

Specification

Nominal Basket Diameter	10", 254mm
Nominal Impedance*	8 ohms
Power Rating**	
Watts	250W
Music Program	500W
Resonance	53Hz
Usable Frequency Range***	51Hz-3.8kHz
Sensitivity	97
Magnet Weight	34 oz
Gap Height	0.312", 7.92mm
Voice Coil Diameter	2", 50.8mm

Thiele & Small Parameters

Resonant Frequency (fs)	53Hz
DC Resistance (Re)	5.75
Coil Inductance (Le)	0.67mH
Mechanical Q (Qms)	8.14
Electromagnetic Q (Qes)	0.52
Total Q (Qts)	0.49
Compliance Equivalent Volume (Vas)	60.1 ltr/2.1 cu. ft.
Peak Diaphragm Displacement Volume (Vd)	102cc
Mechanical Compliance of Suspension (Cms)	0.36mm/N
BL Product (BL)	9.6 T-M
Diaphragm Mass inc. Airload (Mms)	25 grams
Efficiency Bandwidth Product (EBP)	103
Maximum Linear Excursion (Xmax)	3.0mm
Surface Area of Cone (Sd)	344.9cm ²
Maximum Mechanical Limit (Xlim)	8.6mm

Mounting Information

Recommended Enclosure Volume	
Sealed	8.5-14.2 ltr/0.3-0.5 cu. ft.
Vented	19.8-70.8 ltr/0.7-2.5 cu. ft.
Overall Diameter	10.11", 256.8mm
Baffle Hole Diameter	9.13", 231.8mm
Front Sealing Gasket	Fitted as Standard
Rear Sealing Gasket	Fitted as Standard
Mounting Holes Diameter	0.23", 5.7mm
Mounting Holes B.C.D.	9.6", 243.8mm
Depth	3.98", 101mm
Net Weight	6.8 lbs, 3.1 kg
Shipping Weight	7.8 lbs, 3.6 kg

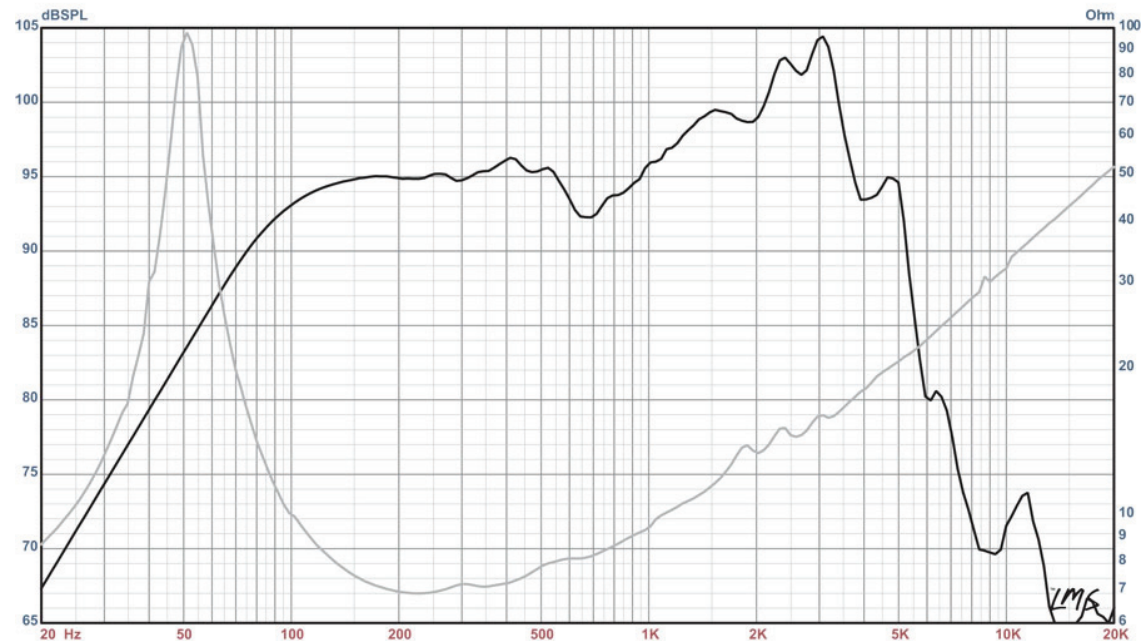
Materials of Construction

Coil Construction	Aluminum
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-10A American Standard Series

Recommended for professional audio, bass guitar, mid-bass or floor monitor applications in sealed enclosures. Also works well as a mid-bass or woofer in vented enclosures.



* 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. ie: 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)

Beta10A Med Vented Cab, Bass Guitar/ Low Pwr FR

By Jerry McNutt, Eminence Speaker LLC
Displacement limited to 50 Watts; F3 51 Hz.

Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square (optimum)

--Box Parameters--

Vb = 2.1 cu.ft

V(total) = 2.166 cu.ft

Fb = 55 Hz

QL = 7

F3 = 59.09 Hz

Fill = minimal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 3 in

Lv = 2.67 in

Driver Properties

--Description--

Name: Beta-10 (8 ohm)

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: Revised Sep-2002

Piston: Paper cone.

Suspension: Cloth surround.

Dust Cap: Solid composition paper dust cap.

Frame: Pressed steel basket.

Voice Coil: 2 inch (50.8 mm) AL Wire. Kapton former.

Magnet: 34 oz ferrite magnet.

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 53 Hz

Qms = 8.14

Vas = 60.1 liters

Cms = 0.36 mm/N

Mms = 25 g

Rms = 1.03 kg/s

Xmax = 3 mm

Xmech = 8.64 mm

P-Dia = 208.9 mm

Sd = 344.9 sq.cm

P-Vd = 0.104 liters

--Electrical Parameters--

Qes = 0.52

Re = 5.75 ohms

Le = 0.67 mH

Z = 8 ohms

BL = 9.6 Tm

Pe = 250 watts

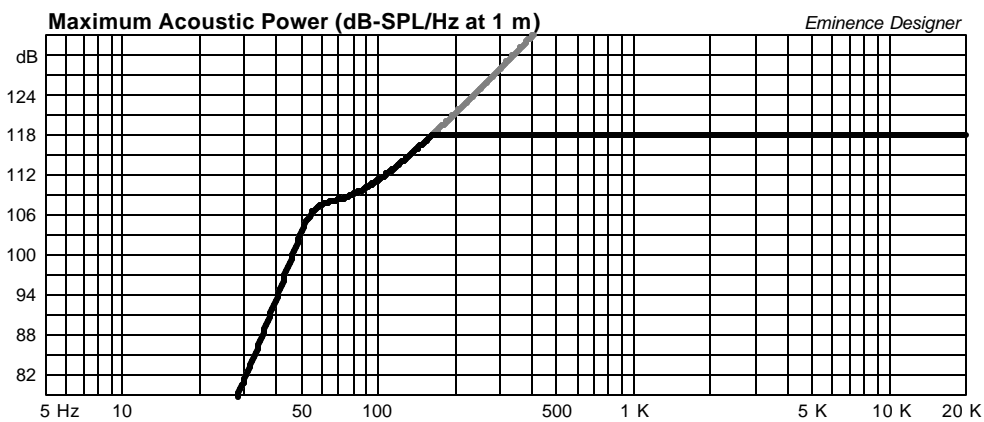
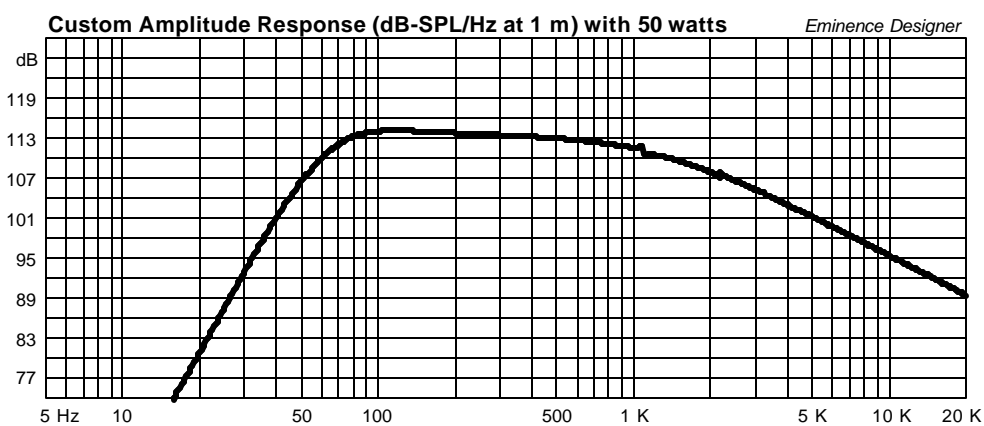
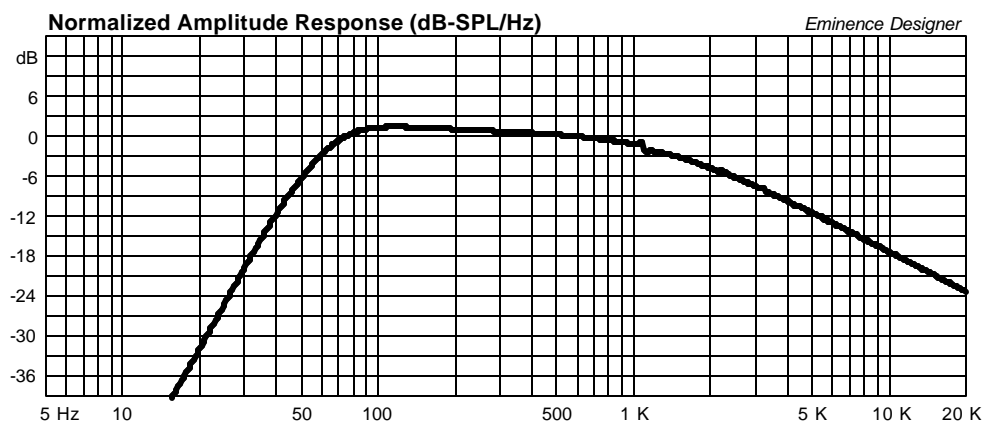
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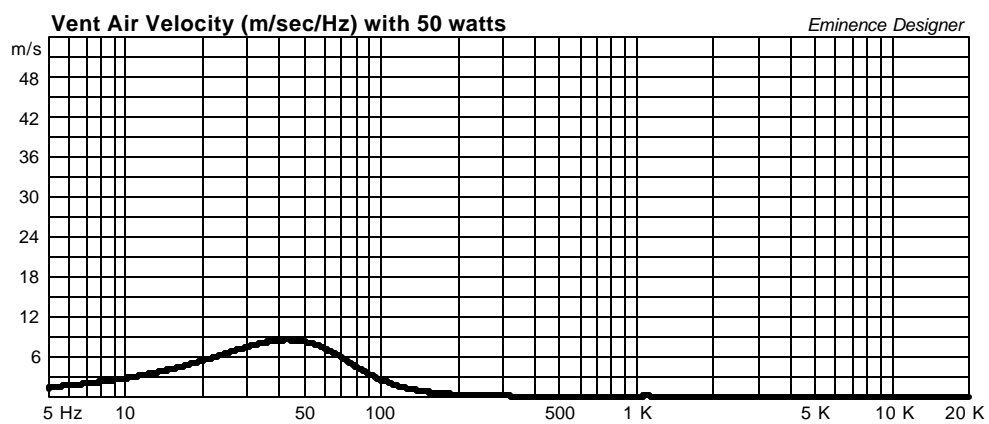
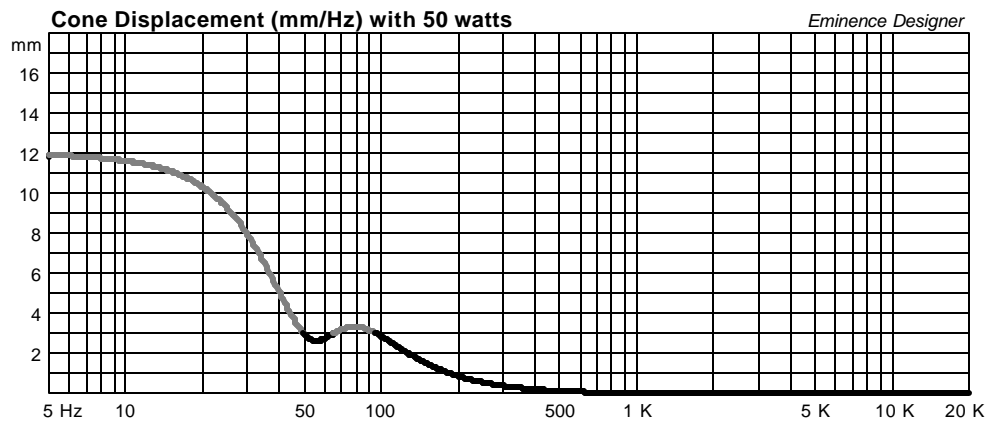
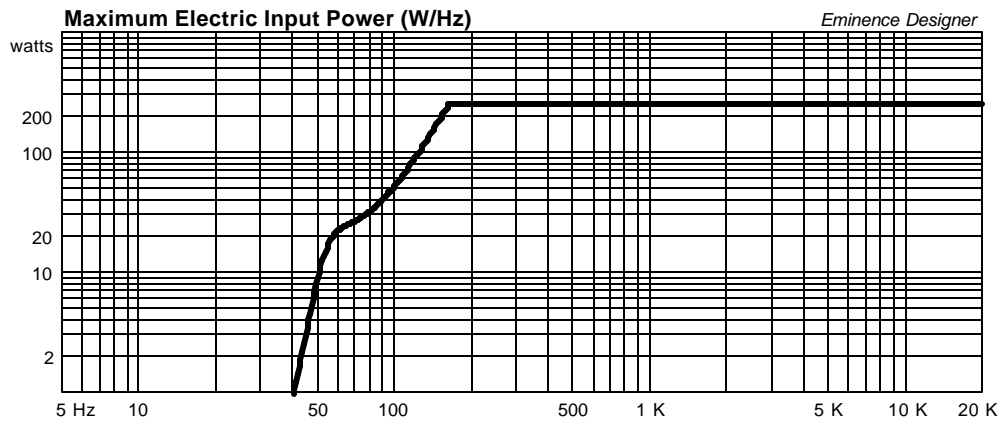
Qts = 0.49

