

NEOTERA AUDIO – UF CBS 295 – 23/09/2022

T&S PARAMETERS

Electrical Parameters

Re	3.9	Ohm	electrical voice coil resistance at DC
Le	3.0	mH	frequency independent part of voice coil inductance
fs	19.5	Hz	driver resonance frequency

Mechanical Parameters

(using laser)

Mms	470	g	mechanical mass of driver air load and voice coil
Mmd (Sd)	460	g	mechanical mass of voice coil and diaphragm without air load
Rms	13	kg/s	mechanical resistance of total-driver losses
Cms	0.14	mm/N	mechanical compliance of driver suspension
Kms	7.14	N/mm	mechanical stiffness of driver suspension
Bl	10.3	N/A	force factor (Bl product)

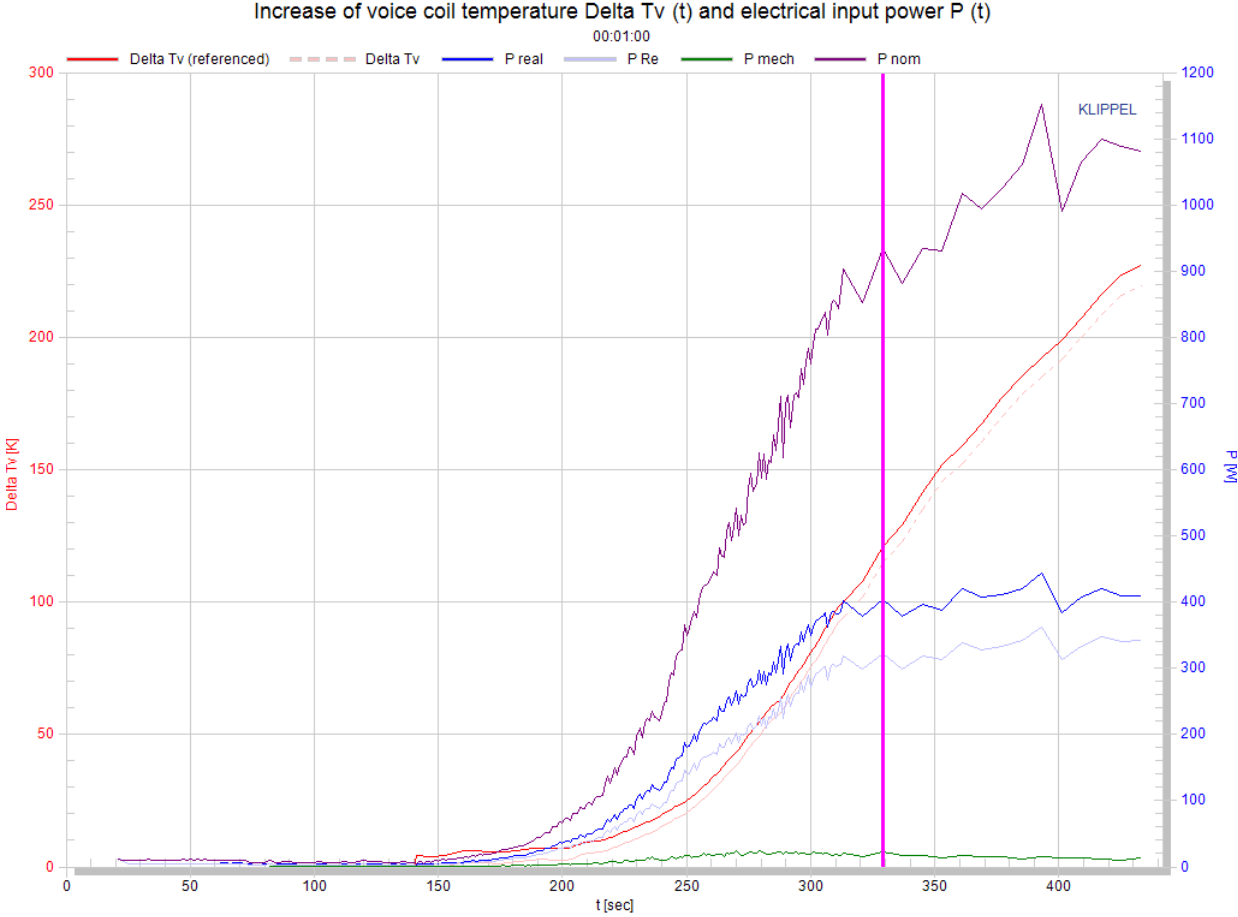
Loss factors

Qtp	1.4		total Q-factor considering all losses
Qms	4.4		mechanical Q-factor of driver in free air considering Rms only
Qes	2.1		electrical Q-factor of driver in free air considering Re only
Qts	1.4		total Q-factor considering Re and Rms only

Other Parameters

Vas	30	l	equivalent air volume of suspension
Lnom	72.5	dB	nominal sensitivity (SPL at 1m for 1W @ Zn)
Sd	394	cm ²	diaphragm area

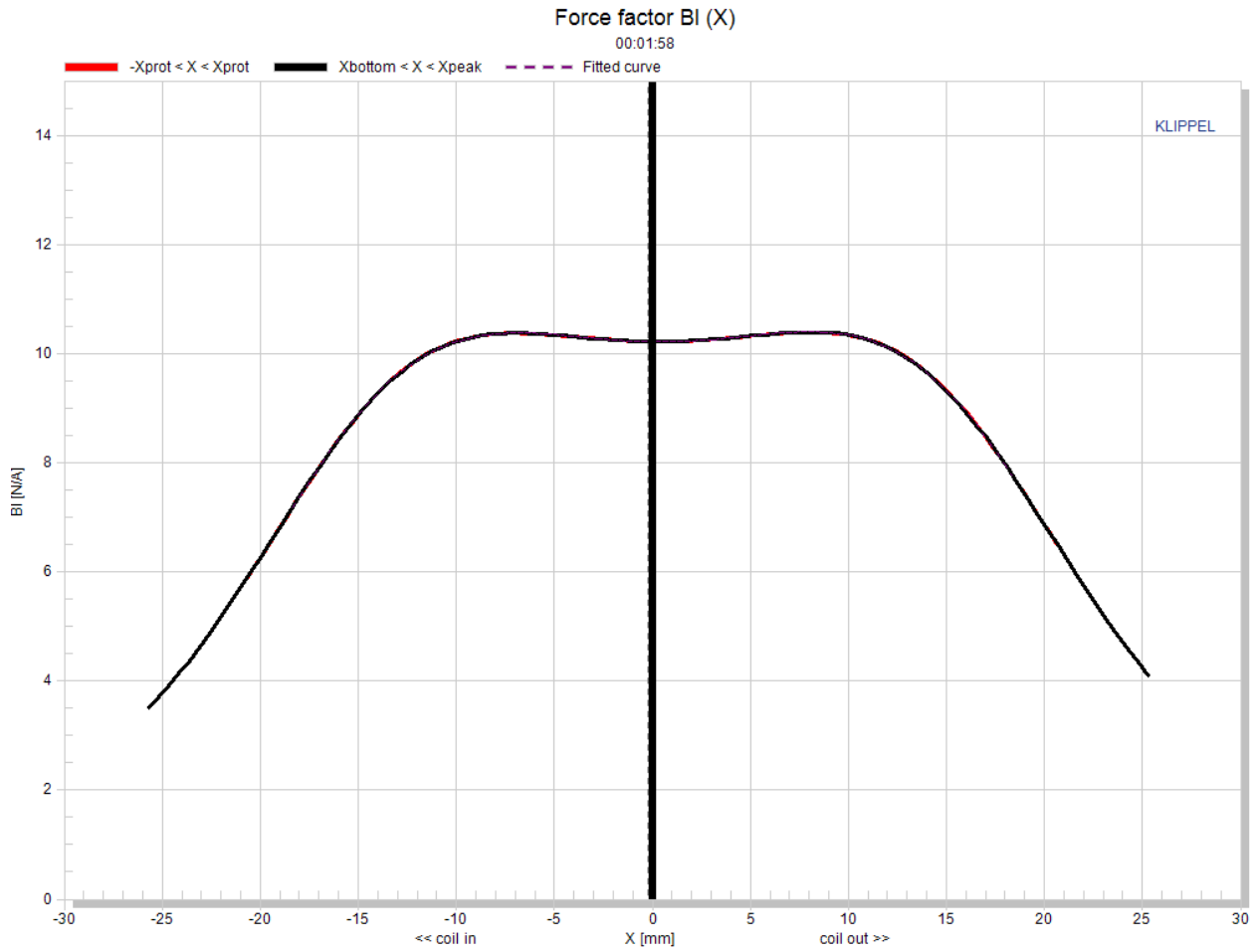
NON-LINEAR PARAMETERS @ indicated time (purple line)



