



## AMERICAN STANDARD SERIES

# BETA-12A-2

Recommended for professional audio and bass guitar applications as a woofer in a vented enclosure. Also works well for PA in a sealed or bandpass enclosure.



### SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	250 W
Music Program	500 W
Resonance	47 Hz
Usable Frequency Range	43 Hz – 3.8 kHz
Sensitivity***	98.0 dB
Magnet Weight	38 oz.
Gap Height	.312", 7.9 mm
Voice Coil Diameter	2.0", 51 mm

### THIELE & SMALL PARAMETERS\*

Fs	47 Hz
Re	5.00 Ω
Le	0.64 mH
Qms	6.00
Qes	0.50
Qts	0.46
Vas	4.24 cu.ft., 120.10 liters
Vd	237.0 cc
Cms	0.29 mm/N
BL	10.80 T-M
Mms	40 grams
EBP	94
Xmax	4.40 mm
Sd	538.9 cm <sup>2</sup>
Xlim	11.0 mm

### MOUNTING INFORMATION

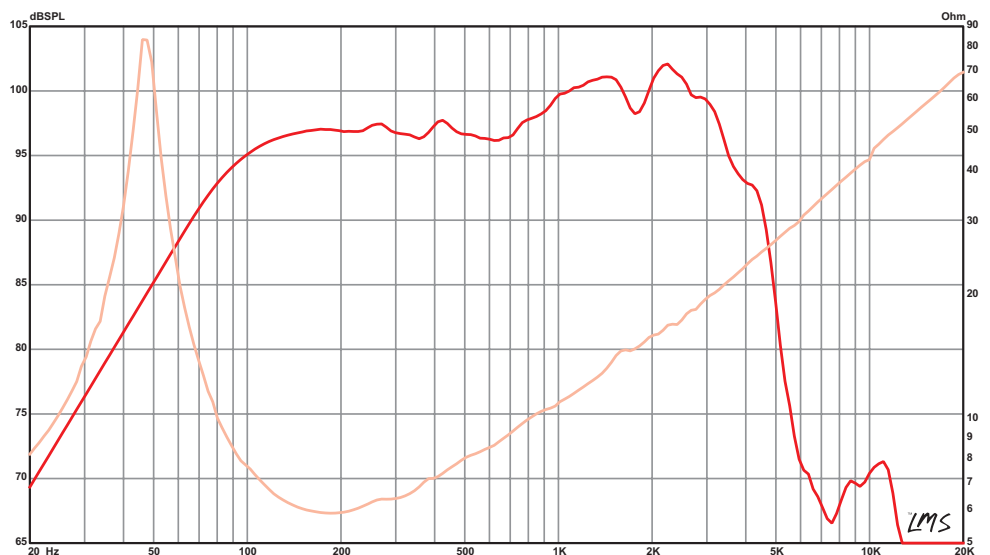
Recommended Enclosure Volume	
Sealed	25.50–35.40 liters, 0.90–1.25 cu.ft.
Vented	36.80–139.00 liters, 1.30–4.90 cu.ft.
Driver Volume Displaced	0.071 cu.ft., 2.00 liters
Overall Diameter	12.03", 305.6 mm
Baffle Hole Diameter	11.07", 281.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	11.59", 294.4 mm
Depth	4.57", 116.1 mm
Net Weight	7.50 lbs, 3.40 kg
Shipping Weight	9.70 lbs, 4.40 kg

### MATERIALS OF CONSTRUCTION

- \_\_\_\_\_ Copper voice coil
- \_\_\_\_\_ Polyimide former
- \_\_\_\_\_ Ferrite magnet
- \_\_\_\_\_ Vented and extended core
- \_\_\_\_\_ Pressed steel basket
- \_\_\_\_\_ Paper cone
- \_\_\_\_\_ Cloth cone edge
- \_\_\_\_\_ Solid composition paper dust cap



### FREQUENCY RESPONSE & IMPEDANCE CURVE\*



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*From design and manufacturing to the stage or studio. Once you've experienced the performance of Eminence, you'll never accept anything else.*

## MISSION STATEMENT

*Eminence is dedicated to providing the best Quality, Value and Service to meet our customers' needs.*

## FOOTNOTES

- \* Please consult [www.eminence.com](http://www.eminence.com) for specifications of models with alternative impedances.
- \*\* Multiple units exceed published ratings evaluated under EIA 426A specification while tested in a free-air, non-temperature-controlled environment.
- \*\*\* The average output across the usable frequency range when applying 1W/1m into the nominal impedance. i.e: 2.83V/8Ω, 4V/16Ω. Eminence response curves are measured under the following conditions: All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance | LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall/baffle | 2 ft. x 2 ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum diffraction | Carver PM-120 amplifier | 2700 cu. ft. chamber with fiberglass on all six surfaces (three with custom-made wedges).
- \*\*\*\* BETA 8CX, 10CX, and 12CX are coaxial speakers with tweeter sold separately. Published usable frequency response contingent upon use of ASD:1001 HF Driver.
- \*\*\*\*\* Multiple units exceeded published ratings evaluated under EIA-426A or AES specification while mounted on Eminence's H290, H290S, or H2EA horn in a non-temperature-controlled environment.
- \*\*\*\*\*The average on axis output across the entire usable frequency range when applying 1W/1m into the nominal impedance, i.e. 2.83V/8Ω, 4V/16Ω. Eminence response curves are measured under the following conditions: All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance | LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall/baffle | 2ft x 2ft baffle is built into the wall with horn front mounted | Carver PM-120 amplifier | 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges).

