

Specification

| | |
|---------------------------|----------------|
| Nominal Basket Diameter | 12", 304.8mm |
| Nominal Impedance* | 8 ohms |
| Power Rating** | |
| Watts | 225W |
| Music Program | 450W |
| Resonance | 45Hz |
| Usable Frequency Range*** | 48Hz-8kHz |
| Sensitivity | 97.7 |
| Magnet Weight | 38 oz |
| Gap Height | 0.312", 7.92mm |
| Voice Coil Diameter | 2", 50.8mm |

Thiele & Small Parameters

| | |
|---|-----------------------|
| Resonant Frequency (fs) | 45Hz |
| DC Resistance (Re) | 7.37 |
| Coil Inductance (Le) | 0.83mH |
| Mechanical Q (Qms) | 6.44 |
| Electromagnetic Q (Qes) | 0.55 |
| Total Q (Qts) | 0.51 |
| Compliance Equivalent Volume (Vas) | 136.3 ltr/4.8 cu. ft. |
| Peak Diaphragm Displacement Volume (Vd) | 170cc |
| Mechanical Compliance of Suspension (Cms) | 0.34mm/N |
| BL Product (BL) | 11.7 T-M |
| Diaphragm Mass inc. Airlod (Mms) | 36 grams |
| Efficiency Bandwidth Product (EBP) | 82 |
| Maximum Linear Excursion (Xmax) | 3.2mm |
| Surface Area of Cone (Sd) | 532.4cm ² |
| Maximum Mechanical Limit (Xlim) | 8.0mm |

Mounting Information

| | |
|------------------------------|----------------------------|
| Recommended Enclosure Volume | |
| Sealed | 14-51 ltr/0.5-1.8 cu. ft. |
| Vented | 56.6-116 ltr/2-4.1 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 | 4.47", 114mm |
| Net Weight | 8.1 lbs, 3.7 kg |
| Shipping Weight | 10.2 lbs, 4.6 kg |

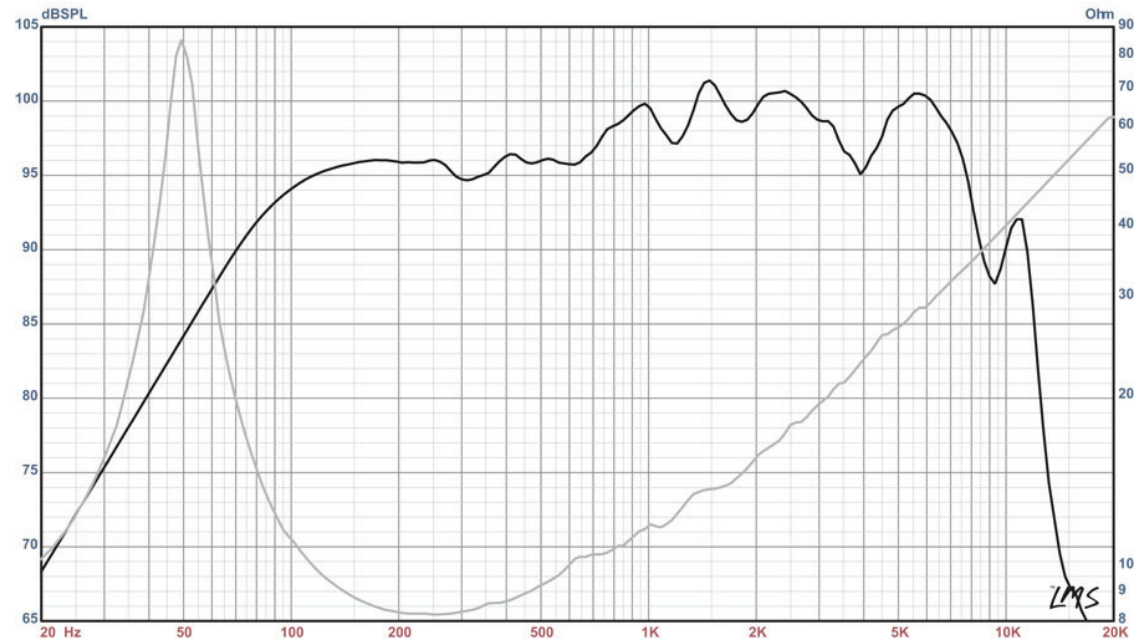
Materials of Construction

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



BETA-12LTA American Standard Series

Recommended for professional audio as a woofer in small sealed monitor, or as a PA woofer or monitor in a vented 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. $I_e: 2.83 \text{ V}/8 \text{ ohms}, 4 \text{ V}/16 \text{ ohms}$.

