

**TEBM36S12-4/A Square BMR® Driver**

**Features**

- Wide bandwidth and wide directivity
- Impedance: 4  $\Omega$
- 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 Elements 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 $\Omega$  version is also available.

**Parameters**

Parameter	Description	min	typ	max	Units
<b>R<sub>e</sub></b>	DC resistance	-10%	4.4	+10%	Ohms
<b>L<sub>e</sub></b>	Inductance (10 kHz)	-10%	0.06	+10%	mH
<b>BL</b>	Force factor	-10%	3.15	+10%	Tm
<b>f<sub>s</sub></b>	Resonance frequency	-20%	165	+20%	Hz
<b>SPL</b>	Sound Pressure Level @ 1W, 1m	81	83	84	dB
<b>dDrv</b>	Voice coil diameter	-	25.4	-	mm
<b>M<sub>ms</sub></b>	Moving mass	-10%	1.7	+10%	g
<b>C<sub>ms</sub></b>	Compliance	-12%	0.6	+12%	mmN <sup>-1</sup>
<b>R<sub>ms</sub></b>	Suspension Loss	-15%	0.5	+15%	Nsm <sup>-1</sup>
<b>S<sub>d</sub></b>	Radiating Area	-	17.2	-	cm <sup>2</sup>
<b>X<sub>mech max</sub></b>	Maximum coil excursion (p-p)	-	7.0	-	mm
<b>V<sub>AS</sub></b>	Equivalent volume	-	0.2	-	L
<b>Q<sub>ms</sub></b>	Mechanical quality factor	-15%	3.4	+15%	
<b>Q<sub>es</sub></b>	Electrical quality factor	-15%	0.779	+15%	
<b>Q<sub>ts</sub></b>	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**

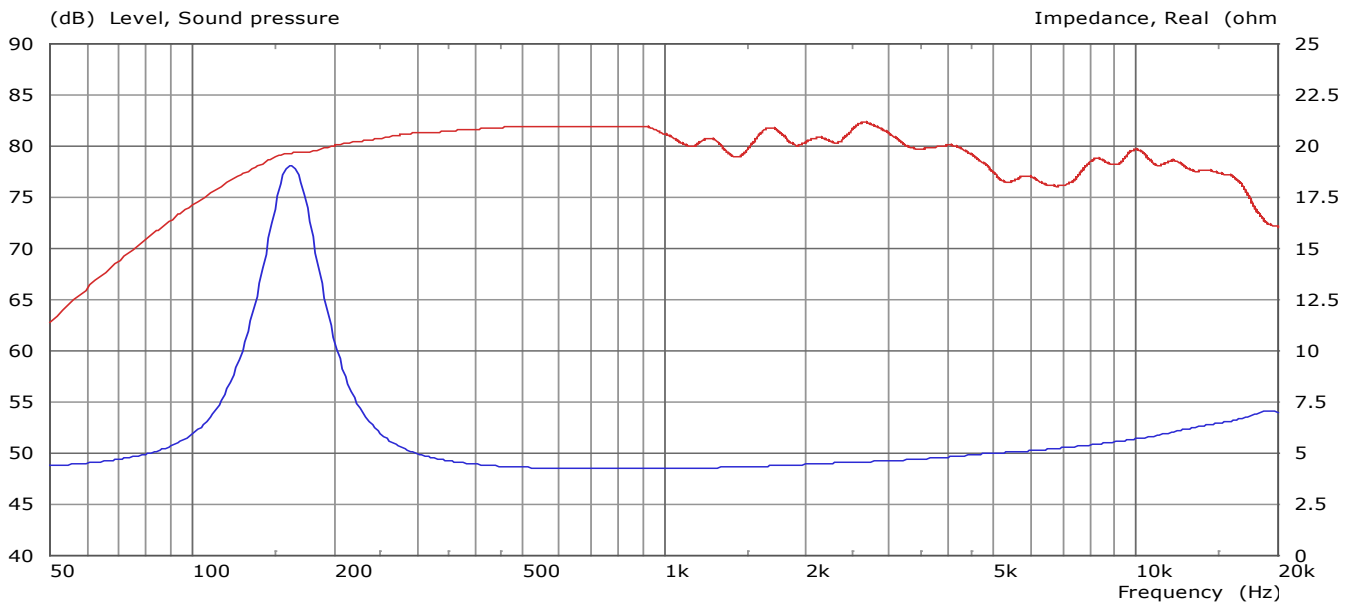


Figure 1: Red: on-axis SPL at 1W/1m (1/3-octave smoothed/spliced anechoic measurement) Blue: Impedance

