

## 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



Figure 1.1

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

### 2. Applications

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

### 3. Specifications

Transducer Performance			Parameter	Nominal	Unit
Frequency Response (±6dB)	150Hz ~ 20kHz		Fs	145	Hz
Sensitivity (1 W / 1 m)	80	dB	Sd	8.55	cm <sup>2</sup>
Rated Maximum SPL (1 Meter)	90	dB	Mms	1.19	g
Nominal Impedance	3.8	Ω	Cms	1.0	mm/N
Power Handling (IEC268-5)	10	W	Rms	0.31	N*s/m
Operating Temperature	-20 to +55	°C	Re	3.8	Ω
Voice Coil Diameter	19.05	mm	BL	2.9	T*m
Voice Coil Material	Copper		Le	0.10	mH
Diaphragm Material	Doped Paper Composite		Qts	0.44	
Max Linear Excursion*	2.8 mm Peak to peak				
Max Mechanical Excursion	8 mm Peak to peak		Max Surround Frontal Movement	2.2 mm	

*\*From Klippel LSI*

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

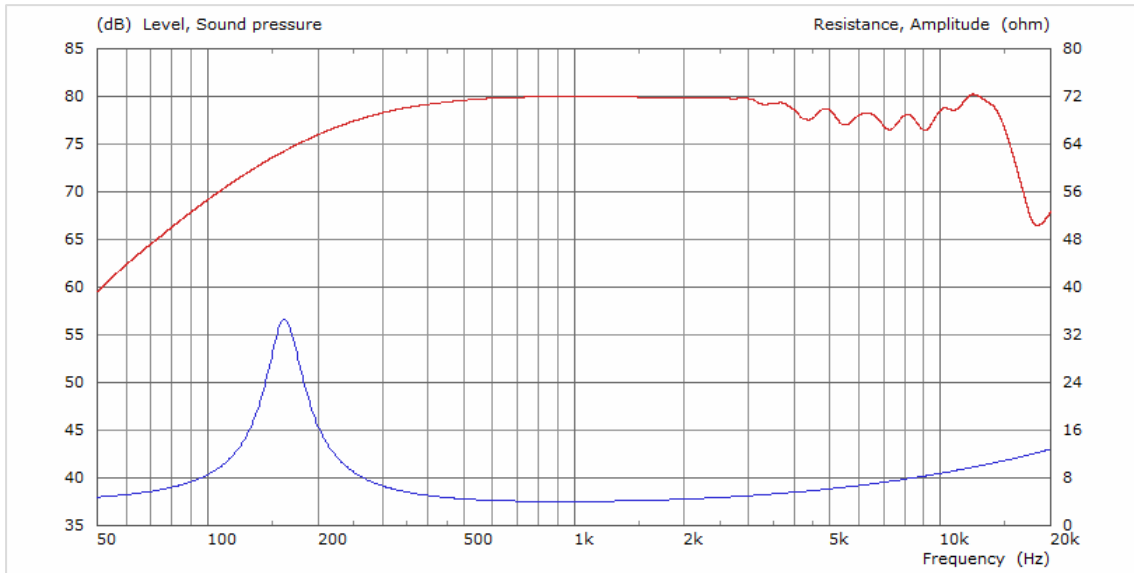


Figure 3.1.1 – Red: On-Axis SPL at 1W/1m (1/3-octave smoothed/spliced\*/anechoic). Blue: Electrical Impedance

