Arendal Sound - 1610 Series 8
Official Launch Date February 10

Engineering Notes

Cabinet

• Same finish concept as the 1528 Series 8
• Available in Polar (white satin without pearlescent particles) and Basalt
• Waveguides and trim rings are color matched to each finish, consistent with the 1528 Series 8

• Passively time aligned baffle, most critical on the Tower where multiple woofers share the same frequency range
• All drivers angled toward the listening position for optimal phase coherence and transient response (radius matches 4m of listening distance)

• 46 mm thick baffle to eliminate cabinet resonance and coloration
• Baffle constructed from multiple thin HDF layers bonded together with adhesive

• Cabinet wall thickness
• 25 mm on Tower
• 18 mm on Slim, Bookshelf, and Center
• Heavy internal bracing for improved transparency, dynamics, and soundstage

• Woofer trim rings for a clean and refined appearance
• Cast aluminum feet bars without visible end caps
• Large rubber feet with M10 threads

• Individual cloth grilles covering each woofer

• All models except Slim 8 (sealed design) use large, low-tuned ports for deep bass extension with minimal turbulence
• Port resonances controlled by inducing a cancelling airflow inside the port
• Strategically placed, damped openings reduce resonance while maintaining efficiency

• VESA 100 mounting inserts on 1610 Slim 8
• Flat wall-mount bracket included in the box

Crossover

• Solid copper terminals plated with rhodium for optimal conductivity and long-term reliability

• High quality crossover components throughout
• Wire-wound resistors (green types) and aluminum heatsinked wire-wound resistors for high thermal stability and sonic clarity

• Air-core inductors used in midrange and tweeter circuits
• Polypropylene capacitors in the tweeter section

Crossover topology

• Fourth-order filters for the high-frequency section
• Second-order filters between woofer - midrange, and midrange - tweeter

• Only non-ferrous components used in the signal path
• No steel nuts or washers to avoid magnetic interference and signal smearing

Drivers

Tweeter

• 28 mm aluminum-magnesium dome combining exceptionally high stiffness with good inert damping
• Large copper shorting ring and powerful neodymium motor
• Very low distortion and high power handling
• High sensitivity of 95 dB at 1 W and 1 m

Midrange

• 5-inch carbon cone, extremely stiff and lightweight
• High detail retrieval, accuracy, and (literally scary!) dynamic capability
• Oversized motor and fully enclosed basket
• High sensitivity of 95 dB at 1 W and 1 m
• Copper shorting ring for ultra low distortion and minimal dynamic compression at high SPL

Woofer

• 8-inch aluminum cone optimized for bass and lower midrange reproduction
• High stiffness with low inert damping, optimized to operate well below breakup modes and resonances within its intended frequency range
• Exceptional clarity in bass transients and lower male vocals

• Motor designed for high excursion and low distortion
• Reinforced surround with internal ribs, optimized using Comsol simulations
• Stable cone behavior and minimal distortion at extreme excursion levels

Waveguide and midrange assembly

• Elliptical waveguide positions tweeter and midrange as close together as physically possible
• Smooth vertical dispersion with minimal lobing

• Waveguide geometry optimized for a wide listening window
• Controlled directivity into the upper frequency range

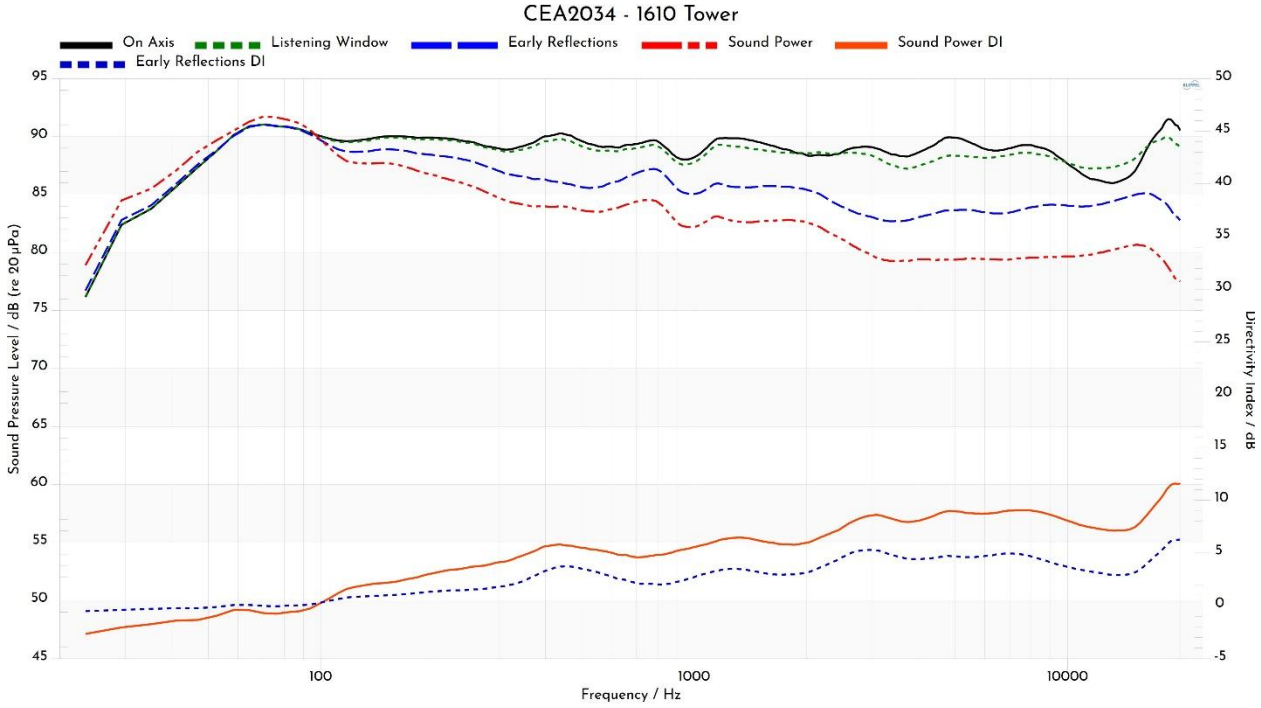
• Waveguide assembly mounted to a thick steel plate
• Provides rigid mounting for the large midrange motor
• Ensures mechanical stability and precise driver alignment

