



Code: DR-6-007-8R-B2-C0001

REDCATT 6FHM 6-inch ferrite professional mid-woofer: 40 W AES, 89 dB sensitivity, 8 Ω , Fs 36 Hz, 33 mm voice coil. Full T/S parameters, datasheet, 2D drawing and STEP CAD file.

KEY FEATURES

- ✓ 3 layer cone, consisting hi-end 1k carbon fiber on nomex honeycomb core
- ✓ Fem optimized motor structure
- ✓ Low harmonic distortion

QUICK SPECS

Impedance
8 Ω

Sensitivity
89.01 dB

Magnet
Ferrite

Program Power
80 W

Fs
36.00 Hz

Voice Coil
33 mm

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

Design Notes

The 6FHM is a high efficiency, (89 dB 1watt / 1 meter) 6-inch mid-woofer with incredibly linear frequency response characteristics and ultra low harmonic distortion artifacts. The 6FHM uses a lightweight 1k carbon fiber material, assembled on both sides of Nomex honey-comb core. This unique cone provides the ideal weight to strength ratio. The rubber surround has been FEM modeled and optimized. The honeycomb cone with high-end 1k carbon fiber material provides remarkable strength, while pushing the cone break-up modes to high frequencies, significantly extending the working range of the

The 6FHM cone is made using 1k carbon fiber honey-comb, placed from both sides of Nomex core, while the dustcap is made off hard-anodization reinforced aluminum. The dustcap shape and the hard anodizing are further improving the mid to high frequency behavior.

Specifications

GENERAL SPECS

Nominal Diameter	6"
Rated Impedance	8 Ohm
Magnet	Ferrite
Basket Material	Aluminum

POWER HANDLING

AES Power	40 W
Continuous Power	80 W
Peak Power	160 W

VOICE COIL

Diameter	33 mm
Winding Wire	CCAR
Former	Kapton
Winding Height	14.5 mm

Resonant frequency (Hz)	55.55 Hz
Re	6.90 Ω
Qes	0.290
Qms	12.70
Qts	0.290
Vas	26.10 liters
Sd	132.70 cm ²
Mms	18.10 grams
Rms	0.32
Cms	1.0800
Bl	9.89 T·m
Le	0.260 mH
Sensitivity	89.01 dB

General Material

RED

Cone/Dome Material	Composite
Spider	Nomex
T-Plate	6 mm
Xmax (peak)	4.25 mm
Xmech	10.25 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)	81.70 mm
Net Weight	2.40 kg

ORDERING CODES

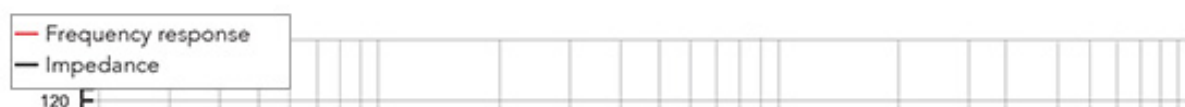
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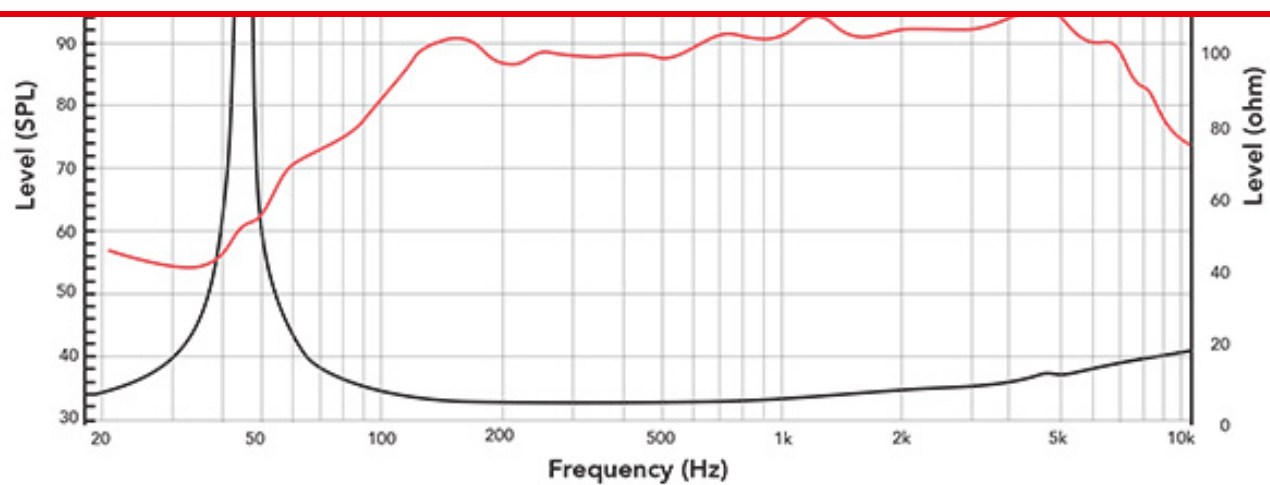
DOWNLOADS

