



Code: DR-12-021-8R-B2-C0001

Mid-Woofer/12inch/Neo/Paper/800W/8ohm

KEY FEATURES

- ✓ High sensitivity, EXTENDED FREQUENCY RESPONSE
- ✓ 3 demodulation rings, powerful motor structure, dual air-gap
- ✓ High power handling

QUICK SPECS

Impedance
8 Ω

Program Power
1600 W

Sensitivity
95.82 dB

Fs
58.00 Hz

Magnet
Neodymium

Voice Coil
101.6 mm

 [Datasheet \(PDF\)](#)

 [2D Drawing](#)

 [3D Model \(STEP\)](#)

Design Notes

The 123NPM is a truly unique full range woofer. We have designed cutting edge product, using the best available materials and highly optimized design for the best performance in its class. It delivers very high efficiency, (96 dB 1watt / 1 meter), incredibly linear frequency response characteristics with extended HF frequency response, extreme high power handling capability, while generating ultra low harmonic distortion artifacts. The 123NPM uses a lightweight carbon fiber loaded cone assembly along with a high excursion triple roll constant geometry surround. This combination provides remarkable strength, high efficiency and a peak to peak linear excursion of 21mm.

techniques and further optimized to provide the highest levels of cooling efficiency. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

Specifications

GENERAL SPECS

Nominal Diameter	12"
Rated Impedance	8 Ohm
Magnet	Neodymium
Basket Material	Aluminum

POWER HANDLING

AES Power	800 W
Continuous Power	1600 W
Peak Power	3200 W

VOICE COIL

Diameter	101.6 mm
Former	TIL
Winding Height	23 mm

Resonant Frequency (Hz)	55.55 Hz
Re	4.70 $\times 10^2$
Qes	0.450
Qms	12.60
Qts	0.430
Vas	31.60 liters
Sd	551.00 cm ²
Mms	100.00 grams
Rms	2.89
Cms	0.0753
Bl	19.60 T $\times 10^{-3}$ m
Le	0.710 mH
Sensitivity	95.82 dB

General Material

Cone/Dome Material	Paper GF
Spider	Nomex
T-Plate	12.5 mm
Xmax (peak)	5.25 mm
Xmech	17.75 mm
Overall Diameter	320.35 mm
Bolt Circle Diameter	299.00 mm
Baffle Cutout Dia.	281.90 mm
Mounting Holes	8
Depth (flange to rear)	140.50 mm
Net Weight	6.20 kg

ORDERING CODES

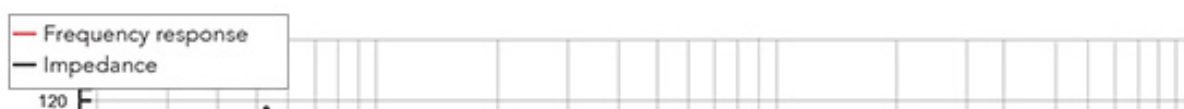
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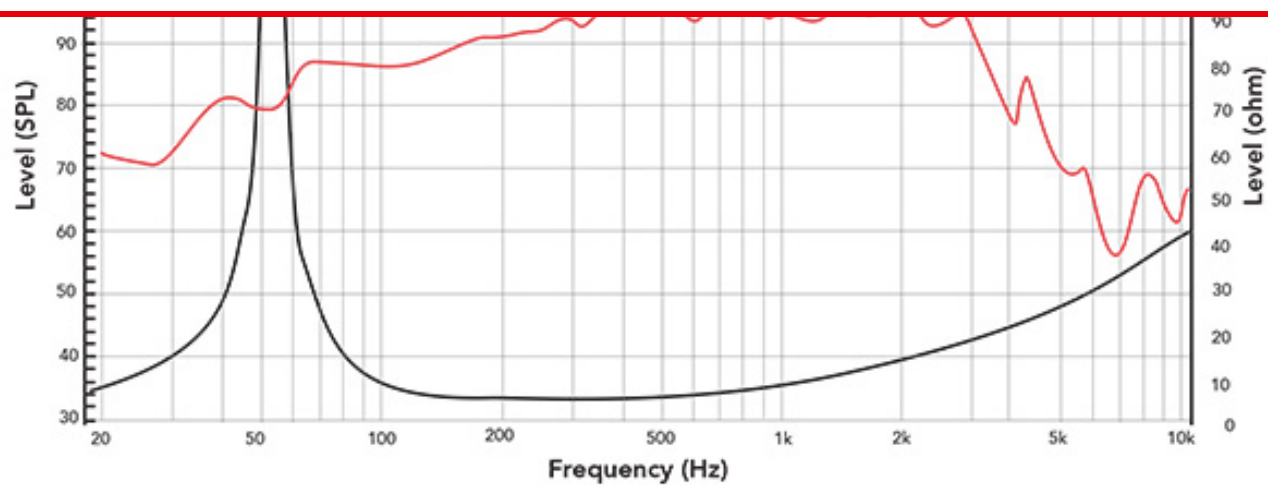
DOWNLOADS

