

LAB12C Small Sealed Subwoofer

By Jerry McNutt, Eminence Speaker LLC

Limit to 450 Watts; F3 at 54 Hz. Use a steep high pass at 25 Hz.

This Design Is More for Automotive Use



Box Properties

--Description--

Name:

Type: Closed Box

Shape: Prism, square

--Box Parameters--

Vb = 1 cu.ft

V(total) = 1.101 cu.ft

Qtc = 0.676

QL = 20

F3 = 54.38 Hz

Fill = normal

Driver Properties

--Description--

Name: LAB12C

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: Four Ohm LAB12 Subwoofer

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 22.85 Hz

Qms = 11.7

Vas = 128.3 liters

Cms = 0.36 mm/N

Mms = 135.6 g

Rms = 1.66 kg/s

Xmax = 13 mm

Xmech = 22 mm

P-Dia = 252.6 mm

Sd = 506.7 sq.cm

P-Vd = 0.651 liters

--Electrical Parameters--

Qes = 0.34

Re = 3.11 ohms

Le = 1.09 mH

Z = 4 ohms

BL = 13.36 Tm

Pe = 500 watts

--Electromech. Parameters--

Qts = 0.33

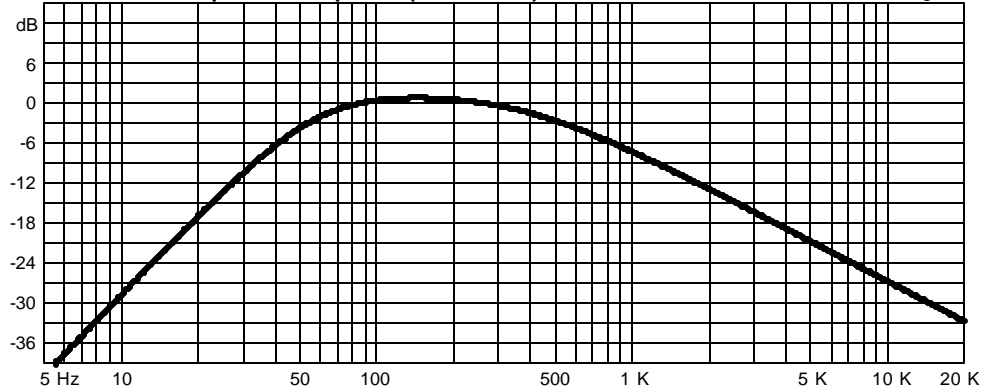
no = 0.434 %

1-W SPL = 88.52 dB

2.83-V SPL = 92.63 dB

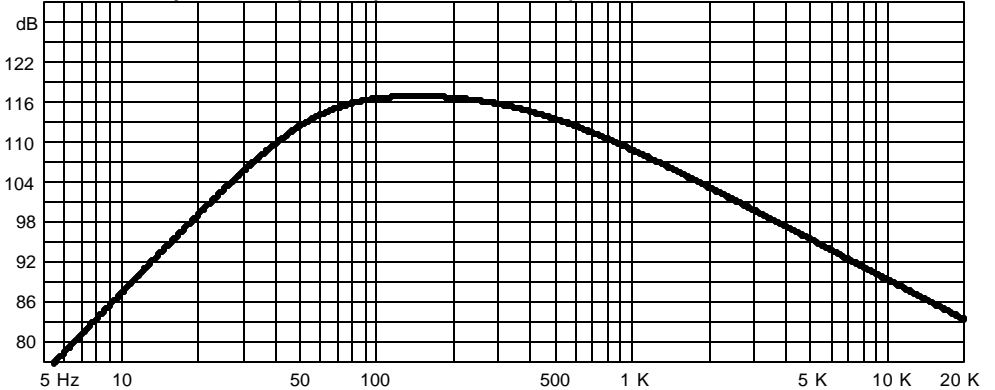
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



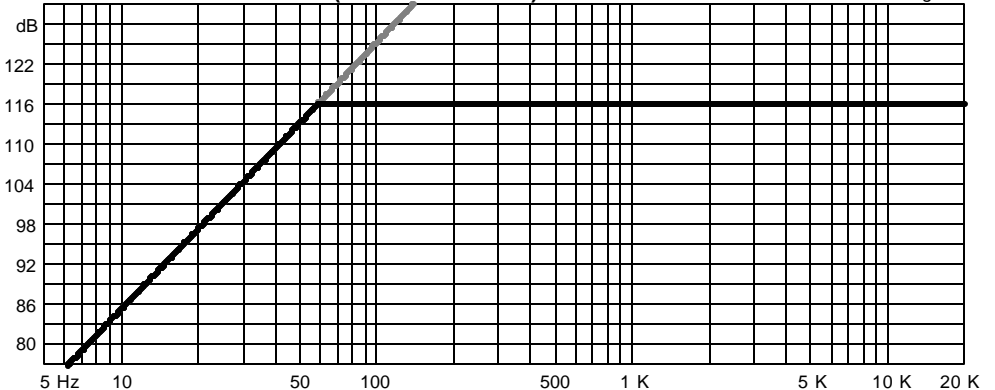
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 450 watts

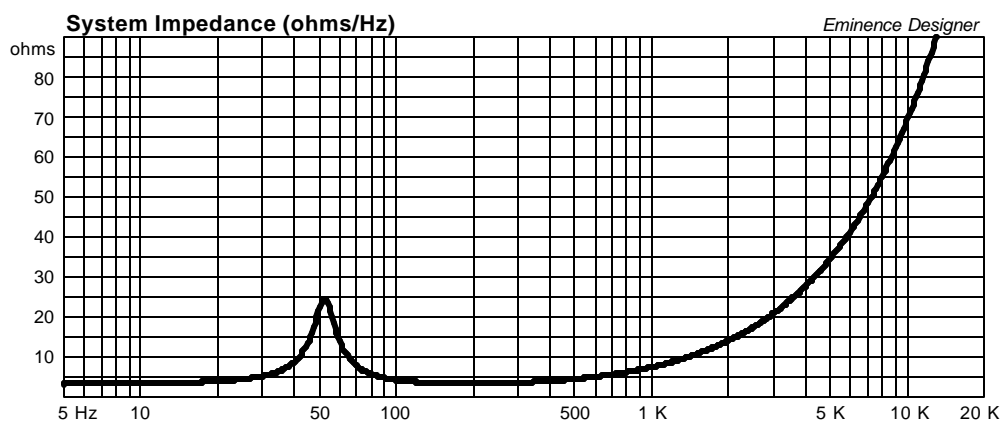
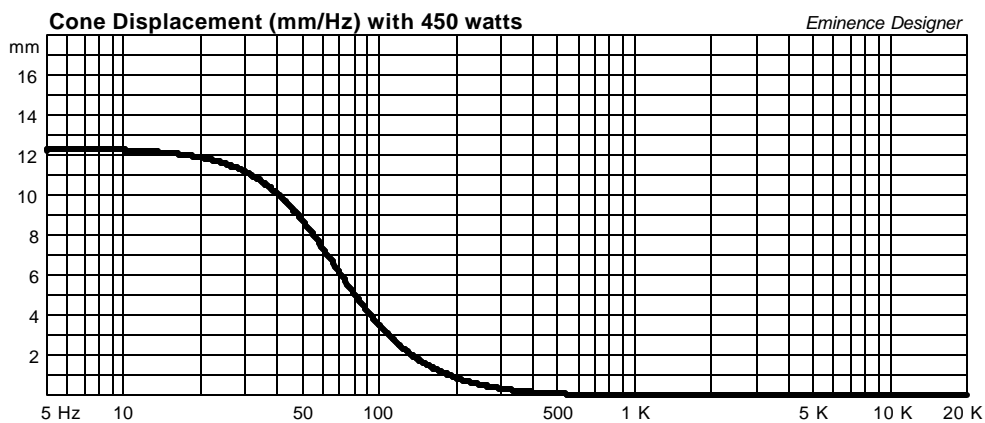
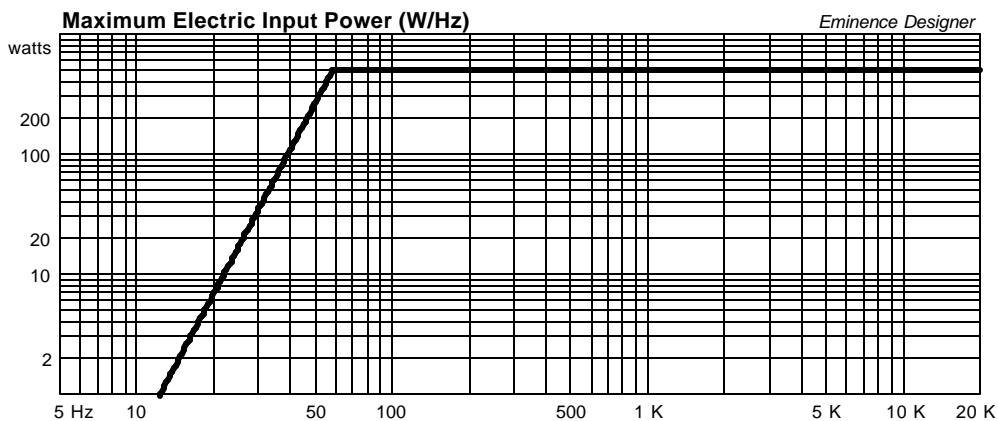
Eminence Designer

