

Specification

Nominal Basket Diameter	12", 304.8mm
Nominal Impedance*	8 ohms
Power Rating**	
Watts	250W
Music Program	500W
Resonance	47Hz
Usable Frequency Range***	43Hz-3.8kHz
Sensitivity	98
Magnet Weight	38 oz
Gap Height	0.312", 7.92mm
Voice Coil Diameter	2", 50.8mm

Thiele & Small Parameters

Resonant Frequency (fs)	47Hz
DC Resistance (Re)	5.0
Coil Inductance (Le)	0.64mH
Mechanical Q (Qms)	6.00
Electromagnetic Q (Qes)	0.50
Total Q (Qts)	0.46
Compliance Equivalent Volume (Vas)	120.1 ltr/4.2 cu. ft.
Peak Diaphragm Displacement Volume (Vd)	237cc
Mechanical Compliance of Suspension (Cms)	0.29mm/N
BL Product (BL)	10.8 T-M
Diaphragm Mass inc. Airlod (Mms)	40 grams
Efficiency Bandwidth Product (EBP)	94
Maximum Linear Excursion (Xmax)	4.4mm
Surface Area of Cone (Sd)	538.9cm ²
Maximum Mechanical Limit (Xlim)	11mm

Mounting Information

Recommended Enclosure Volume	
Sealed	25.5-35.4 ltr, 0.9-1.25 cu. ft.
Vented	36.8-139 ltr/1.3-4.9 cu. ft.
Overall Diameter	12.03", 305.5mm
Baffle Hole Diameter	10.95", 278.1mm
Front Sealing Gasket	Fitted as Standard
Rear Sealing Gasket	Fitted as Standard
Mounting Holes Diameter	0.25", 6.4mm
Mounting Holes B.C.D.	11.59", 294.3mm
Depth	4.57", 116mm
Net Weight	7.5 lbs, 3.4 kg
Shipping Weight	9.7 lbs, 4.4 kg

Materials of Construction

Coil Construction	Copper
Coil	Polyimide
Magnet Composition	Ferrite
Core Details	Vented And Extended
Basket Materials	Pressed Steel
Cone Composition	Paper
Cone Edge Composition	Cloth
Dust Cap Composition	Solid Composition Paper

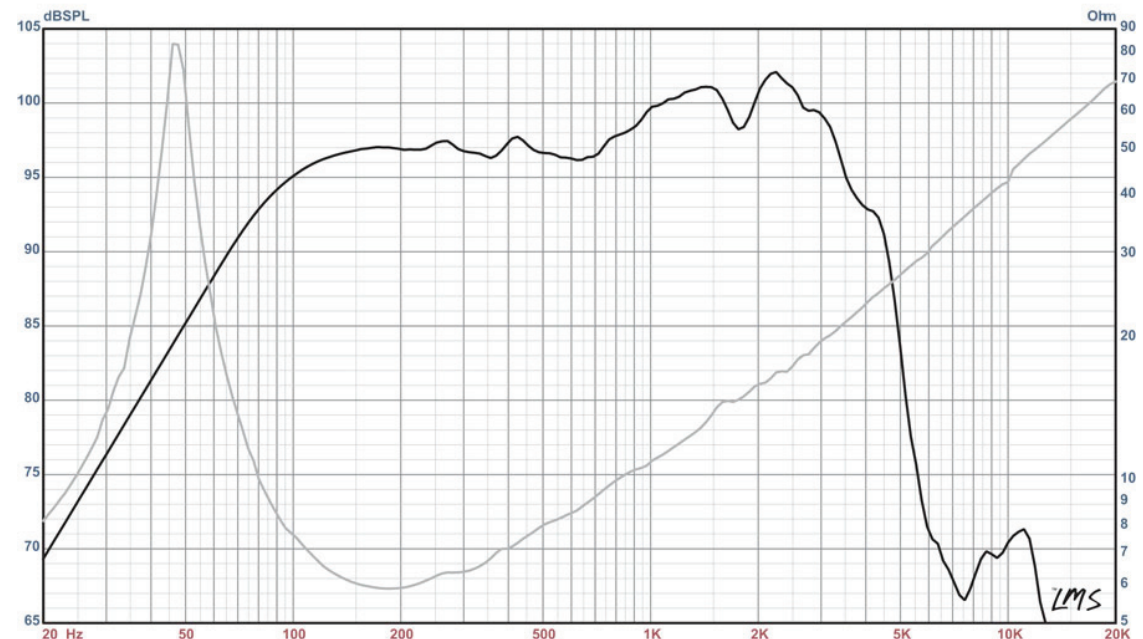




EMINENCE®
 The Art and Science of Sound

BETA-12A-2 American Standard Series

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.



* Please inquire about alternative impedances.

