KEY FEATURES

- High power handling (150 w AES)
- 2” (51.7 mm) copper voice-coil with polyimide fiber glass former
- Optimum winding length for increased linear excursion
- Designed for high power woofer applications

GENERAL DESCRIPTION

The design concept of this low frequency transducer arises from the need to achieve a more resistant loudspeaker that matches the more and more power given by ultimate amplification systems. In order to accomplish that, almost every component of the speaker has been reconsidered. The SM-108 incorporates a 2” voice coil made with high quality materials: copper round wire with high temperature bonding strength and fiber glass former. Moreover, it features a powerful magnet system with rear air ventilation. By the other hand, its special surround guarantees the possibility of long displacements with linear behaviour. All these facts result in a 8” driver with extended and smooth low-mid frequency response, reduced harmonic distortion, good efficiency and excellent power handling (150 w AES). The SM-108 is specially recommended for woofer applications.

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

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.

PREDICTED LOW FREQUENCY RESPONSE

Note: Bass-reflex cabinet, Vb=20 l, fb=60 Hz.
**SM108 MOUNTING INFORMATION**

- **Nominal diameter**: 200 mm. 8 in.
- **Rated impedance**: 8 ohms.
- **Minimum impedance**: 7.6 ohms.
- **Power capacity**: 150 w AES
- **Program power**: 300 w
- **Sensitivity**: 95 dB 2.83v @ 1m @ 2π
- **Frequency range**: 65 - 6000 Hz
- **Recom. enclosure vol.**: 10 / 30 l 0.35 / 1.06 ft³
- **Voice coil diameter**: 51.7 mm. 2 in.
- **Magnetic assembly weight**: 2.8 kg. 6.17 lb.
- **BL factor**: 13 N / A
- **Moving mass**: 0.024 kg.
- **Voice coil length**: 15 mm.
- **Air gap height**: 7 mm.
- **X damage (peak to peak)**: 22 mm.

**SM108 DIMENSION DRAWINGS**

**SM108 MATERIALS**

- **Voice coil**: copper round wire with high temperature bonding strength. Polyimide fiber glass former able to withstand high temperatures.
- **Cone**: high stiffness paper cone.
- **Surround**: special cloth surround designed for long displacements.
- **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.

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**THIELE-SMALL PARAMETERS**

- **Resonant frequency, fs**: 69 Hz
- **D.C. Voice coil resistance, Re**: 6.3 ohms.
- **Mechanical Quality Factor, Qms**: 7.01
- **Electrical Quality Factor, Qes**: 0.39
- **Total Quality Factor, Qts**: 0.37
- **Equivalent Air Volume to Cms, Vas**: 16 l
- **Mechanical Compliance, Cms**: 225 µm / N
- **Mechanical Resistance, Rms**: 1.5 kg / s
- **Efficiency, η (%)**: 1.3
- **Effective Surface Area, Sd (m²)**: 0.0220 m²
- **Maximum Displacement, Xmax**: 4 mm.
- **Displacement Volume, Vd**: 87 cm³
- **Voice Coil Inductance, Le @ 1 kHz**: 1.5 mH

**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).