

Alpha 3-8 Small Sealed Midrange Design

By Jerry McNutt, Eminence Speaker LLC
30 Watts; F3 at 185 Hz. Best used above 250 Hz.



Box Properties

--Description--

Name:

Type: Closed Box

Shape: Prism, square

--Box Parameters--

Vb = 0.0344 cu.ft

V(total) = 0.038 cu.ft

Qtc = 0.622

QL = 20

F3 = 185.2 Hz

Fill = normal

Driver Properties

--Description--

Name: Alpha 3-8

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: 3" Full Range Driver

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 117.6 Hz

Qms = 7.94

Vas = 0.95 liters

Cms = 0.84 mm/N

Mms = 2.18 g

Rms = 0.2 kg/s

Xmax = 2.4 mm

Xmech = 4 mm

P-Dia = 59.94 mm

Sd = 28.58 sq.cm

P-Vd = 0.00677 liters

--Electrical Parameters--

Qes = 0.53

Re = 5.12 ohms

Le = 0.11 mH

Z = 8 ohms

BL = 3.93 Tm

Pe = 30 watts

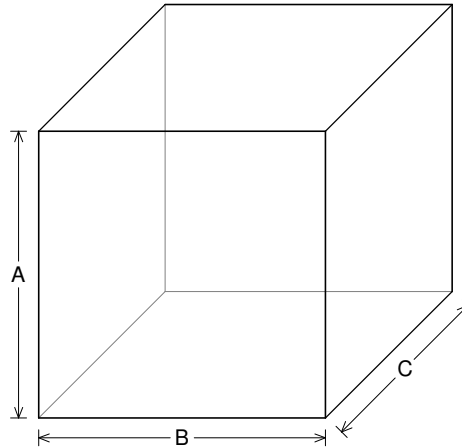
--Electromech. Parameters--

Qts = 0.497

no = 0.281 %

1-W SPL = 86.63 dB

2.83-V SPL = 88.57 dB



--External Dimensions--

A = 5.36 in

B = 5.36 in

C = 4.457 in

--Internal Dimensions--

A = 4.36 in

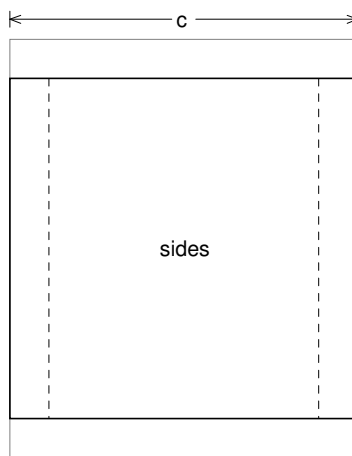
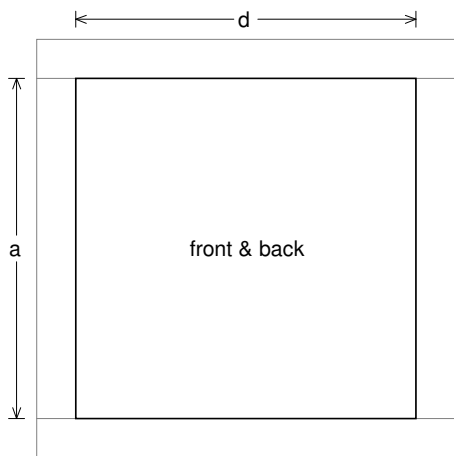
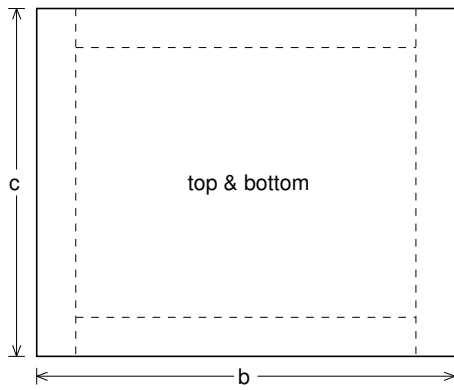
B = 4.36 in

