

Wom265_vKi-6

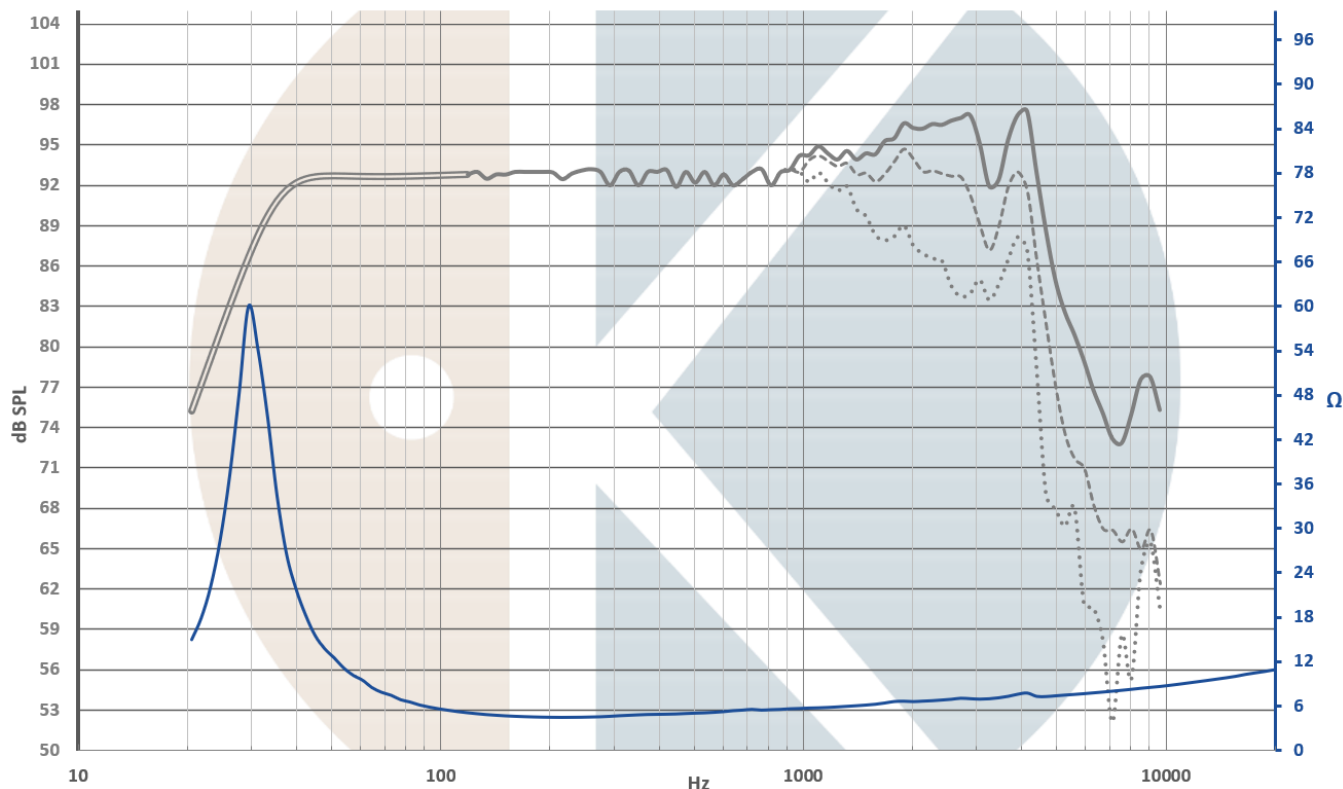
High-End / High Efficiency Woofer



Wom265_vKi-6 is top of the art high-end / high efficiency woofer engineered for ultimate 2 ways systems (35 – 1500Hz at -3dB).