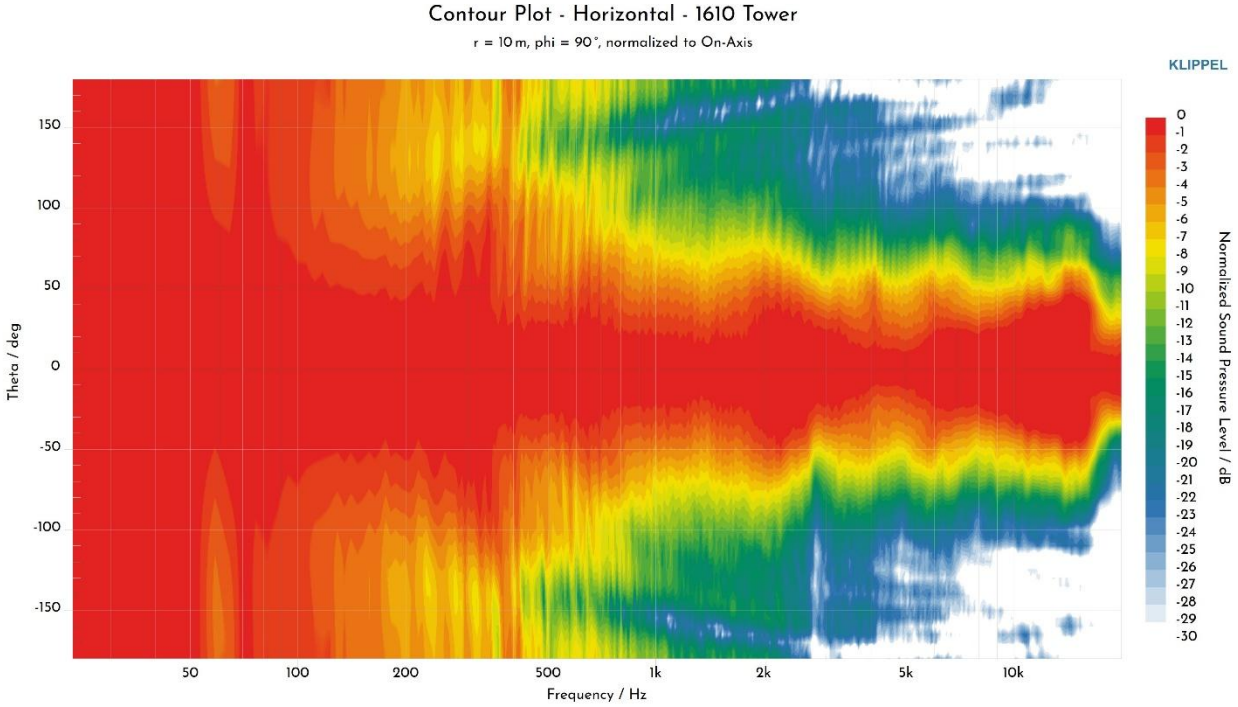
Tweeter lens

• Increases sensitivity and reduces distortion in the 7 to 15 kHz range
• Improves off-axis response
• Protects the tweeter dome