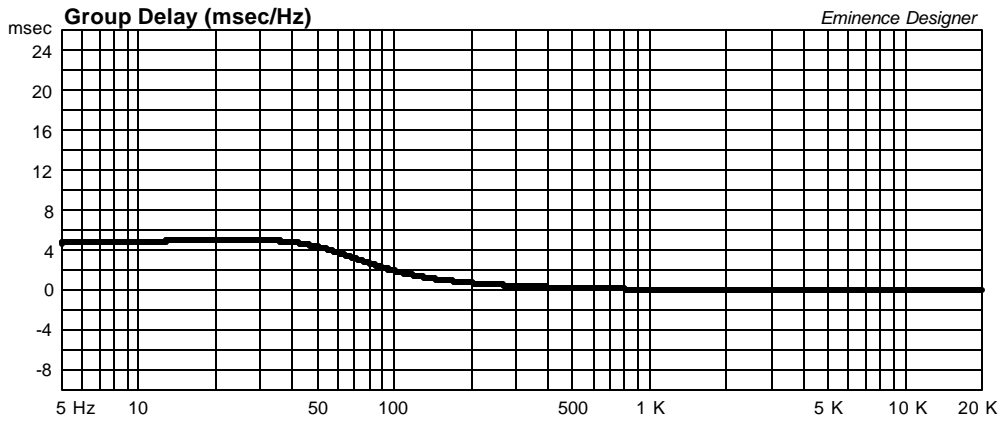


Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer







LAB12C Small Vented Subwoofer Design

By Jerry McNutt, Eminence Speaker LLC

500 Watts; F3 at 42 Hz. Use a steep high pass at 32 Hz.



Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 1.25 cu.ft

V(total) = 1.466 cu.ft

Fb = 38 Hz

QL = 7

F3 = 41.5 Hz

Fill = normal

--Vents--

No. of Vents = 1

Vent shape = round

Vent ends = one flush

Dv = 4 in

Lv = 14.79 in

Driver Properties

--Description--

Name: LAB12C

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: Four Ohm LAB12 Subwoofer

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 22.85 Hz

Qms = 11.7

Vas = 128.3 liters

Cms = 0.36 mm/N

Mms = 135.6 g

Rms = 1.66 kg/s

Xmax = 13 mm

Xmech = 22 mm

P-Dia = 252.6 mm

Sd = 506.7 sq.cm

P-Vd = 0.651 liters

--Electrical Parameters--

Qes = 0.34

Re = 3.11 ohms

Le = 1.09 mH

Z = 4 ohms

BL = 13.36 Tm

Pe = 500 watts

--Electromech. Parameters--

Qts = 0.33

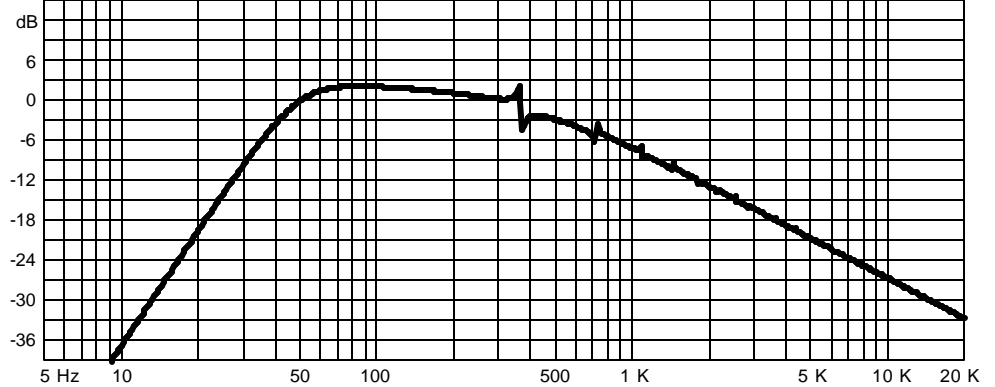
no = 0.434 %

1-W SPL = 88.52 dB

2.83-V SPL = 92.63 dB

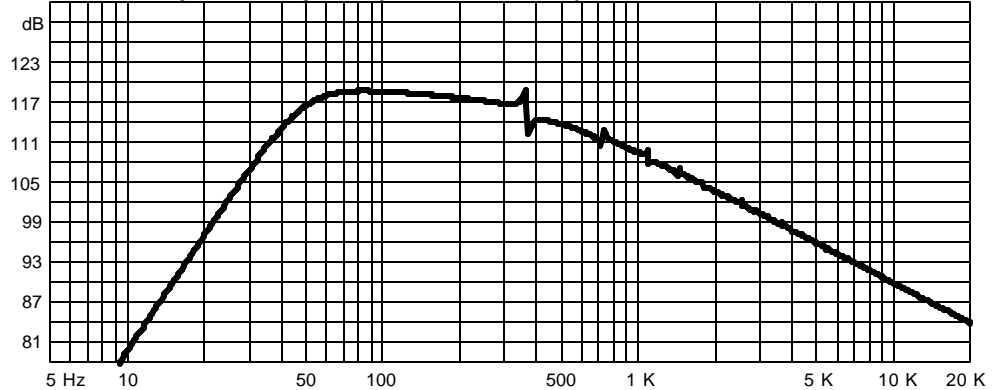
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



