

KEY FEATURES

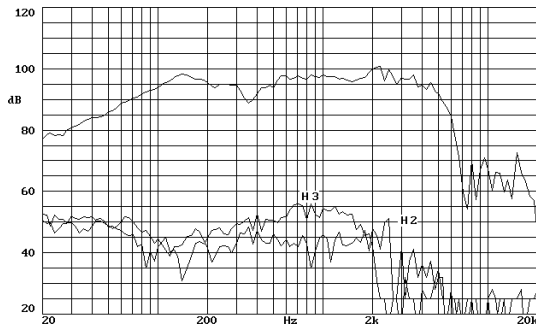
- High power handling (300 w AES)
- Excellent sensitivity: 98 dB
- 2.5" (62.4 mm.) copper voice coil with polyimide fiber glass former
- Optimum winding length for increased linear excursion
- Lightweight curvilinear cone
- Designed for low-mid frequencies reproduction



GENERAL DESCRIPTION

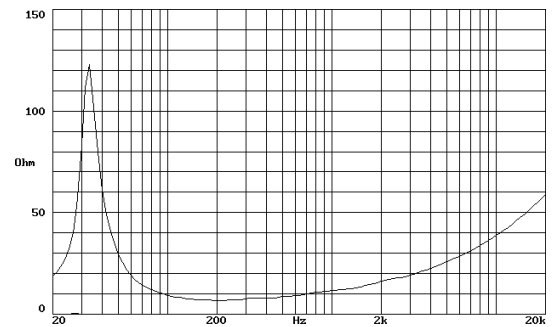
This 12" loudspeaker has been designed to reproduce the low and mid frequency range. It features a 2.5" (62.4 mm) voice coil made with high quality materials: copper round wire with high temperature bonding strength and fiber glass former. Combining this with a massive magnet system with an appropriate rear air ventilation results in a excellent power handling: 300 w AES. Moreover, it incorporates a lightweight curvilinear cone that allows the driver to be used in the low-mid frequency range. The SM-212 offers a compromise between good efficiency, extended frequency response and reduced harmonic distortion. It is recommended for small two or three way systems.

FREQUENCY RESPONSE AND DISTORTION CURVES

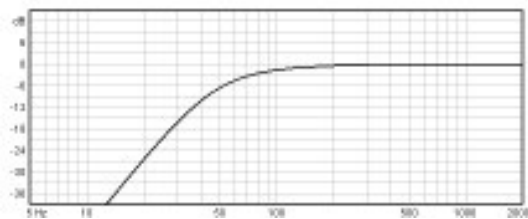


Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

FREE AIR IMPEDANCE CURVE

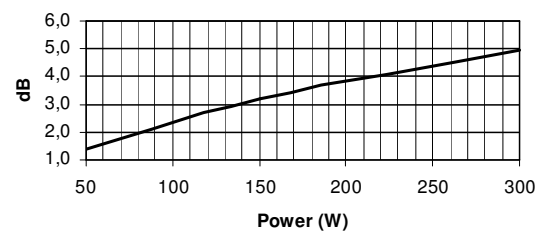


PREDICTED LOW FREQUENCY RESPONSE



Note: Bass-reflex cabinet, $V_b=70$ l, $f_b=40$ Hz

POWER COMPRESSION LOSSES



Note: These losses are calculated from a five minutes AES power test applying band limited pink noise (25-1200 Hz). The loudspeaker is free-air standing.

TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm. 12 in.
Rated impedance	8 ohms.
Minimum impedance	6.8 ohms.
Power capacity *	300 w AES
Program power	600 w
Sensitivity	98 dB 2.83v @ 1m @ 2 π
Frequency range	45 - 6000 Hz
Recom. enclosure vol.	30 / 100 l 1.06 / 3.53 ft. ³
Voice coil diameter	62.4 mm. 2.5 in.
Magnetic assembly weight	3.8 kg. 8.38 lb.
BL factor	12.8 N / A
Moving mass	0.044 kg.
Voice coil length	20 mm.
Air gap height	7 mm.
X damage (peak to peak)	27 mm.

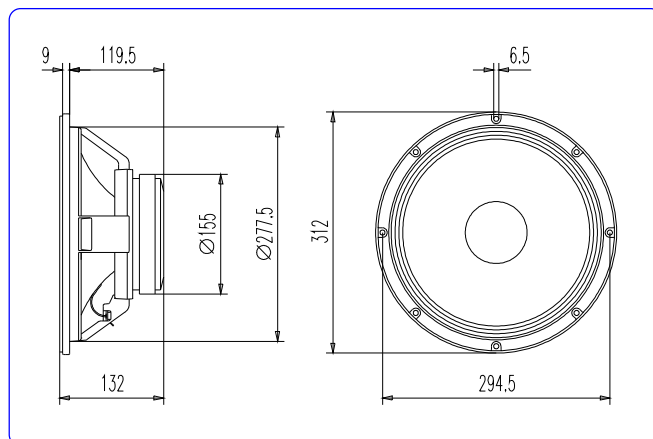
MOUNTING INFORMATION

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.
- Rear mount	280 mm. 11 in.
Depth	132 mm. 5.20 in.
Volume displaced by driver	4 l 0.14 ft. ³
Net weight	4.6 kg. 10.14 lb.
Shipping weight	5.3 kg. 11.69 lb.

THIELE-SMALL PARAMETERS **

Resonant frequency, fs	40 Hz
D.C. Voice coil resistance, Re	5.8 ohms.
Mechanical Quality Factor, Qms	5.6
Electrical Quality Factor, Qes	0.4
Total Quality Factor, Qts	0.38
Equivalent Air Volume to Cms, Vas	150 l
Mechanical Compliance, Cms	350 μ m / N
Mechanical Resistance, Rms	1.8 kg / s
Efficiency, η_0 (%)	2.3
Effective Surface Area, Sd (m ²)	0.0550 m ²
Maximum Displacement, Xmax	7 mm.
Displacement Volume, Vd	382 cm ³
Voice Coil Inductance, Le @ 1 kHz	1.2 mH

DIMENSION DRAWINGS



MATERIALS

- **Voice coil:** copper round wire with high temperature bonding strength. Polyimide fiber glass former able to withstand high temperatures.
- **Cone:** lightweight paper cone.
- **Surround:** specially treated cloth surround.
- **Spider:** cotton spider.
- **Metal parts:** effective protection against corrosion.
- **Basket:** specially designed die cast aluminium basket to avoid disturbing resonances.
- **Magnet:** high Curie temperature ferrite.

Notes:

*The power capacity 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).



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