

Impero 15A Small Vented Design

By Jerry McNutt, Eminence Speaker LLC
1000 Watt Design; F3 at 62 Hz. Use a steep high pass at 50 Hz.
High Power Semi-full range or Mid/bass in a Pro Sound PA System.



Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 2.5 cu.ft

V(total) = 2.779 cu.ft

Fb = 60 Hz

QL = 7

F3 = 62.03 Hz

Fill = minimal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 4 in

Lv = 3.071 in

Driver Properties

--Description--

Name: Impero 15A

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: High Power Pro Woofer

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 42.97 Hz

Qms = 15.33

Vas = 142.5 liters

Cms = 0.14 mm/N

Mms = 100.6 g

Rms = 1.77 kg/s

Xmax = 7.3 mm

Xmech = 15.4 mm

P-Dia = 328.3 mm

Sd = 856.3 sq.cm

P-Vd = 0.618 liters

--Electrical Parameters--

Qes = 0.4

Re = 5.42 ohms

Le = 1.47 mH

Z = 8 ohms

BL = 19.18 Tm

Pe = 1200 watts

--Electromech. Parameters--

Qts = 0.39

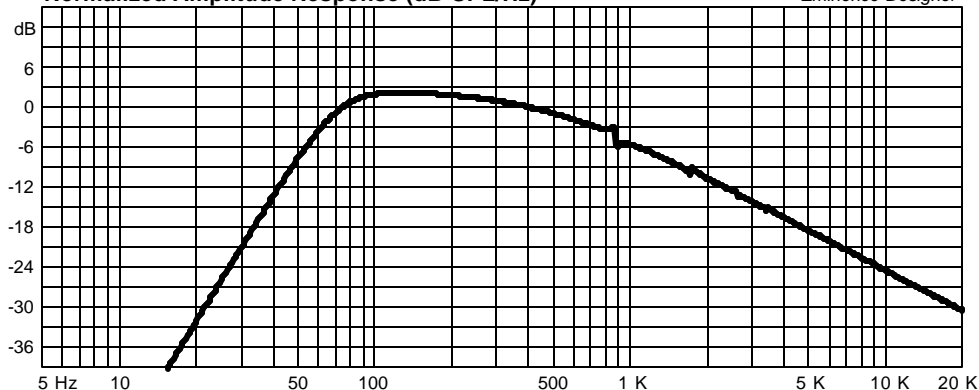
no = 2.725 %

1-W SPL = 96.5 dB

2.83-V SPL = 98.19 dB

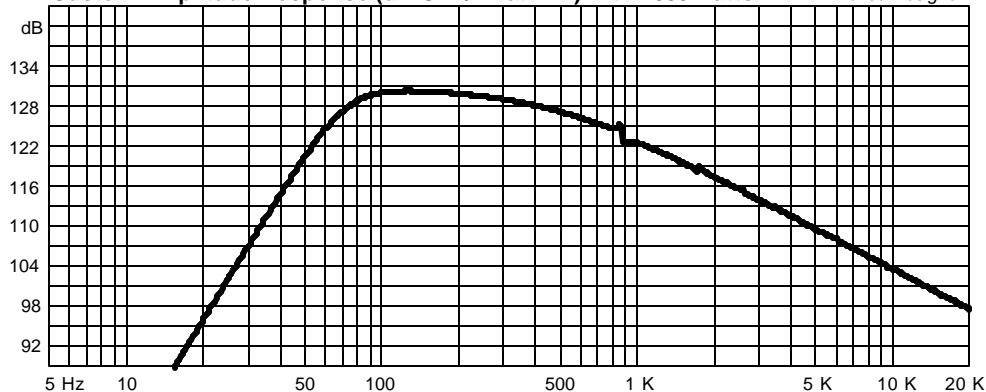
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



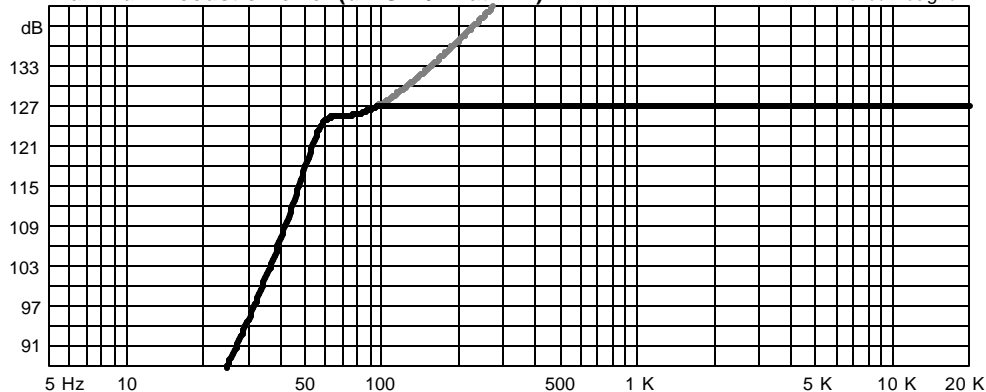
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 1000 watts

