beyma

PROFESSIONAL LOUDSPEAKERS
www.beyma.com

21QLEX1600Fe

LOW FREQUENCY TRANSDUCER

Preliminary Data Sheet

KEY FEATURES

maltcross TECHNOLOGY

- High power handling and low distortion 21” subwoofer
- Exclusive Malt Cross® Technology Cooling System
- Low power compression losses
- High sensitivity: 98 dB (1W / 1m)
- FEA optimized ceramic magnetic circuit
- Aluminium demodulating ring
- Ultra low air noise
- Optimized linear behaviour
- 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	540 mm	21 in
Rated impedance		8 Ω
Minimum impedance		6,3 Ω
Power capacity [1]		1.600 W_{AES}
Program power [2]		3.200 W
Sensitivity	98 dB	1W / 1m @ Z_N
Frequency range		30 - 1.000 Hz
Recom. enclosure		V_b = 170 l
(Bass-reflex design)		F_b = 38 Hz
Voice coil diameter	101,6 mm	4 in
Bl factor		36,4 N/A
Moving mass		0,388 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	5,4 Ω
Mechanical Quality Factor, Q_{ms}	4,5
Electrical Quality Factor, Q_{es}	0,30
Total Quality Factor, Q_{ts}	0,28
Equivalent Air Volume to C_{ms}, V_{as}	309 l
Mechanical Compliance, C_{ms}	72 µm / N
Mechanical Resistance, R_{ms}	16,2 kg / s
Efficiency, η_0	2,7 %
Effective Surface Area, S_d	0,1734 m^2
Maximum Displacement, X_{max} [4]	13 mm
Displacement Volume, V_d	2254 cm^3
Voice Coil Inductance, L_e	4 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

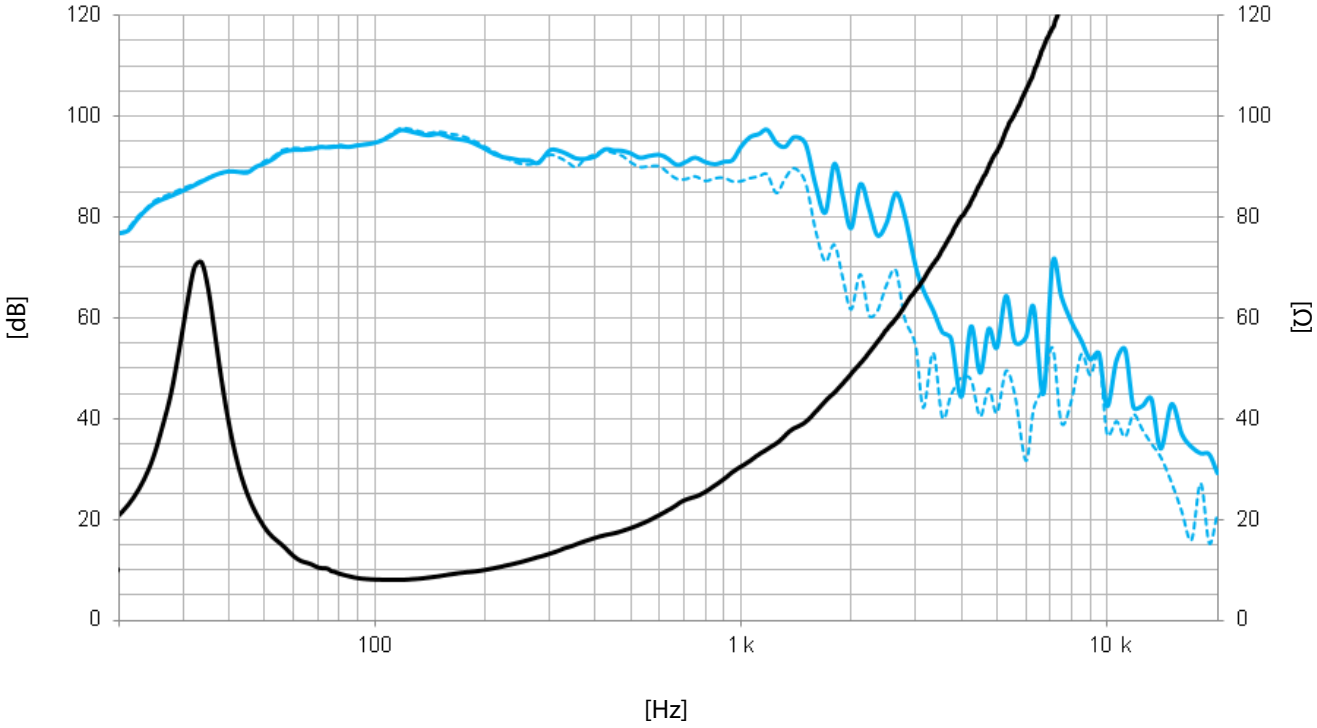
PROFESSIONAL LOUDSPEAKERS

www.beyma.com

21QLEX1600Fe

LOW FREQUENCY TRANSDUCER

Preliminary Data Sheet



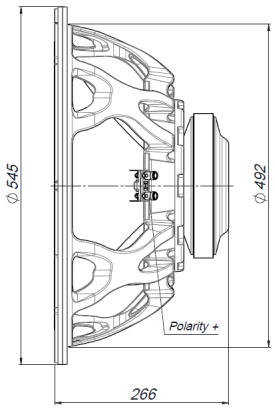
Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

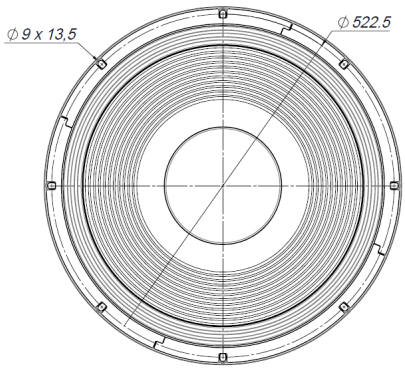
Frequency response on axis
Frequency response 45º off axis

MOUNTING INFORMATION

Overall diameter	545 mm	21,5 in
Bolt circle diameter	522,5 mm	20,6 in
Baffle cutout diameter:		
- Front mount	492 mm	19,4 in
Depth	266 mm	10,5 in
Volume displaced by driver	11,5 l	0,40 ft³
Net weight	17,1 kg	37,6 lb
Shipping weight	19,6 kg	43,1 lb

DIMENSION DRAWING





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

03/20