

# Oberton 15 NB 451



## KEY FEATURES:

- 99 db 1W / 1m average sensitivity
- 77 mm high temperature sandwich voice coil
- 900 W AES program power
- Vented neodymium magnet assembly with massive heatsink
- Triple aluminium demodulating rings for lower distortion and improved heat dissipation
- Double silicone spider for improved excursion control and linearity

## Application : High power woofer

15NB451 loudspeaker combining good linearity and efficiency with high power handling capabilities, with use of 77 mm voice coil and double silicone spider. It features aluminium die cast frame with integrated triple demodulating rings and vented neodymium magnet structure. The massive heatsink improve the cooling of the magnet structure, which reduce power compression. 15NB451 is suitable for application in a wide variety of enclosure types and particularly as LF driver in 2- or 3- way boxes.

## SPECIFICATIONS

Nominal Diameter	15"/388 inch/mm
Impedance	8 Ohm
Minimum Impedance	6.07 Ohm
Power Capacity AES <sup>1</sup>	450 W
Program Power <sup>2</sup>	900 W
Sensitivity	(60-2000 Hz) 99 dB/W/m
Frequency Range	48 - 3000 Hz
Voice Coil Diameter	77 mm
Voice Coil Material	Copper
Voice Coil Former	Kapton™
Voice Coil Winding Depth	18 mm
Magnet Gap Depth	9 mm
Cone Material	Paper with Glass fiber
Basket	Die Cast Aluminium
Magnet	Neodymium
Flux Density	1.45 T

## THIELE-SMALL PARAMETERS

Resonance Frequency	39.57 Hz
Mechanical Efficiency Factor (Qms)	10.54
Electrical Efficiency Factor (Qes)	0.263
Total Q (Qts)	0.257
Equivalent Air Volume (Vas)	145.21 litres
Diaphragm mass ind. airload (Mms)	100.63 grams
Voice Coil Resistance Re	5.5 Ohms
Effective Diagram Area (Sd)	829.6 cm <sup>2</sup>
Peak Linear Displacement of Diaphragm (Xmax)*	±7 mm
Mechanical Compliance of Suspension (Cms)	0.16 mm/N
BL Product (BL)	22.87 T.m
V.C. Inductance at 1 kHz (Le)	1.6 mH

1. AES standard. Power is calculated on rated minimum impedance. Measurement is in 125 L box enclosure tuned 56 Hz using a 40-400 Hz band limited pink noise test signal applied continuously for 2 hours.

2. Program power is defined as 3db greater than AES Power Capacity.

\* Linear Mathematical Xmax is calculated as:  $(Hvc - Hg)/2 + Hg/4$  where Hvc is the voice coil depth and Hg is the gap depth.

## MOUNTING INFORMATION

Overall Diameter	388 mm
Baffle Hole Diameter	354 mm
Number of Mounting Holes	8 elliptic 7x8 mm
Bolt Circle Diameter	370/372 mm
Overall Depth	196.3 mm
Net Weight	4.9 kg

# Frequency Responce

