

BMR27C-8A Datasheet

1. Overview

BMR27C-8A is a dedicated mid-high frequency Balanced Mode Radiator (BMR) drive unit. It combines the benefits of Tectonic bending-wave technology and pistonic modes of operation. The lightweight voice coil and optimized neo-ring motor allow for high efficiency. The low resonant frequency allows systems to be crossed over well below the critical 1kHz - 3kHz listening region to preserve mid-range clarity. The modal output of this drive unit helps create a smooth, extended power response, effectively widening the sweet spot of listening without compromising detail.

- Power Handling: 10 W
- Nominal Impedance: 8 Ω
- 52.5mm max Dia x 41.5 min Dia x 20.8mm Depth
- Neodymium Ring Motor



Figure 1.1

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

2. Applications

- Monitors
- Sound bars
- IoT Products
- Voice-only Conferencing Systems
- Line Arrays

3. Preliminary Specifications

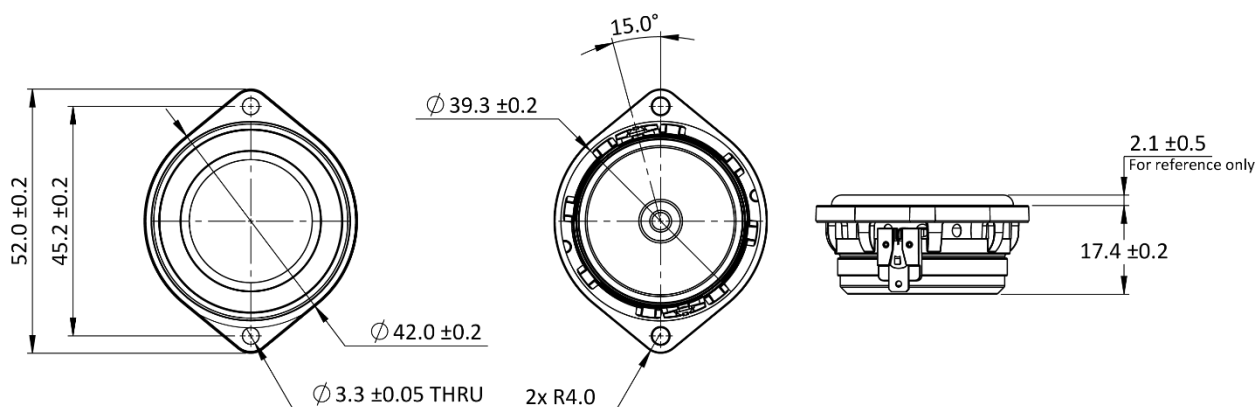
Transducer Characteristics			Parameter	Nominal	Unit
Frequency Response ($\pm 6\text{dB}$)	300 Hz ~ 30 kHz		Fs	335	Hz
Speaker Sensitivity (1 Watt / 1 meter)	81.7	dB	Sd	7.82	cm ²
Rated Maximum SPL (1 Meter)	91.7	dB	Mms	0.73	g
Speaker Nominal Impedance	8	Ω	Cms	0.31	mm/N
Voice Coil Diameter	19	mm	Rms	0.68	kg/s
Voice Coil Material	CCAW		Re	7.56	Ω
Diaphragm Material	Doped Paper Composite		Bl	3.2	Tm
			Le	0.07	mH
			Qts	0.77	

3.1. Operating Conditions

Rated Noise Power (24 hours) <i>IEC268 Pink noise with 2nd order high-pass filter at 300Hz, 6dB crest factor, transducer in free air, ambient conditions – normal temperature and pressure</i>	: 10 W
Operating Ambient Temperature Range	: -20 to +55 °C
Max Linear Excursion*	: 3.1 mm Peak to peak
Mechanical Excursion Limit	: 5.0 mm Peak to peak
Max Surround Frontal Movement	: 1.5 mm

**From Klippel LSI*

3.2. Product Dimension



Note:

