

## 12MCS500

LOW & MID FREQUENCY TRANSDUCER
MCS Series

#### **KEY FEATURES**

- High power handling: 1.000 W program power
- 2,5" copper wire voice coil
- Beyma's Malt Cross<sup>®</sup> Cooling System
- Low power compression looses
- High sensitivity: 97 dB (1W / 1m)
- · Optimized pressed steel frame
- FEA optimized magnetic circuit
- Designed with MMSS technology for high control, linearity and low harmonic distortion. LSI optimized parameters
- Aluminum demodulating ring
- Waterproof cone treatment on both sides of the cone
- Optimized for 2 or 3 way PA systems and line array applications

### TECHNICAL SPECIFICATIONS

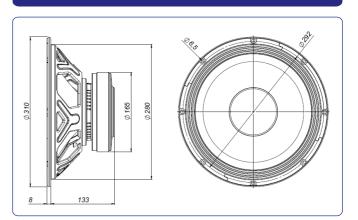
Nominal diameter	300 mm 12 in
Rated impedance	8 Ω
Minimum impedance	7,3 Ω
Power capacity*	500 W <sub>AES</sub>
Program power	1.000 W
Sensitivity	97 dB 1W / 1m @ Z <sub>N</sub>
Frequency range	65 - 5.000 Hz
Voice coil diameter	63,5 mm 2,5 in
BI factor	18 N/A
Moving mass	0,064 kg
Voice coil length	19,5 mm
Air gap height	9,5 mm
X <sub>damage</sub> (peak to peak)	40 mm

#### THIELE-SMALL PARAMETERS\*\*

Resonant frequency, f <sub>s</sub>	62 Hz
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D.C. Voice coil resistance, R <sub>e</sub>	5,7 Ω
Mechanical Quality Factor, Q <sub>ms</sub>	7,8
Electrical Quality Factor, Q <sub>es</sub>	0,44
Total Quality Factor, Qts	0,42
Equivalent Air Volume to C <sub>ms</sub> , V <sub>as</sub>	44
Mechanical Compliance, C <sub>ms</sub>	103 μm / N
Mechanical Resistance, R <sub>ms</sub>	3,18 kg / s
Efficiency, η <sub>0</sub>	2,3 %
Effective Surface Area, S <sub>d</sub>	$0,055 \text{ m}^2$
Maximum Displacement, X <sub>max</sub> ***	8 mm
Displacement Volume, V <sub>d</sub>	440 cm <sup>3</sup>
Voice Coil Inductance, Le	1,1 mH



#### **DIMENSION DRAWINGS**



#### **MOUNTING INFORMATION**

Overall diameter Bolt circle diameter	310 mm 292 mm	12,20 in 11,50 in
Baffle cutout diameter:		,
- Front mount	280 mm	11,02 in
Depth	141 mm	5,55 in
Net weight	6 kg	13,2 lb
Shipping weight	6,7 kg	14,8 lb

#### Notes

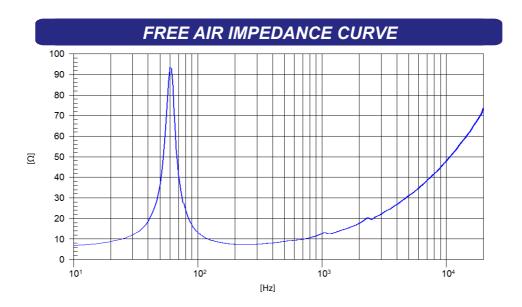
- \* The power capaticty is determined according to AES2-1984 (r2003) standard. Program power is defined as the transducer's ability to handle normal music program material.
- \*\* T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out 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<sub>max</sub> is calculated as (L<sub>vc</sub> H<sub>ag</sub>)/2 + (H<sub>ag</sub>/3,5), where L<sub>vc</sub> is the voice coil length and H<sub>ag</sub> is the air gap height.



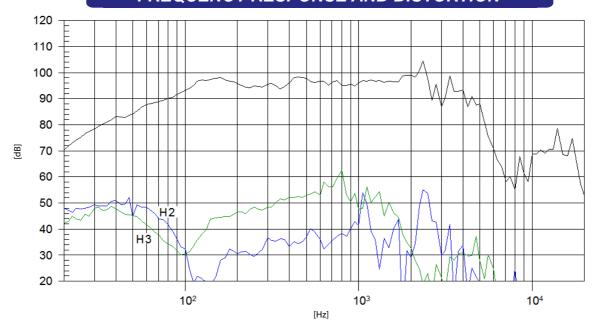


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#### FREQUENCY RESPONSE AND DISTORTION



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

### beyma //

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