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

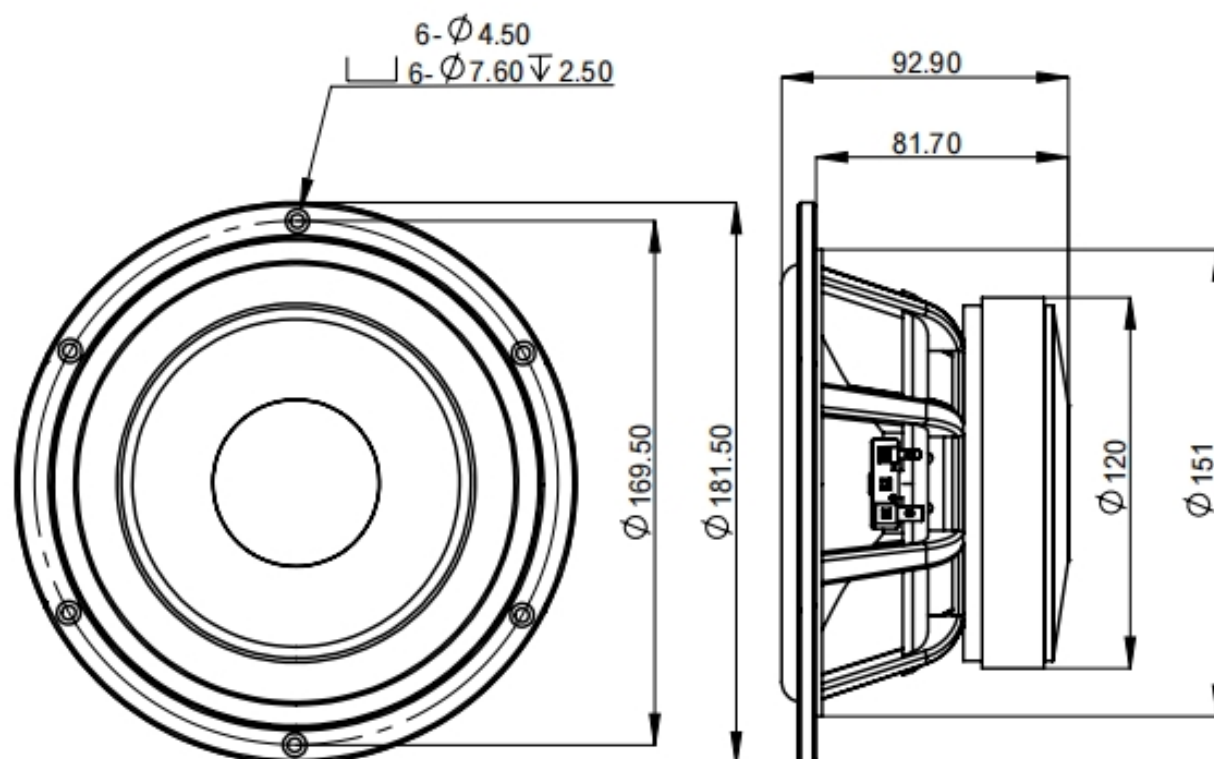
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Frequency Response & Impedance





2D Drawing



into a nominal 8-ohm load. Sensitivity is 89.0 dB (1 W/1 m), suited to integration with high-sensitivity compression drivers in compact 2-way PA systems. The Qts of 0.29 indicates a motor-suspension design optimized to maintain consistent performance at high drive levels, with controlled excursion and reduced thermal compression during long-term operation. The trilaminate cone - 1k carbon fiber bonded to both sides of a Nomex honeycomb core - combined with an anodized aluminum dustcap pushes cone breakup modes to higher frequencies, extending the pistonic operating range well into the midrange. The 33 mm CCAR voice coil on a Kapton former and an FEM-optimized ferrite motor circuit contribute to the driver's characteristically low harmonic distortion.

The driver is rated for approximately 40 W AES (80 W continuous) and is intended for use with amplification typical of compact 2-way professional audio systems. A high-pass filter at 45-60 Hz (18-24 dB/octave) is recommended for vented alignments to protect the driver below the port tuning frequency. The low voice coil inductance ($L_e = 0.26$ mH) supports clean crossover integration with compression drivers or dome tweeters at frequencies from 2 to 4 kHz.

The 6FHMx8-152C is suited for compact 2-way professional PA top cabinets, hi-fi standmount monitors, and studio reference systems where extended midrange response, low harmonic distortion, and high-performance trilaminate cone construction are required. Good to use with 1-inch compression drivers such as 101FCDX8-539A or 101NCDX8-160, or with dome tweeters such as 25TNX4-386B or 33TNX8-410B in 2-way systems requiring a refined mid-woofer with audiophile-grade cone technology.

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):

- 8 liters tuned to 41 Hz: high output, strong mid-bass, reduced excursion; -3 dB approx. 38 Hz, HP filter 33 Hz

Frequently Asked Questions

What are the key features of the 6FHM?



What enclosure is recommended for the 6FHM?



What applications is the 6FHM suited for?



What are the power and sensitivity specs of the 6FHM?



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