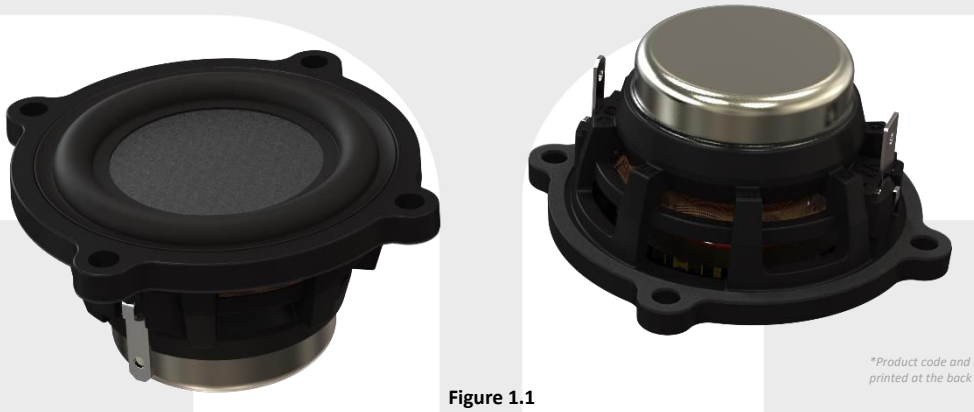
TEBM28C10-4B Datasheet

1. Overview

The TEBM28C10-4B Balanced Mode Radiator (BMR®) is an audio drive unit with an extended frequency range and wide directivity. The small form-factor is ideally suited for compact products that require a full-range drive unit, room filling sound and a high-performance acoustic solution.

- Power Handling: 10 W
- Nominal Impedance: 3.8 Ω
- 55 mm Dia x 24 mm Depth
- 58 g Mass



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

Figure 1.1

2. Applications

- Full-range Compact Systems
- Conferencing Systems
- Bluetooth Audio
- Smart Speakers
- Gaming Devices
- IoT Devices

3. Specifications

Transducer Performance		
Frequency Response (±6dB)	150Hz ~ 20kHz	
Sensitivity (1 W / 1 m)	80	dB
Rated Maximum SPL (1 Meter)	90	dB
Nominal Impedance	3.8	Ω
Power Handling (IEC268-5)	10	W
Operating Temperature	-20 to +55	°C
Voice Coil Diameter	19.05	mm
Voice Coil Material	Copper	
Diaphragm Material	Doped Paper Composite	
Max Linear Excursion*	2.8 mm Peak to peak	
Max Mechanical Excursion	8 mm Peak to peak	

*From Klippel LSI

Parameter	Nominal	Unit
Fs	145	Hz
Sd	8.55	cm^2
Mms	1.19	g
Cms	1.0	mm/N
Rms	0.31	N*s/m
Re	3.8	Ω
BL	2.9	T*m
Le	0.10	mH
Qts	0.44	