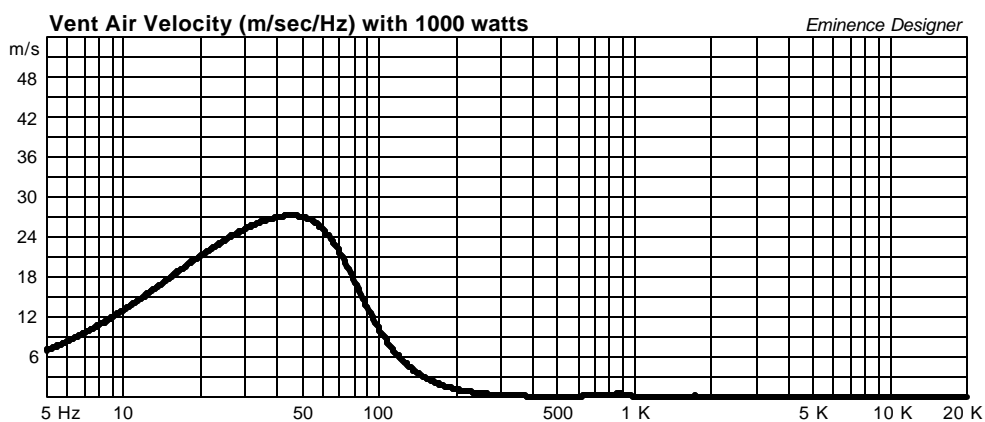
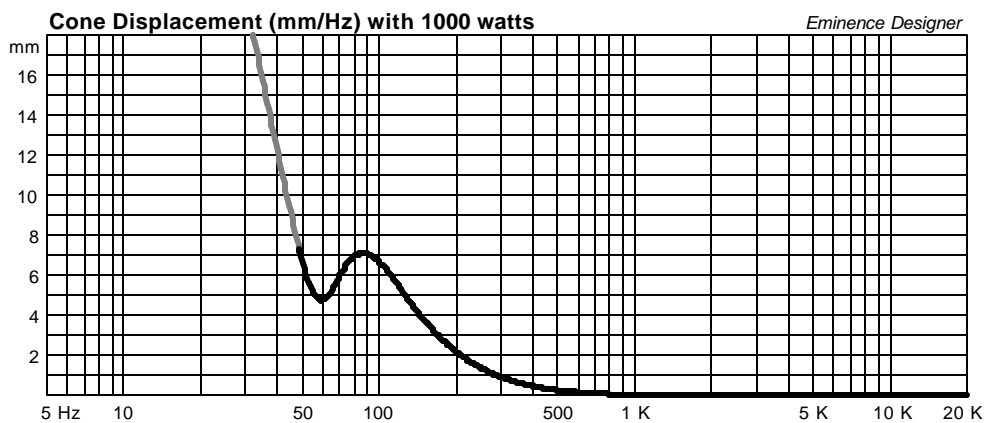
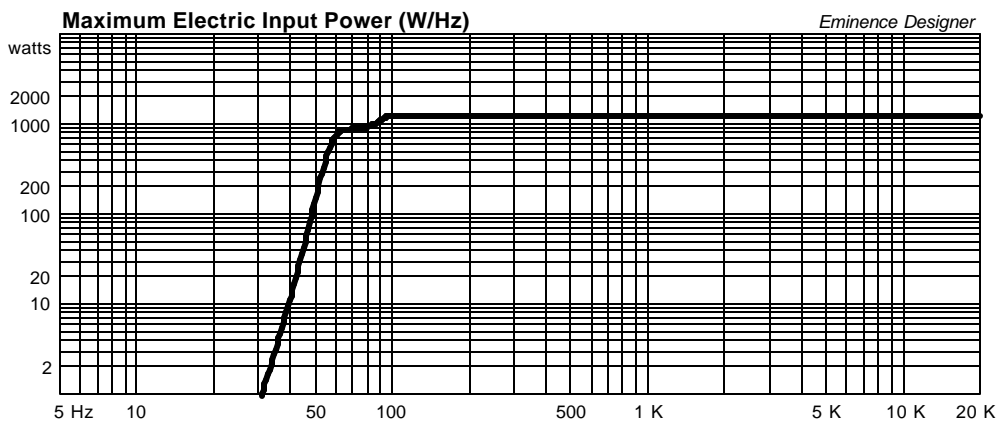
Eminence Designer

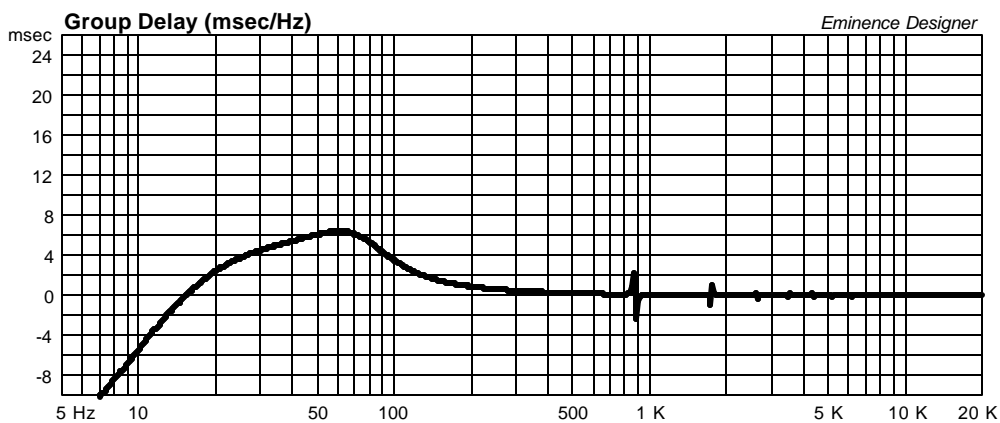
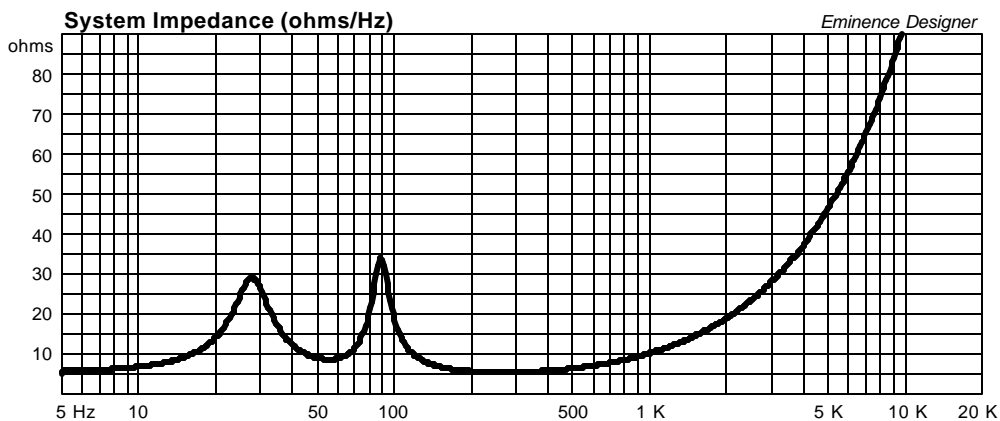


Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer







Impero 15A Max Power Small Vented Mid/Bass

By Jerry McNutt, Eminence Speaker LLC
1200 Watt Design; F3 at 71 Hz. Best Used above 90 Hz as a mid/bass.
High Power Mid/bass in a Pro Sound PA System.



Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 1.65 cu.ft

V(total) = 1.952 cu.ft

Fb = 68 Hz

QL = 7

F3 = 70.26 Hz

Fill = minimal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 4 in

Lv = 4.477 in

Driver Properties

--Description--

Name: Impero 15A

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: High Power Pro Woofer

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 42.97 Hz

Qms = 15.33

Vas = 142.5 liters

Cms = 0.14 mm/N

Mms = 100.6 g

Rms = 1.77 kg/s

Xmax = 7.3 mm

Xmech = 15.4 mm

P-Dia = 328.3 mm

Sd = 856.3 sq.cm

P-Vd = 0.618 liters

--Electrical Parameters--

Qes = 0.4

Re = 5.42 ohms

Le = 1.47 mH

Z = 8 ohms

BL = 19.18 Tm

Pe = 1200 watts

--Electromech. Parameters--

Qts = 0.39

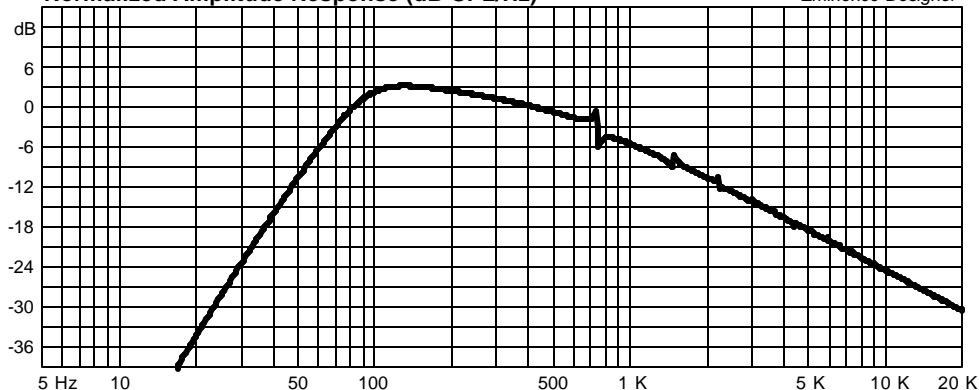
no = 2.725 %

1-W SPL = 96.5 dB

2.83-V SPL = 98.19 dB

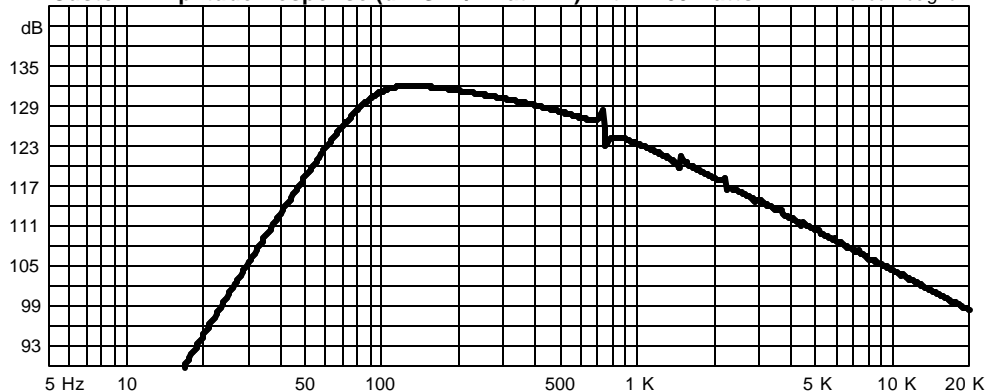
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



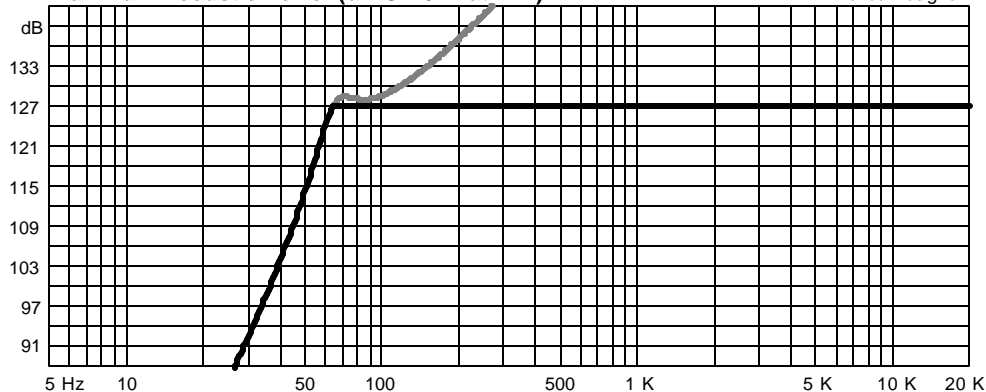
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 1200 watts

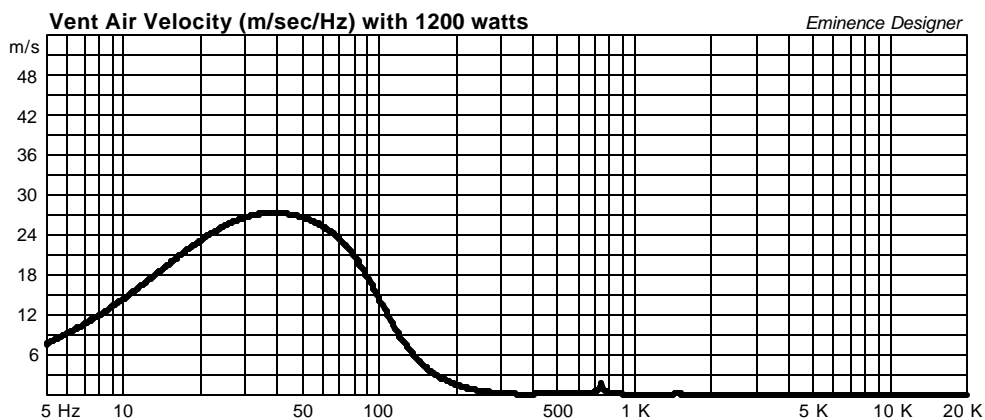
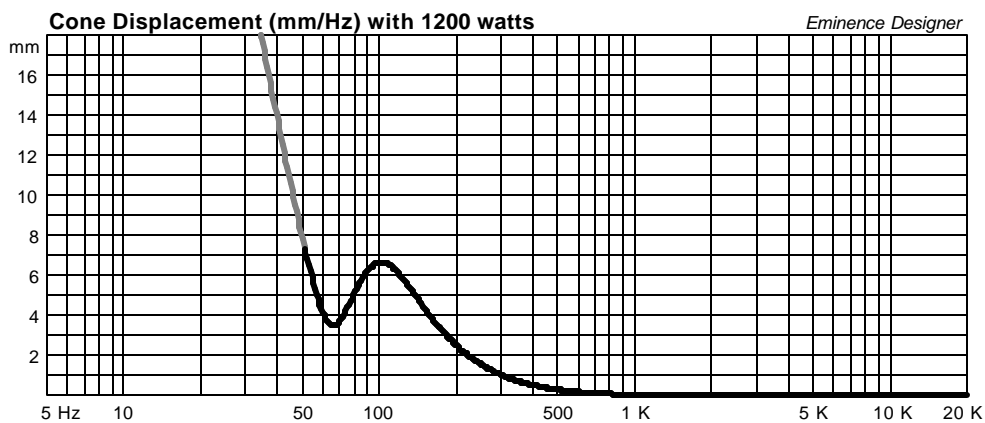
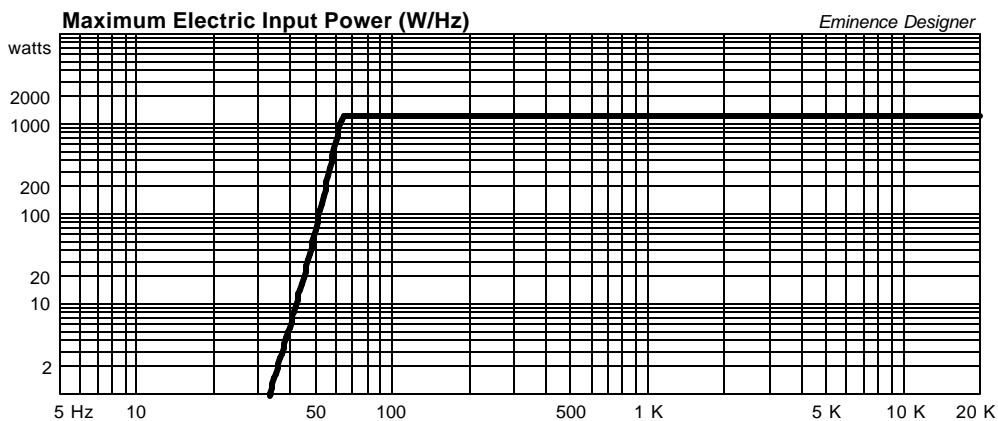
Eminence Designer