Tech Specs

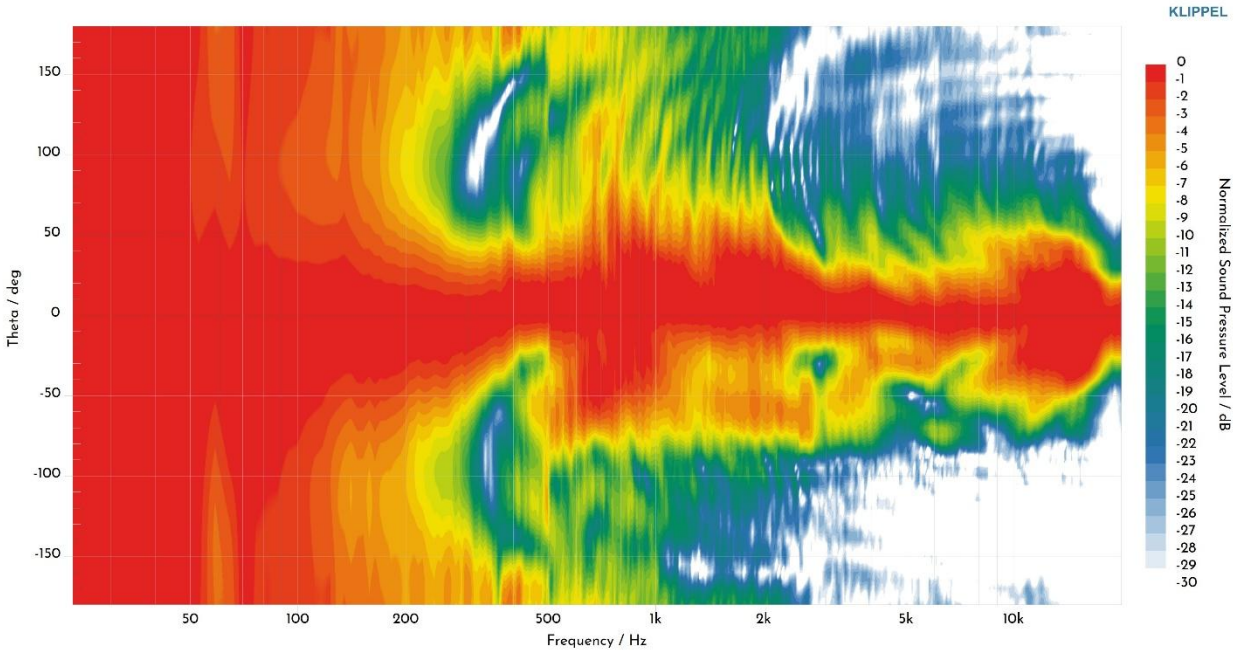
1610 Tower 8



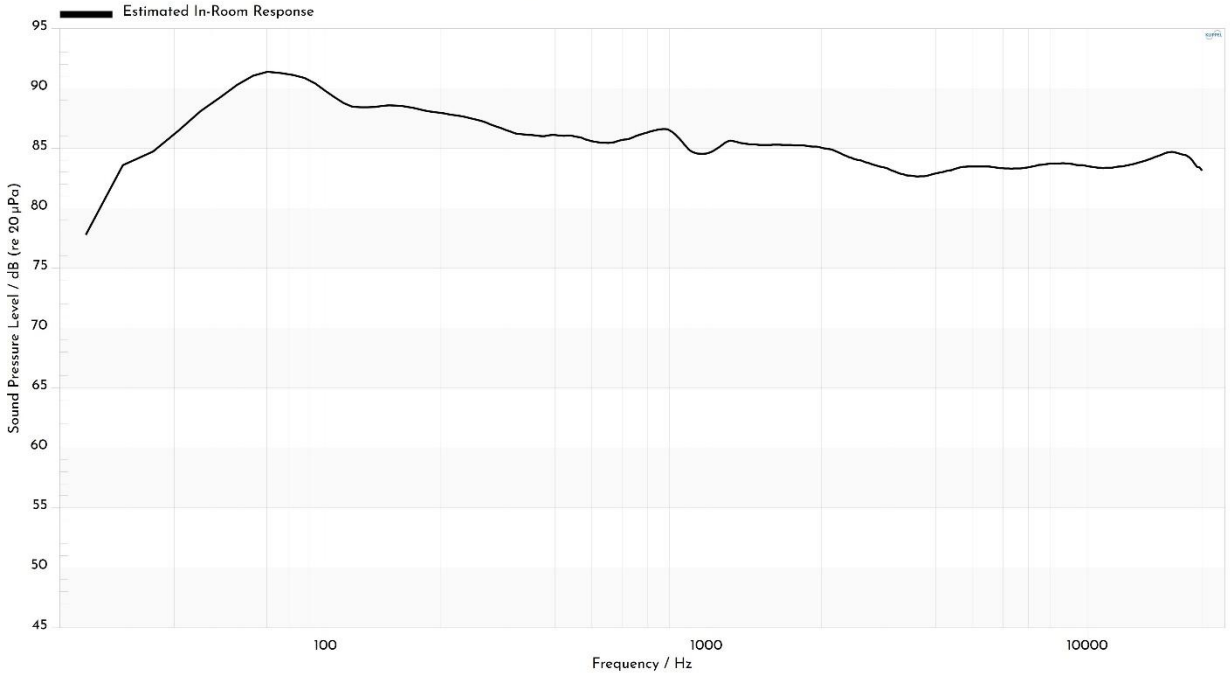


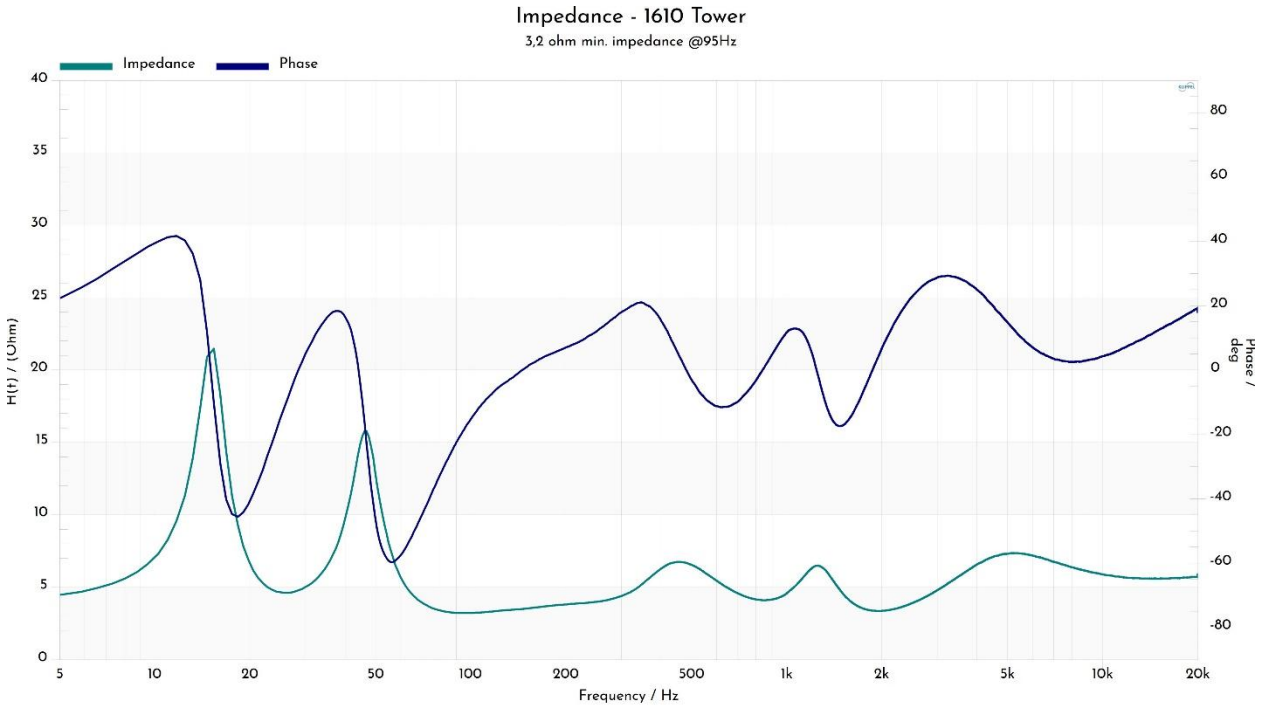
Contour Plot - Vertical - 1610 Tower

r = 10 m, phi = 0°, normalized to On-Axis



Estimated In-Room Response - 1610 Tower





