

KEY FEATURES

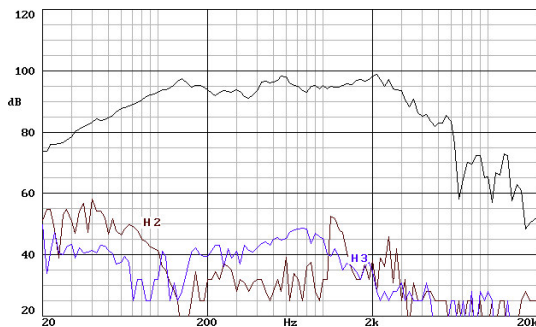
- High power handling (400 w AES)
- 3" (77 mm) copper voice coil
- Good sensitivity: 96 dB
- Optimum winding length for increased linear excursion
- Excellent performance/price ratio
- Designed for high power subwoofer applications



GENERAL DESCRIPTION

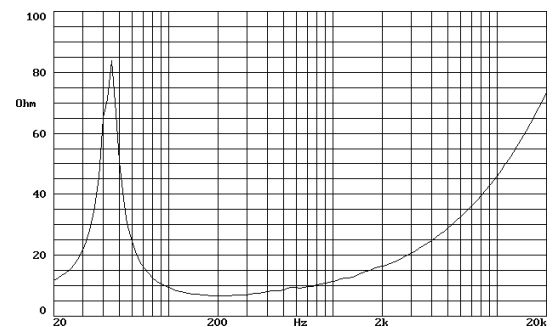
The SM-112/W is specially intended for compact subwoofer applications. Its main features are its 3" voice coil made with high quality materials, its powerful magnet system with rear air ventilation and its stiff cone combined with an special surround that allows longer displacements. All these facts result in a 12" driver with an smooth frequency response, reduced harmonic distortion, good efficiency and excellent power handling (400 w AES). Moreover, this loudspeaker offers an excellent performance/price ratio.

FREQUENCY RESPONSE AND DISTORTION CURVES

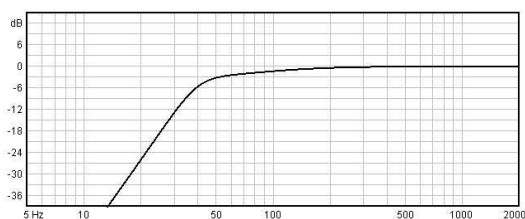


Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

FREE AIR IMPEDANCE CURVE

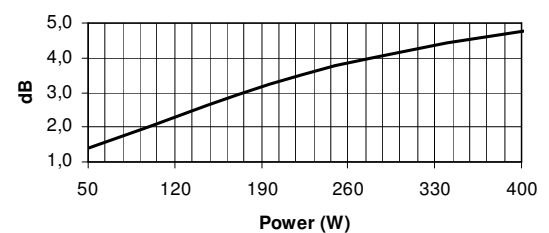


PREDICTED LOW FREQUENCY RESPONSE



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	6.7 ohms.
Power capacity *	400 w AES
Program power	800 w
Sensitivity	96 dB 2.83v @ 1m @ 2 π
Frequency range	35 - 4000 Hz
Recom. enclosure vol.	30 / 100 l 1.06 / 3.53 ft. ³
Voice coil diameter	77 mm. 3 in.
Magnetic assembly weight	4.9 kg. 10.8 lb.
BL factor	16.3 N / A
Moving mass	0.062 kg.
Voice coil length	18 mm.
Air gap height	7 mm.
X damage (peak to peak)	35 mm.

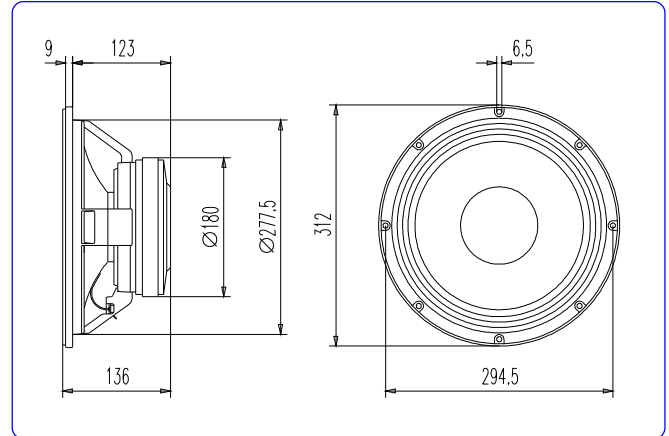
MOUNTING INFORMATION

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	136 mm. 5.35 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.

THIELE-SMALL PARAMETERS **

Resonant frequency, fs	42 Hz
D.C. Voice coil resistance, Re	5.8 ohms.
Mechanical Quality Factor, Qms	4.92
Electrical Quality Factor, Qes	0.36
Total Quality Factor, Qts	0.33
Equivalent Air Volume to Cms, Vas	90 l
Mechanical Compliance, Cms	225 μ m / N
Mechanical Resistance, Rms	3.4 kg / s
Efficiency, η_0 (%)	1.8
Effective Surface Area, Sd (m ²)	0.0530 m ²
Maximum Displacement, Xmax	5.5 mm.
Displacement Volume, Vd	300 cm ³
Voice Coil Inductance, Le @ 1 kHz	1.1 mH

DIMENSION DRAWINGS



MATERIALS

- **Voice coil:** copper round wire with high temperature bonding strength.
- **Cone:** high stiffness 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).