** Multiple units exceed published rating evaluated under EIA 426A noise source and test standard while in a free-air, nontemperature-controlled environment.

*** The average output across the usable frequency range when applying 1W/1m into the nominal impedance. I.e: 2.83 V/8 ohms, 4 V/16 ohms.

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 | Hafler P1500 Trans-Nova amplifier | 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

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]

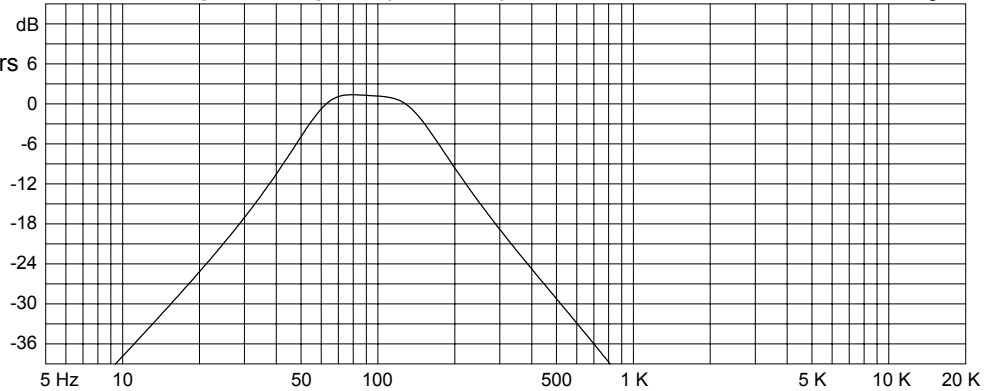
Le = 0.64 mH [0.32]

Z = 8 ohms [4]

Pe = 250 watts [500]

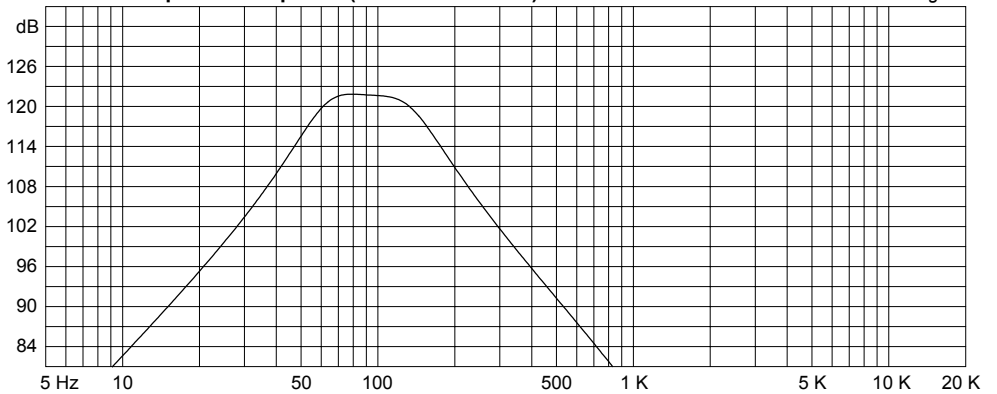
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



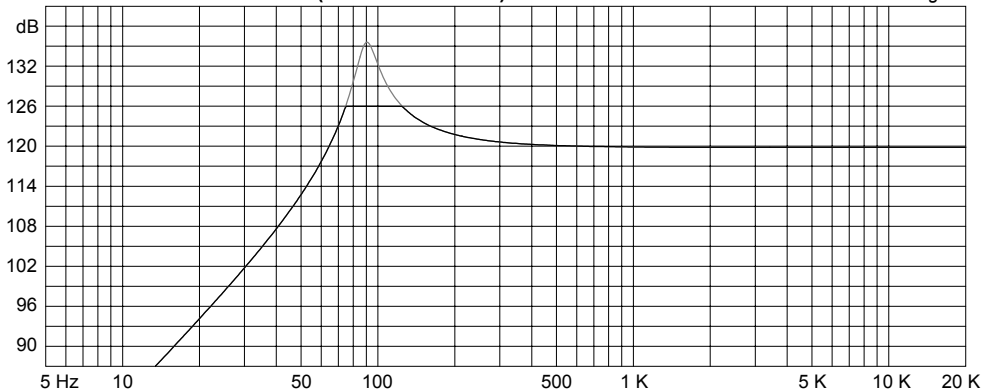
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 100 watts

