beyma

PROFESSIONAL LOUDSPEAKERS
www.beyma.com

18LEX1200Fe

LOW FREQUENCY TRANSDUCER

LEX Series

KEY FEATURES

maltcross

- High power handling and low distortion 18” subwoofer
- Exclusive Malt Cross® Technology Cooling System
- Low power compression losses
- High sensitivity: 97 dB (1W / 1m)
- FEA optimized ceraminc magnetic circuit
- Ultra low air noise
- Optimized linear behaviour
- Weatherproof cone with treatment for both sides
- Double silicone spider
- 4” DUO double layer in/out copper voice coil
- Aluminium demodulating ring
- Extended controlled displacement: X_{max} ± 11 mm
- 48 mm peak-to-peak excursion before damage
- Optimized for direct radiation and band-pass subwoofer applications

TECHNICAL SPECIFICATIONS

Nominal diameter	460 mm	18 in
Rated impedance		8 Ω
Minimum impedance		5,8 Ω
Power capacity [1]		1.200 W_{AES}
Program power [2]		2.400 W
Sensitivity	97 dB	1W / 1m @ Z_N
Frequency range		40 - 1.000 Hz
Recom. enclosure		V_b = 172 l
(Bass/reflex design)		F_b = 42 Hz
Voice coil diameter	101,6 mm	4 in
Bl factor		23,2 N/A
Moving mass		200 g
Voice coil length		27 mm
Air gap height		12 mm
X_{damage} (peak to peak)		48 mm

THIELE-SMALL PARAMETERS [3]

Resonant frequency, f_s	32 Hz
D.C. Voice coil resistance, R_e	5,3 Ω
Mechanical Quality Factor, Q_{ms}	12,2
Electrical Quality Factor, Q_{es}	0,39
Total Quality Factor, Q_{ts}	0,38
Equivalent Air Volume to C_{ms}, V_{as}	277 l
Mechanical Compliance, C_{ms}	0,124 mm / N
Mechanical Resistance, R_{ms}	3,2 kg / s
Efficiency, η_0	2,2 %
Effective Surface Area, S_d	1255 cm^2
Maximum Displacement, X_{max} [4]	11 mm
Displacement Volume, V_d	1,3 l
Voice Coil Inductance, L_e	1,21 mH

Notes:

[1] The power capaticty is determined according to AES2-1984 (r2003) standard.

[2] Program power is defined as power capacity + 3 dB.

[3] 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).

[4] 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.

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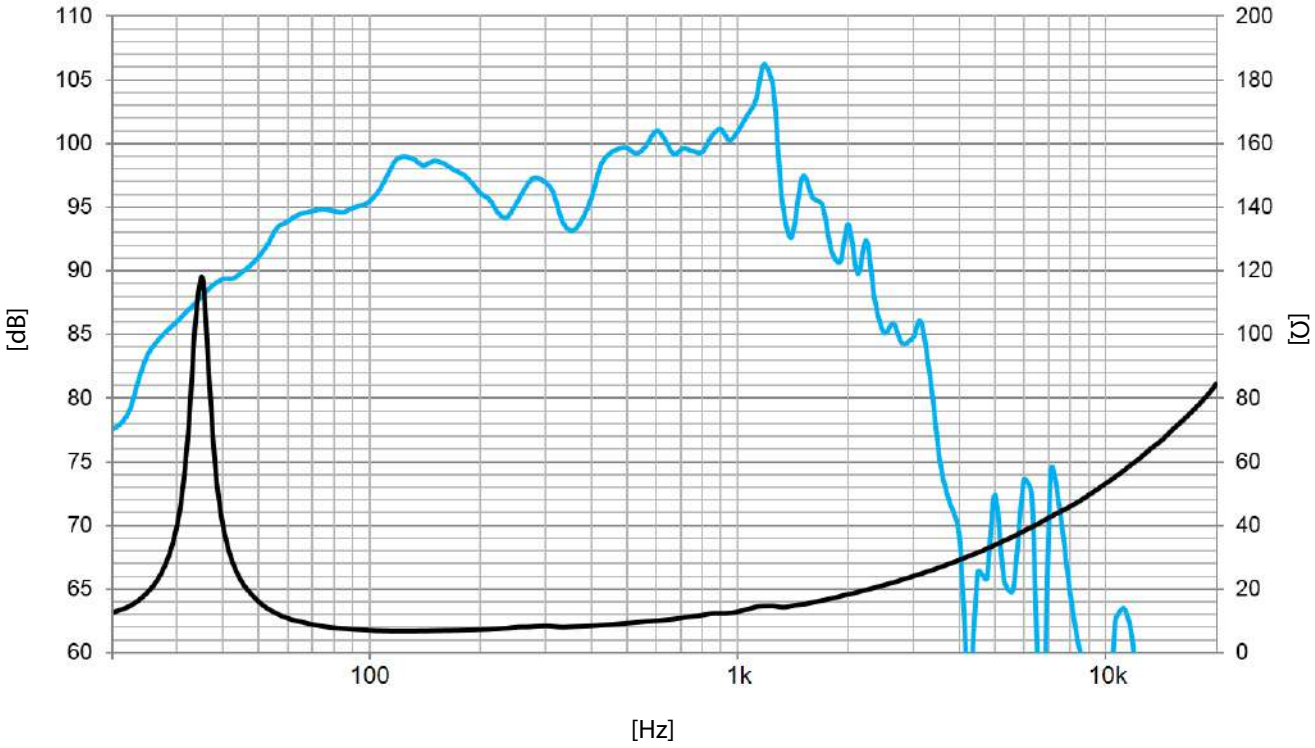

Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

Frequency response on axis

MOUNTING INFORMATION

Overall diameter	462 mm	18,18 in
Bolt circle diameter	440 mm	17,32 in
Baffle cutout diameter:		
- Front mount	415 mm	16,33 in
Depth	225 mm	8,85 in
Net weight	14 kg	30,8 lb
Shipping weight	15,2 kg	33,5 lb

DIMENSION DRAWING