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)

Beta12LTA Sealed Monitor Cabinet or for Vocal PA

By McJerry, Eminence Speaker LLC

Displacement Limited to 100 Watts; use a 100 Hz high pass filter.

Box Properties

--Description--

Name:

Type: Closed Box

Shape: Prism, square

--Box Parameters--

Vb = 1.75 cu.ft

V(total) = 1.821 cu.ft

Qtc = 0.748

QL = 17.61

F3 = 78.46 Hz

Fill = heavy

Driver Properties

--Description--

Name: Beta-12LT

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: Revised Nov 2005

Piston: Paper cone with whizzer cone.

Suspension: Cloth surround.

Dust Cap: Solid paper dust cap w/whizzer.

Frame: Pressed steel basket.

Voice Coil: 2 inch (50.8 mm) coated copper.

Magnet: 38 oz ferrite magnet.

--Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 45 Hz

Qms = 6.44

Vas = 136.3 liters

Xmax = 3.2 mm

Sd = 532.4 sq.cm

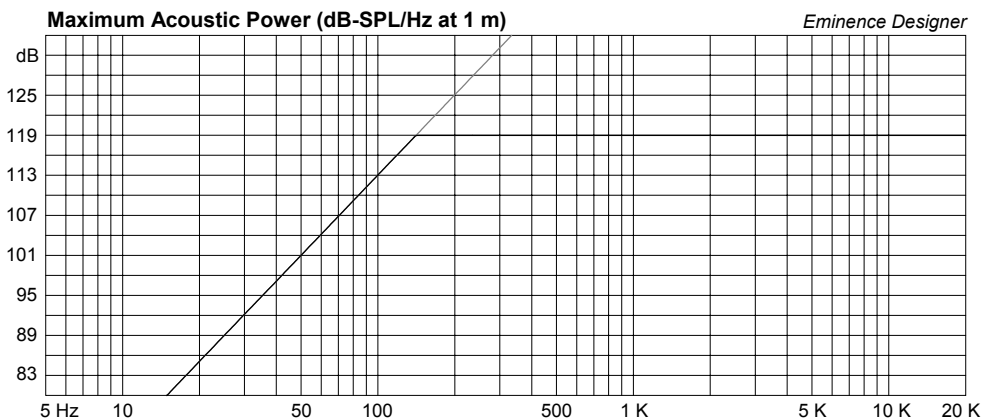
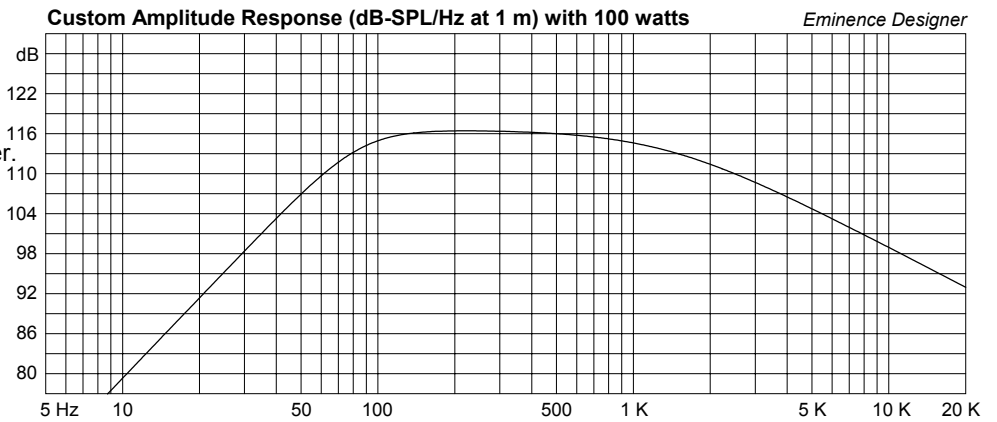
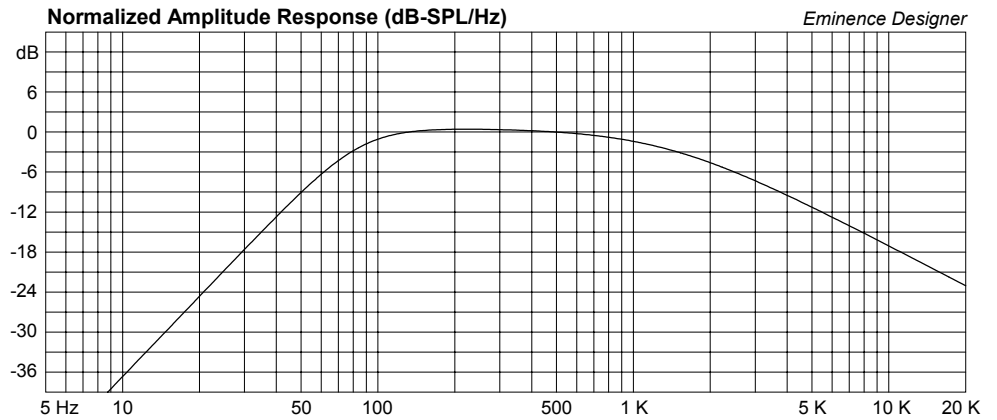
Qes = 0.55