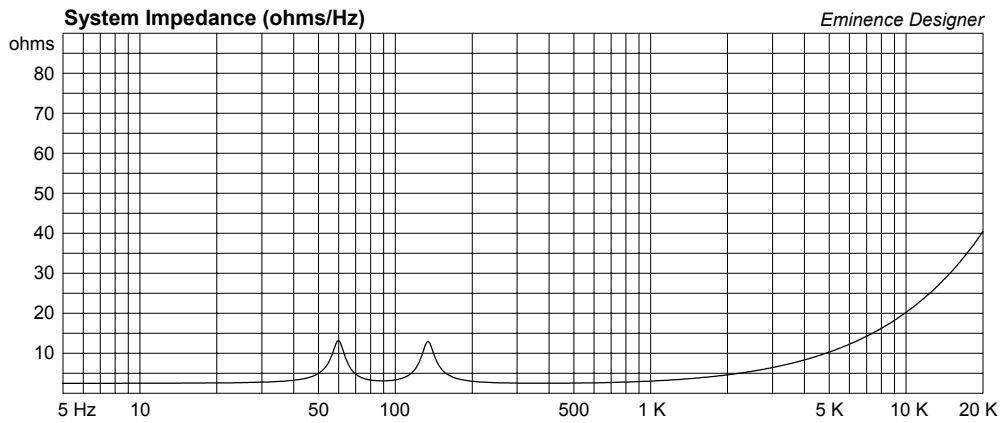
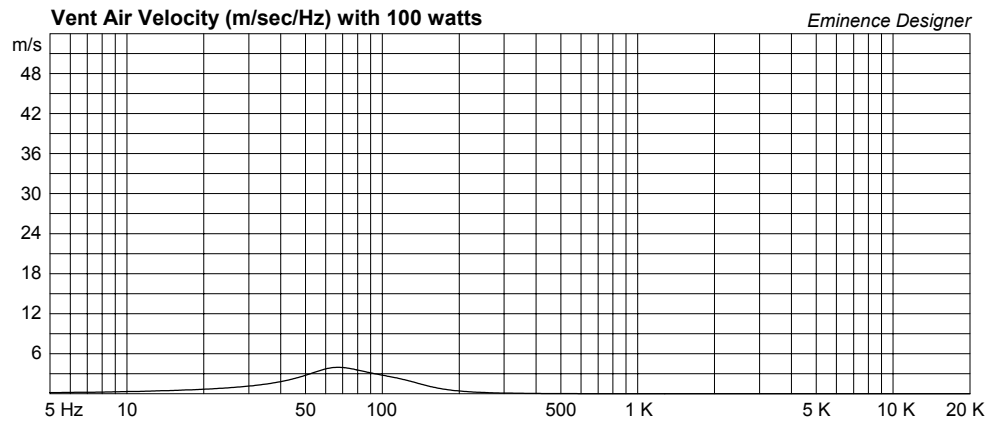
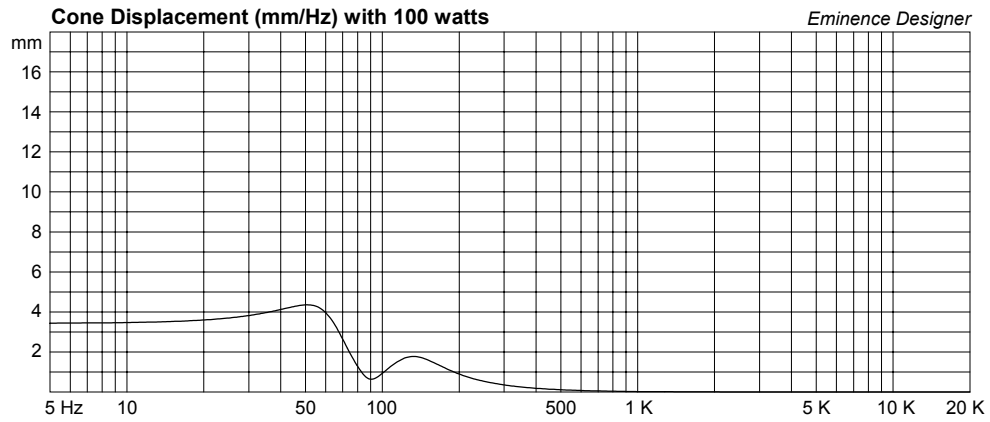
Eminence Designer



