

15NLW9401

Extended Low Frequency Neo Transducer

Key Features

- 97,5 dB SPL 1W / 1m average sensitivity
- 100 mm (4 in) Interleaved Sandwich Voice coil (ISV)
- 1200W AES power handling
- Fiberglass reinforced water repellent treated cone
- Double Silicon Spider (DSS) for improved excursion control and linearity
- High grade neodymium magnet assembly
- Improved heat dissipation via multiple back-plate vents
- Ideal for 60 to 130 lt subwoofer cabinets



General Description

The 15NLW9401 is a 15" neodymium extended low frequency loudspeaker with 100mm (4in) diameter voice coil. It has been designed for use as a low bass or subwoofer component in either a more compact reflex, bandpass or horn loaded configuration. It provides clean, linear, undistorted low frequency reproduction at very high power levels. In its reflex configuration, it can be used in extremely compact enclosures (60 - 130 lt) with tuning frequency as low as 45 Hz.

The high grade neodymium magnet assembly assures high flux concentration, low power compression and excellent heat exchange, resulting in high levels of force factor and power handling with an optimum power to weight ratio.

The high excursion capabilities of the surround and suspension system, in conjunction with the Double Silicon Spider (DSS), enable the 15NLW9401 to achieve high levels of linear travel and maintain full control of the moving mass.

The 15NLW9401 features a dedicated fiberglass reinforced water repellent treated cone, showing a high damping mode behaviour.

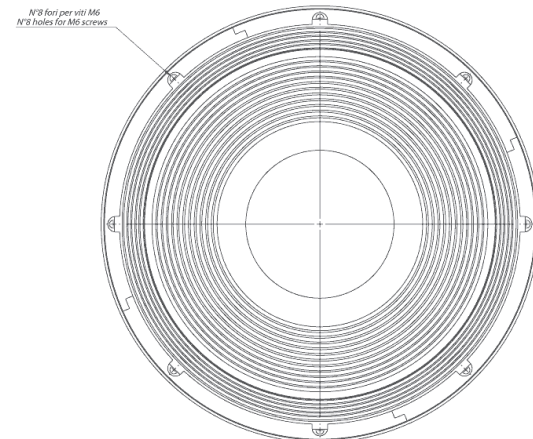
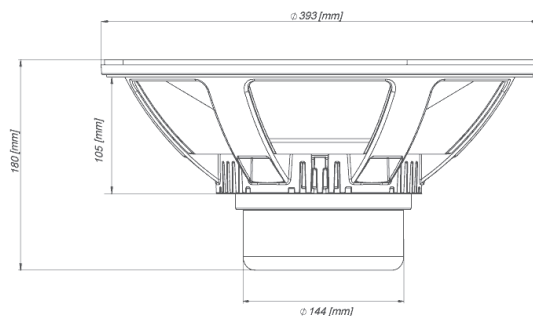
The suspension system provides symmetric large signal characteristics throughout the whole working range, providing low harmonic distortion at different excitation levels.

The 100mm (4in) 4-layers Interleaved Sandwich Voice coil (ISV) provides high levels of thermal stability and durability. The weight of the windings are evenly distributed, providing a uniform motive drive. This, in conjunction with the use of high temperature resistant adhesives, results in an extremely linear motor assembly.

The 15NLW9401 ability to perform properly under inclement weather conditions has been achieved using a special coating applied to metal plates.

022158N940 8 Ohm
022158N940 4 Ohm

027158N940 R-kit 8 Ohm
027154N940 R-kit 4 Ohm



NEODYMIUM LF-MB-MF TRANSDUCERS

15NLW9401

Extended Low Frequency Neo Transducer

GENERAL SPECIFICATIONS

NOMINAL DIAMETER	380mm (15 in)
RATED IMPEDANCE	8 ohms
AES POWER (1)	1200W
PROGRAM POWER (2)	2400W
PEAK POWER (3)	7000W
SENSITIVITY (4)	97,5 dB
FREQUENCY RANGE (5)	37 - 2300 Hz
POWER COMPRESSION @ -10 DB (6)	0,7 dB
POWER COMPRESSION @ -3 DB	1,4 dB
POWER COMPRESSION @ 0 DB	2,0 dB
MAX RECOMM. FREQUENCY	500 Hz
RECOMM. ENCLOSURE VOLUME	60 ÷ 130 lt. (2,12 ÷ 4,59 cuft)
MINIMUM IMPEDANCE	7,2 ohms at 25°C
MAX PEAK TO PEAK EXCURSION	38 mm (1,53 in)
VOICE COIL DIAMETER	100 mm (4 in)
VOICE COIL WINDING MATERIAL	copper
SUSPENSION	Triple roll, Polycotton
CONE	Straight ribbed, fiberglass reinforced water repellent treated paper

