ND1460A

Neodymium High Frequency Driver

Key Features

110 dB 1W / 1m average sensitivity
1,4 inch exit throat
3 inch voice coil diameter
150 W continuous program power handling
Pure Aluminum dome
Neodymium magnetic structure
Excellent thermal exchange

General Description

The ND1460A neodymium HF compression driver has been designed for high level sound systems application. With its 1.4-inch exit throat, this compression driver has been developed to work with our XT1464 elliptical shape constant coverage horn.
The ND1460A diaphragm assembly is composed by an aluminum dome sandwiched to a proprietary treated polyester suspension. This design maintains low resonance and lowers the minimum crossover point value at 800Hz. The composite diaphragm assembly is made by an aluminum dome strongly joined to the PEN suspension, in order to assure unmatched transient response. The lower density of the aluminum and PEN structure permits higher levels of sensitivity, especially in the mid-high frequency range. The unique ellipsoidal suspension shape has been designed to maintain 3rd harmonic distortion value lower than 0.05% over all working frequency range.
A bended former edge-wound aluminum 75mm voice coil completes the diaphragm assembly. The proprietary treated Nomex former material shows 30% higher value of tensile elongation at working operative temperature (200°C) when compared to Kapton. Moreover, Nomex is suitable to work also in higher moisture contents environments. The bended former is joint in a sandwich configuration between PEN suspension and the aluminum dome, assuring extended frequency energy transfer for improved response linearity and unparallel reliability.
Through careful use of elementary pieces of neodymium magnets, Eighteen Sound engineers have developed a powerful neodymium magnet assembly able to reach 19 KGauss in the gap in a compact and lightweight structure. The motor structure, throughout the precisely coherent phase plug with 3 circumferential slots and copper ring on the pole piece, reduces inductance effects and distortion. Four top plate air ducts were designed to act as a loading chamber for the diaphragm, implementing mid band distortion and response figures.
The custom designed O-ring creates a tight seal between the plate and the cover assuring air chamber loading. Excellent heat dissipation and thermal exchange are guaranteed by the direct contact between the magnetic structure and the aluminum cover that allows to obtain a lower power compression value.
For the increase in use of high power audio systems at outdoor events or in marine environments, the ability to perform properly under inclement weather conditions is a key-point. The special coating applied to the magnet and the top and back plates of the magnetic structure makes the ND1460A compression driver resistant to the corrosive effects of salts and oxidization.

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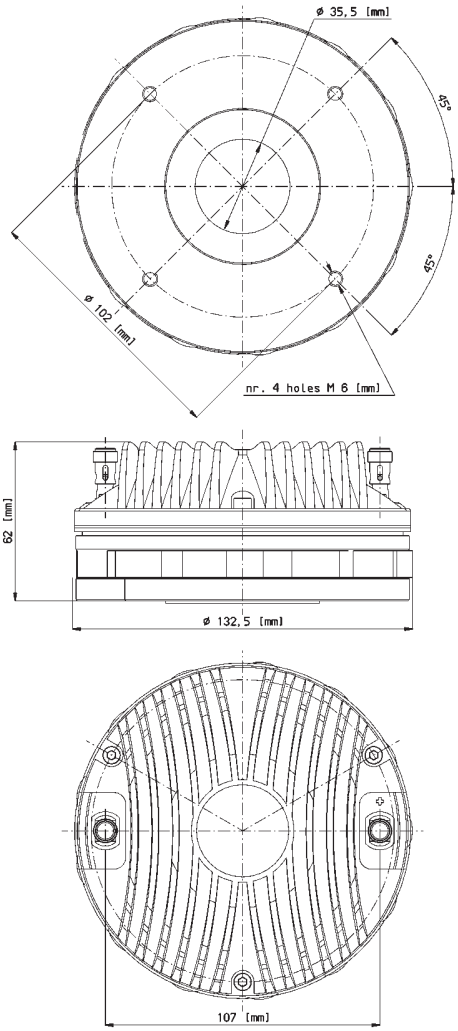

