beyma

PROFESSIONAL LOUDSPEAKERS

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12MCB700

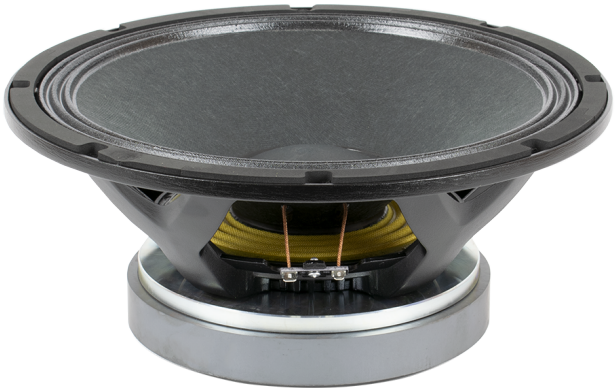
LOW & MID FREQUENCY TRANSDUCER

MCB Series

KEY FEATURES

maltcross TECHNOLOGY

- High power handling: 1.400 W program power
- Exclusive Malt Cross® Technology Cooling System
- Low power compression losses
- High sensitivity: 98 dB (1W / 1m)
- FEA optimized magnetic circuit
- Optimized non-linear behaviour
- Weatherproof cone treatment on both sides of the cone
- 3" DUO double layer in/out copper voice coil
- Aluminium demodulating ring
- Extended controlled displacement: X_{max} ± 7 mm
- 45 mm peak-to-peak excursion before damage
- Optimized for low frequency and mid-bass applications



TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm	12 in
Rated impedance		8 Ω
Minimum impedance		7,1 Ω
Power capacity [1]		700 W_{AES}
Program power [2]		1.400 W
Sensitivity	98 dB	1W / 1m @ Z_N
Frequency range		55 - 4.000 Hz
Recom. enclosure		V_b = 40 l
(Bass-reflex design)		F_b = 67 Hz
Voice coil diameter	76,2 mm	3 in
Bl factor		20,4 N/A
Moving mass		0,069 kg
Voice coil length		18 mm
Air gap height		9,5 mm
X_{damage} (peak to peak)		45 mm

THIELE-SMALL PARAMETERS [3]

Resonant frequency, f_s	51 Hz
D.C. Voice coil resistance, R_e	5,4 Ω
Mechanical Quality Factor, Q_{ms}	3,9
Electrical Quality Factor, Q_{es}	0,29
Total Quality Factor, Q_{ts}	0,27
Equivalent Air Volume to C_{ms}, V_{as}	59,5 l
Mechanical Compliance, C_{ms}	139 µm / N
Mechanical Resistance, R_{ms}	5,6 kg / s
Efficiency, η_0	2,7 %
Effective Surface Area, S_d	0,055 m^2
Maximum Displacement, X_{max} [4]	7 mm
Displacement Volume, V_d	385 cm^3
Voice Coil Inductance, L_e	0,9 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.

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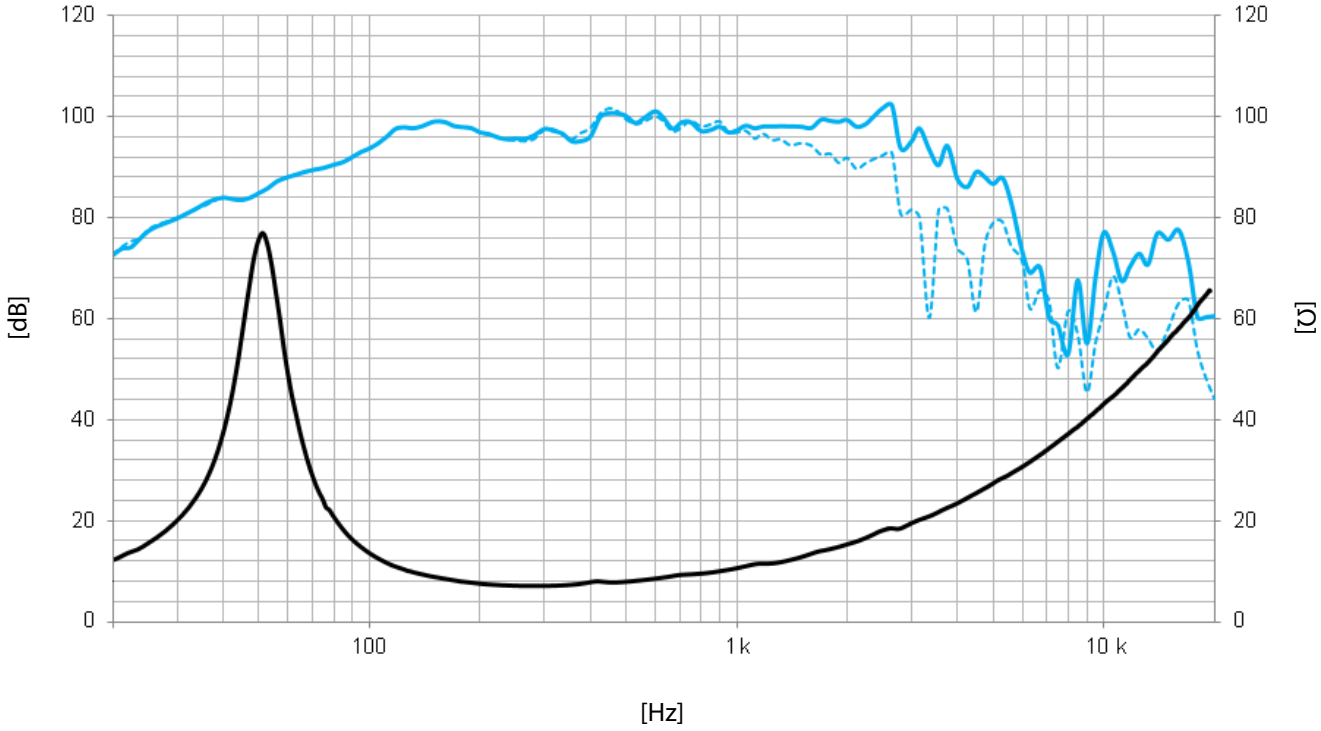

Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

Frequency response on axis
Frequency response 45º off axis

MOUNTING INFORMATION

Overall diameter	312 mm	12,3 in
Bolt circle diameter	294,5 mm	11,6 in
Baffle cutout diameter:		
- Front mount	278 mm	10,9 in
Depth	145 mm	5,7 in
Net weight	7,8 kg	17,2 lb
Shipping weight	9,5 kg	20,9 lb

DIMENSION DRAWING