beyma

PROFESSIONAL LOUDSPEAKERS
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SM-115/K

LOW FREQUENCY TRANSDUCER
SM Series

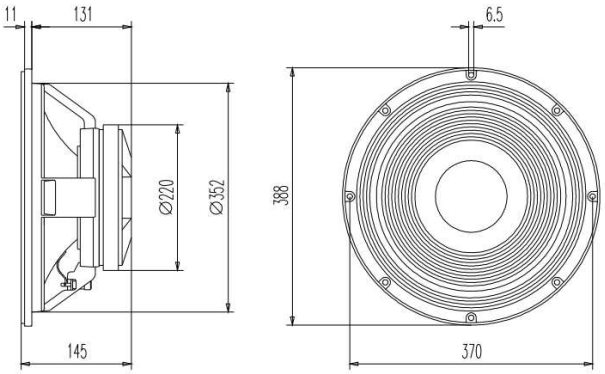
KEY FEATURES

- High power handling: 500 W_{AES}
- 4” copper voice coil
- High sensitivity: 97 dB
- High controlled displacement X_{MAX} ± 8 mm
- Low resonant frequency: 29 Hz
- Low harmonic distortion
- Designed for subwoofer and woofer applications

TECHNICAL SPECIFICATIONS

Nominal diameter	380 mm	15 in
Rated impedance		8 Ω
Minimum impedance		6,5 Ω
Power capacity*		500 W_{AES}
Program power		1.000 W
Sensitivity	97 dB	1W @ 1m @ Z_N
Frequency range		30 - 2.000 Hz
Voice coil diameter	101,6 mm	4 in
Bl factor		22,8 N/A
Moving mass		0,121 kg
Voice coil length		20,5 mm
Air gap height		10 mm
X_{damage} (peak to peak)		30 mm

DIMENSION DRAWINGS



THIELE-SMALL PARAMETERS**

Resonant frequency, f_s	29 Hz
D.C. Voice coil resistance, R_e	6,1Ω
Mechanical Quality Factor, Q_{ms}	5,8
Electrical Quality Factor, Q_{es}	0,26
Total Quality Factor, Q_{ts}	0,25
Equivalent Air Volume to C_{ms}, V_{as}	273 l
Mechanical Compliance, C_{ms}	250 μm / N
Mechanical Resistance, R_{ms}	3,8 kg / s
Efficiency, η_0	2,4 %
Effective Surface Area, S_d	0,088 m^2
Maximum Displacement, X_{max} * **	8 mm
Displacement Volume, V_d	704 cm^3
Voice Coil Inductance, L_e @ 1 kHz	1,6 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	145 mm	5,7 in
Net weight	10,2 kg	22,49 lb
Shipping weight	11,3 kg	24,91 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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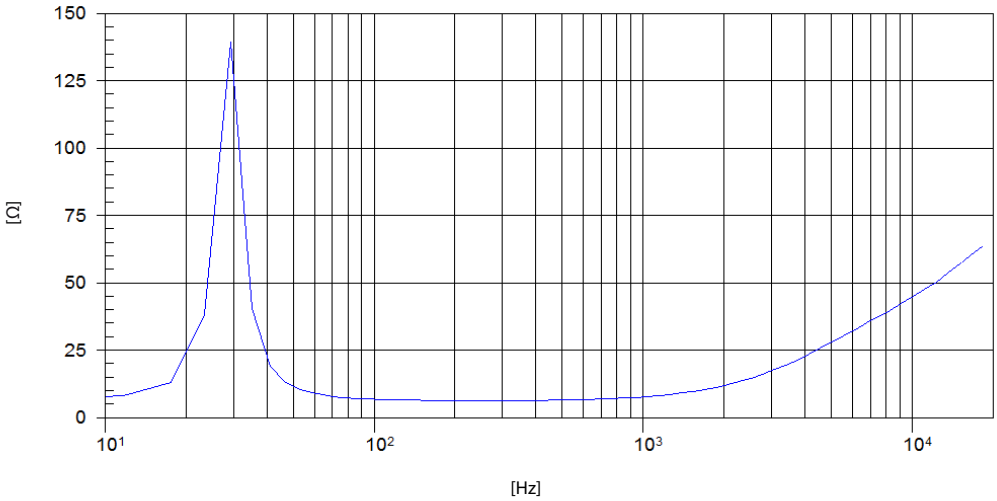
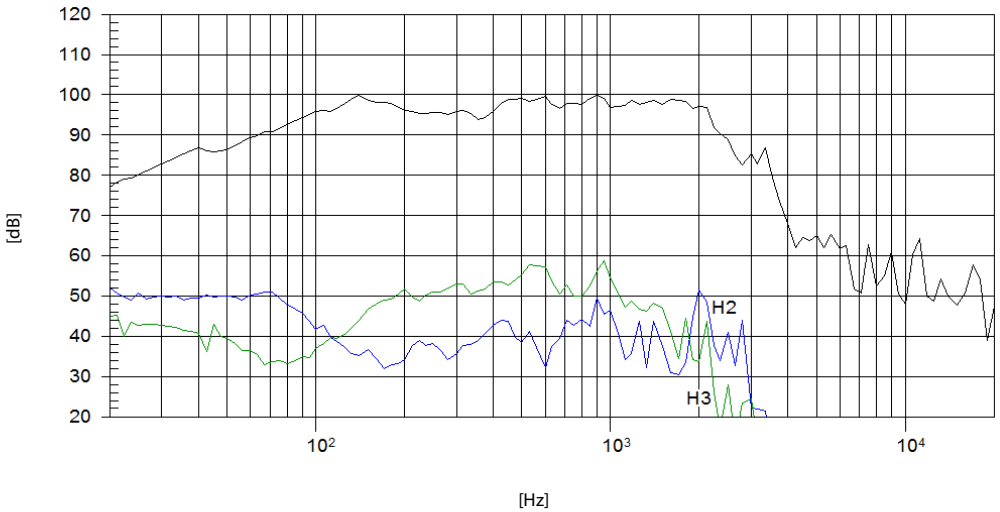
FREE AIR IMPEDANCE CURVE



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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