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

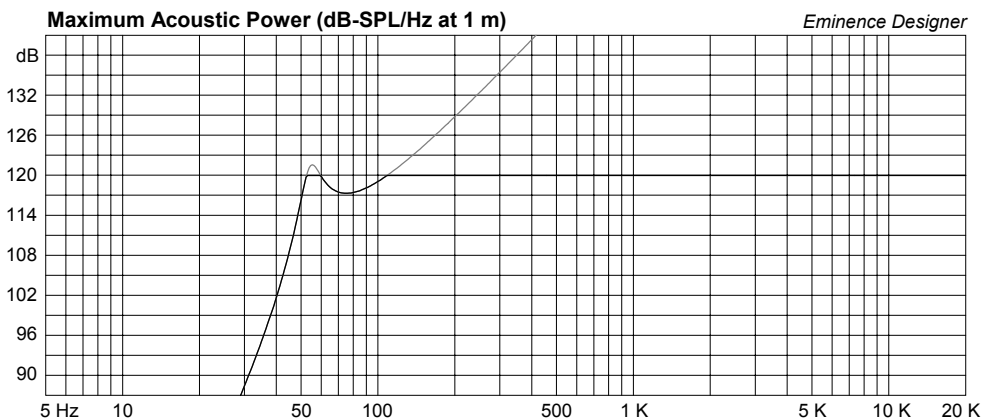
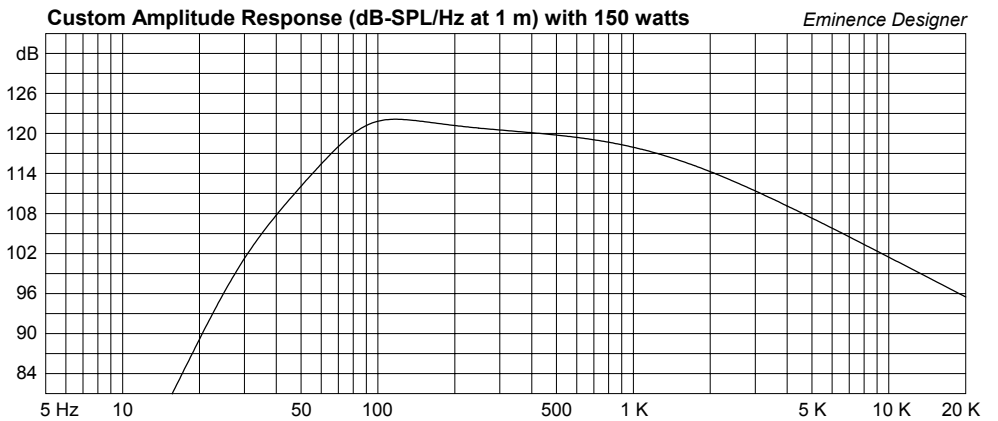
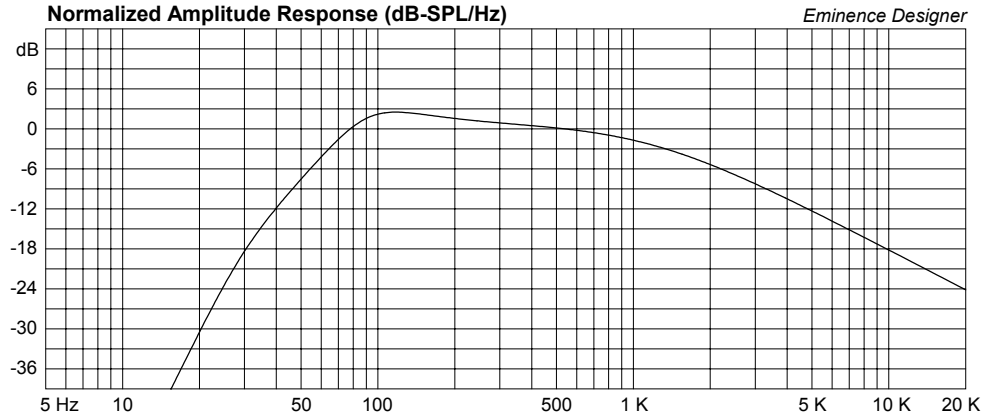
Qes = 0.5

