beyma

PROFESSIONAL LOUDSPEAKERS
www.beyma.com

12MCS500

LOW & MID FREQUENCY TRANSDUCER

MCS Series

KEY FEATURES

maltcross TECHNOLOGY

- High power handling: 1.000 W program power
- 2,5" copper wire voice coil
- Beyma's Malt Cross® Cooling System
- Low power compression looses
- High sensitivity: 98 dB (1W / 1m)
- Optimized pressed steel frame
- FEA optimized magnetic circuit
- Aluminum demodulating ring
- Weatherproof cone treatment for both sides of the cone
- Optimized for 2 or 3 way PA systems and line array applications





TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm	12 in
Rated impedance		8 Ω
Minimum impedance		7,3 Ω
Power capacity [1]		500 W_{AES}
Program power [2]		1.000 W
Sensitivity	98 dB	1W / 1m @ Z_N
Frequency range		65 - 5.000 Hz
Voice coil diameter	63,5 mm	2,5 in
Bl factor		17,6 N/A
Moving mass		0,059 kg
Voice coil length		19,5 mm
Air gap height		9,5 mm
X_{damage} (peak to peak)		40 mm

THIELE-SMALL PARAMETERS [3]

Resonant frequency, f_s	57 Hz
D.C. Voice coil resistance, R_e	5,6 Ω
Mechanical Quality Factor, Q_{ms}	7,8
Electrical Quality Factor, Q_{es}	0,38
Total Quality Factor, Q_{ts}	0,36
Equivalent Air Volume to C_{ms}, V_{as}	57 l
Mechanical Compliance, C_{ms}	132 μm / N
Mechanical Resistance, R_{ms}	2,7 kg / s
Efficiency, η_0	2,6 %
Effective Surface Area, S_d	0,055 m^2
Maximum Displacement, X_{max} [4]	8 mm
Displacement Volume, V_d	440 cm^3
Voice Coil Inductance, L_e	1,1 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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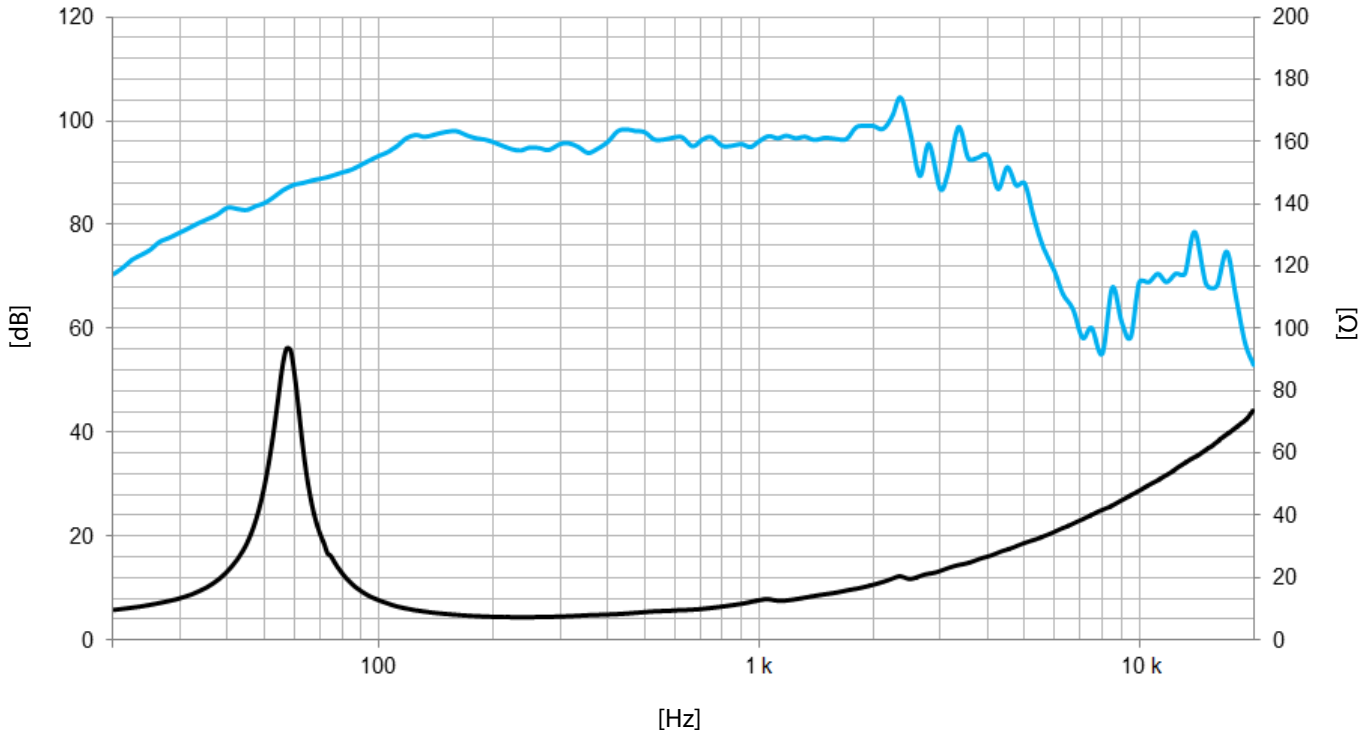
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Note: On axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

MOUNTING INFORMATION

Overall diameter	310 mm	12,2 in
Bolt circle diameter	292 mm	11,5 in
Baffle cutout diameter:		
- Front mount	280 mm	11,0 in
Depth	140 mm	5,5 in
Net weight	6 kg	13,2 lb
Shipping weight	6,7 kg	14,8 lb

DIMENSION DRAWING

