

Code: DR-8-027-4R-B2-C0001

REDCATT 8FR 8-inch ferrite full-range loudspeaker driver: 30 W AES, 93 dB sensitivity, 4 Ω , Fs 53 Hz, 40.6 mm voice coil. Full T/S parameters, datasheet, 2D drawing and STEP CAD file.

KEY FEATURES

- ✓ lightweight, yet strong paper cone reinforced by bamboo fibers
- ✓ working range up to 15kHz
- ✓ aesthetics tuned for moder hi-fi look

QUICK SPECS

Impedance
4 Ω

Program Power
60 W

Sensitivity
93.00 dB

Fs
53.00 Hz

Magnet
Ferrite

Voice Coil
40.6 mm

[📄 Datasheet \(PDF\)](#)[📐 2D Drawing](#)[📦 3D Model \(STEP\)](#)

Design Notes

8FR was developed for Hi-Fi applications where single point audio source is required. Our engineers designed the cone to be lightweight, yet strong, using our new paper pulp reinforced by bamboo fibers. The driver sports wizard cone that extends the working range up to 15kHz, paired with bullet style phase plug. Combination of these two key features ensures smooth frequency response and an optimal sound reproduction on and off axes.

Magnetic circuit was design to deliver robust B field across the whole range of working

the driver can be exposed to the end user. Distinctive colors ensures the driver can be featured as part of the overall industrial design.

Specifications

GENERAL SPECS

Nominal Diameter	8"
Rated Impedance	4 Ohm
Magnet	Ferrite
Basket Material	Aluminum

POWER HANDLING

AES Power	30 W
Continuous Power	60 W
Peak Power	120 W

VOICE COIL

Diameter	40.6 mm
Former	kapton
Winding Height	17.6 mm

Resonant Frequency (Hz)	55.55 Hz
Re	3.80 Ω
Qes	0.396
Qms	8.47
Qts	0.378
Vas	36.80 liters
Sd	213.80 cm ²
Mms	18.38 grams
Rms	0.72
Cms	0.4900
Bl	7.86 T·m
Le	0.080 mH
Sensitivity	93.00 dB

General Material

Cone/Dome Material	Paper
Spider	Nomex
T-Plate	6 mm
Xmax (peak)	5.8 mm
Xmech	11.8 mm
Overall Diameter	210.00 mm
Bolt Circle Diameter	195.50 mm
Baffle Cutout Dia.	186.88 mm
Mounting Holes	8
Depth (flange to rear)	91.80 mm
Net Weight	2.55 kg

