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PROFESSIONAL LOUDSPEAKERS

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10MC500Nd

Sample Data Sheet

Custom 10" Transducer 16Ω

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

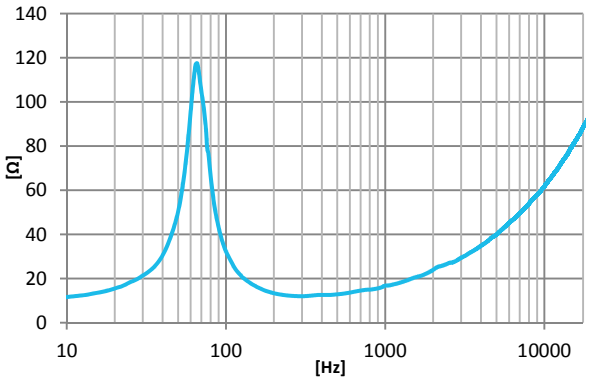
MOUNTING INFORMATION

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

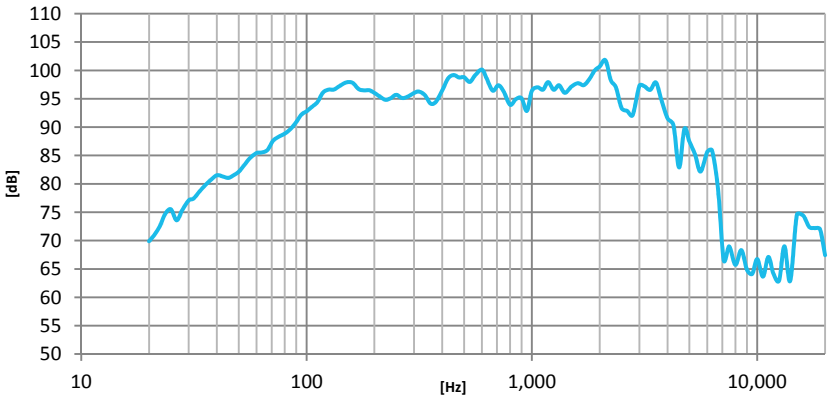
THIELE-SMALL PARAMETERS[3]

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, η_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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