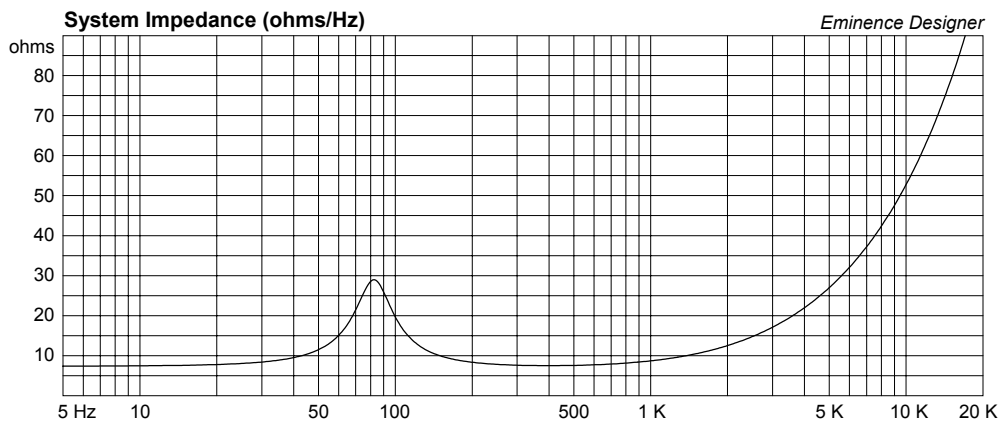
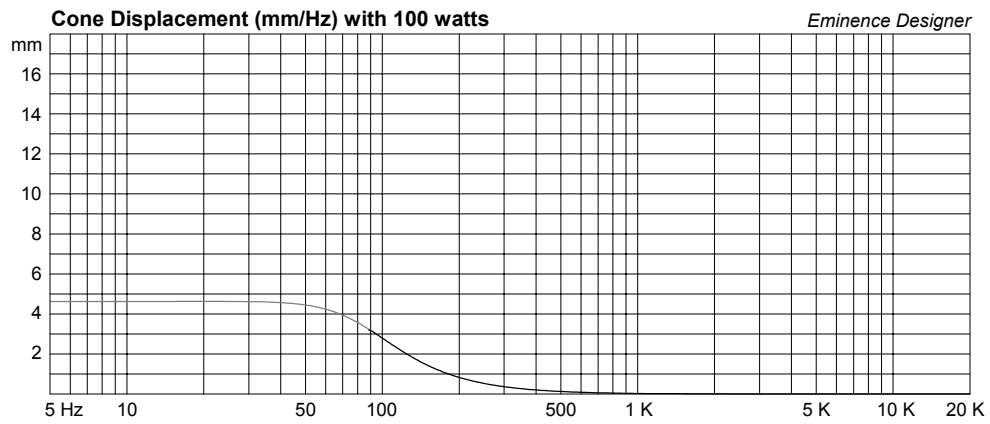
Re = 7.37 ohms