- Volume Displacement: 10.5 cc
- All dimensions are in mm

Figure 3.2.1 – External product dimensions

3.3. On-Axis SPL and Impedance (Measured)

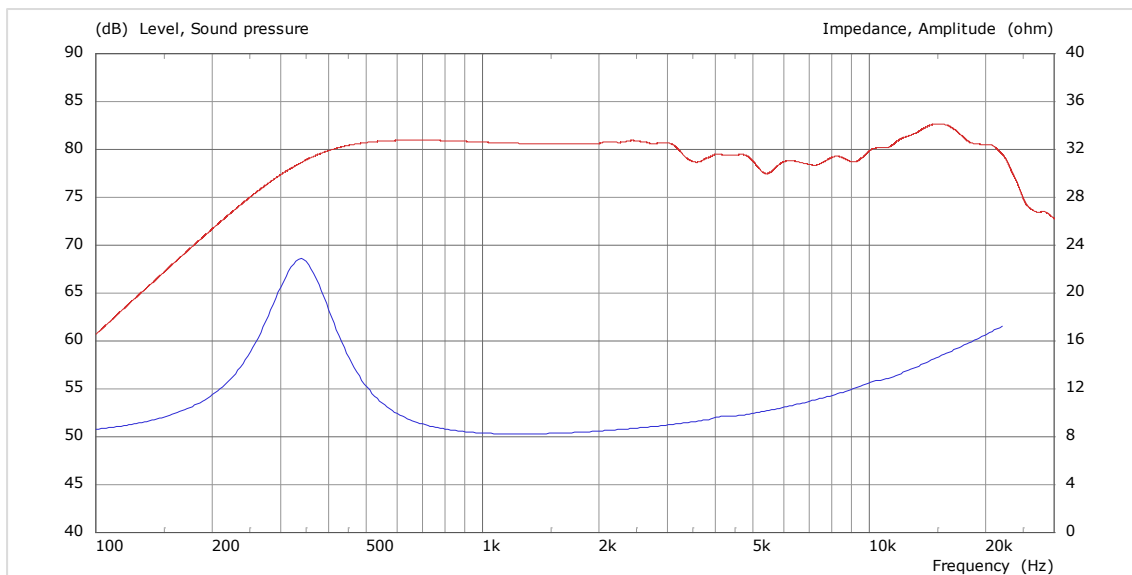


Figure 3.3.1 – Red: On-Axis SPL at 1W/1m (1/3-octave smoothed/spliced*/anechoic). Blue: Electrical Impedance

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

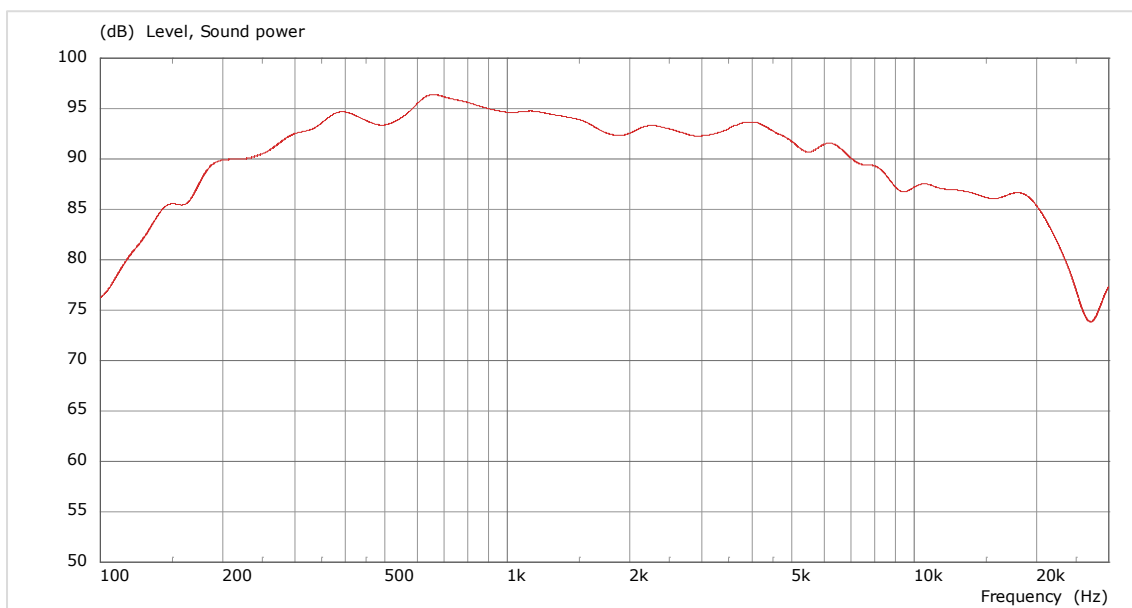


Figure 3.4.1 – Sound power calculated from SPL measurements, 1W/1m (1/3-octave smoothed/spliced*)

