

# 15MCS500

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: 98 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



Nominal diameter	380 mm 1	5 in
Rated impedance		8 Ω
Minimum impedance	7,	,1 Ω
Power capacity*	500 W	'AES
Program power	1.00	0 W
Sensitivity	97 dB 1W / 1m @	Z <sub>N</sub>
Frequency range	50 - 4.000	) Hz
Voice coil diameter	63,5 mm 2,	,5 in
BI factor	16,8	N/A
Moving mass	0,09	5 kg
Voice coil length	19,5	mm
Air gap height	10	mm
X <sub>damage</sub> (peak to peak)	40	mm

## THIELE-SMALL PARAMETERS\*\*

Resonant frequency, f <sub>s</sub>	49 Hz
D.C. Voice coil resistance, R <sub>e</sub>	5,8 Ω
Mechanical Quality Factor, Q <sub>ms</sub>	5,7
Electrical Quality Factor, Q <sub>es</sub>	0,62
Total Quality Factor, Qts	0,56
Equivalent Air Volume to C <sub>ms</sub> , V <sub>as</sub>	118,2 I
Mechanical Compliance, C <sub>ms</sub>	108 μm / N
Mechanical Resistance, R <sub>ms</sub>	5,1 kg / s
Efficiency, η <sub>0</sub>	2,25 %
Effective Surface Area, S <sub>d</sub>	0,088 m <sup>2</sup>
Maximum Displacement, X <sub>max</sub> ***	8 mm
Displacement Volume, V <sub>d</sub>	704 cm <sup>3</sup>
Voice Coil Inductance, Le @ 1 kHz	1 mH

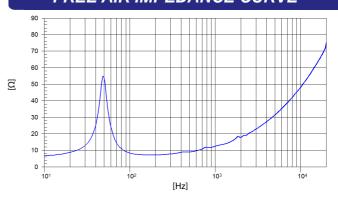
#### Notes:



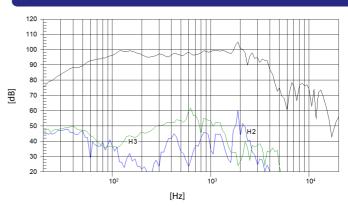
## **MOUNTING INFORMATION**

Overall diameter	381 mm	15 in
Bolt circle diameter	367 mm	14,49 in
Baffle cutout diameter:		
- Front mount	353 mm	13,90 in
Depth	170 mm	6,69 in
Net weight	6,4 kg	14,11 lb
Shipping weight	7,4 kg	16,12 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

<sup>\*</sup> 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.

<sup>\*\*</sup> 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).

<sup>\*\*\*</sup> 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.