Displacement Limits

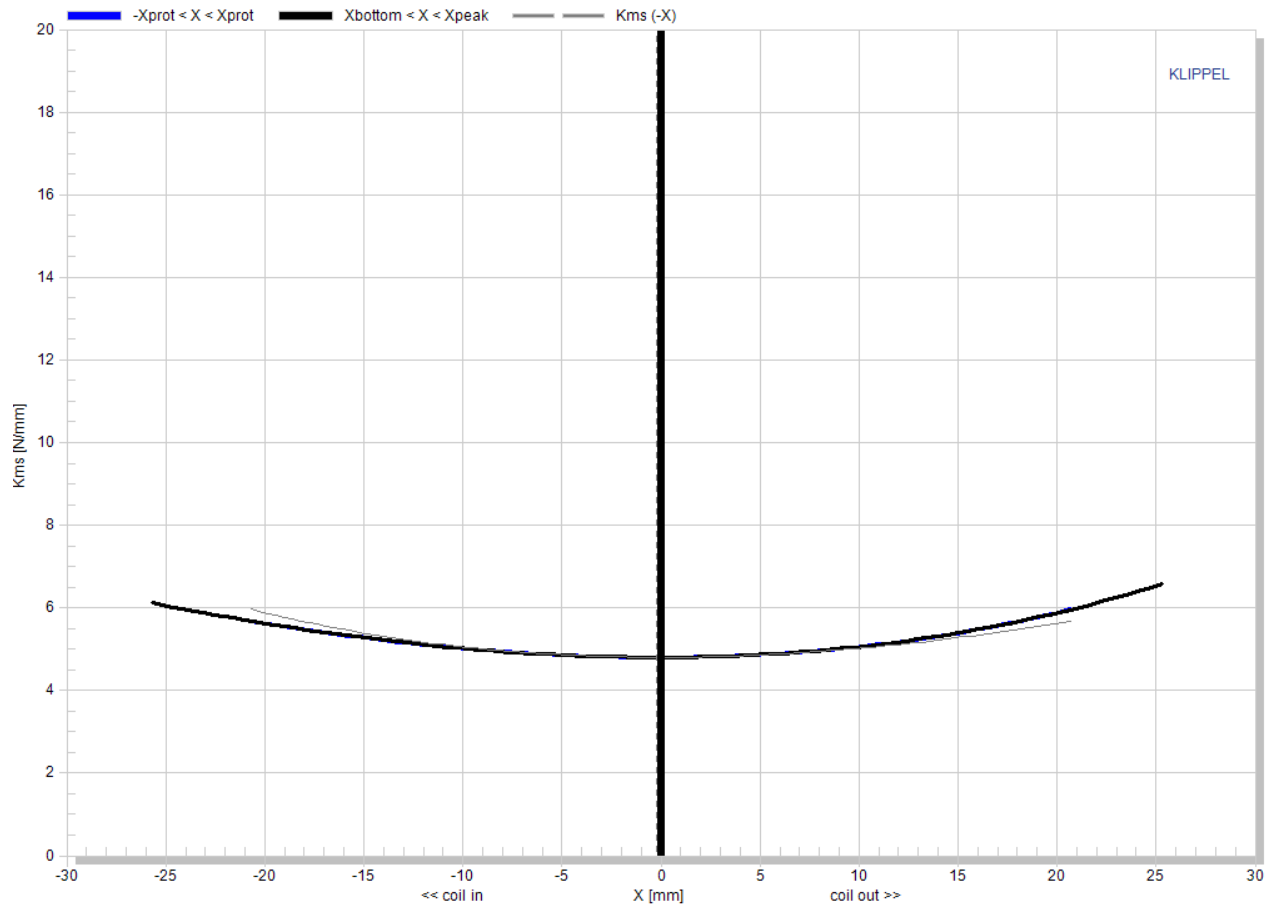
X Bl @ Bl min=82%	16.1	mm	Displacement limit due to force factor variation
X C @ C min=75%	>18.3	mm	Displacement limit due to compliance variation
X L @ Z max=10 %	>18.3	mm	Displacement limit due to inductance variation
X d @ d2=10%	56.2	mm	Displacement limit due to IM distortion (Doppler)