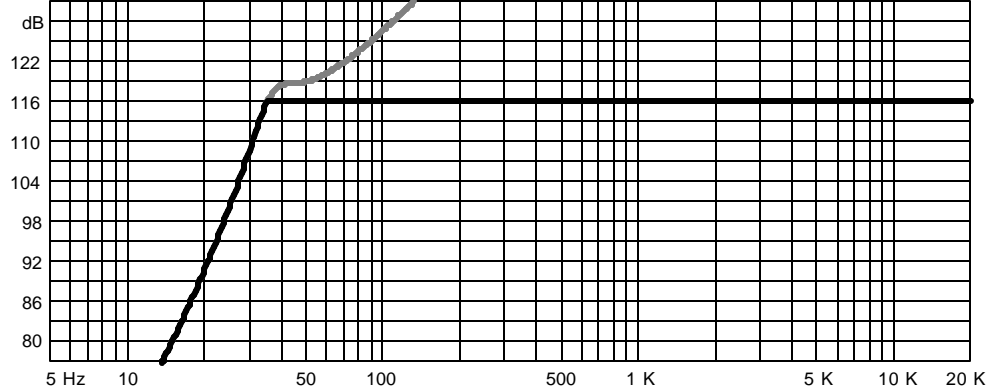
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 500 watts

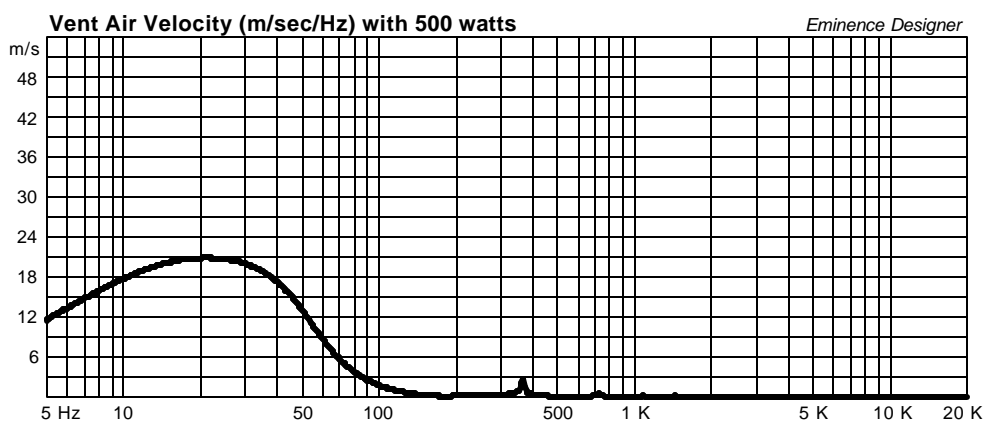
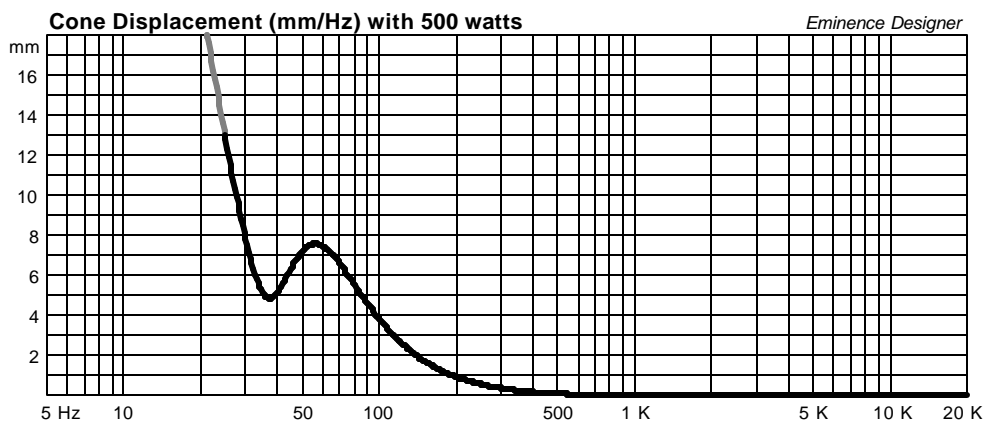
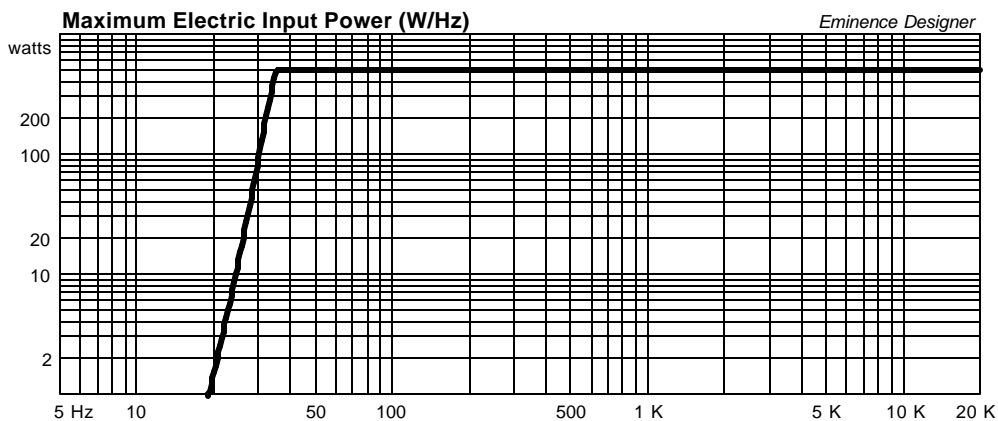
Eminence Designer

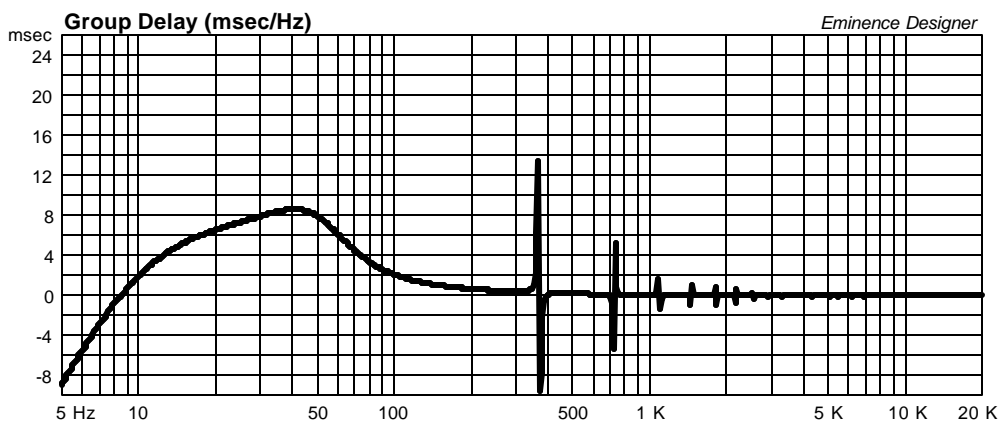
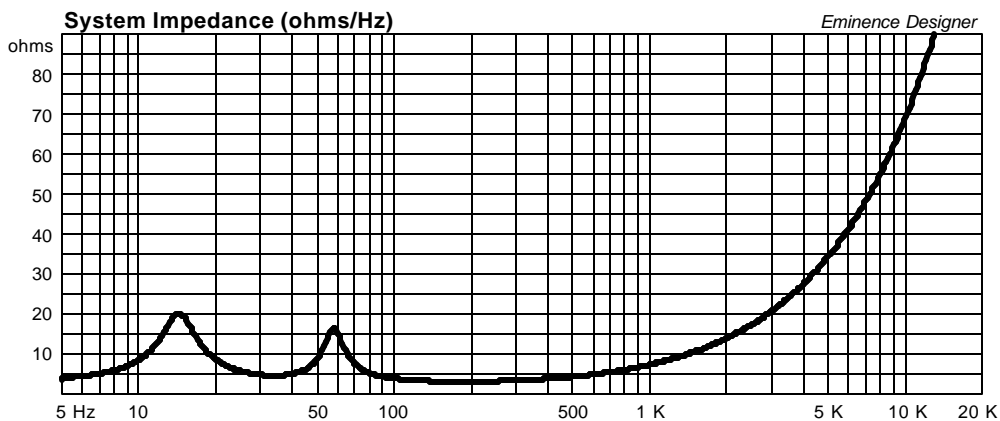


Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer







LAB12C Medium Sealed Subwoofer

By Jerry McNutt, Eminence Speaker LLC

Limit to 450 Watts; F3 at 54 Hz. Use a steep high pass at 35 Hz.

