beyma

PROFESSIONAL LOUDSPEAKERS
www.beyma.com

18PWB1000/Fe

LOW FREQUENCY TRANSDUCER
Preliminary Data Sheet

KEY FEATURES

- High power handling: 2000 W program power
- 4” voice coil
- High sensitivity: 96,5 dB
- FEA optimized magnetic circuit
- Designed with MMSS technology for high control, linearity and low harmonic distortion
- Low power compression losses
- Waterproof cone with treatment for both sides of the cone
- CONEX spider
- Ultra high excursion capabilities (X_{max} 12,5 mm)
- Low frequency extension, deep sound and high control

TECHNICAL SPECIFICATIONS

Nominal diameter	460 mm	18 in
Rated impedance		8 Ω
Minimum impedance		6 Ω
Power capacity*		1000 W_{AES}
Program power		2000 W
Sensitivity	96,5 dB @ 1W @ 1m @ Z_N	
Frequency range		20 - 2.000 Hz
Voice coil diameter	101,6 mm	4 in
Bl factor		25,8 N/A
Moving mass		0,233 kg
Voice coil length		30 mm
Air gap height		12 mm
X_{damage} (peak to peak)		55 mm

THIELE-SMALL PARAMETERS**

Resonant frequency, f_s	31 Hz
D.C. Voice coil resistance, R_e	5,9 Ω
Mechanical Quality Factor, Q_{ms}	7,9
Electrical Quality Factor, Q_{es}	0,45
Total Quality Factor, Q_{ts}	0,43
Equivalent Air Volume to C_{ms}, V_{as}	220 l
Mechanical Compliance, C_{ms}	90 μm / N
Mechanical Resistance, R_{ms}	6,5 kg / s
Efficiency, η_0	2 %
Effective Surface Area, S_d	0,125 m^2
Maximum Displacement, X_{max} * **	12,5 mm
Displacement Volume, V_d	1562 cm^3
Voice Coil Inductance, L_e @ 1 kHz	2,2 mH

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.

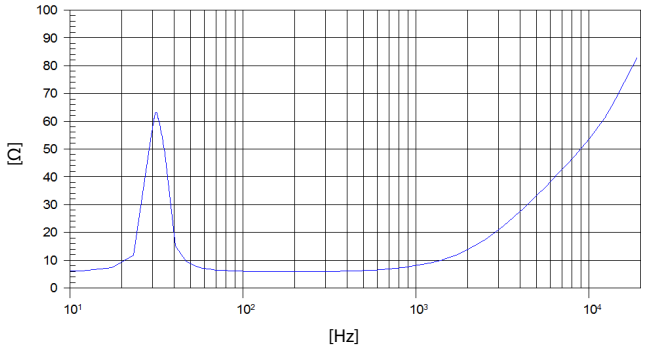
** T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

*** 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.

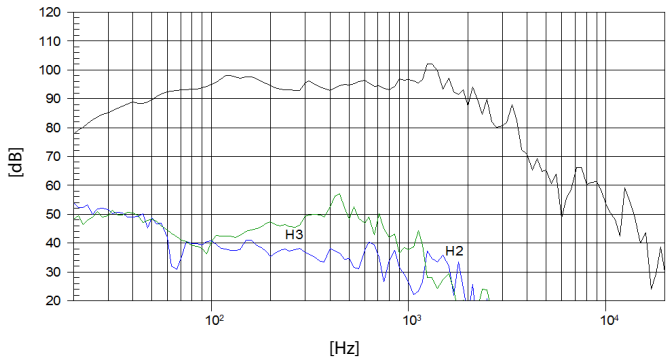
MOUNTING INFORMATION

Overall diameter	462 mm	18,2 in
Bolt circle diameter	438 mm	17,3 in
Baffle cutout diameter:		
- Front mount	413 mm	16,3 in
Depth	215 mm	8,4 in
Net weight	13,6 kg	30 lb
Shipping weight	15,1 kg	33,9 lb

FREE AIR IMPEDANCE CURVE



FREQUENCY RESPONSE



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