X BI @ BI min=82% 16.2 mm



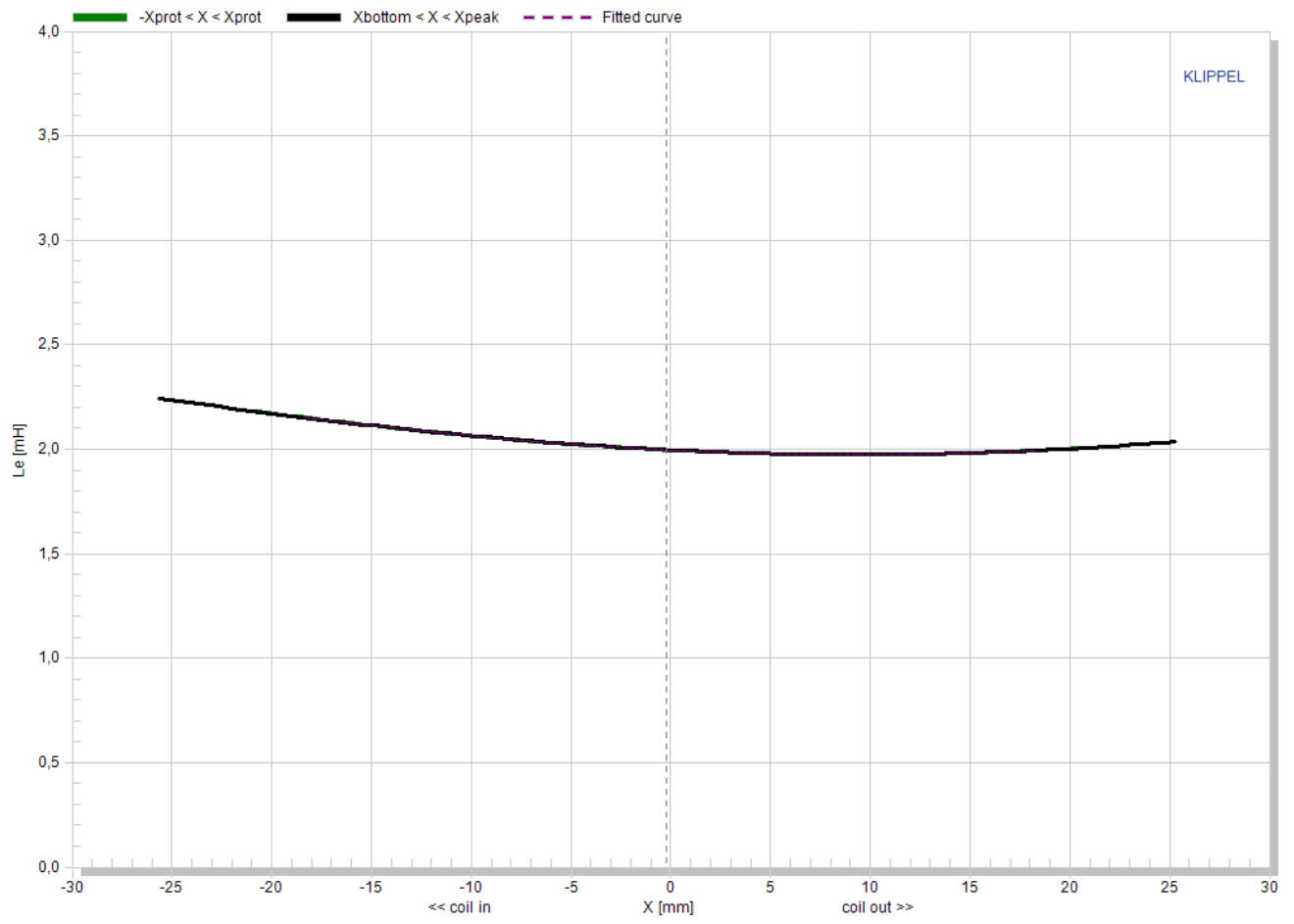
Stiffness of suspension $K_{ms}(X)$

00:02:25

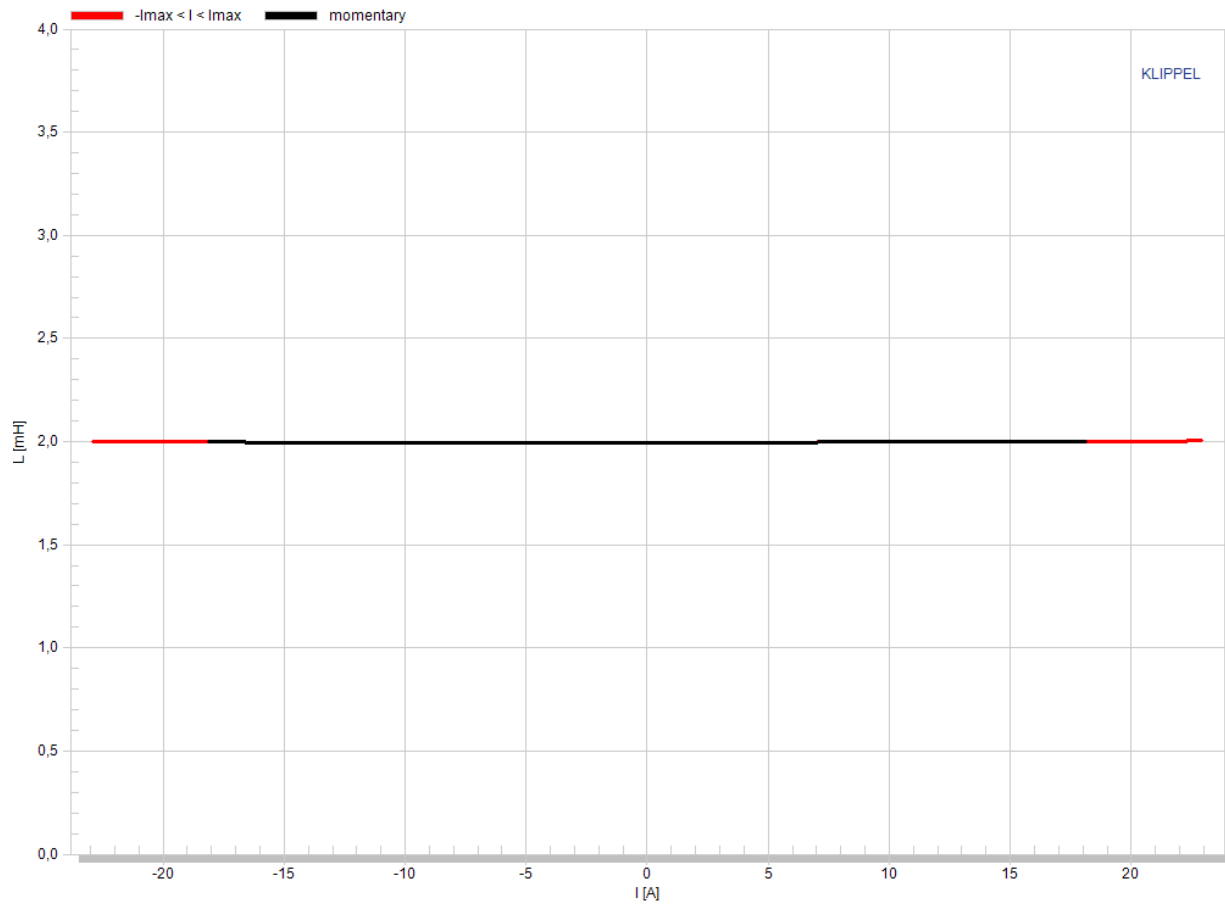


Electrical inductance L(X, I=0)

