

10MCS500

LOW FREQUENCY TRANSDUCER Preliminary Data Sheet

KEY FEATURES

- High power handling: 1000 W program power
- 2,5" copper wire voice coil
- Beyma's Malt Cross[®] ultimate Cooling System
- Low power compression losses
- High sensitivity: 96 dB
- Optimized pressed steel frame
- FEA optimized magnetic circuit
- Designed with MMSS technology for high control, linearity and low harmonic distortion. LSI optimized parameters
- Waterproof cone with treatment for both sides of the cone
 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	7,1 Ω
Power capacity*	500 W _{AES}
Program power	1.000 W
Sensitivity	96 dB 1W / 1m @ Z _N
Frequency range	65 - 5.000 Hz
Voice coil diameter	63,5 mm 2,5 in
BI factor	17,9 N/A
Moving mass	0,048 kg
Voice coil length	19,5 mm
Air gap height	10 mm
X _{damage} (peak to peak)	40 mm

THIELE-SMALL PARAMETERS**

Resonant frequency, f _s	65 Hz
D.C. Voice coil resistance, R _e	5,4 Ω
Mechanical Quality Factor, Q _{ms}	5,9
Electrical Quality Factor, Q _{es}	0,34
Total Quality Factor, Q _{ts}	0,32
Equivalent Air Volume to C _{ms} , V _{as}	21,5 I
Efficiency, η_0	1,7 %
Effective Surface Area, S _d	0,038 m ²
Maximum Displacement, X _{max} ***	7,5 mm
Displacement Volume, V _d	285 cm ³
Voice Coil Inductance, L _e @ 1 kHz	1 mH

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).

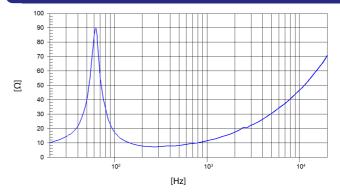
*** The X_{max} is calculated as (L_{vc} - H_{ag})/2 + (H_{ag}/3,5), where L_{vc} is the voice coil length and H_{ag} is the air gap height.



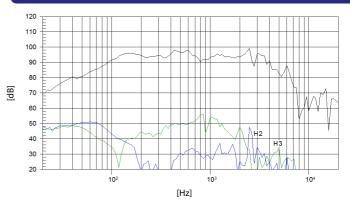
MOUNTING INFORMATION

Overall diameter	254 mm	10 in
Bolt circle diameter	241 mm	9,49 in
Baffle cutout diameter:		
- Front mount	230 mm	9,05 in
Depth	124 mm	4,88 in
Net weight	5,7 kg	12,56 lb
Shipping weight	6,1 kg	13,45 lb

FREE AIR IMPEDANCE CURVE



FREQUENCY RESPONSE & DISTORTION



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