Prices, specifications and product cosmetics are subject to change without notice.

**EMINENCE SPEAKER LLC**

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# Beta12A-2 Twin Loaded BandPass Sub

By Jerry McNutt, Eminence Speaker LLC

Great Compliment to Beta12A-2 Small Sealed Box for Portable PA System

Displacement Limited to 100 watts.

## Box Properties

--Description--

Name:

Type: Bandpass Single-Tuned Box

Shape: Prism, Bandpass with two chambers

--Box Parameters--

Chamber 1 - lower-frequency

Vb = 2.75 cu.ft

V(total) = 2.973 cu.ft

Fb = 94.58 Hz

QL = 7

F3 = 57.38 Hz

Fill = minimal

Chamber 2 - upper-frequency

Vb = 2.917 cu.ft

V(total) = 2.873 cu.ft

Fb = 90 Hz

QL = 7

F3 = 142.5 Hz

Fill = minimal

--Vents--

No. of Vents = 1

Vent shape = round

Vent ends = one flush

Dv = 12 in

Lv = 1.418 in

## Driver Properties

--Description--

Name:

Type: Standard one-way driver

--Configuration--

No. of Drivers = 2

Mounting = Standard, Push-pull

Wiring = Parallel

Drivers sum coherently = Yes

--Driver Parameters--

Fs = 46.8 Hz

Qms = 6

Vas = 120.1 liters [240.2]

Xmax = 4.4 mm

Sd = 538.9 sq.cm [1024]

Qes = 0.5

Re = 5 ohms [2.5]

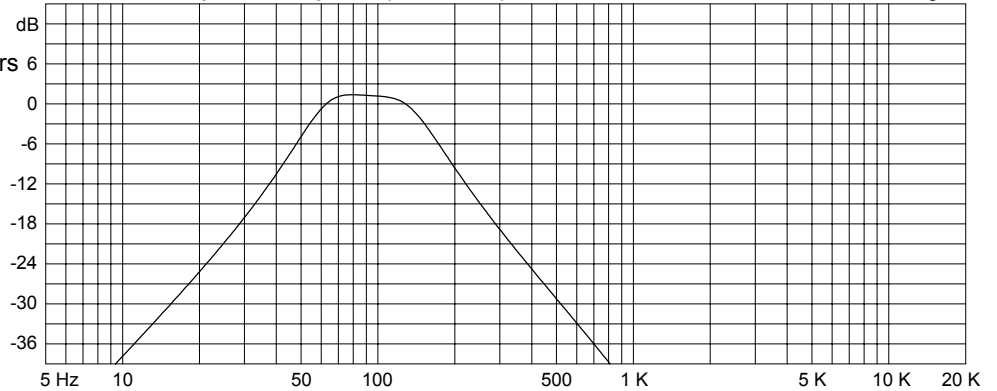
Le = 0.64 mH [0.32]

Z = 8 ohms [4]

Pe = 250 watts [500]

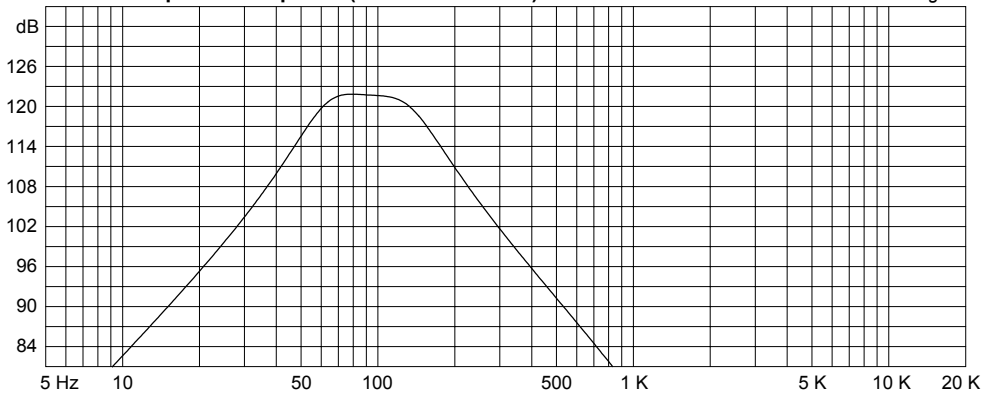
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



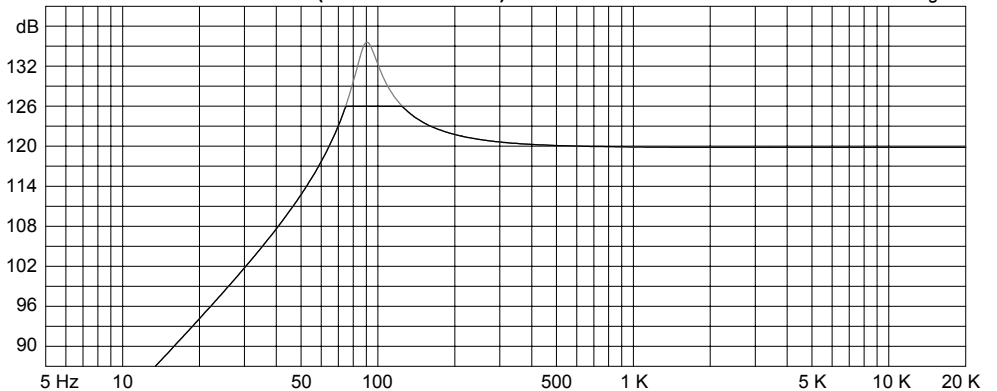
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 100 watts