This Design Is More for Automotive Use



Box Properties

--Description--

Name:

Type: Closed Box

Shape: Prism, square

--Box Parameters--

Vb = 2 cu.ft

V(total) = 2.101 cu.ft

Qtc = 0.534

QL = 20

F3 = 54.29 Hz

Fill = normal

Driver Properties

--Description--

Name: LAB12C

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: Four Ohm LAB12 Subwoofer

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 22.85 Hz

Qms = 11.7

Vas = 128.3 liters

Cms = 0.36 mm/N

Mms = 135.6 g

Rms = 1.66 kg/s

Xmax = 13 mm

Xmech = 22 mm

P-Dia = 252.6 mm

Sd = 506.7 sq.cm

P-Vd = 0.651 liters

--Electrical Parameters--

Qes = 0.34

Re = 3.11 ohms

Le = 1.09 mH

Z = 4 ohms

BL = 13.36 Tm

Pe = 500 watts

--Electromech. Parameters--

Qts = 0.33

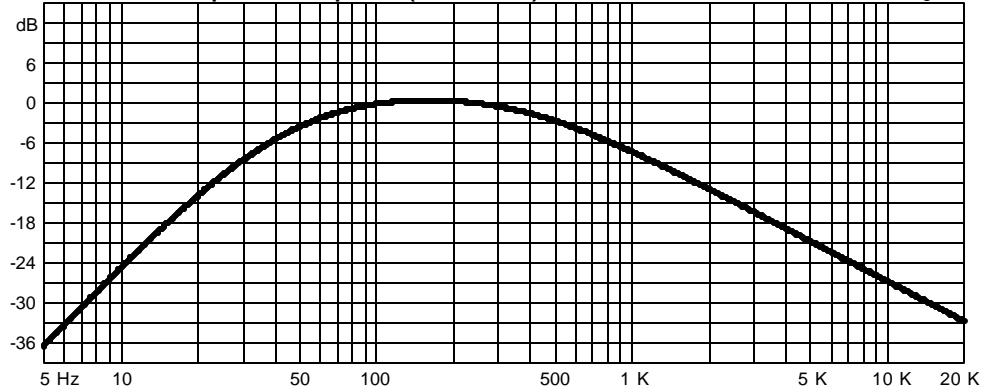
no = 0.434 %

1-W SPL = 88.52 dB

2.83-V SPL = 92.63 dB

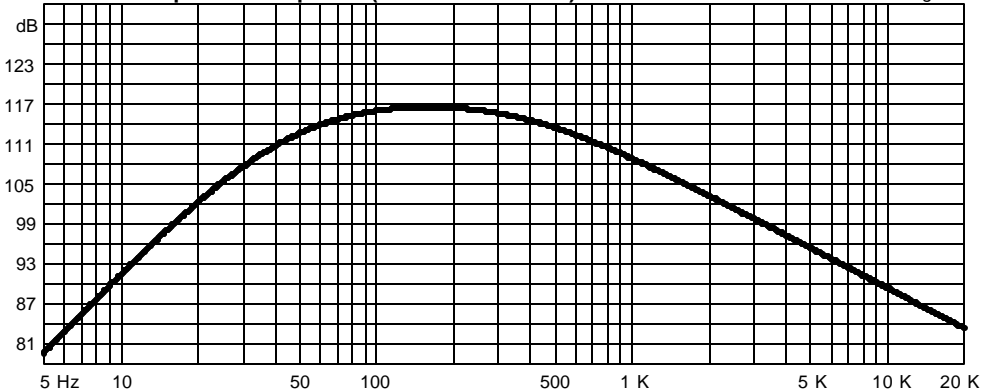
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



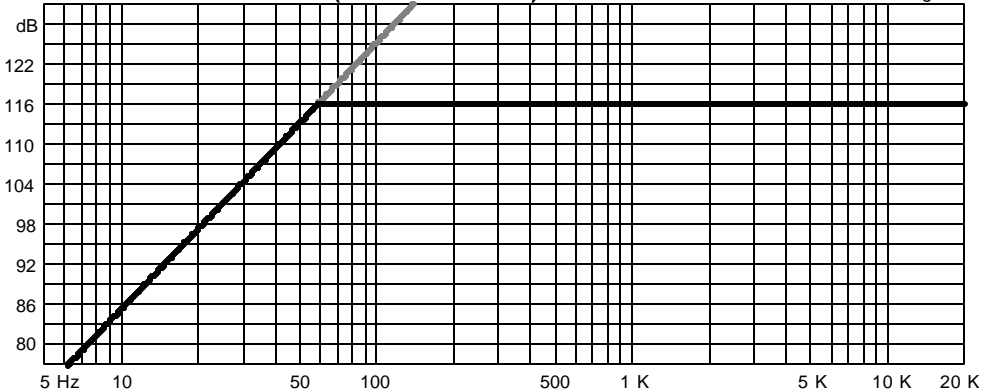
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 450 watts

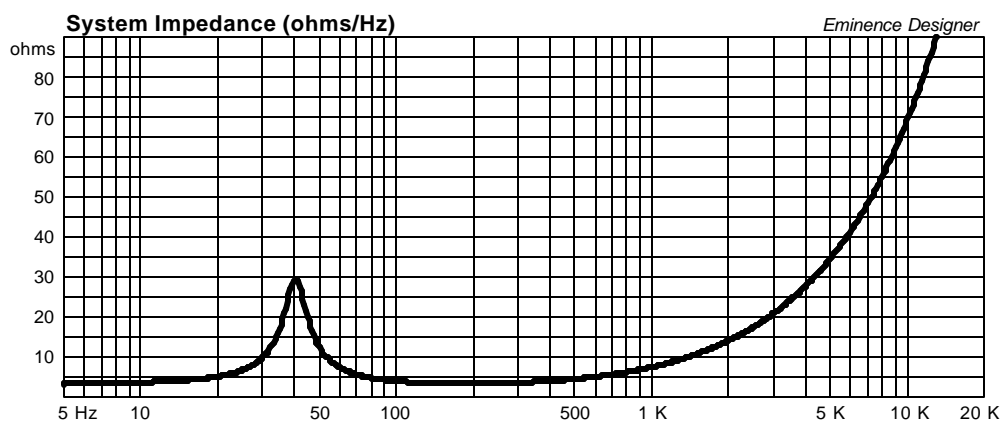
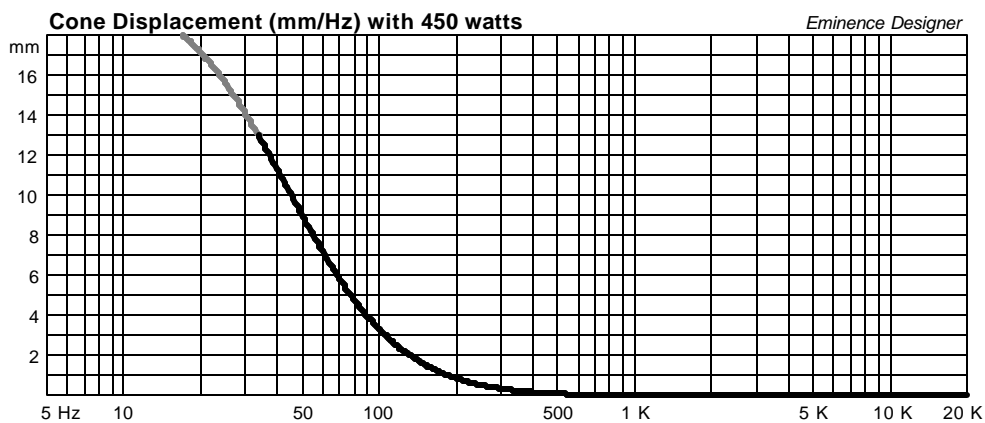
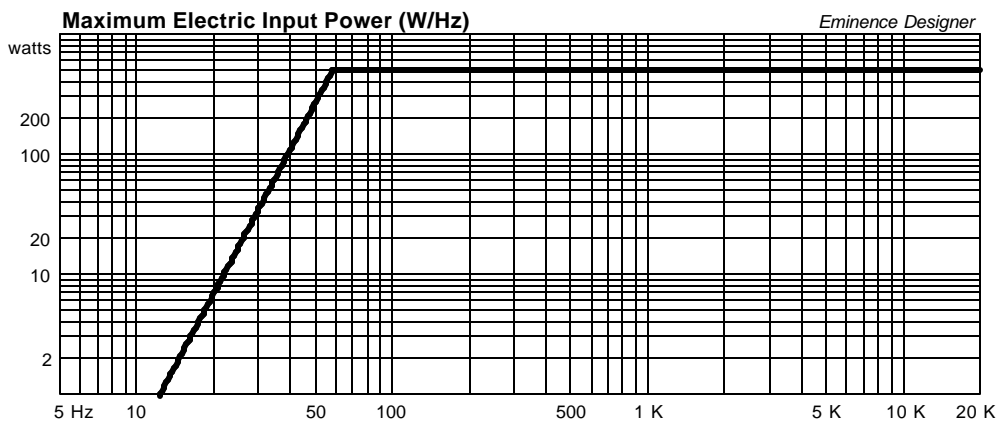
Eminence Designer