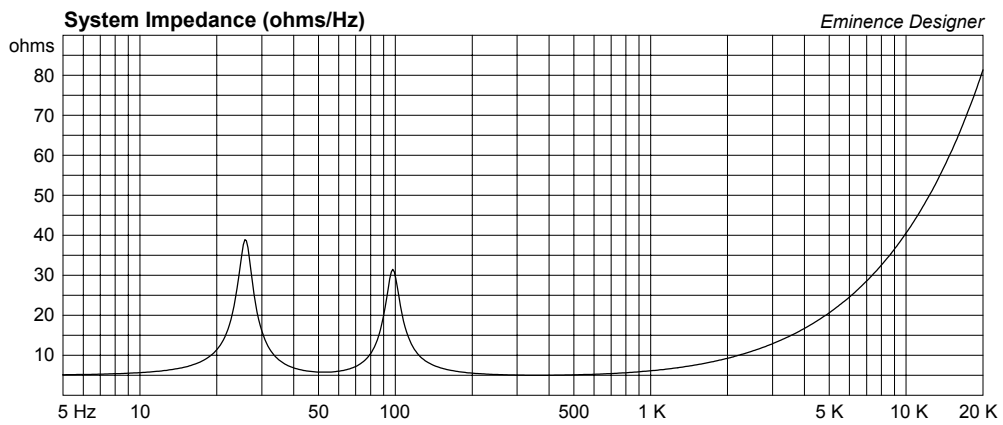
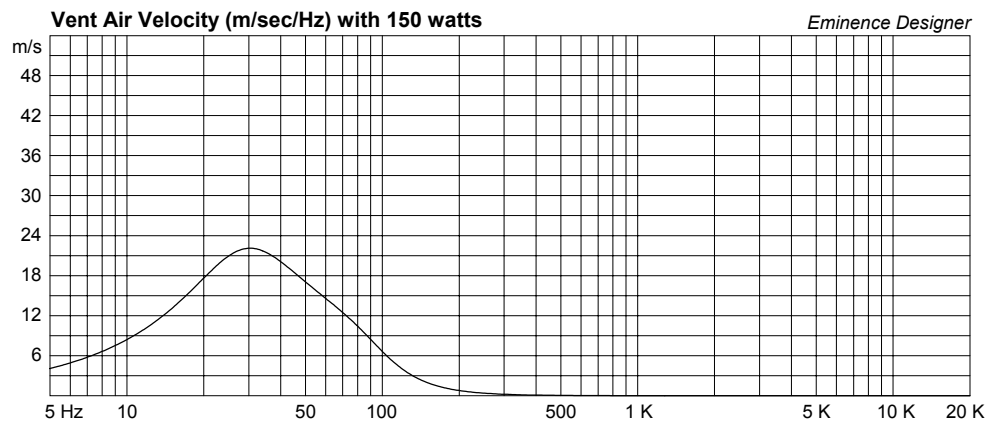
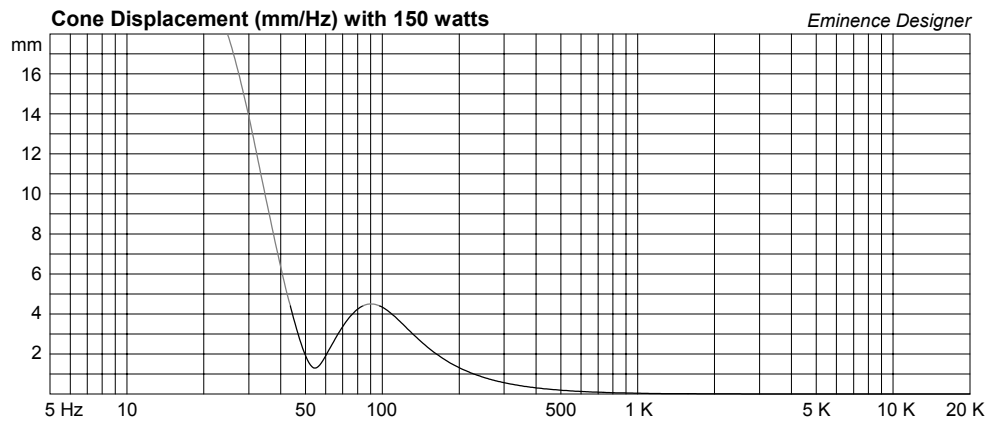
Re = 5 ohms