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

3.5. Polar Response (Measured)

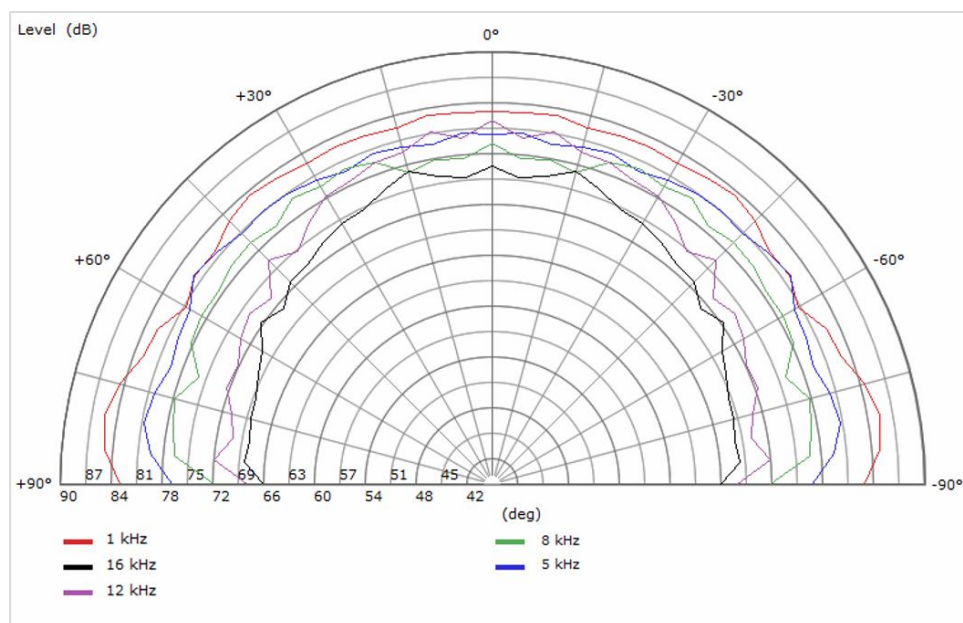


Figure 3.5.1 – Polar response, angle/ dB SPL, 1W/1m (1/3-octave smoothed / anechoic)

4. Appendix – Klippel LSI

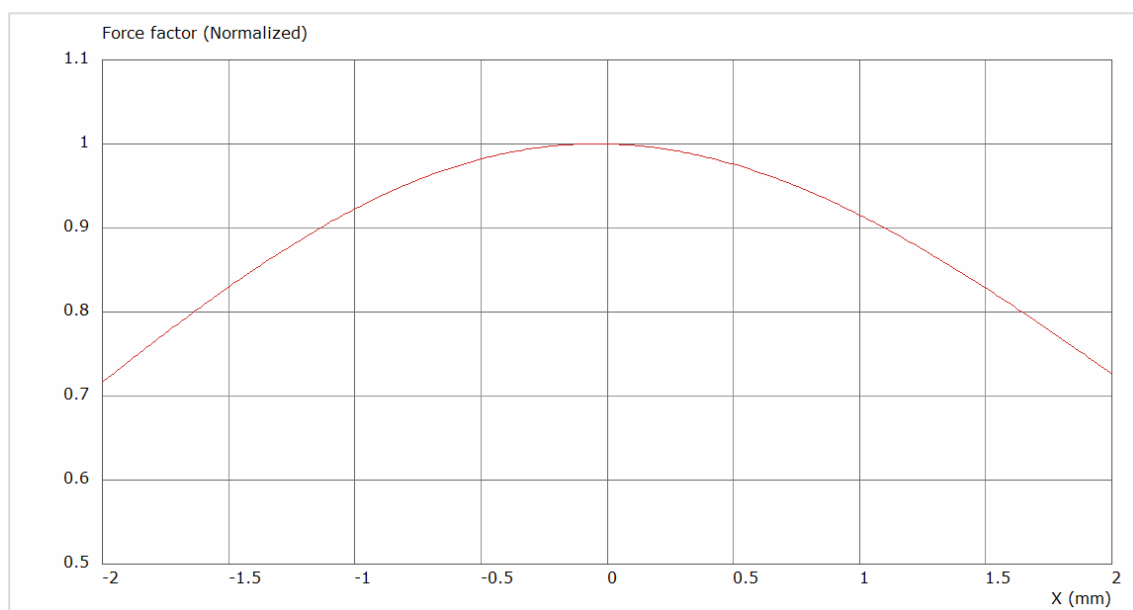


Figure 4.1. – Normalized BL (x)