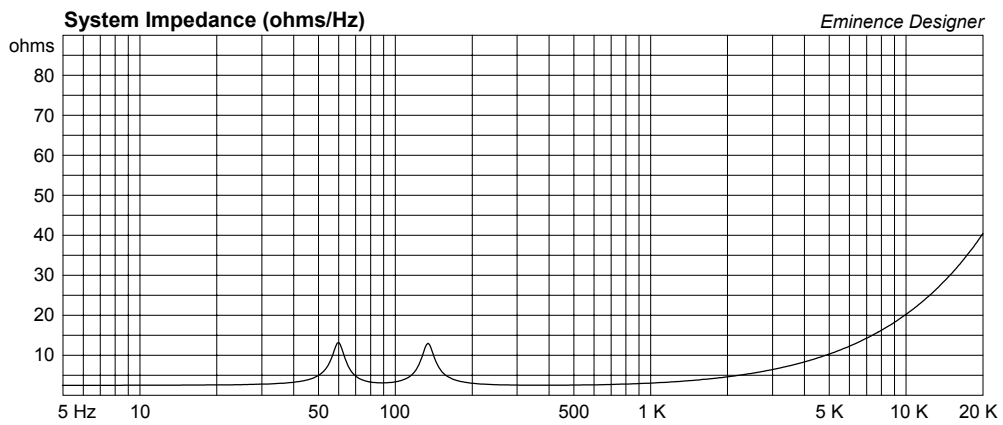
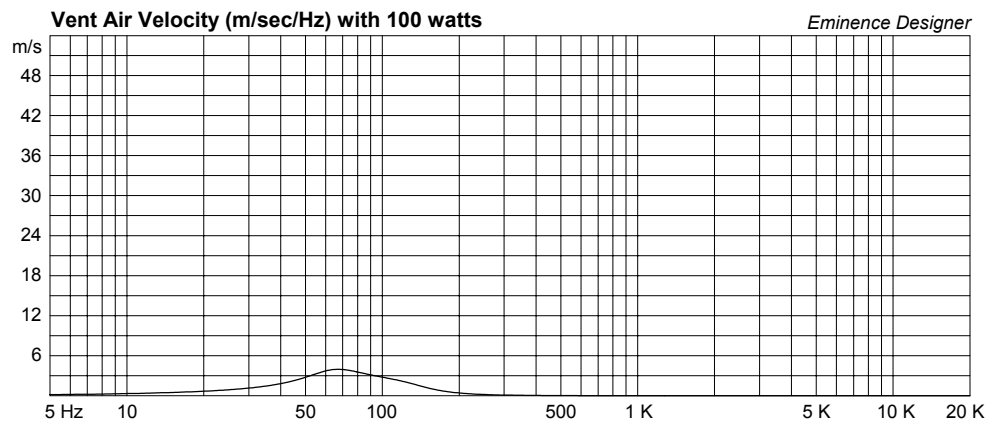
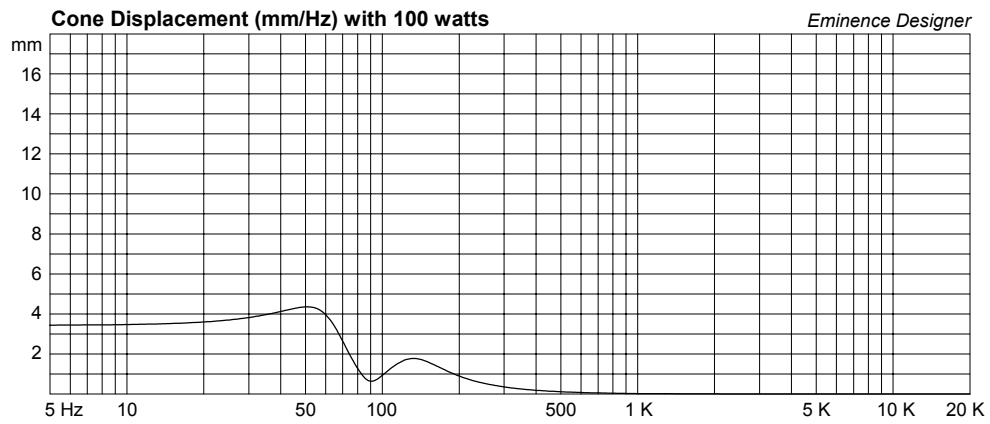
Eminence Designer



Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer





# Beta12A-2 Bass 1x12 Bass Guitar Cabinet

By Jerry McNutt, Eminence Speaker LLC

Great For Bass Guitar. Displacement Limited to 150 Watts.

Small Vented Cabinet.

## Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square (optimum)

--Box Parameters--

Vb = 1.75 cu.ft

V(total) = 1.894 cu.ft

Fb = 54.15 Hz

QL = 7

F3 = 64.18 Hz

Fill = minimal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 3 in

Lv = 4.154 in

## Driver Properties

--Description--

Name:

Type: Standard one-way driver

--Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 46.8 Hz

Qms = 6

Vas = 120.1 liters

Xmax = 4.4 mm

Sd = 538.9 sq.cm

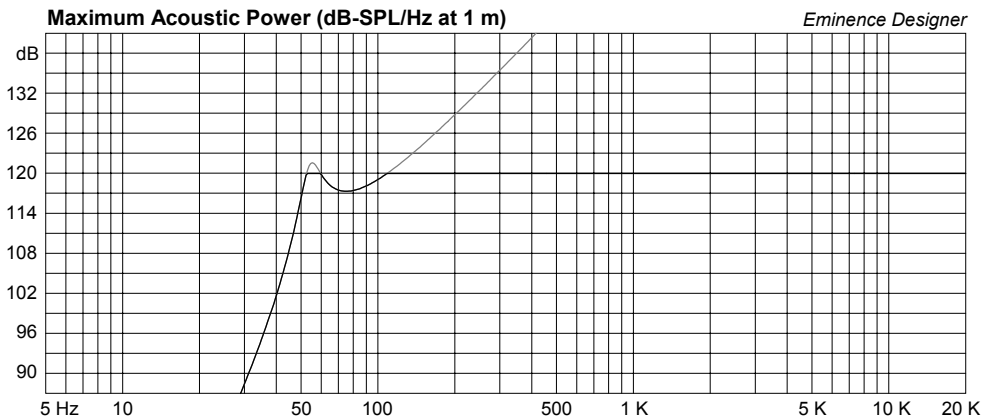
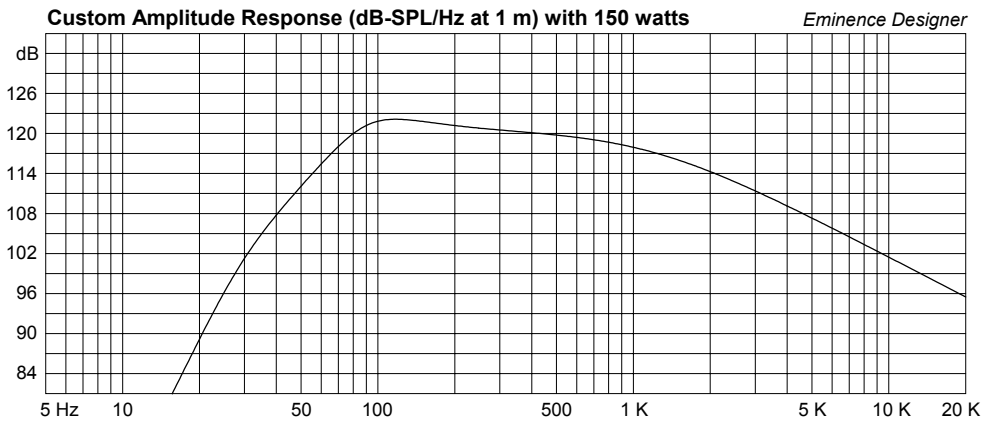
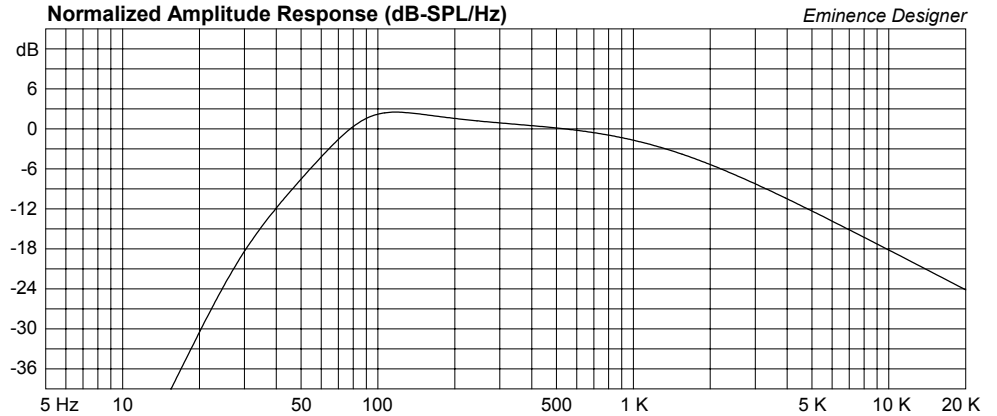
Qes = 0.5