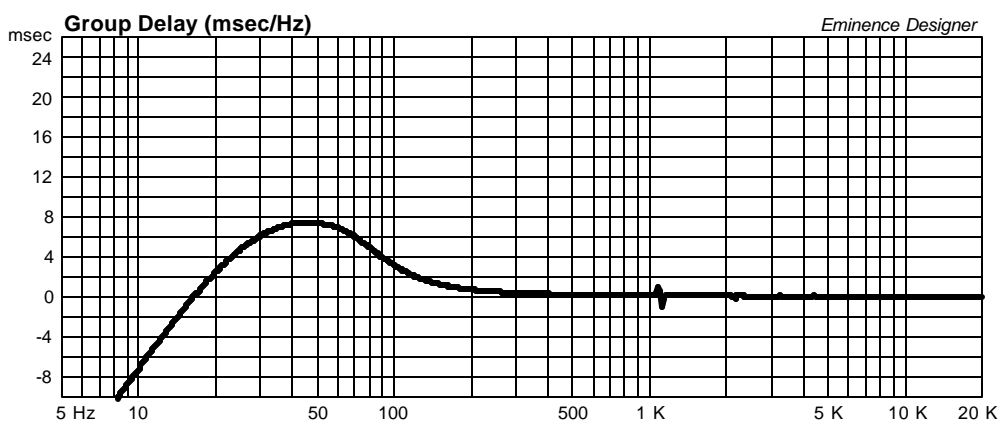
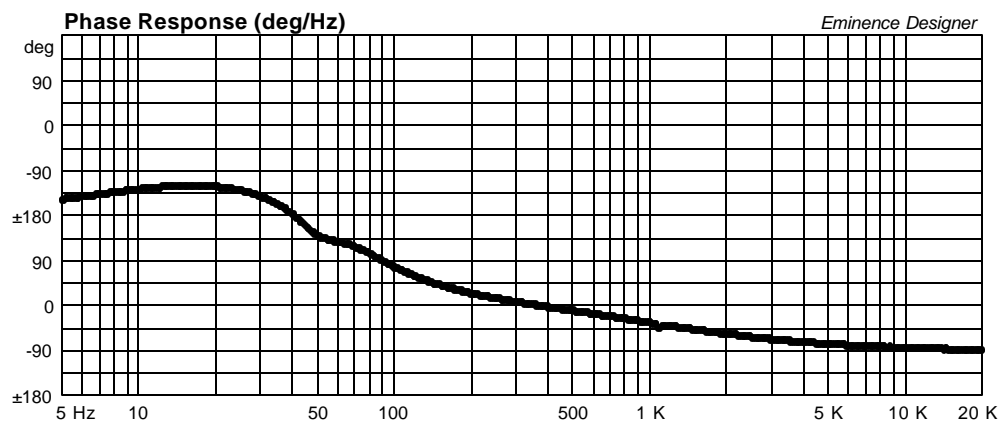
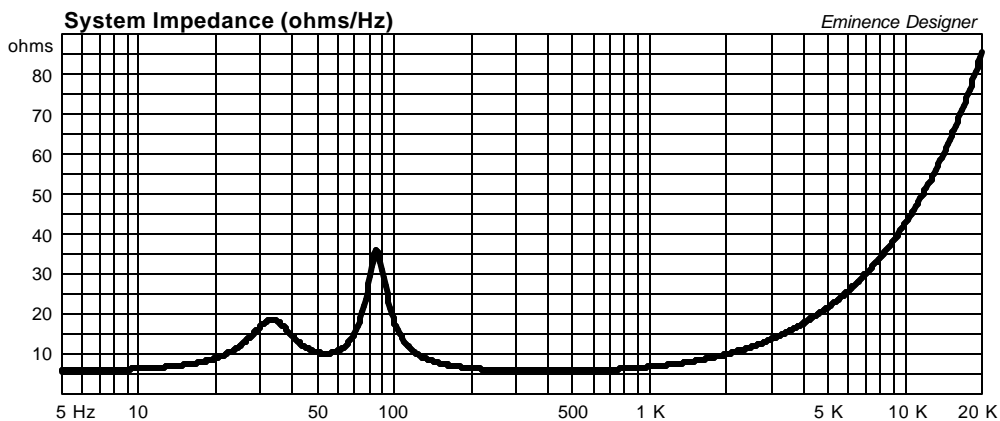
no = 1.659 %

1-W SPL = 94.35 dB

2.83-V SPL = 95.78 dB







Beta10A Sm Vented Mid/High or Low Pwr Public Address

By Jerry McNutt, Eminence Speaker LLC

High Power Mid/High Cabinet: 250 Watt Thermal limit; use above 200 Hz.