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

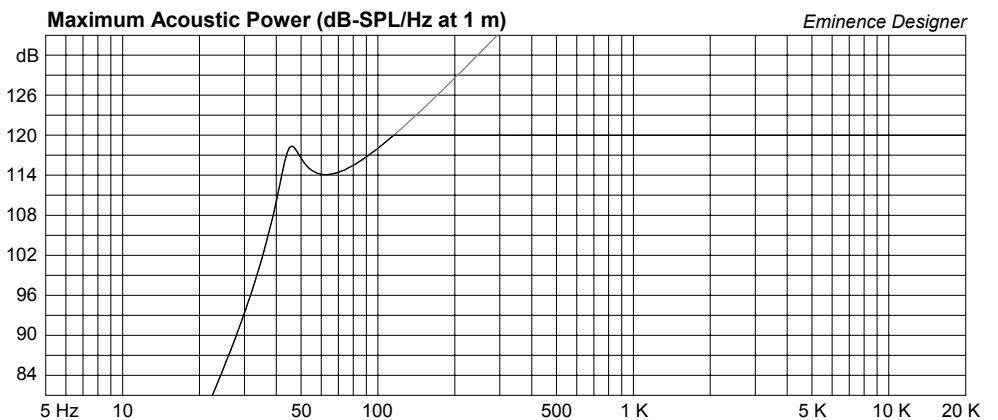
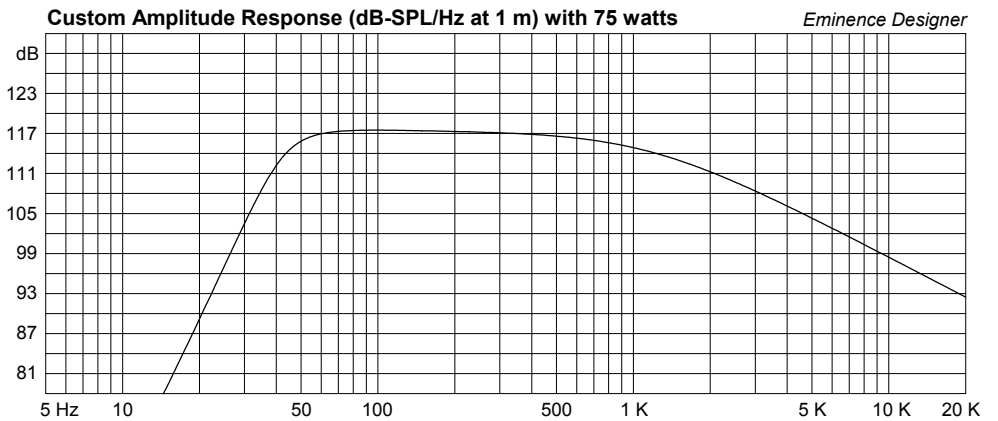
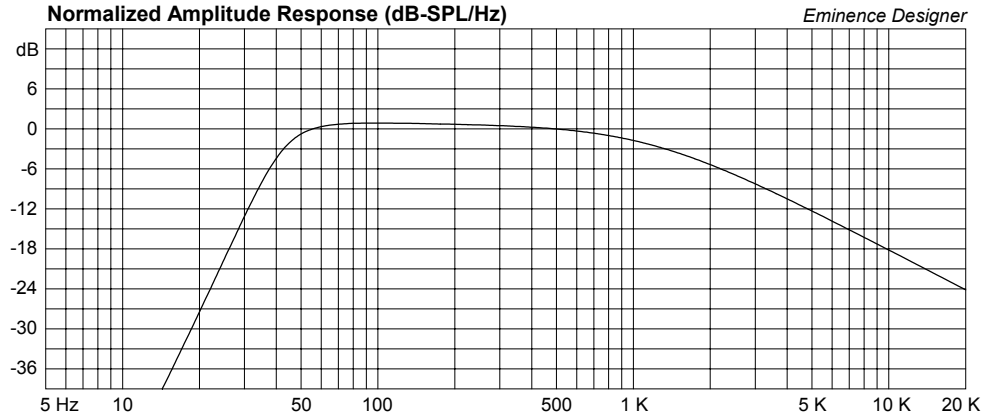
Qes = 0.5

