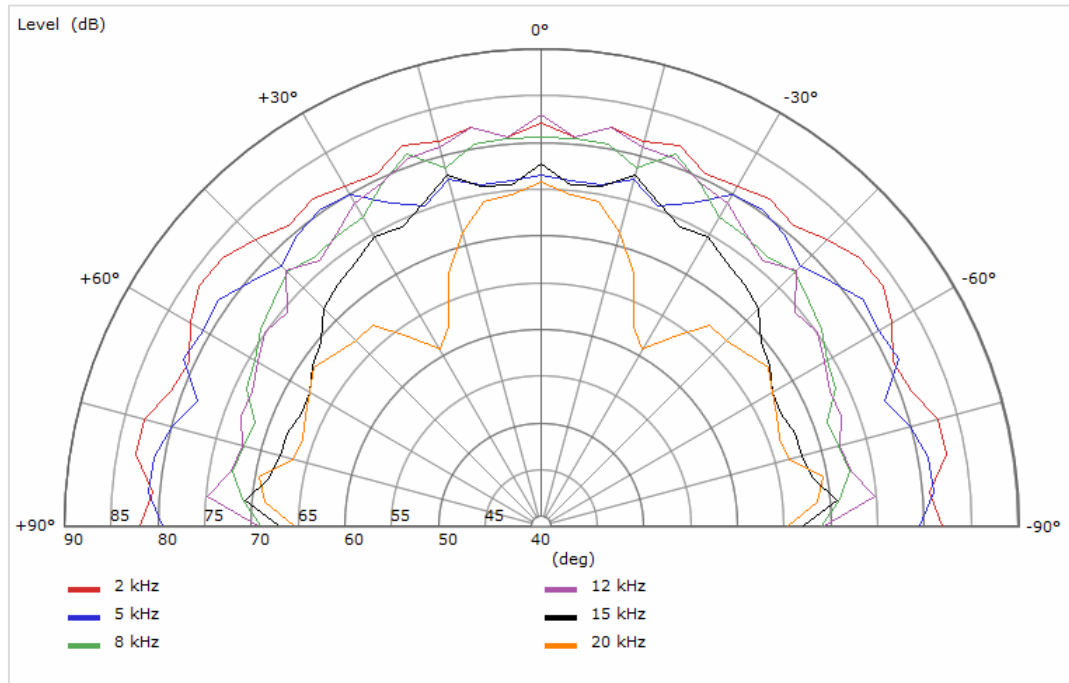


Figure 3.5.1 – Polar response, angle/ dB SPL, 1W/1m (1/3-octave smoothed / anechoic)

