

15MB650

Very High Output Midbass Transducer

Key Features

- 101,5 dB SPL 1W / 1m average sensitivity
- 75 mm (3 in) Interleaved Sandwich Voice coil (ISV)
- 400 W AES power handling
- Excellent transient response and cone damping
- Improved heat dissipation via unique basket design
- Ideal for compact two way, multiway systems and horn design



General Description

The 15MB650 high output mid bass has been designed for use as a bass and low-midrange driver in tuned reflex enclosures, in 2- or 3-way systems. When used in a 2-way system, we recommend a 1" or 2" exit compression driver to obtain the best sound quality and directional control. The 15MB650 combines a high sensitivity value (101dB 1W/1m) with high power handling capabilities.

The curvilinear paper cone, in conjunction with the viscose dampened double half-roll suspension, provides excellent transient response and cone damping.

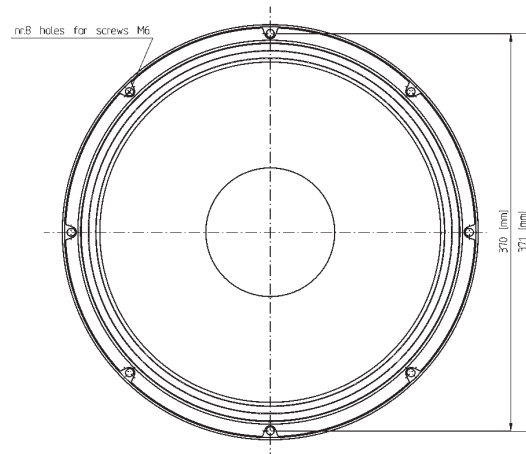
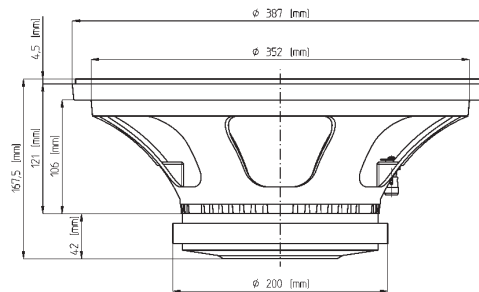
The 75 mm Ø copper voice coil utilises the same technology fitted to our top-of-the-range 4" voice coil models. It employs the Interleaved Sandwich Voice coil (ISV), in which a high strength fibreglas former carries windings on the outer and inner surfaces to achieve a mass balanced coil. This results in an extremely linear motor assembly with a reduced tendency for eccentric behavior when driven hard. The low inductance coil gives improvements in transient response.

Excellent heat dissipation has been achieved by incorporating air channels in the basket design, between the basket and top plate.

Maximum flux concentration and force factor in the gap are assured by the unique shape and design of the face and back plates, which have been created using our in-house Magnetic Flux FEA CAD resource.

The special treatment applied to the top and the back plate is far more resistant to the corrosive effects of salts and oxidization than any other treatment in use.

0221585240 8ohm
0221545240 4ohm



FERRITE LF-MB-MF TRANSDUCERS

15MB650

Very High Output Midbass Transducer

GENERAL SPECIFICATIONS

NOMINAL DIAMETER	380 mm (15 in)
RATED IMPEDANCE	8 Ohm
AES POWER (1)	400 W
PROGRAM POWER (2)	600 W
PEAK POWER (3)	1200 W
SENSITIVITY (4)	101,5 dB
FREQUENCY RANGE (5)	50 ÷ 4800 Hz
POWER COMPRESSION @-10DB (6)	0,7 dB
POWER COMPRESSION @-3DB	2,0 dB
POWER COMPRESSION @FULL POWER	3,6 dB
MAX RECOMM. FREQUENCY	2000 Hz
RECOMM. ENCLOSURE VOLUME	70 ÷ 150 lt. (2,47 ÷ 5,3 cuft)
MINIMUM IMPEDANCE	6,6 Ohm at 25°C
MAX PEAK TO PEAK EXCURSION	20 mm (0,79 in)
VOICE COIL DIAMETER	75 mm (2,95 in)
VOICE COIL WINDING MATERIAL	copper
SUSPENSION	M-roll, Polycotton
CONE	Curvilinear, Paper

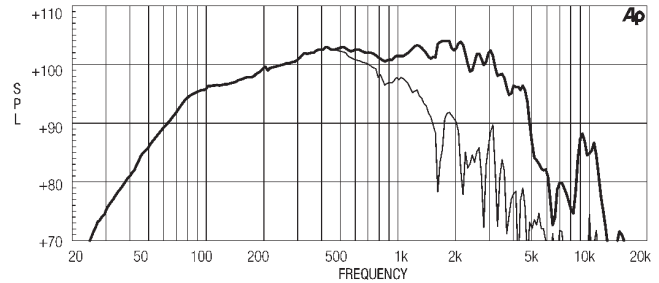
THIELE SMALL PARAMETERS (7)

Fs	40 Hz
Re	5,5 Ohm
Sd	0,085 sq.mt. (131,75 sq.in.)
Qms	3,95
Qes	0,27
Qts	0,26
Vas	210 lt. (7,42 cuft)
Mms	77 gr. (0,17 lb)
BL	20 Tm
Linear Mathematical Xmax (8)	± 4 mm (±0,16 in)
Le (1kHz)	1,36 mH
Ref. Efficiency 1W@1m (half space)	98,9 dB

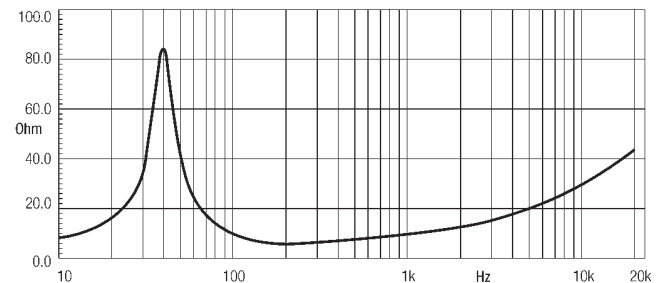
MOUNTING INFORMATION

Overall diameter	387 mm (15,23 in)
N. of mounting holes	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	167,5 mm (6,59 in)
Flange and gasket thickness	19,5 mm (0,76 in)
Net weight	8,4 kg (18,54 lb)
Shipping weight	9,5 kg (20,97 lb)
CardBoard Packaging dimensions	405 x 405 x 214 mm (15,94 x 15,94 x 8,43 in)

FREQUENCY RESPONSE CURVE OF 15MB650 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



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) Thiele - Small parameters are measured after the test specimen has been conditioned by 400 W AES power and represent the expected long term parameters after a short period of use.
- (8) Linear Math. 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.