beyma

PROFESSIONAL LOUDSPEAKERS
www.beyma.com

10MC500

LOW & MID FREQUENCY TRANSDUCER

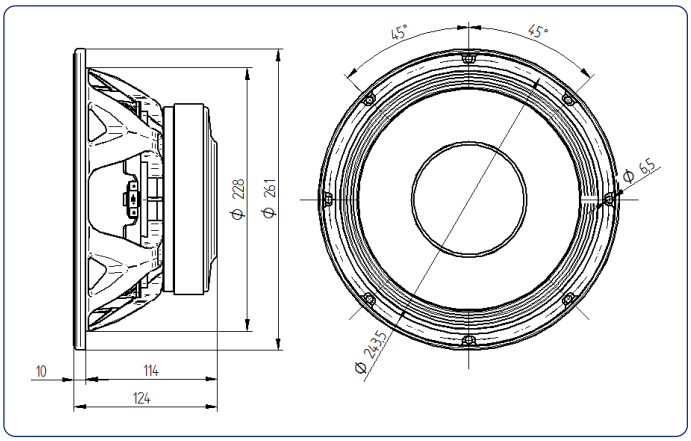
KEY FEATURES

- High power handling: 1.000 W program power
- 2,5" copper wire voice coil
- Beyma's Malt Cross® ultimate Cooling System
- Low power compression losses
- High sensitivity: 97 dB
- FEA optimized magnetic circuit
- Designed with MMSS technology for high control, linearity and low harmonic distortion. LSI optimized parameters
- Aluminum demodulating ring
- Waterproof cone with treatment for both sides of the cone
- Extended controlled displacement: X_{max} ± 8 mm
- Massive mechanical displacement capability: X_{damage} ± 40 mm
- Optimized for 2 or 3 way PA systems and line arrays for ultimate professional applications

TECHNICAL SPECIFICATIONS

Nominal diameter	250 mm	10 in
Rated impedance		8 Ω
Minimum impedance		6,1 Ω
Power capacity*		500 W_{AES}
Program power		1000 W
Sensitivity	97 dB	1W / 1m @ Z_N
Frequency range		60 - 5.000 Hz
Voice coil diameter	63,5 mm	2,5 in
Bl factor		18,3 N/A
Moving mass		0,044 kg
Voice coil length		19,5 mm
Air gap height		9,5 mm
X_{damage} (peak to peak)		40 mm

DIMENSION DRAWINGS



THIELE-SMALL PARAMETERS**

Resonant frequency, f_s	60 Hz
D.C. Voice coil resistance, R_e	5,7 Ω
Mechanical Quality Factor, Q_{ms}	7,5
Electrical Quality Factor, Q_{es}	0,29
Total Quality Factor, Q_{ts}	0,28
Equivalent Air Volume to C_{ms}, V_{as}	26 l
Mechanical Compliance, C_{ms}	154 μm / N
Mechanical Resistance, R_{ms}	2,3 kg / s
Efficiency, η_0	2 %
Effective Surface Area, S_d	0,035 m^2
Maximum Displacement, X_{max} * **	8 mm
Displacement Volume, V_d	280 cm^3
Voice Coil Inductance, L_e @ 1 kHz	1 mH

MOUNTING INFORMATION

Overall diameter	261 mm	10,28 in
Bolt circle diameter	243,5 mm	9,59 in
Baffle cutout diameter:		
- Front mount	228 mm	8,98 in
Depth	124 mm	4,86 in
Net weight	5,7 kg	12,5 lb
Shipping weight	6,1 kg	13,45 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.

maltcross TECHNOLOGY

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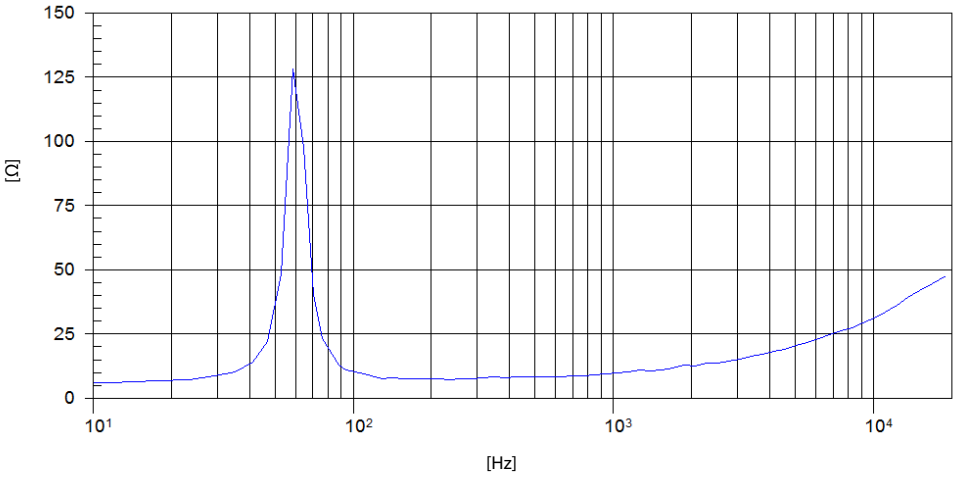
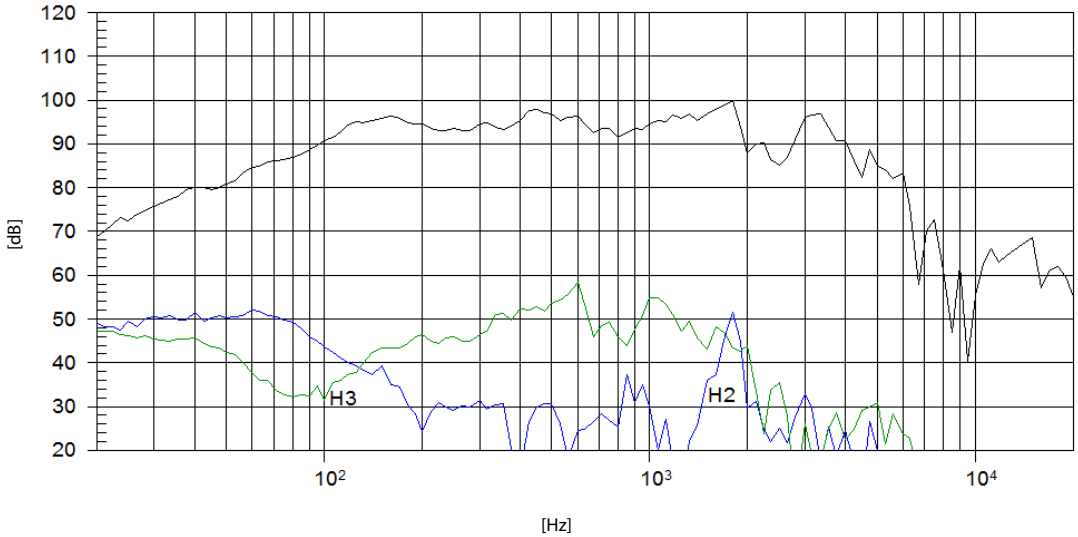
FREE AIR IMPEDANCE CURVE



FREQUENCY RESPONSE AND DISTORTION



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

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