- Very low dynamic compression (~0.5dB, from 30Hz to 2000Hz, with 105dB at 1m).
- Very low Inter Modulation Distortion.
- Very low Total Harmonic Distortion, including in low frequency (below 2% with 95dB output).
- +/- 10mm pure linear excursion.
- Engineered and produced in France

Frequency response and Impedance



On IEC baffle / Distance: 1m / Signal input: 2,83V / Dash curves: 25° & 50° / Smoothing: 1/12 Octave

Impedance measured in free air

Curve below 120Hz is simulated in 80L vented enclosure / Vent tuning at 34Hz

Datasheet for	Wom265_vKi-6	Notes	Kartesian products can be adapted to specific requirements and brand spirit. Each _vKi drivers is delivered with its QC report. We continually improve our products, no contractual data.	
Edition	1.6			
www.kartesian-acoustic.com				

Detailed construction

Membrane

hexaKone damped paper
Vented cone
Concave CGF dust cap

Suspension

Advanced M roll surround
Low lost NBR surround material
progressiF spider

Voice coil:

Ø78.5mm, 1 layer, Cu wire
Vented Titanium / GF former
Ultra-low inductance (0.11mH at 1KHz)

Motor structure:

8x radial NdFeB magnets (grade N40H)
8x Cooper struts
2x Aluminium rings + 2 Cooper rings
Optimized and vented pole pieces
Low carbon steel

Frame

Injected aluminium (ACD12)
Vented spider

Driver weight: 4.8Kgs

T&S parameters

Parameter	Unit	Value	Tolerance
Fs	Hz	30Hz	+/-3
SPL	dB/2.83V/1m	94	+/-0.5
BI	N/A	10.4	+/-0.1
Mms	g	53	+/-1.5
Rms	Kg/s	2.08	
Le (at 1kHz)	mH	0.11	+/-0.05
Re	Ω	4	+/-0.1
Impedance	Ω	6	
Qms		4.8	
Qes		0.37	
Qts		0.34	
VAS	L	114.6	
Sd	cm ²	390	
Mmd / Sd	g/cm ²	0.11	
BI / Re	T.m/Ω	2.6	