C = 3.457 in

--Wall Thickness--

Front = 0.5 in

Side = 0.5 in



Box Parts

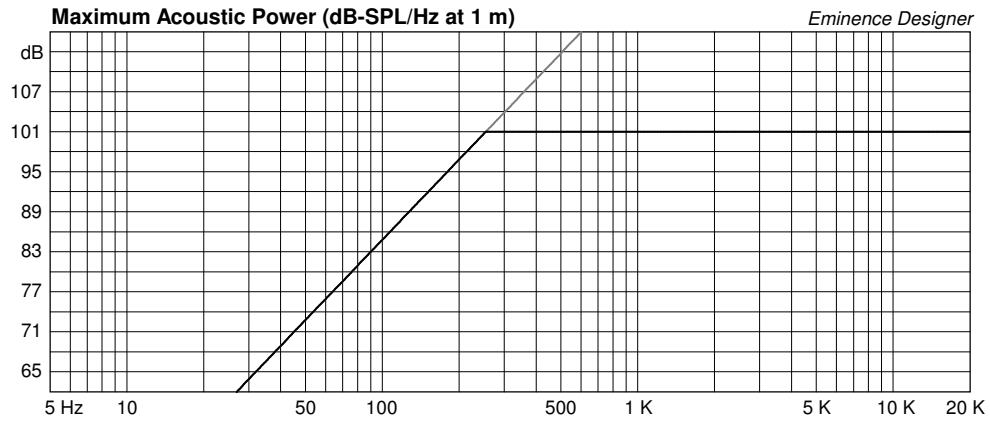
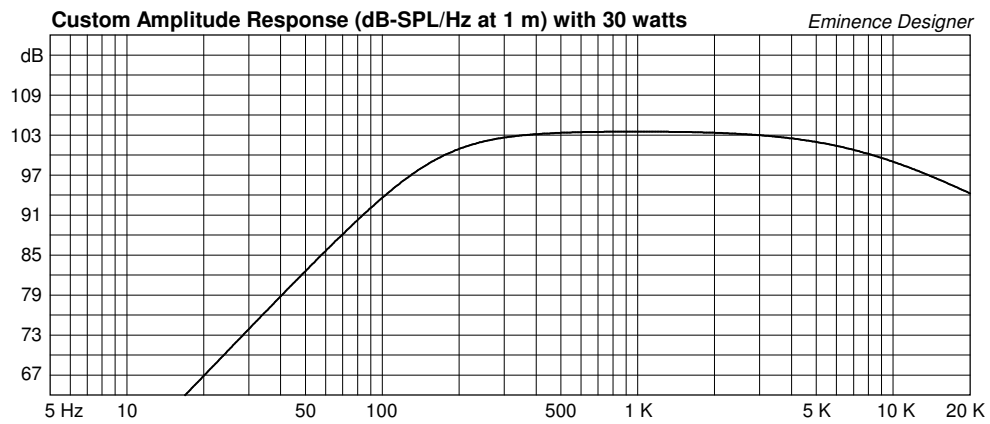
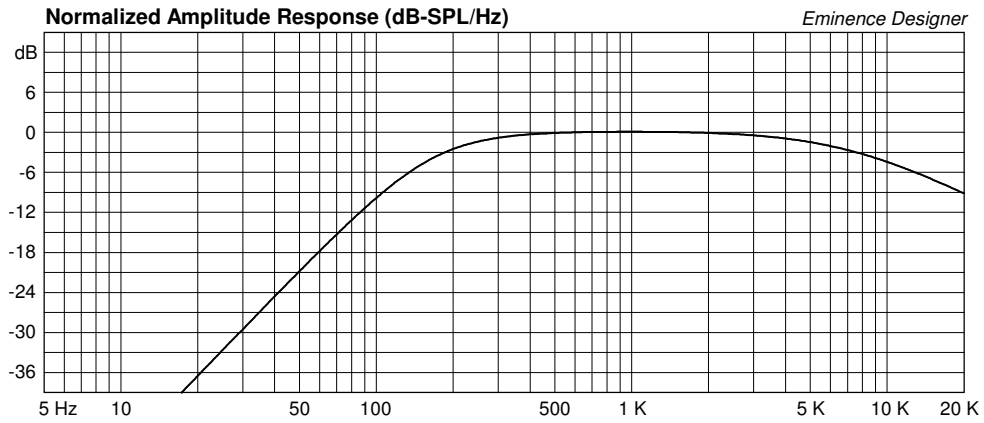
Box Shape: Square Prism

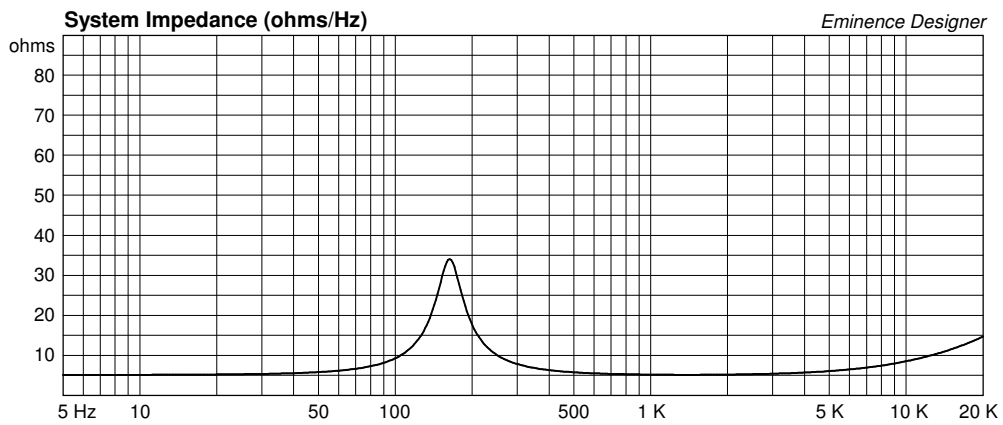
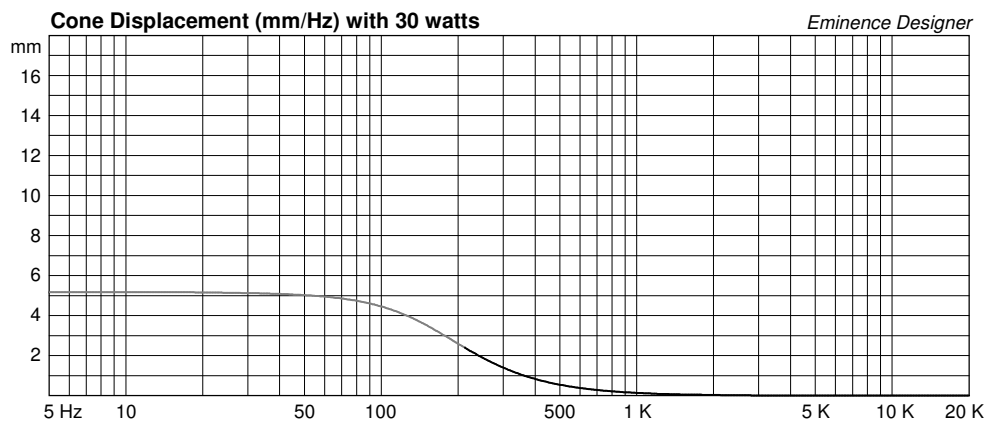
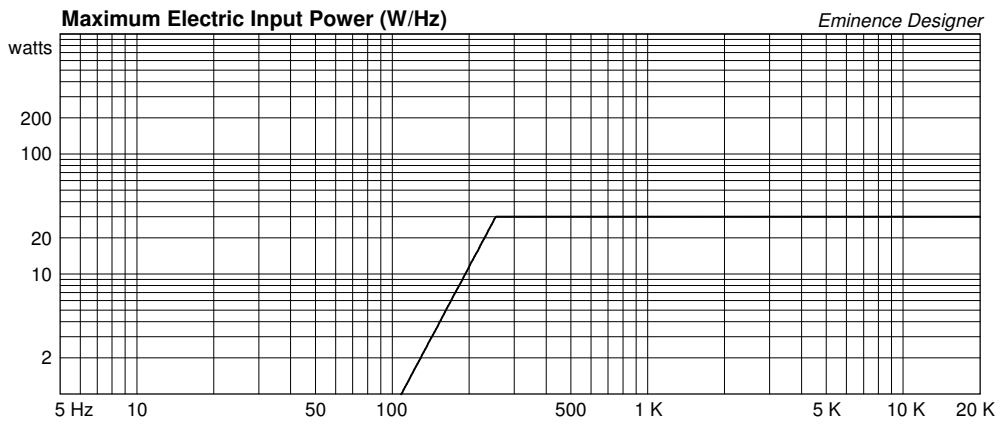
1 Top, 1 Bottom: depth (c) = 4.457 in
width (b) = 5.36, thickness = 0.5 in

