beyma

PROFESSIONAL LOUDSPEAKERS
www.beyma.com

15P80/Nd

LOW FREQUENCY TRANSDUCER
P80 Series

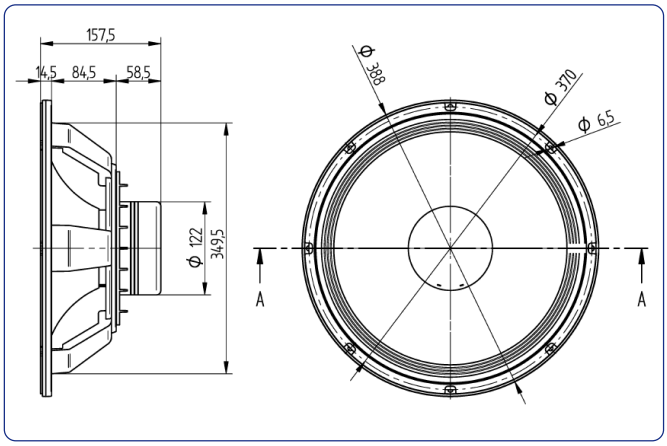
KEY FEATURES

- 1.600 W program power
- High sensitivity: 100 dB (1W / 1m)
- FEA optimized magnetic circuit.
- Forced air convection circuit for low power compression.
- CONEX spider for higher resistance and consistency.
- Waterproof treatment for both sides of the cone.
- 4” duo technology voice coil.
- Extended controlled displacement: X_{max} ± 7,5 mm
- Massive mechanical displacement capability: X_{damage} ± 52 mm

TECHNICAL SPECIFICATIONS

Nominal diameter	380 mm	15 in
Rated impedance		8 Ω
Minimum impedance		5,5 Ω
Power capacity*		800 W_{AES}
Program power		1600 W
Sensitivity	100 dB	1W @ 1m @ Z_N
Frequency range		30 - 4.000 Hz
Recom. enclosure vol.	40 / 150 l	1,41 / 5,3 ft^3
Voice coil diameter	100 mm	4 in
Magnetic assembly weight	4,6 kg	10,15 lb
Bl factor		24,3 N/A
Moving mass		0,101 kg
Voice coil length		20 mm
Air gap height		12 mm
X_{damage} (peak to peak)		52 mm

DIMENSION DRAWINGS



THIELE-SMALL PARAMETERS**

Resonant frequency, f_s	33 Hz
D.C. Voice coil resistance, R_e	5,1 Ω
Mechanical Quality Factor, Q_{ms}	7,7
Electrical Quality Factor, Q_{es}	0,182
Total Quality Factor, Q_{ts}	0,178
Equivalent Air Volume to C_{ms}, V_{as}	250 l
Mechanical Compliance, C_{ms}	229 μm / N
Mechanical Resistance, R_{ms}	2,73 kg / s
Efficiency, η_0	4,77 %
Effective Surface Area, S_d	0,088 m^2
Maximum Displacement, X_{max} * **	7,5 mm
Displacement Volume, V_d	660 cm^3
Voice Coil Inductance, L_e @ 1 kHz	0,8 mH

MOUNTING INFORMATION

Overall diameter	388 mm	15,28 in
Bolt circle diameter	370 mm	14,57 in
Baffle cutout diameter:		
- Front mount	349,5 mm	13,76 in
- Rear mount	355 mm	13,98 in
Depth	157,5 mm	6,2 in
Volume displaced by driver	5,5 l	0,19 ft^3
Net weight	6 kg	13,3 lb
Shipping weight	6,5 kg	14,3 lb

Notes:

* The power capaticty 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).

*** The X_{max} is calculated as $(L_{vc} - H_{ag})/2 + (H_{ag}/3,5)$, where L_{vc} is the voice coil length and H_{ag} is the air gap height.