Linear excursion: +/-10 mm

Bl(x) deviation max: 10%

Maximal excursion: +/-15mm

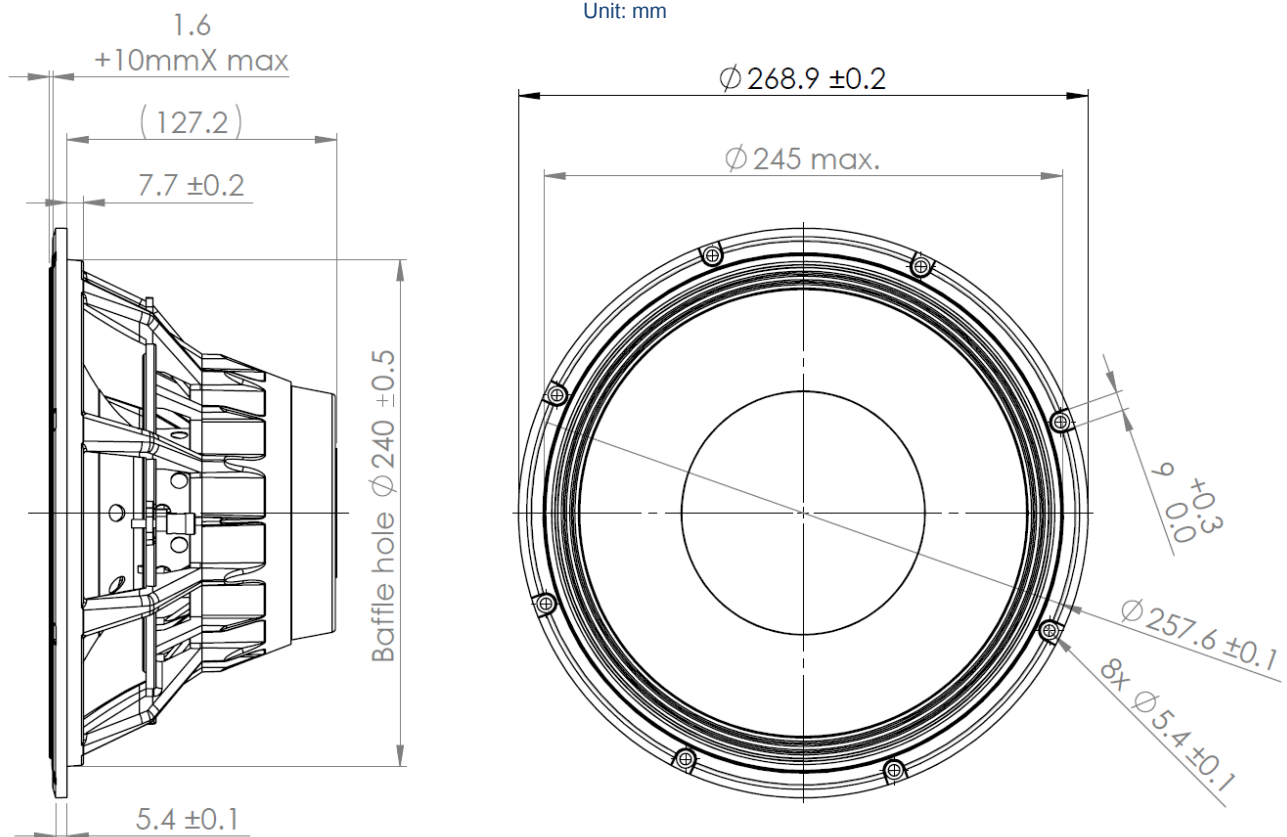
Bl(x) deviation max: 20%

Maximal power handling: 350W

(AES:2012 standard)

Drawing

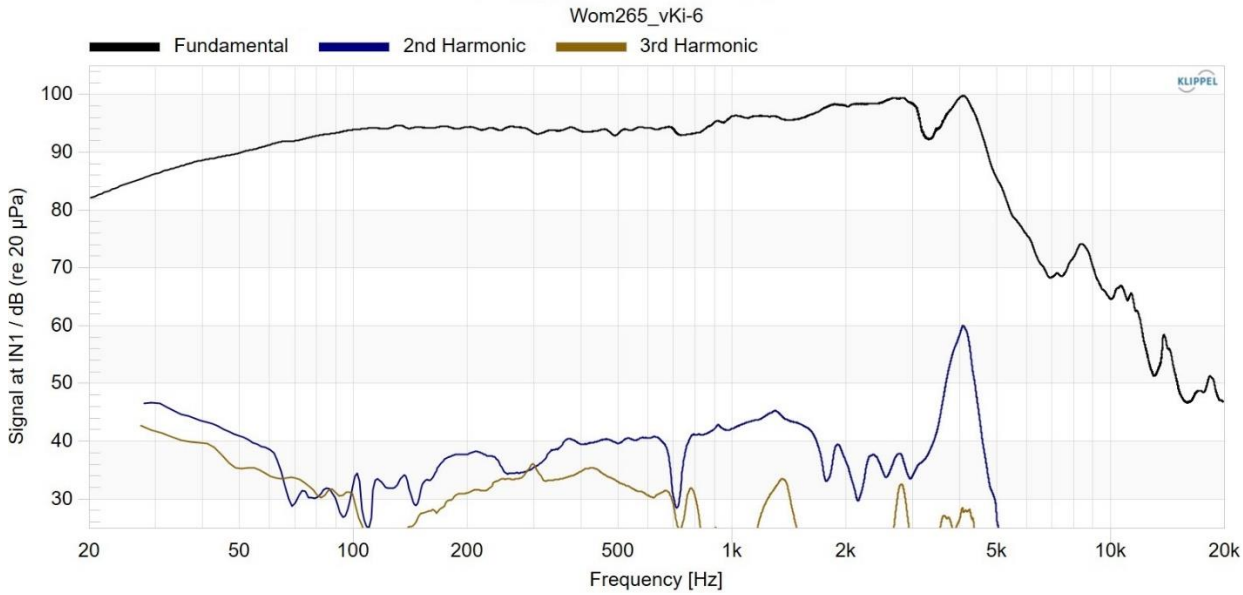
Unit: mm



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Advanced measurements (1/2)

