

### TEBM65C20F-4 Balanced Mode Radiator



#### Features

- Full range: 60Hz – 20kHz
- Extremely wide directivity; 180°
- Nominal Impedance: 4 Ω
- Diameter: 108mm (max OD)
- Depth: 57mm
- Mass: 685g

#### Applications

- Home theatre systems
- Wireless speakers
- Sound bars
- Hi-Fi systems

#### Parameters

Parameter	Description	min	typ	max	Units
$R_e$	DC resistance	-10%	3.8	+10%	Ohms
$L_e$	Inductance (@ 10kHz)	-10%	0.03	+10%	mH
$BL$	Force factor	-10%	3.75	+10%	Tm
$f_s$	Resonant frequency	-20%	97	+20%	Hz
<b>SPL</b>	Sound Pressure Level @ 1W, 1m	79	81	82	dB
<b>dDrv</b>	Voice coil diameter	-	25.4	-	mm
$M_{ms}$	Moving mass	-10%	5.6	+10%	g
$C_{ms}$	Compliance	-12%	0.47	+12%	mmN <sup>-1</sup>
$R_{ms}$	Suspension Loss	-15%	0.51	-15%	Nsm <sup>-1</sup>
$X_{mech\ max}$	Maximum coil excursion (p-p)	-	10.0	-	mm
<b>Sd</b>	Effective piston area	-	37.2	-	cm <sup>2</sup>
$V_{AS}$	Equivalent volume	-	0.99	-	L
$Q_{ms}$	Mechanical quality factor	-15%	7.00	+15%	
$Q_{es}$	Electrical quality factor	-15%	0.94	+15%	
$Q_{ts}$	Total quality factor	-20%	0.83	+20%	

#### Description

The TEBM65C20F-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. It features an advanced ferrite motor system for low cost.

An 8ohm version is also available.

Operating conditions

Condition	Value
Power handling (continuous, weighted pink noise)	30W
Burst power handling (weighted pink noise)	>60W
Operating temperature range	-20 to 55° C
Audio frequency range	60Hz to 20kHz

Measured Response – on axis SPL

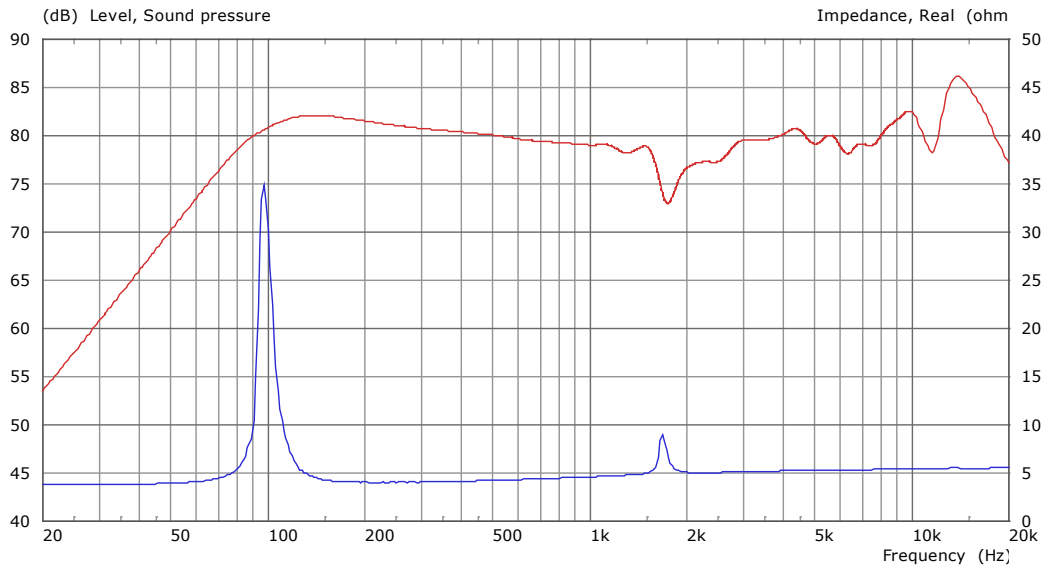


Figure 1: Red: on-axis SPL at 1W/1m (1/3-octave smoothed/spliced anechoic measurement) Blue: Impedance