**Measured Response –adjusted power response over frontal hemisphere**

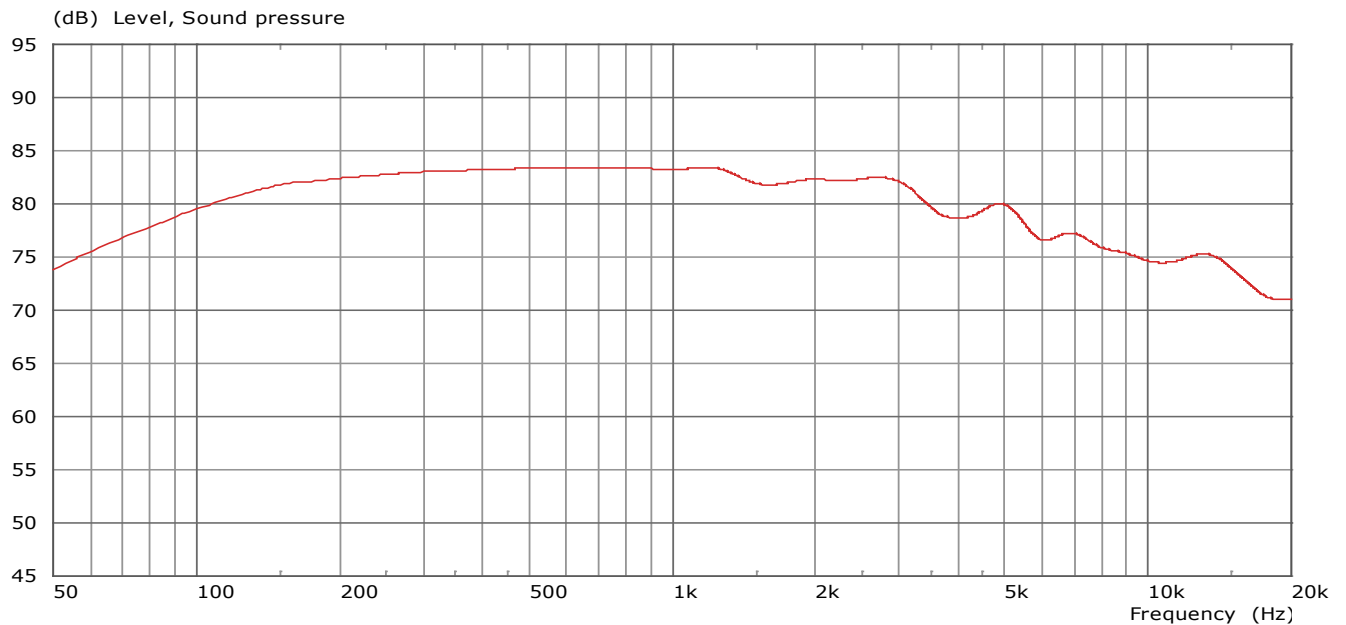


Figure 2: Power Response calculated across -90 -> +90 degrees, 1W/1m, (1/3-octave smoothed/spliced, -11dB)