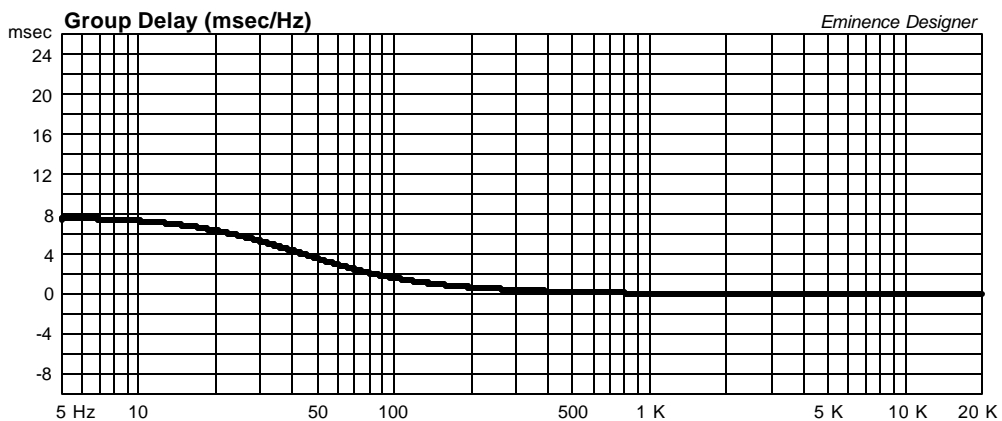


Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer







LAB12C Medium Vented Subwoofer Design

By Jerry McNutt, Eminence Speaker LLC

500 Watts; F3 at 36 Hz. Use a very steep high pass filter at 28 Hz.



Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 2.5 cu.ft

V(total) = 2.874 cu.ft

Fb = 35 Hz

QL = 7

F3 = 36.24 Hz

Fill = normal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 4 in

Lv = 17.39 in

Driver Properties

--Description--

Name: LAB12C

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: Four Ohm LAB12 Subwoofer

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 22.85 Hz

Qms = 11.7

Vas = 128.3 liters

Cms = 0.36 mm/N

Mms = 135.6 g

Rms = 1.66 kg/s

Xmax = 13 mm

Xmech = 22 mm

P-Dia = 252.6 mm

Sd = 506.7 sq.cm

P-Vd = 0.651 liters

--Electrical Parameters--

Qes = 0.34

Re = 3.11 ohms

Le = 1.09 mH

Z = 4 ohms

BL = 13.36 Tm

Pe = 500 watts

--Electromech. Parameters--

Qts = 0.33

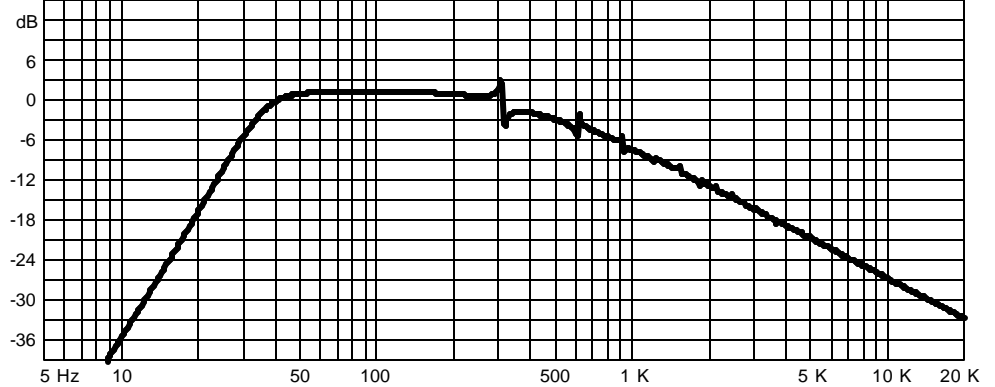
no = 0.434 %

1-W SPL = 88.52 dB

2.83-V SPL = 92.63 dB

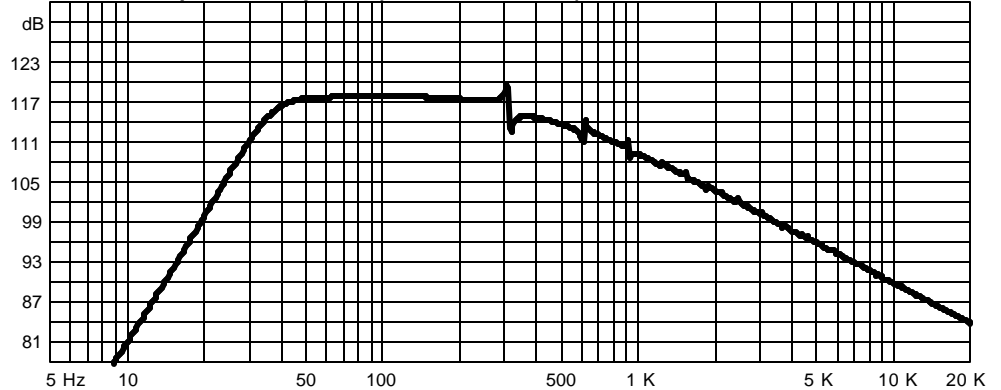
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



