

[illegible]

Thiele-Small Parameters

Measurement method: **Added mass**

Free Air Measurement: **4: 240628_imp 10**

Added mass measurement: **5: 240628_imp 11**

Added mass (g): **17,220**

Manually Entered Values

Voice Coil DC Resistance (ohm): **3,800**

Effective Area (cm²): **176,71**

Air Temperature (Celsius): **20**

Air Pressure (mbar): **1013,25**

Calculate Parameters

Write Parameters to File

Motional Impedance (Ritter 3PC)

R₀ (ohm): **84,81**

C_{MES} (uF): **77,7**

L₀ (mH): **4,097**

β: **0,0169**

ω₀: **2645,9**

Blocked Impedance (T-F)

dR (ohm): **-0,013**

L_{EB} (uH): **9,1**

L_E (mH): **0,215**

R_{SS} (ohm): **100000,00**

K_E (S-H): **0,0389**

Simplified Model Parameters

R_E 3,787 ohm L_E 43,9 uH

R_{ES} 71,22 ohm R₂ 7,15 ohm

C_{MES} 77,7 uF L₂ 64,3 uH

L_{CES} 4,14 mH R₃ 1,08 ohm

L₃ 74,8 uH

R_E 3,787 ohm f_s 280,7 Hz M_{MS} 2,34 g

Z_{min} 4,032 ohm Q_{MS} 9,757 C_{MS} 0,137 mm/N

f_{min} 1 231 Hz Q_{ES} 0,519 R_{MS} 0,424 kg/s

f₃ 4 169 Hz Q_{TS} 0,493 V_{AS} 6,08 litres

L_E (f₃) 0,101 mH F_{TS} 569,8 Hz Bl 5,493 Tm

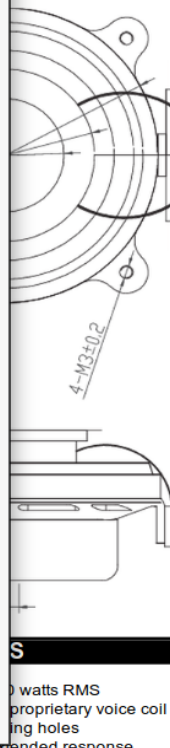
Dd 15,00 cm L_P 106,19 dB (1W/1m) Eta 25,28 %

Sd 176,7 cm² Added mass 17,220 g

Secondary measurement: 240628_imp 11

Air temperature 20,0 C, pressure 1 013,25 mbar giving density 1,2041 kg/m³, c 343,2 m/s

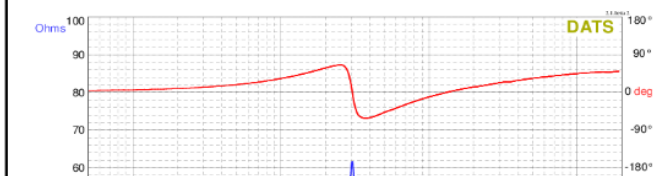
DAEX30HESF-4 High Efficiency Steered Flux Exciter with Shielding 30 mm Exciter 40W 4 Ohm



PARAMETERS

Impedance	4 ohms
Re	3.8 ohms
Le	0.31 mH
Fs	300 Hz
Qms	N/A
Qes	N/A
Qts	N/A
Mms	N/A
Cms	N/A
Sd	N/A
Vd	N/A
BL	N/A
Vas	N/A
Xmax	N/A
VC Diameter	30 mm
SPL	N/A
RMS Power Handling	40 watts
Usable Frequency Range (Hz)	N/A

IMPEDANCE/PHASE



Thiele-Small Parameters

Measurement method
Added mass

Motional Impedance (Ritter 3PC)
 R_0 (ohm): 8,01
 C_{MES} (uF): 256,2
 L_0 (mH): 0,131
 β : 0,0300
 ω_0 : 8104,9

Free Air Measurement
6: 240628_DAEX13CT

Added mass measurement
7: 240628_DAEX13CT_mass
Added mass (g): 4,100

Blocked Impedance (T-F)
 dR (ohm): 0,368
 L_{EB} (uH): 21,7
 L_E (mH): 0,018
 R_{SS} (ohm): 1,22
 K_E (S-H): 10,0000