Sensitivity: 89,5dB @ 2,83V

Impedance: 4ohm

Crossover frequency: 2600Hz / 380Hz

Frequency response -6dB (Anechoic): 28Hz – 20kHz

Frequency linearity: 40Hz-11kHz +-2,5dB

F3: 39Hz

F6: 28Hz

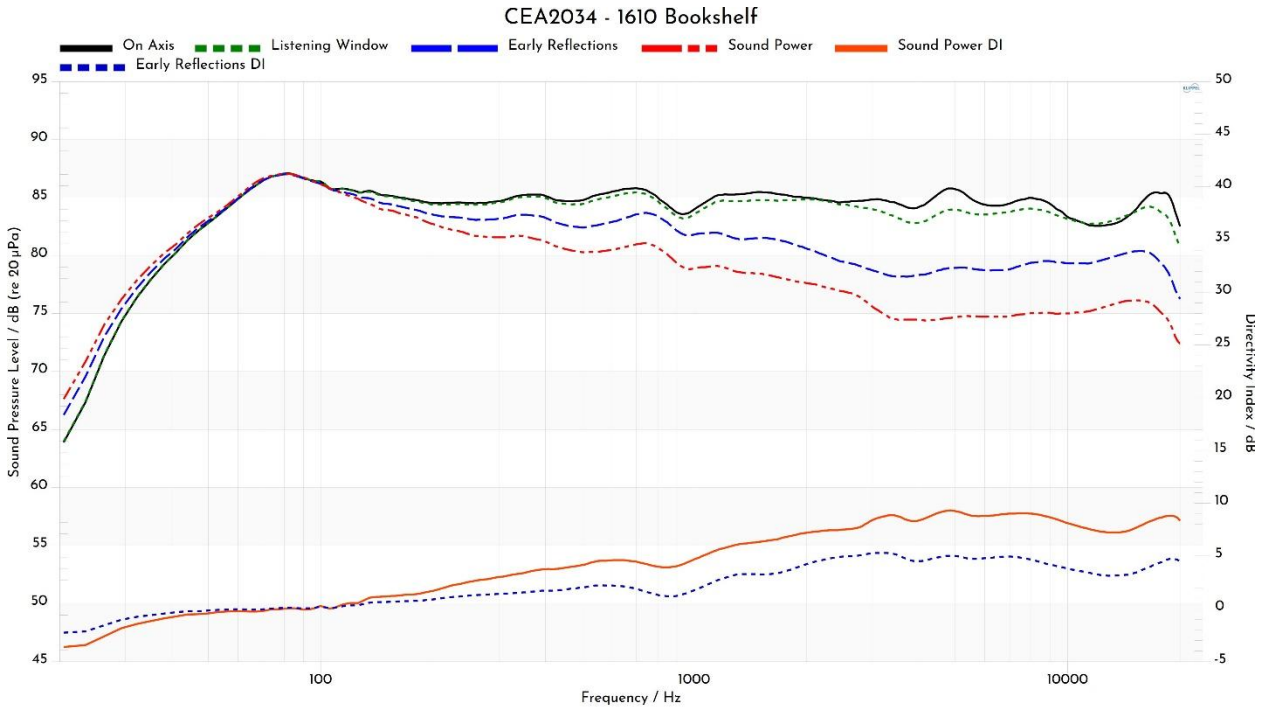
F10: 24Hz

