.Kartesian
SPEAKERINNOVATOR

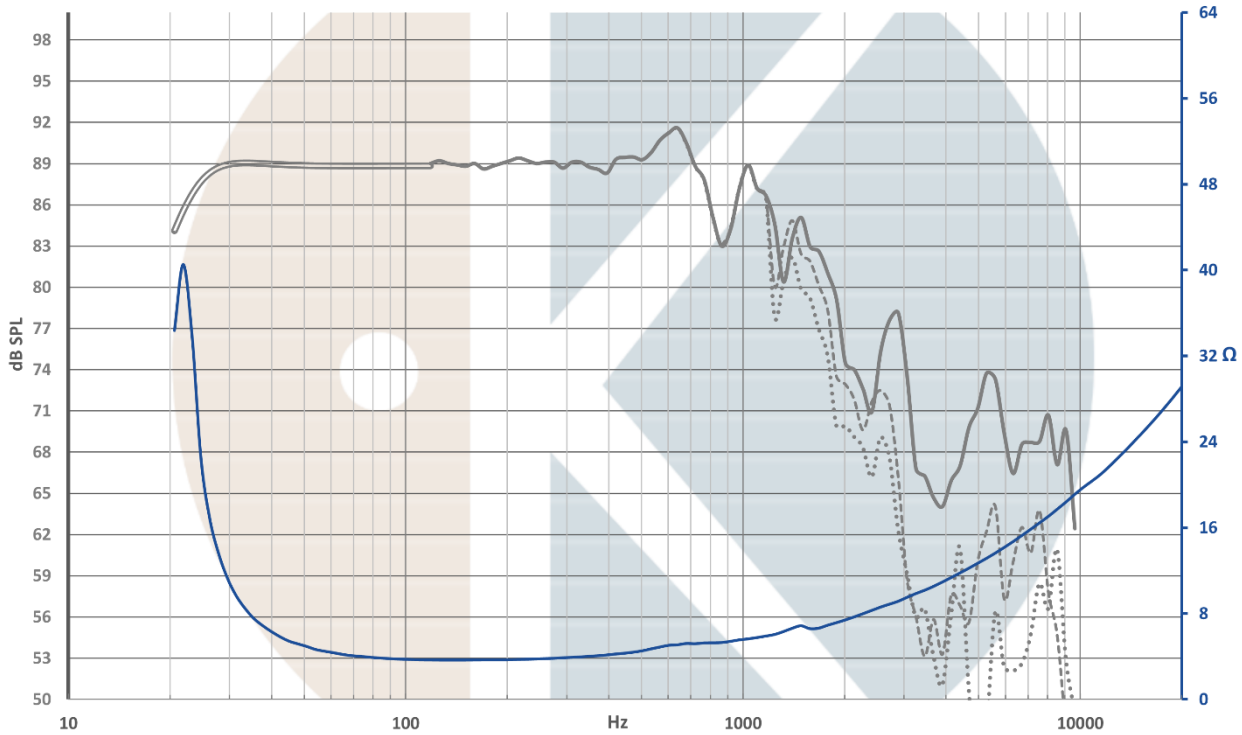
Sub265_vKi-S

High-End Subwoofer

Sub265_vKi-S is top of the art high-end subwoofer, engineered to reproduce 25Hz to 500Hz in sealed enclosure.

- Very low dynamic compression (0.5dB max, below 100Hz, with 105dB at 1m).
- Very low Inter Modulation Distortion.
- Very low Total Harmonic Distortion, especially in low frequency (below 1.5% with 95dB output).
- +/- 16mm 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 simulated in 40L sealed enclosure / EQ +8dB at 25Hz - Q2.2 & -2dB at 65Hz – Q1

Datasheet for	Sub265_vKi-S	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

4 layers - vented paper cone

Large concave CGF dust cap

Suspension

Tri-radius roll surround

Surround with radial reinforcements

Low lost NBR surround material

Dual spiders, vented spacers

progressive + pumaX spiders

Voice coil:

Ø78.5mm, 1 layer, Cu ribbon wire

Vented Titanium / GF former

Motor structure:

8x radial NdFeB magnets (grade N40H)

8x Cooper struts

2x Aluminium rings

Optimized and vented pole pieces

Low carbon steel

Frame

Injected aluminium (ACD12)

Vented spider

Driver weight: 4.92Kgs

T&S parameters

Parameter	Unit	Value	Tolerance
Fs	Hz	22Hz	+/-3
SPL	dB/2.83V/1m	89	+/-0.5
Bl	N/A	9.08	+/-0.1
Mms	g	86	+/-2
Rms	Kg/s	1.56	
Le (at 1kHz)	mH	0.32	+/-0.08
Re	Ω	3.4	+/-0.15
Impedance	Ω	4	
Qms		7.6	
Qes		0.49	
Qts		0.46	
VAS	L	103.4	
Sd	cm²	346	
Mmd / Sd	g/cm²	0.216	
Bl / Re	T.m/Ω	2.67	

Linear excursion: +/-16 mm

Bl(x) deviation max: 12%

Maximal excursion: +/-18mm

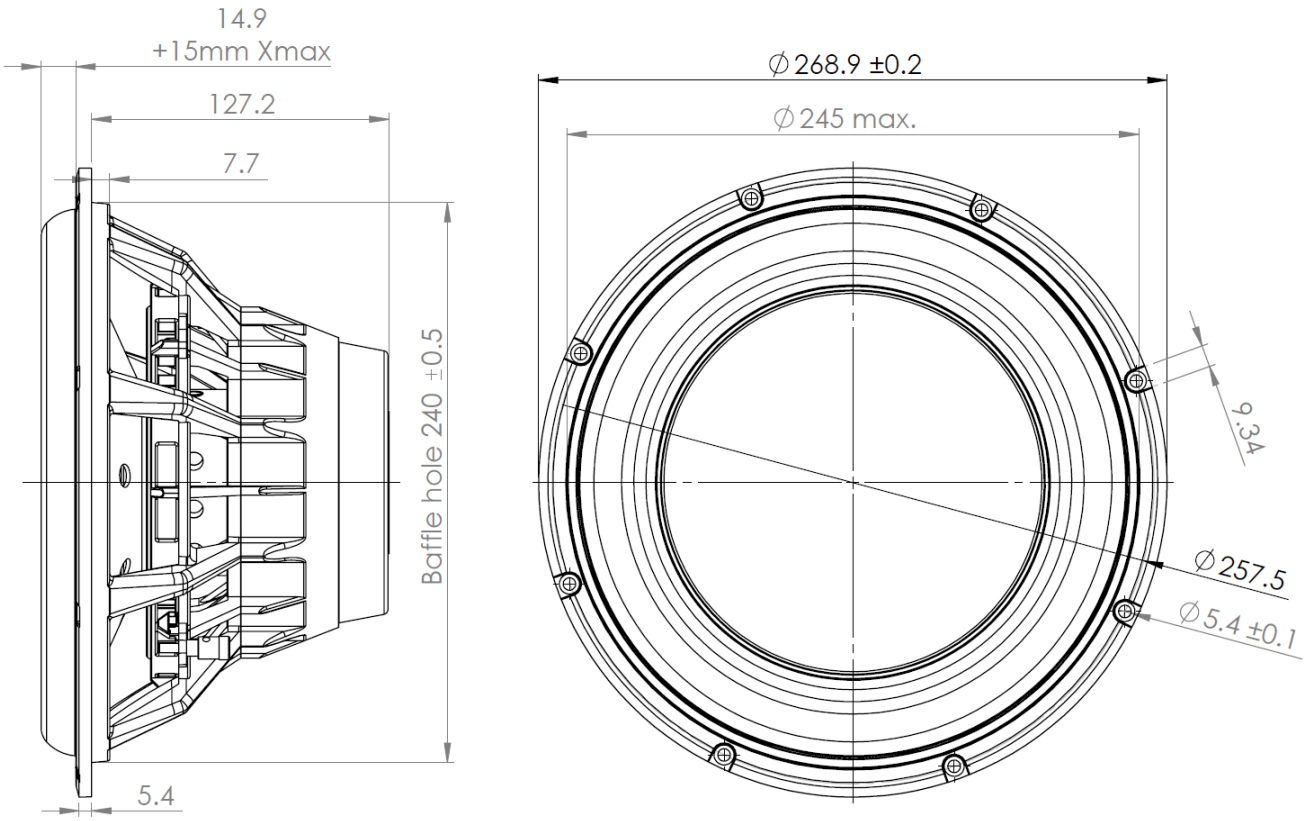
Bl(x) deviation max: 20%

Maximal power handling: 500W

(AES:2012 standard)

Drawing

Unit: mm



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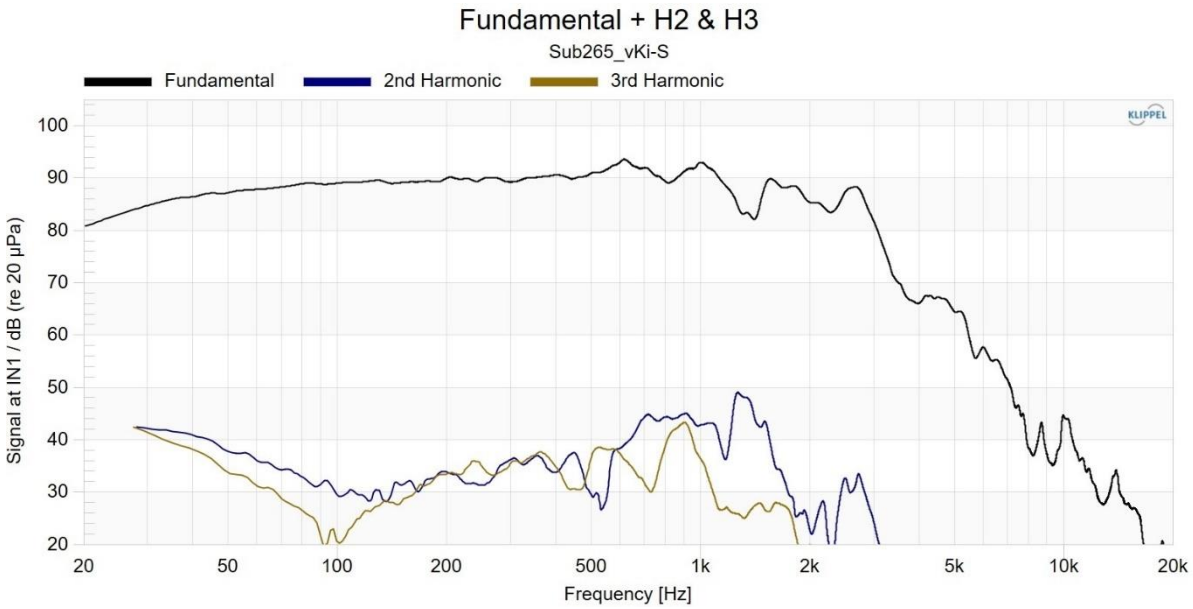
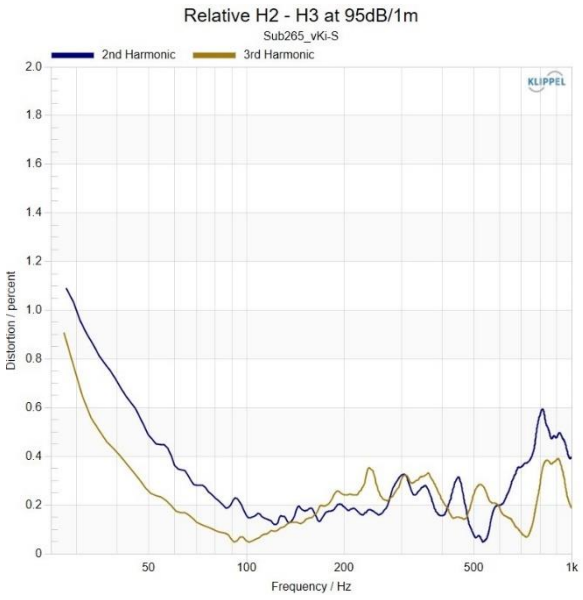
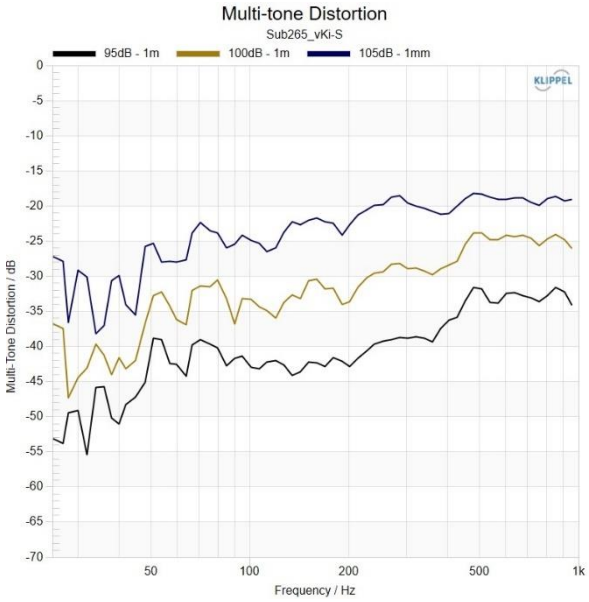
Advanced measurements (1/2)