Le = 0.83 mH

Z = 8 ohms

Pe = 225 watts





Beta12LTA Larger Vented Cab; Low Pwr FR PA or Monitor

By McJerry, Eminence Speaker LLC

Displacement Limited to 45 Watts; F3 of 48 Hz. Use a steep high pass filter set to 30 Hz.

Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 4 cu.ft

V(total) = 4.096 cu.ft

Fb = 40 Hz

QL = 7

F3 = 47.51 Hz

Fill = minimal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 3 in

Lv = 2.624 in

Driver Properties

--Description--

Name: Beta-12LT

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: Revised Nov 2005

Piston: Paper cone with whizzer cone.

Suspension: Cloth surround.

Dust Cap: Solid paper dust cap w/whizzer.

Frame: Pressed steel basket.

Voice Coil: 2 inch (50.8 mm) coated copper.

Magnet: 38 oz ferrite magnet.

--Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 45 Hz

Qms = 6.44

Vas = 136.3 liters

Xmax = 3.2 mm

Sd = 532.4 sq.cm

Qes = 0.55

Re = 7.37 ohms

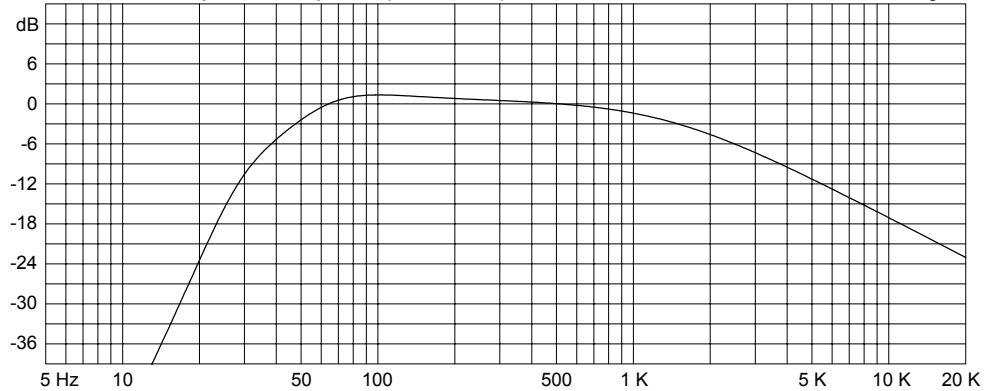
Le = 0.83 mH

Z = 8 ohms

Pe = 225 watts

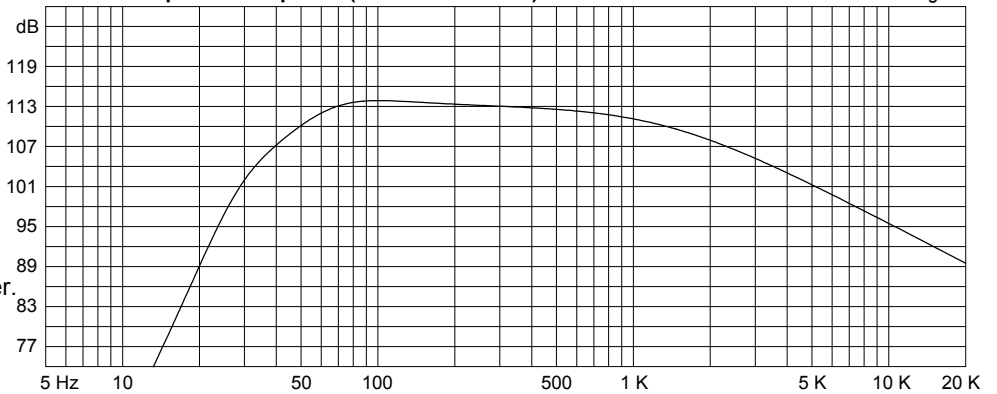
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



