

TEBM36S05-4 Data Sheet

TEBM36S05-4 Balanced Mode Radiator





Features

- Full range:100Hz 20kHz
- Extremely wide directivity; 180°
- Nominal Impedance: 4 Ω
- Dimensions: 58.00mm x 58.00mm
- Depth: 20.6mm
- Mass: 65g

Applications

- Docking stations
- Smart speakers
- Sound bars
- Computer speakers

Parameters

Description

The TEBM36S05-4 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.

| Parameter | Description | min | typ | max | Units |
|-----------------------|-------------------------------|------|------|------|-------------------|
| Re | DC resistance | -10% | 3.7 | +10% | Ohms |
| Le | Inductance (@ 10kHz) | -10% | 0.05 | +10% | mH |
| BL | Force factor | -10% | 2.59 | +10% | Tm |
| f _s | Resonant frequency | -20% | 170 | +20% | Hz |
| SPL | Sound Pressure Level @ 1W, 1m | 79 | 80 | 82 | dB |
| dDrv | Voice coil diameter | - | 25.4 | - | mm |
| M _{ms} | Moving mass | -10% | 2.1 | +10% | g |
| C _{ms} | Compliance | -12% | 0.42 | +12% | mmN ⁻¹ |
| R _{ms} | Suspension Loss | -15% | 0.42 | -15% | Nsm⁻¹ |
| X _{mech max} | Maximum coil excursion (p-p) | - | 6.0 | - | mm |
| Sd | Effective piston area | - | 17.6 | - | CM ² |
| V _{AS} | Equivalent volume | - | 0.18 | - | L |
| Q _{ms} | Mechanical quality factor | -15% | 5.29 | +15% | |
| Q _{es} | Electrical quality factor | -15% | 1.23 | +15% | |
| Q _{ts} | Total quality factor | -20% | 1.00 | +20% | |

Operating conditions

| Condition | Value | |
|--|----------------|--|
| Power handling (continuous, weighted pink noise) | 5W | |
| Operating temperature range | -20 to 55° C | |
| Audio frequency range | 100Hz to 20kHz | |

Measured Response – on axis SPL

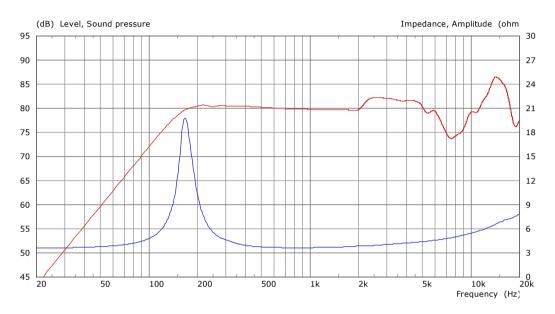


Figure 1: Red: on-axis SPL at 1W/1m (1/3-octave smoothed/spliced anechoic measurement) Blue: Impedance

Measured Response - adjusted power response over frontal hemisphere

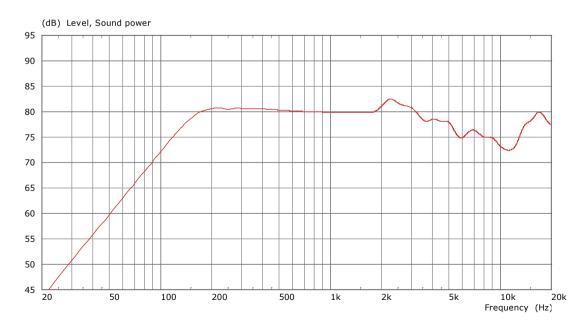


Figure 2: Power Response calculated across -90 -> +90 degrees, 1W/1m, (1/3-octave smoothed/spliced, -11 dB)

Outline Drawing

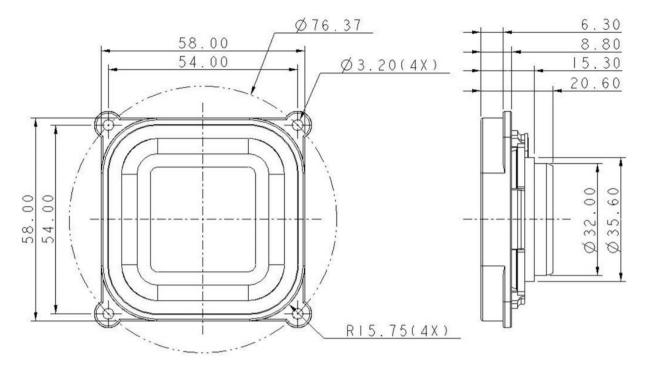


Figure 3: Nominal dimensions

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