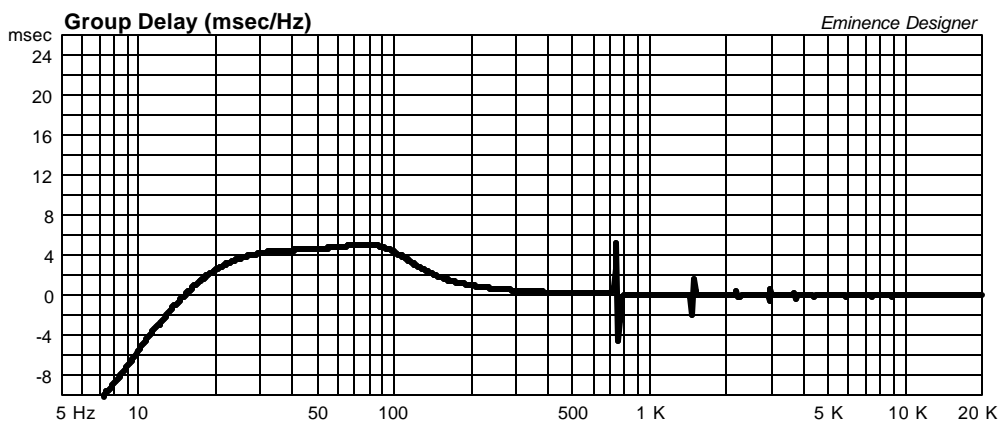
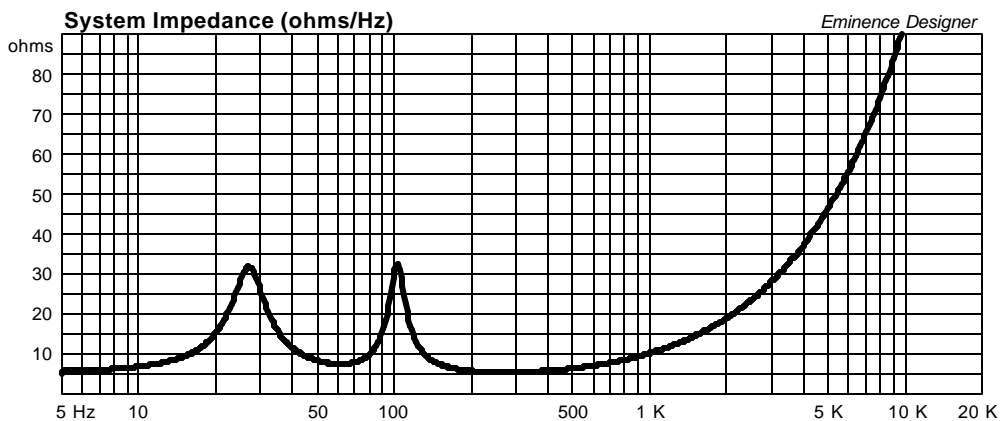


Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer







Impero 15A Medium Vented Design

By Jerry McNutt, Eminence Speaker LLC

600 Watt Design; F3 at 53 Hz. Use a steep high pass at 40 Hz.

High Power full range or Mid/bass in a Pro Sound PA System. High Power Bass Guitar.



Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square (optimum)