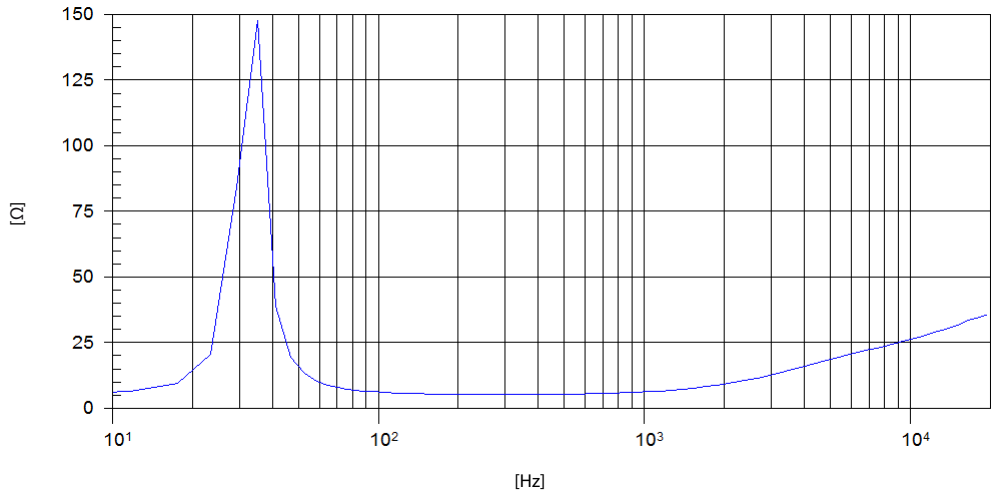
beyma

PROFESSIONAL LOUDSPEAKERS
www.beyma.com

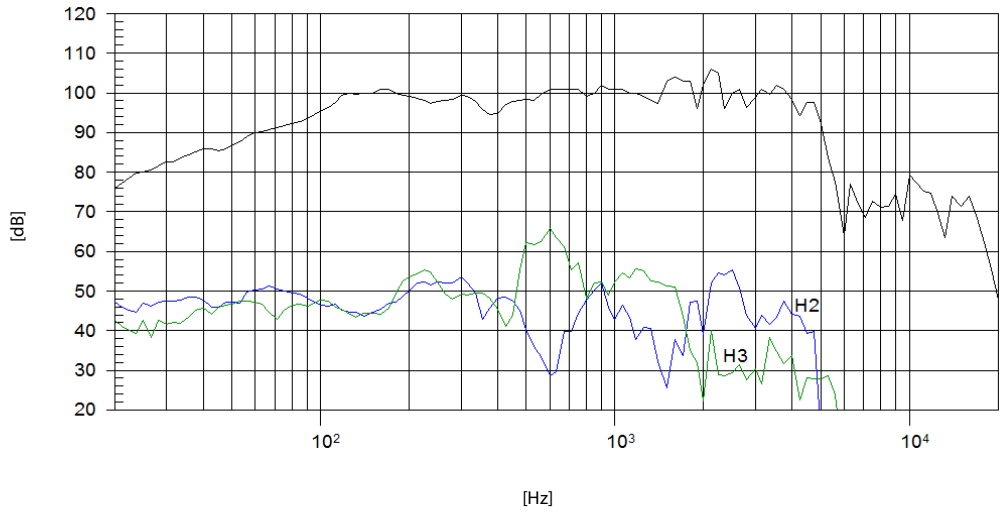
15P80/Nd

LOW FREQUENCY TRANSDUCER
P80 Series

FREE AIR IMPEDANCE CURVE



FREQUENCY RESPONSE AND DISTORTION



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

beyma

Polígono Industrial Moncada II ▪ C/. Pont Sec, 1c ▪ 46113 MONCADA - Valencia (Spain)
▪ Tel.: (34) 96 130 13 75 ▪ Fax: (34) 96 130 15 07 ▪ http://www.beyma.com ▪ E-mail: beyma@beyma.com ▪