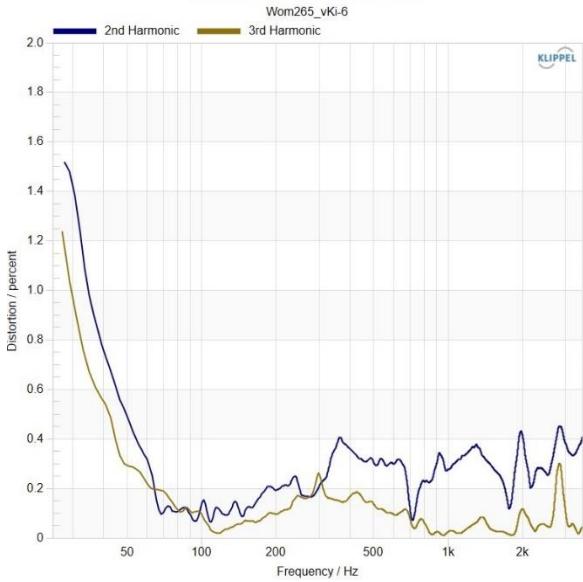
Fundamental + H2 & H3



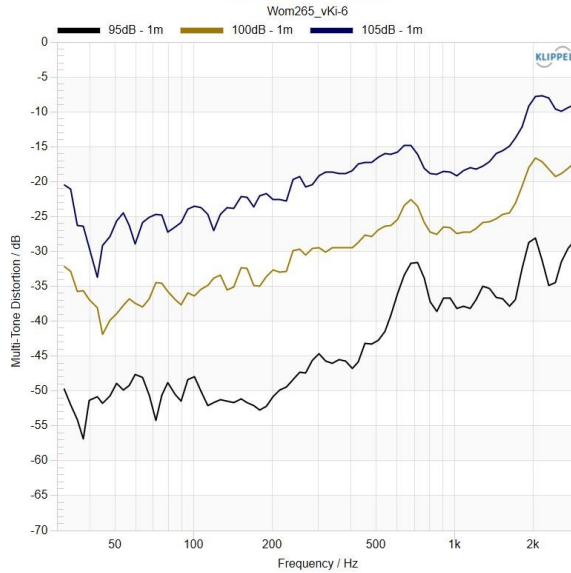
H2 – H3 for 2.83V

Low THD included in low frequency, without peak in the useful band, mainly made of H2

Relative H2 - H3 at 95dB/1m



Multi-tone Distortion

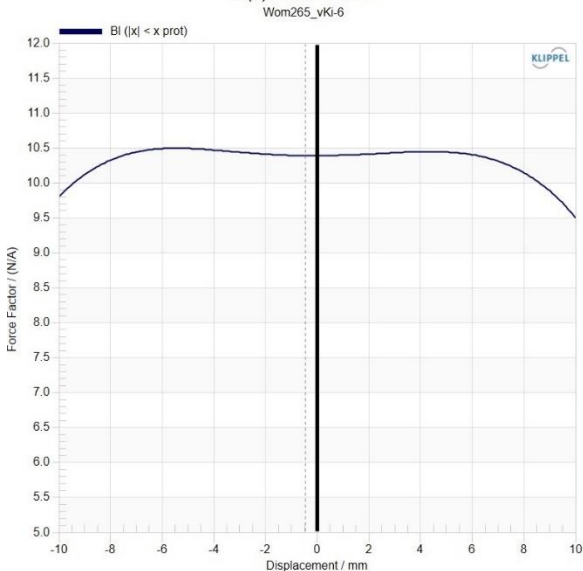


Distortion details

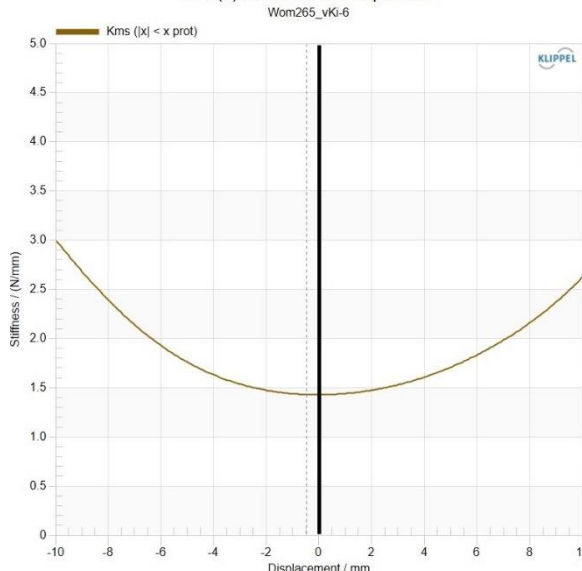
THD is lower than 1% at 40Hz when Wom265_vKi-6 is playing 95dB at 1m.

