

### TEBM35C10-4 Miniature BMR<sup>®</sup> 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<sup>®</sup> is an audio drive unit with an extended frequency response and extremely wide directivity. It combines the benefits of Tectonic Elements bending-wave technology and pistonic 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 <sup>-1</sup>
$R_{ms}$	Suspension Loss	-	0.27	-	Nsm <sup>-1</sup>
$X_{mech\ max}$	Maximum coil excursion (p-p)	-	8.0	-	mm
$S_d$	Effective piston area	-	11.04	-	cm <sup>2</sup>
$V_{AS}$	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**

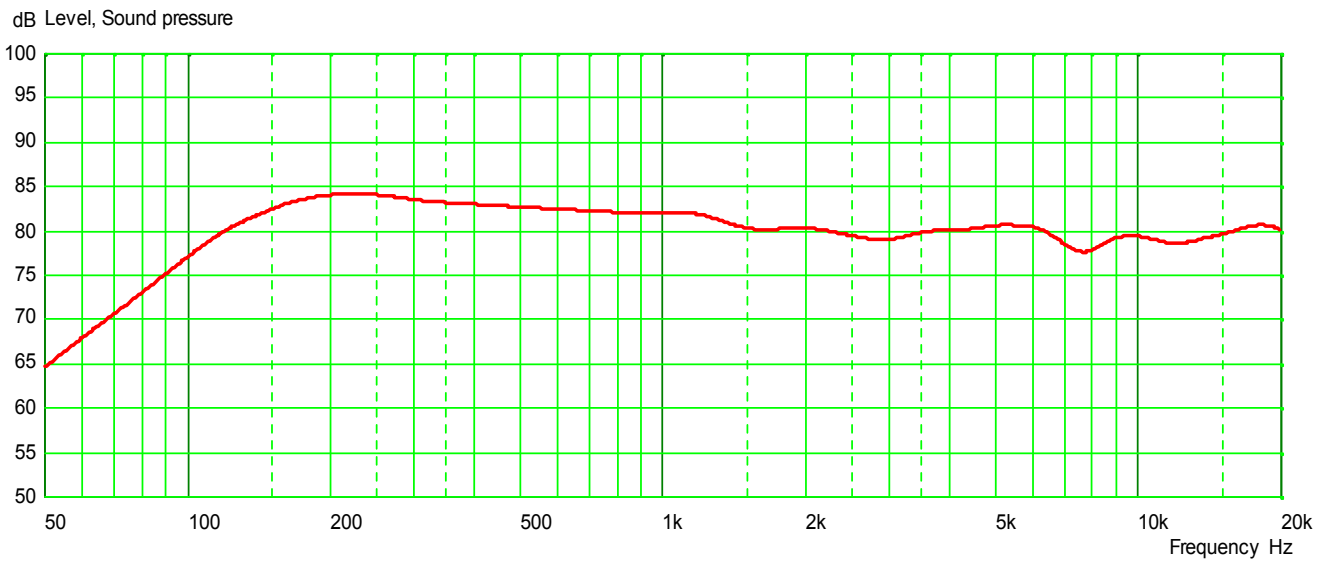


Figure 1: Red: on-axis SPL at 1W/1m (1/3-octave smoothed/spliced/ in room measurement)