1 Front, 1 Back: height (a) = 4.36 in
width (d) = 4.36, thickness = 0.5 in

2 Sides: height (a) = 4.36 in
depth (c) = 4.457, thickness = 0.5 in

--Driver Mounting--
Mounting: Flush





Alpha 3-8 Small Vented Midbass Design

By Jerry McNutt, Eminence Speaker LLC
20 Watts; F3 at 111 Hz. Best used above 150 Hz.
For midbass or for a micro small satellite speaker system.



Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 0.045 cu.ft

V(total) = 0.0523 cu.ft

Fb = 125 Hz

QL = 7

F3 = 111 Hz

Fill = normal

--Vents--

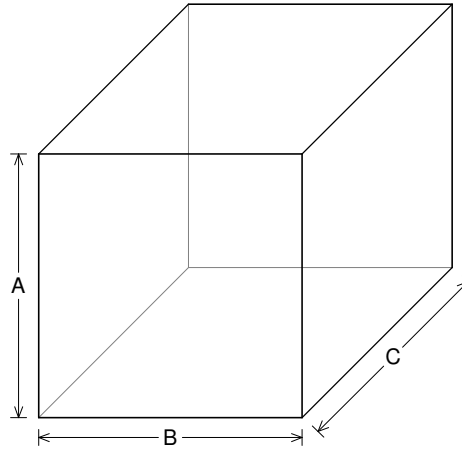
No. of Vents = 1

Vent shape = round

Vent ends = one flush

Dv = 1.3 in

Lv = 3.795 in



--External Dimensions--

A = 5.36 in

B = 5.36 in

C = 5.751 in

--Internal Dimensions--

A = 4.36 in

B = 4.36 in

C = 4.751 in

--Wall Thickness--

Front = 0.5 in

Side = 0.5 in

Driver Properties

--Description--

Name: Alpha 3-8

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: 3" Full Range Driver

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 117.6 Hz

Qms = 7.94

Vas = 0.95 liters

Cms = 0.84 mm/N

Mms = 2.18 g

Rms = 0.2 kg/s

Xmax = 2.4 mm

Xmech = 4 mm

P-Dia = 59.94 mm

Sd = 28.58 sq.cm

P-Vd = 0.00677 liters

--Electrical Parameters--

Qes = 0.53

Re = 5.12 ohms

Le = 0.11 mH

Z = 8 ohms

BL = 3.93 Tm

Pe = 30 watts

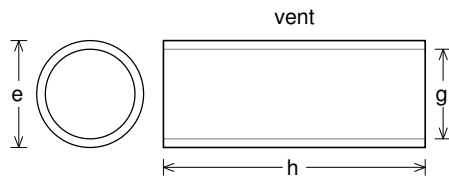
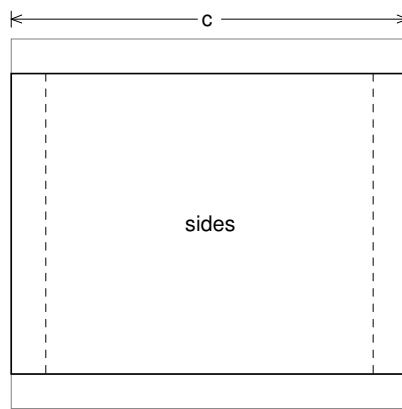
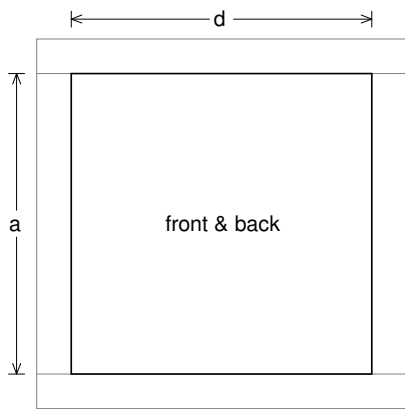
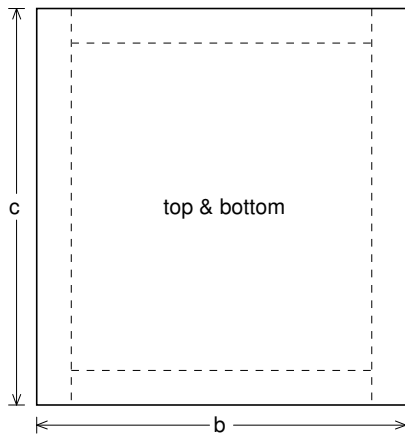
--Electromech. Parameters--