00:03:13

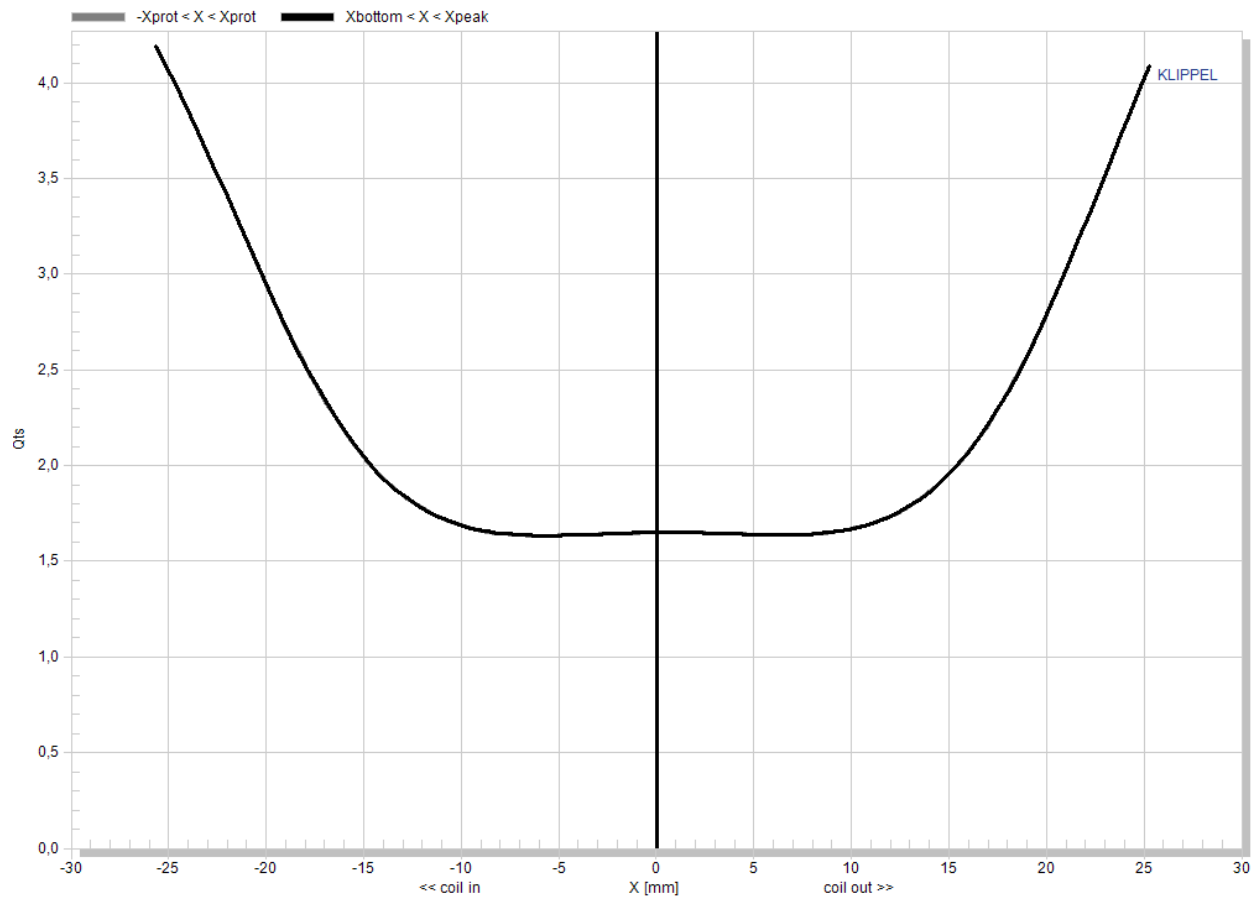


Inductance over current $L(X=0, I)$



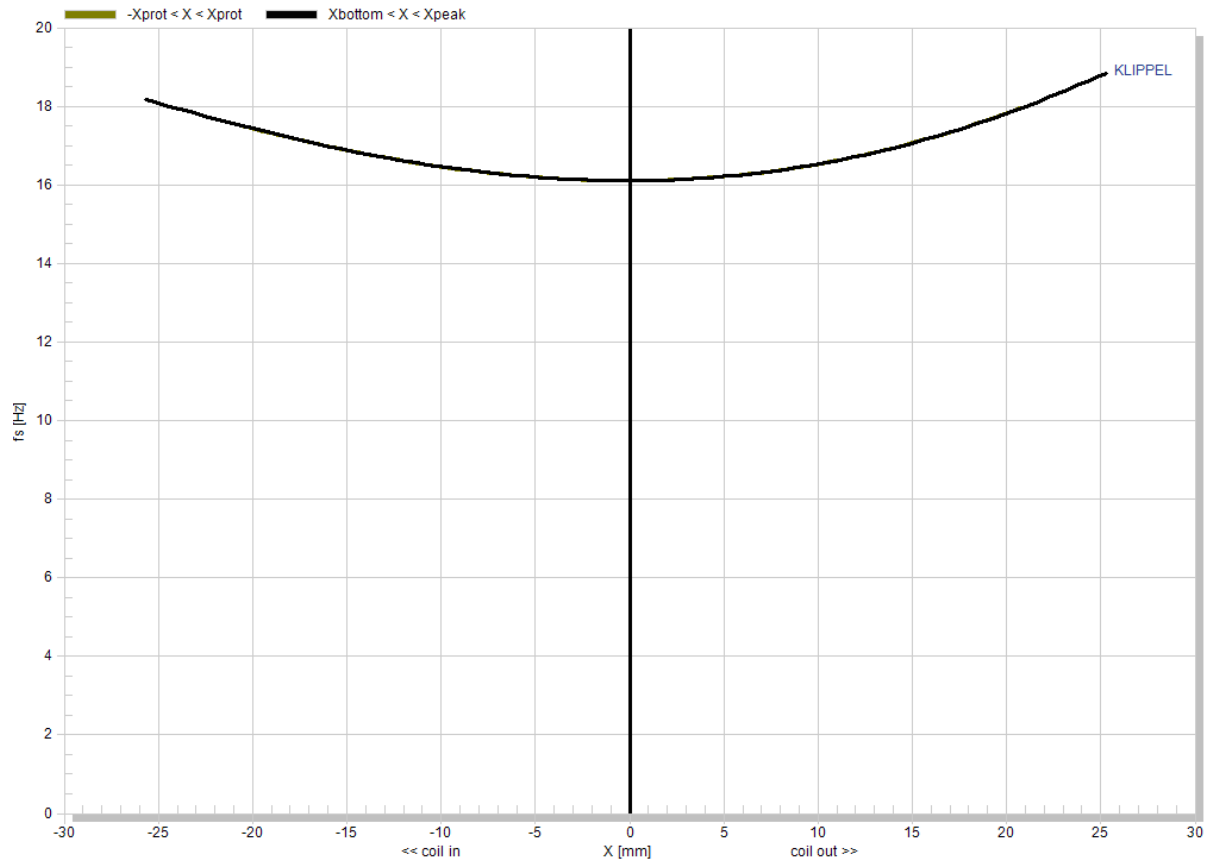
Total loss factor Qts (X)