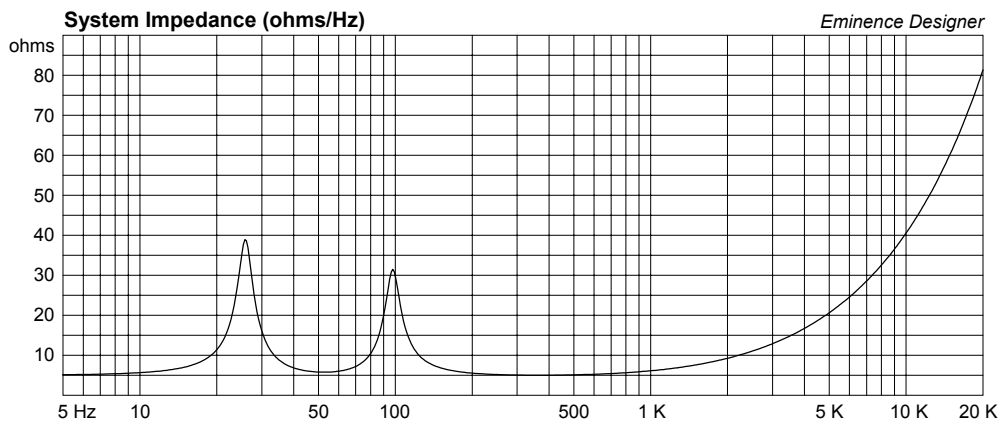
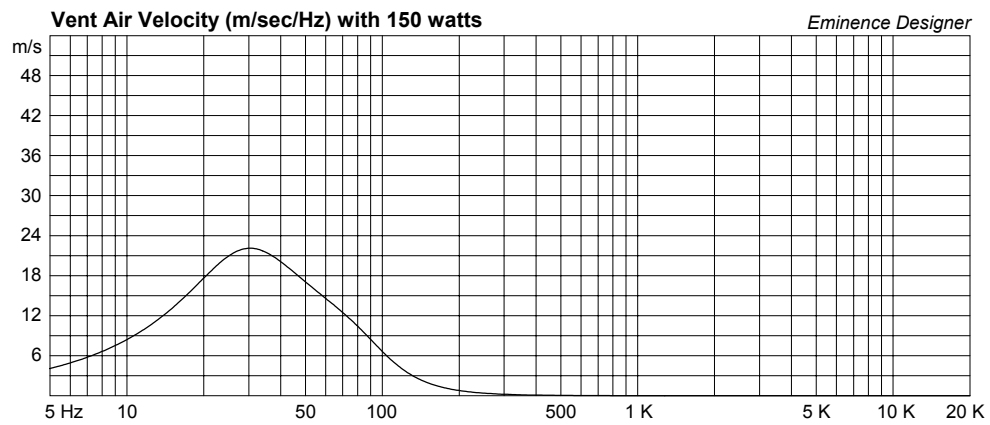
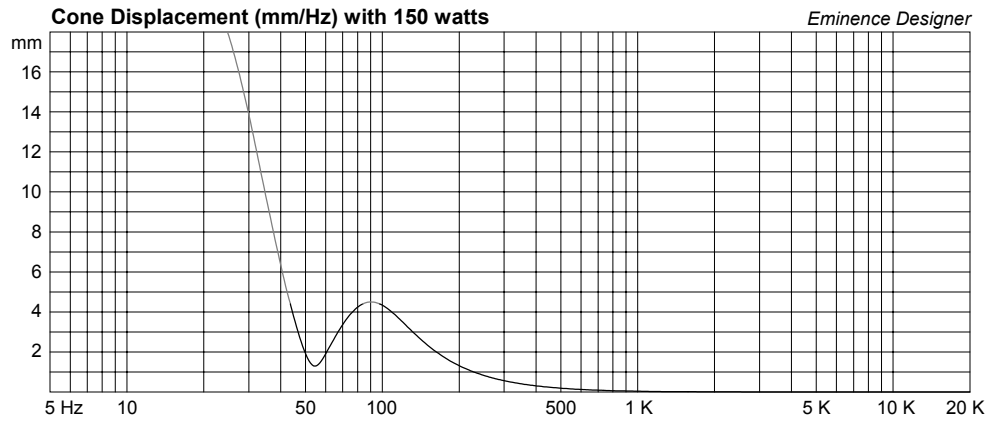
Re = 5 ohms

Le = 0.64 mH

Z = 8 ohms

Pe = 250 watts





# Beta12A-2 Large Low Tuned Bass Guitar Cabinet

By Jerry McNutt, Eminence Speaker LLC

This cabinet is large and goes low. Classic smooth, deep, and rich sound.  
Power is displacement limited to 75 Watts, but it reaches down low.

## Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square (optimum)

--Box Parameters--

Vb = 4.75 cu.ft

V(total) = 4.892 cu.ft

Fb = 45 Hz

QL = 7

F3 = 42.69 Hz

Fill = minimal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 4 in

Lv = 2.567 in

## Driver Properties

--Description--

Name:

