beyma

PROFESSIONAL LOUDSPEAKERS
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SM-112/N

LOW FREQUENCY TRANSDUCER
SM Series

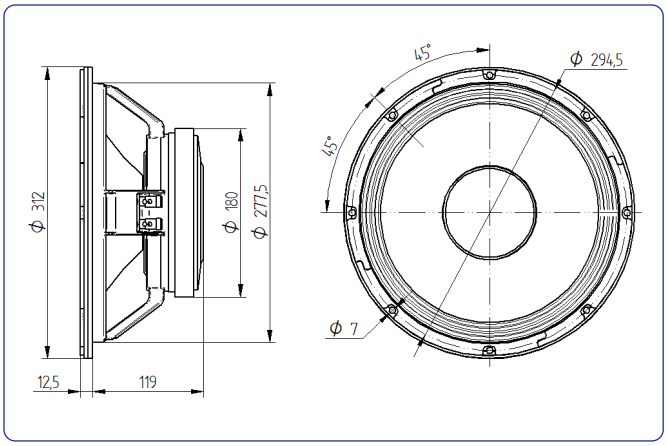
KEY FEATURES

- High power handling (400 W_{AES}).
- 3" (77 mm) copper voice coil with apical former.
- Optimum winding length for increase linear excursion.
- Extended response in the medium frequency range.
- Designed for high power woofer applications.

TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm	12 in
Rated impedance		8 Ω
Minimum impedance		7 Ω
Power capacity*		400 W_{AES}
Program power		800 W
Sensitivity	97 dB	1W @ 1m @ Z_N
Frequency range		40 - 4.000 Hz
Recom. enclosure vol.	30 / 100 l	1,06 / 3,53 ft^3
Voice coil diameter	77 mm	3 in
Bl factor		17 N/A
Moving mass		0,058 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	40 Hz
D.C. Voice coil resistance, R_e	6,2 Ω
Mechanical Quality Factor, Q_{ms}	8
Electrical Quality Factor, Q_{es}	0,31
Total Quality Factor, Q_{ts}	0,30
Equivalent Air Volume to C_{ms}, V_{as}	117,3 l
Mechanical Compliance, C_{ms}	273 μm / N
Mechanical Resistance, R_{ms}	1,8 kg / s
Efficiency, η_0	2,1 %
Effective Surface Area, S_d	0,055 m^2
Maximum Displacement, X_{max} * **	7,25 mm
Displacement Volume, V_d	398 cm^3
Voice Coil Inductance, L_e @ 1 kHz	1,2 mH

MOUNTING INFORMATION

Overall diameter	312 mm	12,3 in
Bolt circle diameter	294,5 mm	11,6 in
Baffle cutout diameter:		
- Front mount	277,5 mm	10,9 in
Depth	131,5 mm	5,17 in
Volume displaced by driver	4,5 l	0,16 ft^3
Net weight	5,65 kg	12,45 lb
Shipping weight	6 kg	13,23 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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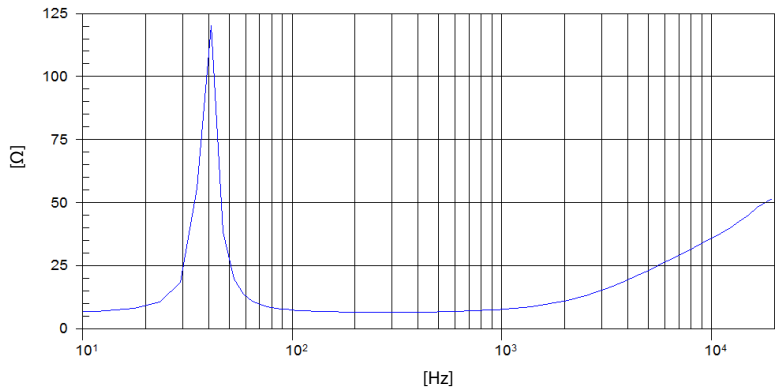
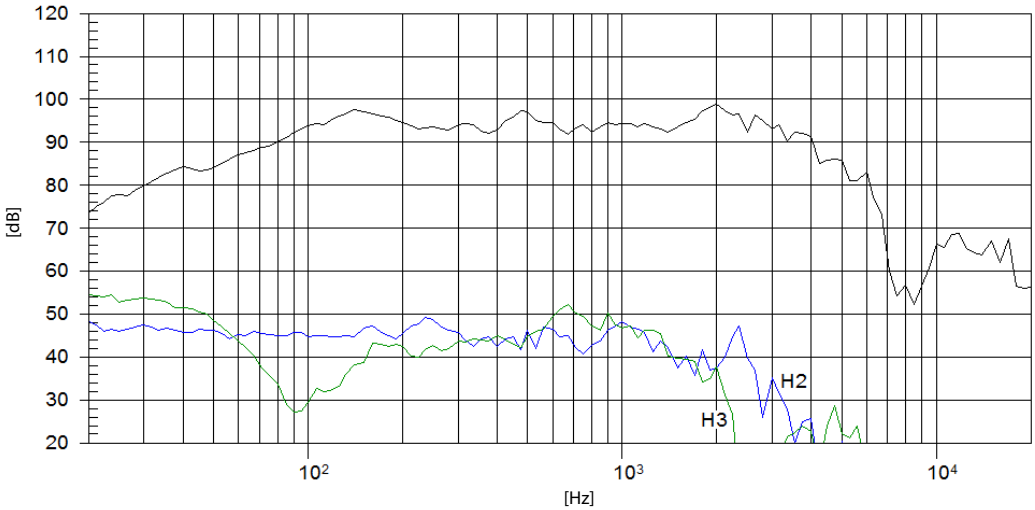
FREE AIR IMPEDANCE CURVE



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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