

10MB400

High Output Midbass Transducer

Key Features

- 100,5 dB SPL 1W / 1m average sensitivity
- 51 mm (2 in) Interleaved Sandwich Voice coil (ISV)
- 320W program power handling
- Improved heat dissipation via unique basket design
- Ideal for compact two way and multiway systems



General Description

The 10MB400 midbass transducer is derived from the 10MB600 but uses a 50 mm voice coil. Nevertheless, it has outstanding sensitivity (100.5dB 1W/1m) as well as good power handling.

This transducer is an extremely versatile high quality 10" driver. It can be used as the midbass component in a 2-way system in combination with a 1" HF compression driver, or as the dedicated bass driver in compact reflex enclosures of just 15 - 25 lt volume, or as a direct radiating midrange unit.

The curvilinear paper cone is carried by a dampened linen, double half-roll front suspension to control vibrational modes whilst providing good excursion capabilities.

The copper shorting ring on the pole piece reduces inductance and provides improved transient response and phase control on the mid frequencies.

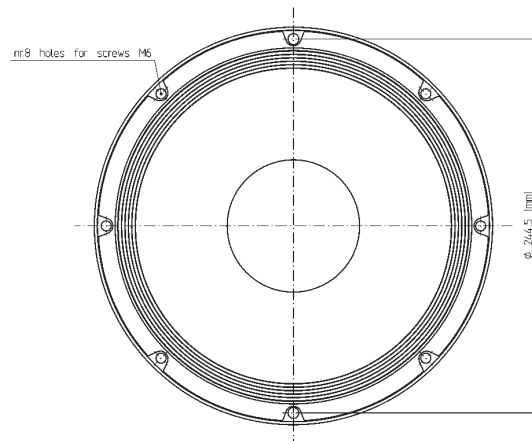
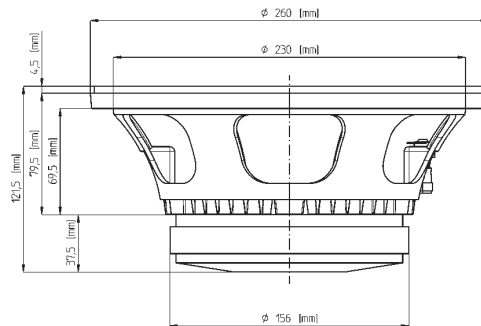
The 50 mm diameter state-of-the-art, copper wire voice coil employs the same technology fitted to our top-of-the-range models, i.e. our Interleaved Sandwich Voice coil (ISV). This technology consists of a high strength fibreglas former carrying windings on both the outer and inner surfaces, creating a mass balanced coil. This results in an extremely linear motor assembly which, in conjunction with the highly advanced design of the magnetic structure, provides a high force factor or BL.

Another advanced design feature of the 10MB400 is the air channel fine passages between the chassis back plate and top plate of the magnet. These passages are used to draw heated air out from the voice coil gap and dissipate the energy via the chassis casting.

The top and back plates of the magnet assembly have been designed to optimise flux density and BL factor in the air gap using our in-house FEA CAD facility.

0221085410 8 Ohm

0271085410 R-kit 80hm



FERRITE LF-MB-MF TRANSDUCERS

10MB400

High Output Midbass Transducer

GENERAL SPECIFICATIONS

NOMINAL DIAMETER	260 mm (10 in)
RATED IMPEDANCE	8 Ohm
AES POWER (1)	250 W
PROGRAM POWER (2)	320 W
PEAK POWER (3)	650 W
SENSITIVITY (4)	100,5 dB
FREQUENCY RANGE (5)	65 ÷ 6100 Hz
POWER COMPRESSION @-10DB (6)	0,8 dB
POWER COMPRESSION @-3DB	1,9 dB
POWER COMPRESSION @0DB	2,9 dB
MAX RECOMM. FREQUENCY	3000 Hz
RECOMM. ENCLOSURE VOLUME	10 ÷ 30 lt. (0,35 ÷ 1,06 cuft)
MINIMUM IMPEDANCE	10,3 Ohm at 25°C
MAX PEAK TO PEAK EXCURSION	18 mm (0,71 in)
VOICE COIL DIAMETER	51 mm (2 in)
VOICE COIL WINDING MATERIAL	copper
SUSPENSION	double half roll, treated polycotton
CONE	Curvilinear, treated paper

