

### TEBM46C20N-4B Balanced Mode Radiator

✓RoHS  
COMPLIANT



#### Features

- Wide bandwidth and wide directivity
- Impedance: 4 ohm
- Dimensions: 75mm x 75mm
- Thickness: 34.65mm
- Mass: 194g

#### Applications

- Sound bars
- Portable speakers
- Internet radios
- Docking stations
- Wireless speakers

#### Description

The TEBM46C20N-4B 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.

#### Parameters

Parameter	Description	min	typ	max	Units
$R_e$	DC resistance	-10%	3.94	+10%	Ohms
$L_e$	Inductance	-10%	0.03	+10%	mH
$BL$	Force factor		4.49		Tm
$f_s$	Resonance frequency	-20%	170	+20%	Hz
$d_{Drv}$	Voice coil diameter		32		mm
$M_{ms}$	Moving mass		2.26		g
$C_{ms}$	Compliance		0.39		mmN <sup>-1</sup>
$R_{ms}$	Suspension Loss		0.16		Nsm <sup>-1</sup>
$X_{mech\ max}$	Maximum coil excursion (p-p)		8.0		mm
$S_d$	Effective piston area		19.6		cm <sup>2</sup>
$V_{AS}$	Equivalent volume		0.32		L
$Q_{ms}$	Mechanical quality factor		15.16		
$Q_{es}$	Electrical quality factor		0.47		
$Q_{ts}$	Total quality factor		0.46		

Operating conditions

Condition	Value
Continuous power handling (IEC 268-5 weighted pink noise, 150Hz high pass filter)	20W
Operating temperature range	-20 to 55° C
Audio frequency range	150Hz to 20kHz
Sound pressure level @ 1W, 1m	86 dB

Response

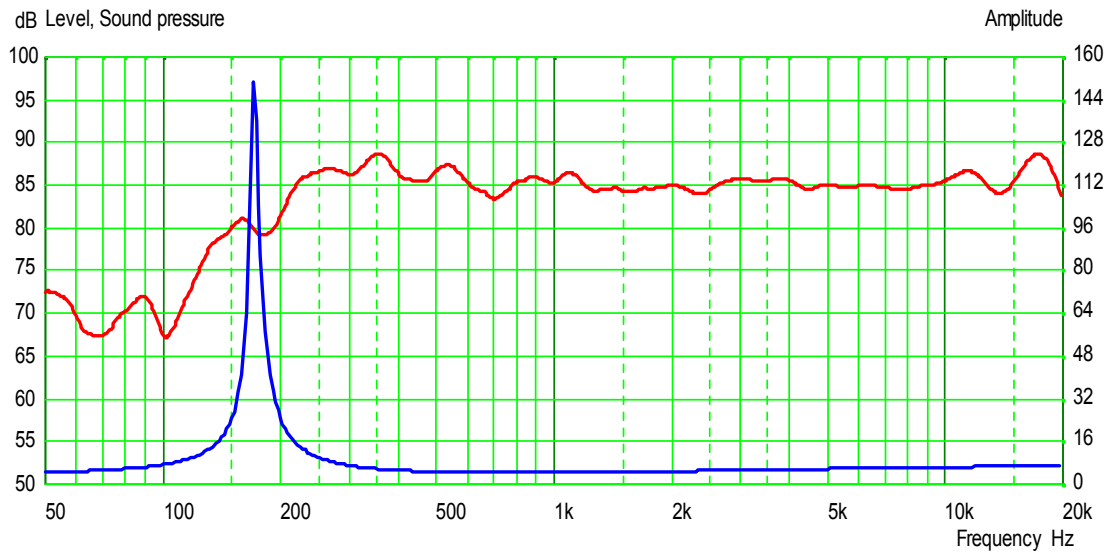


Figure 1. On-axis SPL at 1W, 1m (in-room), & impedance vs. frequency

Outline Drawing

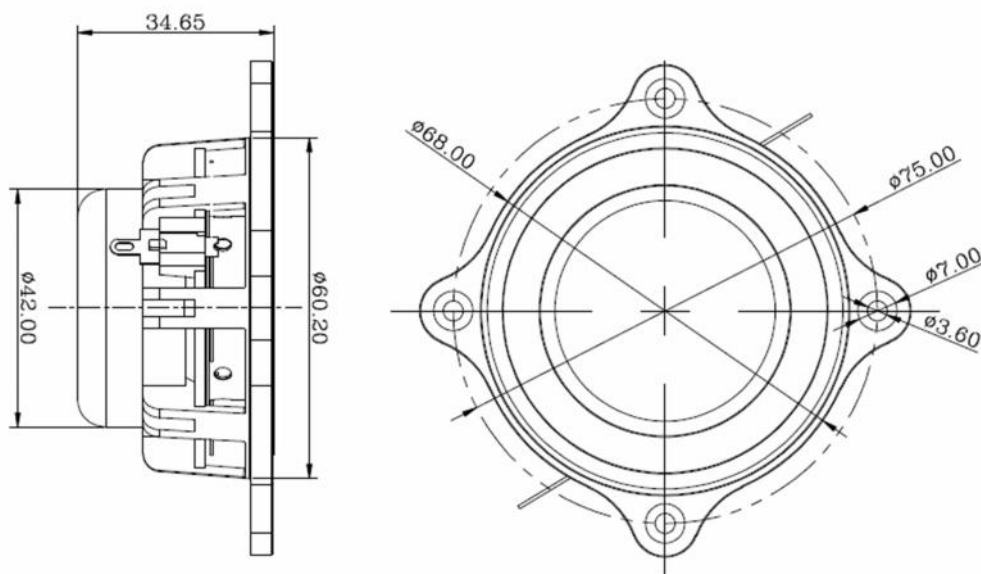


Figure 2. Nominal dimensions