



Code: DR-6-006-4R-B2-C0001

REDCATT 61XR 6-inch neodymium professional mid-woofer: 100 W AES, 87 dB sensitivity, 4 Ω , Fs 64 Hz, 44.5 mm voice coil. Full T/S parameters, datasheet, 2D drawing and STEP CAD file.

KEY FEATURES

- ✓ EXTENDED FREQUENCY RESPONSE, incredible sound reproduction clarity
- ✓ Secondary AND STATIC shorting COIL
- ✓ High power handling

QUICK SPECS

Impedance
4 Ω

Sensitivity
87.02 dB

Magnet
Neodymium

Program Power
200 W

Fs
64.00 Hz

Voice Coil
44.5 mm

 [Datasheet \(PDF\)](#)

 [2D Drawing](#)

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

Design Notes

The 61XR was designed to be simply the best driver for 2-way and multi-way systems on the market. We bring this with clarity in the mid-frequencies and undistorted bass. The combination of our XR patented technology with static shorting coil brings an nonparallel opportunity to the audio designers.

Motor Design

The magnetic design incorporates large neodymium magnets placed along the voice coil winding, together with the 2nd and static coil placed on the pole piece. This has allowed

Our extensive R&D on the surround foam material has yielded material that has proven its benefits over and over again. The surround is extremely light, yet it allows the cone excursion as the traditional, but heavier, rubber surround.

61XR best application is in hi-quality home hi-fi applications and studio monitors where the requirements for precise sound reproduction without distortion artifacts are required.

Specifications

GENERAL SPECS

Nominal Diameter	6"
Rated Impedance	4 Ohm
Magnet	Neodymium
Basket Material	Aluminum

POWER HANDLING

AES Power	100 W
Continuous Power	200 W
Peak Power	400 W

VOICE COIL

Diameter	44.5 mm
Winding Wire	Copper
Former	Glass Fiber
Winding Height	10.3 mm

Resonant Frequency (Hz)	84.88 Hz
Re	3.10 Ω
Qes	0.960
Qms	2.88
Qts	0.720
Vas	8.60 liters
Sd	132.70 cm ²
Mms	17.30 grams
Rms	2.40
Cms	0.3600
Bl	4.77 T·m
Le	0.060 mH
Sensitivity	87.02 dB

General Material

Cone/Dome Material	Paper CF
Spider	Nomex
T-Plate	26.5 mm
Xmax (peak)	8.1 mm
Xmech	16.6 mm
Overall Diameter	181.50 mm
Bolt Circle Diameter	169.50 mm
Baffle Cutout Dia.	151.00 mm
Mounting Holes	6
Depth (flange to rear)	94.00 mm
Net Weight	1.50 kg

ORDERING CODES

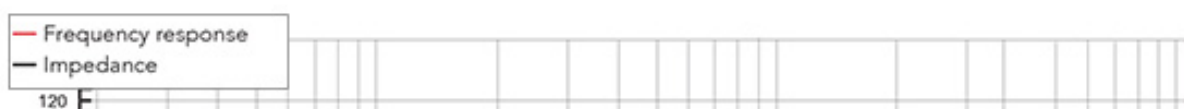
Product Code	DR-6-006-4R-B2-C0001
--------------	----------------------