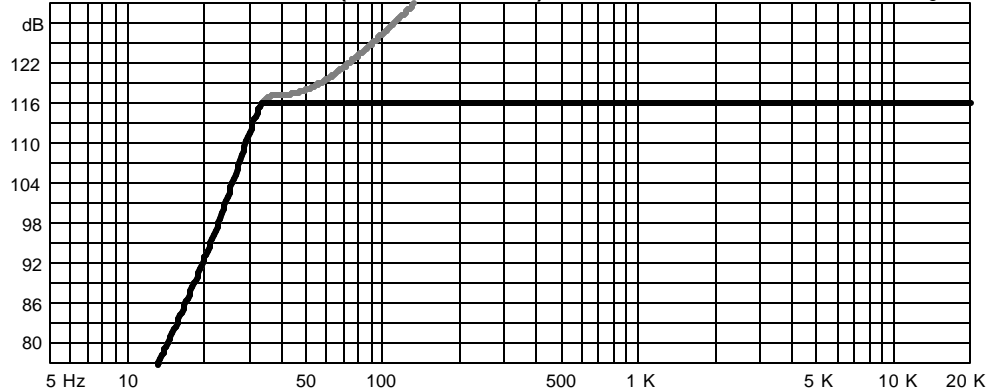
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 500 watts

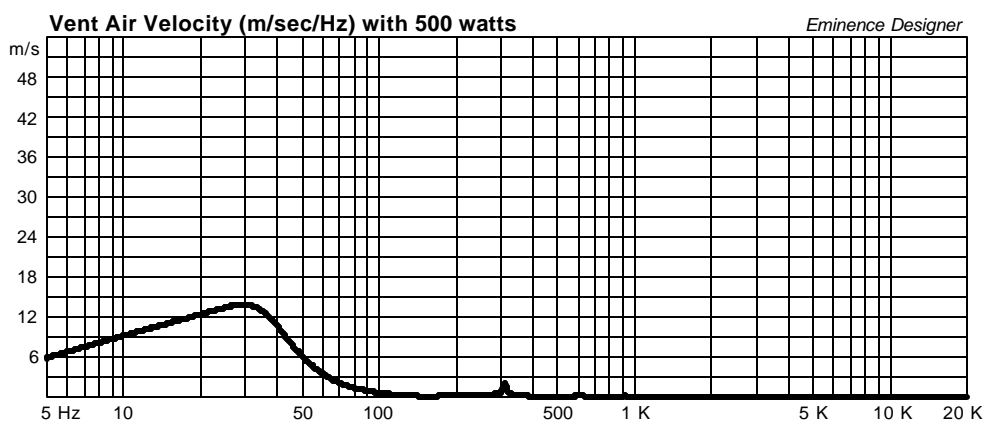
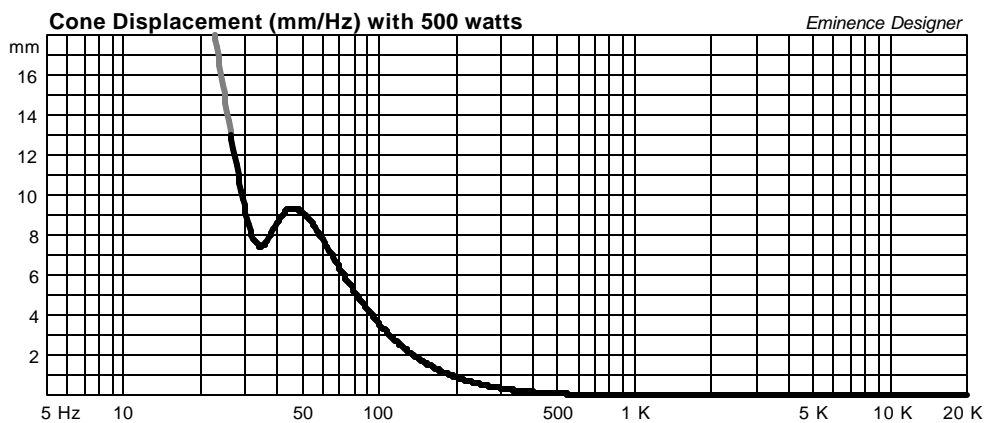
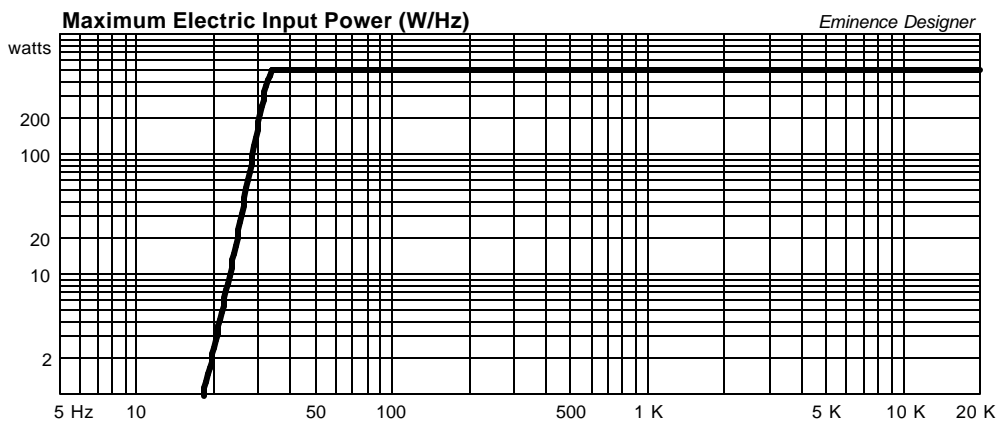
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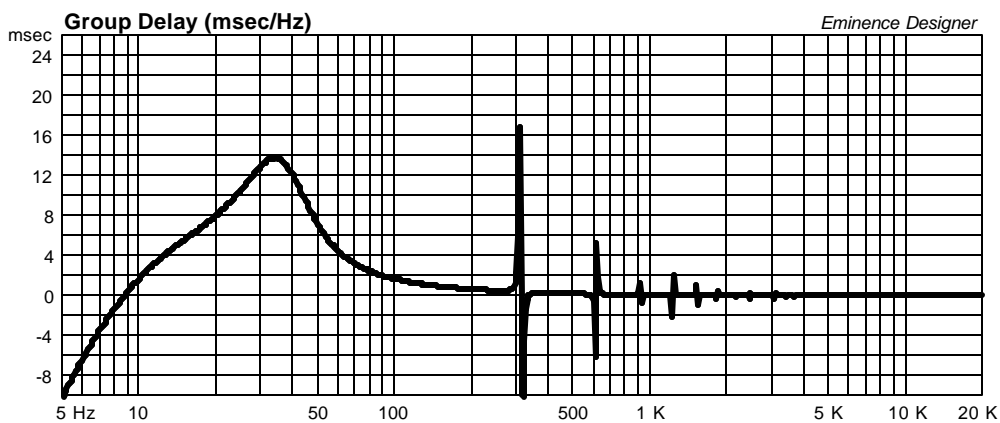
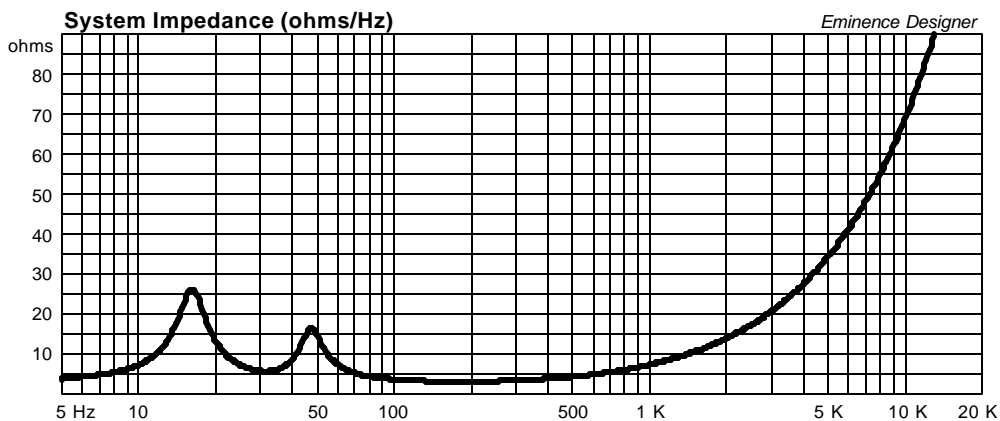


Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer







LAB12C Large Sealed Subwoofer

By Jerry McNutt, Eminence Speaker LLC

Limit to 400 Watts; F3 at 56 Hz. Use a steep high pass at 38 Hz.

