



Code: DR-12-020-4R-B2-C0001

REDCATT 123FPM 12-inch ferrite professional mid-woofer: 300 W AES, 97.8 dB sensitivity, 4 Ω , Fs 45 Hz, 63.5 mm voice coil. Full T/S parameters, datasheet, 2D drawing and STEP CAD file.

KEY FEATURES

- ✓ EXTENDED FREQUENCY RESPONSE
- ✓ Rib reinforced paper cone
- ✓ High power handling

QUICK SPECS

Impedance
4 Ω

Sensitivity
97.75 dB

Magnet
Ferrite

Program Power
600 W

Fs
45.00 Hz

Voice Coil
63.5 mm

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

Design Notes

The 123FPM is a high efficiency, (98 dB 1watt / 1 meter) 12-inch mid bass woofer with incredibly linear frequency response characteristics. The 123FPM uses a lightweight rib-reinforced cone assembly along with a precision double roll constant geometry surround. This combination provides remarkable strength, high efficiency and a excursion linearity of 10.2mm.

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	12"
Rated Impedance	4 Ohm
Magnet	Ferrite
Basket Material	Steel

POWER HANDLING

AES Power	300 W
Continuous Power	600 W
Peak Power	1200 W

VOICE COIL

Diameter	63.5 mm
Winding Wire	CCAW
Former	Glass Fiber
Winding Height	13.5 mm

Resonant Frequency (Hz)	48.88 Hz
Re	3.10 Ω
Qes	0.290
Qms	4.96
Qts	0.270
Vas	98.50 liters
Sd	531.00 cm ²
Mms	52.10 grams
Rms	2.97
Cms	0.2400
Bl	12.80 T·m
Le	0.420 mH
Sensitivity	97.75 dB

General Material

Table

Cone/Dome Material	Paper GF
Spider	Nomex
T-Plate	8 mm
Xmax (peak)	2.75 mm
Xmech	10.75 mm
Overall Diameter	320.00 mm
Bolt Circle Diameter	302.00 mm
Baffle Cutout Dia.	282.00 mm
Mounting Holes	8
Depth (flange to rear)	127.80 mm
Net Weight	5.00 kg
Packaging Dimensions	360X360X180 mm