Max Surround Frontal Movement 2.2 mm

3.1. On-Axis SPL and Impedance (Measured)

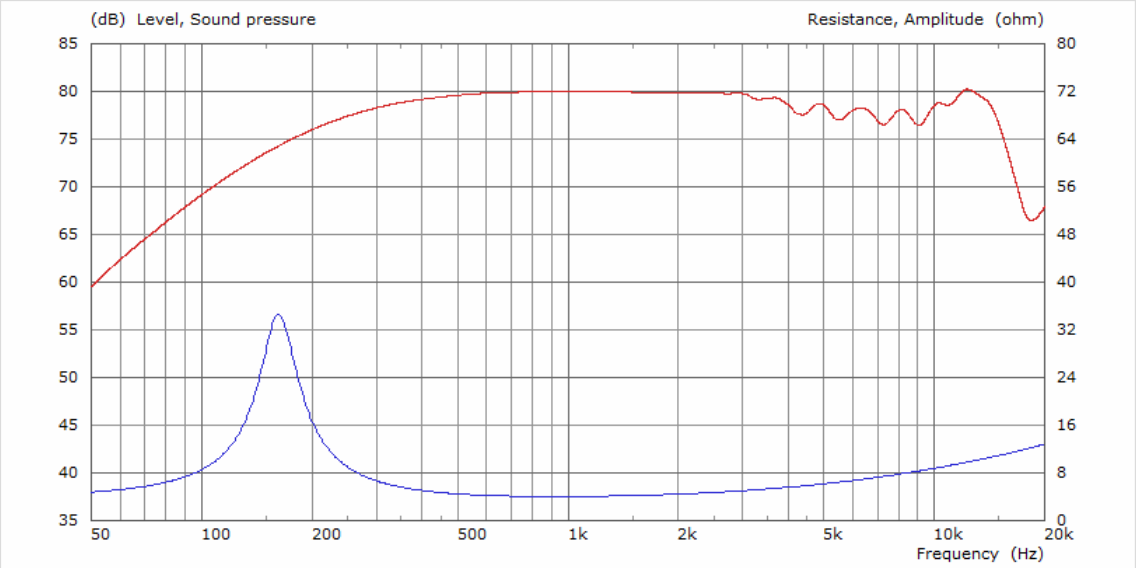


Figure 3.1.1 – Red: On-Axis SPL at 1W/1m (1/3-octave smoothed/spliced*/anechoic). Blue: Electrical Impedance

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

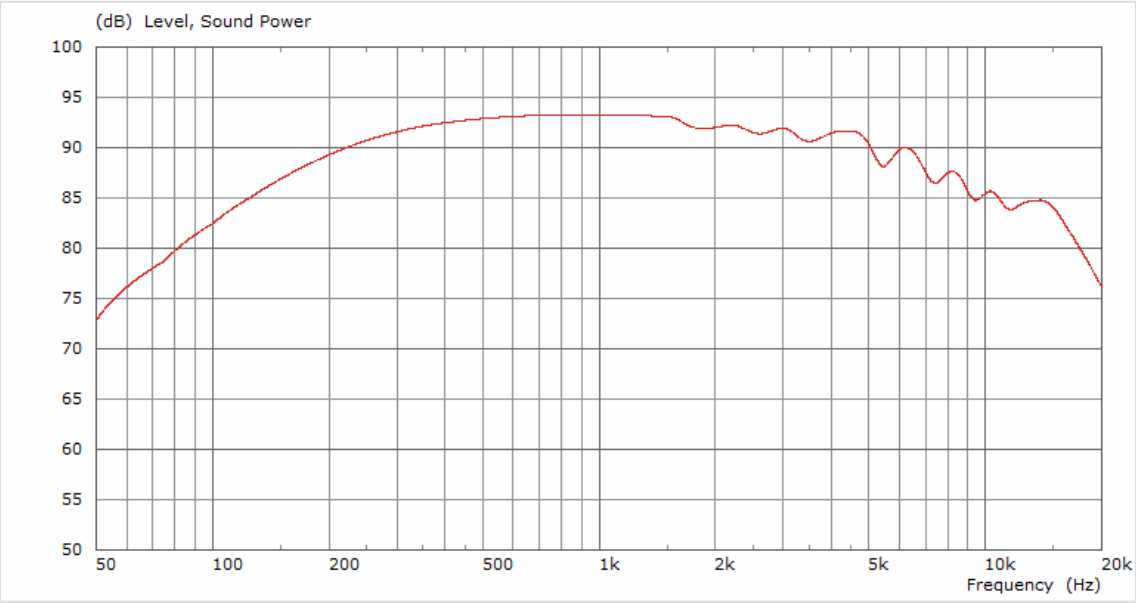


Figure 3.2.1 – Sound power calculated from SPL measurements, 1W/1m (1/3-octave smoothed/spliced*)