--Box Parameters--

Vb = 3.67 cu.ft

V(total) = 3.946 cu.ft

Fb = 50 Hz

QL = 7

F3 = 55.31 Hz

Fill = minimal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 4 in

Lv = 2.921 in

Driver Properties

--Description--

Name: Impero 15A

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: High Power Pro Woofer

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 42.97 Hz

Qms = 15.33

Vas = 142.5 liters

Cms = 0.14 mm/N

Mms = 100.6 g

Rms = 1.77 kg/s

Xmax = 7.3 mm

Xmech = 15.4 mm

P-Dia = 328.3 mm

Sd = 856.3 sq.cm

P-Vd = 0.618 liters

--Electrical Parameters--

Qes = 0.4

Re = 5.42 ohms

Le = 1.47 mH

Z = 8 ohms

BL = 19.18 Tm

Pe = 1200 watts

--Electromech. Parameters--

Qts = 0.39

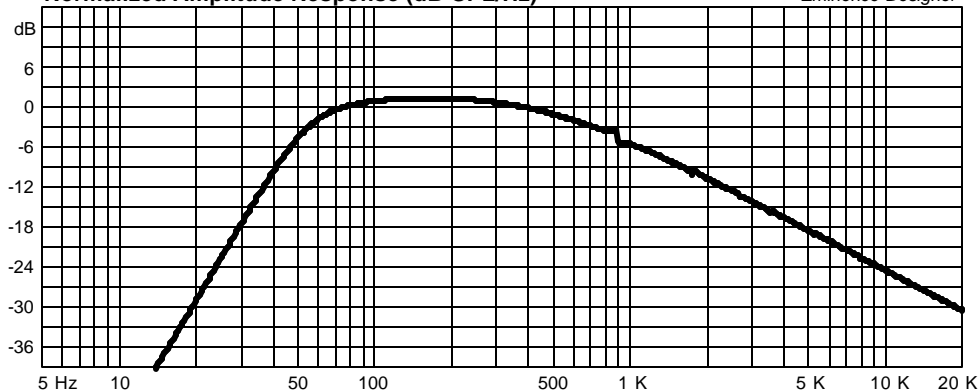
no = 2.725 %

1-W SPL = 96.5 dB

2.83-V SPL = 98.19 dB

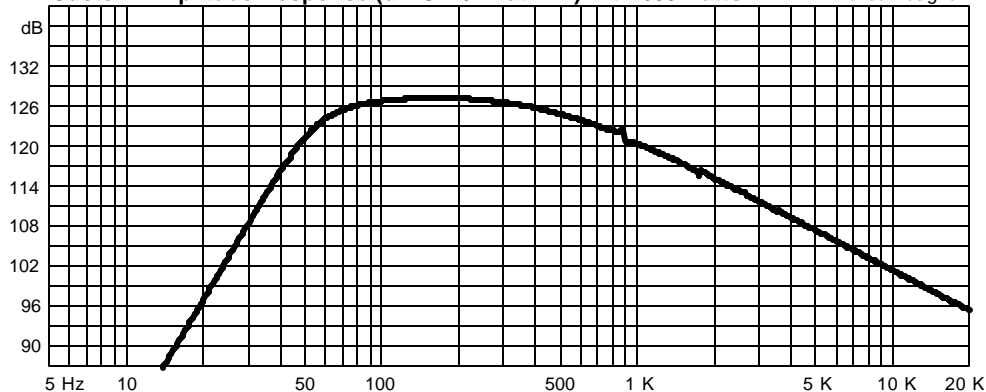
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



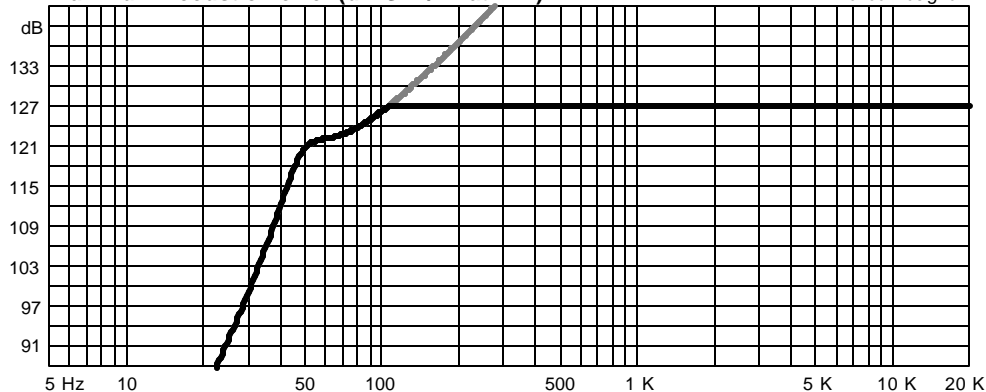
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 600 watts

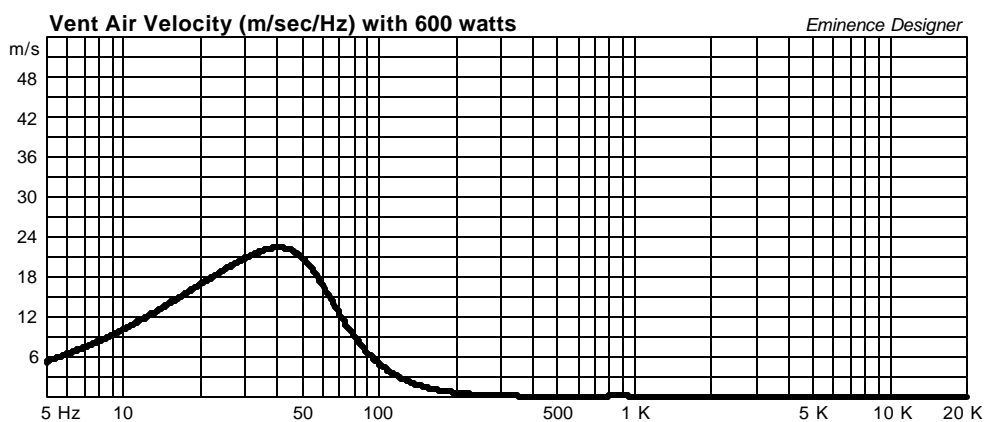
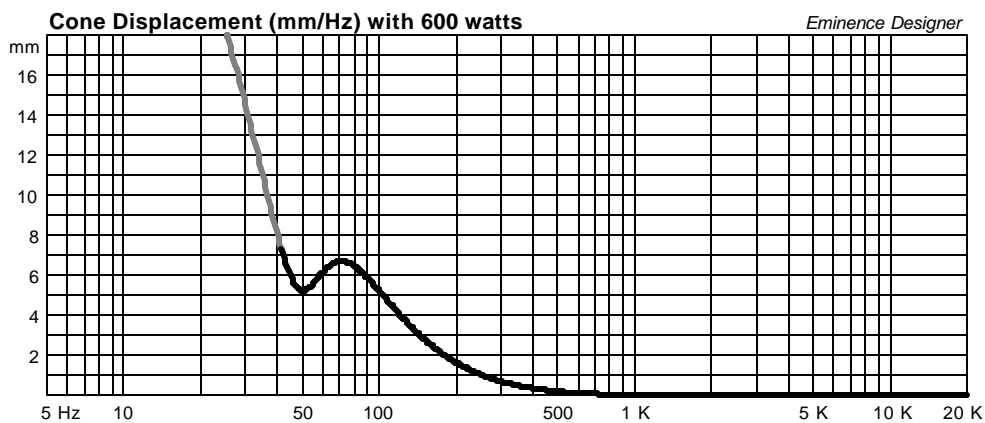
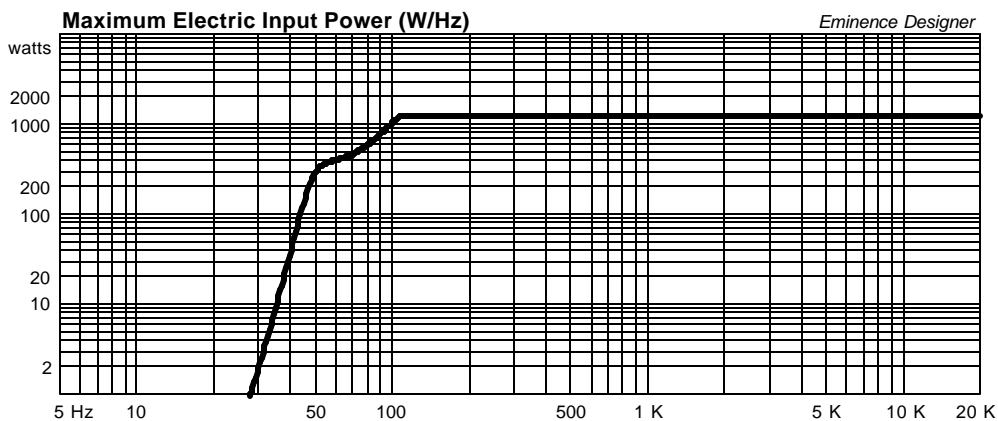
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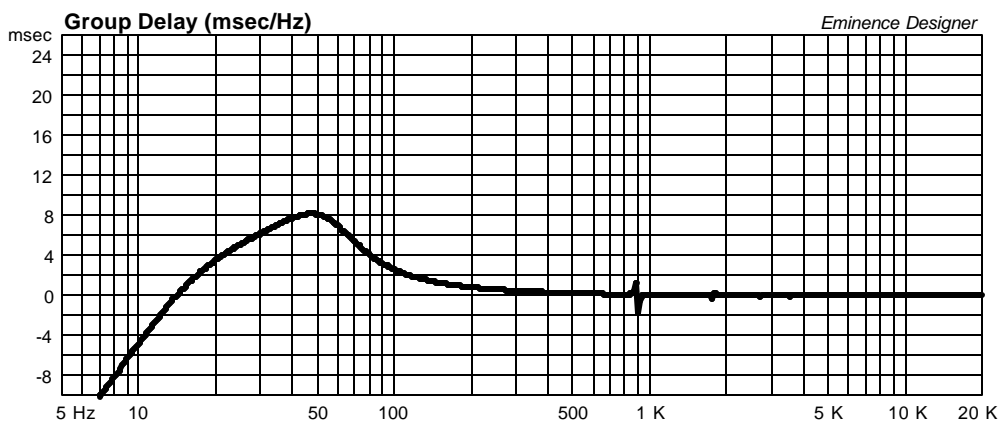
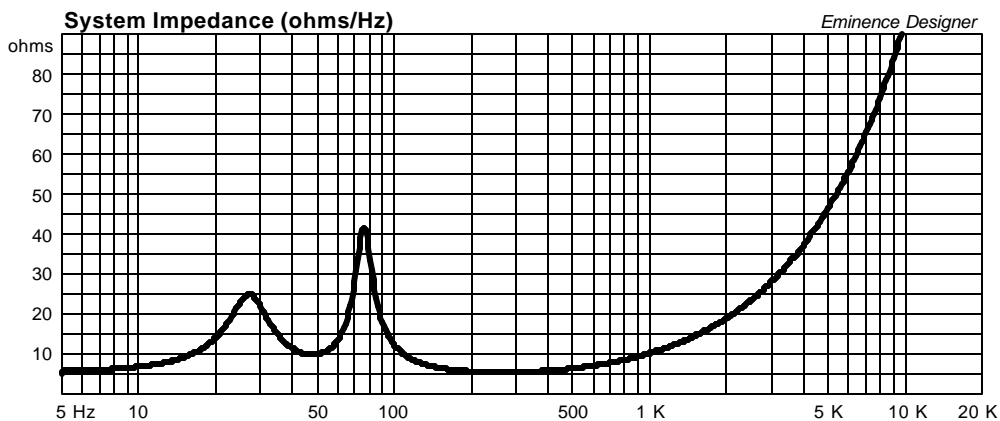


Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer







Impero 15A 2x15 Vented Full Range Design

By Jerry McNutt, Eminence Speaker LLC

1600 Watt Design; F3 at 56 Hz. Use a steep high pass at 45 Hz.

Very High Power full range or Mid/bass in a Pro Sound PA System. 2x15"



Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 6.2 cu.ft

V(total) = 6.774 cu.ft

Fb = 56 Hz

QL = 7

F3 = 55.92 Hz

Fill = minimal

--Vents--

No. of Vents = 6

Vent shape = round

Vent ends = one flush

Dv = 4 in

Lv = 4.609 in

Driver Properties

--Description--

Name: Impero 15A

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: High Power Pro Woofer

--Configuration--

No. of Drivers = 2

Mounting = Standard

Wiring = Parallel

Drivers sum coherently = Yes

--Mechanical Parameters--

Fs = 42.97 Hz

Qms = 15.33

Vas = 142.5 liters [285]

Cms = 0.14 mm/N [0.07]

Mms = 100.6 g [201.1]

Rms = 1.77 kg/s [3.54]

Xmax = 7.3 mm

Xmech = 15.4 mm

P-Dia = 328.3 mm [464.3]

Sd = 856.3 sq.cm [1713]

P-Vd = 0.618 liters [1.236]

--Electrical Parameters--

Qes = 0.4

Re = 5.42 ohms [2.71]

Le = 1.47 mH [0.735]

Z = 8 ohms [4]

BL = 19.18 Tm [19.18]

Pe = 1200 watts [2400]

--Electromech. Parameters--

Qts = 0.39

no = 2.725 % [5.451]

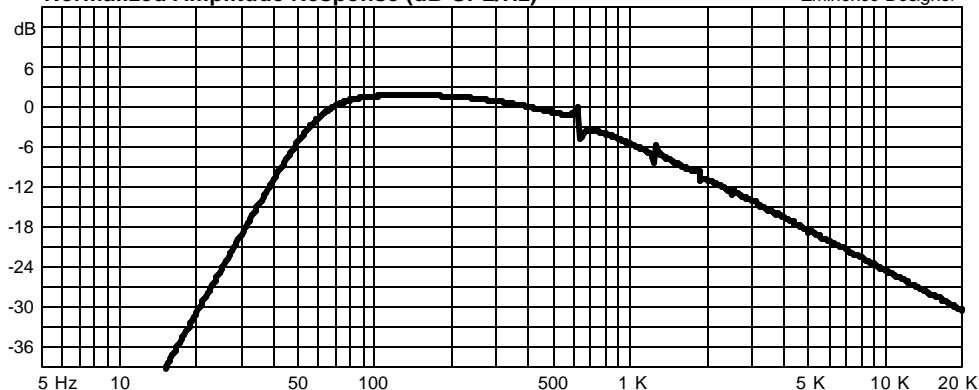
1-W SPL = 96.5 dB [99.51]

2.83-V SPL = 98.19 dB [104.2]

