

TEBM28C10-4/A Miniature BMR[®] Driver



Features

- Full range: 100Hz – 20kHz
- Wide directivity; 180°
- Nominal Impedance: 4 Ω
- Baffle: 46mm OD
- Depth: 25.8mm
- Mass: 58g

Applications

- Smart IoT speakers
- Portable speakers
- Sound bars and stands
- Conference speaker phone

Parameters

Parameter	Description	min	typ	max	Units
R_e	DC resistance	-10%	4.40	+10%	Ohms
L_e	Inductance (@ 10kHz)	-10%	0.09	+10%	mH
BL	Force factor	-10%	2.87	+10%	Tm
f_s	Resonant frequency	-20%	130	+20%	Hz
SPL	Sound Pressure Level @ 1W, 1m	78	80	81	dB
dDrv	Voice coil diameter	-	19.05	-	mm
M_{ms}	Moving mass	-10%	1.0	+10%	g
C_{ms}	Compliance	-12%	1.50	+12%	mmN ⁻¹
R_{ms}	Suspension Loss	-15%	0.31	+15%	Nsm ⁻¹
$X_{mech\ max}$	Maximum coil excursion (p-p)	-	8.0	-	mm
Sd	Effective piston area	-	8.55	-	cm ²
V_{AS}	Equivalent volume	-	0.15	-	L
Q_{ms}	Mechanical quality factor	-15%	2.74	+15%	
Q_{es}	Electrical quality factor	-15%	0.45	+15%	
Q_{ts}	Total quality factor	-20%	0.39	+20%	

Description

The TEBM28C10-4/A BMR[®] is an audio drive unit with an extended frequency response and 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.

Operating conditions

Condition	Value
Power handling (IEC268-5 continuous, weighted pink noise, 2 nd order HP filter)	10W
Preliminary operating temperature range	-20 to 55° C
Audio frequency range	100Hz to 20kHz

Measured Response – on axis SPL

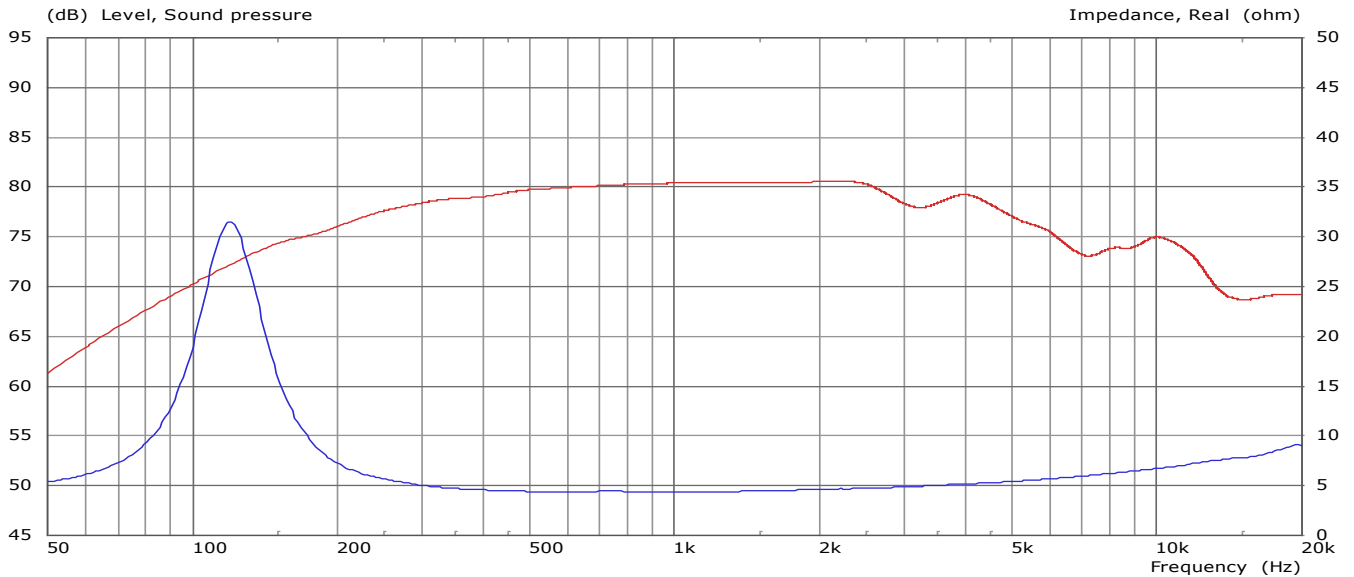


Figure 1: Red: on-axis SPL at 1W/1m (1/3-octave smoothed/spliced/ anechoic measurement). Blue: Impedance