Measured Response – adjusted power response over frontal hemisphere

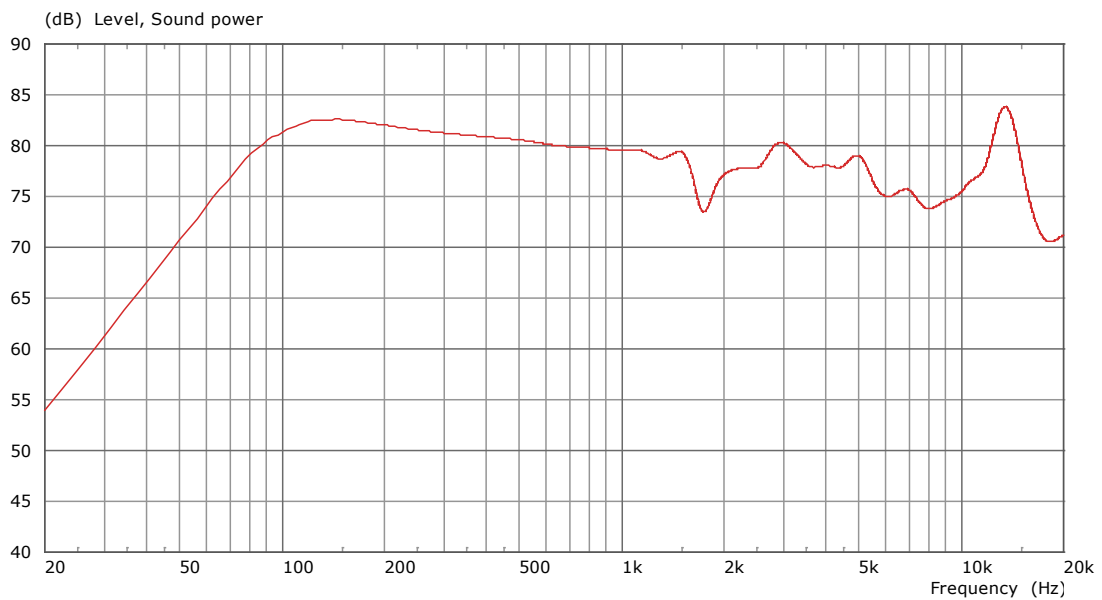


Figure 2: Power Response calculated across -90 -> +90 degrees, 1W/1m, (1/3-octave smoothed/spliced, -11 dB)

Outline Drawing

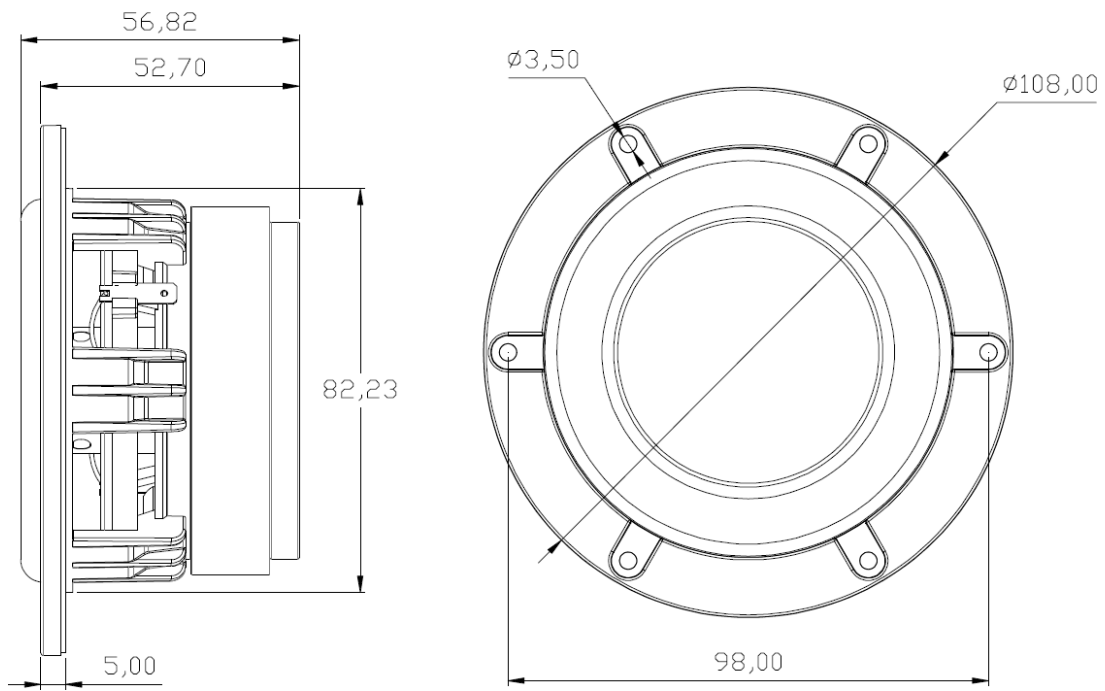


Figure 3: Nominal dimensions

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