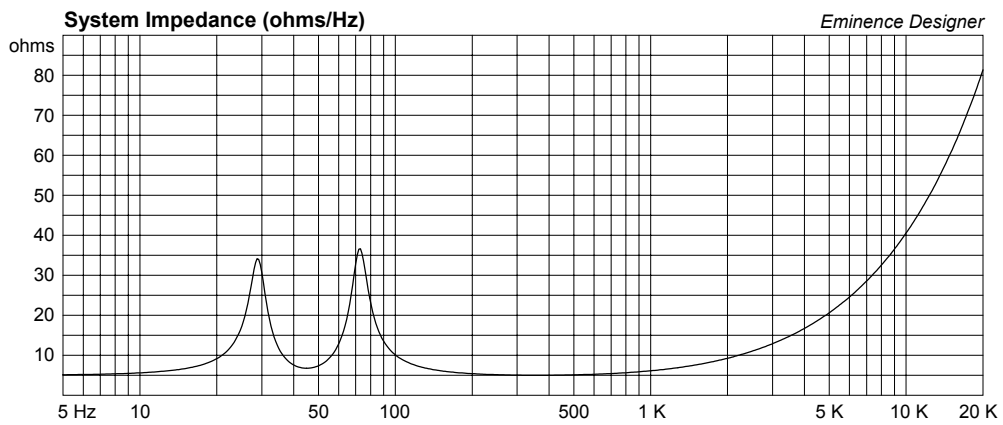
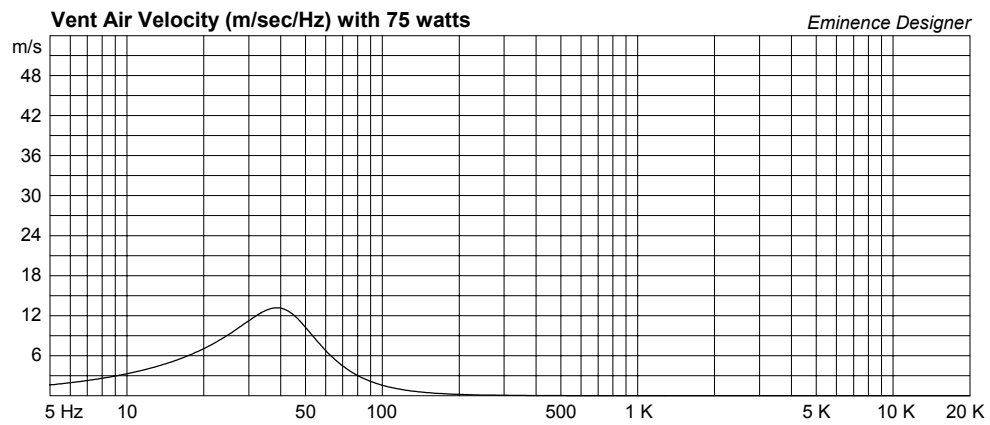
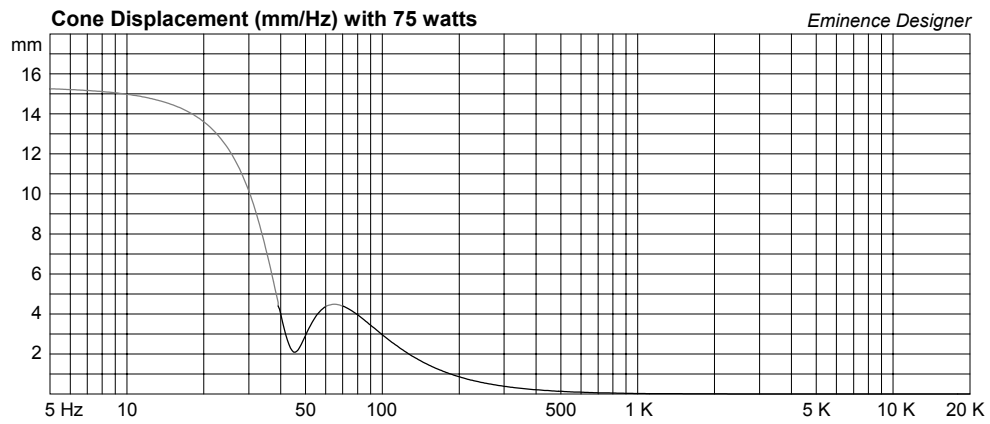
Re = 5 ohms

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

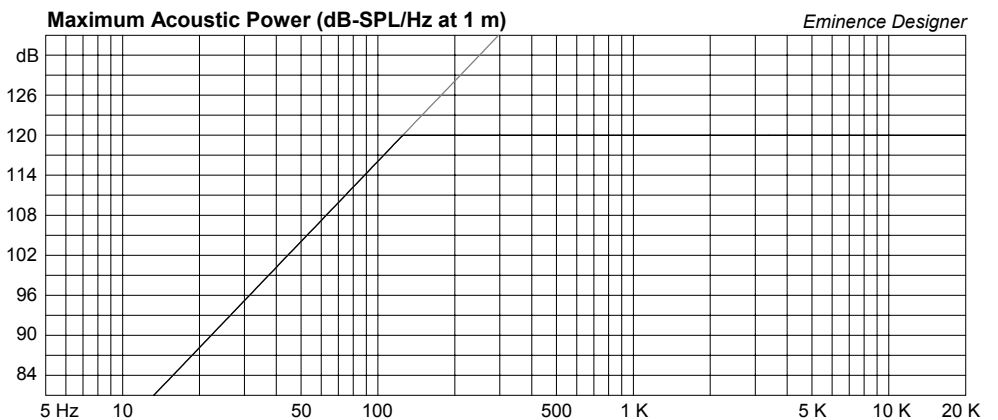
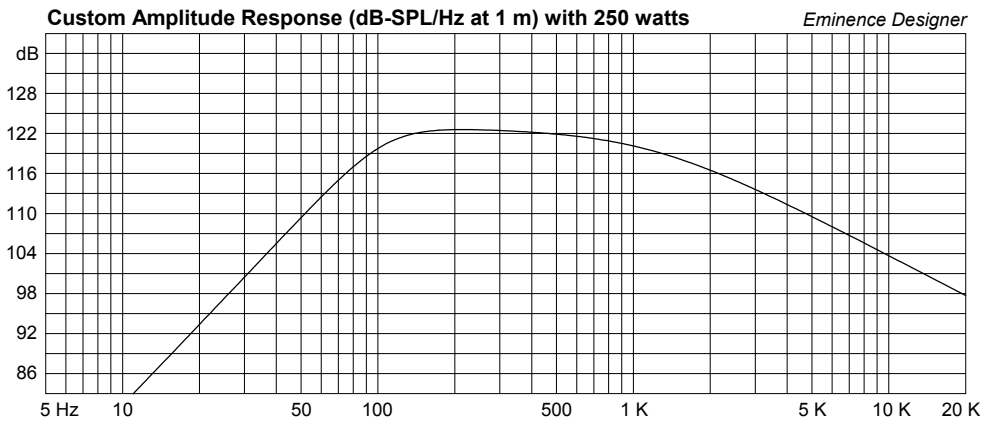
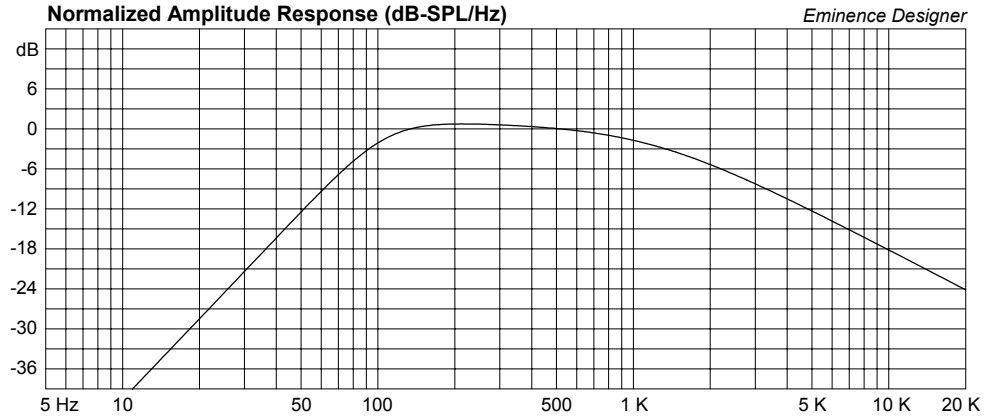
Qes = 0.5