Measured Response – Sound power response (SWL) over frontal hemisphere

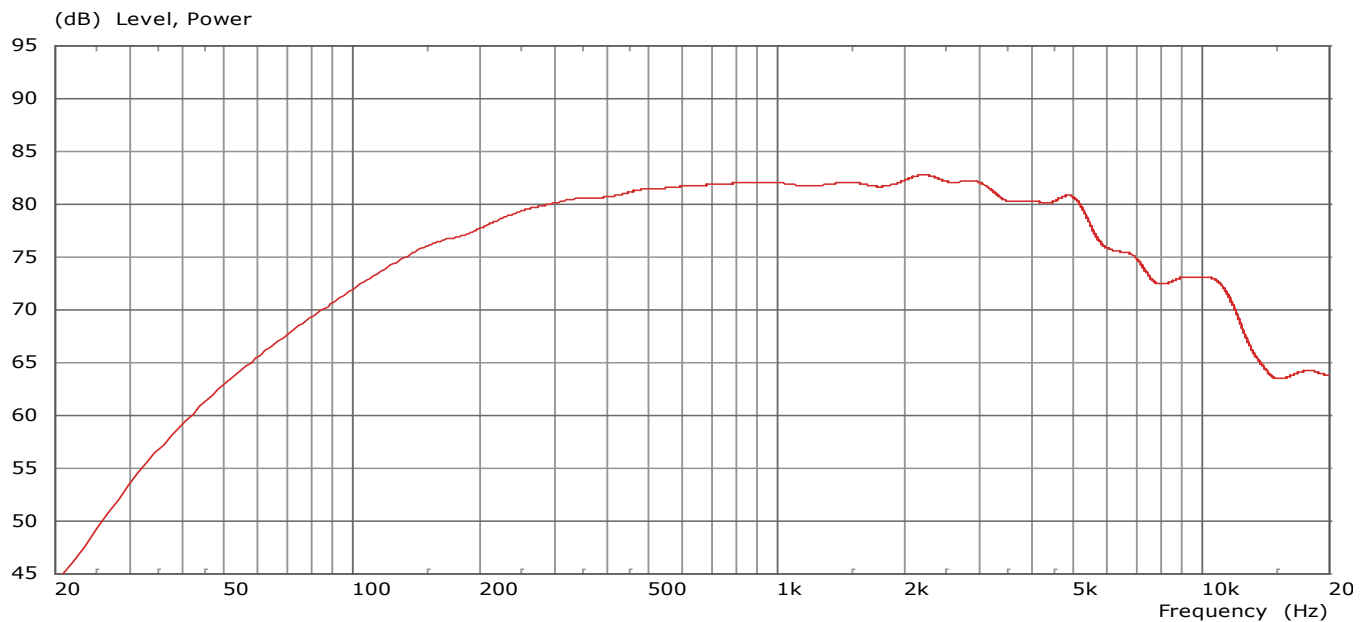


Figure 2: Power Response calculated across -90 -> +90 degrees, 1W/1m, 1/3-octave smoothed, spliced at 1kHz

Polar – off axis acoustic measurements in anechoic chamber at various frequencies