Public Address (Semi-Full Range): 100 Watt Displacement Limit; use above 80 Hz

Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square (optimum)

--Box Parameters--

Vb = 0.7 cu.ft

V(total) = 0.757 cu.ft

Fb = 65.39 Hz

QL = 7

F3 = 82.55 Hz

Fill = minimal

--Vents--

No. of Vents = 1

Vent shape = round

Vent ends = one flush

Dv = 3 in

Lv = 3.62 in

Driver Properties

--Description--

Name: Beta-10 (8 ohm)

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: Revised Sep-2002

Piston: Paper cone.

Suspension: Cloth surround.

Dust Cap: Solid composition paper dust cap.

Frame: Pressed steel basket.

Voice Coil: 2 inch (50.8 mm) AL Wire. Kapton former.

Magnet: 34 oz ferrite magnet.

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 53 Hz

Qms = 8.14

Vas = 60.1 liters

Cms = 0.36 mm/N

Mms = 25 g

Rms = 1.03 kg/s

Xmax = 3 mm

Xmech = 8.64 mm

P-Dia = 208.9 mm

Sd = 344.9 sq.cm

P-Vd = 0.104 liters

--Electrical Parameters--

Qes = 0.52

Re = 5.75 ohms

Le = 0.67 mH

Z = 8 ohms

BL = 9.6 Tm

Pe = 250 watts

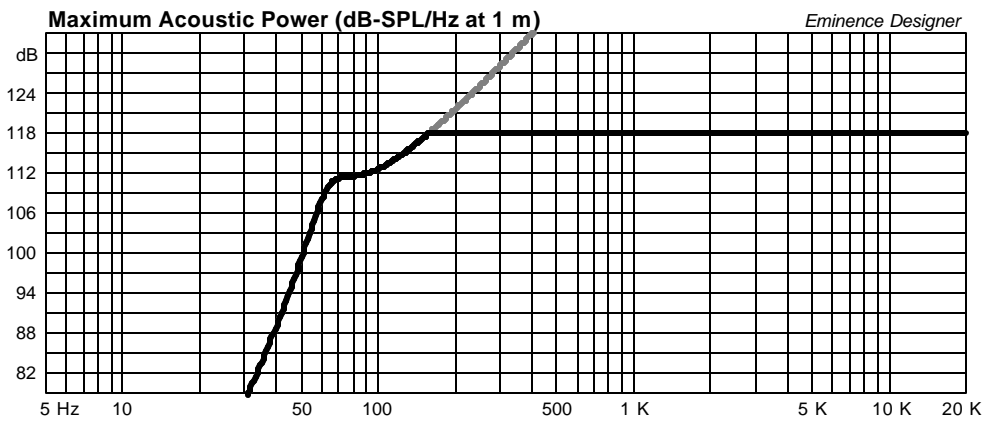
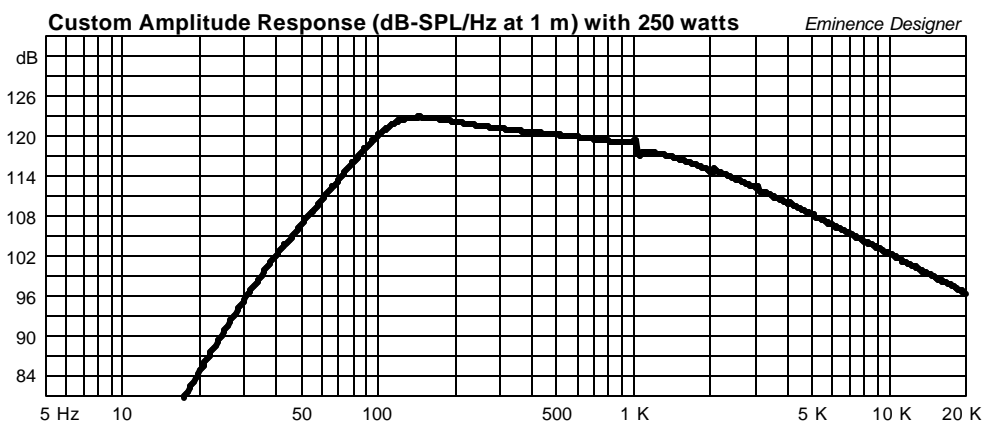
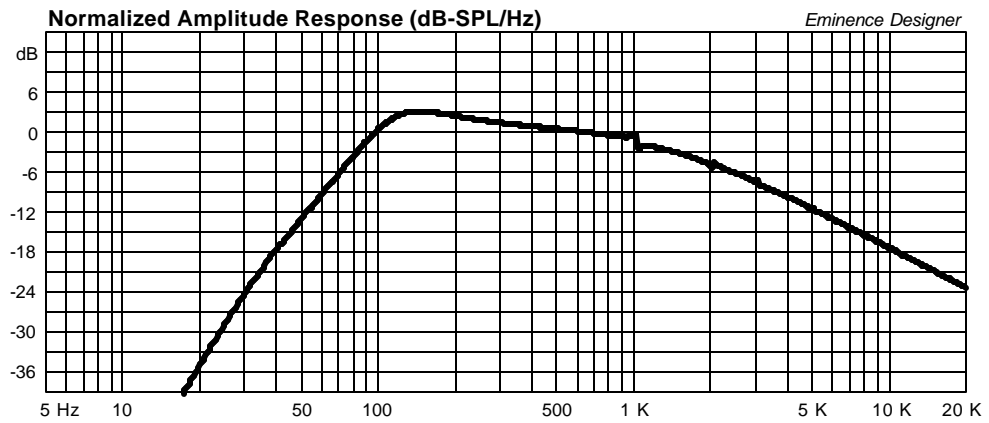
--Electromech. Parameters--