File: Impero15ADual15VentedBox1600Watts.bb6

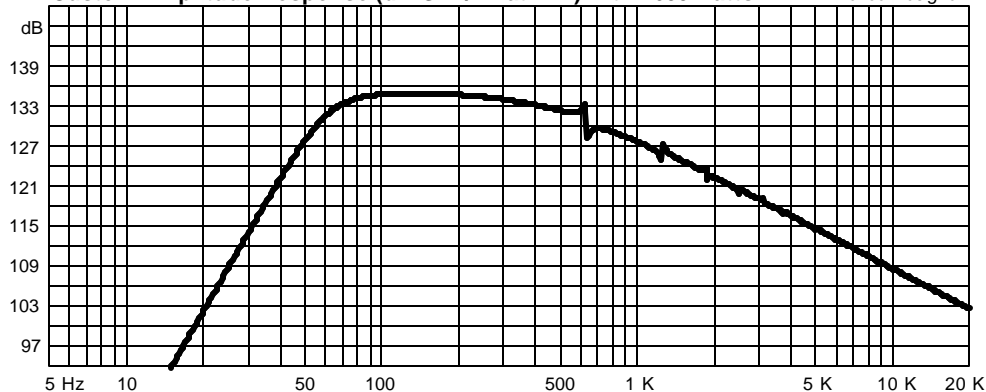
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



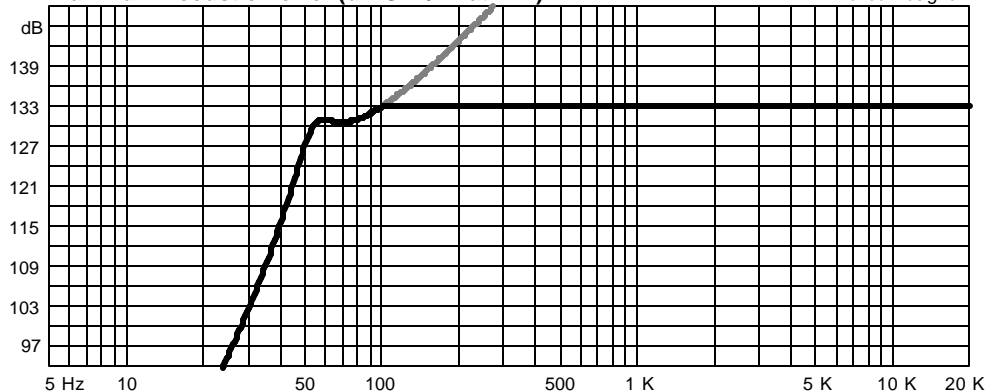
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 1600 watts

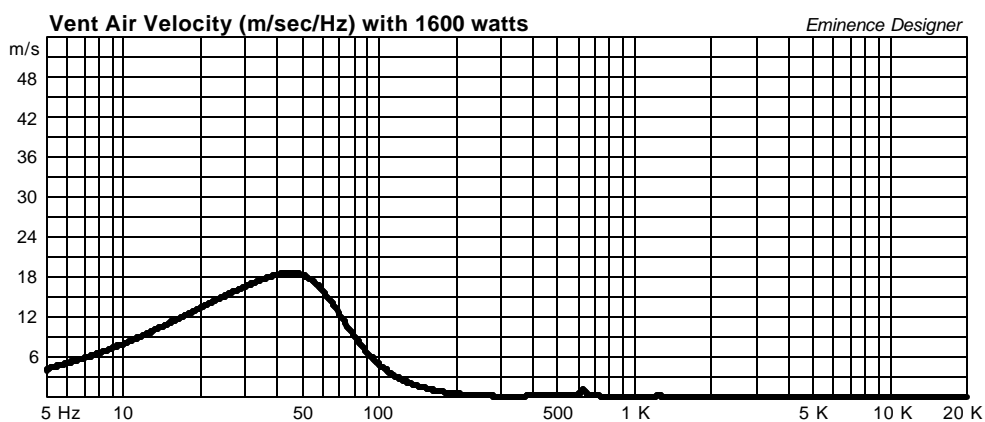
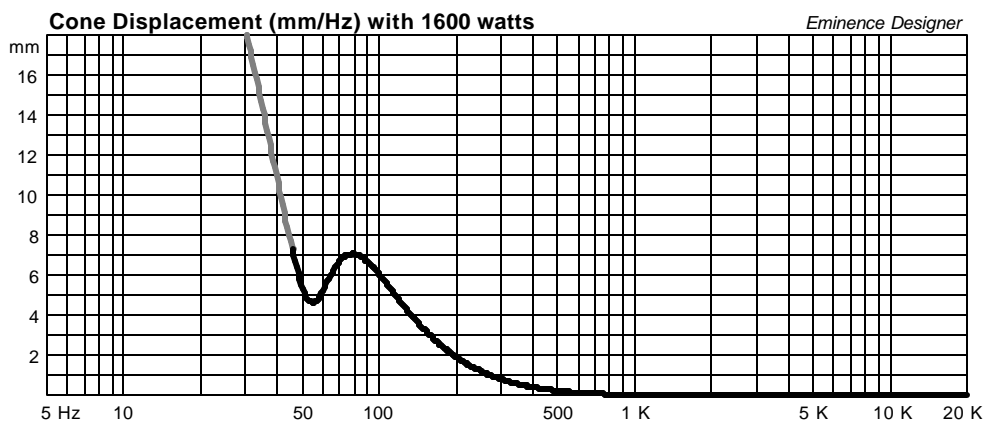
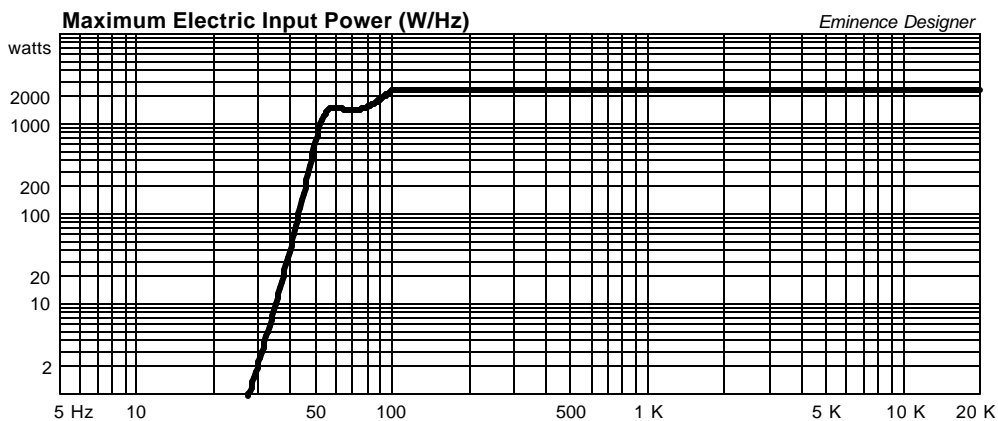
Eminence Designer

