



Code: DR-10-018-8R-B2-C0001

REDCATT 10NPM-2 10-inch neodymium professional mid-woofer: 200 W AES, 95.1 dB sensitivity, 8 Ω , Fs 58 Hz, 76.2 mm voice coil. Full T/S parameters, datasheet, 2D drawing and STEP CAD file.

KEY FEATURES

- ✓ High sensitivity, hi power handling
- ✓ Carbon fiber loaded paper cone, nomex spider
- ✓ Excellent frequency response

QUICK SPECS

Impedance
8 Ω

Program Power
400 W

Sensitivity
95.07 dB

Fs
58.00 Hz

Magnet
Neodymium

Voice Coil
76.2 mm

 [Datasheet \(PDF\)](#)

Design Notes

The 10NPM is a high efficiency, (95 dB 1watt / 1 meter) 10-inch mid bass woofer with incredibly linear frequency response characteristics, extreme high power handling capability while generating low harmonic distortion artifacts.-

The 10NPM uses a lightweight carbon fiber loaded cone assembly along with a precision double roll constant geometry surround. This combination provides remarkable strength, high efficiency and a excursion linearity of 15.4mm.

consistent, high integrity magnetic flux gap, ultra low distortion characteristic and high efficiency cooling system. 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	200 W
Continuous Power	400 W
Peak Power	800 W

VOICE COIL

Diameter	76.2 mm
Winding Wire	CCAW
Former	Glass Fiber
Winding Height	23.2 mm

Resonant Frequency (Hz)	55.55 Hz
Re	6.50 Ω
Qes	0.360
Qms	4.68
Qts	0.330
Vas	29.30 liters
Sd	363.10 cm ²
Mms	47.00 grams
Rms	3.66
Cms	0.1600
Bl	17.90 T·m
Le	0.790 mH
Sensitivity	95.07 dB

Construction Material

Table

Cone/Dome Material	Paper CF
Spider	Nomex
T-Plate	10.5 mm
Xmax (peak)	6.35 mm
Xmech	16.85 mm
Overall Diameter	262.00 mm
Bolt Circle Diameter	246.00 mm
Baffle Cutout Dia.	234.00 mm
Mounting Holes	4
Depth (flange to rear)	107.80 mm
Net Weight	3.50 kg
Packaging Dimensions	310×310×170 mm