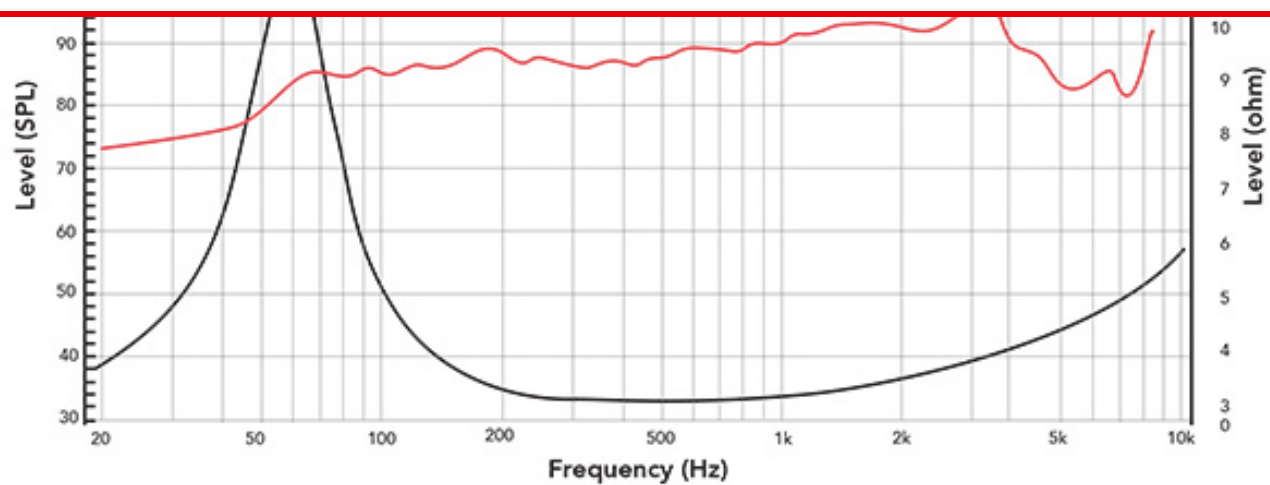
DOWNLOADS

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

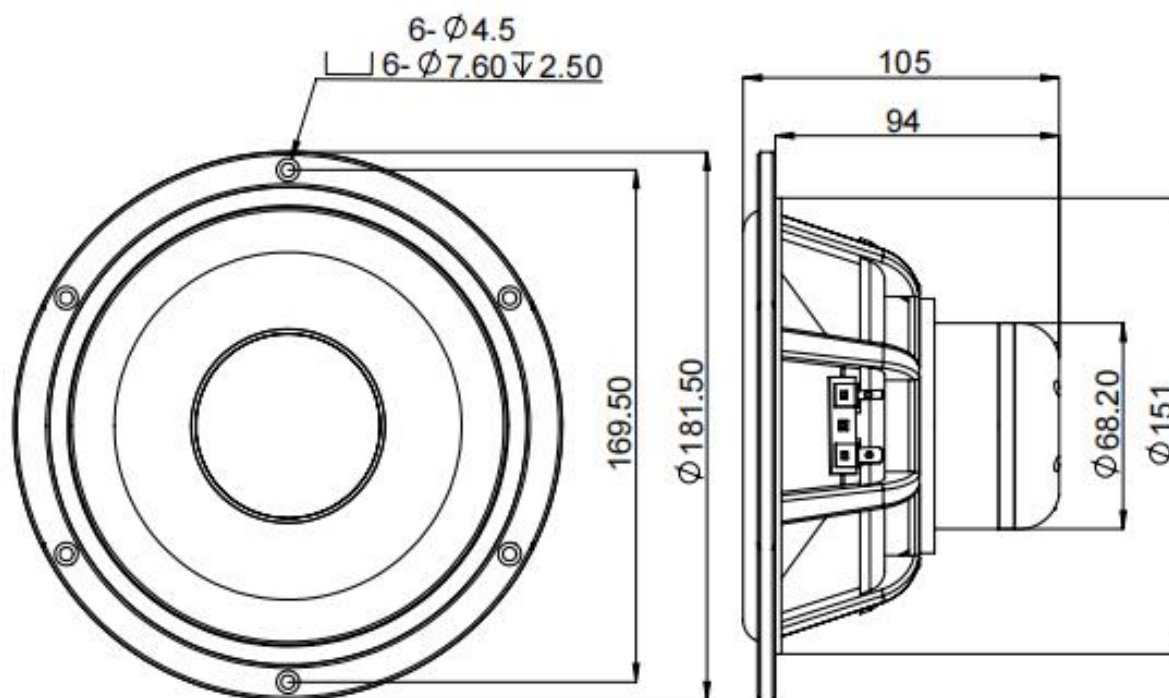
Covered by the REDCATT **3-year Limited Warranty**.

Frequency Response & Impedance





2D Drawing



studio monitoring, built around the proprietary XR motor topology with radial neodymium magnets and both secondary and static shorting coils. The dual shorting coil design reduces voice coil inductance to just 0.06 mH, virtually eliminating inductive impedance rise and enabling extended, distortion-free midrange performance well suited for precise crossover integration.

The driver handles 100 W AES (200 W continuous) into its 4-ohm nominal impedance, with exceptional mechanical headroom - 8.1 mm X_{max} and 16.6 mm X_{mech} (30 mm peak-to-peak) - enabling sustained low-frequency output well below the sealed resonance. This excursion capability, unusual for a 6-inch frame, makes the driver effective in both standalone 2-way designs and in active systems with subwoofer support.

Intended applications include premium bookshelf and standmount loudspeakers, nearfield and midfield studio monitors, and mid-woofer duty in multi-way floorstanding systems where clarity, low distortion, and precise imaging are paramount.

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 (sealed):

- 8 liters (Q_{tc} approx. 1.0): compact sealed, punchy character with broad resonance lift; system resonance approx. 70 Hz; best for bookshelf or compact 2-way cabinets
 - 12 liters (Q_{tc} approx. 0.85): moderate sealed, slightly warm character; system resonance approx. 67 Hz; recommended starting point for 2-way home audio
 - 20 liters (Q_{tc} approx. 0.72): larger sealed, natural smooth rolloff with room gain; system resonance approx. 65 Hz; in-room -3 dB approx. 45-55 Hz with boundary reinforcement
- Vented enclosures are not recommended for this driver due to the high Q_{ts} (0.72); port dimensions become impractical in any cabinet volume suitable for a 6-inch mid-woofer.

What are the key features of the 61XR?



What enclosure is recommended for the 61XR?



What applications is the 61XR suited for?



What are the power and sensitivity specs of the 61XR?



Related professional mid-woofers & midranges

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



LF 6"
61FHM-1



LF 6"
61FHM-1



LF 6"
61NPM



LF 6"
6FHM



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

OEM & ODM Development

Engineering Data & API

Technology

Quality

Warranty

FAQ

Contact

Warranty Claim

CONTACT

✉ info@redcatt.net

☎ (+86) 769 8318 1898

📍 Dongguan, China