00:05:29



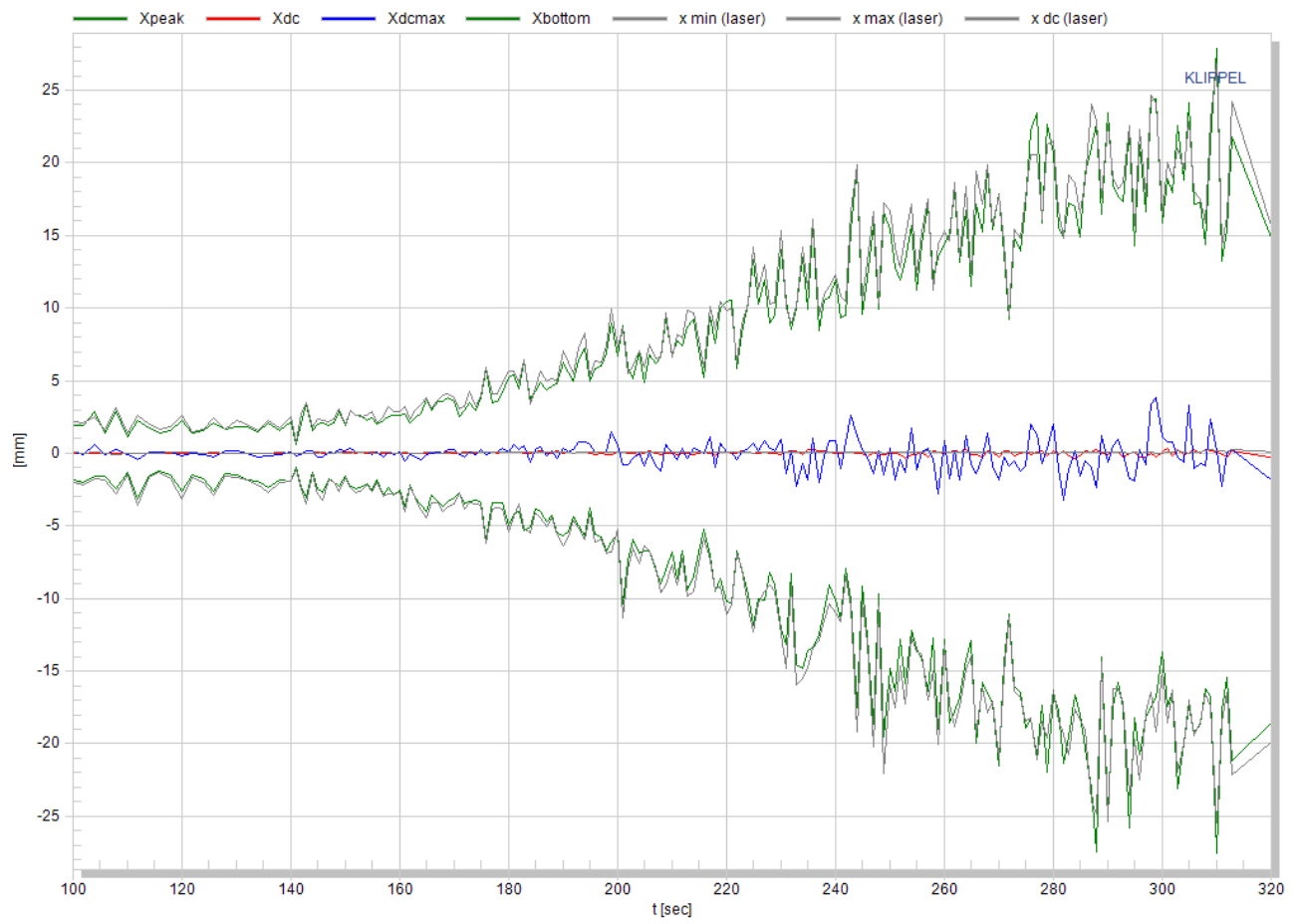
Resonance frequency $f_s(X)$

00:03:19



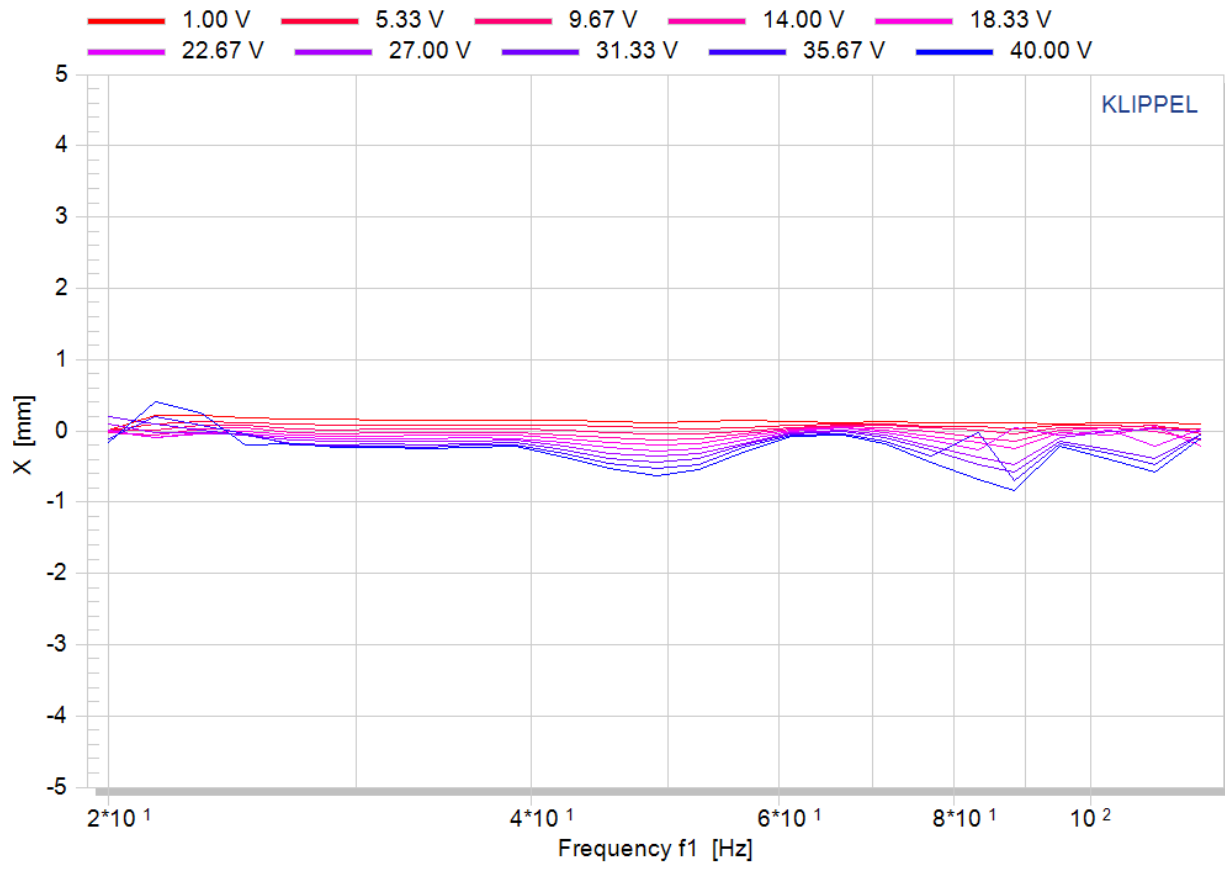
Voice coil displacement

00:09:26



