



Code: DR-10-007-8R-B2-C0001

REDCATT 101NPM 10-inch neodymium professional mid-woofer: 150 W AES, 94.6 dB sensitivity, 8 Ω , Fs 53 Hz, 50.8 mm voice coil. Full T/S parameters, datasheet, 2D drawing and STEP CAD file.

KEY FEATURES

- ✓ Ultra lightweight, designed for portable products
- ✓ High efficiency, low harmonic distortion
- ✓ Carbon fiber loaded paper cone

QUICK SPECS

Impedance
8 Ω

Program Power
300 W

Sensitivity
94.56 dB

Fs
53.00 Hz

Magnet
Neodymium

Voice Coil
50.8 mm

 Datasheet (PDF)

 2D Drawing

 3D Model (STEP)

Design Notes

The 101NPM is a high efficiency, (95 dB 1watt / 1 meter) 10-inch mid-woofer with incredibly linear frequency response characteristics, high power handling capability, while generating ultra low harmonic distortion artifacts. The 101NPM uses a lightweight glass fiber loaded cone assembly along with a high excursion triple roll surround. This combination provides a lightweight, yet strong, piston, high efficiency and a peak to peak maximum excursion of 13.6.

consistent, high integrity magnetic flux gap, ultra low distortion characteristic and high efficiency cooling system. The magnetic structure has integrated two aluminum shorting rings. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

Specifications

GENERAL SPECS

Nominal Diameter	10"
Rated Impedance	8 Ohm
Magnet	Neodymium
Basket Material	Aluminum

POWER HANDLING

AES Power	150 W
Continuous Power	300 W
Peak Power	600 W

VOICE COIL

Diameter	50.8 mm
Winding Wire	CCAR
Former	Glass Fiber
Winding Height	14.5 mm

Resonant Frequency (Hz)	55.55 Hz
Re	5.00 Ω
Qes	0.610
Qms	5.51
Qts	0.550
Vas	49.70 liters
Sd	363.00 cm ²
Mms	32.60 grams
Rms	1.97
Cms	0.2800
Bl	9.60 T·m
Le	0.530 mH
Sensitivity	94.56 dB

General Material

Table

Cone/Dome Material	Paper CF
Spider	Nomex
T-Plate	8 mm
Xmax (peak)	3.25 mm
Xmech	11.25 mm
Overall Diameter	262.00 mm
Bolt Circle Diameter	246.00 mm
Baffle Cutout Dia.	230.00 mm
Mounting Holes	8
Depth (flange to rear)	111.50 mm
Net Weight	1.97 kg
Packaging Dimensions	310×310×170 mm