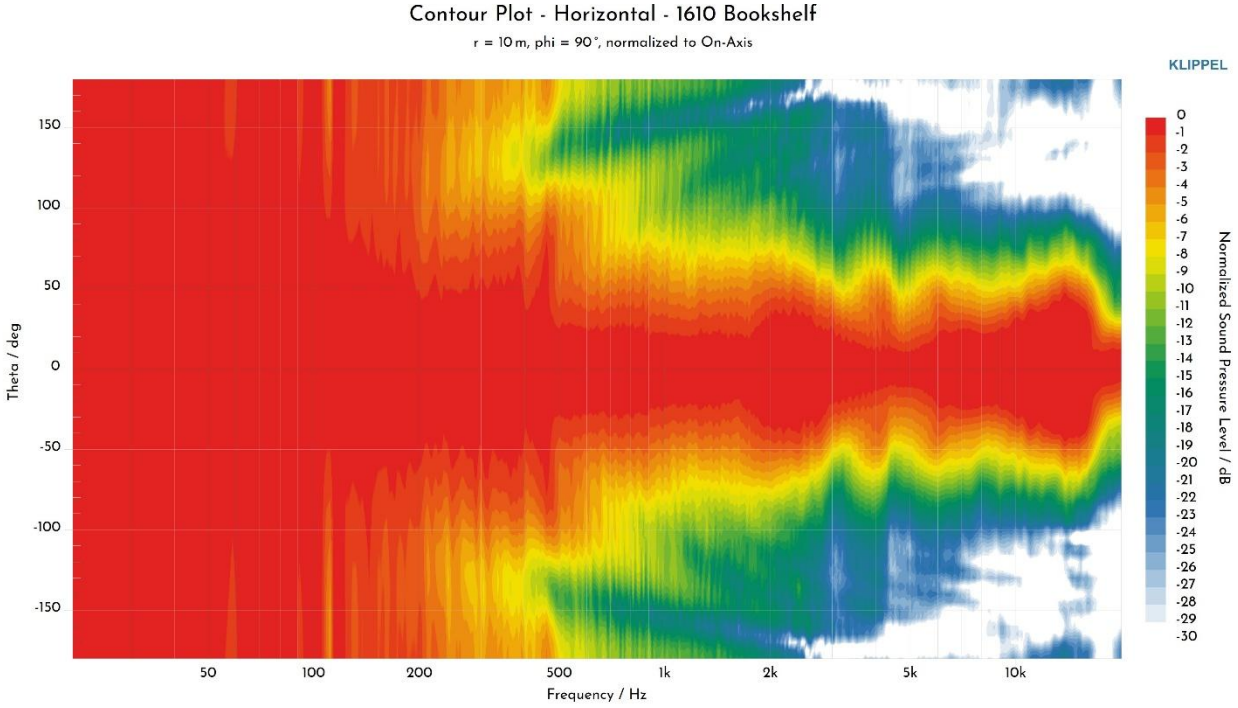
Sealed F3: 50Hz

Sealed F6: 44Hz

Sealed F10: 32Hz

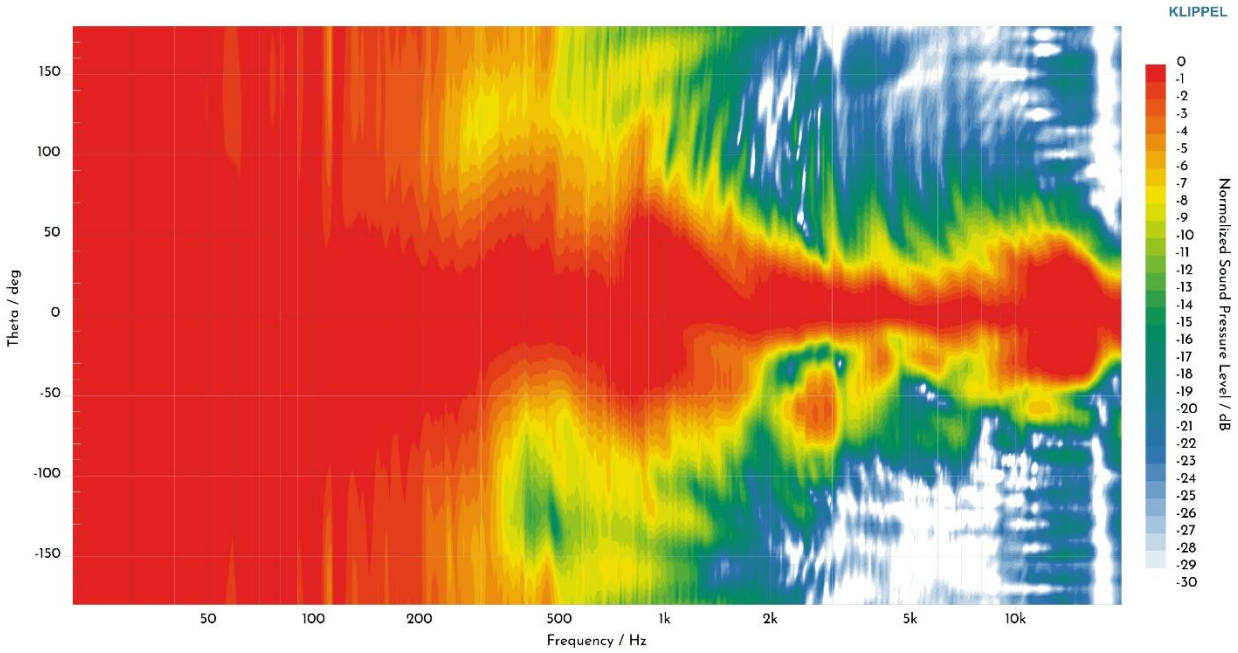
1610 Bookshelf 8



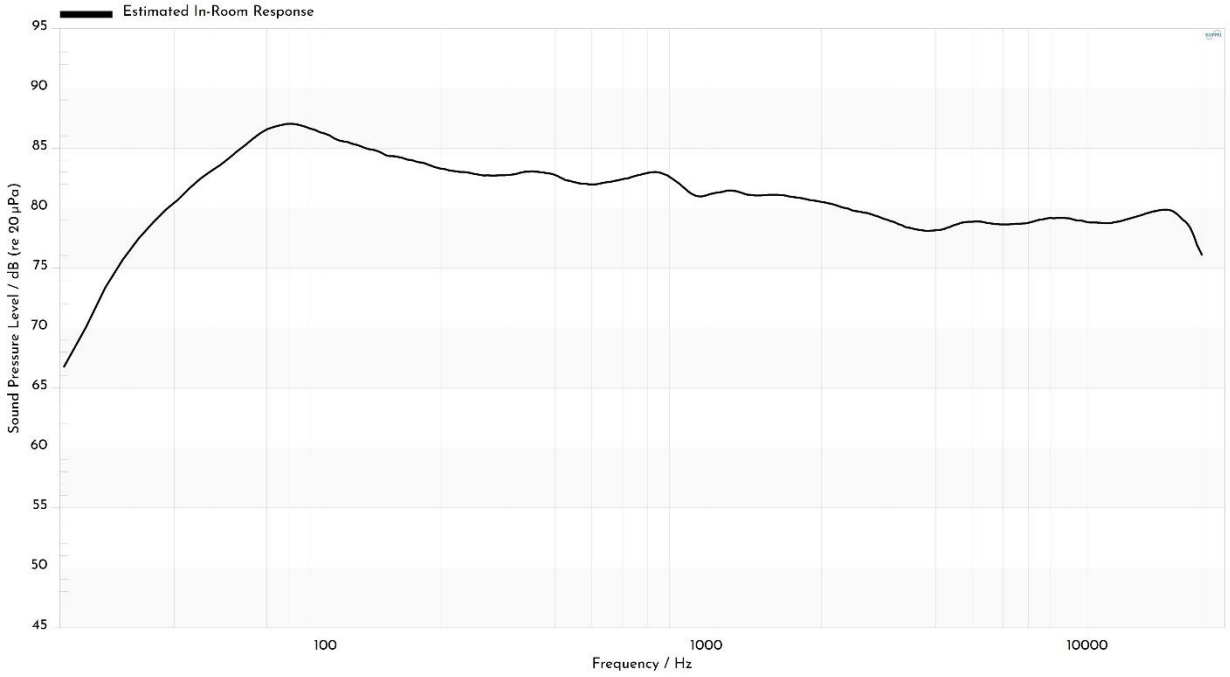


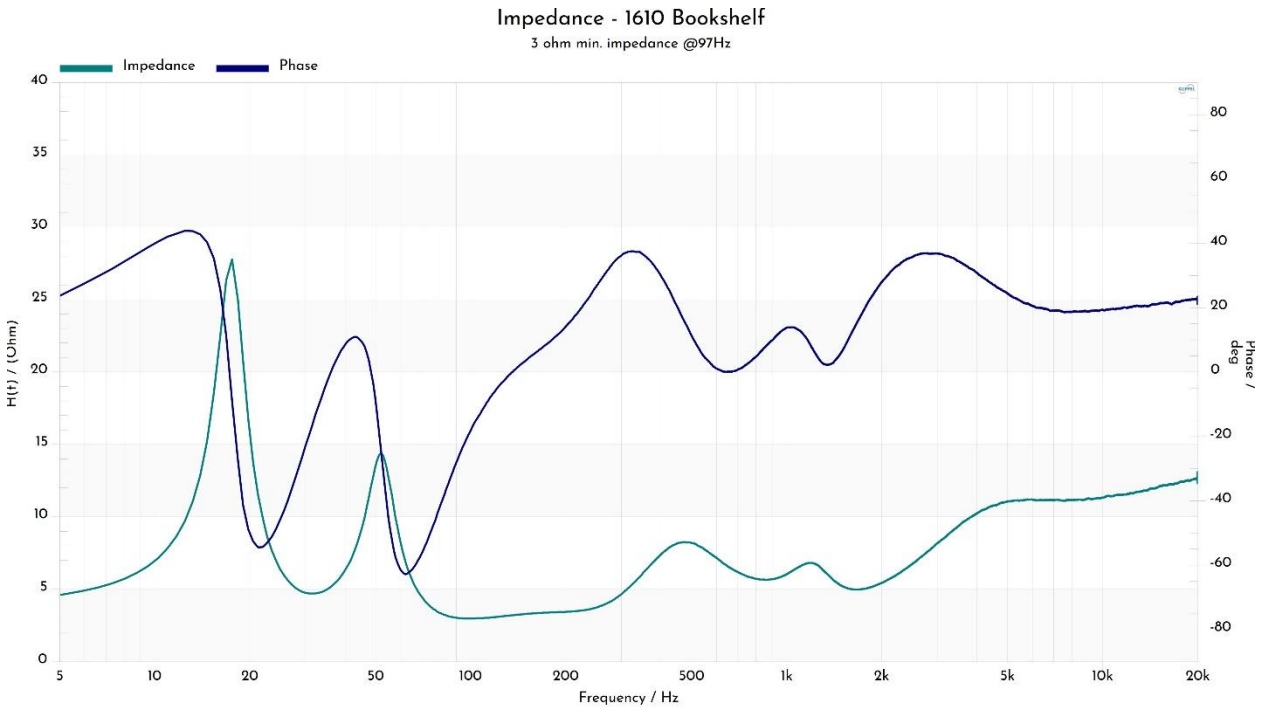
Contour Plot - Vertical - 1610 Bookshelf

