

15MB1000

High Output MB Ferrite Transducer

KeyFeatures

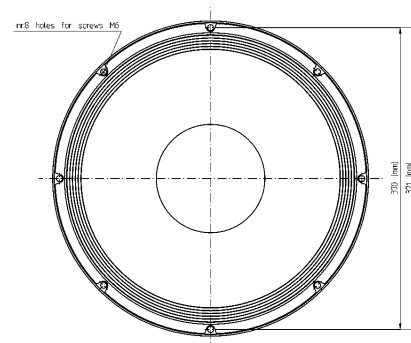
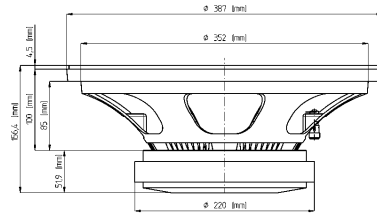
- 98 dB SPL 1W / 1m average sensitivity
- 100 mm (4 in) Interleaved Sandwich Voice coil (ISV)
- 850 W AES power handling
- Carbon fiber reinforced cellulose cone
- Copper shorting ring for linear impedance and reduced distortion figure
- Double Demodulating Ring (DDR) for lower distortion
- Improved heat dissipation via unique basket design
- Weather protected cone and plates for outdoor usage
- Ideal for compact reflex enclosures, two-way systems and stage monitoring applications

Description

The 15MB1000 is a 100mm (4 in) voice coil 380mm (15 in) diameter mid-low frequency transducer which has been created to meet requirements for low bass applications where a significant extension in mid frequency is needed. It has been designed for use in compact reflex enclosures, in two-way systems with 1.4" - 2" compression drivers and stage monitoring applications. 15MB1000 is also suitable for horn loaded applications in multiway systems. The low profile, carbon fiber reinforced, smooth curvilinear cone provides smooth response within its intended frequency range and exceptional strength with maximum reliability under high mechanical stress. The copper shorting ring on the plates has been adopted to reduce inductance and improve transient response. Intermodulation distortion has also been significantly improved. The low distortion and unmatched sound quality of the 15MB1000 has been significantly improved by the Double Demodulating Rings (DDR) embedded in the pole piece of the magnetic structure. These have been designed to dramatically reduce the intermodulation and harmonic distortion while improving the transient response. The 100mm aluminum voice coil employs the Interleaved Sandwich Voice coil (ISV) technology, in which a high strength fiberglass former carries windings on both the outer and inner surfaces to achieve a balanced coil with a uniform distribution of mass and motive energy. This results in an extremely linear motor assembly. Excellent heat dissipation has been achieved by incorporating air channels between the basket and the magnetic top plate. Further ventilation is provided using air vents in the back plate that direct air into the lower part of the voice coil gap. Considerable attention has also been given to the design of the magnetic structure in order to maximize flux concentration and force factor in the gap. Due to the increasing use of high power audio systems at outdoor events, the ability to perform in adverse weather conditions is a key feature of the 15MB1000. This has been achieved using an exclusive treatments which allows the cone and the magnetic plate to resist corrosion whilst also rendering the cone water repellent.

Models

Model	Code	Info
15MB1000	0221585100	8 Ohm



General Specifications

Nominal Diameter	380 mm (15 in)
Rated Impedance	8 Ohm
AES Power	850 W
Program Power	1200 W
Peak Power	3000 W
Sensitivity	98 dB
Frequency Range	45 - 5100 Hz
Power Compression @-10dB	0,9 dB
Power Compression @-3dB	2,1 dB
Power Compression @Full Power	3,8 dB
Max Recomm. Frequency	1200 Hz
Recomm. Enclosure Volume	70 - 150 lt. (2,47 - 5,3 cuft)
Minimum Impedance	6 Ohm at 25°C
Max Peak To Peak Excursion	39 mm (1,53 in)
Voice Coil Diameter	100 mm (4 in)
Voice Coil winding material	aluminum
Suspension	Triple roll, Polycotton
Cone	Curvilinear, carbon fiber reinforced cellulose