Manually Entered Values
Voice Coil DC Resistance (ohm): 3,600
Effective Area (cm²): 176,71
Air Temperature (Celsius): 20
Air Pressure (mbar): 1013,25
Calculate Parameters
Write Parameters to File

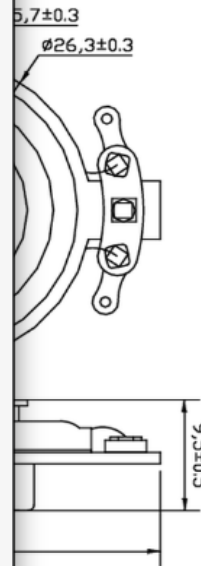
Simplified Model Parameters
 R_E 3,968 ohm L_E 21,7 uH
 R_{ES} 6,06 ohm R_2 1,25 ohm
 C_{MES} 256,2 uF L_2 16,4 uH
 L_{CES} 0,13 mH R_3 0,05 ohm
 L_3 2 835 315,7 uH

R_E 3,968 ohm f_s 862,4 Hz M_{MS} 0,20 g
 Z_{min} 4,027 ohm Q_{MS} 8,417 C_{MS} 0,174 mm/N
 f_{min} 2 580 Hz Q_{ES} 5,509 R_{MS} 0,126 kg/s
 f_3 14 785 Hz Q_{TS} 3,330 V_{AS} 7,71 litres
 $L_E (f_3)$ 0,028 mH F_{TS} 259,0 Hz Bl 0,874 Tm
 Dd 15,00 cm L_p 111,59 dB (1W/1m) η 87,66 %
 Sd 176,7 cm² Added mass 4,100 g

Secondary measurement: 240628_DAEX13CT_mass
Air temperature 20.0 C. pressure 1 013.25 mbar air density 1.2041 kg/m³. c 343.2 m/s