Very low MD in low frequency, even at 105dB at 1m.

Bl(x) Force Factor



Kms(x) Stiffness of Suspension



Linear excursion

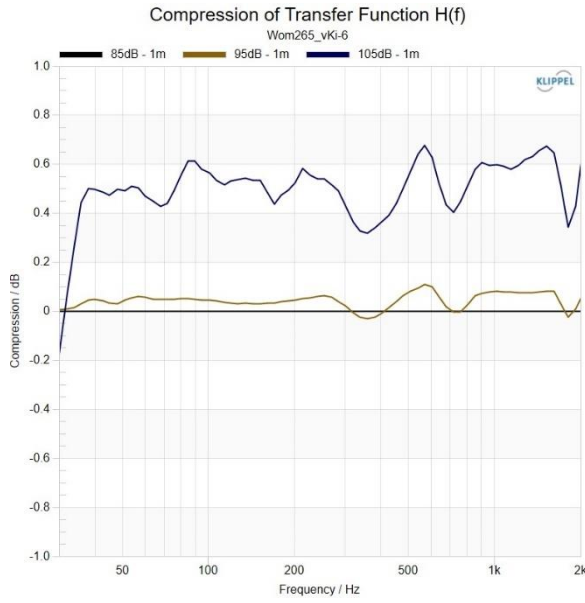
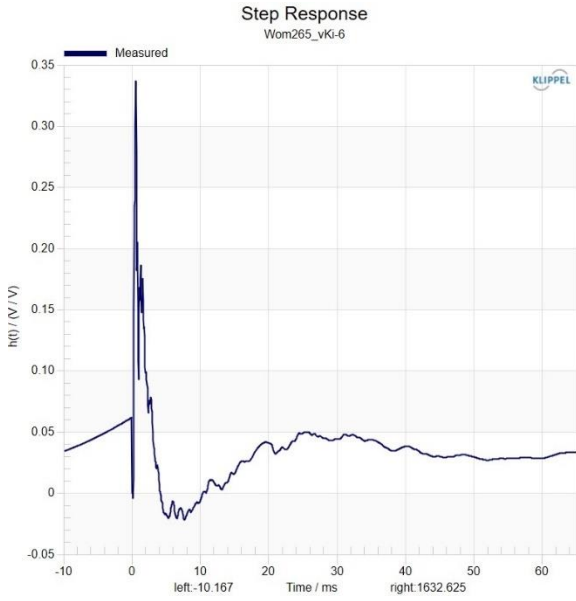
+/-10mm linear motion with Bl(x) curve shape suitable to Kms(x)

Force factor remains stable with 90% accuracy on the full excursion.

Suspension stiffness increase smoothly to ensure soft Fs variation and protection the driver under highest excursion.

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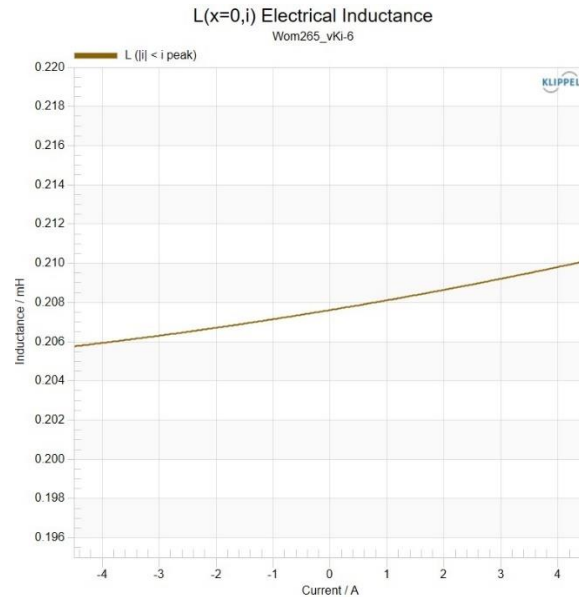
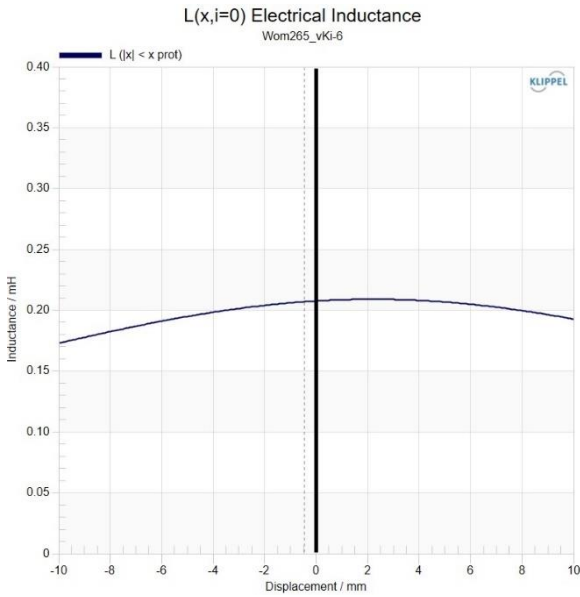
Advanced measurements (2/2)