Qts = 0.497

no = 0.281 %

1-W SPL = 86.63 dB

2.83-V SPL = 88.57 dB



Box Parts

Box Shape: Square Prism

1 Top, 1 Bottom: depth (c) = 5.751 in
width (b) = 5.36, thickness = 0.5 in

1 Front, 1 Back: height (a) = 4.36 in
width (d) = 4.36, thickness = 0.5 in

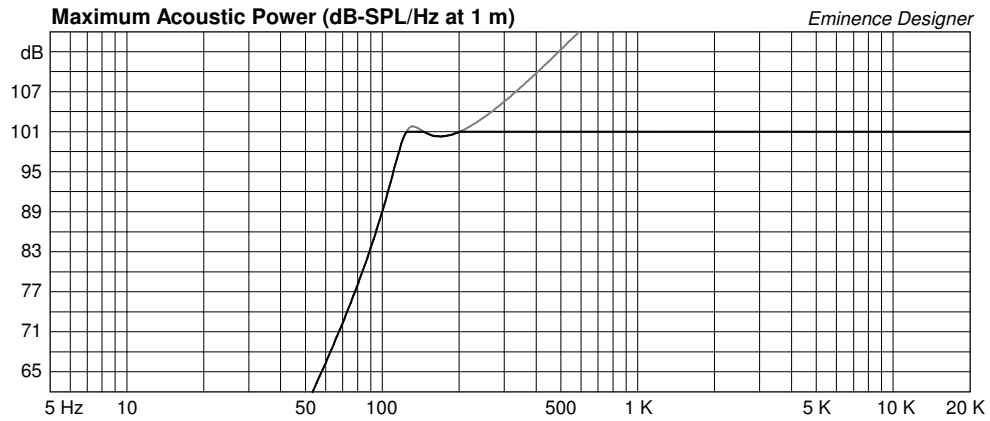
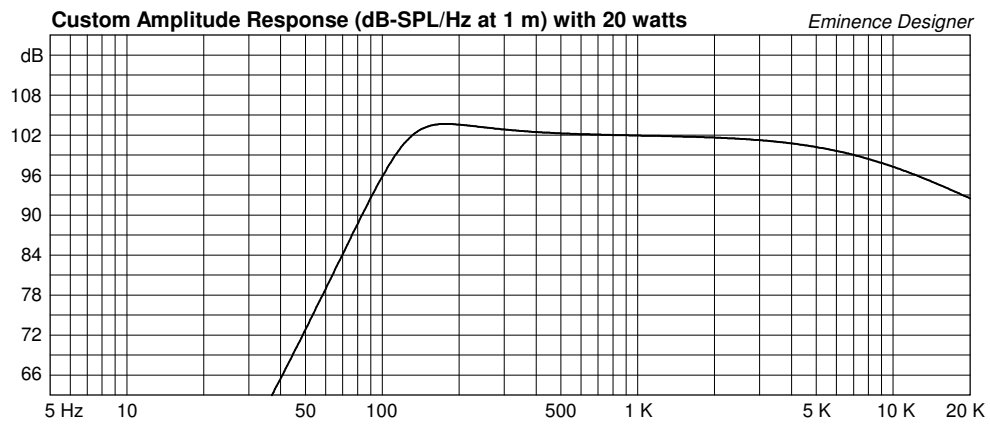
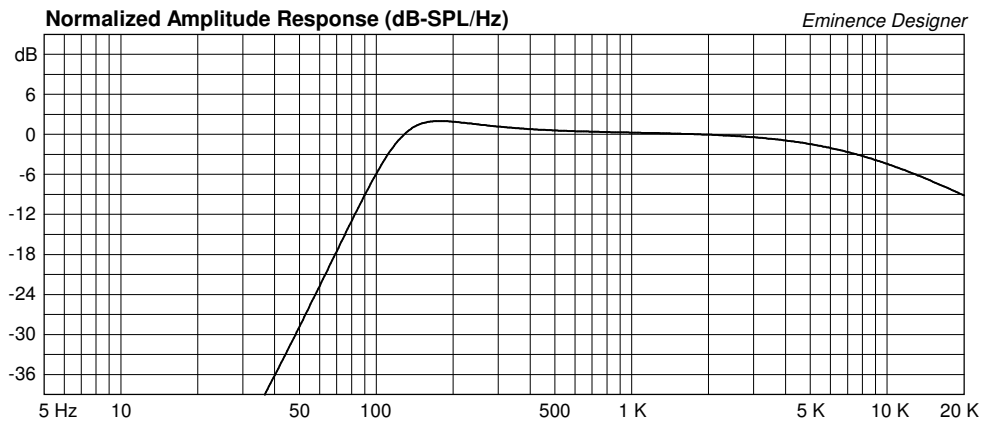
2 Sides: height (a) = 4.36 in
depth (c) = 5.751, thickness = 0.5 in