ORDERING CODES

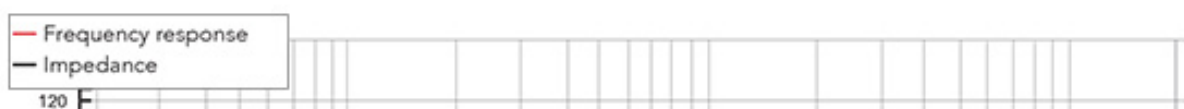
Product Code DR-8-027-4R-B2-C0001

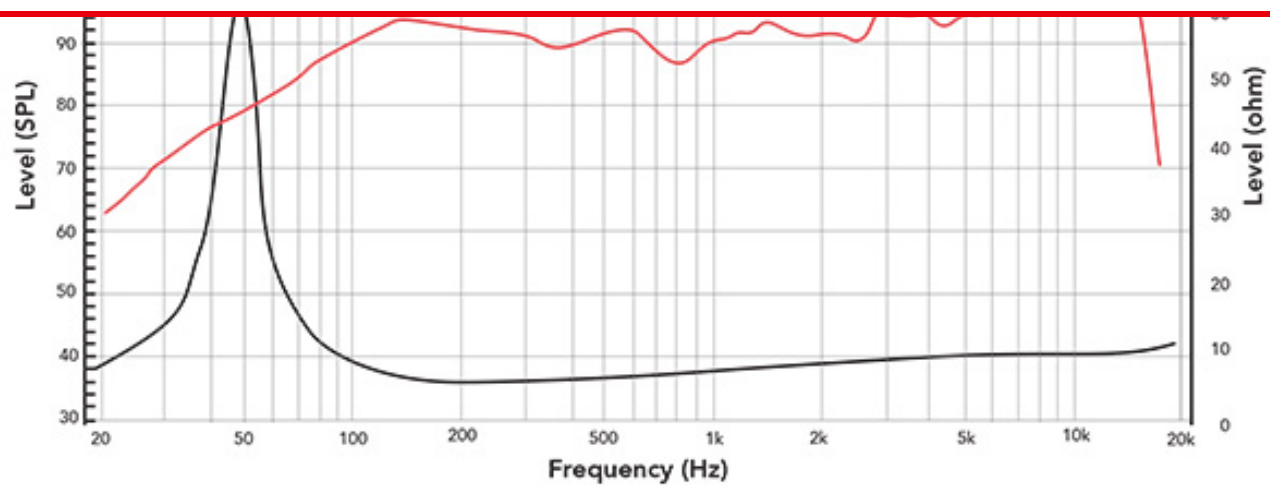
DOWNLOADS

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

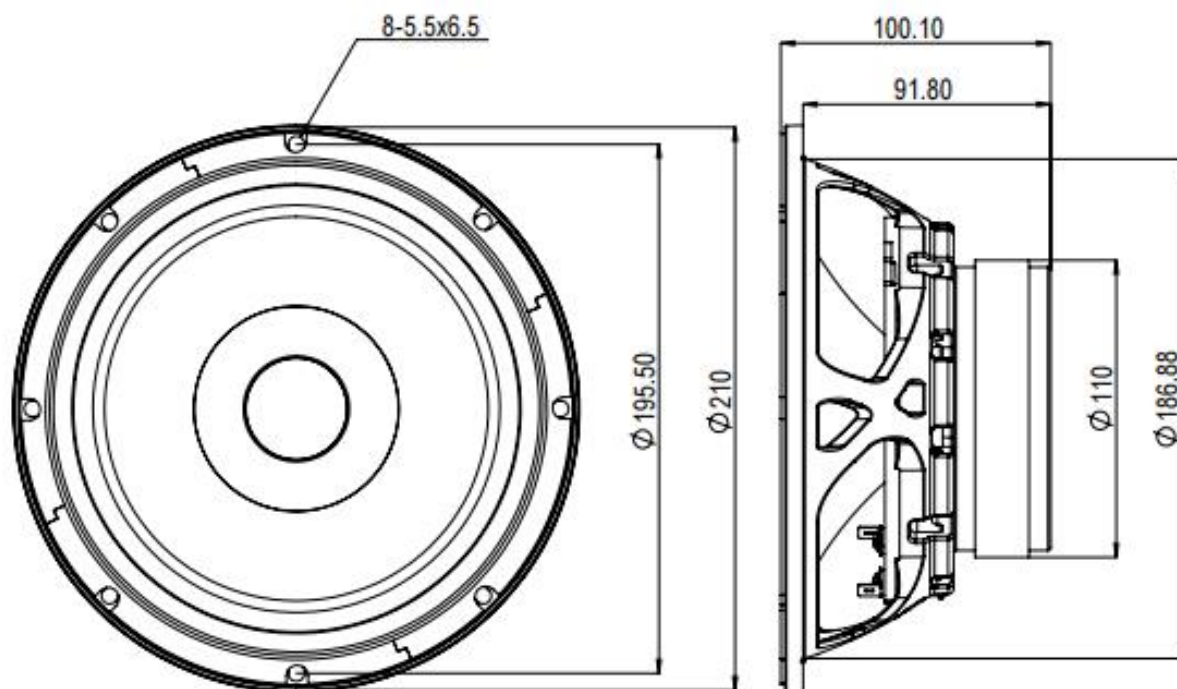
Covered by the REDCATT **3-year Limited Warranty**.

Frequency Response & Impedance





2D Drawing



single-point audio source is required, including open baffle, sealed, and vented loudspeaker systems. It features a lightweight bamboo fiber reinforced paper cone with an integrated whizzer (secondary) cone for extended high-frequency response to 15 kHz, a bullet-style phase plug for controlled off-axis dispersion, and a 1.6-inch aluminum voice coil on a Kapton former. The ferrite motor circuit with copper shorting cup and extremely low voice coil inductance (0.08 mH) provide flat impedance behavior and clean, wide-bandwidth reproduction from a single driver. At 93 dB sensitivity (1W/1m) with a moving mass of only 18.4 grams, the driver is efficient and fast, with good transient response across its full operating range.

For enclosed alternatives, sealed enclosures of 15 to 50 liters produce system resonances between 70 and 98 Hz with Q_{tc} values of 0.5 to 0.7. A 25-liter sealed enclosure (Q_{tc} 0.6, f_c 83 Hz) is the recommended starting point, providing a smooth overdamped rolloff that integrates naturally with domestic room gain for in-room bass extension to approximately 55-60 Hz. Vented enclosures of 27 to 37 liters tuned between 48 and 61 Hz extend the anechoic -3 dB point to approximately 41-56 Hz with moderate port velocities (11-14 m/s). In all configurations, the driver is rated for 30 W AES / 60 W continuous power handling, which is appropriate for domestic listening levels given the 93 dB sensitivity.

This driver is particularly effective in hi-fi open baffle loudspeakers, single-driver sealed or vented cabinets, and full-range desktop monitors where point-source imaging, wide-bandwidth reproduction from a single driver, and natural tonal character are priorities. The bamboo fiber cone, whizzer cone extension to 15 kHz, and aesthetically refined design (exposed aluminum basket, distinctive colorway) support both high sound quality and modern industrial design integration.

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

Hz, HP filter 53 Hz

- 24 liters tuned to 56 Hz: balanced response, general-purpose (recommended); -3 dB approx. 52 Hz, HP filter 46 Hz

- 24 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 8FR?



What enclosure is recommended for the 8FR?



What applications is the 8FR suited for?



What are the power and sensitivity specs of the 8FR?



Independent Reviews



HiFi Test · Oct 2024
Redcatt FR 8.01





LF 8"
81FHW



LF 8"
81FIND



LF 8"
81NPM-1



LF 8"
81NPM-2

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