

TEBM35C10-4 Miniature BMR[®] Driver

✓RoHS
COMPLIANT



Features

- Full range: 100Hz – 20kHz
- Extremely wide directivity; 180°
- Nominal Impedance: 4 ohm
- Diameter: 52mm (54mm OD max)
- Depth: 25.1mm
- Mass: 51.3g

Applications

- Portable speakers
- Sound bars and stands
- Flat TV speakers
- Conference speaker phone

Description

The TEBM35C10-4 BMR[®] is an audio drive unit with an extended frequency response and extremely wide directivity. It combines the benefits of Tectonic bending-wave technology and piston modes of operation.

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.

Parameters

Parameter	Description	min	typ	max	Units
R_e	DC resistance	-10%	4.2	+10%	Ohms
L_e	Inductance (@ 10kHz)	-	0.05	-	mH
BL	Force factor	-	2.03	-	Tm
f_s	Resonant frequency	-20%	145	+20%	Hz
SPL	Sound Pressure Level @ 1W, 1m	-	80	-	dB
$dDrv$	Voice coil diameter	-	20.4	-	mm
M_{ms}	Moving mass	-10%	1.11	+10%	g
C_{ms}	Compliance	-10%	1.04	+10%	mmN ⁻¹
R_{ms}	Suspension Loss	-	0.27	-	Nsm ⁻¹
$X_{mech\ max}$	Maximum coil excursion (p-p)	-	8.0	-	mm
S_d	Effective piston area	-	11.04	-	cm ²
V_{AS}	Equivalent volume	-	0.18	-	L
Q_{ms}	Mechanical quality factor	-	3.84	-	
Q_{es}	Electrical quality factor	-	1.06	-	
Q_{ts}	Total quality factor	-	0.83	-	

Operating conditions

Condition	Value
Power handling (continuous, weighted pink noise)	10W
Operating temperature range	-20 to 55° C
Audio frequency range	100Hz to 20kHz

Measured Response – on axis SPL

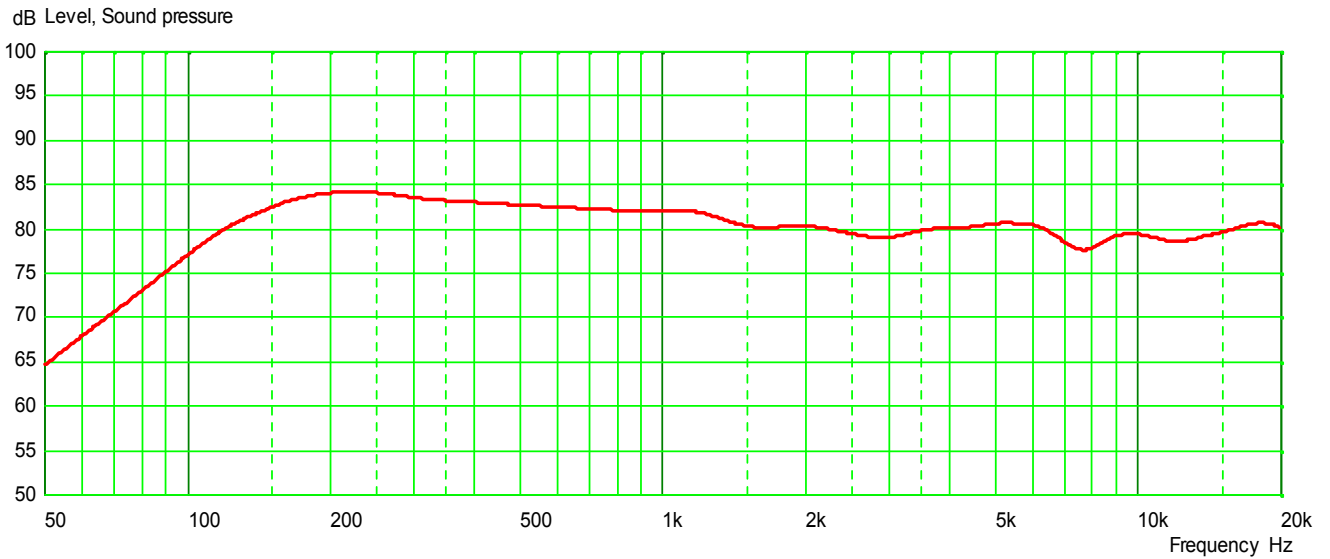


Figure 1: Red: on-axis SPL at 1W/1m (1/3-octave smoothed/spliced/ in room measurement)