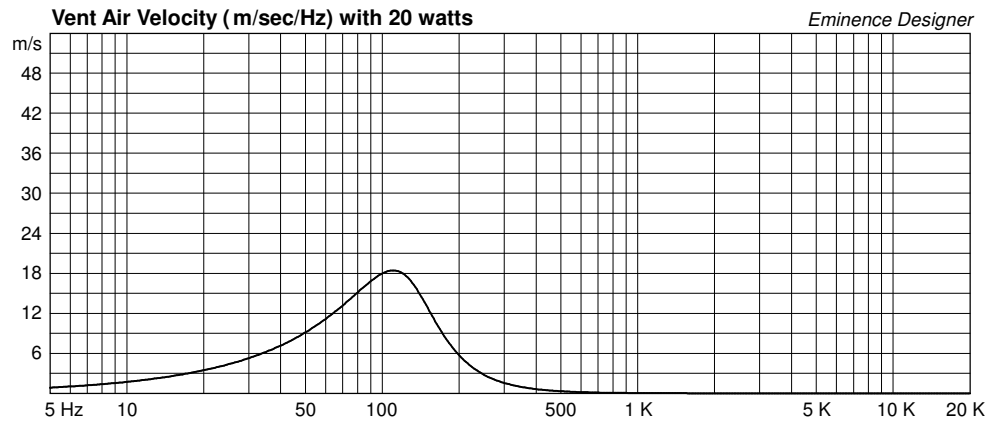
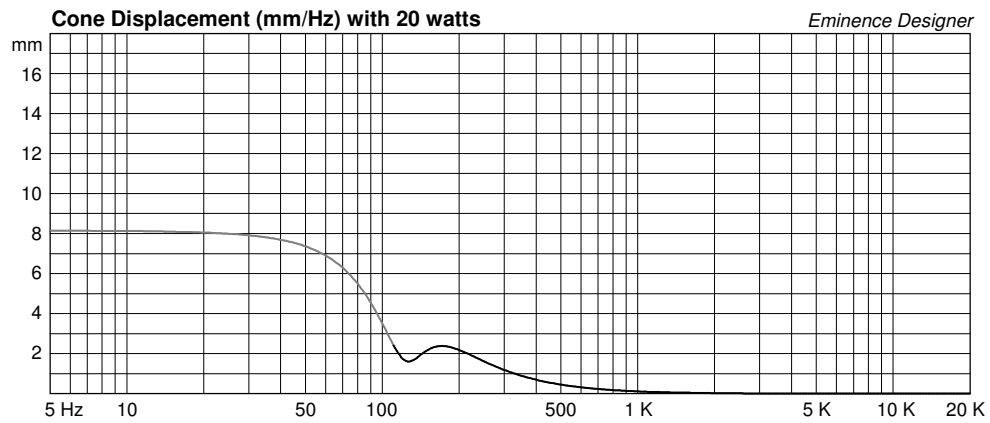
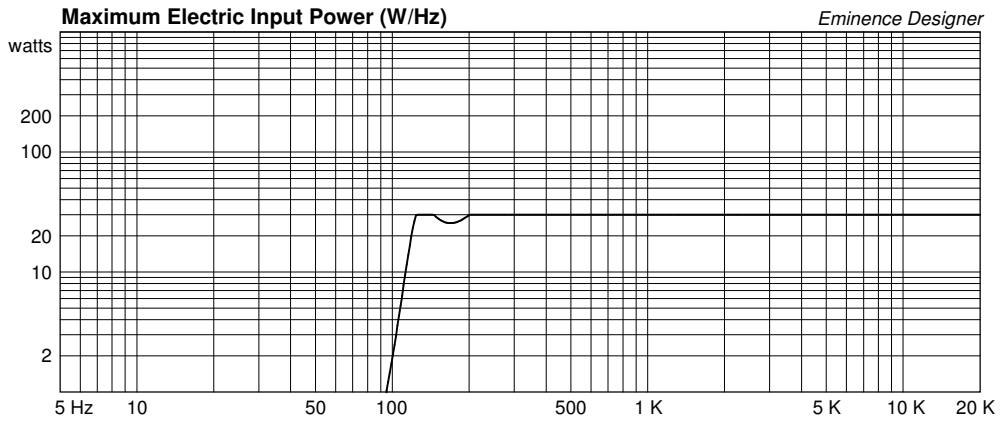
--Vent Parts--

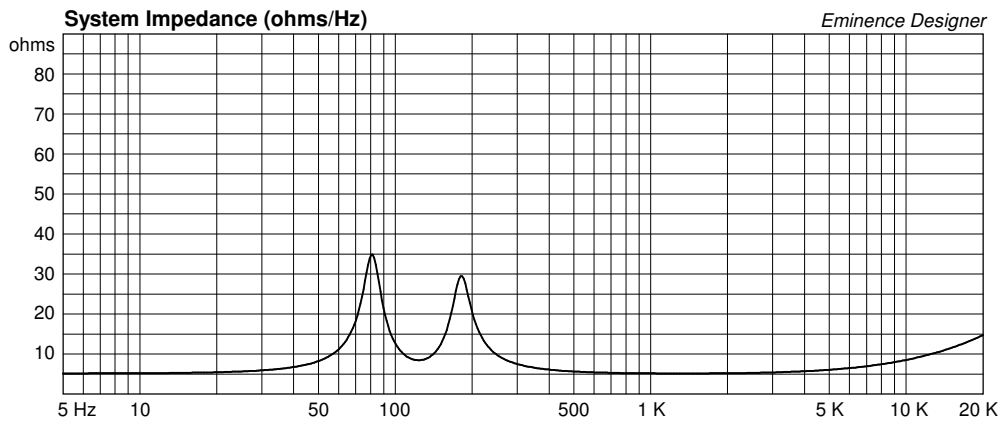
1 Duct: outside diameter (e) = 1.55 in
inside diameter (g) = 1.3 in
length (h) = 3.795 in

--Driver Mounting--

Mounting: Flush







Alpha 3-8 Vented Column Array Module

By Jerry McNutt, Eminence Speaker LLC
150 Watts; F3 at 109 Hz. Best used above 150 Hz.
4 ohms per module. Stack them for longer throw.



Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 0.41 cu.ft

V(total) = 0.458 cu.ft

Fb = 125 Hz

QL = 7

F3 = 109 Hz

Fill = normal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 3 in

Lv = 2.385 in

Driver Properties

--Description--

Name: Alpha 3-8

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: 3" Full Range Driver

--Configuration--

No. of Drivers = 8

Mounting = Standard

Wiring = Series-Parallel

Drivers sum coherently = Yes

--Mechanical Parameters--

Fs = 117.6 Hz

Qms = 7.94

Vas = 0.95 liters [7.6]

Cms = 0.84 mm/N [0.105]

Mms = 2.18 g [17.44]

Rms = 0.2 kg/s [1.6]

Xmax = 2.4 mm

Xmech = 4 mm

P-Dia = 59.94 mm [169.5]

Sd = 28.58 sq.cm [228.6]

P-Vd = 0.00677 liters [0.0542]

--Electrical Parameters--

Qes = 0.53

Re = 5.12 ohms [2.56]

Le = 0.11 mH [0.055]

Z = 8 ohms [4]

BL = 3.93 Tm [7.889]

Pe = 30 watts [240]

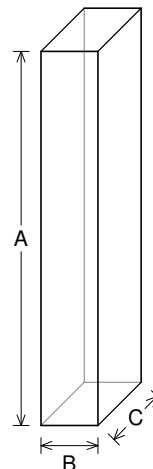
--Electromech. Parameters--

Qts = 0.497

no = 0.281 % [2.248]