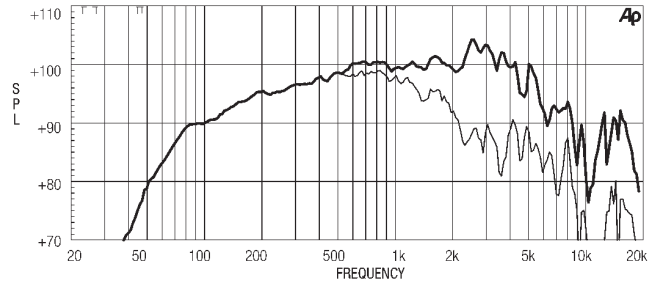
THIELE SMALL PARAMETERS (7)

Fs	70 Hz
Re	5,1 Ohm
Sd	0,035 sq.mt. (54,25 sq.in.)
Qms	3,5
Qes	0,37
Qts	0,33
Vas	41 lt. (1,45 cuft)
Mms	21 gr. (0,05 lb)
BL	12 Tm
Linear Mathematical Xmax (8)	± 2,5 mm (± 0,10 in)
Le (1kHz)	1,05 mH
Ref. Efficiency 1W@1m (half space)	97,7 dB

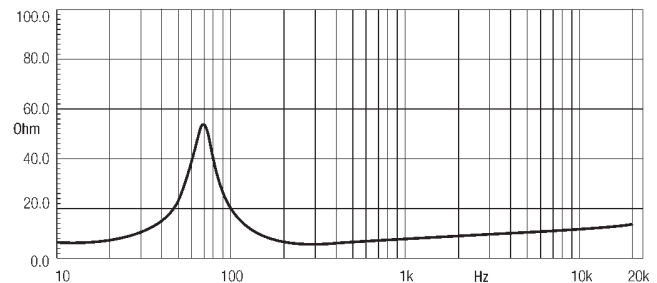
MOUNTING INFORMATION

Overall diameter	260 mm (10,24 in)
N. of mounting holes	8
Mounting holes diameter	7,15 mm (0,28 in)
Bolt circle diameter	244,5 mm (9,63 in)
Front mount baffle cutout Ø	232 mm (9,13 in)
Rear mount baffle cutout Ø	232 mm (9,13 in)
Total depth	121,5 mm (4,78 in)
Flange and gasket thickness	14,5 mm (0,57 in)
Net weight	4,7 kg (10,38 lb)
Shipping weight	5,10 kg (11,26 lb)
CardBoard Packaging dimensions	275 x 275 x 164 mm (10,83 x 10,83 x 6,46 in)

FREQUENCY RESPONSE CURVE OF 10MB400 MADE ON 30 LIT. ENCLOSURE TUNED 55HZ 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.



NOTES

- (1) AES power is determined according to AES2-1984 (r2003) standard
- (2) Program power rating is measured in 30 lit enclosure tuned 55Hz using a 70 - 2000Hz band limited pink noise test signal with 50% duty cycle, applied for 2 hours.
- (3) The peak power rating is based on a 6dB crest factor above the continuous power rating and 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 500Hz and 2500Hz with the test specimen mounted in the same enclosure as given for 2 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) Thiele - Small parameters are measured after the test specimen has been conditioned by 250 W AES power and represent the expected long term parameters after a short period of use.
- (8) Linear Mat. Xmax is calculated as; $(Hvc-Hg)/2 + Hg/4$ where Hvc is the coil depth and Hg is the gap depth.

Eighteen Sound engages in research and product improvement. New materials and design refinements can be introduced into existing products without notice.