ORDERING CODES

Product Code DR-12-020-4R-B2-C0001

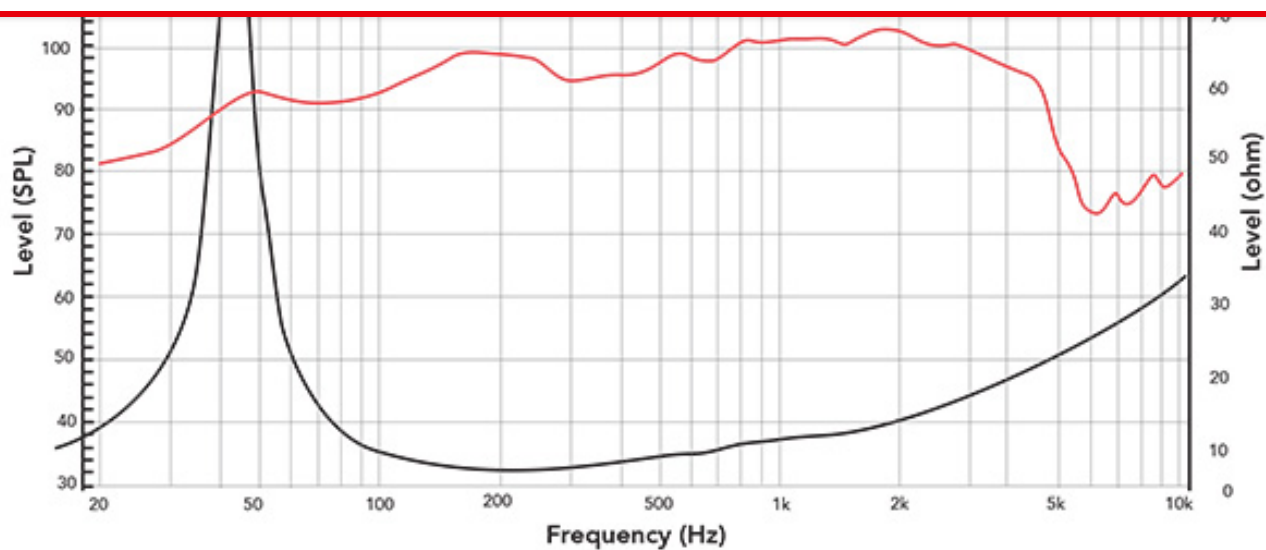
DOWNLOADS

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

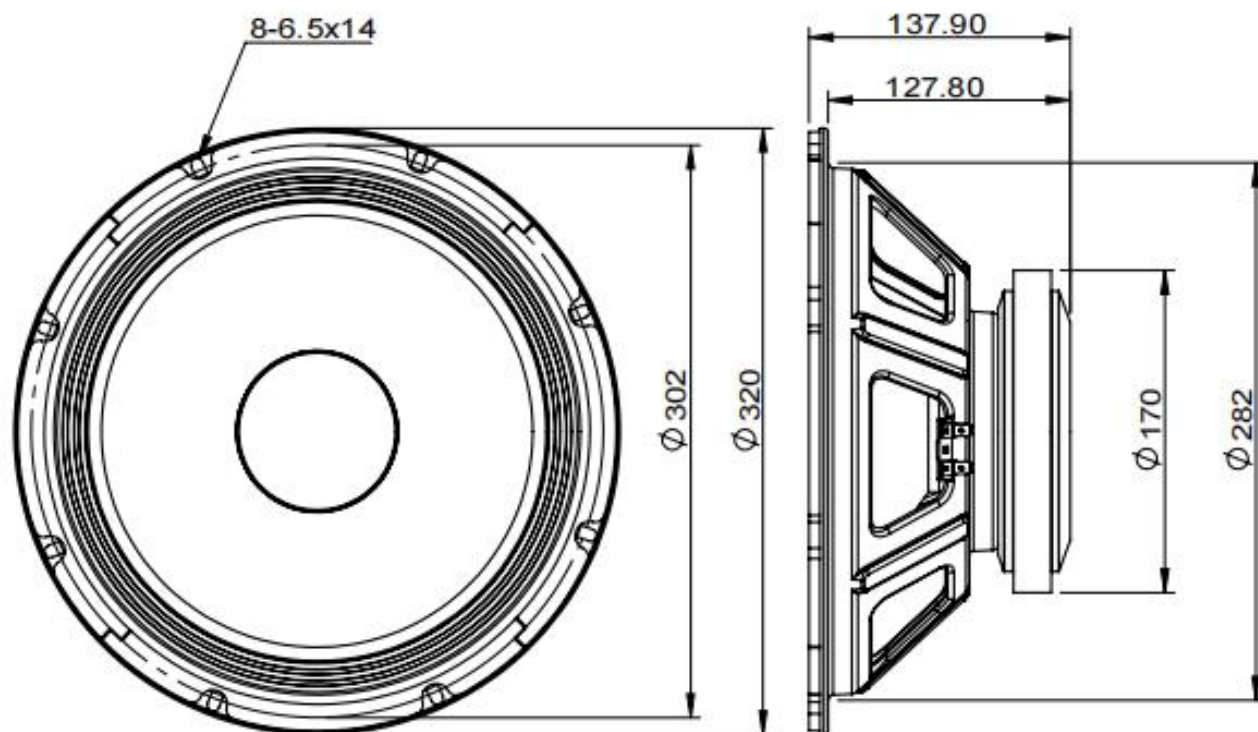
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Frequency Response & Impedance





2D Drawing



and multi-way systems requiring high sensitivity (98 dB 1W/1m) and controlled low-frequency behavior. The motor and suspension are optimized to maintain consistent performance at high drive levels, with controlled excursion and reduced thermal compression during long-term operation.

The driver is intended for use with high-power amplification (approx. 300 W AES / 600 W continuous) and DSP control. A high-pass filter in the range of 31-44 Hz is recommended depending on enclosure tuning, along with proper limiting to manage thermal and mechanical stress. Typical operating bandwidth is 37-2000 Hz, covering bass through upper-mid frequencies for direct integration with a compression driver or tweeter in a two-way or multi-way system.

This design is particularly effective in single or multi-driver bass reflex systems used in professional two-way and multi-way PA systems, powered monitors, and compact bass-reflex enclosures, where extended bandwidth, controlled distortion across the full operating range, and versatile system integration are required.

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):

- 70 liters tuned to 52 Hz: high output, strong mid-bass, reduced excursion; -3 dB approx. 48 Hz, HP filter 44 Hz
- 90 liters tuned to 46 Hz: balanced response, general-purpose (recommended); -3 dB approx. 42 Hz, HP filter 36 Hz
- 90 liters tuned to 43 Hz: extended low-frequency, requires HP filter protection; -3 dB approx. 37 Hz, HP filter 31 Hz

What are the key features of the 123FPM?



What enclosure is recommended for the 123FPM?



What applications is the 123FPM suited for?



What are the power and sensitivity specs of the 123FPM?



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