1-W SPL = 86.63 dB [95.67]

2.83-V SPL = 88.57 dB [100.6]



--External Dimensions--

A = 33 in

B = 5 in

C = 7.179 in

--Internal Dimensions--

A = 32 in

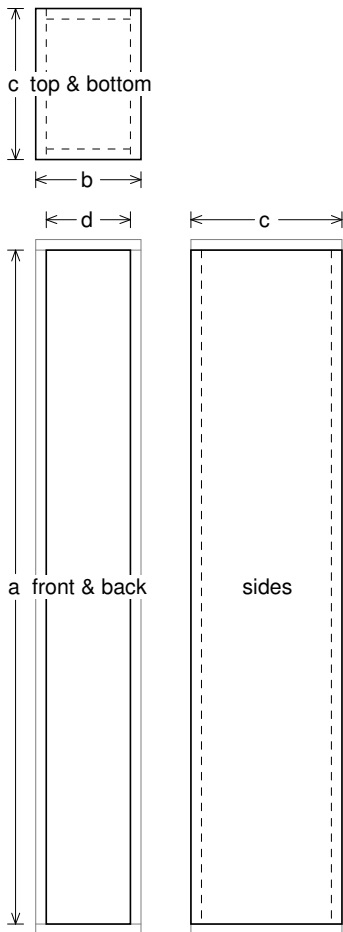
B = 4 in

C = 6.179 in

--Wall Thickness--

Front = 0.5 in

Side = 0.5 in



Box Parts

Box Shape: Square Prism

1 Top, 1 Bottom: depth (c) = 7.179 in
width (b) = 5, thickness = 0.5 in

1 Front, 1 Back: height (a) = 32 in
width (d) = 4, thickness = 0.5 in

2 Sides: height (a) = 32 in
depth (c) = 7.179, thickness = 0.5 in

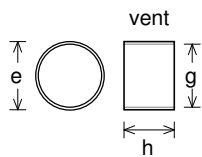
--Vent Parts--

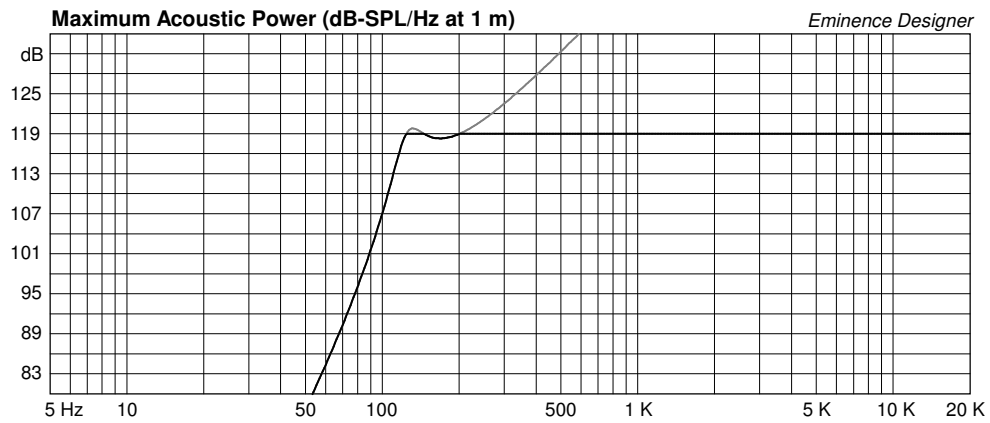
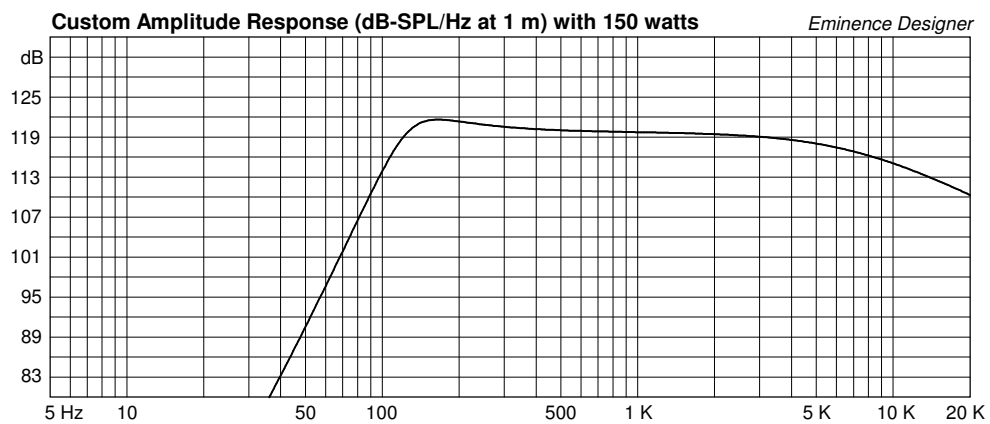
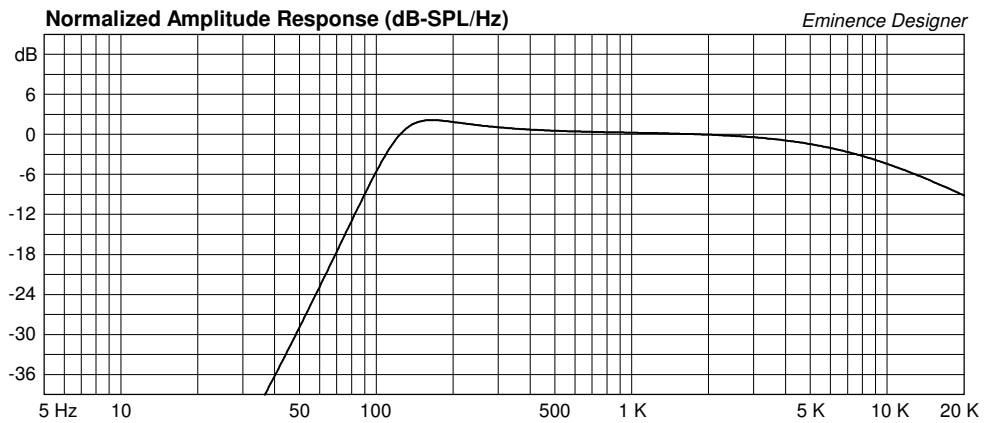
2 Ducts: outside diameter (e) = 3.25 in
inside diameter (g) = 3 in
length (h) = 2.385 in