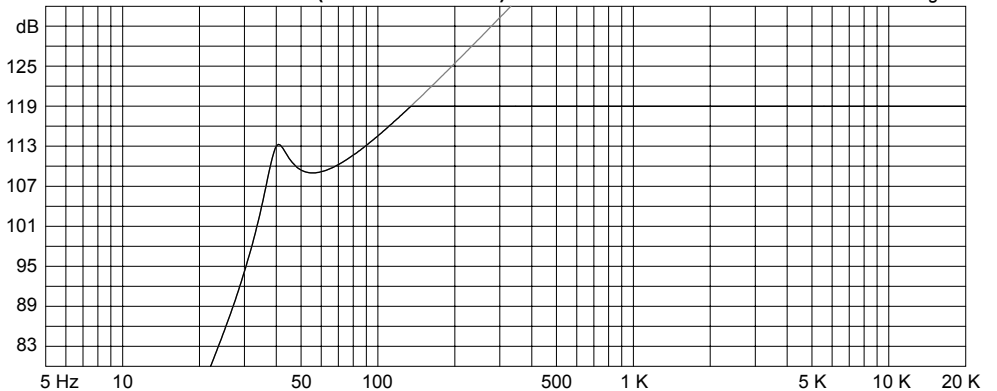
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 45 watts