Type: Standard one-way driver

--Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 46.8 Hz

Qms = 6

Vas = 120.1 liters

Xmax = 4.4 mm

Sd = 538.9 sq.cm

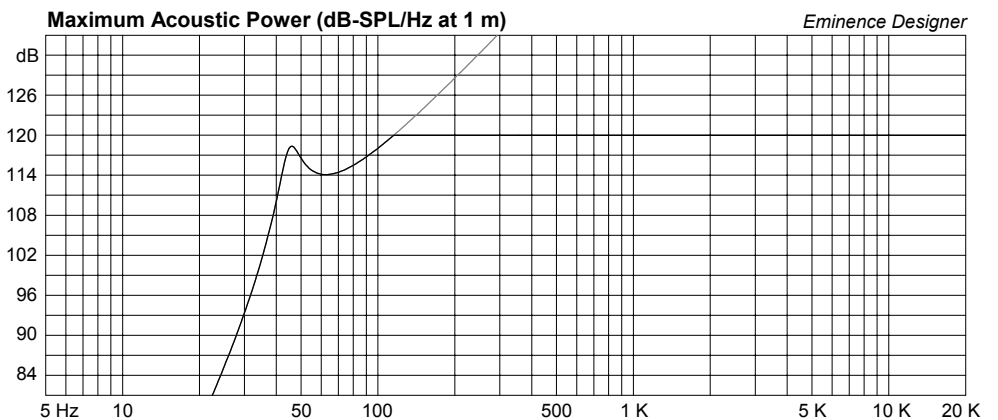
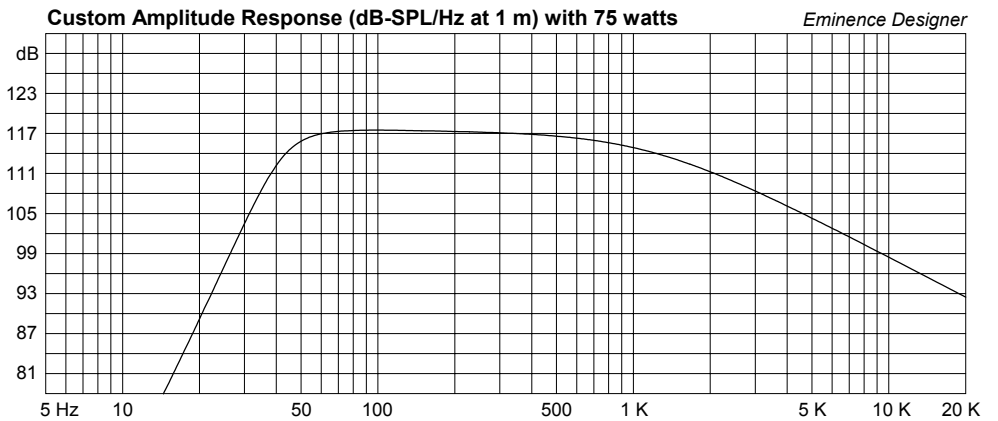
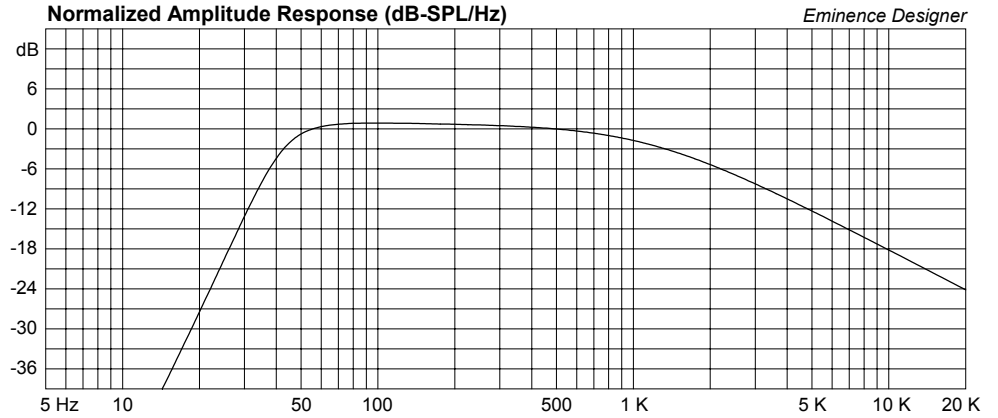
Qes = 0.5

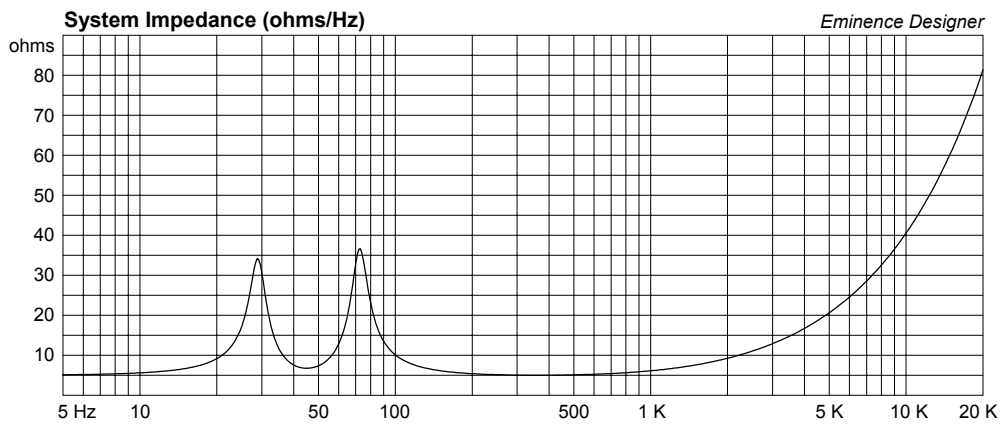
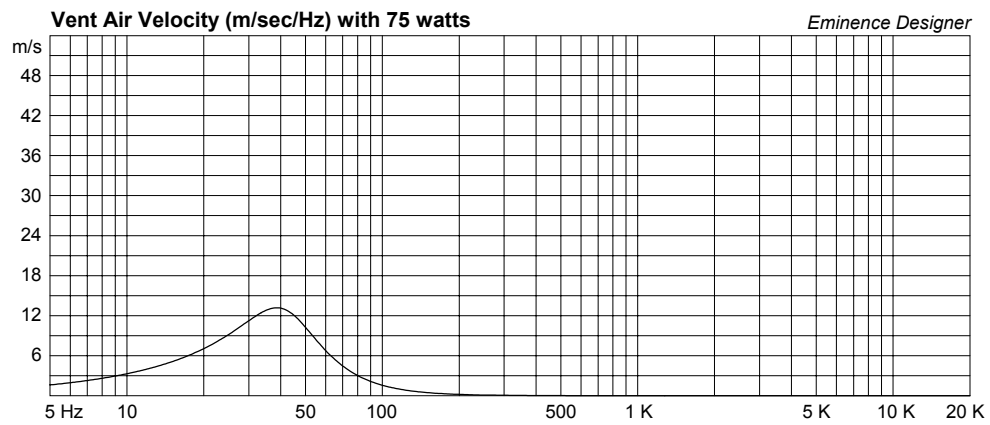
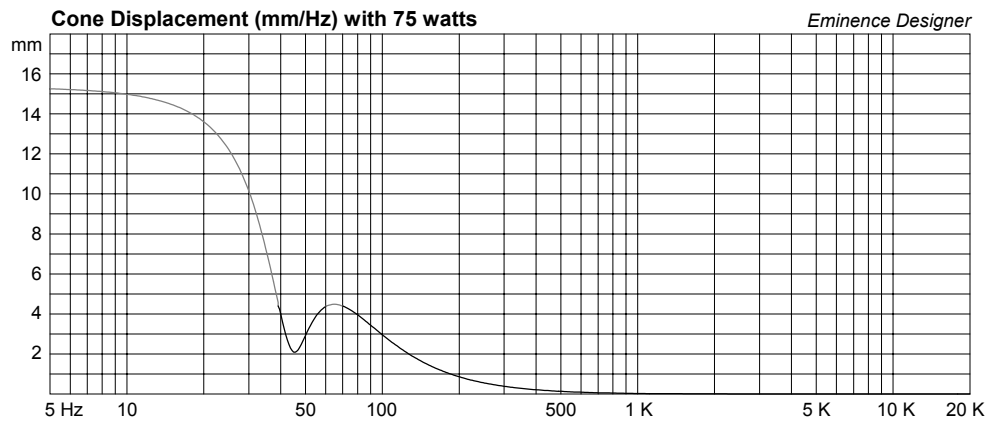
Re = 5 ohms

