

NSD1095N

Key Features

- 110 dB SPL 1W / 1m average sensitivity
- 1 inch exit throat
- 1,75 inch voice coil diameter
- 100W program power handling
- True Piston Motion TiN coated titanium diaphragm
- Neodymium ring magnetic structure
- Proprietary phase plug design
- Excellent thermal exchange

General Description

The NSD1095N 1 inch exit neodymium compression driver has been designed for situations where the highest quality is required.

Equipped with proprietary phase plug architecture, the NSD1095N has been designed to give a smooth coherent wavefront at the horn entrance across the whole working frequency range. The phase plug short openings and high flare rate value assure low distortion and overall, this kind of phase plug demonstrates remarkable improvements in mid-high frequency reproduction.

A further innovation in the NSD1095N is the titanium diaphragm nitrogen treatment, a proprietary technology defined as True Piston Motion - TPM technology developed after extensive research by Eighteen Sound. The coating is realized in a PVD - Physical Vapor Deposition - vacuum chamber. With its very high value of elasticity modulus (six times higher than titanium and two times higher than beryllium), the nitride thin film is capable of doubling the diaphragm overall stiffness with obvious benefits in terms of impulse response and intermodulation distortion reduction. The frequency response is then extended by 25%, showing a predictable, ideal piston behavior, avoiding top-end spurious resonances.

An edge-wound copper-clad aluminum voice coil, wound on proprietary treated Nomex, completes the diaphragm assembly. Nomex shows a 30% higher value of tensile elongation at a working operative temperature (200°C) when compared to Kapton. Moreover, this proprietary former material is also suitable for use in high moisture content environments.

The powerful neodymium magnet assembly has been designed to obtain 20KGauss in the gap giving major benefits in transient response.

A copper ring on the pole piece reduces inductance above 10 kHz, improving phase and impedance linearization.

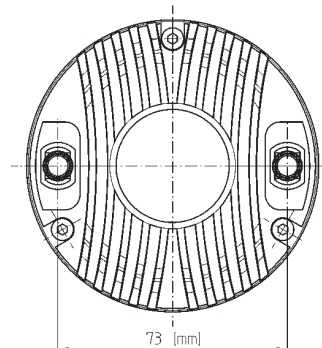
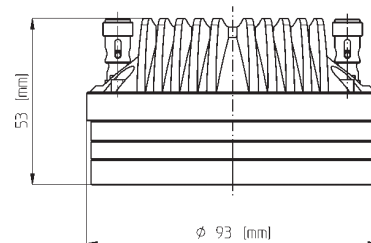
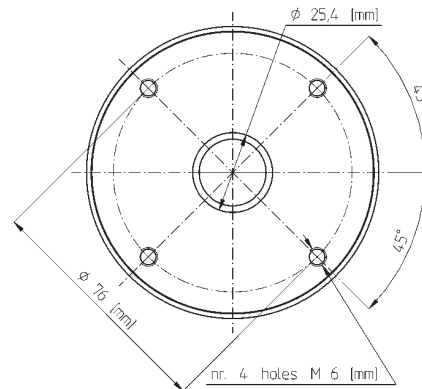
The custom designed O-ring creates a tight seal between the plate and the cover assuring air chamber loading. Excellent heat dissipation and thermal exchange are guaranteed by the direct contact between the magnetic structure and the aluminum cover which leads to a lower power compression value.

A special treatment has been applied to the magnet and the top and back plates of the magnetic structure making the driver more resistant to the corrosive effects of salts and oxidization.

Neo High Frequency Driver



0421T8N410 80hm
0421T6N410 160hm



NEODYMIUM HF DRIVERS

NSD1095N

Neo High Frequency Driver

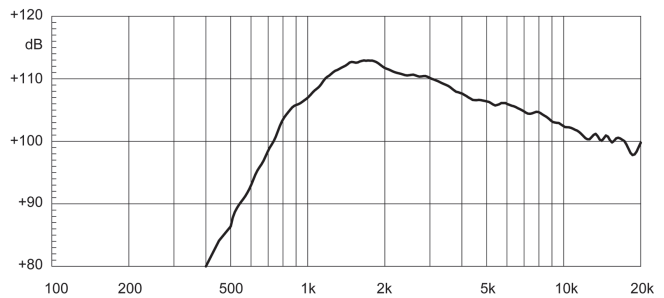
GENERAL SPECIFICATIONS

| | |
|-----------------------------|--|
| THROAT DIAMETER | 25,4 mm (1 in) |
| RATED IMPEDANCE | 8 ohm |
| DC RESISTANCE | 5,3 Ohm |
| MINIMUM IMPEDANCE | 7 Ohm at 4000Hz |
| LE (AT 1KHZ) | 67 µH |
| AES POWER (1) | 50 W above 1,6 kHz |
| PROGRAM POWER (2) | 100 W above 1,6 kHz |
| SENSITIVITY (1W@1M) (3) | 110 dB |
| FREQUENCY RANGE | 1600Hz ÷ 20kHz |
| RECOMM. XOVER FREQUENCY | 1600Hz (12dB/oct slope) |
| DIAPHRAGM MATERIAL | TiN coated Titanium |
| VOICE COIL DIAMETER | 44,4 mm (1 3/4 in) |
| VOICE COIL WINDING MATERIAL | Edge-wound aluminum |
| MAGNET MATERIAL | Neodymium |
| FLUX DENSITY | 2 T |
| BL FACTOR | 9,1 N/A |
| POLARITY | Positive voltage on "+" terminal gives positive pressure in the throat |

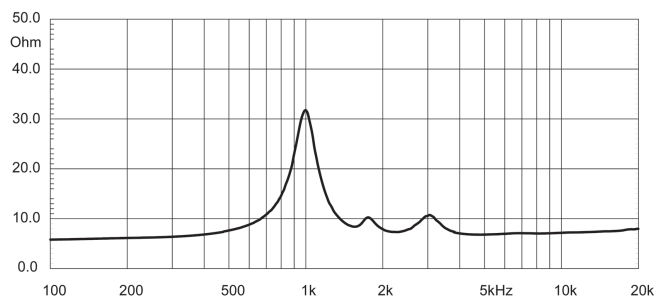
MOUNTING INFORMATION

| | |
|--------------------------------|----------------------------------|
| Overall diameter | 93 mm (3,7 in) |
| Mounting holes diameter | 4 M6 holes 90° at Ø 76 mm (3 in) |
| Bolt circle diameter | 76 mm (3 in) |
| Total depth | 53 mm (2,1 in) |
| Net weight | 1,2 Kg (2,6 lb) |
| Shipping weight | 1,3 Kg (2,9 lb) |
| CardBoard Packaging dimensions | 97x97x58 mm (3,8x3,8x2,3 in) |

NSD1095N MEASURED WITH 1W INPUT ON RATED IMPEDANCE AT 1M DISTANCE ON XT1086 HORN MOUTH AXIS



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 at 1W input on rated impedance at 1m on axis from the mouth of XT1086 horn averaged between 1 kHz and 4 kHz.

Eighteen Sound engages in research and product improvement. New materials and design refinements can be introduced into existing products without notice.