# beyma ))

# 10MCB700
## LOW & MID FREQUENCY TRANSDUCER
### Preliminary Data Sheet

## KEY FEATURES

### maltcross
TECHNOLOGY

- High power handling: 1.400 W program power
- Exclusive Malt Cross® Technology Cooling System
- Low power compression losses
- High sensitivity: 96 dB (1W / 1m)
- FEA optimized magnetic circuit
- Optimized non-linear behaviour

- Waterproof 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 | 250 mm | 10 in |
| Rated impedance | | 8 Ω |
| Minimum impedance | | 7,1 Ω |
| Power capacity [1] | | 700 $W_{AES}$ |
| Program power [2] | | 1.400 W |
| Sensitivity | 96 dB | 1W / 1m @ $Z_N$ |
| Frequency range | | 80 - 4.000 Hz |
| Recom. enclosure | | $V_b$ = 14 l |
| (Bass-reflex design) | | $F_b$ = 76 Hz |
| Voice coil diameter | 76,2 mm | 3 in |
| Bl factor | | 20,1 N/A |
| Moving mass | | 0,055 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, $f_s$ | 75 Hz |
| D.C. Voice coil resistance, $R_e$ | 5,3 Ω |
| Mechanical Quality Factor, $Q_{ms}$ | 4,9 |
| Electrical Quality Factor, $Q_{es}$ | 0,35 |
| Total Quality Factor, $Q_{ts}$ | 0,33 |
| Equivalent Air Volume to $C_{ms}$, $V_{as}$ | 13,2 l |
| Mechanical Compliance, $C_{ms}$ | 76 μm / N |
| Mechanical Resistance, $R_{ms}$ | 5,5 kg / s |
| Efficiency, $\eta_0$ | 1,7 % |
| Effective Surface Area, $S_d$ | 0,035 $m^2$ |
| Maximum Displacement, $X_{max}$ [4] | 7 mm |
| Displacement Volume, $V_d$ | 245 $cm^3$ |
| Voice Coil Inductance, $L_e$ | 0,9 mH |

**Notes:**

[1] The power capaticty is determined according to AES2-1984 (r2003) standard.
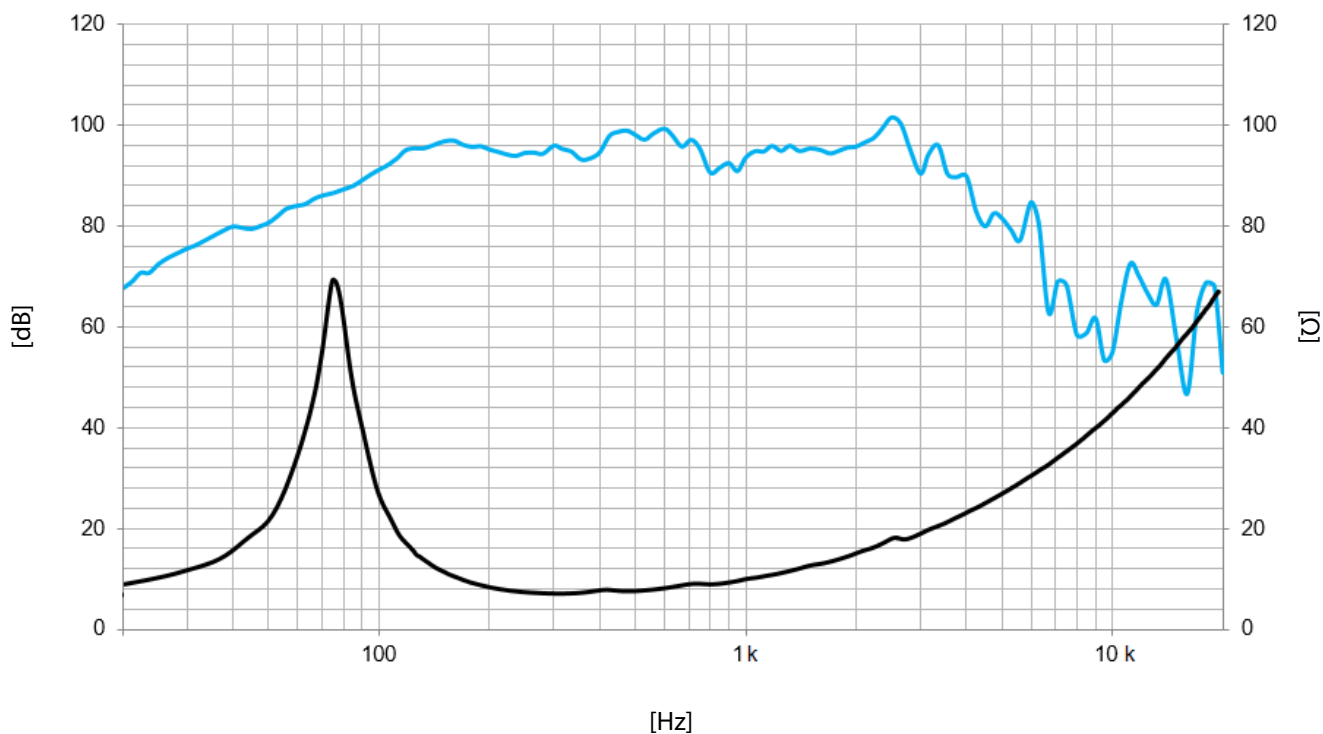
[2] Program power is defined as power capacity + 3 dB.

[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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## PROFESSIONAL LOUDSPEAKERS
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**Note:** Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

## MOUNTING INFORMATION

| | | |
|---|---|---|
| **Overall diameter** | 261 mm | 10,3 in |
| **Bolt circle diameter** | 243,5 mm | 9,6 in |
| **Baffle cutout diameter:** | | |
| - Front mount | 228 mm | 9,0 in |
| **Depth** | 129 mm | 5,1 in |
| **Net weight** | 7,6 kg | 16,7 lb |
| **Shipping weight** | 8,1 kg | 17,8 lb |

## DIMENSION DRAWING

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