r = 10 m, phi = 0°, normalized to On-Axis



Estimated In-Room Response - 1610 Bookshelf





Sensitivity: 85dB @ 2,83V

Impedance: 4ohm

Crossover frequency: 2300Hz / 330Hz

Frequency response -6dB (Anechoic): 34Hz – 20kHz

Frequency linearity: 47Hz-20kHz +-2,5dB

F3: 43Hz

F6: 34Hz

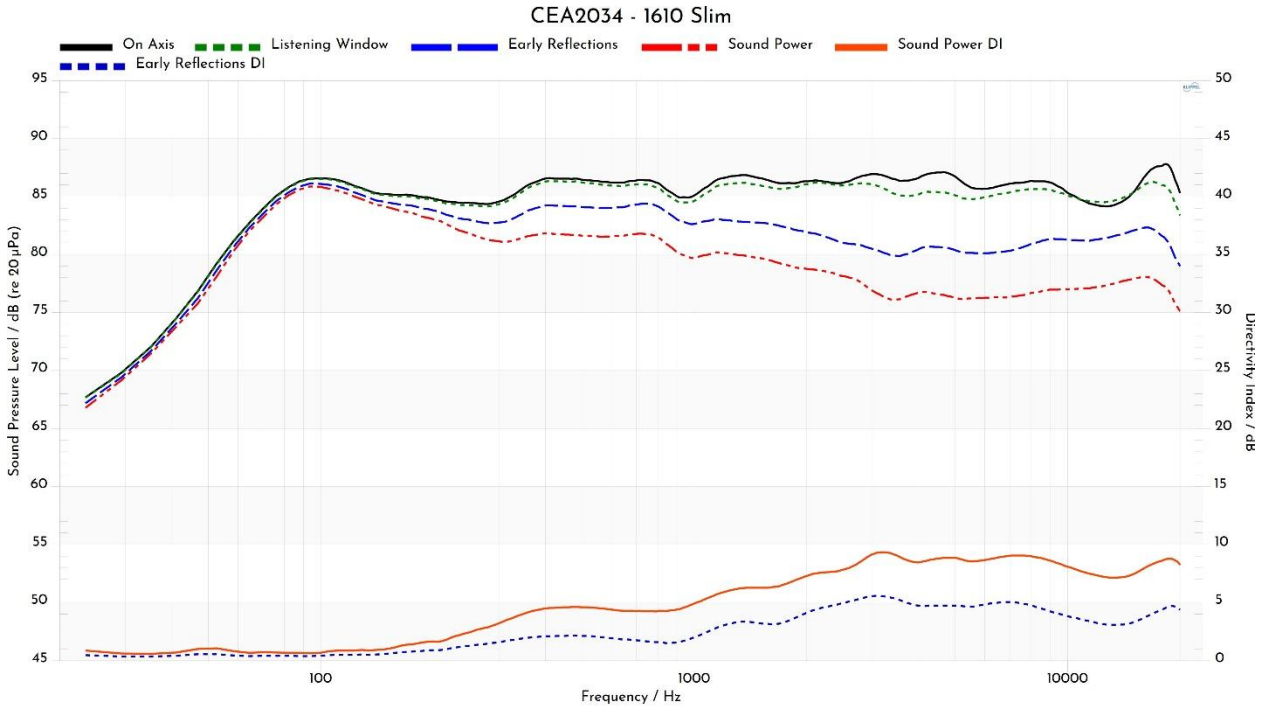
F10: 27Hz

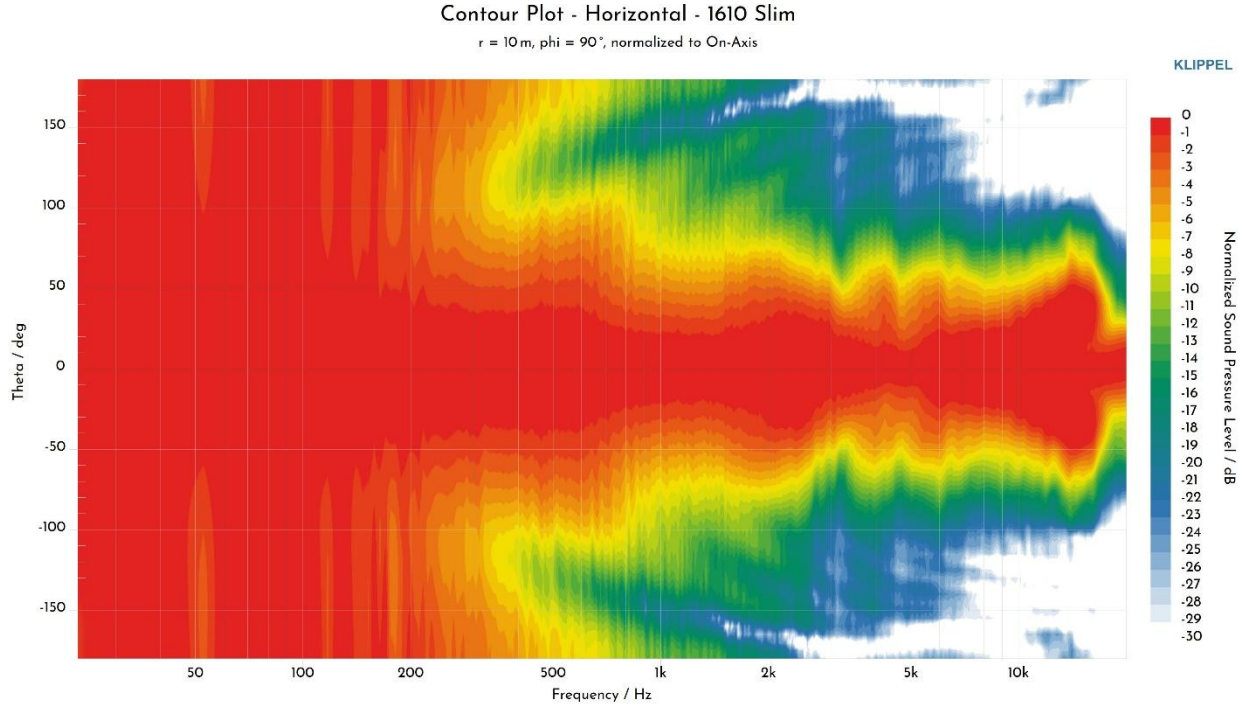
Sealed F3: 47Hz

Sealed F6: 42Hz

Sealed F10: 36Hz

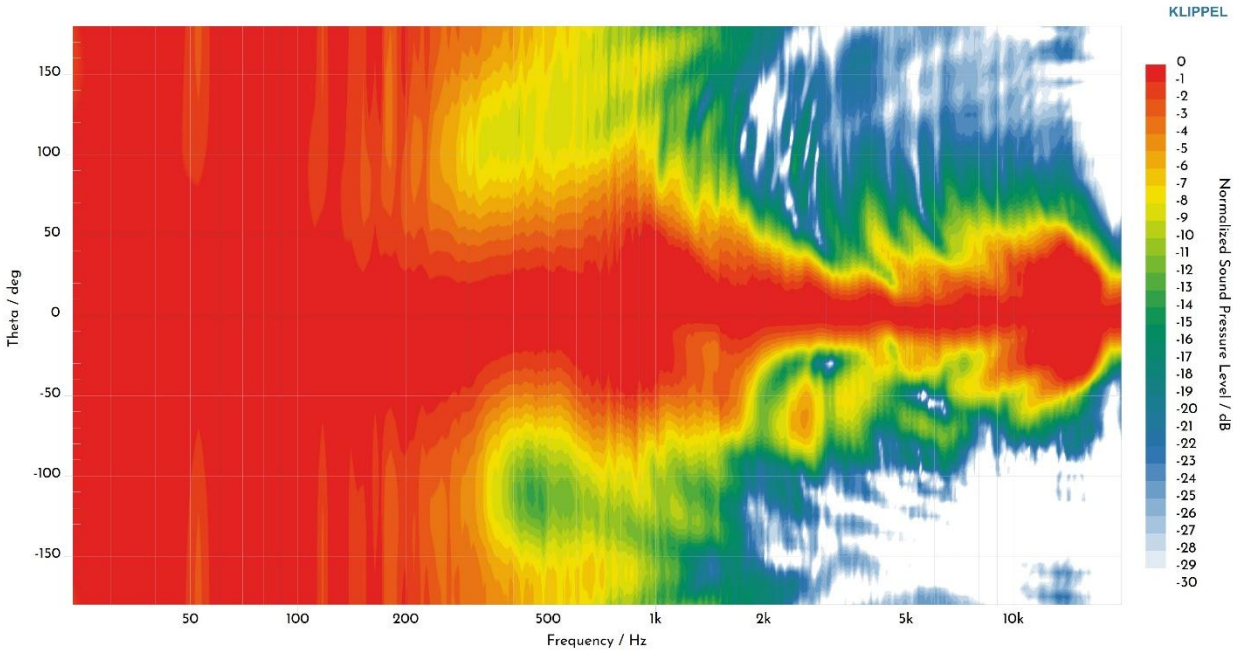
1610 Slim 8


CEA2034 - 1610 Slim
On Axis
Listening Window
Early Reflections
Sound Power
Sound Power DI
Early Reflections DI
