beyma
PROFESSIONAL LOUDSPEAKERS

6MI100

MI100 Series

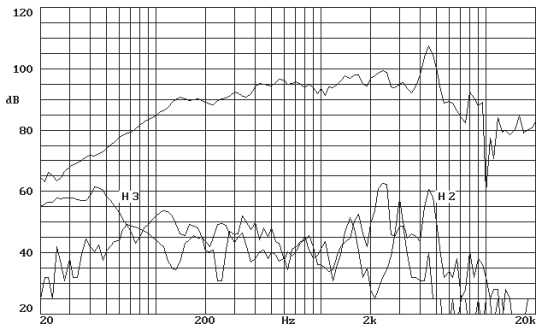
KEY FEATURES

- High power handling (250 W_{AES})
- Low harmonic distortion
- Controlled dispersion up to 3 kHz
- 2” edgewound aluminium voice coil with polyimide fiber glass former
- Designed for high quality mid-frequency reproduction

GENERAL DESCRIPTION

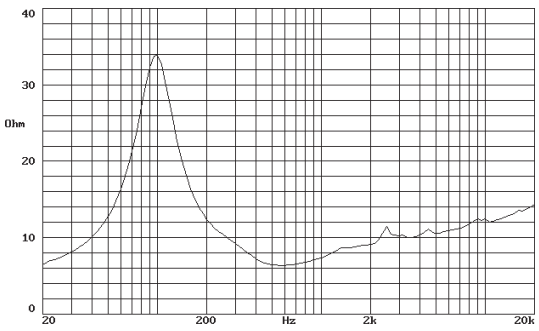
This low-mid frequency transducer offers three main points of interest: a good sensitivity (97 dB), a controlled dispersion up to 3 kHz and a low harmonic distortion. These characteristics make it suitable for high quality sound reinforcement systems, especially for live applications. Furthermore, it is mounted with a cast aluminium basket that reduces mechanical vibrations and increases thermal dissipation. This fact, added to the use of a high quality 2’’ voice-coil, increases considerably the power handling reaching 250 W_{AES}.

FREQUENCY RESPONSE AND DISTORTION CURVES

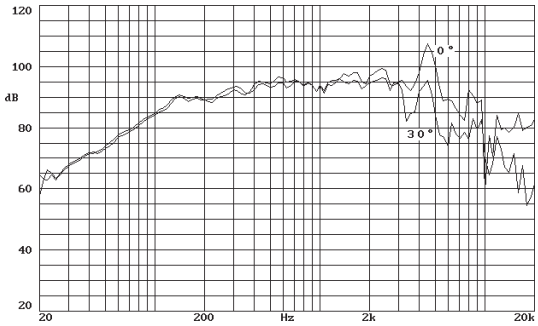


Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

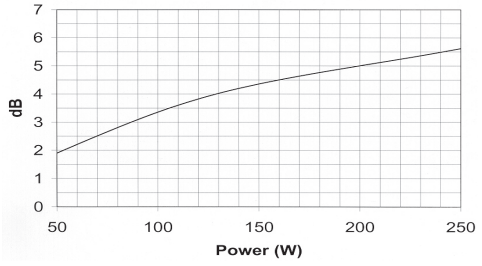
FREE AIR IMPEDANCE CURVE



FREQUENCY RESPONSE OUT OF AXIS



POWER COMPRESSION LOSSES



Note: These losses are calculated from a five minutes AES power test applying band limited pink noise (120-3500 Hz). The loudspeaker is free-air standing.

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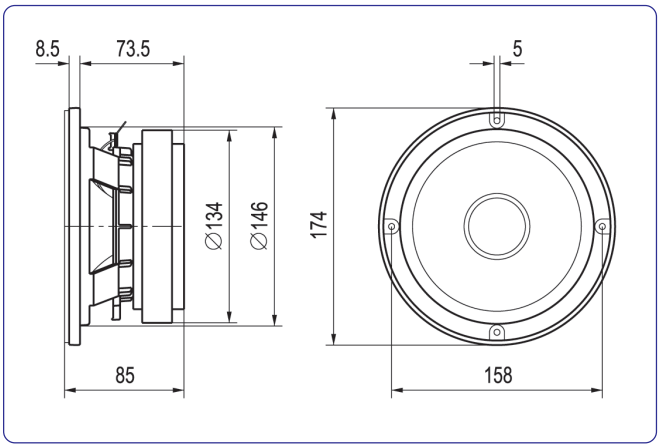
TECHNICAL SPECIFICATIONS

Nominal diameter		165 mm. 6.5 in.
Rated impedance		8 ohms.
Minimum impedance		6.6 ohms.
Power capacity*		250 w AES
Program power		500 w
Sensitivity	97 dB	2.83v @ 1m @ 2π
Frequency range		150 - 6000 Hz
Voice coil diameter		51.7 mm. 2 in.
Magnetic assembly weight		2 kg. 4.4 lb.
BL factor		11.6 N / A
Moving mass		0.014 kg.
Voice coil length		8 mm.
Air gap height		7 mm.

DIMENSION DRAWINGS



MOUNTING INFORMATION

Overall diameter	174 mm.	6.85 in.
Bolt circle diameter	158 mm.	6.22 in.
Baffle cutout diameter:		
- Front mount	146 mm.	5.75 in.
- Rear mount	142 mm.	5.59 in.
Depth	85 mm.	3.35 in.
Volume displaced by driver	0.75 l	0.026 ft^3
Net weight	2.2 kg.	4.84 lb.
Shipping weight	2.25 kg.	4.95 lb.

THIELE-SMALL PARAMETERS**

Resonant frequency, fs	100 Hz
D.C. Voice coil resistance, Re	5.3 ohms.
Mechanical Quality Factor, Qms	1.9
Electrical Quality Factor, Qes	0.35
Total Quality Factor, Qts	0.29
Equivalent Air Volume to Cms, Vas	5 l
Mechanical Compliance, Cms	183 μm / N
Mechanical Resistance, Rms	4.6 kg / s
Efficiency, ηo (%)	1.4
Effective Surface Area, Sd (m^2)	0.0140 m^2
Maximum Displacement, Xmax	1 mm.
Displacement Volume, Vd	14 cm^3
Voice Coil Inductance, Le @ 1 kHz	0.6 mH

MATERIALS

- **Voice coil:** edgewound aluminium wire with high temperature bonding strength. Polyimide fiber glass former able to withstand high temperatures.
- **Cone:** light and stiff paper cone to provide good mid-frequency response.
- **Surround:** foam.
- **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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