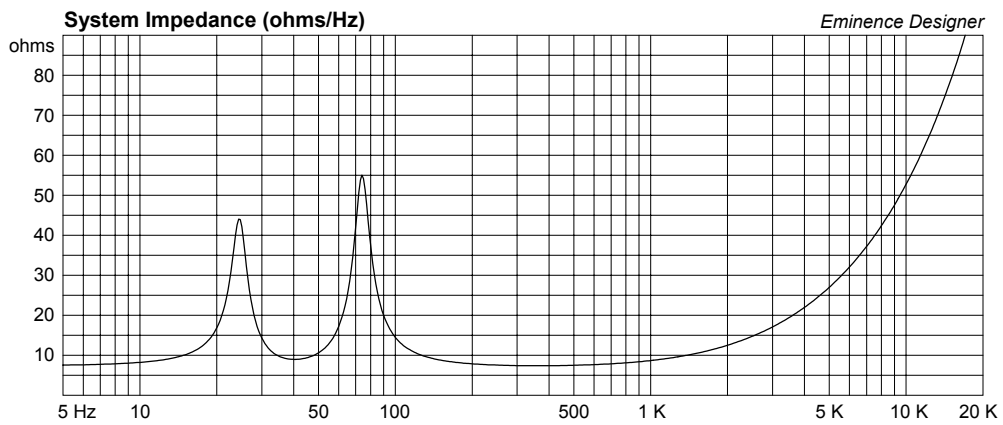
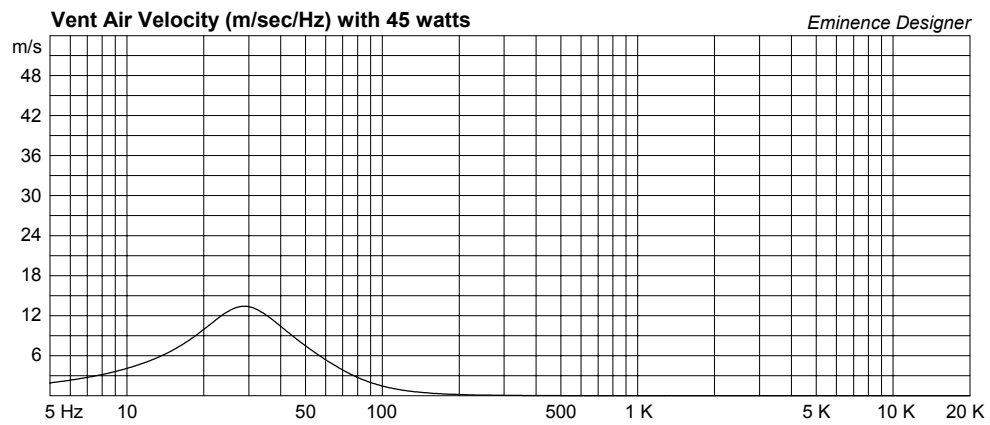
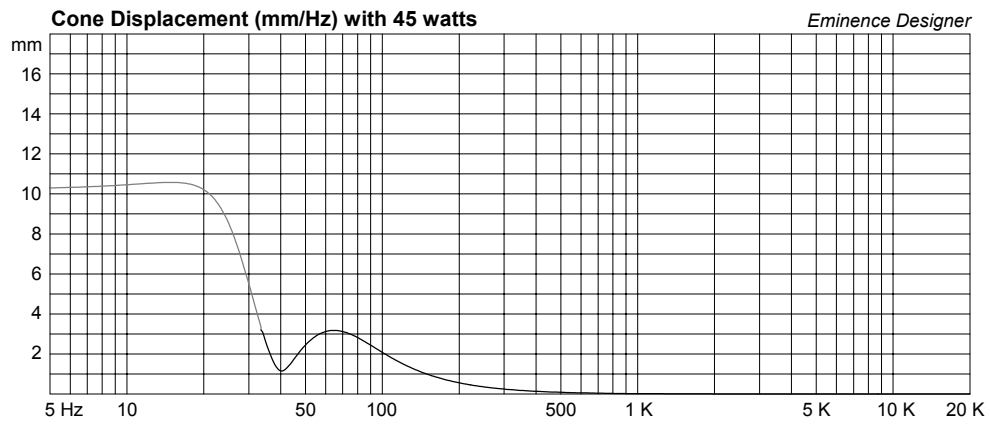
Eminence Designer



