beyma

PROFESSIONAL LOUDSPEAKERS
www.beyma.com

# 15MC700

## LOW & MID FREQUENCY TRANSDUCER
## MC 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 linear behavior
- Weatherproof cone treatment on both sides of the cone
- 3” DUO double layer in/out copper voice coil
- Aluminum demodulating ring
- Extended controlled displacement: $X_{max}$ ± 9,8 mm
- 40 mm peak-to-peak excursion before damage
- Optimized for low frequency and mid-bass applications

## TECHNICAL SPECIFICATIONS

| | | |
|---|---|---|
| **Nominal diameter** | 380 mm | 15 in |
| **Rated impedance** | | 8 Ω |
| **Minimum impedance** | | 7,4 Ω |
| **Power capacity** [1] | | 700 $W_{AES}$ |
| **Program power** [2] | | 1.400 W |
| **Sensitivity** | 98 dB | 1W / 1m @ $Z_N$ |
| **Frequency range** | | 45 - 4.000 Hz |
| **Voice coil diameter** | 76,2 mm | 3 in |
| **Bl factor** | | 19,8 N/A |
| **Moving mass** | | 0,094 kg |
| **Voice coil length** | | 23 mm |
| **Air gap height** | | 8 mm |
| **$X_{damage}$ (peak to peak)** | | 40 mm |

## THIELE-SMALL PARAMETERS [3]

| | |
|---|---|
| **Resonant frequency, $f_s$** | 44 Hz |
| **D.C. Voice coil resistance, $R_e$** | 6 Ω |
| **Mechanical Quality Factor, $Q_{ms}$** | 5,3 |
| **Electrical Quality Factor, $Q_{es}$** | 0,40 |
| **Total Quality Factor, $Q_{ts}$** | 0,37 |
| **Equivalent Air Volume to $C_{ms}$, $V_{as}$** | 148 l |
| **Mechanical Compliance, $C_{ms}$** | 136 µm / N |
| **Mechanical Resistance, $R_{ms}$** | 4,9 kg / s |
| **Efficiency, $\eta_0$** | 3,1 % |
| **Effective Surface Area, $S_d$** | 0,088 $m^2$ |
| **Maximum Displacement, $X_{max}$** [4] | 9,8 mm |
| **Displacement Volume, $V_d$** | 880 $cm^3$ |
| **Voice Coil Inductance, $L_e$** | 1 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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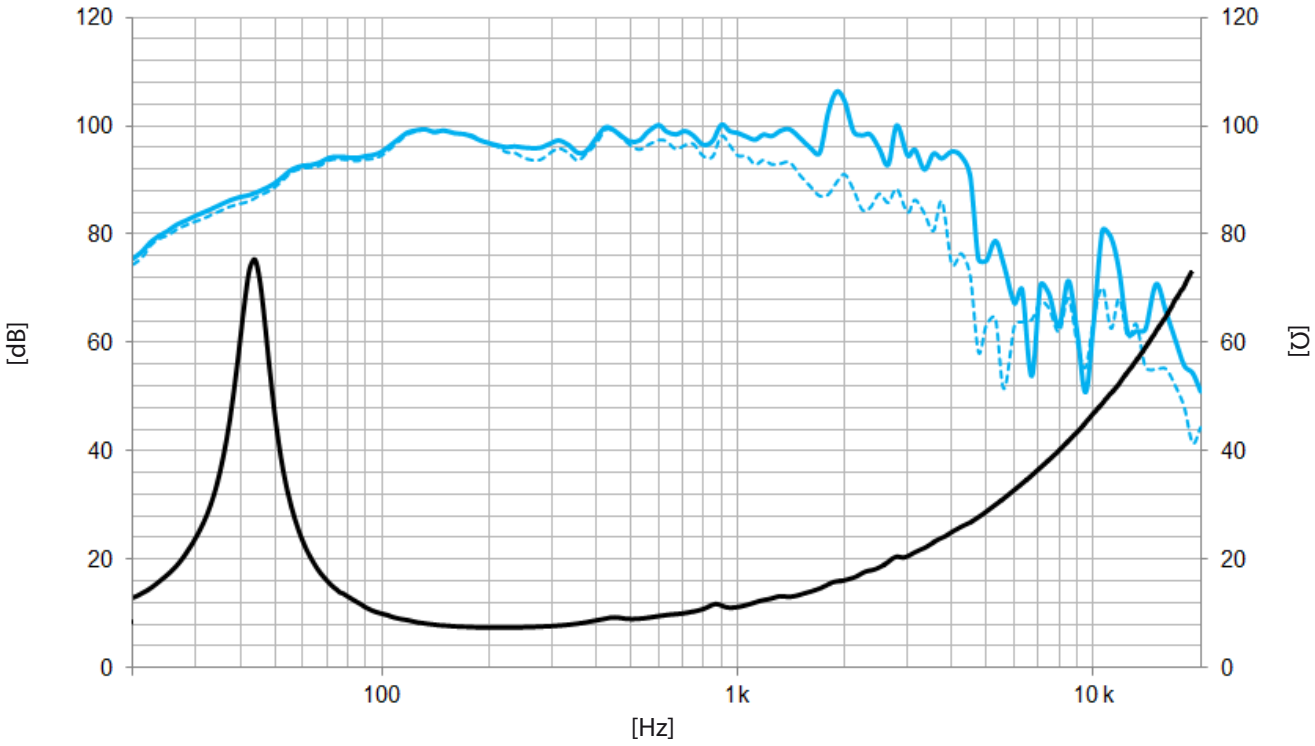


**Note:** Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

**Frequency response on axis**
**Frequency response 45º off axis**

## MOUNTING INFORMATION

| | | |
|---|---|---|
| **Overall diameter** | 388 mm | 15,27 in |
| **Bolt circle diameter** | 370 mm | 14,56 in |
| **Baffle cutout diameter:** | | |
| **- Front mount** | 349,5 mm | 13,76 in |
| **Depth** | 175 mm | 6,89 in |
| **Net weight** | 7,5 kg | 16,5 lb |
| **Shipping weight** | 8,5kg | 18,7 lb |

## DIMENSION DRAWING