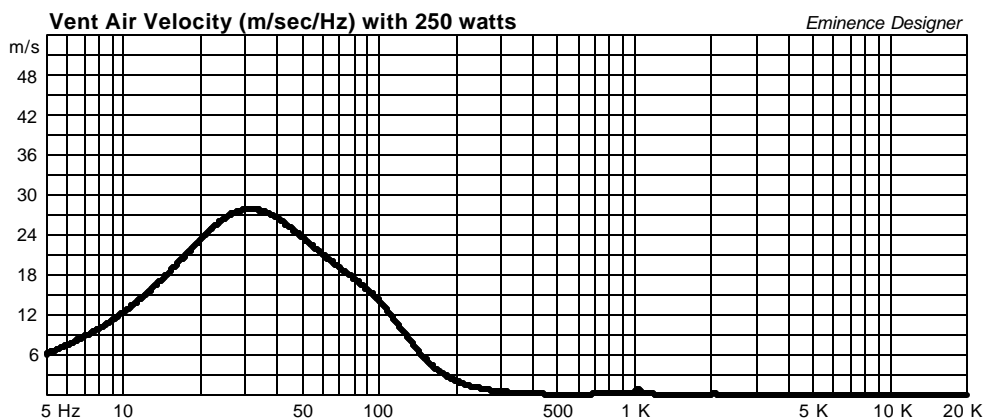
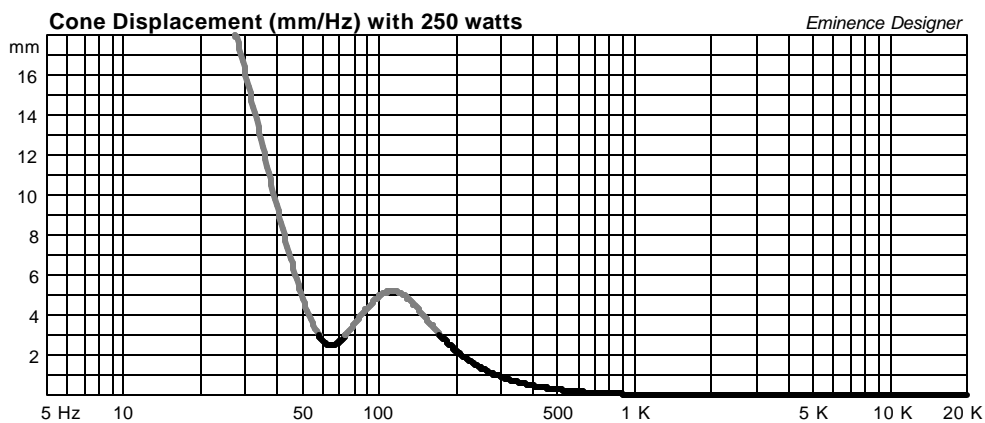
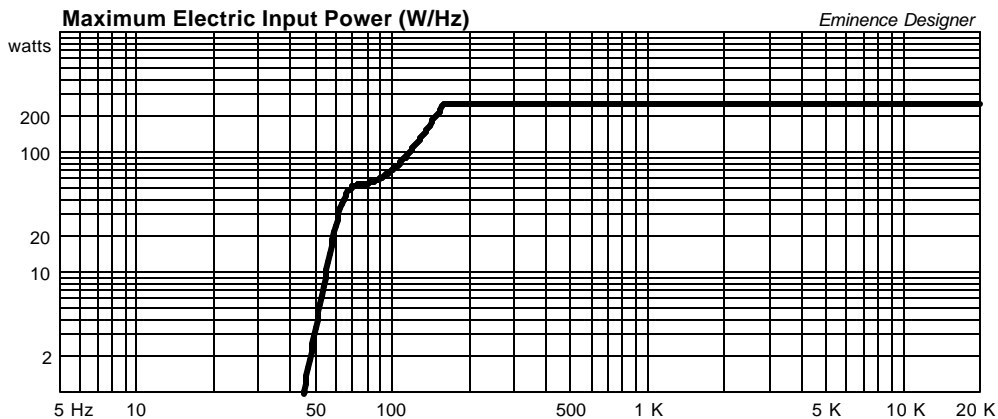
Qts = 0.49

