beyma

PROFESSIONAL LOUDSPEAKERS
www.beyma.com

SM-115/N

LOW FREQUENCY TRANSDUCER
SM Series

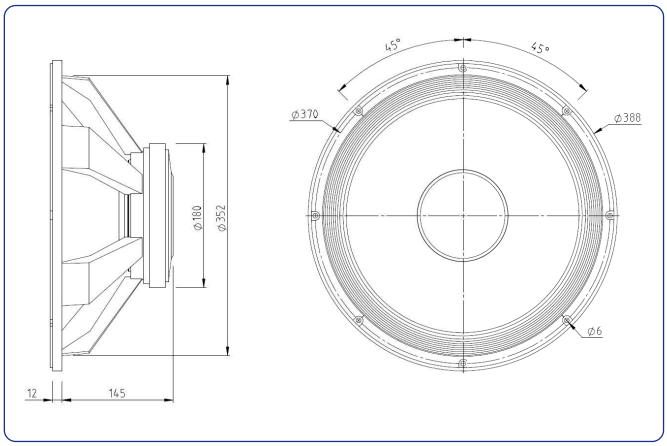
KEY FEATURES

- 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*		400 W_{AES}
Program power		800 W
Sensitivity	98 dB	1W @ 1m @ Z_N
Frequency range		35 - 3.000 Hz
Voice coil diameter	77 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

DIMENSION DRAWINGS



THIELE-SMALL PARAMETERS**

Resonant frequency, f_s	35 Hz
D.C. Voice coil resistance, R_e	6,4Ω
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} * **	7,25 mm
Displacement Volume, V_d	638 cm^3
Voice Coil Inductance, L_e @ 1 kHz	1,2 mH

MOUNTING INFORMATION

Overall diameter	388 mm	15,28 in
Bolt circle diameter	370 mm	14,57 in
Baffle cutout diameter:		
- Front mount	352 mm	13,86 in
Depth	160 mm	6,3 in
Volume displaced by driver	6 l	0,22 ft^3
Net weight	6,5 kg	14,33 lb
Shipping weight	7,4 kg	16,31 lb

Notes:

* The power capaticty is determined according to AES2-1984 (r2003) standard. Program power is defined as the transducer’s ability to handle normal music program material.

** 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).

*** 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.

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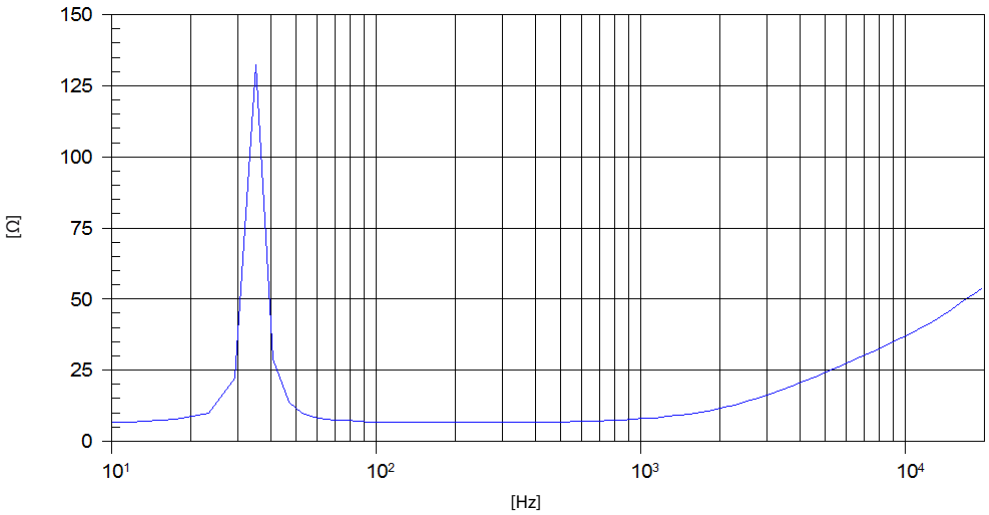
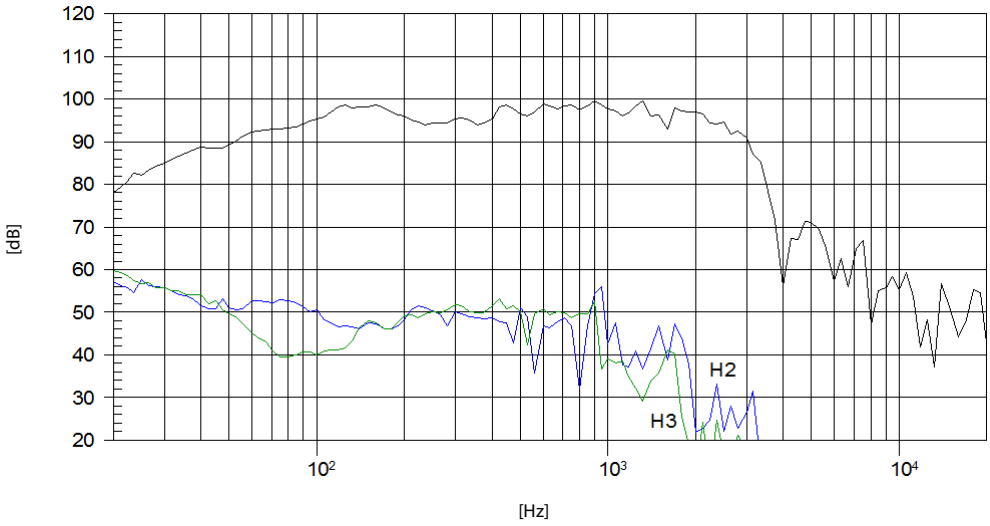
FREE AIR IMPEDANCE CURVE



FREQUENCY RESPONSE AND DISTORTION



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

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