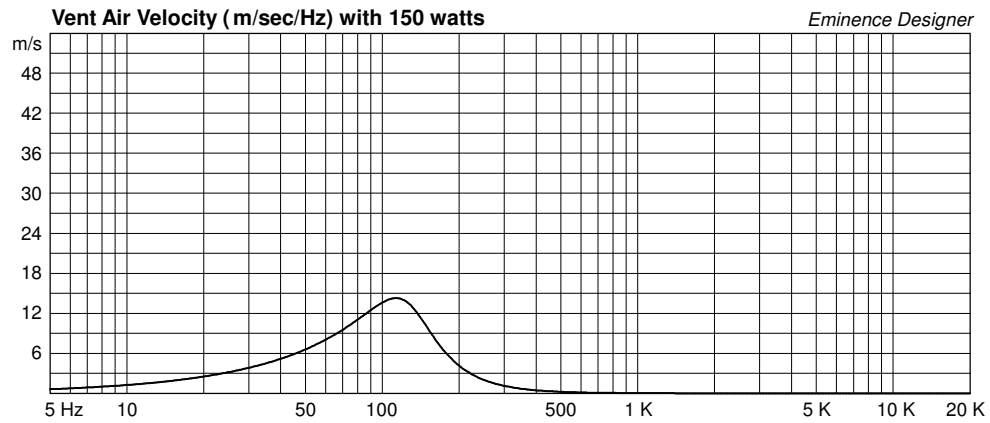
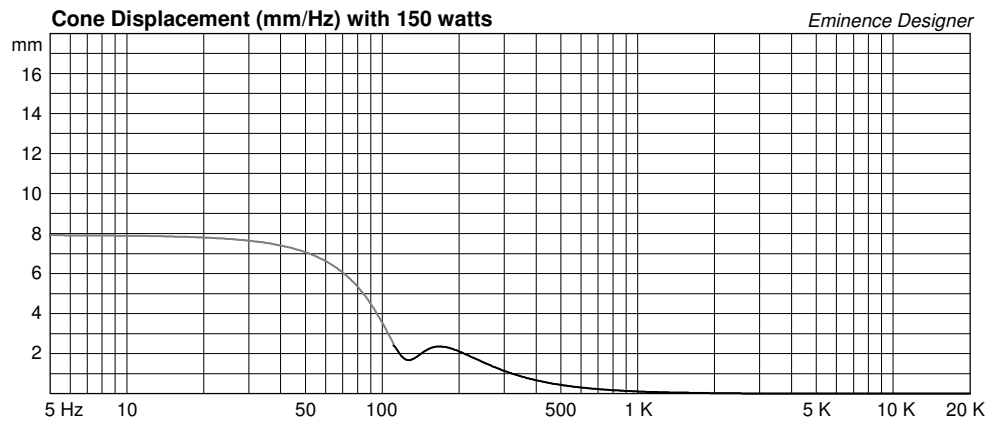
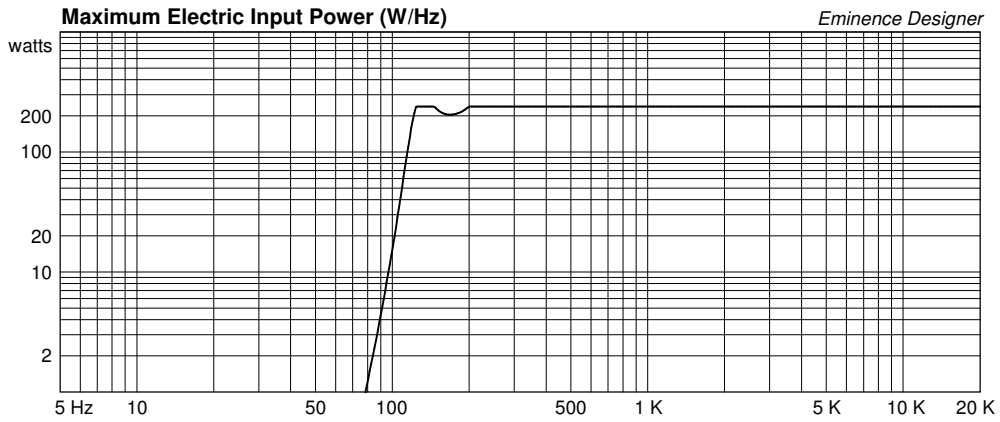
--Driver Mounting--

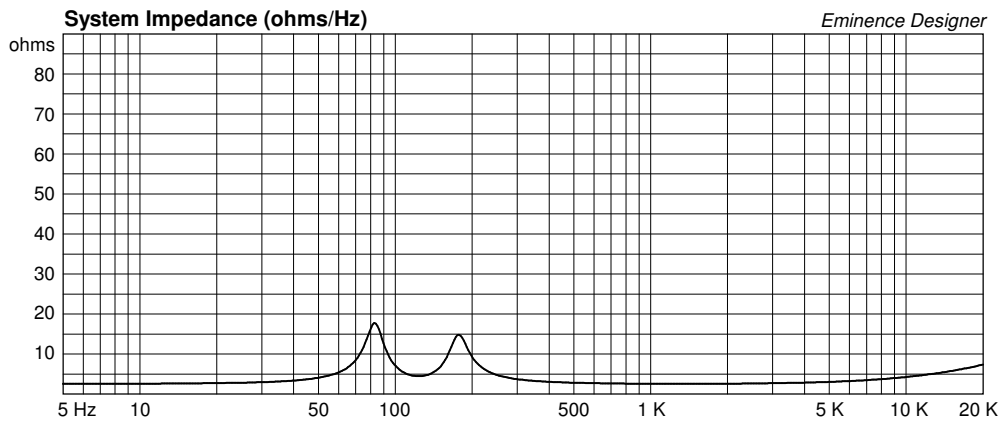
Mounting: Flush

Aim: All drivers face same direction









Alpha 3-8 Sealed Column Array Module

By Jerry McNutt, Eminence Speaker LLC
240 Watts; F3 at 187 Hz. Best used above 250 Hz.
Each Module is a 4 ohm load. Stack them up for longer throw.