4. Appendix

4.1. Klippel LSI

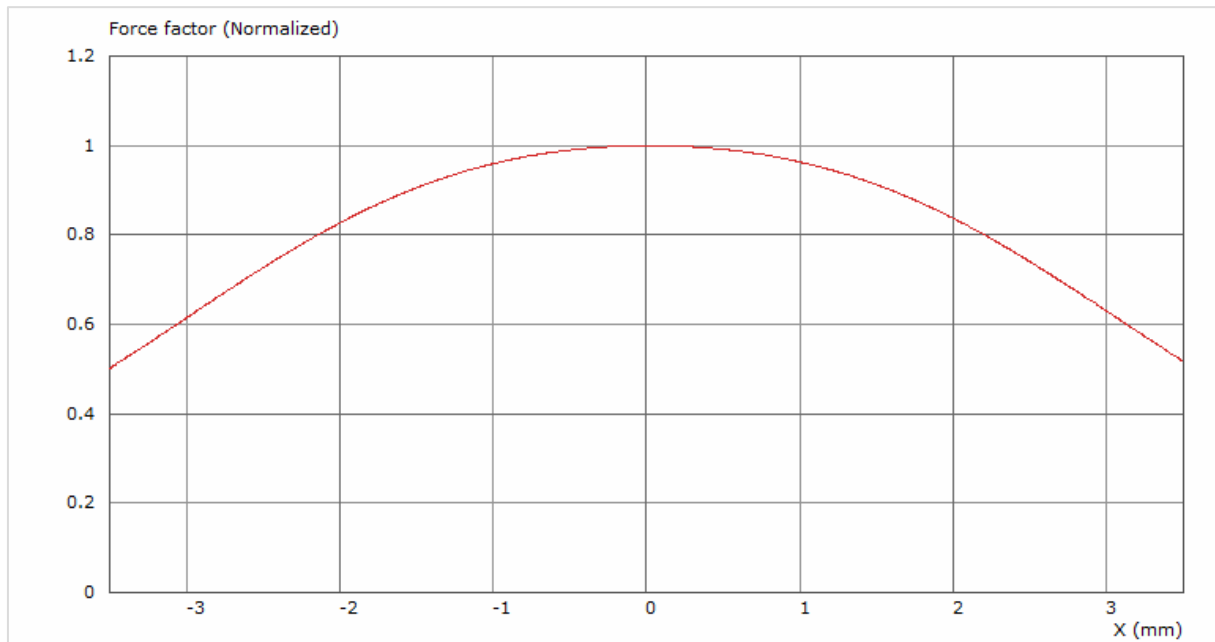


Figure 4.1.1 – BI (x)

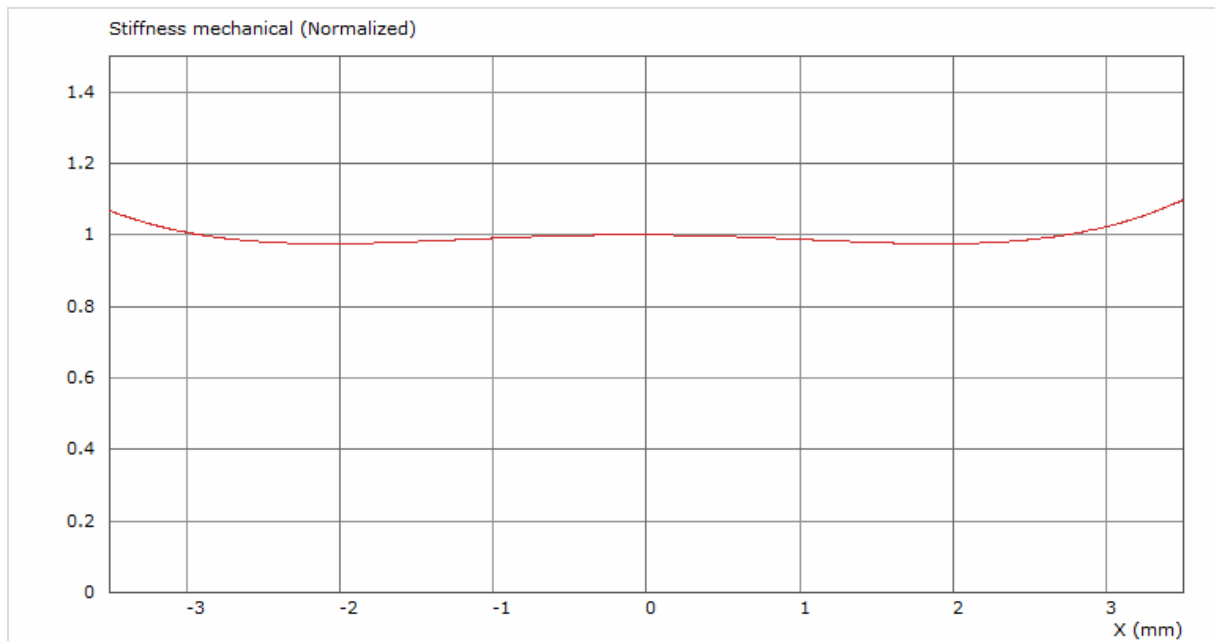


Figure 4.1.2 – Kms (x)