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

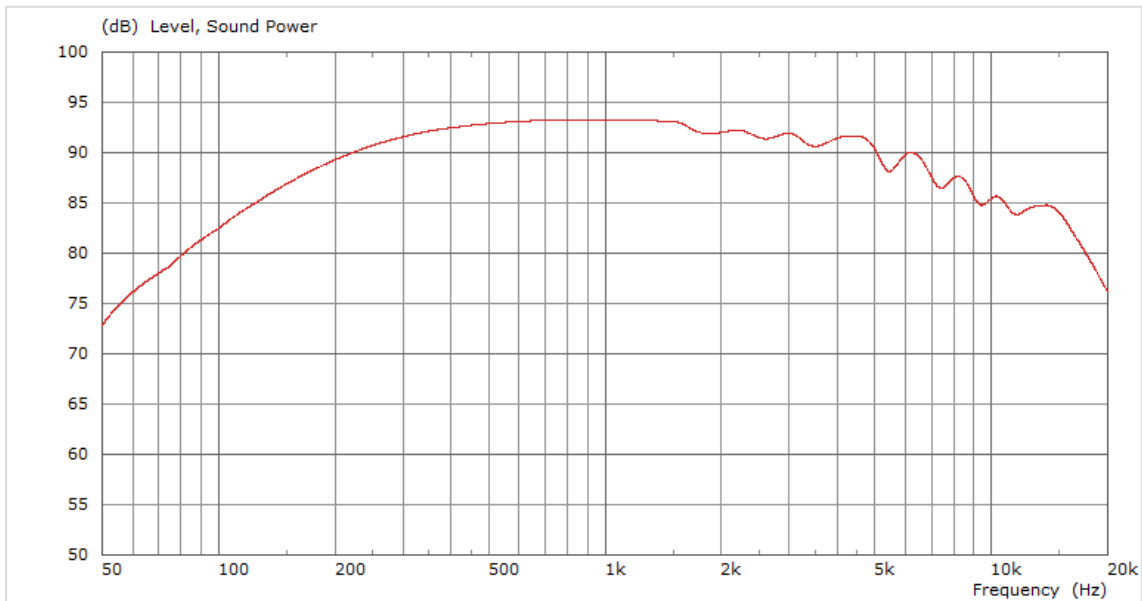


Figure 3.2.1 – Sound power calculated from SPL measurements, 1W/1m (1/3-octave smoothed/spliced\*)

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

### 3.3. Polar Response (Measured)

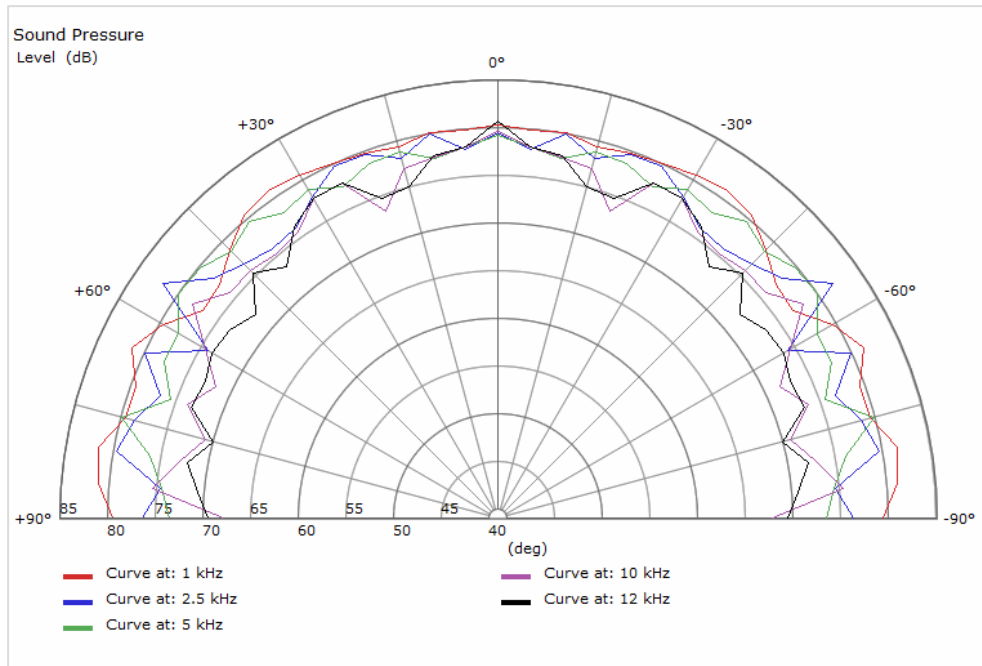
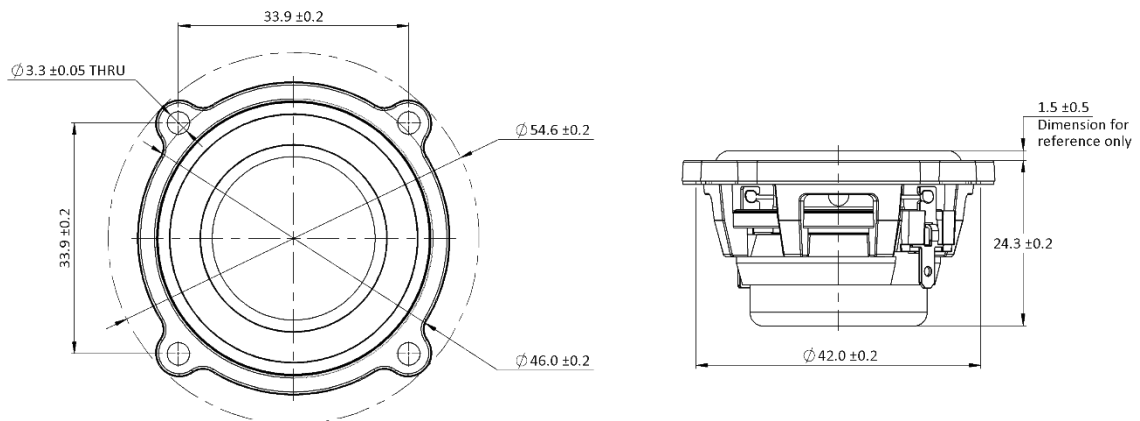