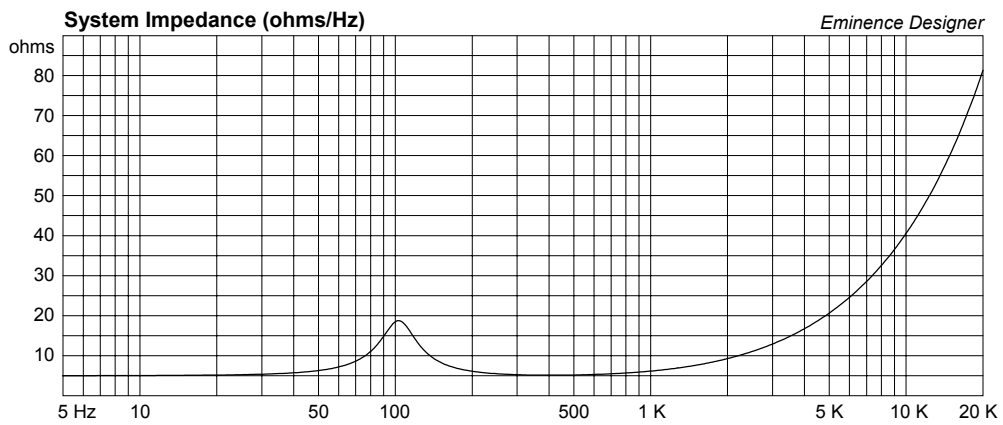
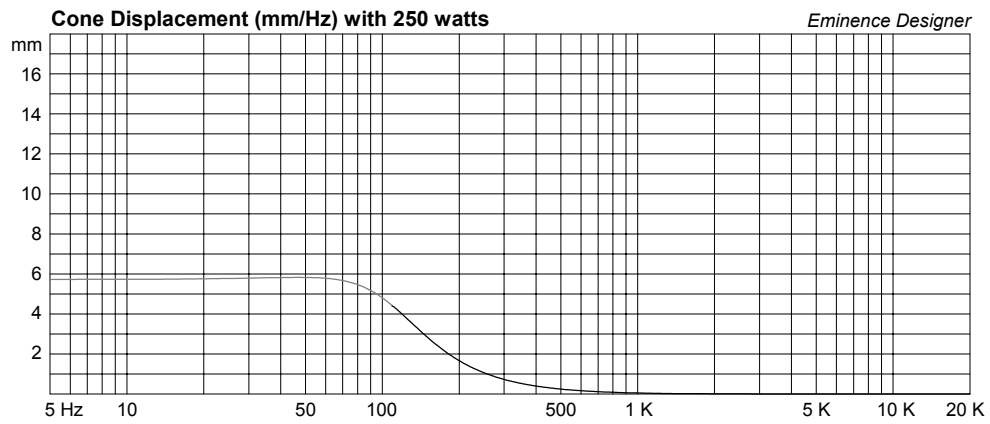
Re = 5 ohms

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