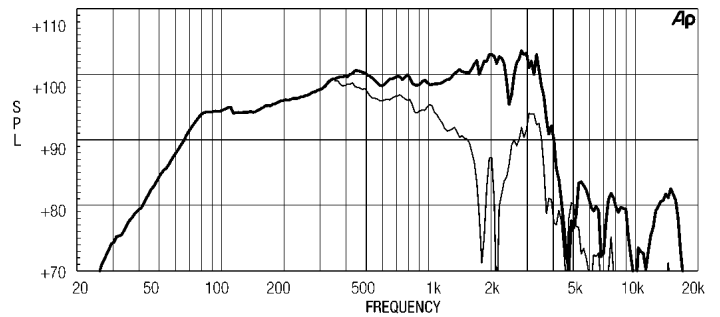
Thiele Small Parameters

Fs	48 Hz
Re	5,5 Ohm
Sd	0,0855 sq.mt. (132,5 sq.in.)
Qms	6
Qes	0,32
Qts	0,31
Vas	132,5 lt. (4,66 cuft)
Mms	85 gr. (0,19 lb)
BL	21 Tm
Linear Mathematical Xmax	± 6 mm (±0,24 in)
Le (1kHz)	1,5 mH
Ref. Efficiency 1W@1m (half space)	98,4 dB

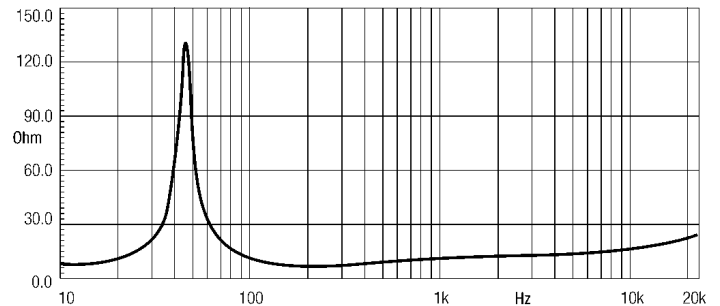
Mounting information

Overall diameter	387 mm (15,23 in)
N. of mounting holes and bolt	8
Mounting holes diameter	7,15 mm (0,28 in)
Bolt circle diameter	370 - 371 mm (14,55 - 14,6 in)
Front mount baffle cutout ø	353 mm (13,90 in)
Rear mount baffle cutout ø	357 mm (14,06 in)
Total depth	156,4 mm (6,16 in)
Flange and gasket thickness	19,5 mm (0,76 in)
Net weight	11,4 kg (25,13 lb)
Shipping weight	13,4 kg (29,58 lb)
Packaging Dimensions	405 x 405 x 214 mm (15,94 x 15,94 x 8,43 in)

FREQUENCY RESPONSE CURVE



FREQUENCY RESPONSE CURVE OF 15MB1000 MADE ON 125 LIT. ENCLOSURE TUNED 50HZ IN FREE FIELD (4PI) ENVIRONMENT. ENCLOSURE CLOSES THE REAR OF THE DRIVER. THE THIN LINE REPRESENTS 45 DEG. OFF AXIS FREQUENCY RESPONSE FREE AIR IMPEDANCE MAGNITUDE CURVE



FREE AIR IMPEDANCE MAGNITUDE CURVE

Notes

- 1) AES power is determined according to AES2-1984 (r2003) standard.
- 2) Program power rating is measured in 125 lit enclosure tuned 50Hz using a 40 - 400Hz band limited pink noise test signal with 50% duty cycle, applied for 2 hours.
- 3) The peak power rating represents the maximum permitted instantaneous peak power level over a maximum period of 10ms which will be withstood by the loudspeaker without damage.
- 4) Sensitivity represents the averaged value of acoustic output as measured on the forward central axis of cone, at distance 1m from the baffle panel, when connected to 2,83V sine wave test signal swept between 100Hz and 500Hz with the test specimen mounted in the same enclosure as given for (1) above.
- 5) Frequency range is given as the band of frequencies delineated by the lower and upper limits where the output level drops by 10 dB below the rated sensitivity in half space environment.
- 6) Power compression represents the loss of sensitivity for the specified power, measured from 50-500 Hz, after a 5 min pink noise preconditioning test at the specified power.
- 7) Linear Math. Xmax is calculated as $(Hvc \cdot Hg) / 2 + Hg / 4$ where Hvc is the coil depth and Hg is the gap depth.