NEODYMIUM HF DRIVERS

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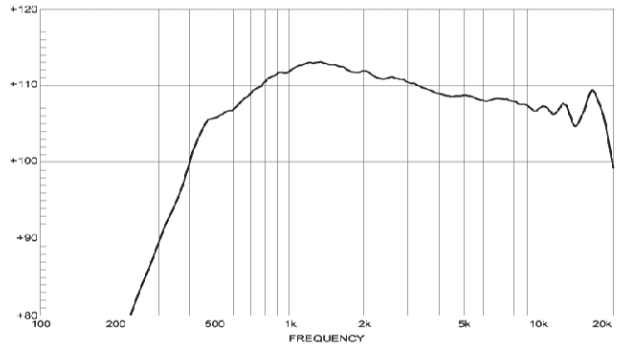
GENERAL SPECIFICATIONS

THROAT DIAMETER	35,5 mm (1,4 in)
RATED IMPEDANCE	8 ohm
DC RESISTANCE	6,2 ohm
MINIMUM IMPEDANCE	8 ohm at 3500 Hz
LE (AT 1KHZ)	124 µH
POWER HANDLING	
CONTINUOUS PINK NOISE (1)	75 W above 1,2 kHz
CONTINUOUS PROGRAM (2)	150 W above 1,2 kHz
SENSITIVITY(1W@1M) (3)	110 dB
FREQUENCY RANGE	500 Hz ÷ 20 kHz
RECOMM. XOVER FREQUENCY	above 800 Hz (12 dB/octave)
DIAPHRAGM MATERIAL	Pen-Aluminum
VOICE COIL DIAMETER	74,4 mm (2,93 in)
VOICE COIL WINDING MATERIAL	Edge-wound aluminum
MAGNET MATERIAL	Neodymium
FLUX DENSITY	1,9 T
BL FACTOR	13,5 N/A
POLARITY	Positive voltage on red terminal gives positive pressure in the throat

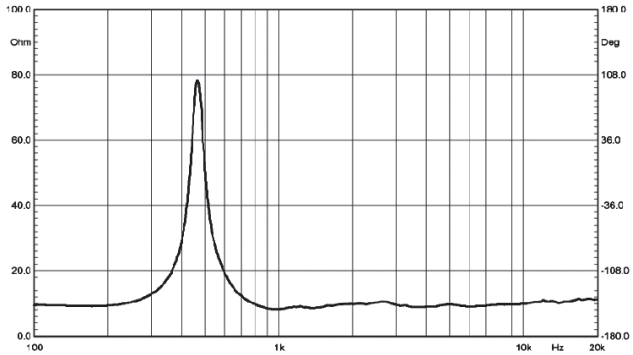
MOUNTING INFORMATIONS

Overall diameter	132,5 mm (5,22 in)
Mounting holes diameter	4 M6 holes 90° at Ø102 mm (4 in)
Bolt circle diameter	102mm (4 in)
Total depth	62 mm (2,5 in)
Net weight	3,2 Kg (7,1 lb)
Shipping weight	3,4 Kg (7,5 lb)
CardBoard Packaging dimensions	132x132x68 mm (5,2x5,2x2,7 in)

ND1460A MEASURED WITH 1W INPUT ON RATED IMPEDANCE AT 1 M DISTANCE ON AXIS FROM THE MOUTH OF XT1464 HORN



FREE AIR IMPEDANCE MAGNITUDE CURVE



NOTES

(1) Continuous pink noise power rating is tested with a pink noise input having a 6 dB crestfactor for two hours duration within the specified range. Power calculated on minimumimpedance.

(2) Program Power is defined as 3 dB greater than continuous pink noise but with 50% dutycycle.

(3) Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth ofXT1464 averaged between 1kHz and 4 kHz.