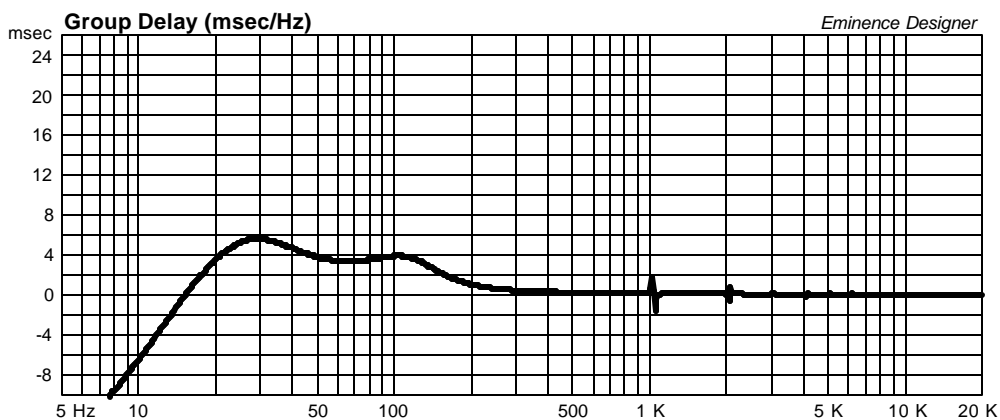
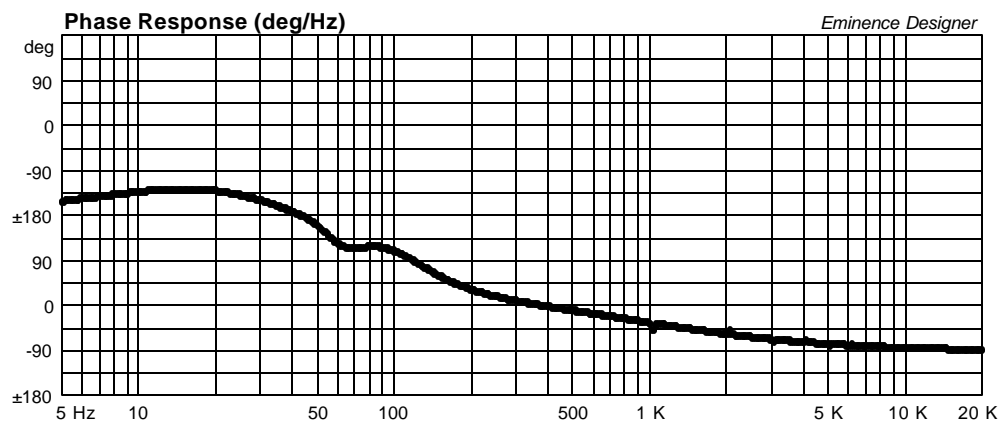
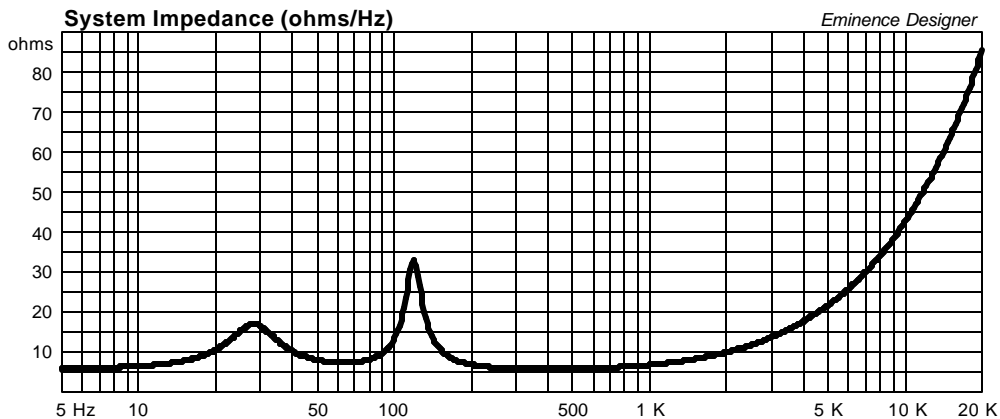
no = 1.659 %

1-W SPL = 94.35 dB

2.83-V SPL = 95.78 dB







Beta10A Sealed Mid/High or Floor Monitor Box

By Jerry McNutt, Eminence Speaker LLC

Displacement Limited to 150 Watts; use above 125 Hz.