Le = 0.64 mH

Z = 8 ohms

Pe = 250 watts







# Beta12A-2, Small Sealed Box

By Jerry McNutt, Eminence Speaker LLC

Great for Floor Monitors and small PA's when used with Subs.

High pass at 120 Hz; thermally limited to 250 Watts.

## Box Properties

--Description--

Name:

Type: Closed Box

Shape: Prism, square (optimum)

--Box Parameters--

Vb = 0.904 cu.ft

V(total) = 1.016 cu.ft

Qtc = 0.812

QL = 19.96

F3 = 92.1 Hz

Fill = heavy

## Driver Properties

--Description--

Name:

Type: Standard one-way driver

--Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 46.8 Hz

Qms = 6

Vas = 120.1 liters

Xmax = 4.4 mm

Sd = 538.9 sq.cm

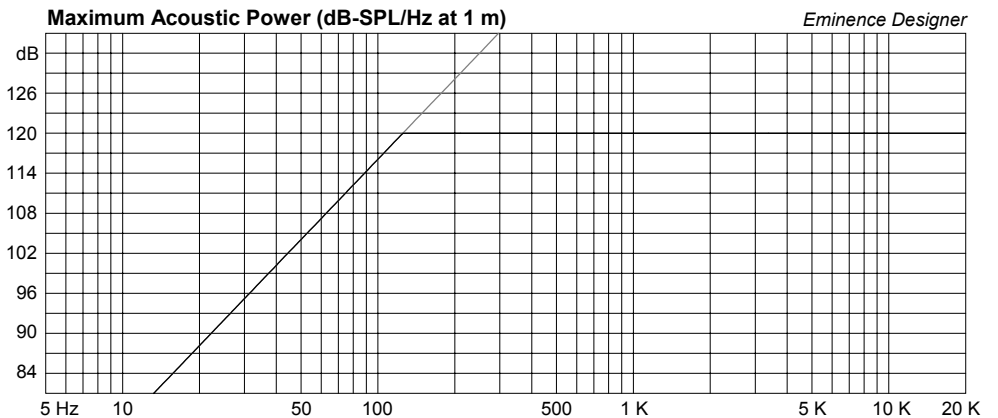
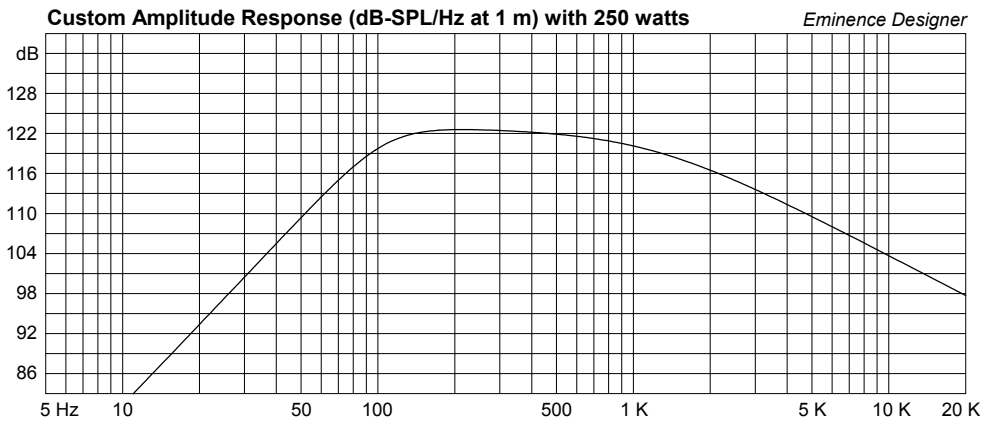
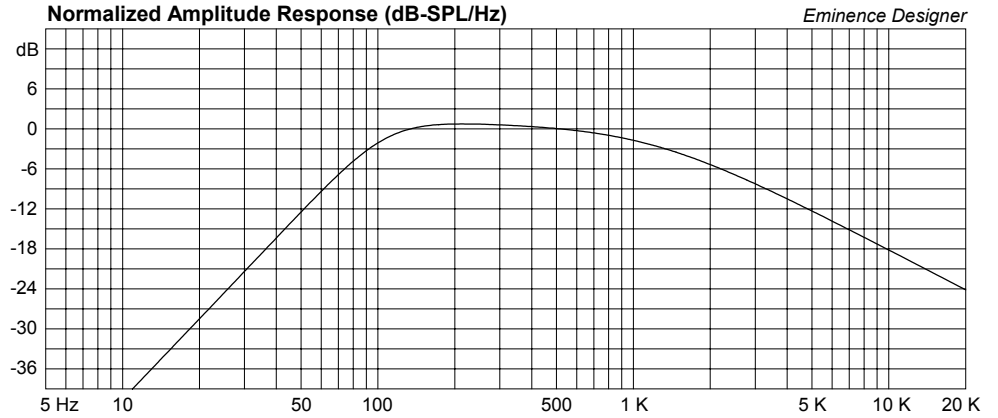
Qes = 0.5