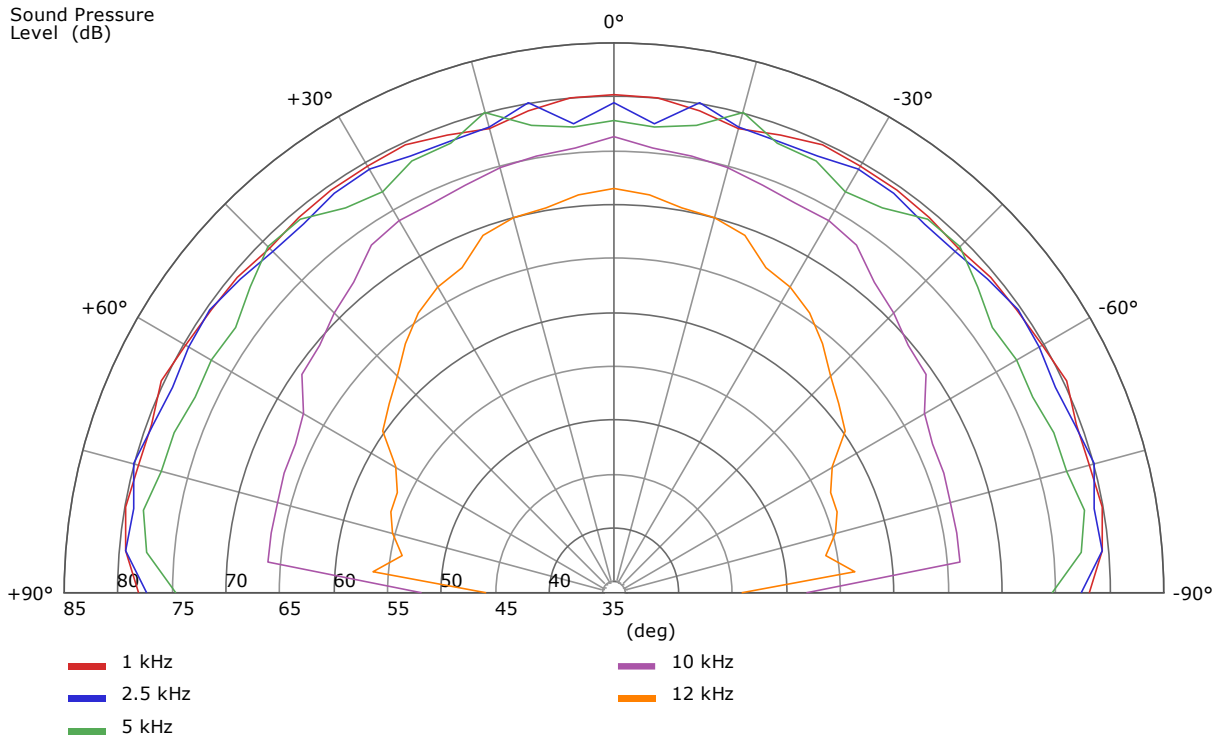


Figure 3: Polar Response, angle/dB SPL, input level 1 Watt (1/3rd octave smoothing)

Outline Drawing

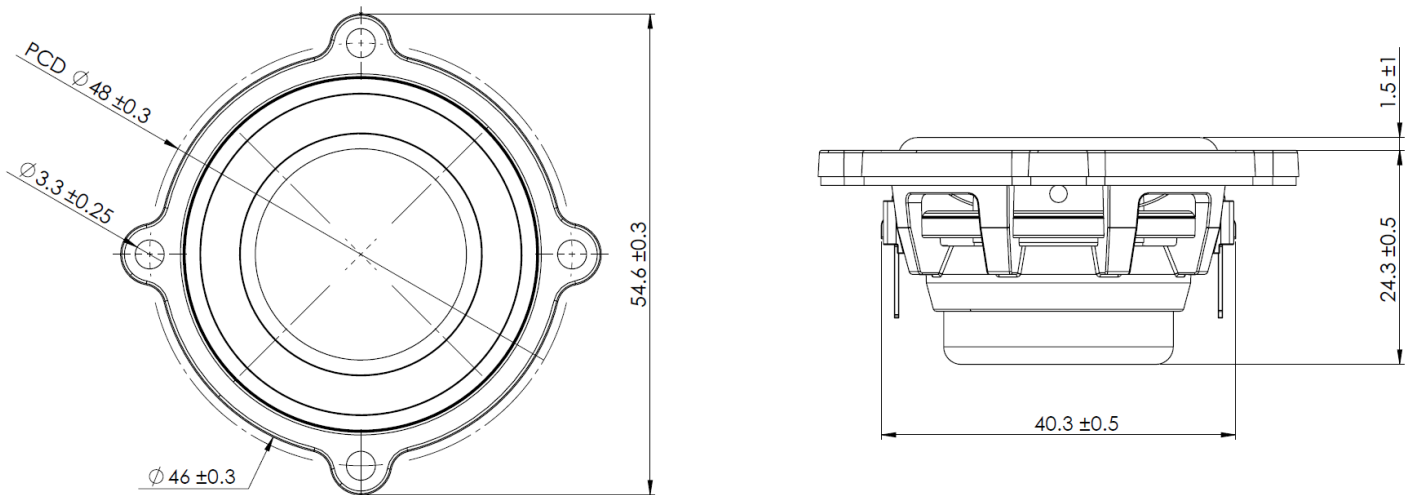


Figure 5: Nominal dimensions

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