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

Eminence Designer





Beta12LTA Med Vented Cab; Semi Full Range PA or Monitor

By McJerry, Eminence Speaker LLC

Displacement Limited to 100 Watts; F3 of 62 Hz. Use a steep high pass filter set to 50 Hz.

Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 2.029 cu.ft

V(total) = 2.116 cu.ft

Fb = 61.1 Hz

QL = 7

F3 = 62.48 Hz

Fill = minimal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 3 in

Lv = 1.665 in

Driver Properties

--Description--

Name: Beta-12LT

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: Revised Nov 2005

Piston: Paper cone with whizzer cone.

Suspension: Cloth surround.

Dust Cap: Solid paper dust cap w/whizzer.

Frame: Pressed steel basket.

Voice Coil: 2 inch (50.8 mm) coated copper.

Magnet: 38 oz ferrite magnet.

--Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 45 Hz

Qms = 6.44

Vas = 136.3 liters

Xmax = 3.2 mm

Sd = 532.4 sq.cm

Qes = 0.55

Re = 7.37 ohms

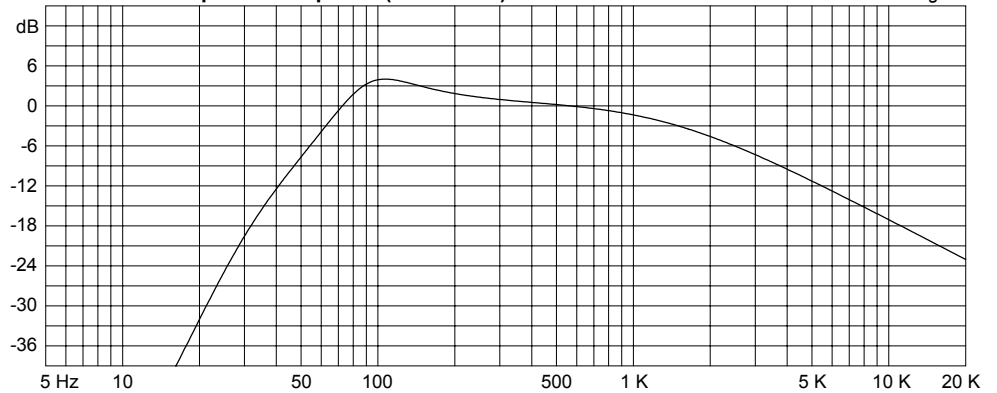
Le = 0.83 mH

Z = 8 ohms

Pe = 225 watts

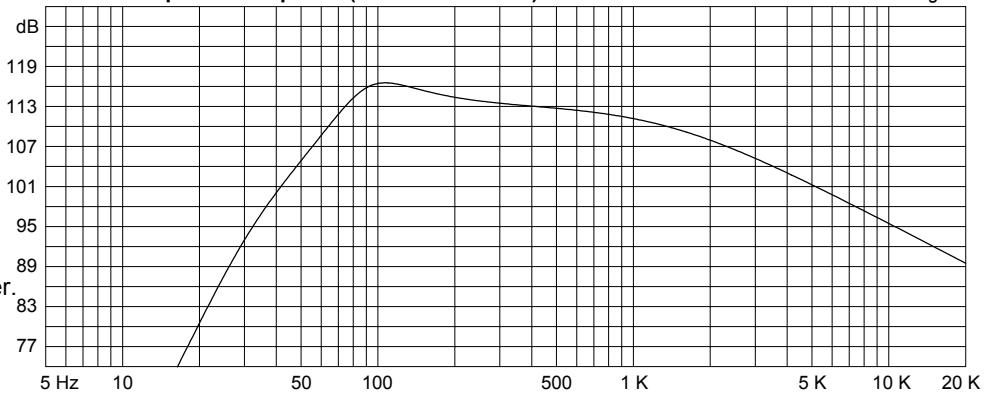
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



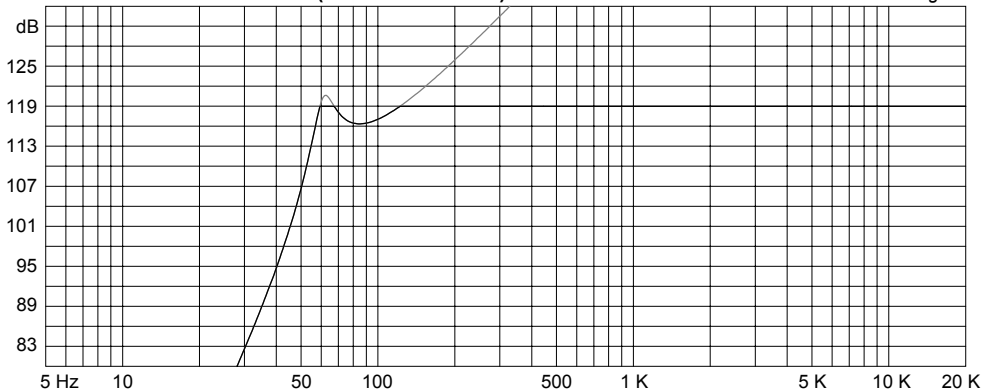
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 45 watts