Figure 3.3.1 – Polar response, angle/ dB SPL, 1W/1m (1/3-octave smoothed / anechoic)

### 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

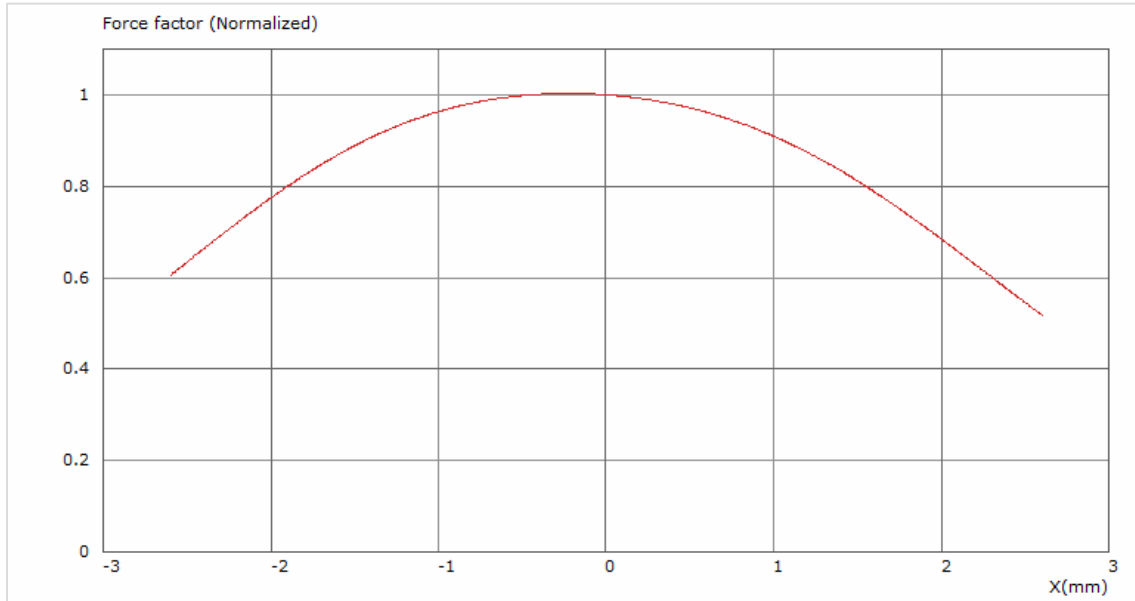


Figure 4.1.1 – Normalized BL (x)

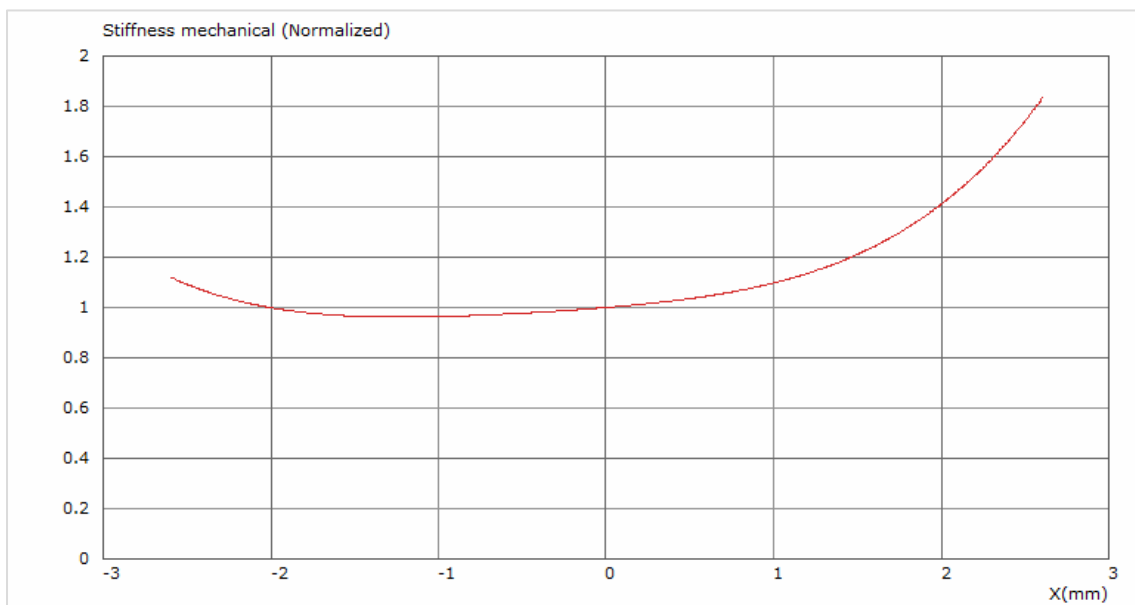


Figure 4.2.1 – Normalized Kms (x)