ORDERING CODES

Product Code DR-10-007-8R-B2-C0001

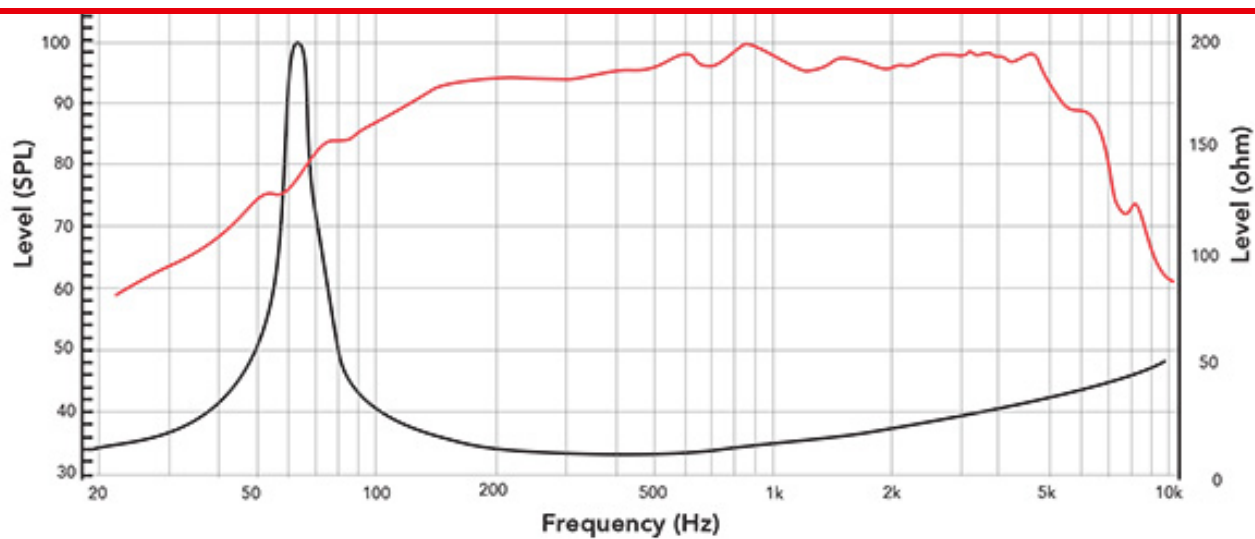
DOWNLOADS

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

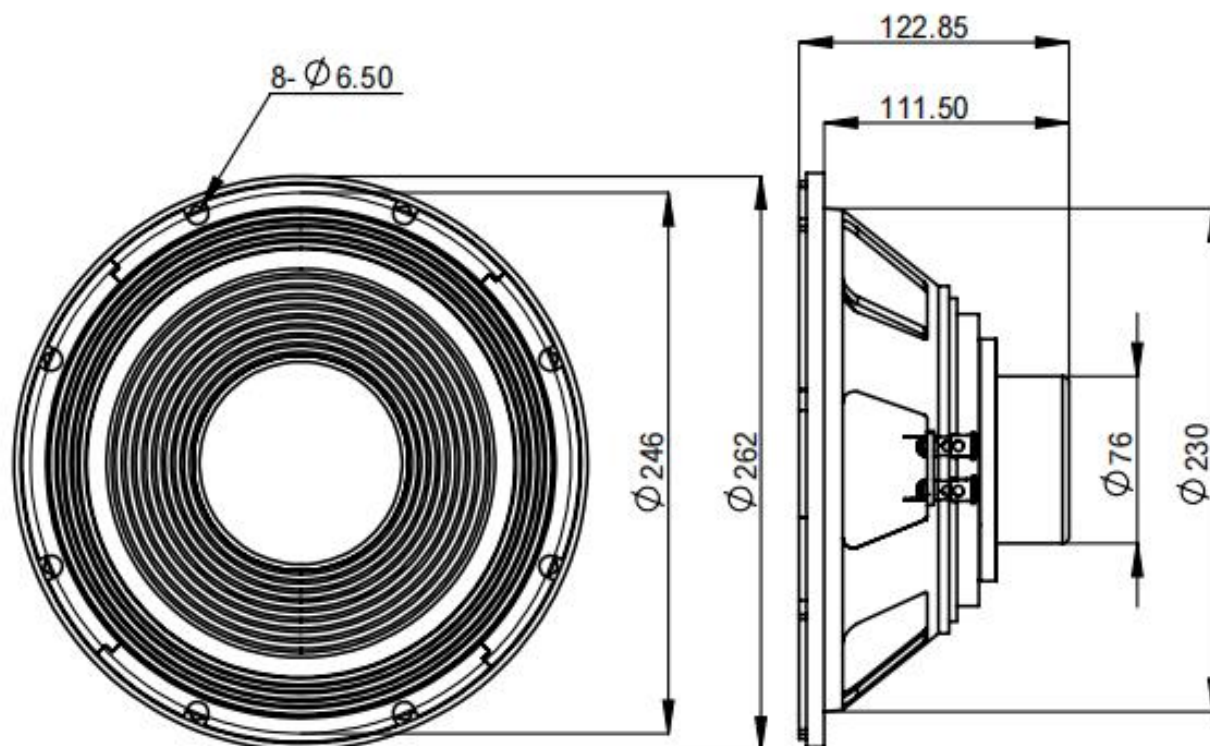
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Frequency Response & Impedance





2D Drawing



lightweight, portable professional loudspeaker systems where minimum weight and maximum sensitivity are critical design parameters. It features a 2-inch CCAR (copper clad aluminum round wire) voice coil on a glass fiber former, a carbon fiber loaded paper cone with a triple roll fabric surround, and an inside neodymium slug motor with 2 aluminum shorting rings for minimized flux modulation and very low harmonic distortion. At 95 dB sensitivity (1W/1m) with an exceptionally light moving mass of 32.6 grams - roughly half that of a typical professional 10-inch woofer - the driver achieves its high output through efficiency rather than excursion, making it ideal for portable systems where amplifier power and cabinet weight must be minimized.

The driver is rated for approximately 150 W AES / 300 W continuous power handling and is intended for use with DSP-controlled amplification. A high-pass filter in the range of 40-51 Hz (24 dB/octave Linkwitz-Riley) is recommended for vented alignments depending on enclosure tuning, with a typical crossover to a high-frequency driver at 1.5-3 kHz. The modest linear excursion (3.25 mm) reflects the efficiency-first design approach - the driver's 95 dB sensitivity delivers high SPL from moderate amplifier power, with the triple roll surround providing controlled mechanical excursion to 13.6 mm peak-to-peak for transient headroom.

This driver is particularly effective in lightweight portable 2-way and multi-way PA tops, stage monitors, column speakers, and installation systems where system weight, high sensitivity, and low distortion are priorities. The inside neodymium slug motor, carbon fiber loaded paper cone, aluminum basket, and triple roll surround provide a lightweight, durable package suited to demanding portable and touring applications where equipment must be carried, rigged, and transported frequently.

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):

approx. 52 Hz, HP filter 46 Hz

- 30 liters tuned to 50 Hz: extended low-frequency, requires HP filter protection; -3 dB

approx. 42 Hz, HP filter 38 Hz

Frequently Asked Questions

What are the key features of the 101NPM?



What enclosure is recommended for the 101NPM?



What applications is the 101NPM suited for?



What are the power and sensitivity specs of the 101NPM?



Independent Reviews



HiFi Test · May 2024
Redcatt 101NPMX8



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