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

3.3. Polar Response (Measured)

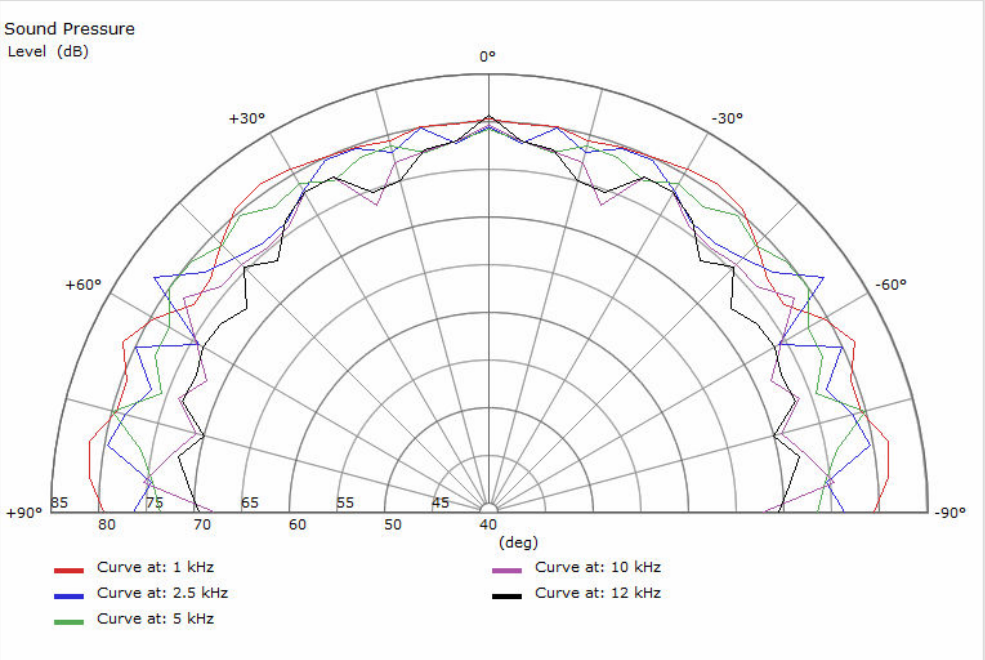
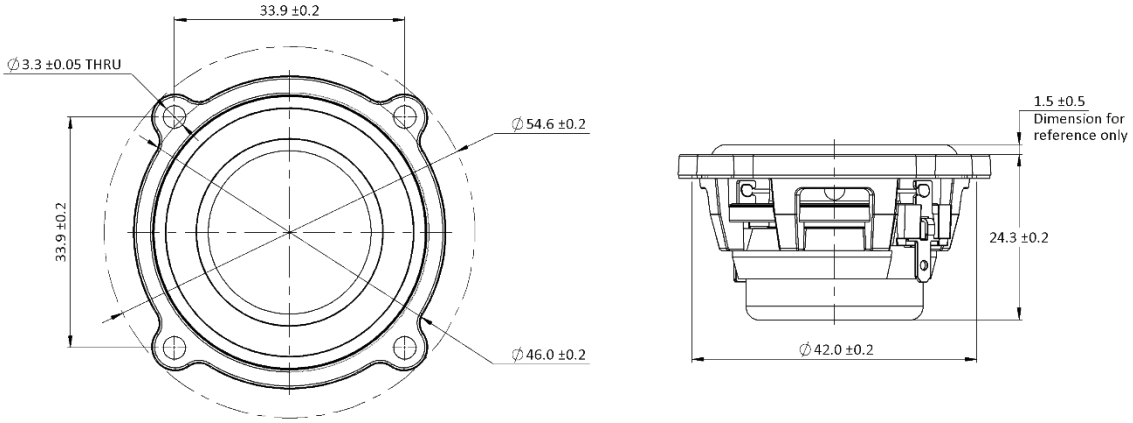


Figure 3.3.1 – Polar response, angle/ dB SPL, 1W/1m (1/3-octave smoothed / anechoic)

3.4. Product Dimensions



Note:

