beyma Low Frequency Transducer Instructions

beyma Low Frequency Transducer Instructions

Contents [hide

KEY FEATURES

- High sensitivity: 98 dB
- High power handling: 400 W_{AES}

- 3” copper voice coil
- Optimum winding length for increased linear excursion.

- Extremely linear frequency response
- Extended response in the medium frequency range
- Low harmonic distortion
- High power woofer and midbass applications

TECHNICAL SPECIFICATIONS

Nominal diameter	380 mm 15 in
Rated impedance	8 Ω
Minimum impedance	7,2 Ω
Power capacity [1]	400 W_{AES}
Program power [2]	800 W
Sensitivity	98 dB 1W / 1m @ Z_N
Frequency range	35 – 3.000 Hz
Recom. enclosure	V_b = 75 l
(Bass-reflex design)	$_{Fb}$ = 48 Hz
Voice coil diameter	76,2 mm 3 in
Bl factor	17,4 N/A
Moving mass	0,086 kg
Voice coil length	17,5 mm
Air gap height	7 mm
X_{damage} (peak to peak)	30 mm

Notes:

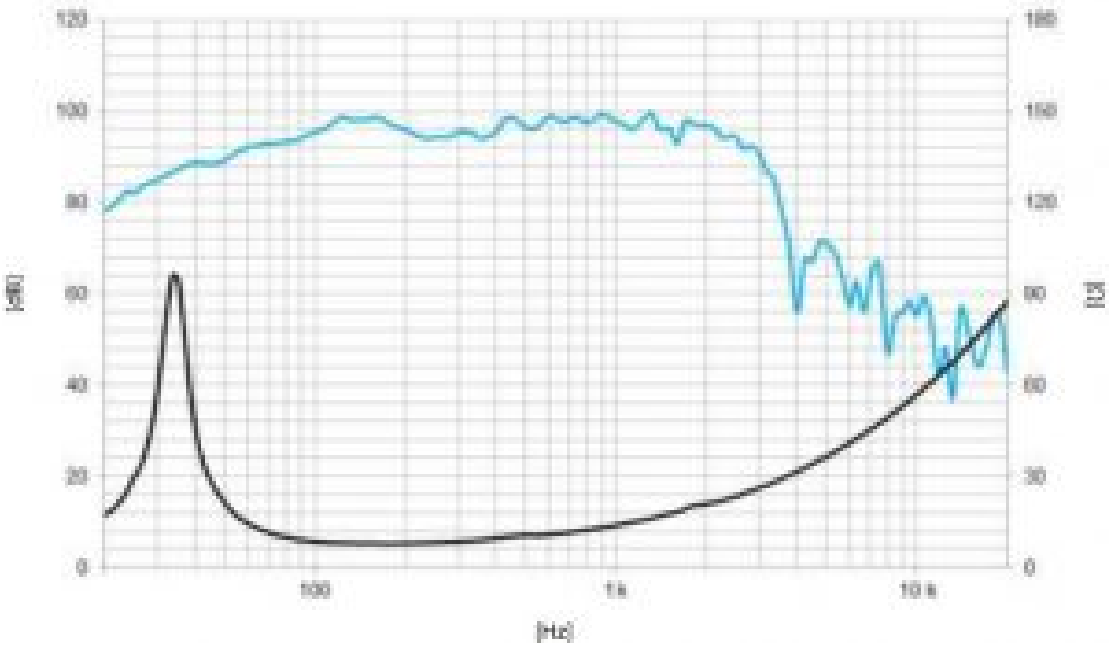
1. The power capaticty is determined according to **AES2-1984** (r2003) standard.
2. Program power is defined as power capacity + 3 dB.
3. T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the

loudspeaker has been working for a short period of time).

4. The X_{max} is calculated as $(L_{vc} – H_{ag})/2 + (H_{ag}/3,5)$, where L_{vc} is the voice coil length and H_{ag} is the air gap height.

THIELE-SMALL PARAMETERS[3]

Resonant frequency, f_s	35 Hz
D.C. Voice coil resistance, R_e	6,4 Ω
Mechanical Quality Factor, Q_{ms}	8,5
Electrical Quality Factor, Q_{es}	0,40
Total Quality Factor, Q_{ts}	0,38
Equivalent Air Volume to C_{ms}, V_{as}	267 l
Mechanical Compliance, C_{ms}	243 µm / N
Mechanical Resistance, R_{ms}	2,2 kg / s
Efficiency, η_0	2,7 %
Effective Surface Area, S_d	0,088 m^2
Maximum Displacement, X_{max} [4]	7,25 mm
Displacement Volume, V_d	638 cm^3
Voice Coil Inductance, L_e	1,2 mH

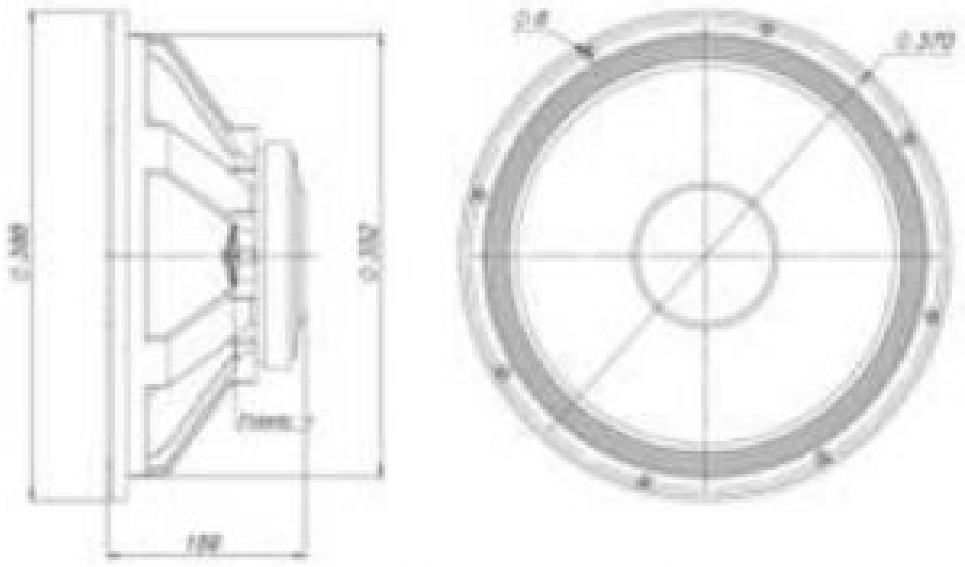


Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

MOUNTING INFORMATION

Overall diameter	388 mm	15,3 in
Bolt circle diameter	370 mm	14,6 in
Baffle cutout diameter:		
Baffle cutout diameter:	352 mm	13,9 in
Depth	156 mm	6,1 in
Net weight	6,5 kg	14,3 lb
Shipping weight	7,4 kg	16,3 lb

DIMENSION DRAWING



Documents / Resources

	beyma Low Frequency Transducer [pdf] Instructions Low Frequency Transducer, SM-115 N

References

- Acústica Beyma - Fabricante Altavoces Profesionales desde 1969