15inch woofer-367D

Redcatt Ltd. implements the use of advanced Klippel transducer technology equipment in all critical areas of transducer development including R&D, Material Science, Power and Production Testing. This allows us to develop

Transducer Name:	367D	**Report Date:**	2022/4/3
Transducer S/N:	2022040301	**Time:**	
Test Engineer:	Jason	**Test System:**	Klippel R&D (LPM)
Comments:			

GENERAL SPECIFICATIONS:

ELECTRICAL PARAMETERS

Parameter	Value	Unit	Description
Re	6.3	Ohm	electrical voice coil resistance at DC
Le	0.994	mH	frequency independent part of voice coil inductance
L2	1.496	mH	para-inductance of voice coil
R2	4.31	Ohm	electrical resistance due to eddy current losses
Cmes	427.29	μF	electrical capacitance representing moving mass
Lces	26.3	mH	electrical inductance representing driver compliance
Res	106.68	Ohm	resistance due to mechanical losses
fs	47.5	Hz	driver resonance frequency

MECHANICAL PARAMETERS (using laser)

Mms	95.732	g	mechanical mass of driver diaphragm assembly including air load and voice coil
Mmd (Sd)	66.162	g	mechanical mass of voice coil and diaphragm without air load
Rms	2.1	kg/s	mechanical resistance of total-driver losses
Cms	0.117	mm/N	mechanical compliance of driver suspension
Kms	8.52	N/mm	mechanical stiffness of driver suspension
Bl	14.968	N/A	force factor (Bl product)
Lambda s	0.007		suspension creep factor

LOSS FACTORS

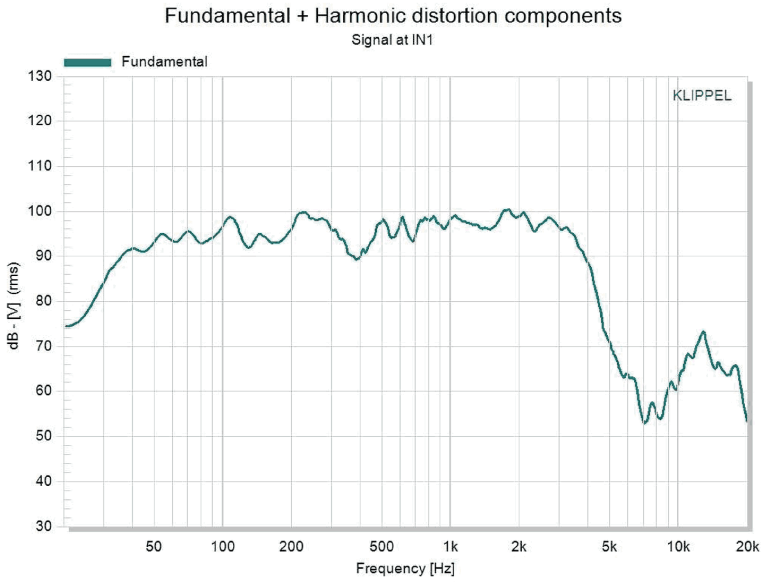
Qtp	0.763		total Q-factor considering all losses
Qms	13.597		mechanical Q-factor of driver in free air considering Rms only
Qes	0.803		electrical Q-factor of driver in free air considering Re only
Qts	0.758		total Q-factor considering Re and Rms only