This Design Is More for Automotive Use



Box Properties

--Description--

Name:

Type: Closed Box

Shape: Prism, square

--Box Parameters--

Vb = 3.9 cu.ft

V(total) = 4.001 cu.ft

Qtc = 0.444

QL = 20

F3 = 56.02 Hz

Fill = normal

Driver Properties

--Description--

Name: LAB12C

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: Four Ohm LAB12 Subwoofer

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 22.85 Hz

Qms = 11.7

Vas = 128.3 liters

Cms = 0.36 mm/N

Mms = 135.6 g

Rms = 1.66 kg/s

Xmax = 13 mm

Xmech = 22 mm

P-Dia = 252.6 mm

Sd = 506.7 sq.cm

P-Vd = 0.651 liters

--Electrical Parameters--

Qes = 0.34

Re = 3.11 ohms

Le = 1.09 mH

Z = 4 ohms

BL = 13.36 Tm

Pe = 500 watts

--Electromech. Parameters--

Qts = 0.33

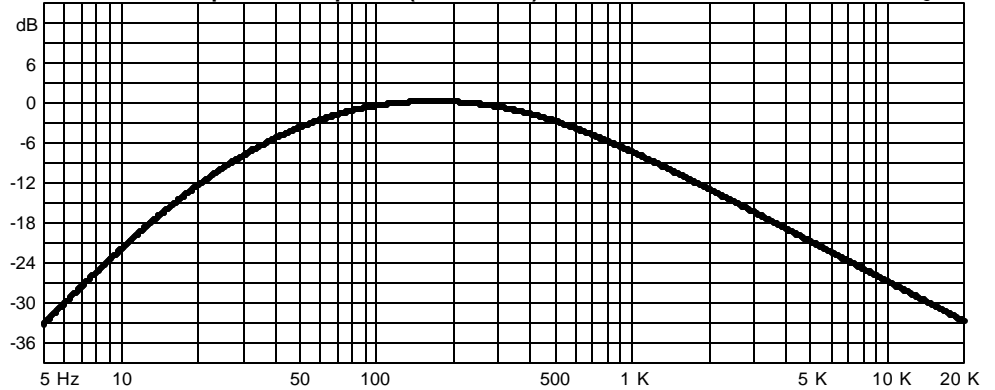
no = 0.434 %

1-W SPL = 88.52 dB

2.83-V SPL = 92.63 dB

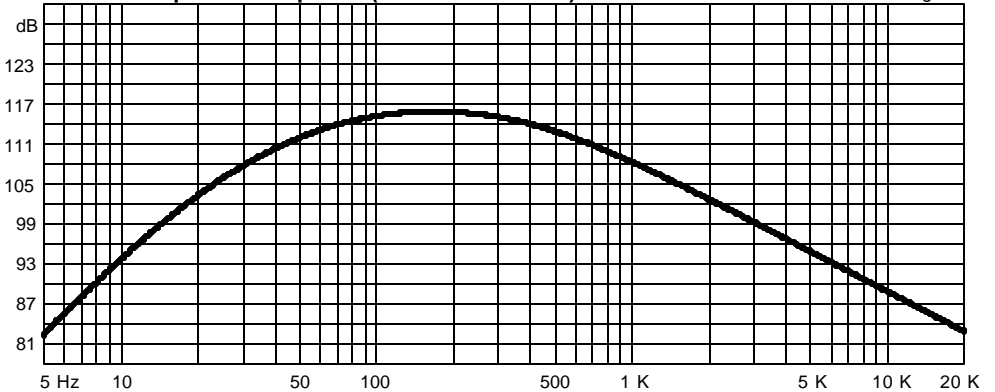
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



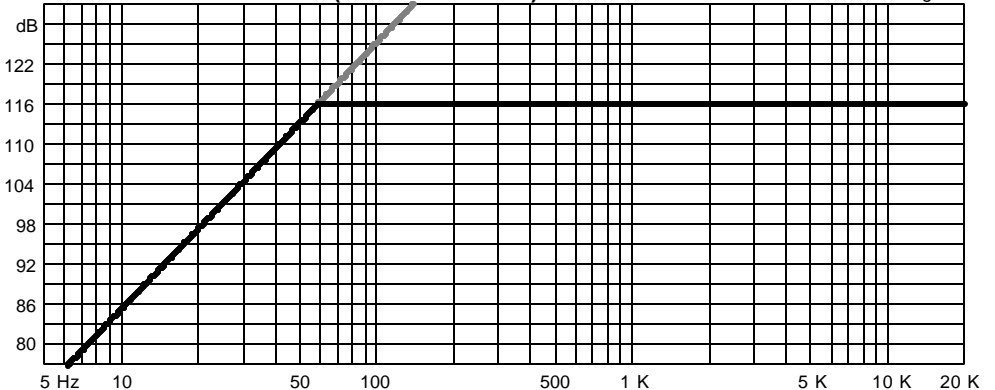
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 400 watts