ORDERING CODES

Product Code	DR-10-018-8R-B2-C0001
--------------	-----------------------

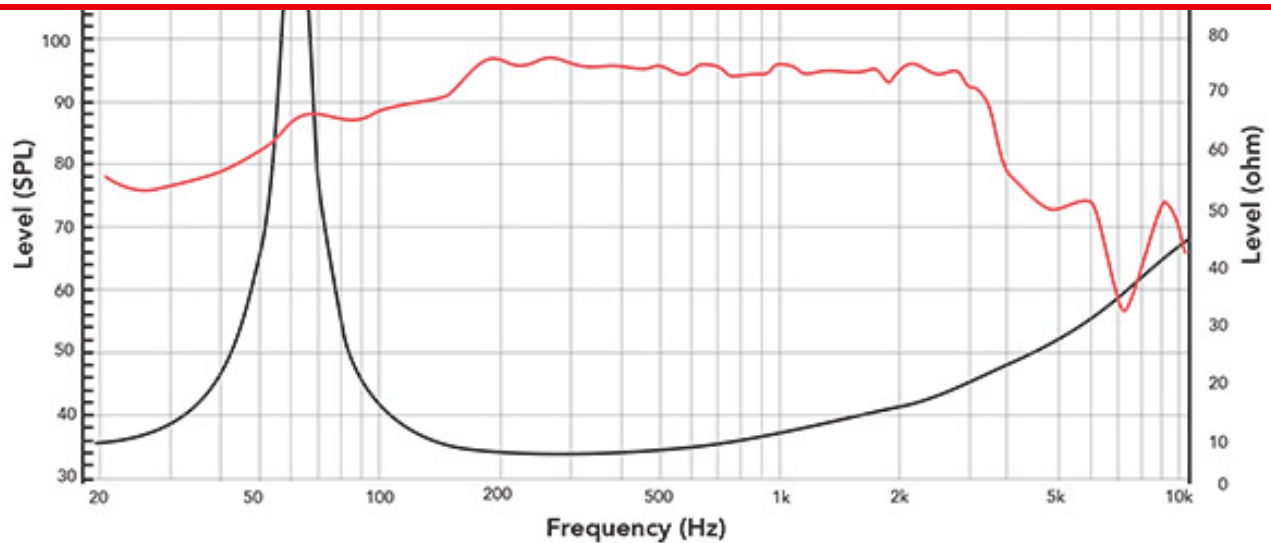
DOWNLOADS

 Datasheet (PDF)

Covered by the REDCATT **3-year Limited Warranty**.

Frequency Response & Impedance





Technical Summary

The 10NPMX8-319 is a 10-inch neodymium pro mid-woofer designed for professional 2-way PA speaker systems, compact touring cabinets, and permanently installed enclosures crossed to a compression driver or horn. It features a carbon fiber paper cone, double-roll constant-geometry fabric surround, Nomex spider, and a 3-inch CCAW voice coil on a glass fiber former, driven by an inside-slug neodymium magnetic circuit designed for minimized flux modulation and high flux-gap integrity. Sensitivity is 95.07 dB (1W/1m). With a Q_{ts} of 0.33, this driver uses a low Q_{ts} , high motor strength design optimized to maintain consistent performance at high drive levels, with controlled excursion and reduced thermal compression during long-term operation.

The 10NPMX8-319 handles approx. 200 W AES and 400 W continuous power, with a peak SPL of 118 dB at 1 metre (AES) and 121 dB at continuous rated power. A high-pass filter in the 45-60 Hz range is recommended depending on alignment. The operating bandwidth is approximately 65-1,000 Hz, with cone beaming onset near 1,018 Hz and inductance rolloff near 1,309 Hz; a crossover to a compression driver on horn at 800 Hz to 1.5 kHz is required. Third or fourth-order crossover slopes are recommended to control directivity above 1,018 Hz.

where a neodymium motor's reduced weight is advantageous. The inside-slug neodymium magnetic circuit, CCAW voice coil, and glass fiber former provide a lightweight motor assembly and consistent high-efficiency output for demanding sustained-power PA applications.

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):

- 25 liters tuned to 64 Hz: high output, strong mid-bass, reduced excursion; -3 dB approx. 59 Hz, HP filter 56 Hz
- 30 liters tuned to 56 Hz: balanced response, general-purpose (recommended); -3 dB approx. 48 Hz, HP filter 46 Hz
- 35 liters tuned to 49 Hz: extended low-frequency, requires HP filter protection; -3 dB approx. 42 Hz, HP filter 37 Hz

Frequently Asked Questions

What are the key features of the 10NPM-2?



What enclosure is recommended for the 10NPM-2?



What applications is the 10NPM-2 suited for?



Related professional mid-woofers & midranges

[All professional mid-woofers & midranges](#) [All 10-inch woofers](#) [All neodymium drivers](#)



LF 10"
10INOF



LF 10"
101FHW



LF 10"
101NPM



LF 10"
10FHW

Engineering-driven loudspeaker manufacturer. High-performance audio transducers for professional audio, OEM, and custom applications.

PRODUCTS

All professional drivers

Professional woofers

Professional subwoofer drivers

Professional mid-woofers & midranges

Professional compression drivers

Professional tweeters

Full-range drivers

Coaxial drivers

Neodymium drivers

Full catalog & filters

COMPANY

About

OEM & ODM Development

Engineering Data & API

Technology

Quality

Warranty

FAQ

Contact

Warranty Claim

