

TEBM36S12-4/A Square BMR® Driver


Features

- Wide bandwidth and wide directivity
- Impedance: 4 Ω
- Dimensions: 65mm x 65mm
- Thickness: 29.7mm
- Mass: 88.2g

Applications

- Docking stations
- Table radios
- Sound bars
- Smart speakers
- Wireless speakers

Description

The TEBM36S12-4/A Balanced-Mode Radiator (BMR) is an audio drive unit with an extended frequency response and wide directivity compared with a conventional drive unit. It combines the benefits of Tectonic bending-wave technology and pistonic modes of operation. It is ideally suited for compact audio applications that require a full-range, high performance acoustic solution. An 8 Ω version is also available.

Parameters

Parameter	Description	min	typ	max	Units
R_e	DC resistance	-10%	4.4	+10%	Ohms
L_e	Inductance (10 kHz)	-10%	0.06	+10%	mH
BL	Force factor	-10%	3.15	+10%	Tm
f_s	Resonance frequency	-20%	165	+20%	Hz
SPL	Sound Pressure Level @ 1W, 1m	81	83	84	dB
dDrv	Voice coil diameter	-	25.4	-	mm
M_{ms}	Moving mass	-10%	1.7	+10%	g
C_{ms}	Compliance	-12%	0.6	+12%	mmN ⁻¹
R_{ms}	Suspension Loss	-15%	0.5	+15%	Nsm ⁻¹
S_d	Radiating Area	-	17.2	-	cm ²
$X_{mech\ max}$	Maximum coil excursion (p-p)	-	7.0	-	mm
V_{AS}	Equivalent volume	-	0.2	-	L
Q_{ms}	Mechanical quality factor	-15%	3.4	+15%	
Q_{es}	Electrical quality factor	-15%	0.779	+15%	
Q_{ts}	Total quality factor	-20%	0.634	+20%	

Operating conditions

Condition	Value
Continuous power handling (weighted pink noise, HP filter)	12W (TBC)
Burst power handling (weighted pink noise)	>24W (TBC)
Operating temperature range	-20 to 55° C
Audio frequency range	80Hz to 20kHz

Measured Response – on axis SPL

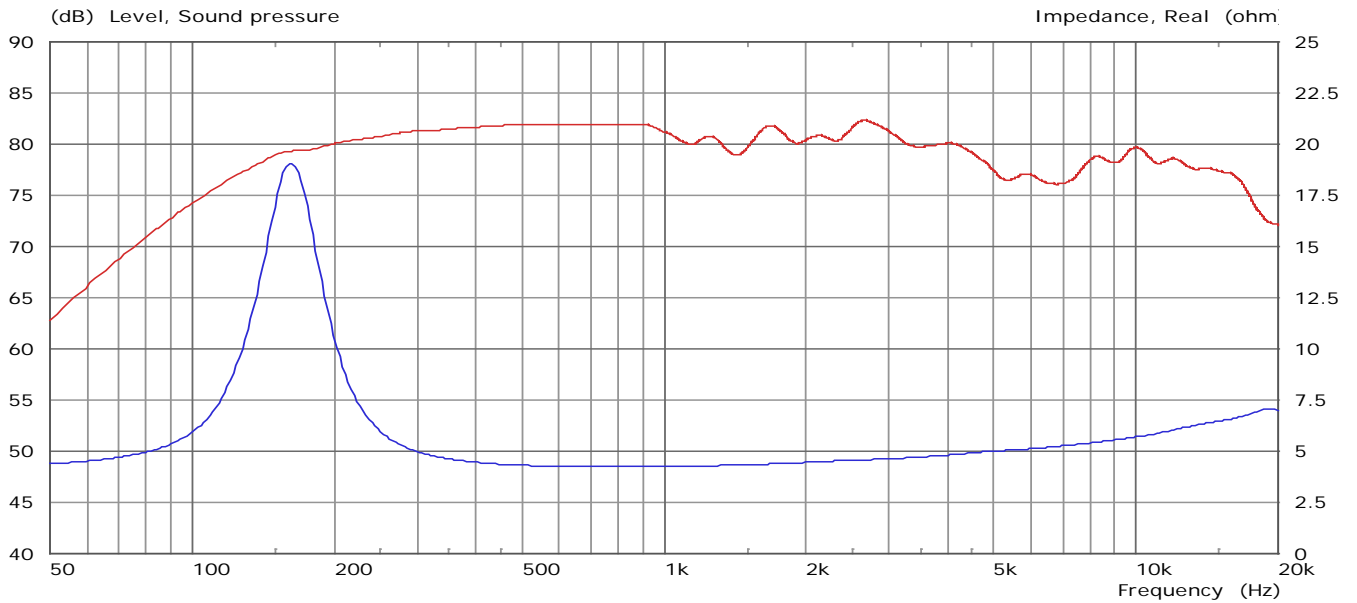


Figure 1: Red: on-axis SPL at 1W/1m (1/3-octave smoothed/spliced anechoic measurement) Blue: Impedance