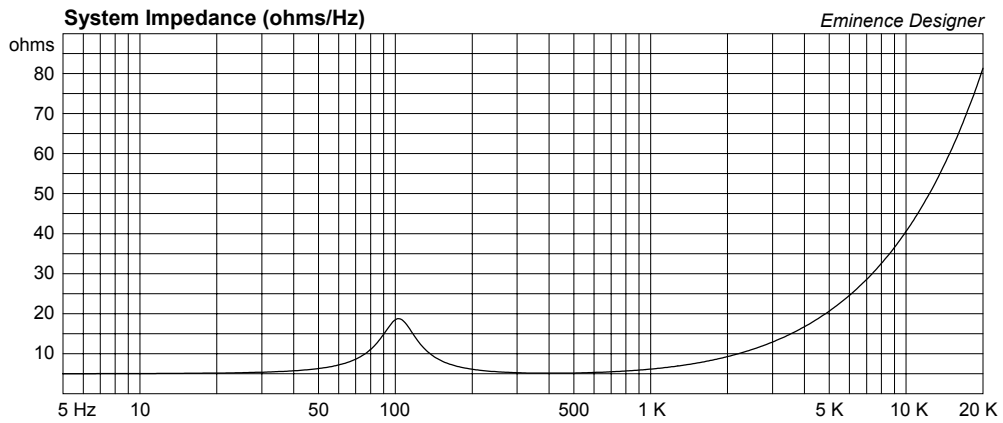
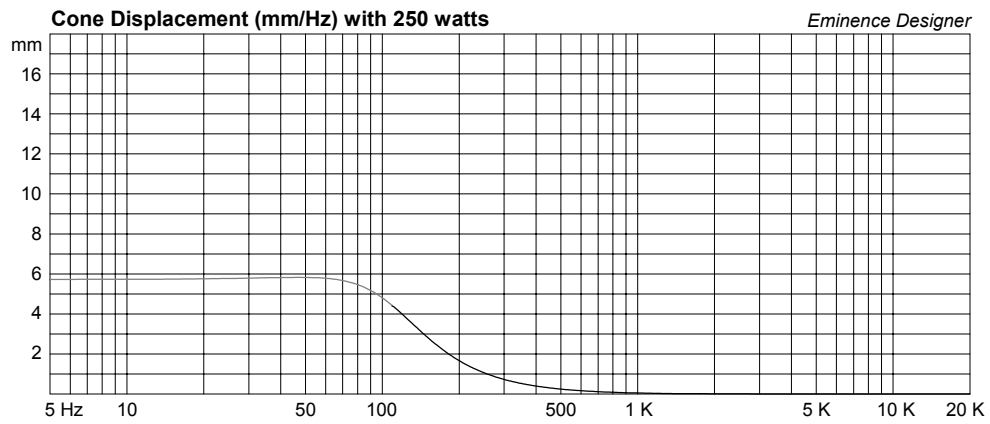
Re = 5 ohms

Le = 0.64 mH

Z = 8 ohms

Pe = 250 watts





# Beta12A-2 Small Vented Box

By Jerry McNutt, Eminence Speaker LLC

Great for Small PA Main, PA Side Fill, or Floor Wedge.

High Pass no lower than 80 Hz; displacement limited to 200 Watts

## Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 1.25 cu.ft

V(total) = 1.405 cu.ft

Fb = 60 Hz

QL = 7

F3 = 73.47 Hz

Fill = minimal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 3 in

Lv = 5.238 in

## Driver Properties

--Description--

Name:

Type: Standard one-way driver

--Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 46.8 Hz

Qms = 6

Vas = 120.1 liters

Xmax = 4.4 mm

Sd = 538.9 sq.cm

Qes = 0.5

Re = 5 ohms

Le = 0.64 mH

Z = 8 ohms

Pe = 250 watts