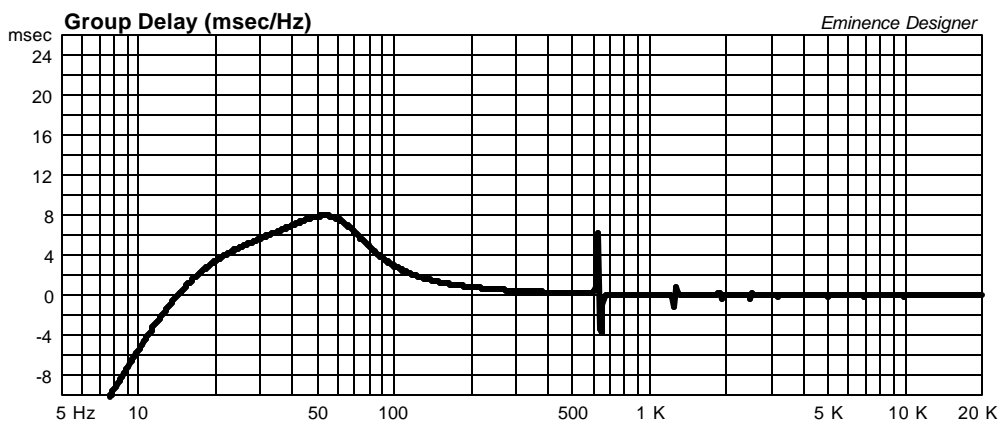
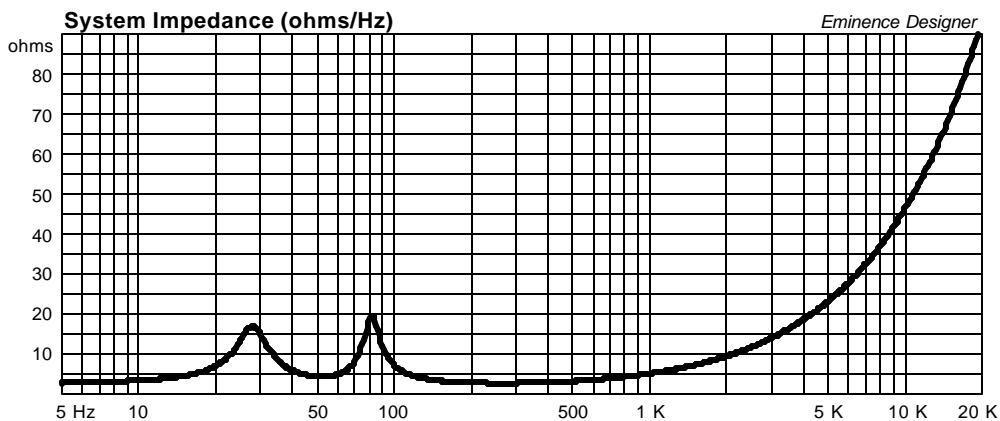


Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer







Impero 15A Large Vented Design

By Jerry McNutt, Eminence Speaker LLC

450 Watt Design; F3 at 46 Hz. Use a steep high pass at 35 Hz.

High Power Full Range Two way or Subwoofer. High Power Bass Guitar.



Box Properties

--Description--

Name:

Type: Vented Box

Shape: Cube

--Box Parameters--

Vb = 6 cu.ft

V(total) = 6.407 cu.ft

Fb = 46 Hz

QL = 7

F3 = 46 Hz

Fill = minimal

--Vents--

No. of Vents = 4

Vent shape = round

Vent ends = one flush

Dv = 4 in

Lv = 5.441 in

Driver Properties

--Description--

Name: Impero 15A

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: High Power Pro Woofer

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 42.97 Hz

Qms = 15.33

Vas = 142.5 liters

Cms = 0.14 mm/N

Mms = 100.6 g

Rms = 1.77 kg/s

Xmax = 7.3 mm

Xmech = 15.4 mm

P-Dia = 328.3 mm

Sd = 856.3 sq.cm

P-Vd = 0.618 liters

--Electrical Parameters--

Qes = 0.4

Re = 5.42 ohms

Le = 1.47 mH

Z = 8 ohms

BL = 19.18 Tm

Pe = 1200 watts

--Electromech. Parameters--

Qts = 0.39

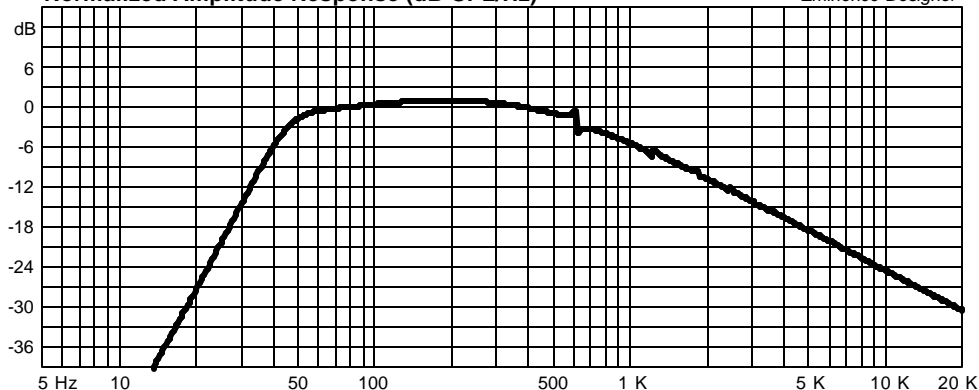
no = 2.725 %

1-W SPL = 96.5 dB

2.83-V SPL = 98.19 dB

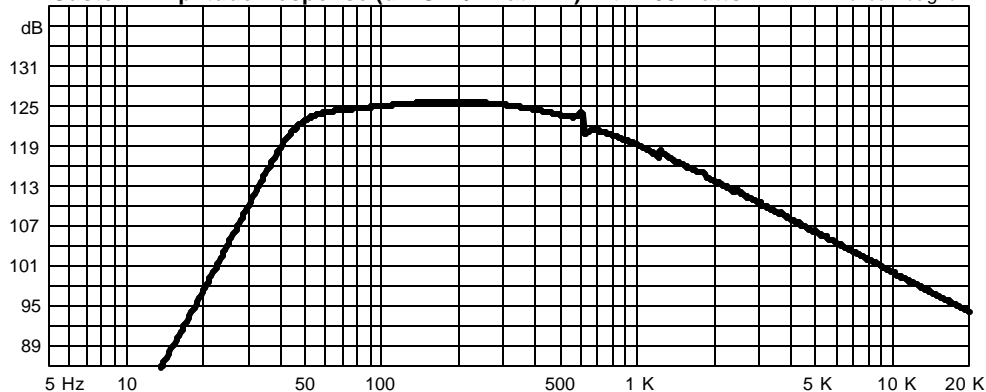
Normalized Amplitude Response (dB-SPL/Hz)

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

