Lorem ipsum

beyma

PROFESSIONAL LOUDSPEAKERS

www.beyma.com

18QLEX1600Fe

LOW FREQUENCY TRANSDUCER

Preliminary Data Sheet

KEY FEATURES

maltcross TECHNOLOGY

- High power handling and low distortion 18” subwoofer
- High force factor design for top performance applications
- Exclusive Malt Cross® Technology Cooling System
- Low power compression losses
- High sensitivity: 97 dB (1W / 1m)
- FEA optimized ceramic magnetic circuit
- Aluminium demodulating ring
- Ultra low air noise
- Optimized linear behaviour
- Exclusive NCR membrane (Neck Coupling Reinforcement)
- Waterproof cone with treatment for both sides
- Double silicone spider
- 4” QUATTRO in/out copper voice coil
- Extended controlled displacement: X_{max} ± 13 mm
- 60 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		6,3 Ω
Power capacity [1]		1.600 W_{AES}
Program power [2]		3.200 W
Sensitivity	97 dB	1W / 1m @ Z_N
Frequency range		30 - 1.000 Hz
Recom. enclosure		V_b = 125 l
(Bass-reflex design)		F_b = 39 Hz
Voice coil diameter	101,6 mm	4 in
Bl factor		36,4 N/A
Moving mass		0,323 kg
Voice coil length		32 mm
Air gap height		15 mm
X_{damage} (peak to peak)		60 mm

THIELE-SMALL PARAMETERS [3]

Resonant frequency, f_s	30 Hz
D.C. Voice coil resistance, R_e	5,3 Ω
Mechanical Quality Factor, Q_{ms}	6,5
Electrical Quality Factor, Q_{es}	0,24
Total Quality Factor, Q_{ts}	0,23
Equivalent Air Volume to C_{ms}, V_{as}	195 l
Mechanical Compliance, C_{ms}	88 µm / N
Mechanical Resistance, R_{ms}	9,3 kg / s
Efficiency, η_0	2,1 %
Effective Surface Area, S_d	0,1255 m^2
Maximum Displacement, X_{max} [4]	13 mm
Displacement Volume, V_d	1631 cm^3
Voice Coil Inductance, L_e	3,9 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.

Acústica Beyma SL - P.I. Moncada II, C/ Pont Sec, 1C - 46113 Moncada, Valencia (Spain) - Tel. +34 96 130 13 75 - beyma@beyma.com

beyma

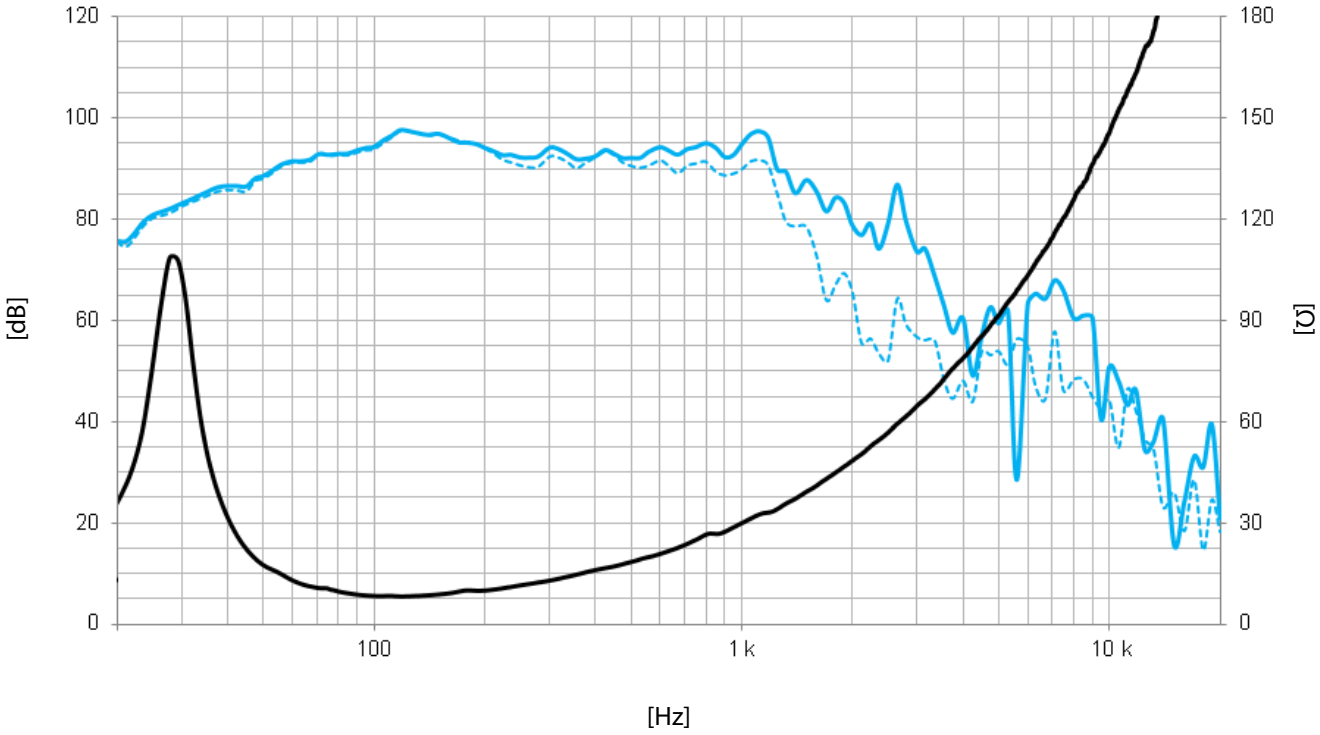
PROFESSIONAL LOUDSPEAKERS

www.beyma.com

18QLEX1600Fe

LOW FREQUENCY TRANSDUCER

Preliminary Data Sheet



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

Frequency response on axis
Frequency response 45º off axis

MOUNTING INFORMATION

Overall diameter	462 mm	18,2 in
Bolt circle diameter	441 mm	17,4 in
Baffle cutout diameter:		
- Front mount	426 mm	16,8 in
Depth	233 mm	9,2 in
Volume displaced by driver	8,0 l	0,28 ft³
Net weight	14,6 kg	32,1 lb
Shipping weight	15,9 kg	35,0 lb

DIMENSION DRAWING