DAEX13CT-4 Coin Type 13mm Exciter 3W 4 Ohm

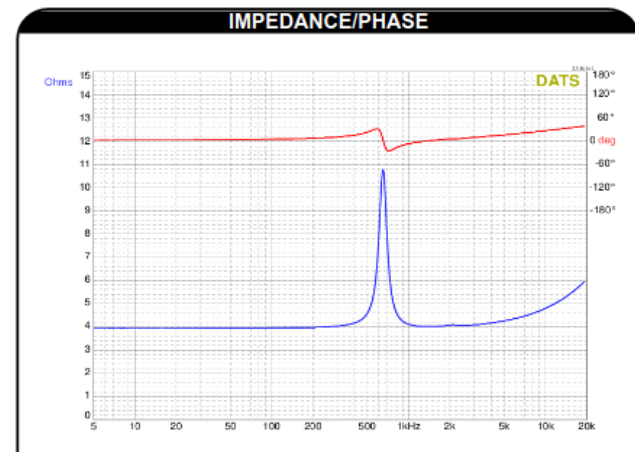
DAEX13CT-4

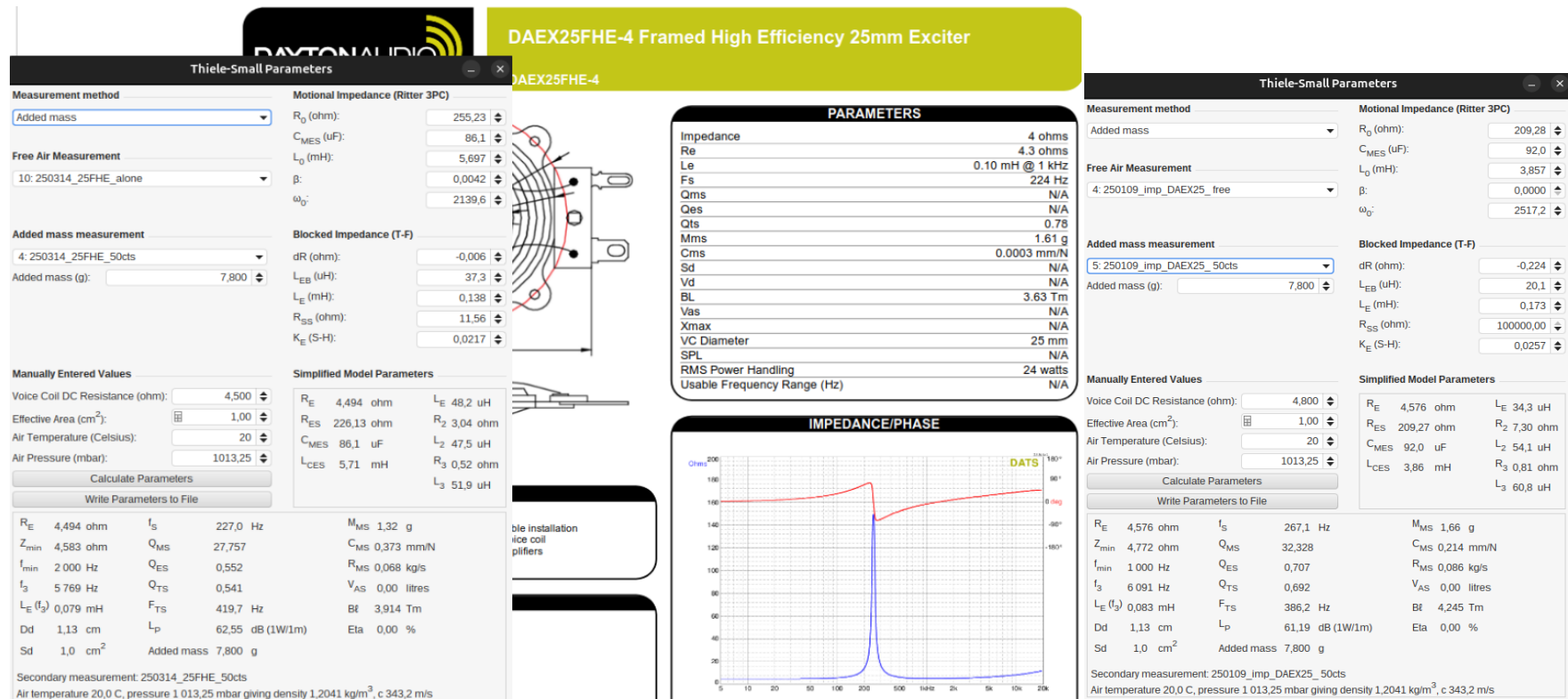


ES
meter, about 3/8" high
quick, secure installation
ass D amplifiers

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PARAMETERS	
Impedance	4 ohms
Re	3.6 ohms
Le	0.04 mH @ 1 kHz
Fs	650 Hz
Qms	N/A
Qes	N/A
Qts	3.25
Mms	0.26 g
Cms	0.0002 mm/N
Sd	N/A
Vd	N/A
BL	1.12 Tm
Vas	N/A
Xmax	N/A
VC Diameter	13 mm
SPL	N/A
RMS Power Handling	3 watts
Usable Frequency Range (Hz)	N/A

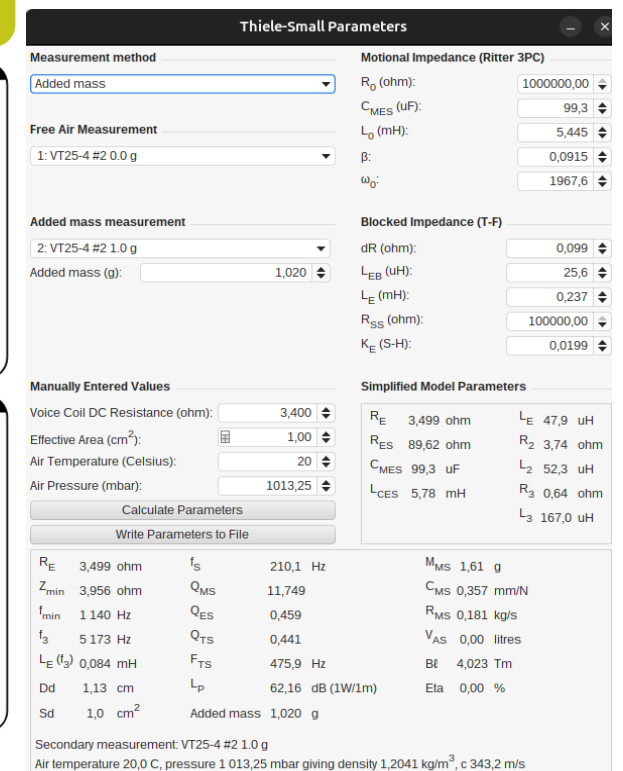




25mm Exciter 20W 4 Ohm

PARAMETERS	
Impedance	4 ohms
Re	4.2 ohms
Le	0.24 mH @ 1 kHz
Fs	230 Hz
Qms	N/A
Qes	N/A
Qts	0.83
Mms	1.75 g
Cms	0.0003 mm/N
Sd	N/A
Vd	N/A
BL	3.86 Tm
Vas	N/A
Xmax	N/A
VC Diameter	25 mm
SPL	N/A
RMS Power Handling	20 watts
Usable Frequency Range (Hz)	N/A

