

## BMR36S12-4S Datasheet

### 1. Overview

The BMR36S12-4S 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 allows full use of the radiating area, maximizing audio performance within industrial design constrained products.

- Power Handling: 15 W
- 25.4 mm Voice Coil Diameter
- 54mm H x 63mm L x 34.2mm D
- Neodymium Motor Structure



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. Specifications

Transducer Performance			Parameter	Nominal	Unit
Frequency Response ( $\pm 6\text{dB}$ )	140 Hz ~ 20 kHz		Fs	155	Hz
Speaker Sensitivity (1 Watt / 1 meter)	83.5	dB	Sd	17.1	cm <sup>2</sup>
Rated Maximum SPL (1 Meter)	95.5	dB	Mms	2.2	g
Speaker Nominal Impedance	4	$\Omega$	Cms	0.54	mm/N
Power Handling (IEC268-5)	15	W	Rms	0.41	kg/s
Operating Temperature	-20 to +55	$^{\circ}\text{C}$	Re	3.6	$\Omega$
Voice Coil Diameter	25.4	mm	Bl	3.8	T*m
Voice Coil Material	TIL		Le	0.07	mH
Diaphragm Material	Doped Paper Composite		Qts	0.46	
Max Linear Excursion*	4.4 mm Peak to peak		<b>Max Surround Frontal Movement</b>		
Max Mechanical Excursion	10 mm Peak to peak		2.66 mm		

\*From Klippel LSI

### 3.1. On-Axis SPL and Impedance (Measured)

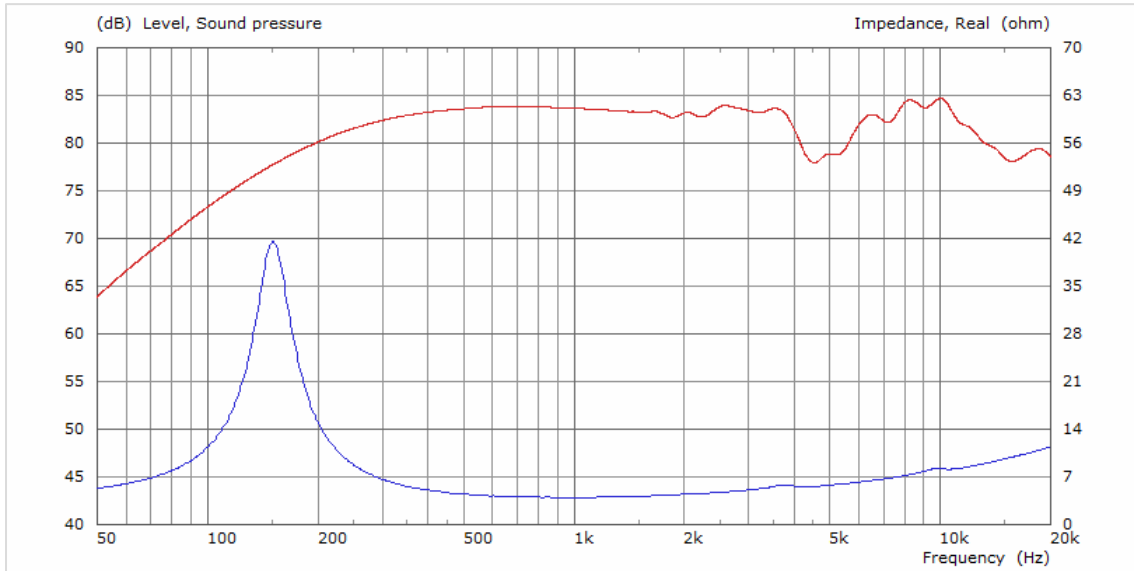


Figure 3.1.1 – Red: On-Axis SPL at 1W/1m (1/3-octave smoothed/spliced\*/anechoic). Blue: Electrical Impedance