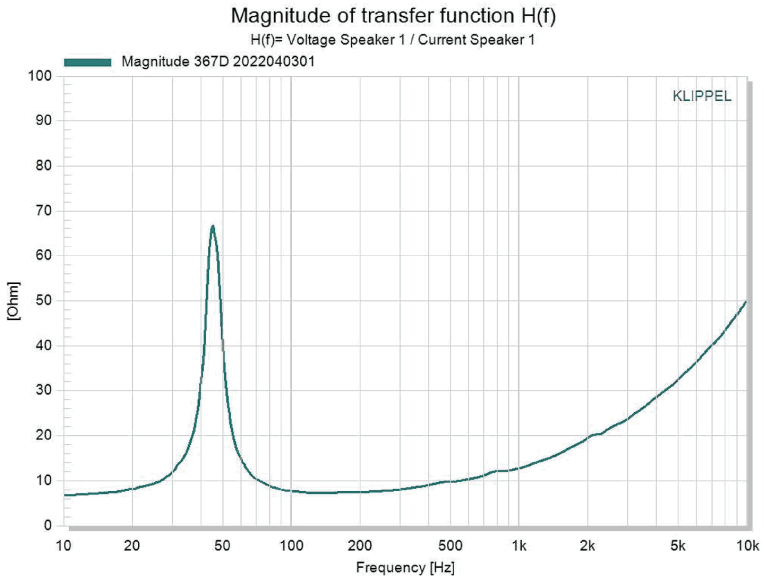
OTHER PARAMETERS

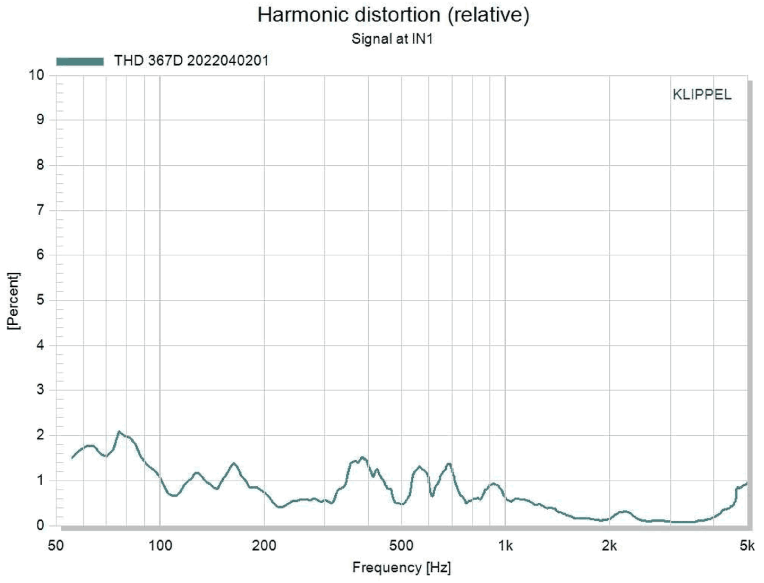
Vas	129.0736	l	equivalent air volume of suspension
n0	1.654	%	reference efficiency (2 pi-radiation using Re)
Lm	94.38	dB	characteristic sound pressure level (SPL at 1m for 1W @ Re)
Lnom	95.42	dB	nominal sensitivity (SPL at 1m for 1W @ Zn)
Sd	881.41	cm2	diaphragm area

IMPORTANT STRUCTRUE PARAMETERS

T-plate	6	mm	thinkness of front plate
L-winding	15.5	mm	length of voice coil winding
Coil ID	63.7	mm	ID of voice coil
Former	TIL		voice coil former material
Wire	COPPER		voice coil wire type


Fundamental + Harmonic distortion components
Signal at IN1
Fundamental
KLIPPEL
dB - [V] (rms)
130
120
110
100
90
80
70
60
50
40
30
50
100
200
500
1k
2k
5k
10k
20k
Frequency [Hz]


Magnitude of transfer function H(f)
H(f)= Voltage Speaker 1 / Current Speaker 1
Magnitude 367D 2022040301
KLIPPEL
[Ohm]
100
90
80
70
60
50
40
30
20
10
0
10
20
50
100
200
500
1k
2k
5k
10k
Frequency [Hz]


Harmonic distortion (relative)
Signal at IN1
THD 367D 2022040201
KLIPPEL
[Percent]
10
9
8
7
6
5
4
3
2
1
0
50
100
200
500
1k
2k
5k
Frequency [Hz]