NSD1460N

Neo High Frequency Driver

Key Features

110 dB 1W / 1m average sensitivity
1,4 inch exit throat
3 inch voice coil diameter
200 W program power handling
Titanium Nitride Coated Dome
True Piston Motion (TPM) Technology
Powerfully Neodymium magnetic structure
Excellent thermal exchange

0422T8M610 8 Ohm
0422T6M610 - 16 Ohm
0472T8N610 - D-kit 8 Ohm
0472T6N610 - D-kit 16 Ohm

NEODYMIUM HF DRIVERS

General Description

NSD1460N is a 1.4 inch exit, 3 inch diaphragm neodymium compression driver that has been designed for top quality sound systems application.

The titanium nitride (TiN) coated dome improves stiffness with direct benefits in transient and intermodulation distortion response. With its very high value of elasticity modulus (6 times higher than titanium and 2 times higher than beryllium), nitride layer doubles the diaphragm stiffness, extending the pistonic motion frequency range by 25%, and showing a predictable, ideal frequency response decay without top-end spurious resonances.

The titanium diaphragm is produced in-house and has been developed to assure unmatched transient response: the nitride-free ellipsoidal suspension shape has been designed to maintain constant titanium stiffness, assuring a 3rd harmonic distortion lower than 0.05% over the whole working frequency range.

The diaphragm assembly is made joining the voice coil former directly to the titanium dome on its upper bend edge. In comparison with a usual straight former joint, this joint type assures extended frequency energy transfer for improved response linearity and unparallel reliability, allowing enhanced motion control of the dome in real working conditions.

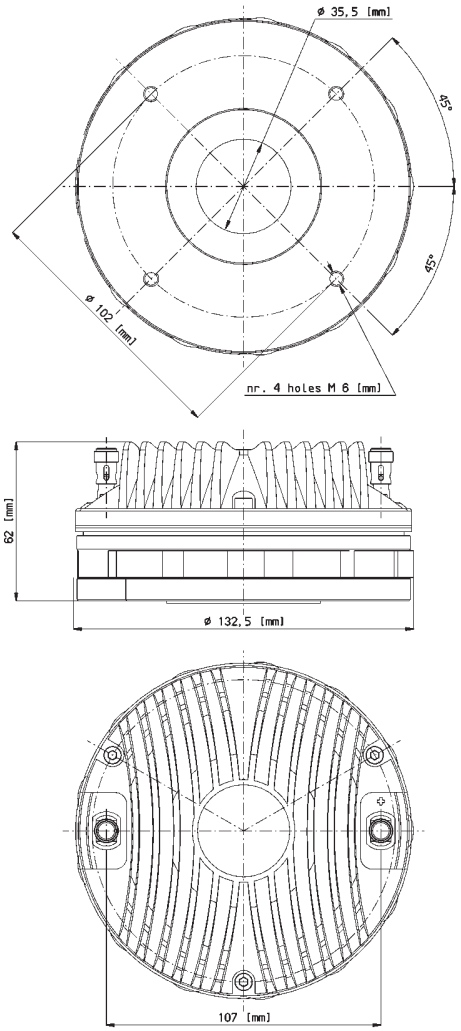
Treated Nomex voice coil former, suitable for use in higher moisture content environments, shows a 30% higher value of tensile elongation at a working operative temperature (200°C) when compared to Kapton.

By carefully using elementary pieces of neodymium, the magnet assembly flux reaches 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 effect and distortion. Four top plate air ducts have been designed to act as a loading chamber for the diaphragm, implementing mid band distortion and response figures.

A custom 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 which gives a lower power compression value.

A special coating is applied to the magnetic structure, making the NSD1460N resistant to the corrosive effects of salts and oxidization.



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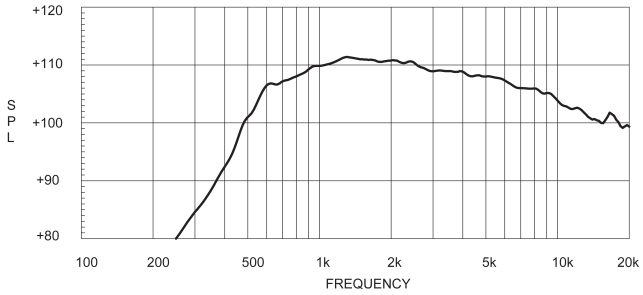
GENERAL SPECIFICATIONS

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
AES POWER (1)	100 W above 1,2 kHz
PROGRAM POWER (2)	200 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	Treated Titanium
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

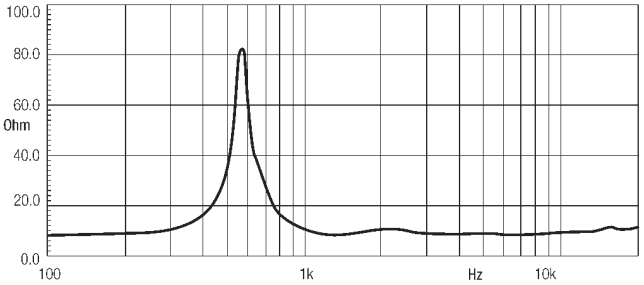
MOUNTING INFORMATIONS

Overall diameter	132,5 mm (5,22 in)
Mounting holes diameter	4 M6 holes 90° at Ø102 mm (4 in)
Bolt circle diameter	102 mm (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)

NSD1460N 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) AES power rating is tested with a pink noise input having a 6 dB crest factor for two hours duration within the specified range. Power calculated on minimum impedance.

(2) Program power rating is defined as 3 dB greater than AES rating, and is a conservative expression of the transducer ability to handle music program material.

(3) Sensitivity is measured on 1 W input on rated impedance at 1 m on axis from the mouth of XT1464 horn averaged between 1 kHz and 4 kHz.