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

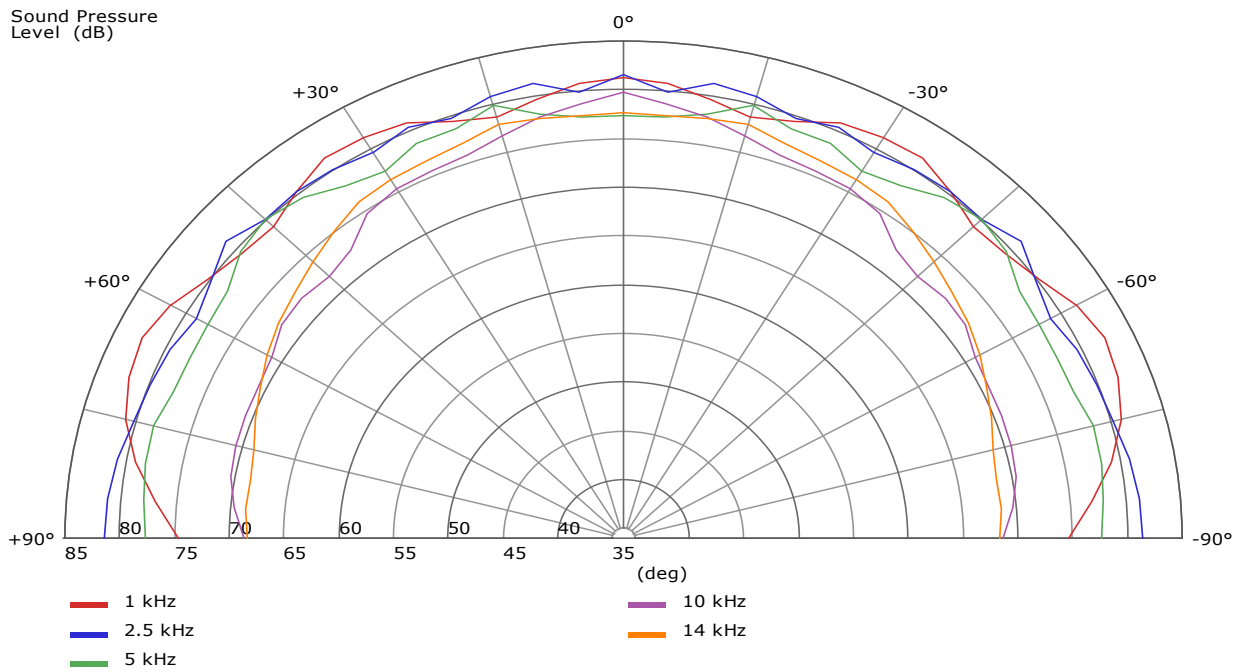


Figure 3: Polar response, angle/dB SPL, input level 1 Watt (1/3<sup>rd</sup> octave smoothing)

Outline Drawing

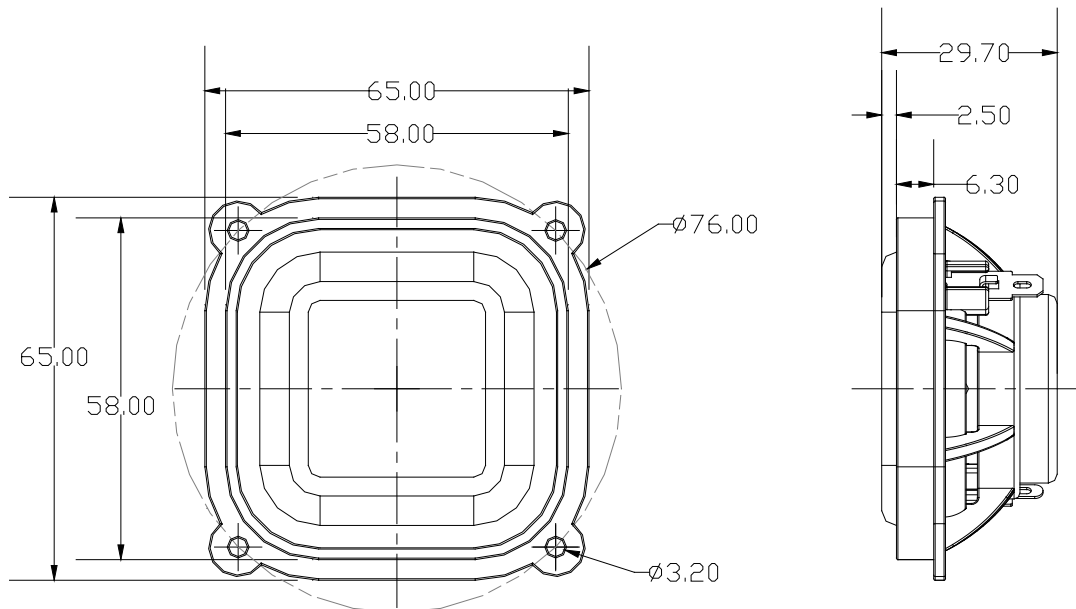


Figure 4: Nominal dimensions

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