Measured Response –adjusted power response over frontal hemisphere

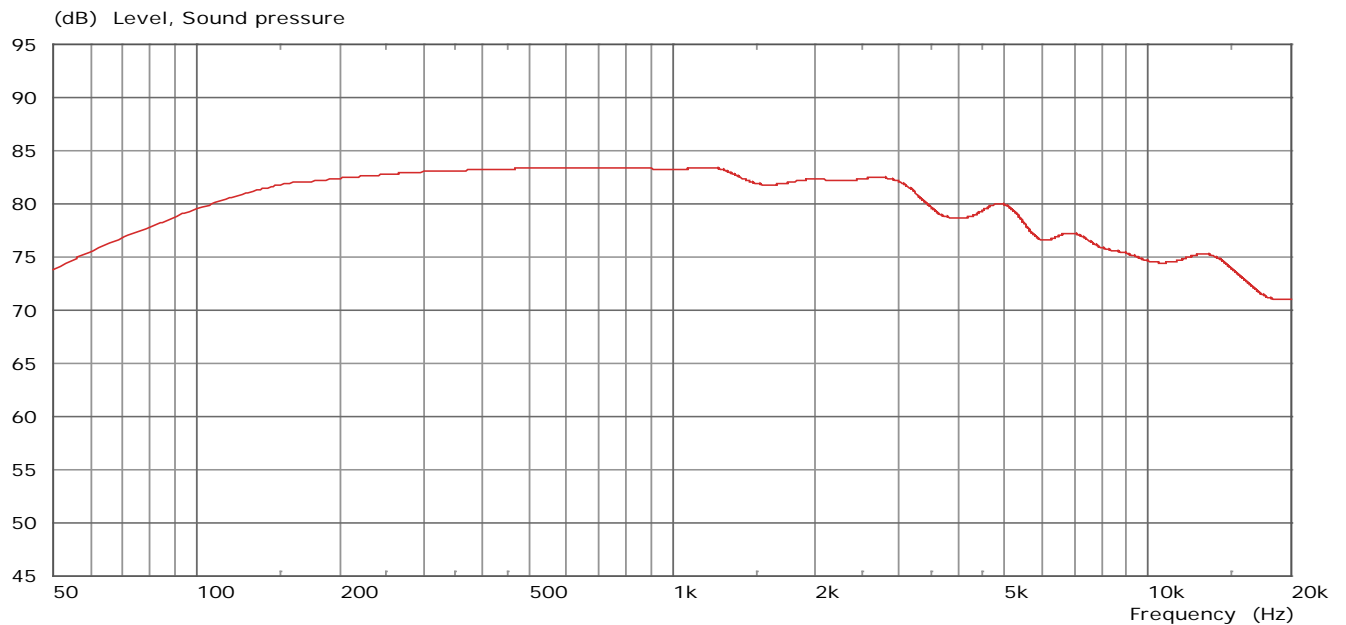


Figure 2: Power Response calculated across -90 -> +90 degrees, 1W/1m, (1/3-octave smoothed/spliced, -11dB)