**Measured Response – wide angle averaged SPL**

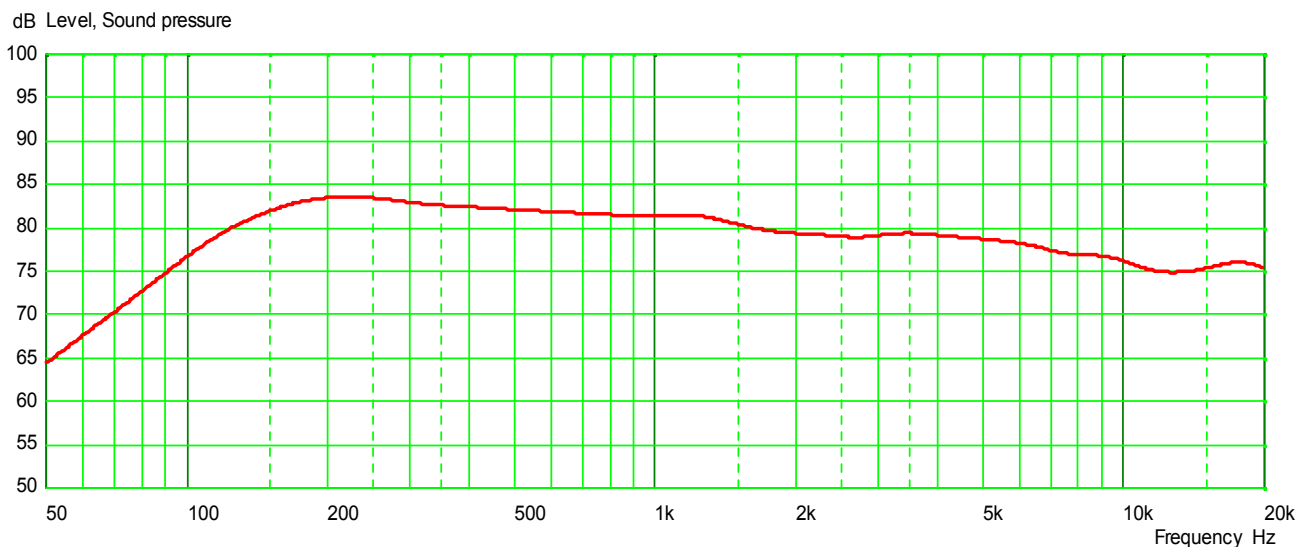


Figure 2: Averaged SPL from measurements across -85 to +85 degrees, 1W/1m, (1/3-octave smoothed/spliced)

Measured Polar Response

Level, Sound pressure  
dB

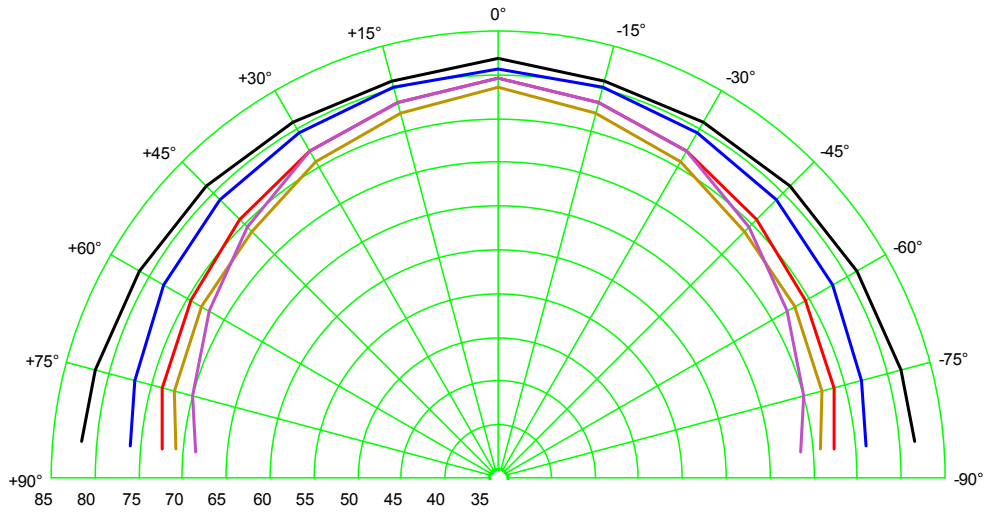


Figure 3: Polar response, angle/dB SPL: Black:1kHz, Blue: 5kHz, Red: 10kHz; Brown: 12kHz; Purple: 15kHz

Outline Drawing

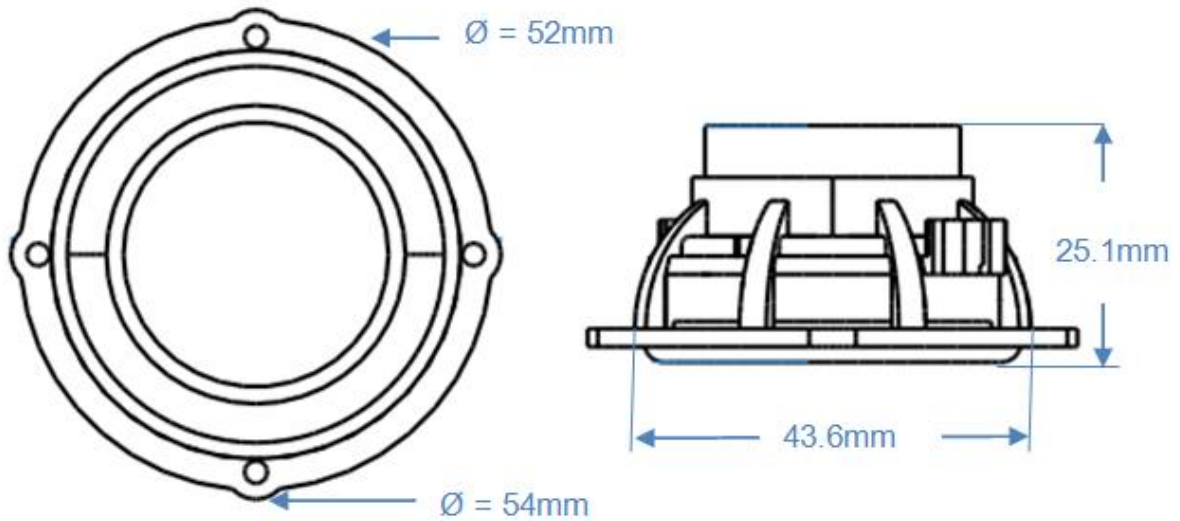


Figure 4. Nominal dimensions

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