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

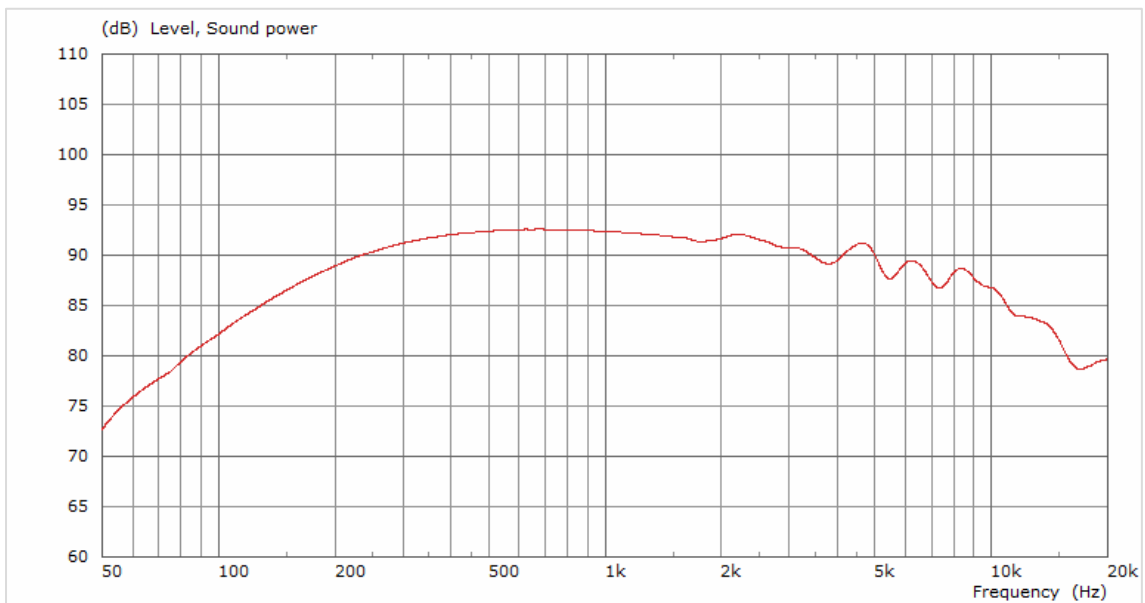


Figure 3.2.1 – Sound power calculated from SPL measurements, 1W/1m (1/3-octave smoothed/spliced\*)

\*Acoustic measurement data is shown above spliced frequency. Lower frequency performance is derived from diaphragm scan using Polytec PSV500 scanning vibrometer.

### 3.3. Polar Response (Measured)

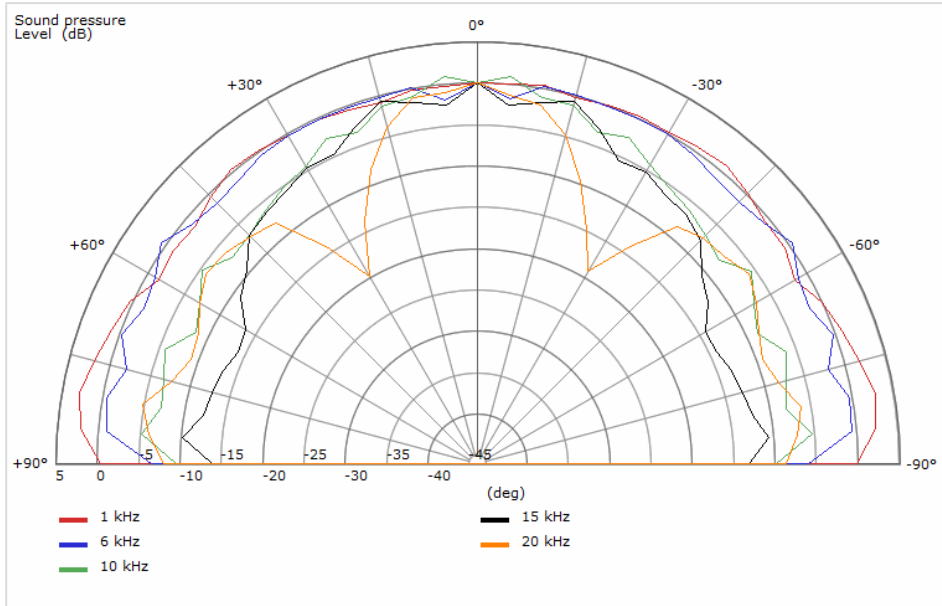
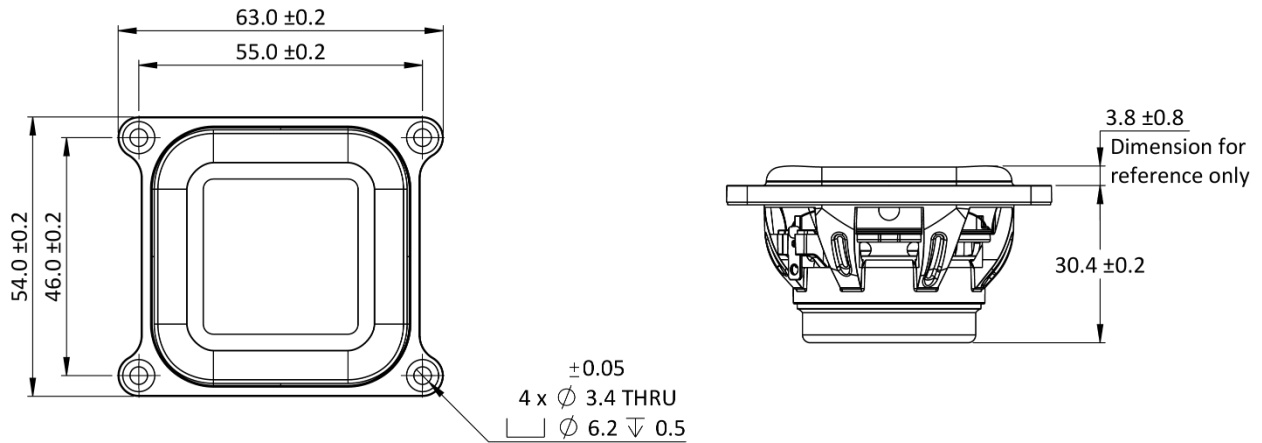


