

# 10MCF400Nd

MID FREQUENCY TRANSDUCER Preliminary Data Sheet

### **KEY FEATURES**

- Very high efficiency mid-range driver
- Carbon fiber cone for optimum loading behaviour and low distortion
- Extremely linear frequency response
- 4" edgewound aluminium voice coil
- 800 W Program Power
- High efficiency and sensitivity
- FEA optimized neodymium motor structure
- Sealed cast aluminium frame
- Designed for high performance mid-frequency line array and horn loading applications

## TECHNICAL SPECIFICATIONS

Nominal diameter	250 mm	10 in
Rated impedance		8 Ω
Minimum impedance		7,5 Ω
Power capacity*	400 W <sub>AES</sub>	
Program power		800 W
Sensitivity	102 dB 1W / 1r	n @ Z <sub>N</sub>
Frequency range	300 - 5.000 Hz	
Voice coil diameter	101,6 mm	4 in
BI factor	28,8 N/A	
Moving mass	0,038 kg	
Voice coil length	1	1,5 mm
Air gap height		10 mm

### THIELE-SMALL PARAMETERS\*\*

Resonant frequency, $f_s$	270 Hz
D.C. Voice coil resistance, $R_e$	5,9 Ω
Mechanical Quality Factor, $Q_{ms}$	14,5
Electrical Quality Factor, $Q_{es}$	0,47
Total Quality Factor, $Q_{ts}$	0,45
Equivalent Air Volume to $C_{ms}$ , $V_{as}$	1,8 I
Mechanical Compliance, $C_{ms}$	9 μm / N
Mechanical Resistance, $R_{ms}$	4,4 kg / s
Efficiency, $\eta_0$	7,55 %
Effective Surface Area, $S_d$	0,038 m <sup>2</sup>
Maximum Displacement, $X_{max}$ ***	3,5 mm
Maximum Displacement, X <sub>max</sub> ***	3,5 mm
Displacement Volume, V <sub>d</sub>	133 cm <sup>3</sup>
Voice Coil Inductance, L <sub>e</sub> @ 1 kHz	0,5 mH

#### 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).

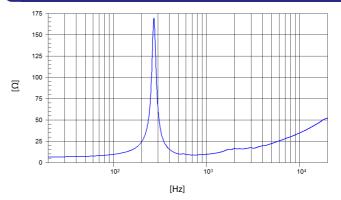
\*\*\* The  $X_{max}$  is calculated as (L<sub>vc</sub> - H<sub>ag</sub>)/2 + (H<sub>ag</sub>/3,5), where L<sub>vc</sub> is the voice coil length and H<sub>ag</sub> is the air gap height.



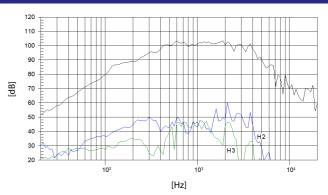
### MOUNTING INFORMATION

Overall diameter	270 mm	10,63 in
Bolt circle diameter	248 mm	9,76 in
Baffle cutout diameter:		
- Front mount	227 mm	8,94 in
Depth	103 mm	4,05 in
Net weight	6,2 kg	13,67 lb
Shipping weight	6,6 kg	14,55 lb

## FREE AIR IMPEDANCE CURVE



### FREQUENCY RESPONSE & DISTORTION



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