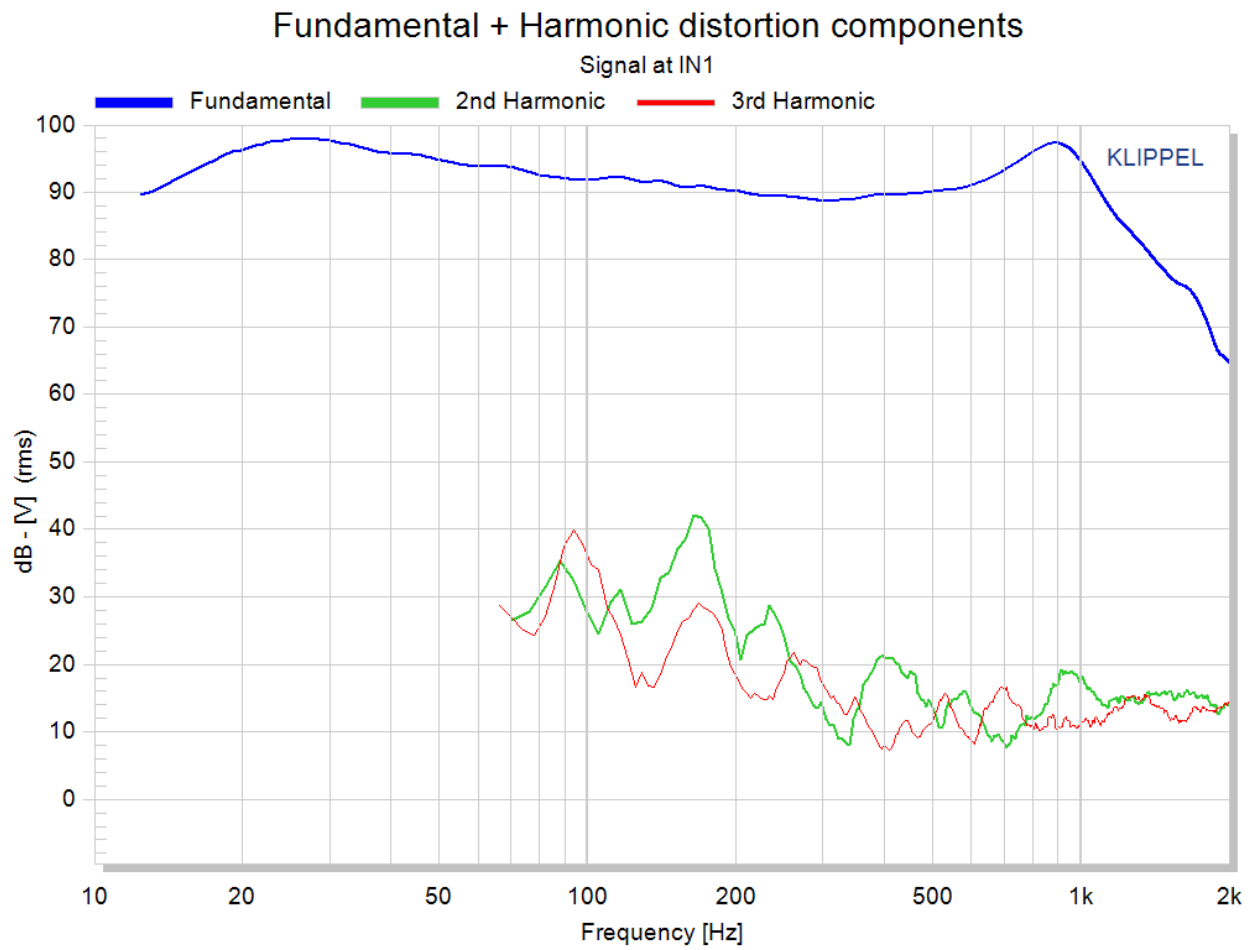
DC component

X DC



Frequency response

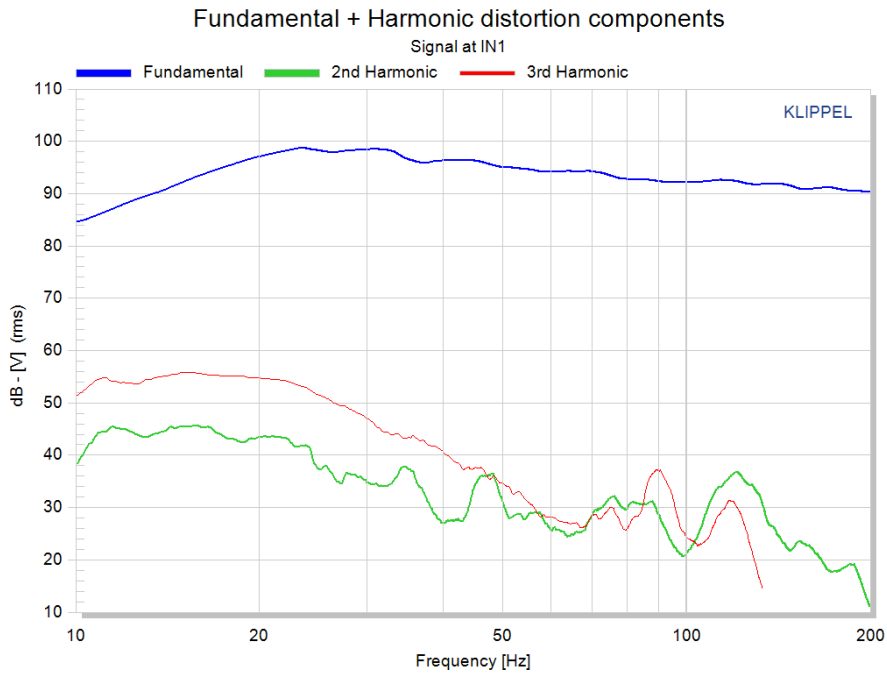
1W/Znom - nearfield 62mm - IEC panel - anechoic chamber