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

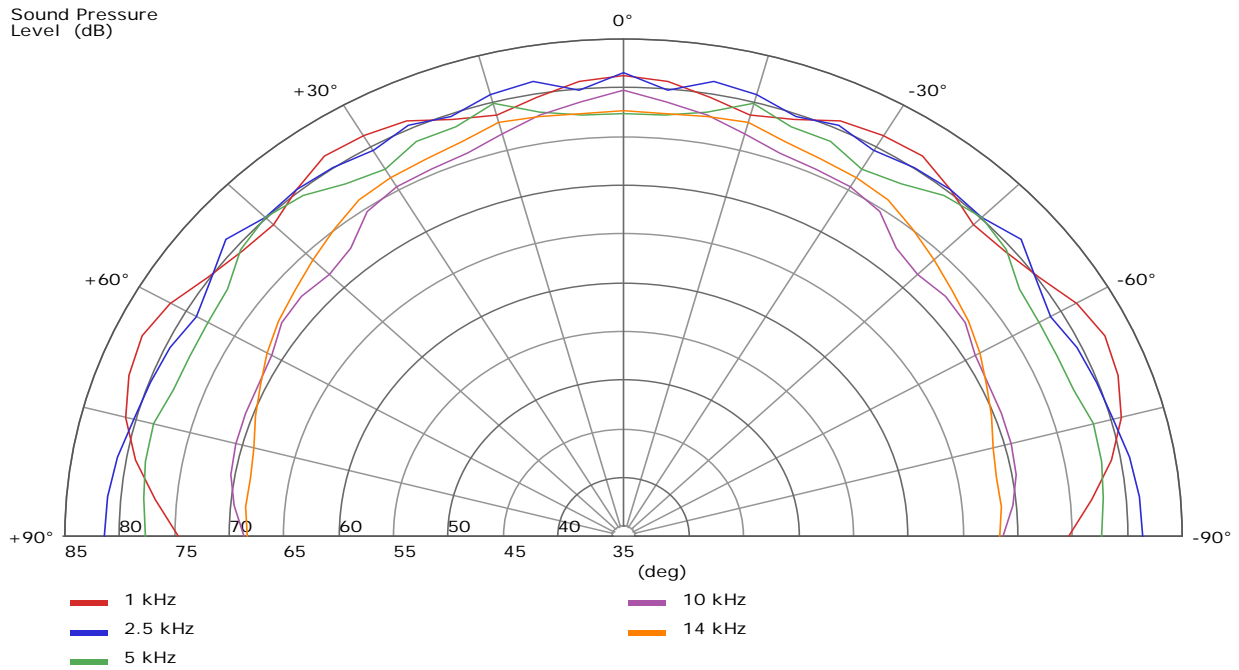


Figure 3: Polar response, angle/dB SPL, input level 1 Watt (1/3rd octave smoothing)

Outline Drawing

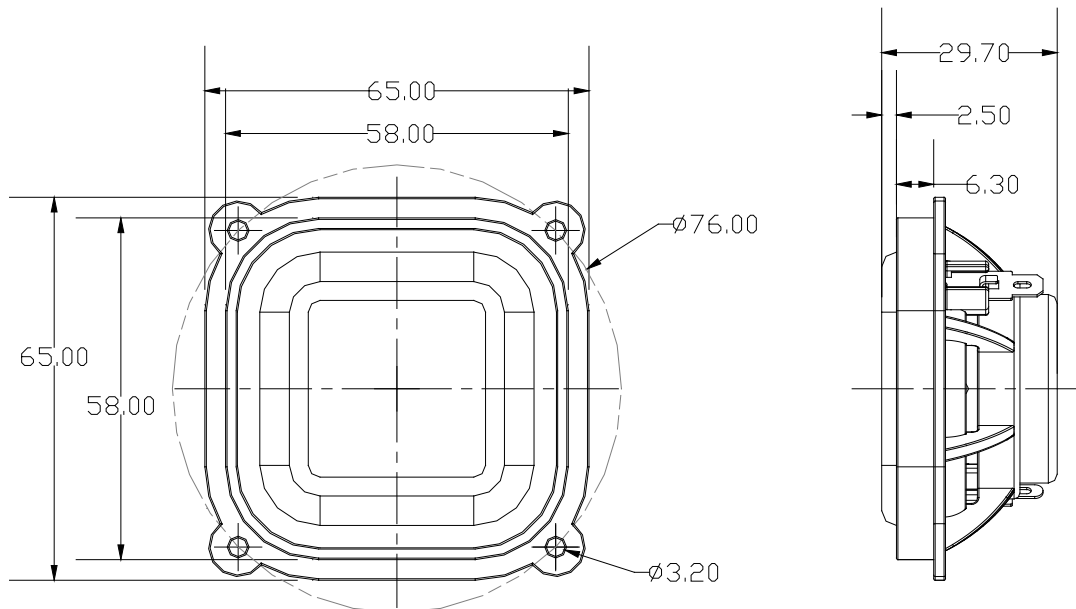


Figure 4: Nominal dimensions

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