H2 – H3 for 2.83V

Very low THD in low frequency (advised up-to 500Hz).

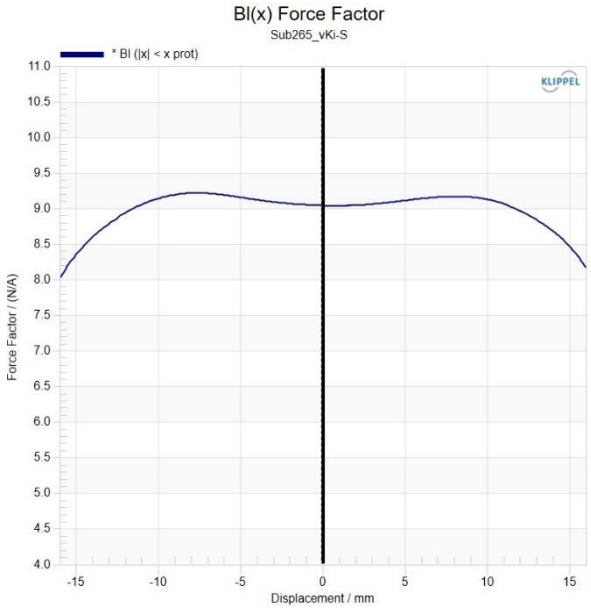


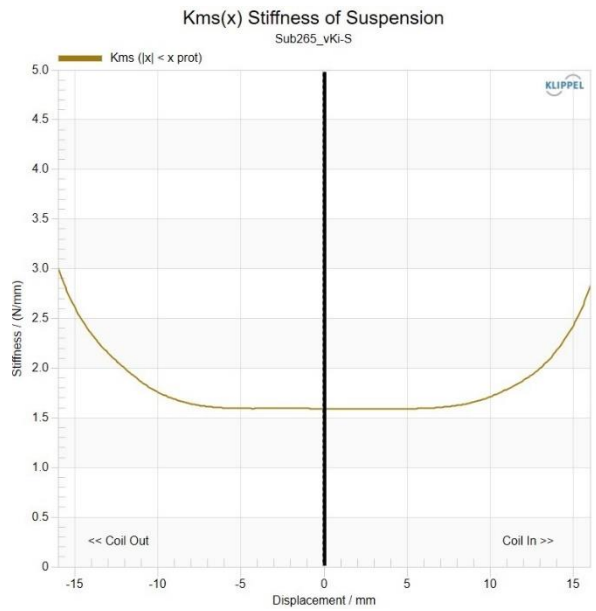


Distortion details

THD is lower than 1% at 40Hz when Sub265_vKi-S is playing 95dB at 1m.