Measured Response – wide angle averaged SPL

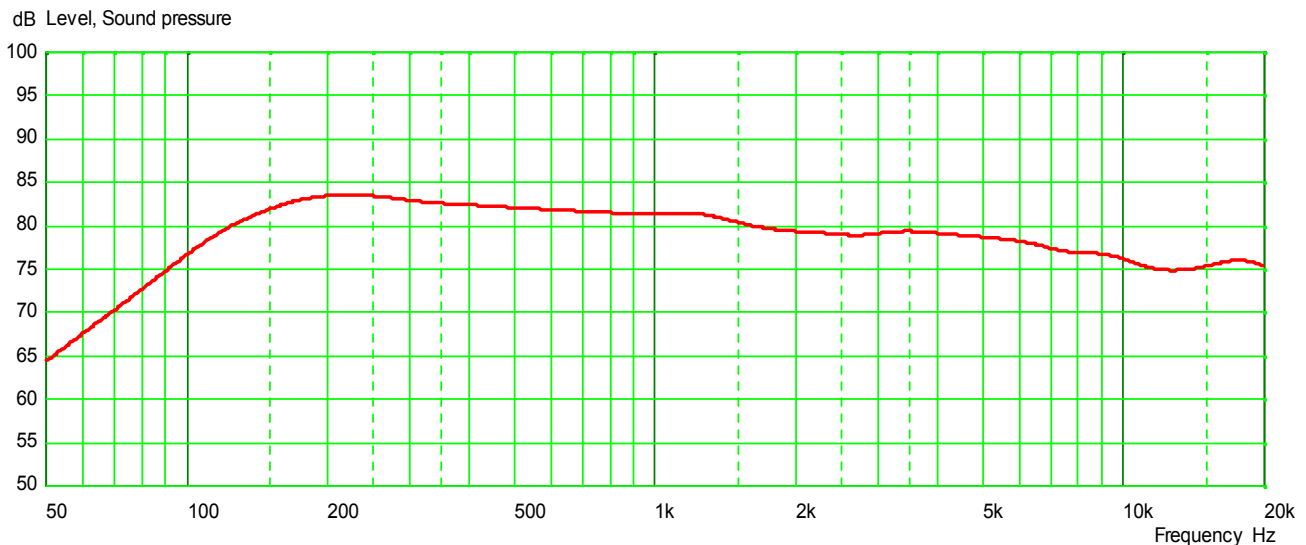


Figure 2: Averaged SPL from measurements across -85 to +85 degrees, 1W/1m, (1/3-octave smoothed/spliced)

Measured Polar Response

Level, Sound pressure
dB

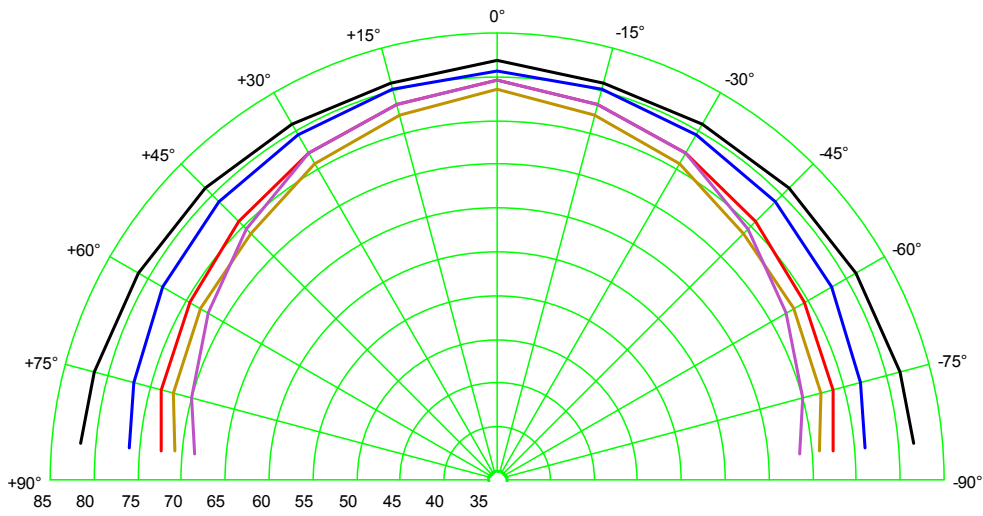


Figure 3: Polar response, angle/dB SPL: Black:1kHz, Blue: 5kHz, Red: 10kHz; Brown: 12kHz; Purple: 15kHz

Outline Drawing

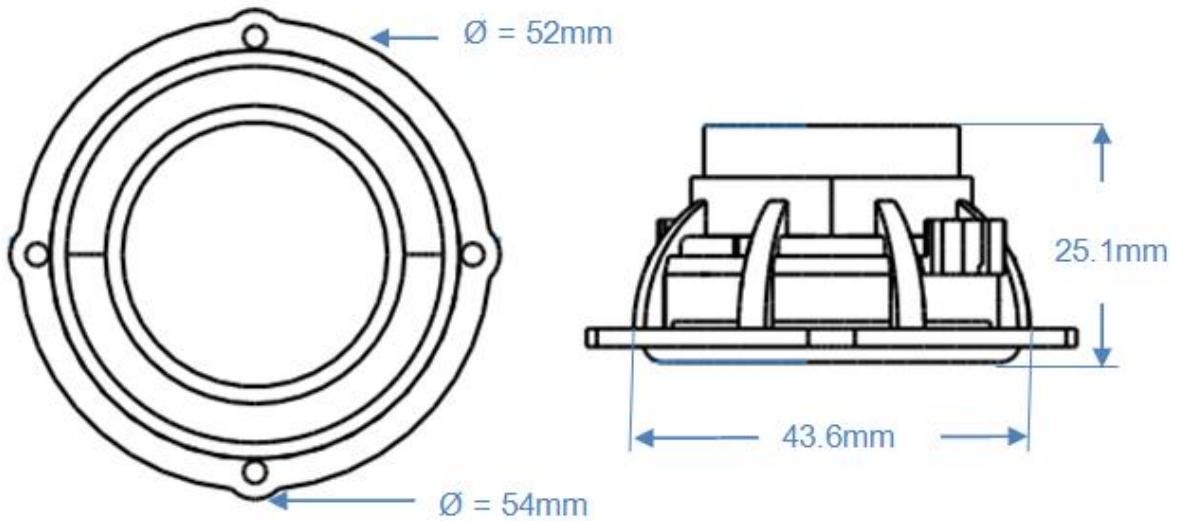


Figure 4. Nominal dimensions

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