Box Properties

--Description--

Name:

Type: Closed Box

Shape: Prism, square

--Box Parameters--

Vb = 0.295 cu.ft

V(total) = 0.334 cu.ft

Qtc = 0.979

QL = 20

F3 = 113.3 Hz

Fill = heavy

Driver Properties

--Description--

Name: Beta-10 (8 ohm)

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: Revised Sep-2002

Piston: Paper cone.

Suspension: Cloth surround.

Dust Cap: Solid composition paper dust cap.

Frame: Pressed steel basket.

Voice Coil: 2 inch (50.8 mm) AL Wire. Kapton former.

Magnet: 34 oz ferrite magnet.

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

Fs = 53 Hz

Qms = 8.14

Vas = 60.1 liters

Cms = 0.36 mm/N

Mms = 25 g

Rms = 1.03 kg/s

Xmax = 3 mm

Xmech = 8.64 mm

P-Dia = 208.9 mm

Sd = 344.9 sq.cm

P-Vd = 0.104 liters

--Electrical Parameters--

Qes = 0.52

Re = 5.75 ohms

Le = 0.67 mH

Z = 8 ohms

BL = 9.6 Tm

Pe = 250 watts

--Electromech. Parameters--

Qts = 0.49

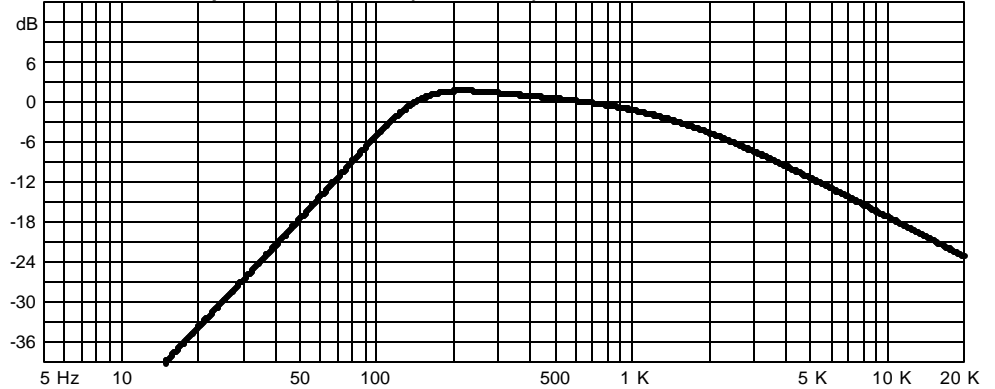
no = 1.659 %

1-W SPL = 94.35 dB

2.83-V SPL = 95.78 dB

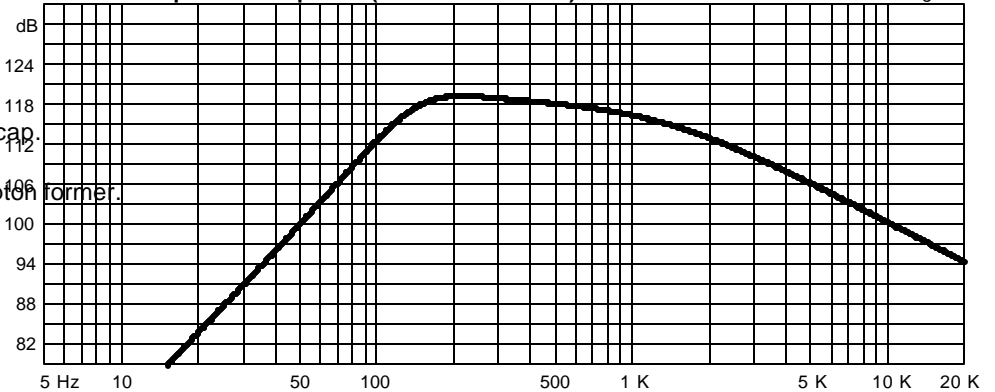
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



Custom Amplitude Response (dB-SPL/Hz at 1 m) with 150 watts

Eminence Designer



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

Eminence Designer