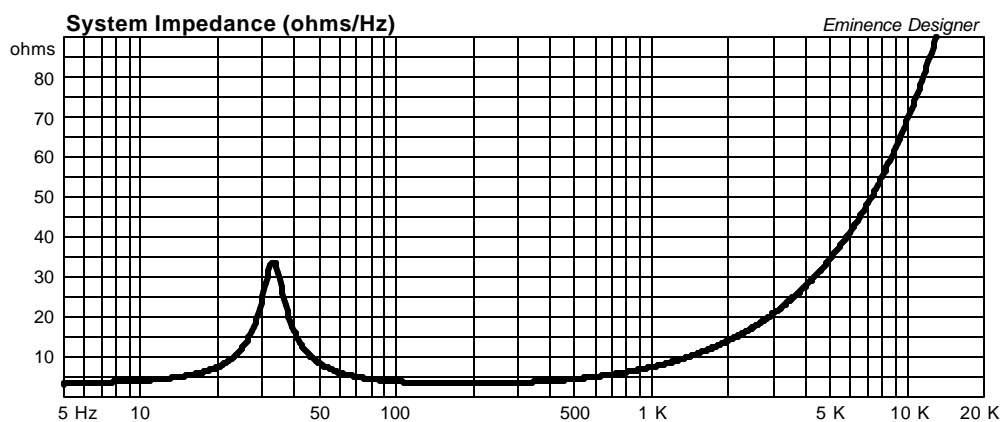
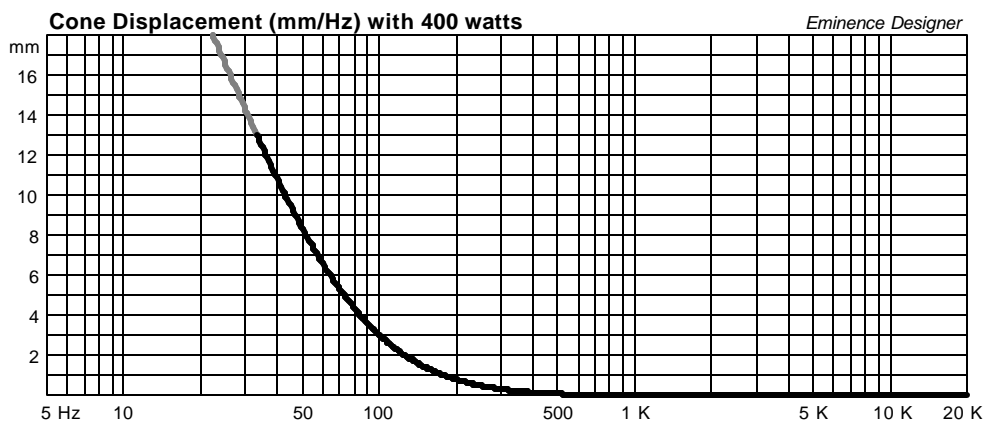
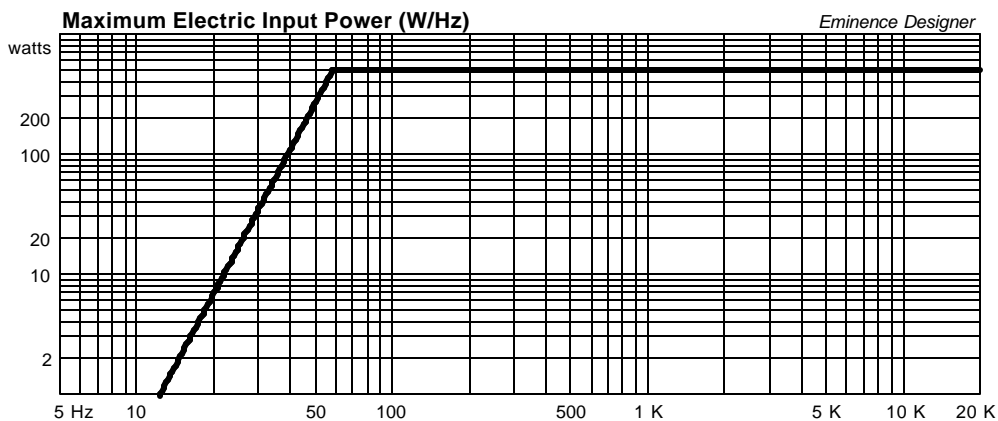
Eminence Designer

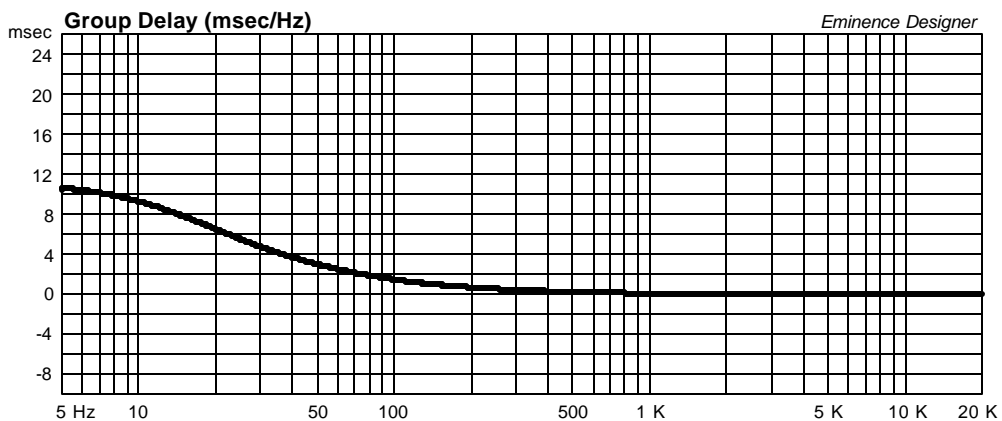


Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer







LAB12C Large Vented Subwoofer Design

By Jerry McNutt, Eminence Speaker LLC

400 Watts; F3 at 29 Hz. Use a very steep high pass filter at 25 Hz.



Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 4.5 cu.ft

V(total) = 4.826 cu.ft

Fb = 28 Hz

QL = 7

F3 = 28.99 Hz

Fill = normal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 4 in

Lv = 14.47 in

Driver Properties

--Description--

Name: LAB12C

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: Four Ohm LAB12 Subwoofer

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 22.85 Hz

Qms = 11.7

Vas = 128.3 liters

Cms = 0.36 mm/N

Mms = 135.6 g

Rms = 1.66 kg/s

Xmax = 13 mm

Xmech = 22 mm

P-Dia = 252.6 mm

Sd = 506.7 sq.cm

P-Vd = 0.651 liters

--Electrical Parameters--

Qes = 0.34

Re = 3.11 ohms

Le = 1.09 mH

Z = 4 ohms

BL = 13.36 Tm

Pe = 500 watts

--Electromech. Parameters--

Qts = 0.33

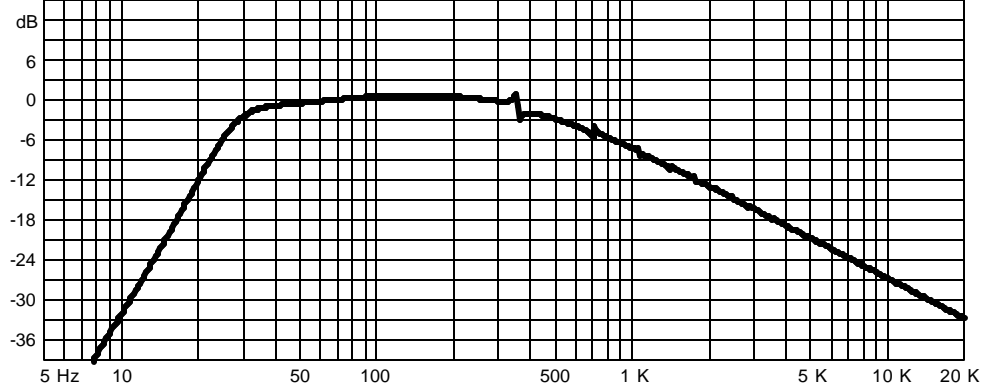
no = 0.434 %

1-W SPL = 88.52 dB

2.83-V SPL = 92.63 dB

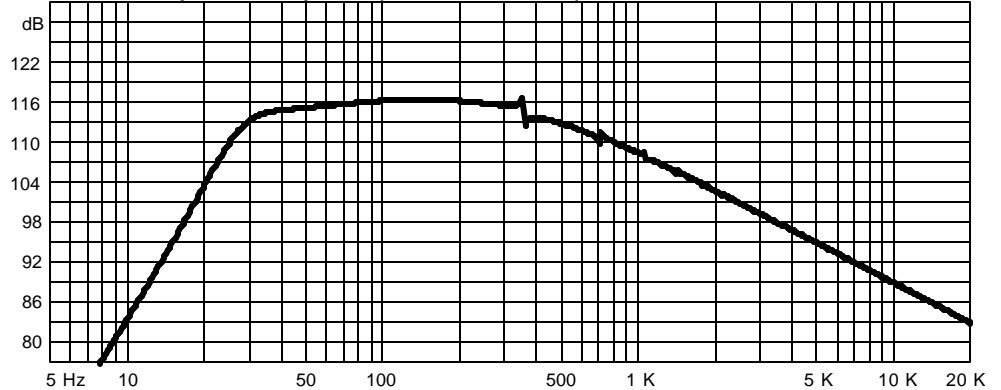
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



Custom Amplitude Response (dB-SPL/Hz at 1 m) with 400 watts

Eminence Designer



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

Eminence Designer