Figure 3.3.1 – Polar response, angle/ dB SPL, 1W/1m (1/3-octave smoothed / anechoic)

### 3.4. Product Dimensions



**Note:**

- Volume Displacement: 29 cc
- All dimensions are in mm

Figure 3.4.1 – External product dimensions

## 4. Appendix

### 4.1. Klippel LSI

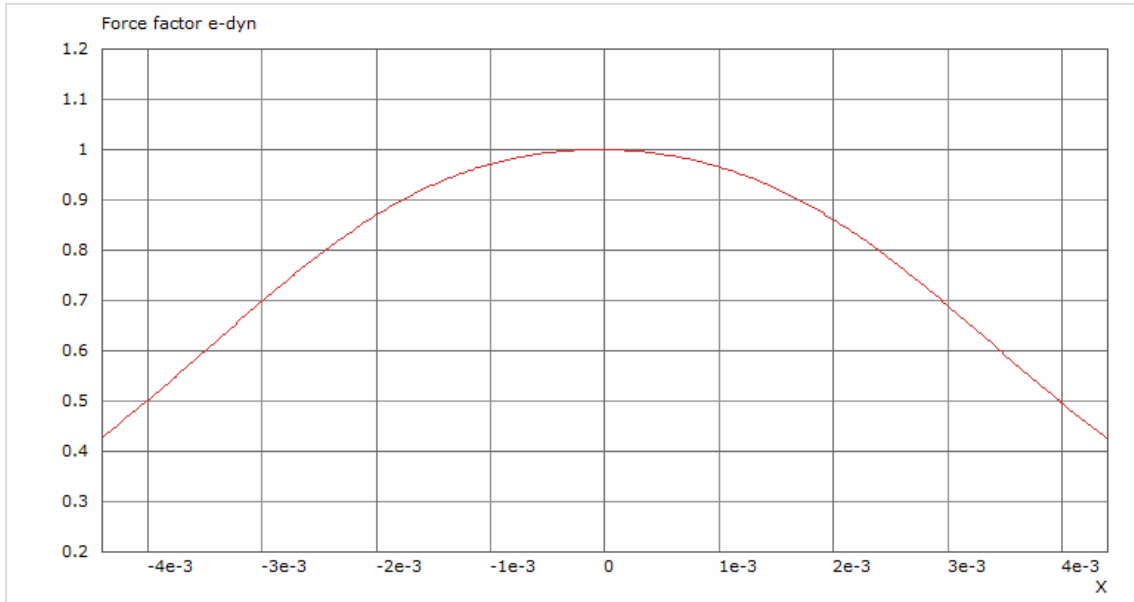


Figure 4.1.1 – BI (x)

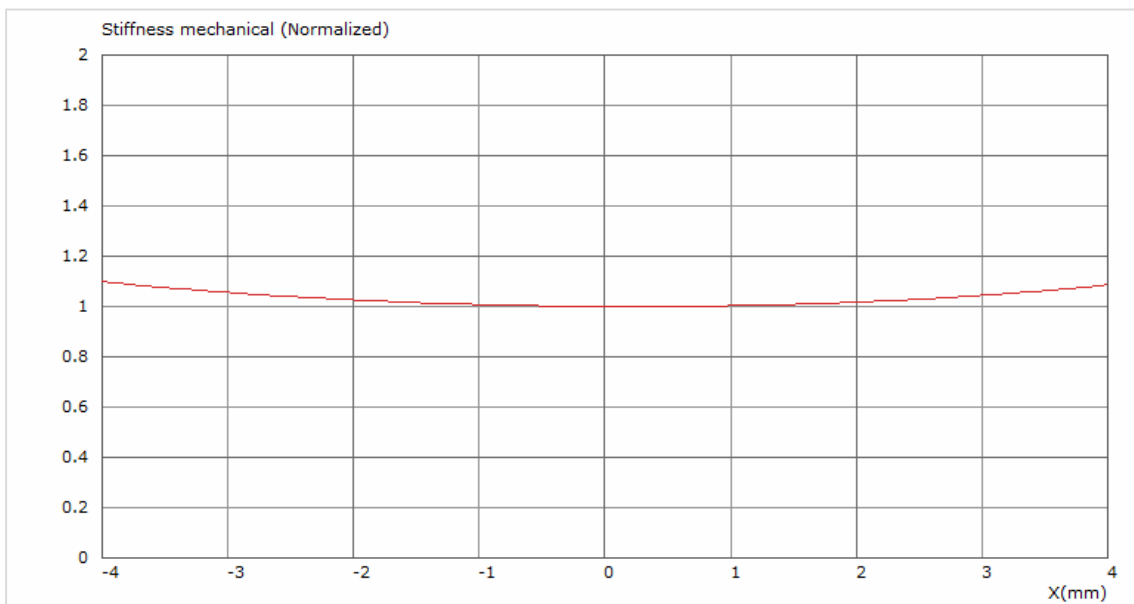


Figure 4.2.1 – Kms (x)