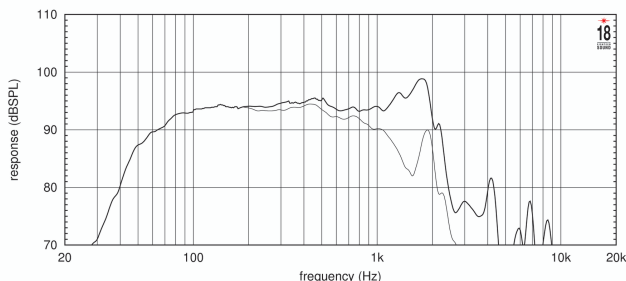
THIELE SMALL PARAMETERS (7)

Fs	39 Hz
Re	5,2 ohms
Sd	0,09 sq.mt. (139,5 sq.in.)
Qms	4,13
Qes	0,28
Qts	0,26
Vas	134 lt (4,73 cuft)
Mms	140 gr (0,31 lb)
BL	25,4 Tm
Linear Mathematical Xmax (8)	±10 mm (±0,39 in)
Le (1kHz)	1,9 mH
Ref. Efficiency 1W@1m (half space)	96,7 dB

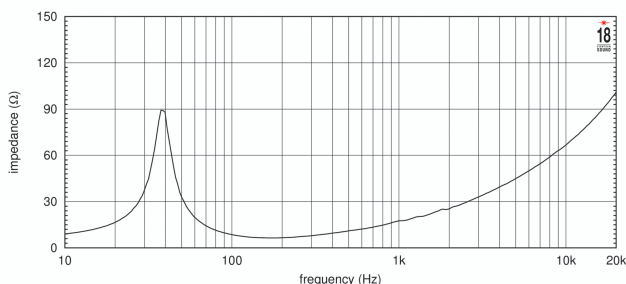
MOUNTING INFORMATION

Overall diameter	393 mm (15,47 in)
N. of mounting holes	8
Mounting holes diameter	7,15 mm (0,28 in)
Bolt circle diameter	371 mm (14.6 in)
Front mount baffle cutout diameter	354 mm (13.93 in)
Rear mount baffle cutout diameter	360 mm (14.17 in)
Total depth	180 mm (7.13 in)
Flange and gasket thickness	12,5 mm (0.49 in)
Net weight	7,6 kg (16.78 lb)
Shipping weight	8,2 kg (18.96 lb)
CardBoard Packaging dimensions	405x405x214 mm (15,94x15.94x8,43 in)

FREQUENCY RESPONSE CURVE OF 15NLW9401 MADE ON 125 LIT. ENCLOSURE TUNED AT 50HZ IN FREE FIELD (4PI) ENVIRONMENT. ENCLOSURE CLOSES THE REAR OF THE DRIVER. THE THIN LINE REPRESENTS 45 DEG. OFF AXIS FREQUENCY RESPONSE.



FREE AIR IMPEDANCE MAGNITUDE CURVE



NOTES

- (1) AES power is determined according to AES2-1984 (r2003) standard
- (2) Program power rating is measured in 125 lt enclosure tuned at 50Hz using a 40-400Hz band limited pink noise test signal with 50% duty cycle, applied for 2 hours.
- (3) The peak power rating represents the maximum permitted instantaneous peak power level over a maximum period of 10ms which will be withstood by the loudspeaker without damage.
- (4) Sensitivity represents the averaged value of acoustic output as measured on the forward central axis of cone, at distance 1m from the baffle panel, when connected to 2,83V sine wave test signal swept between 100Hz and 500Hz with the test specimen mounted in the same enclosure as given for (1) above.
- (5) Frequency range is given as the band of frequencies delineated by the lower and upper limits where the output level drops by 10 dB below the rated sensitivity in half space environment.
- (6) Power compression represents the loss of sensitivity for the specified power, measured from 40-400 Hz, after a 5 min pink noise preconditioning test at the specified power.
- (7) Thiele - Small parameters are measured after the test specimen has been conditioned by AES power and represent the expected long term parameters after a short period of use.
- (8) Linear Math. Xmax is calculated as $(Hvc-Hg)/2 + Hg/4$ where Hvc is the coil depth and Hg is the gap depth.

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

