

# TEBM54C30-8F Datasheet

#### 1. Overview

The TEBM54C30-8F Balanced Mode Radiator (BMR®) is an audio drive unit with an extended frequency range and wide directivity. Combining the benefits of Tectonic bending-wave technology and pistonic modes of operation, this BMR is ideally suited for products that require a high-performance, low distortion acoustic solution, that delivers full-range, room filling sound.

Full range: 120 Hz ~ 40 kHz
 Extremely wide directivity

Power Handling: 20 W

Nominal Impedance: 8 Ω
72mm H x 72mm L x 35mm D

Mass: 265 g



# 2. Applications

- Conferencing Systems
- IoT devices
- Bluetooth Audio

- Smart Speakers and TVs
- Ceiling speakers
- Soundbars and monitors

#### 3. Specifications

Transducer Performance			Paramete	r Nominal	Unit	
Frequency Response (±6dB)	120Hz ~ 40kHz	2	Fs	125	Hz	
Sensitivity (1 W/ 1 m)	85.5	dB	Sd	25.5	cm <sup>2</sup>	
Rated Maximum SPL (1 Meter)	99	dB	Mms	3.0	g	
Nominal Impedance	8	Ω	Cms	0.51	mm/N	
Power Handling (IEC268-5)	20	W	Rms	0.54	kg/s	
Operating Temperature	-20 to +55	°C	Re	7.7	Ω	
Voice Coil Diameter	38.6	mm	BL	6.3	N/A	
Voice Coil Material	CCAW		Le	0.07	mH	
Diaphragm Material	Doped Paper Composite		Qts	0.41		
Max Linear Excursion*	5.6 mm Peak t	5.6 mm Peak to peak				
Max Mechanical Excursion	9.2 mm Peak to peak		Max Surro	<b>Max Surround Frontal Movement</b>		

\*From Klippel LSI

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

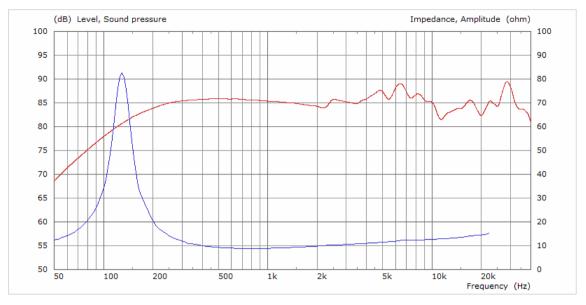


Figure 3.1.1 - Red: On-Axis SPL at 1W/1m (1/3-octave smoothed/spliced\*/anechoic). Blue: Electrical Impedance

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

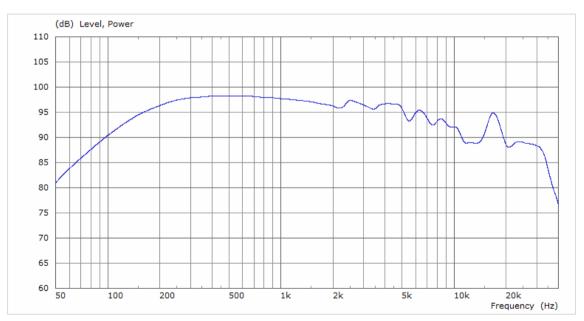


Figure 3.2.1 – Sound power calculated from SPL measurements, 1W/1m (1/3-octave smoothed/spliced\*)

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<sup>\*</sup>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)

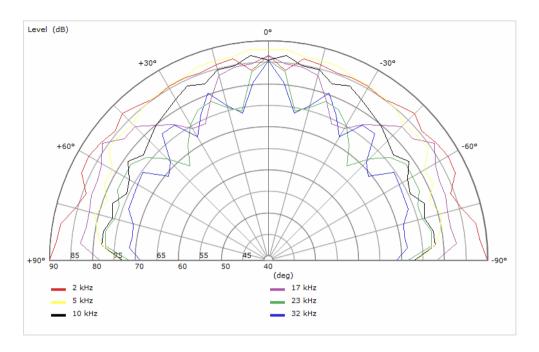
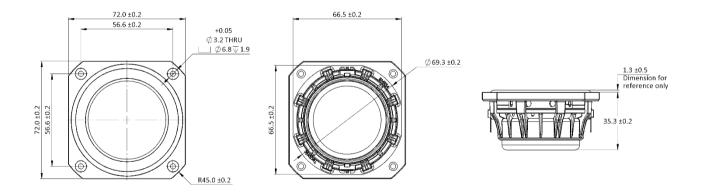


Figure 3.3.1 - Polar response, angle/ dB SPL, 1W/1m (1/3-octave smoothed / anechoic)

## 3.4. Product Dimensions



#### Note:

- Volume Displacement: 63 cc
- All dimensions are in mm

Figure 3.4.1 - External product dimensions

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# 4. Appendix

# 4.1. Klippel LSI

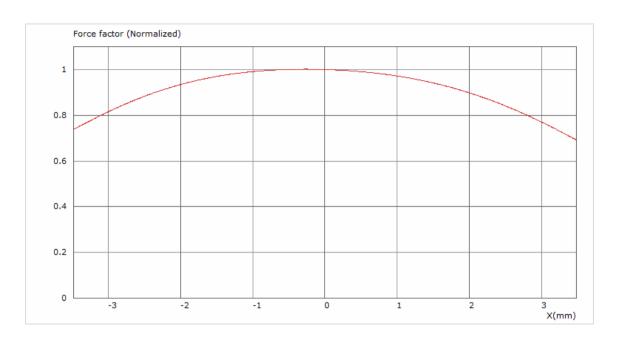


Figure 4.1.1 - Normalized BL (x)

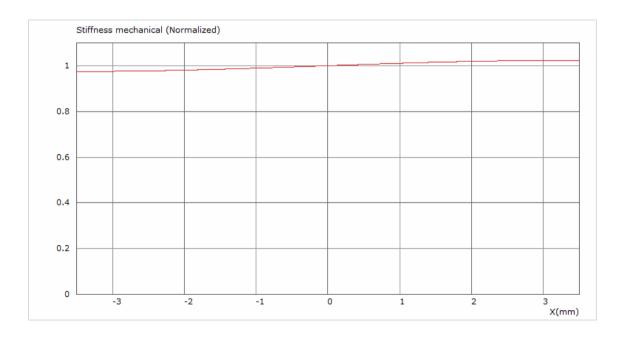


Figure 4.2.1 - Normalized Kms (x)