10NMBA520

High Output MB Neodymium Transducer

Key Features

- 100,5 dB SPL 1W / 1m average sensitivity (AIC on)
- 65 mm (2,5 in) Interleaved Sandwich Voice coil (ISV)
- 300 Watt AES power handling
- Neodymium motor assembly
- AIC (Active Impedance Control) secondary voice coil for superior intelligibility, very low distortion and inductance linearization
- Suitable for high quality two way compact systems
- Suitable for line array applications and multiway systems

Description

The 10NMBA520 is the evolution of the 10NDA520. The transducer is a 10” mid-bass transducer created for compact reflex 2-way enclosures, and when compared to 10NDA520 shows 1 dB increased sensitivity over all operative frequency range, as well as 600 Watts program power handling. It can be used in mid-low sections on line-array systems and everywhere very high quality mid-bass frequency range reproduction is needed. The 10NMBA520 incorporates Active Impedance Control technology (AIC), consisting of an additional coil fixed on the pole piece and connected in parallel to the moving coil. The magnetic field generated by AIC coil has the following effects: 1) Impedance linearization 2) Acoustic and electric phase linearization 3) Significant increase of sensitivity and total SPL 4) Total harmonic distortion reduction 5) Constant power transfer by not absorbing the moving coil’s electromagnetic energy, the AIC offers substantial advantages to the sound quality. The external neodymium magnet assembly assures high flux concentration, low power compression and excellent heat exchange. The curvilinear cone, specified with a high damping wood pulp has been designed to achieve the best possible linearity within its frequency range. The 65 mm (2,5 in) diameter aluminum voice coil is wound on a strong fiberglass former in order to improve force transmission and power handling. A special coating applied to both the top and back plates makes the 10NMBA520 far more resistant to the corrosive effects of salts and oxidization.

Models

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<td>022108N520</td>
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<td>8 Ohm</td>
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General Specifications

Nominal Diameter: 260mm (10 in)
Rated Impedance: 8 Ohm
AES Power: 300W
Program Power: 600W
Peak Power: 900W
Sensitivity: 100.5 dB
Frequency Range: 60 - 7000 Hz
Power Compression @-10dB: 0.7 dB
Power Compression @-3dB: 2.5 dB
Power Compression @Full Power: 3.9 dB
Max Recom. Frequency: 2000 Hz
Recomm. Enclosure Volume: 10 - 40 lt. (0.90 - 1.41 cuft)
Minimum Impedance: 6.3 Ohm at 25°C
Max Peak To Peak Excursion: 24 mm (0.95 in)
Voice Coil Diameter: 65 mm (2.5 in)
Voice Coil winding material: aluminum
Suspension: Double roll, polycotton
Cone: Curvilinear, paper

Thiele Small Parameters

Fs: 60 Hz
Re: 5 Ohm
Sd: 0.035 sq.mt. (54,25 sq.in.)
Qms: 4.2
Qes: 0.24
Qts: 0.23
Vas: 42 lt. (1.48 cu ft)
Mms: 28 gr. (0.06 lb)
BL: 14.6 Tm
Linear Mathematical Xmax: ±4.9 mm (±0.16 in)
Le (1kHz): 0.01 mH (AIC on) - 0.38 mH (AIC off)
Ref. Efficiency 1W@1m (half space): 97.8 dB

Mounting information

Overall diameter: 260 mm (10.24 in)
N. of mounting holes and bolt: 4 on diam. 275 mm (4 on 10.83 in) 8 on diam. 244.5 mm (4 on 9.63 in)
Mounting holes diameter: 7.15 mm (0.28 in)
Front mount baffle cutout ø: 232 mm (9.13 in)
Rear mount baffle cutout ø: 232 mm (9.13 in)
Total depth: 104 mm (4.09 in)
Flange and gasket thickness: 14.5 mm (0.57 in)
Net weight: 3 kg (6.67 lb)
Shipping weight: 3.57 kg (7.88 lb)
Packaging Dimensions: 275 x 275 x 164mm (10.83 x 10.83 x 6.46 in)

Notes

1) AES power is determined according to AES2-1984 (r2003) standard
2) Program power rating is measured in 30 lit enclosure tuned at 55 Hz using a 100-3000Hz 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 500Hz and 2500Hz 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 100-1000 Hz, after a 5 min pink noise preconditioning test at the specified power
7) Linear Math. Xmax is calculated as (Hvc-Hg)/2 + Hg/4 where Hvc is the coil depth and Hg is the gap depth.