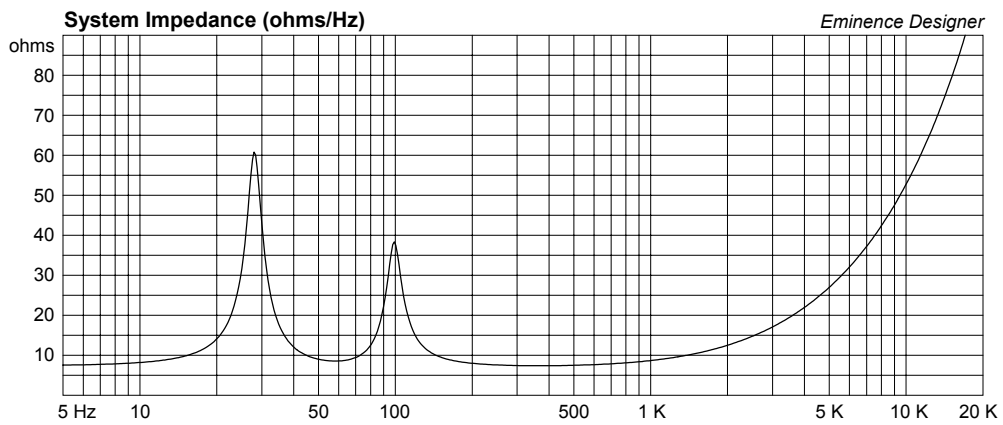
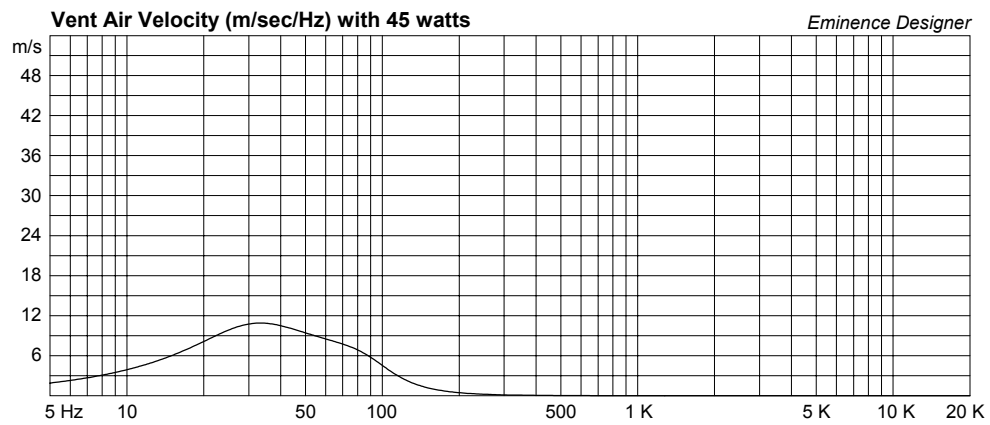
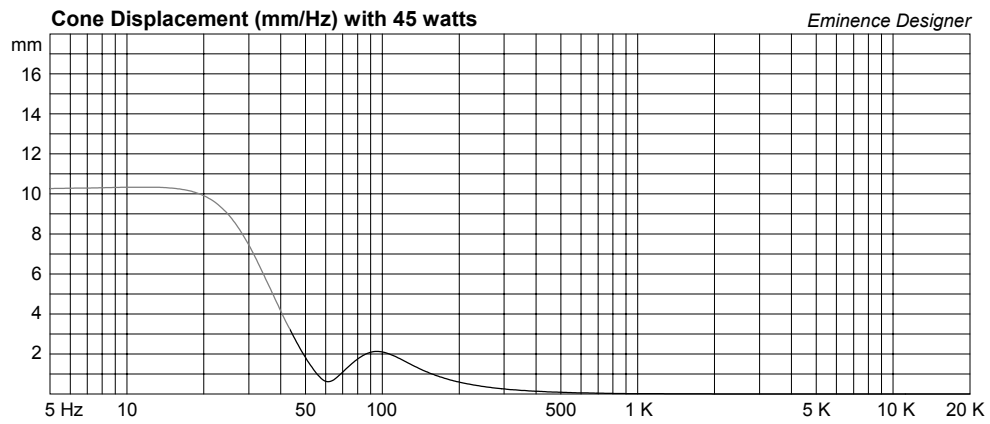
Eminence Designer



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

Eminence Designer





Beta12LTA Small Sealed Cab; Vocal Monitor

By McJerry, Eminence Speaker LLC

Limited to 150 Watts; use a steep high pass filter at 150 Hz. Not for Full Range Use.

Box Properties

--Description--

Name:

Type: Closed Box

Shape: Prism, square

--Box Parameters--

Vb = 0.457 cu.ft

V(total) = 0.528 cu.ft

Qtc = 1.14

QL = 20

F3 = 107.6 Hz

Fill = heavy

Driver Properties

--Description--

Name: Beta-12LT

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: Revised Nov 2005

Piston: Paper cone with whizzer cone.

Suspension: Cloth surround.

Dust Cap: Solid paper dust cap w/whizzer.

Frame: Pressed steel basket.

Voice Coil: 2 inch (50.8 mm) coated copper.

Magnet: 38 oz ferrite magnet.

--Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 45 Hz

Qms = 6.44

Vas = 136.3 liters

Xmax = 3.2 mm

Sd = 532.4 sq.cm

Qes = 0.55

Re = 7.37 ohms

Le = 0.83 mH

Z = 8 ohms

Pe = 225 watts