Dynamic behavior

Step response shows fast transient and good damping.

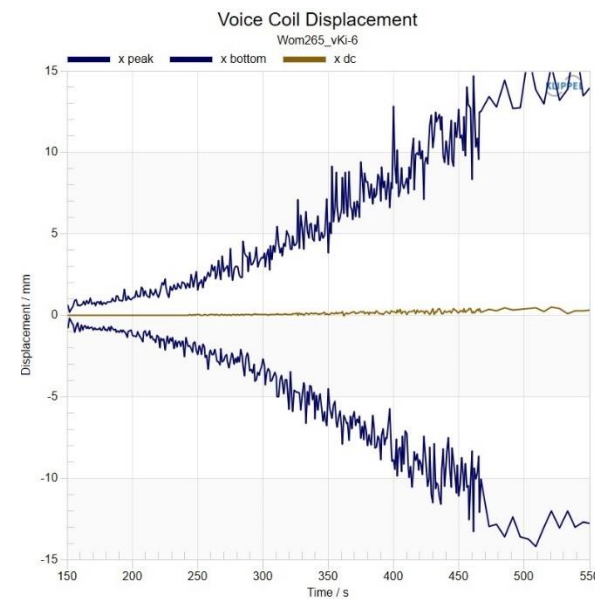
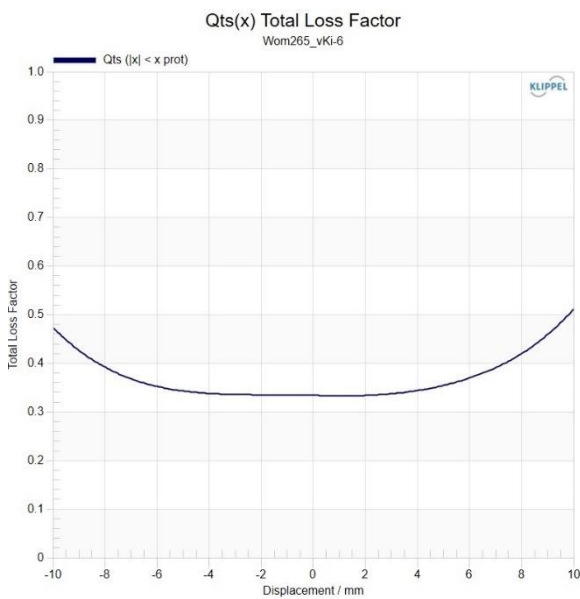
Dynamic compression is only ~0.5dB on the full bandwidth when Wom265_vKi-6 is playing 105dB at 1m.



Inductance

$L_e = 0.11\text{mH}$ at 1kHz.
Average 0.2mH at the rest position, on the band 20 – 2000Hz.
Inductance variation over +/-10mm is 0.04mH.

Inductance variation according to current input is 0.03mH max with +/-4.5A consumed.



Stability

Qts variation is symmetric and limited to 30% over +/-10mm excursion.

There isn't any significant offset over +/-10mm excursion.

The maximal excursion is close to +/-15mm

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