Frequency response

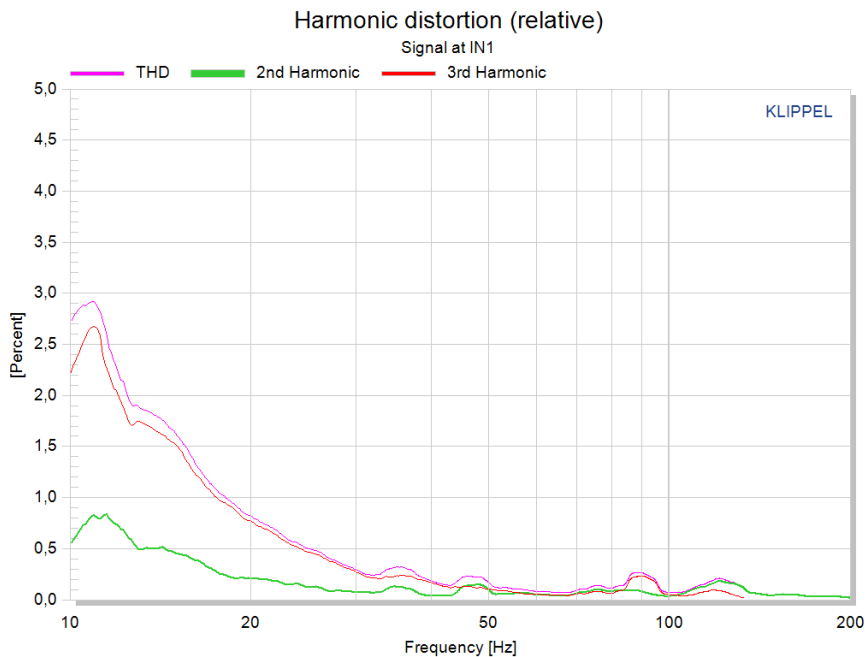
1W/Znom - nearfield 62mm - IEC panel - anechoic chamber

