beyma
PROFESSIONAL LOUDSPEAKERS
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# Sample G-021

## Sample Data Sheet
## Custom 10" Transducer 8Ω

## TECHNICAL SPECIFICATIONS

| | | |
|---|---|---|
| **Nominal diameter** | 250 mm | 10 in |
| **Rated impedance** | | 16 Ω |
| **Minimum impedance** | | 12.0 Ω |
| **Power capacity**[1] | | TBD $W_{AES}$ |
| **Program power**[2] | | TBD W |
| **Sensitivity** | 97 dB | 1W @ 1m @ $Z_n$ |
| **Frequency range** | | 75 - 5000 Hz |
| **Voice coil diameter** | 63.5 mm | 2.5 in |
| **Air gap height** | | 10 mm |
| **Voice coil length** | | 19.5 mm |
| **Bl factor** | | 21.8 N/A |
| **Moving mass** | | 0.042 kg |
| **Winding material** | | Copper |
| **Spider material** | | Polycotton |
| **Magnet material** | | Neodymium |
| **Cone material** | | Paper |
| **Frame material** | | Die cast aluminum |

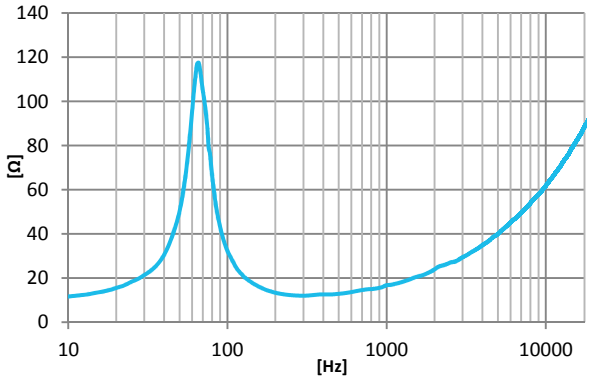
## MOUNTING INFORMATION

| | | |
|---|---|---|
| **Overall diameter** | 261 mm | 10.3 in |
| **Bolt circle diameter** | 244 mm | 9.6 in |
| **Baffle cutout diameter** | 228 mm | 9.0 in |
| **Depth** | 125 mm | 4.9 in |
| **Net weight** | 3.1 kg | 6.8 lb |

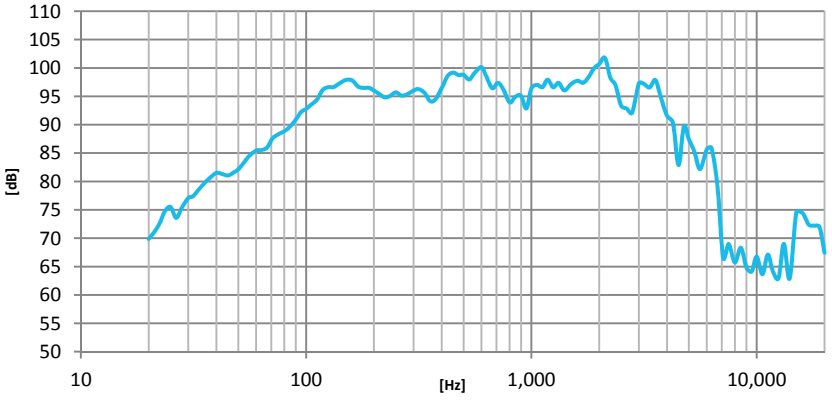
## THIELE-SMALL PARAMETERS[3]

| | |
|---|---|
| **Resonant frequency, $f_s$** | 67 Hz |
| **D.C. Voice coil resistance, $R_e$** | 9.4 Ω |
| **Mechanical Quality Factor, $Q_{ms}$** | 4.6 |
| **Electrical Quality Factor, $Q_{es}$** | 0.35 |
| **Total Quality Factor, $Q_{ts}$** | 0.33 |
| **Equivalent Air Volume to Cms, $V_{as}$** | 23.1 l |
| **Mechanical Compliance, $C_{ms}$** | 133 µm/N |
| **Mechanical Resistance, $R_{ms}$** | 3.9 kg/s |
| **Efficiency, $\eta_0$** | 1.9 % |
| **Effective Surface Area, $S_D$** | 0.035 $m^2$ |
| **Maximum Displacement, $X_{max}$**[4] | 7.6 mm |
| **Voice Coil Inductance, $L_e$** | 1.3 mH |

## FREE AIR IMPEDANCE CURVE




## FREQUENCY RESPONSE AND DISTORTION




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

**Notes:**

This datasheet is done with the measurements of a laboratory prototype. Small differences may appear once the driver is transferred to the production line and manufactured in big quantities. Please refer to the serial datasheet for the definitive information of the average production.

[1] Power capacity (AES2-1984 r2003) has been estimated in this particular case for the present sample.

[2] Program power is defined as power capacity +3dB.

[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 Xmax is calculated as (Lvc - Hag)/2 + (Hag/3,5), where Lvc is the voice coil length and Hag is the air gap height.

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