Sound Pressure Level / dB (re 20 µPa)
Directivity Index / dB
Frequency / Hz
95
90
85
80
75
70
65
60
55
50
45
50
45
40
35
30
25
20
15
10
5
0
100
1000
10000

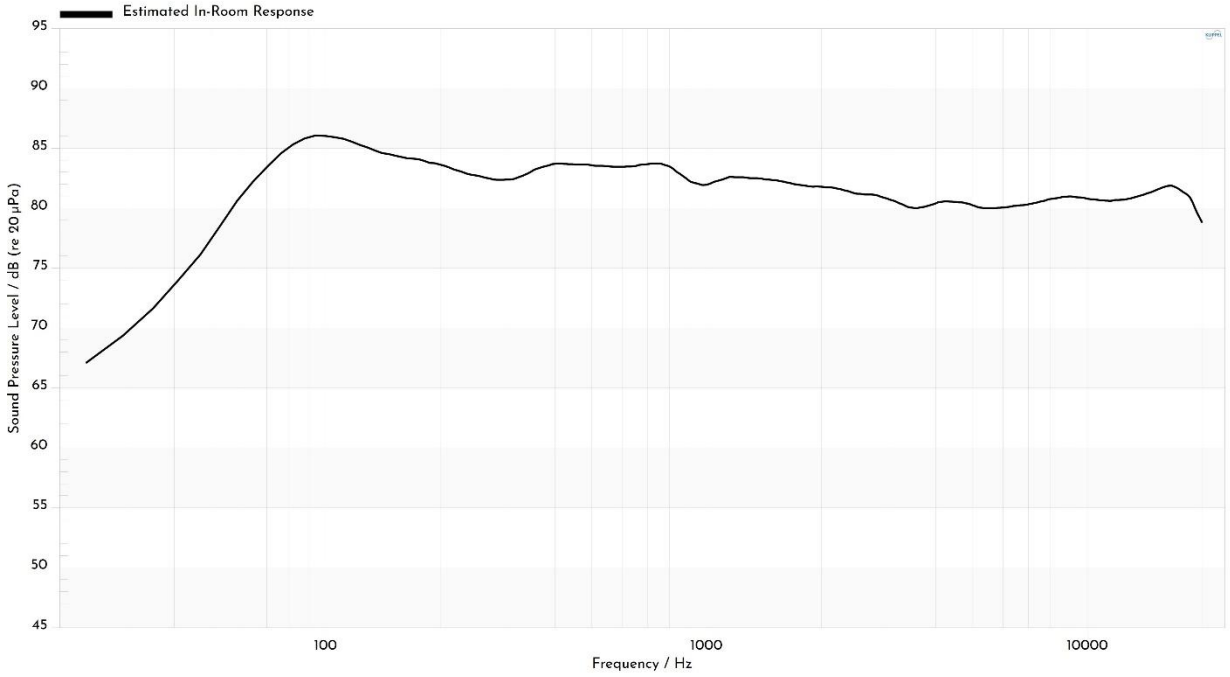

Contour Plot - Horizontal - 1610 Slim
r = 10 m, phi = 90°, normalized to On-Axis
KLIPPEL
Theta / deg
Frequency / Hz
Normalized Sound Pressure Level / dB
150
100
50
0
-50
-100
-150
50
100
200
500
1k
2k
5k
10k
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
-13
-14
-15
-16
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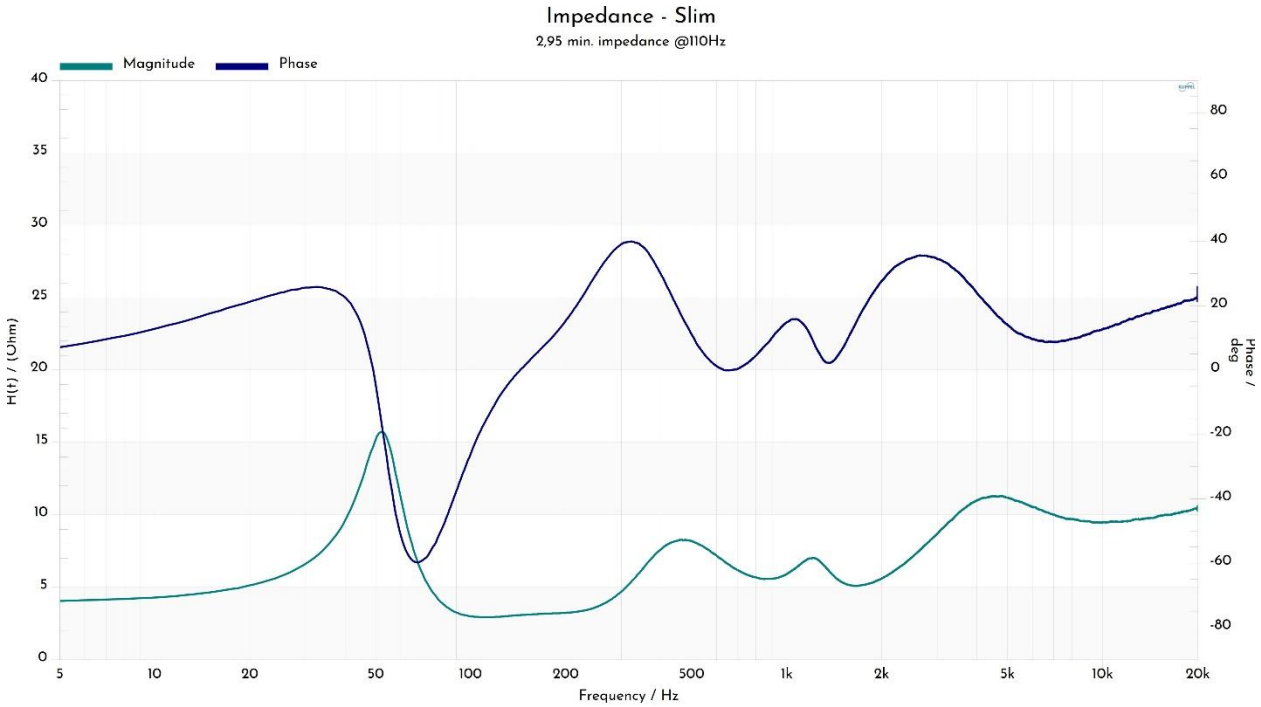
Contour Plot - Vertical - 1610 Slim