 Datasheet (PDF)
  2D Drawing (PDF)
  3D Model (STEP)

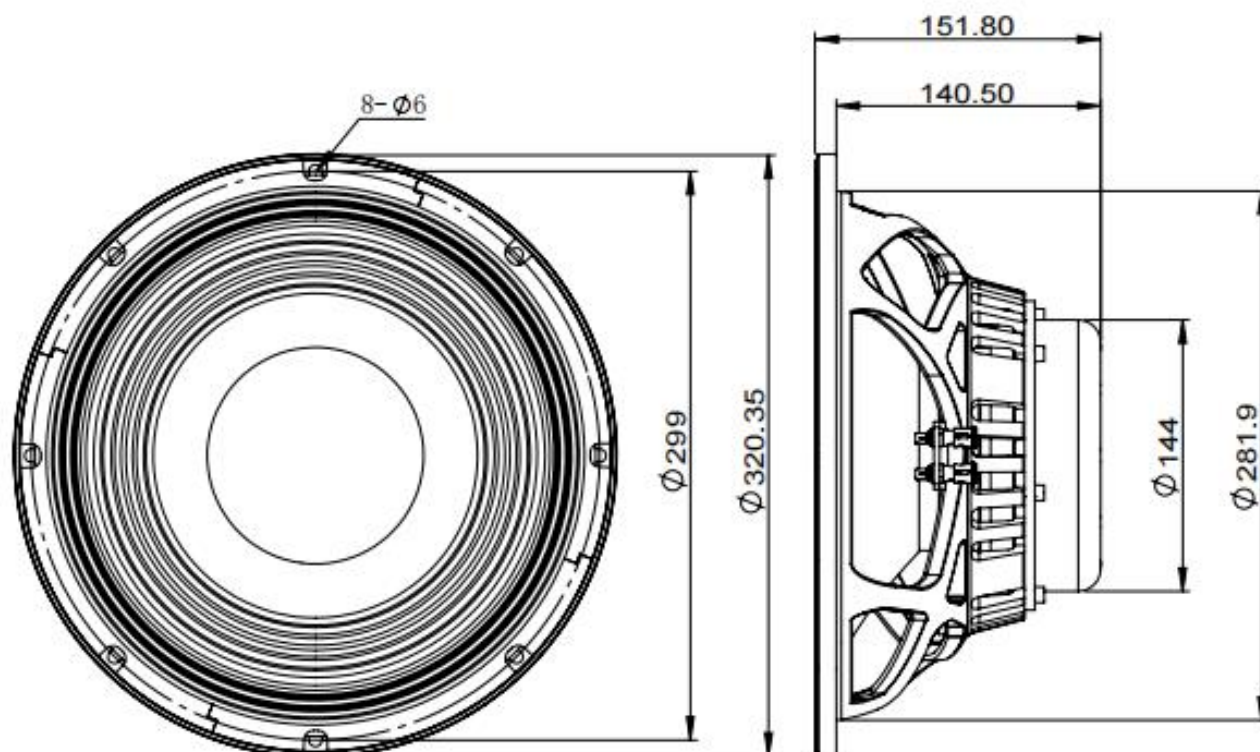
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Frequency Response & Impedance





2D Drawing



multi-way systems requiring high sensitivity (96 dB 1W/1m) and controlled low-frequency behavior. The driver uses a balanced motor-suspension design that provides good cone control while maintaining usable output across its operating bandwidth.

The driver is intended for use with high-power amplification (approx. 800 W AES / 1600 W continuous) and DSP control. A high-pass filter in the range of 35-58 Hz is recommended depending on enclosure tuning, along with proper limiting to manage thermal and mechanical stress. Typical operating bandwidth is 40-2000 Hz, covering bass through upper-mid frequencies for direct integration with a compression driver or tweeter in a two-way or multi-way system.

This design is particularly effective in single or multi-driver bass reflex systems used in professional two-way and multi-way PA systems, powered monitors, and compact bass-reflex enclosures, where extended bandwidth, controlled distortion across the full operating range, and versatile system integration are required.

Recommended enclosure volumes are simulated results. For best enclosure volumes and tuning, we recommend secondary simulation and careful evaluation. Several rounds of samples and fine-tuning may be required for optimal results.

Enclosure Recommendations

Recommended enclosure alignments (bass reflex):

- 20 liters tuned to 67 Hz: high output, strong mid-bass, reduced excursion; -3 dB approx. 62 Hz, HP filter 59 Hz
- 25 liters tuned to 61 Hz: balanced response, general-purpose (recommended); -3 dB approx. 56 Hz, HP filter 51 Hz
- 30 liters tuned to 55 Hz: extended low-frequency, requires HP filter protection; -3 dB approx. 47 Hz, HP filter 43 Hz

Frequently Asked Questions

What enclosure is recommended for the 123NPM?



What applications is the 123NPM suited for?



What are the power and sensitivity specs of the 123NPM?



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