- **Volume Displacement: 13 cc**
- **All dimensions are in mm**

Figure 3.4.1 – External product dimensions

4. Appendix

4.1. Klippel LSI

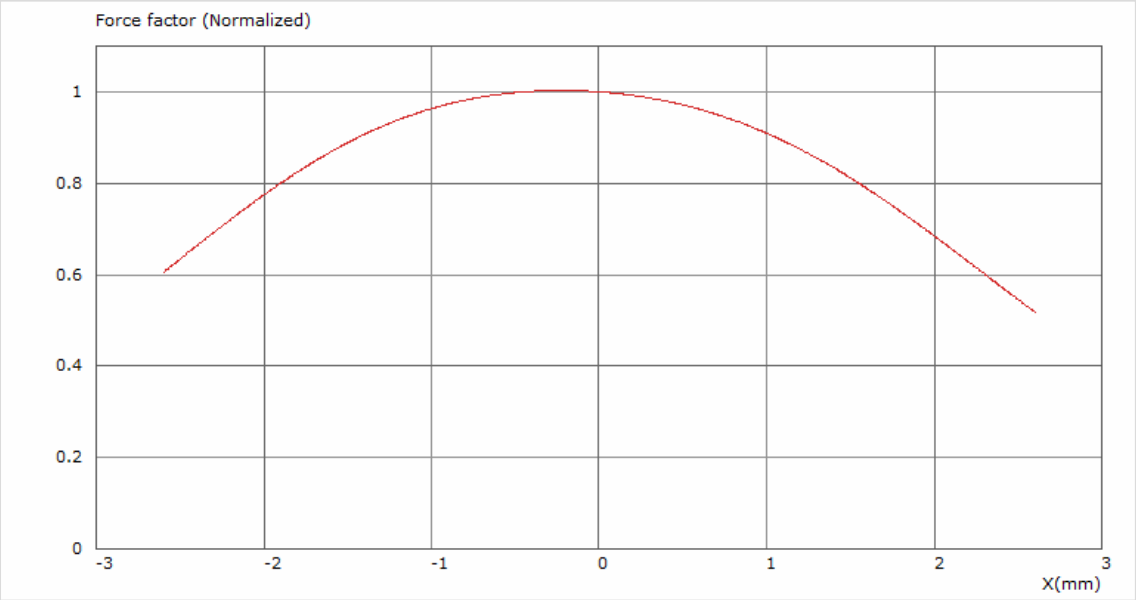


Figure 4.1.1 – Normalized BL (x)

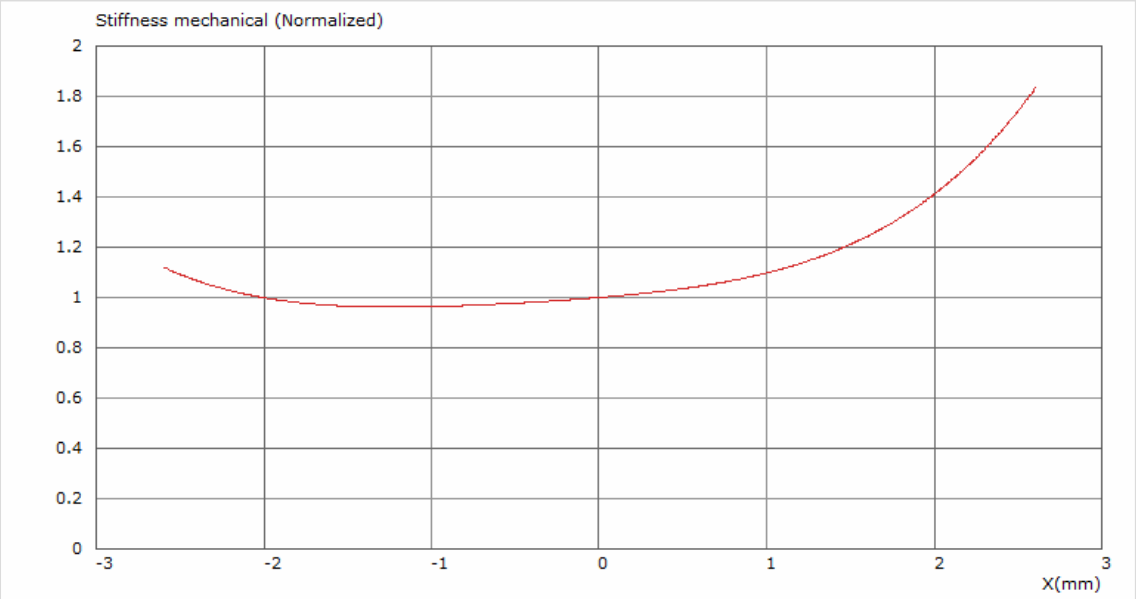


Figure 4.2.1 – Normalized Kms (x)