Box Properties

--Description--

Name:

Type: Closed Box

Shape: Prism, square

--Box Parameters--

Vb = 0.275 cu.ft

V(total) = 0.304 cu.ft

Qtc = 0.622

QL = 20

F3 = 186.6 Hz

Fill = normal

Driver Properties

--Description--

Name: Alpha 3-8

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: 3" Full Range Driver

--Configuration--

No. of Drivers = 8

Mounting = Standard

Wiring = Series-Parallel

Drivers sum coherently = Yes

--Mechanical Parameters--

Fs = 117.6 Hz

Qms = 7.94

Vas = 0.95 liters [7.6]

Cms = 0.84 mm/N [0.105]

Mms = 2.18 g [17.44]

Rms = 0.2 kg/s [1.6]

Xmax = 2.4 mm

Xmech = 4 mm

P-Dia = 59.94 mm [169.5]

Sd = 28.58 sq.cm [228.6]

P-Vd = 0.00677 liters [0.0542]

--Electrical Parameters--

Qes = 0.53

Re = 5.12 ohms [2.56]

Le = 0.11 mH [0.055]

Z = 8 ohms [4]

BL = 3.93 Tm [7.889]

Pe = 30 watts [240]

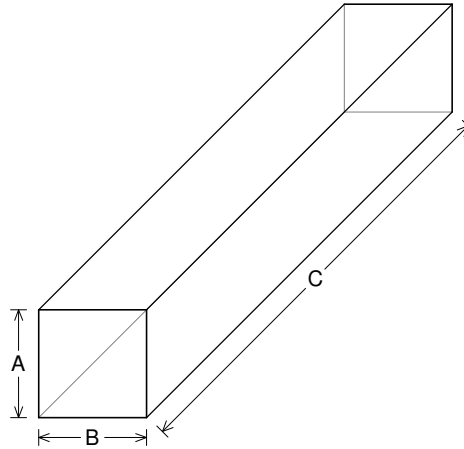
--Electromech. Parameters--

Qts = 0.497

no = 0.281 % [2.248]

1-W SPL = 86.63 dB [95.67]

2.83-V SPL = 88.57 dB [100.6]



--External Dimensions--

A = 5.36 in

B = 5.36 in

C = 28.66 in

--Internal Dimensions--

A = 4.36 in

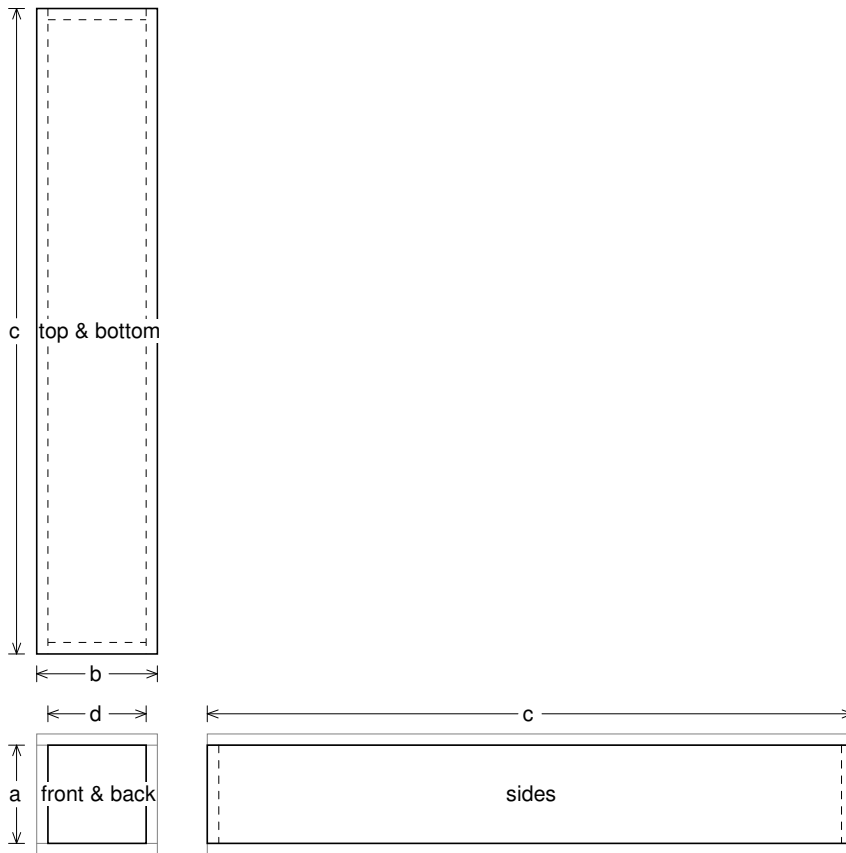
B = 4.36 in

C = 27.66 in

--Wall Thickness--

Front = 0.5 in

Side = 0.5 in



Box Parts

Box Shape: Square Prism

1 Top, 1 Bottom: depth (c) = 28.66 in
width (b) = 5.36, thickness = 0.5 in

1 Front, 1 Back: height (a) = 4.36 in
width (d) = 4.36, thickness = 0.5 in

2 Sides: height (a) = 4.36 in
depth (c) = 28.66, thickness = 0.5 in

--Driver Mounting--

Mounting: Flush

Aim: All drivers face same direction