Zoom on useful band



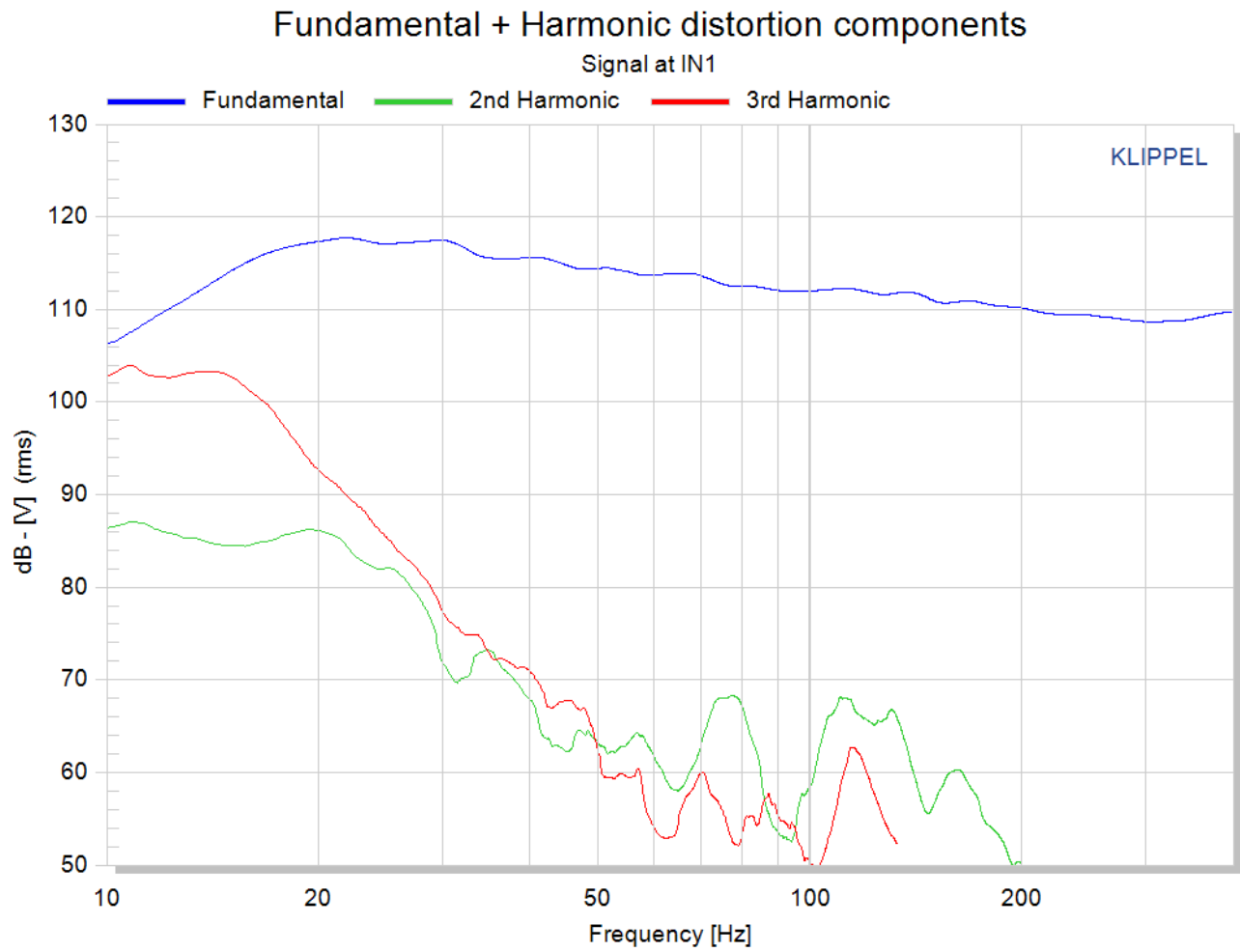
THD – 2nd – 3rd

1W/Znom - nearfield 62mm - IEC panel - anechoic chamber



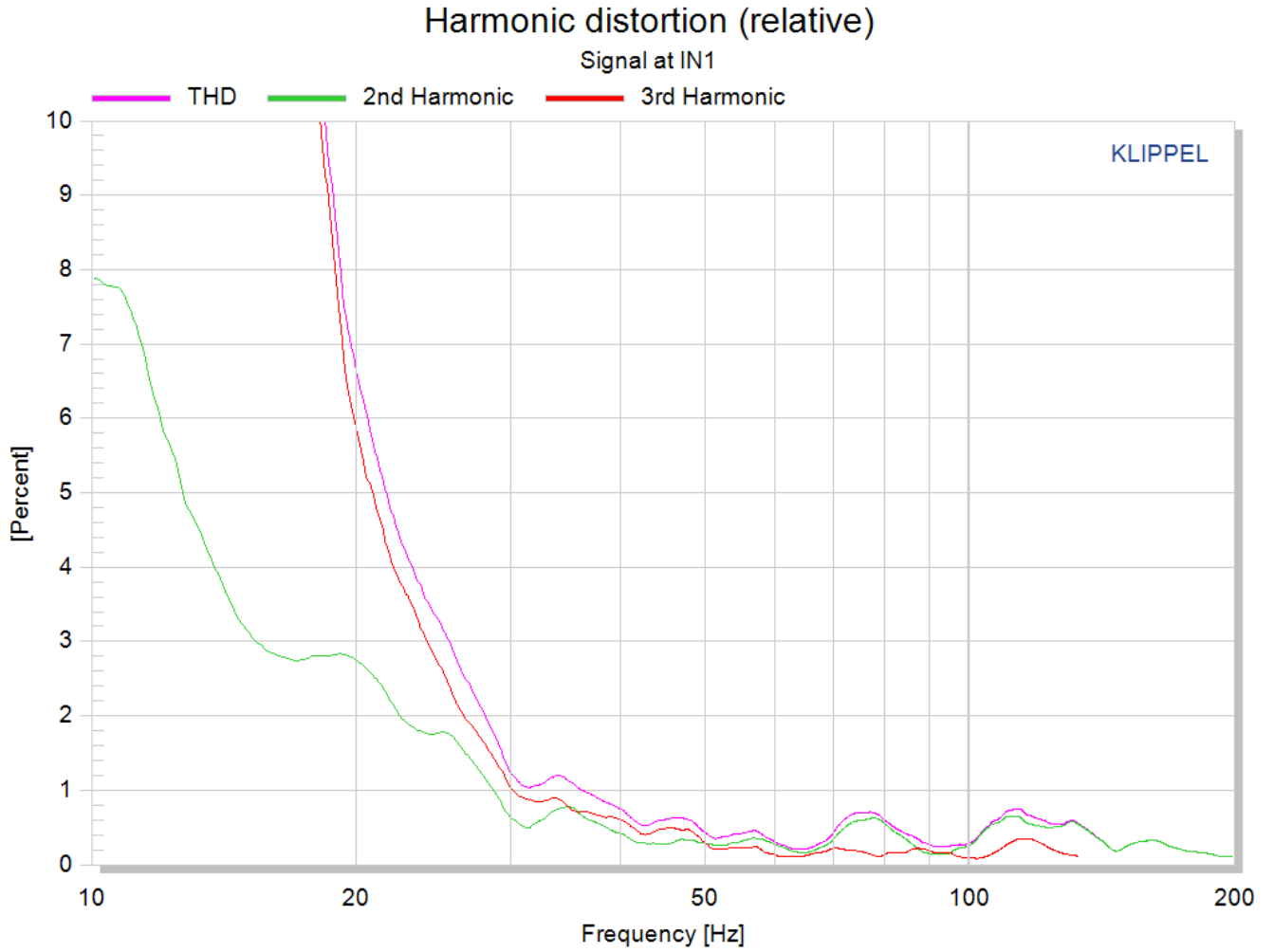
Frequency response

100W/Znom - nearfield 62mm - IEC panel - anechoic chamber



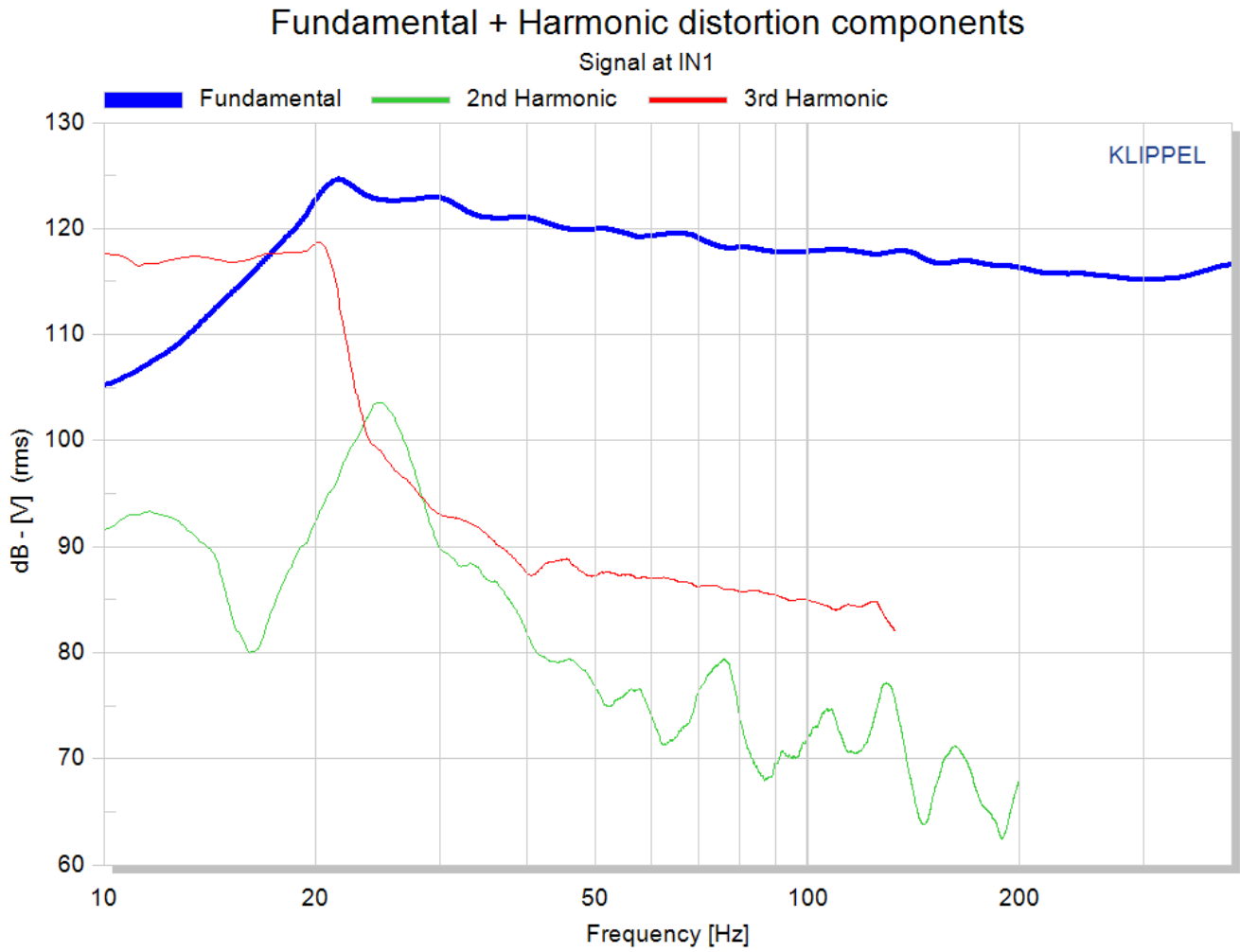
THD – 2nd – 3rd

100W/Znom - nearfield 62mm - IEC panel - anechoic chamber



Frequency response

500W/Znom - nearfield 62mm - IEC panel - anechoic chamber



THD – 2nd – 3rd

500W/Znom - nearfield 62mm - IEC panel - anechoic chamber