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





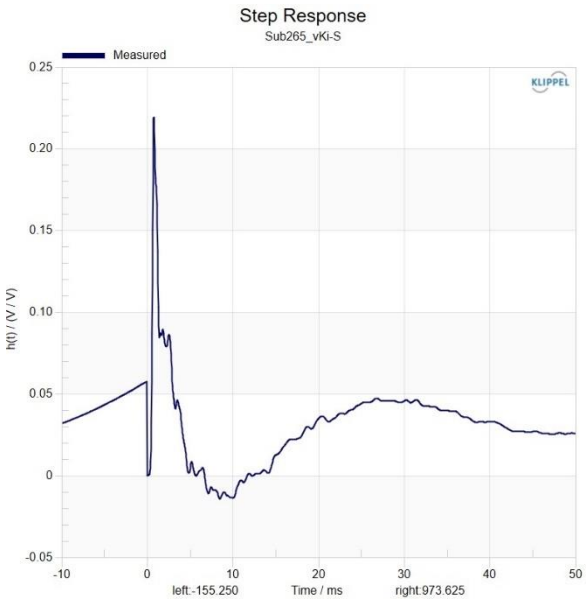
Linear excursion

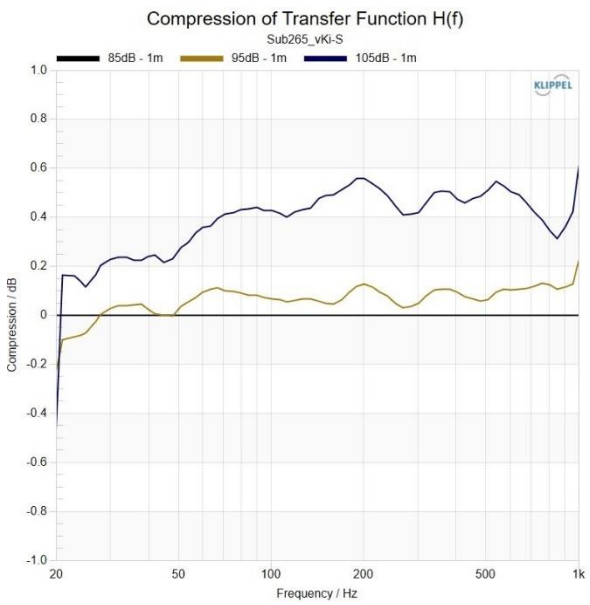
+/-16mm linear motion with Bl[x] curve shape suitable to Kms(x)

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

Suspension stiffness increase smoothly to ensure soft Fs variation

Advanced measurements (2/2)