r = 10 m, phi = 0°, normalized to On-Axis



Estimated In-Room Response - 1610 Slim





Sensitivity: 86,5dB @ 2,83V

Impedance: 4ohm

Crossover frequency: 2700Hz / 340Hz

Frequency response -6dB (Anechoic): 56Hz – 20kHz

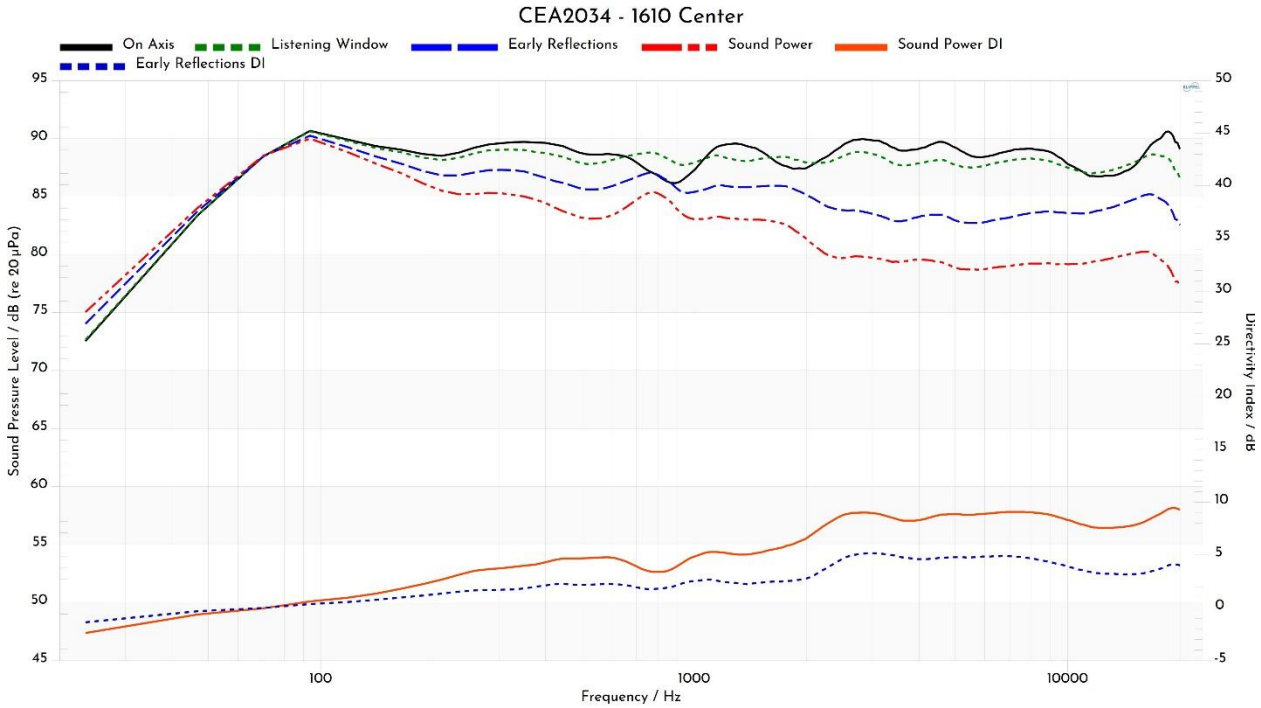
Frequency linearity: 70Hz-20kHz +-2,5dB

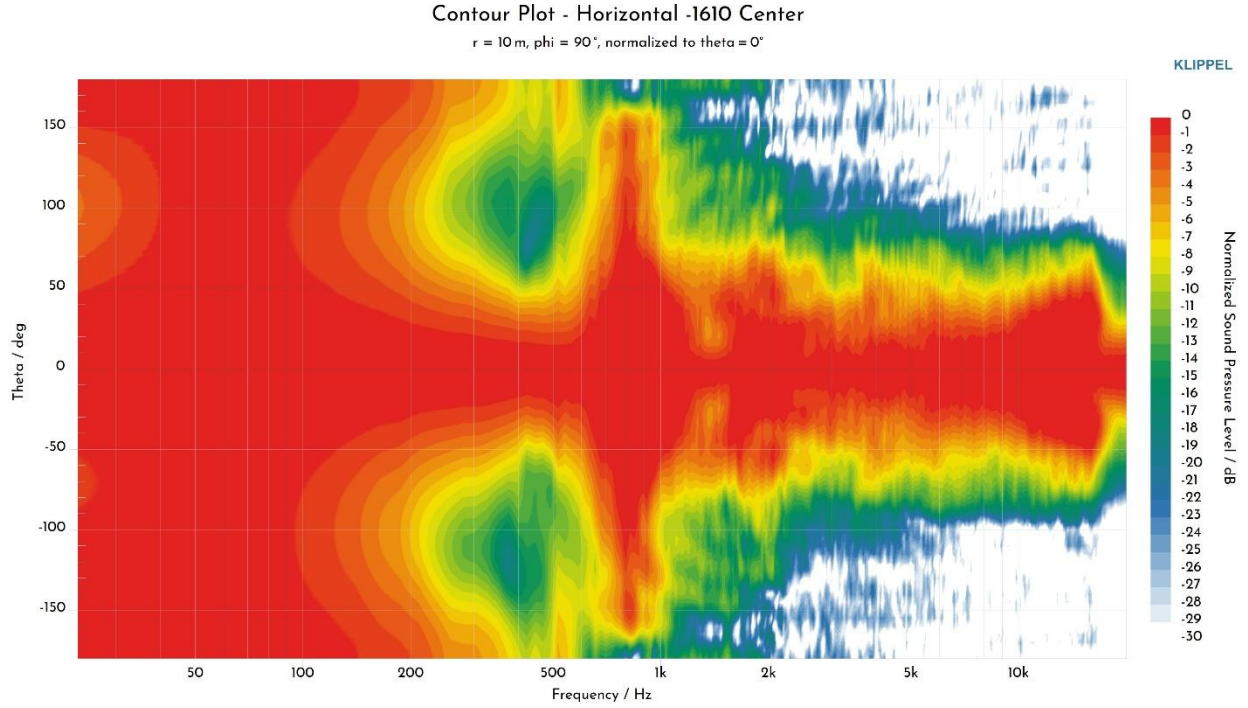
F3: 68Hz

F6: 56Hz

F10: 45Hz

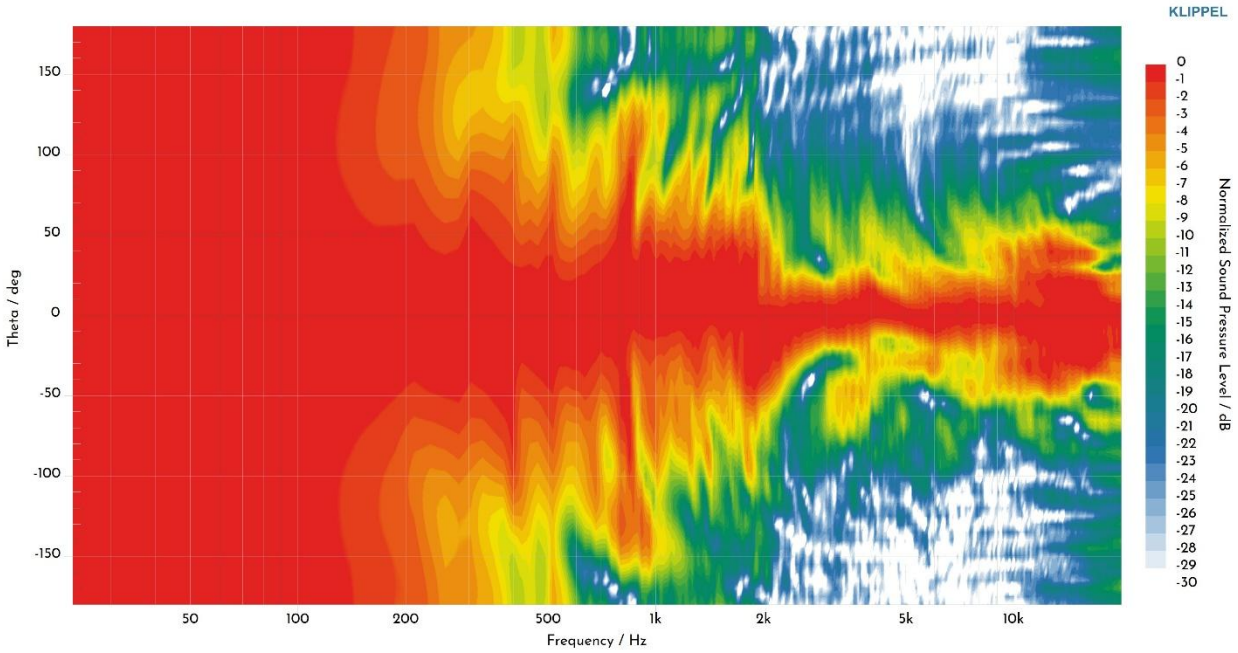
1610 Center 8



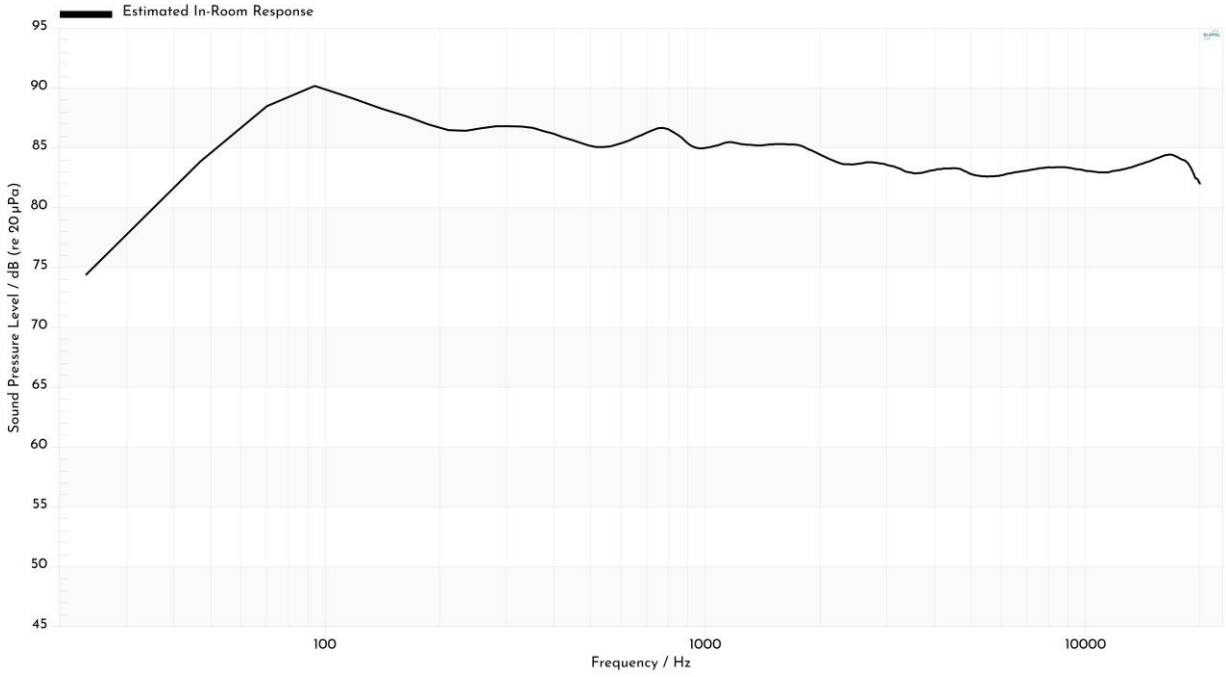


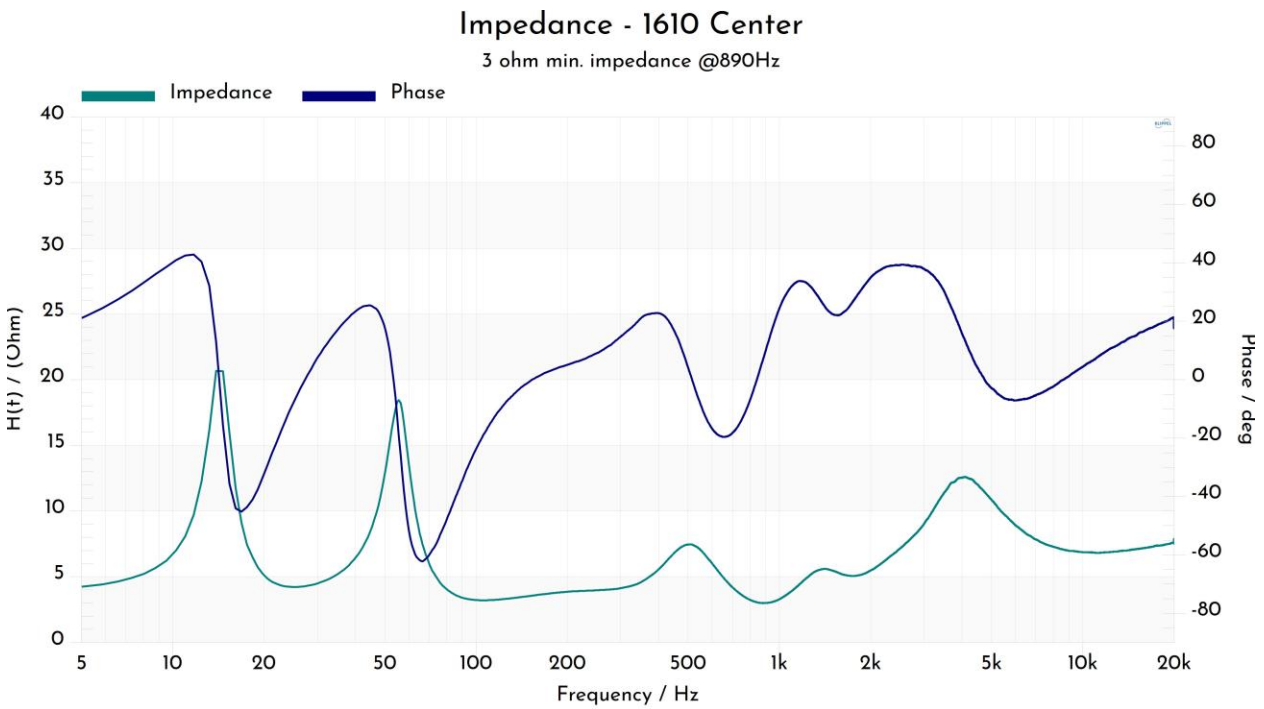
Contour Plot - Vertical - 1610 Center

r = 10 m, phi = 0°, normalized to On-Axis



Estimated In-Room Response - 1610 Center





Sensitivity: 88,6dB @ 2,83V

Impedance: 4ohm

Crossover frequency: 2900Hz / 470Hz

Frequency response -6dB (Anechoic): 40Hz – 20kHz

Frequency linearity: 52Hz-20kHz +-2,6dB

F3: 51Hz

F6: 40Hz

F10: 31Hz

Sealed F3: 54Hz

Sealed F6: 47Hz

Sealed F10: 38Hz