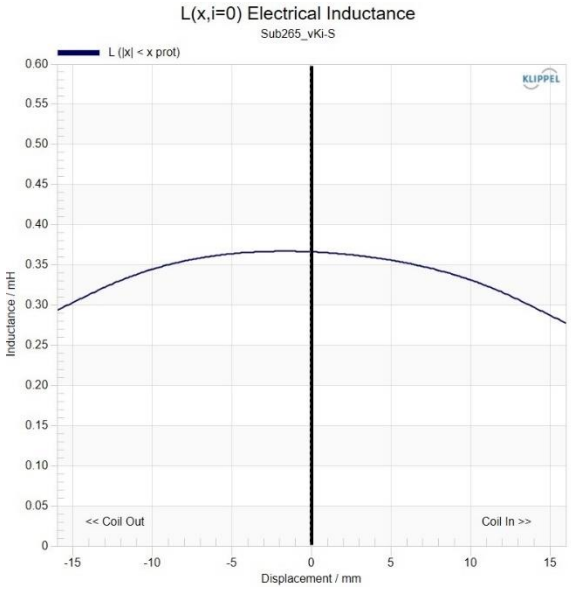


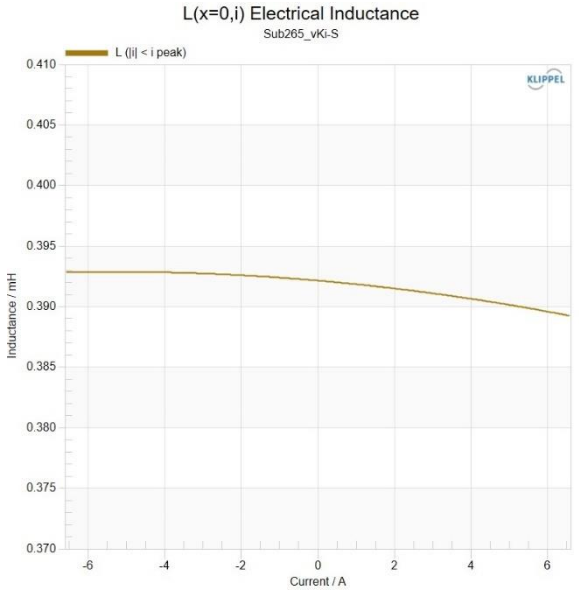


Dynamic behavior

Step response shows fast transient and good damping.

Dynamic compression is 0.5dB max below 100Hz when Sub265_vKi-S is playing 105dB at 1m.

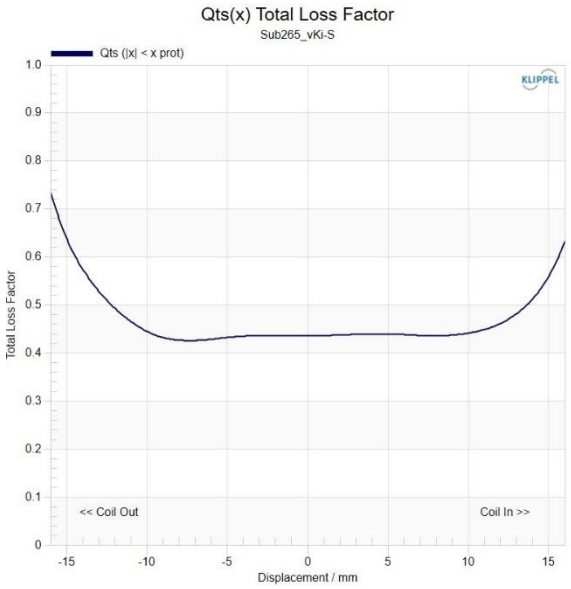


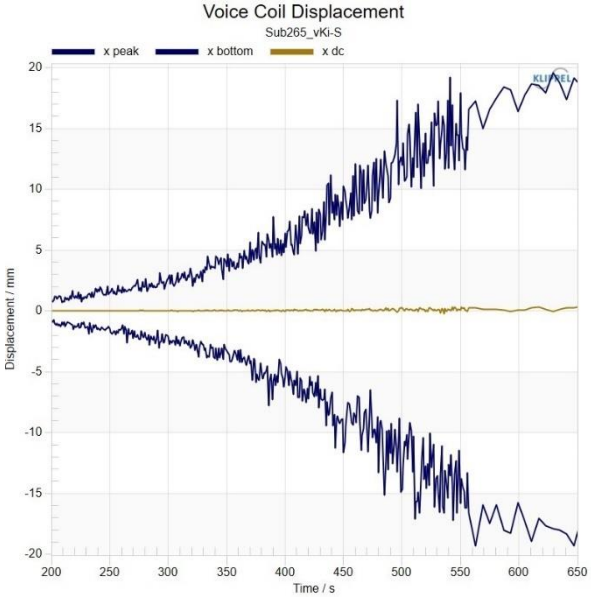


Inductance

Le = 0.32mH at 1kHz. Average 0.37mH at the rest position, on the band 20 – 2000Hz. Inductance variation over +/-17mm is 0.07mH.

Inductance variation according to current input is 0.05mH max with +/-6.5A consumed.





Stability

Qts variation is symmetric and limited to 30% over +/-14mm excursion.

There isn't any significant offset over +/-20mm excursion