Measurement taken with transducer uncoupled facing upward.



XT25-4 SPECIFICATIONS

Electrical and Mechanical Properties

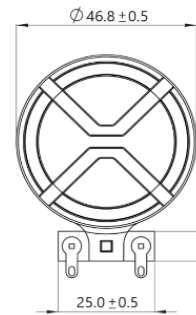
Rms Noise Test [W]	15
Long-term Max Power [W]	30
Frequency Range [Hz] ¹	40Hz – 19kHz
Nominal Impedance [Ohm]	4
DC Resistance [Ohm]	3.79
Le [mH] Re2 [Ohm] Le2 [mH]	0.07 2.87 0.05
Kms [N/mm]	6.05
Cms [mm/N]	0.17
Bl [N/A]	3.73
Motor Efficiency Factor β [dB] ²	5.65
Linear Xmax - IEC 60268 [mm]	± 1.4
Mechanical Xmax [mm]	± 3.0

Position Related Properties ³

	Magnet	Coil
Fs [Hz]	44.4	306
Mms [g]	75.2	1.58
Rms [Kg/s]	0.85	0.09
Qts	4.63	0.88
Qms	24.8	18.5
Qes	5.7	0.93

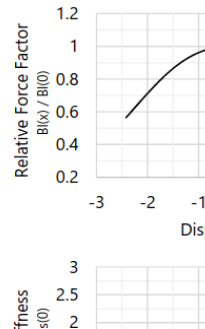
Physical Properties

Total Weight [g]	76.8
Outer Diameter [mm]	46.8
Total Height [mm]	21.5



Distortion Relevant Parameters

At higher amplitudes, excitors primarily from Bl(x) and Kms(x), to generate low harmonic and



Thiele-Small Parameters

Measurement method

Added mass

Free Air Measurement

1: Xcite XT25-4 0.0 g

Added mass measurement

2: Xcite XT25-4 2.0 g Al

Added mass (g): 2,080

Manually Entered Values

Voice Coil DC Resistance (ohm): 3,000

Effective Area (cm²): 1,00

Air Temperature (Celsius): 20

Air Pressure (mbar): 1013,25

Calculate Parameters

Write Parameters to File

Motional Impedance (Ritter 3PC)

R₀ (ohm): 89,85

C_{MES} (uF): 137,3

L₀ (mH): 1,815

β : 0,0000

ω_0 : 2982,8

Blocked Impedance (T-F)

dR (ohm): 0,370

L_{EB} (uH): 19,8

L_E (mH): 0,136

R_{SS} (ohm): 60235,29

K_E (S-H): 0,0203

Simplified Model Parameters

R_E 3,370 ohm L_E 33,7 uH

R_{ES} 89,85 ohm R₂ 4,96 ohm

C_{MES} 137,3 uF L₂ 41,8 uH

L_{CES} 1,82 mH R₃ 0,61 ohm

L₃ 54,5 uH

Parameters

R_E 3,370 ohm f_S 318,9 Hz M_{MS} 1,72 g

Z_{min} 3,568 ohm Q_{MS} 24,707 C_{MS} 0,145 mm/N

f_{min} 1 140 Hz Q_{ES} 0,927 R_{MS} 0,140 kg/s

f₃ 5 552 Hz Q_{TS} 0,893 V_{AS} 0,00 litres

L_E (f₃) 0,072 mH F_{TS} 357,0 Hz Bl 3,543 Tm

Dd 1,13 cm L_P 60,62 dB (1W/1m) Eta 0,00 %

Sd 1,0 cm² Added mass 2,080 g

Secondary measurement: Xcite XT25-4 2.0 g Al

Air temperature 20,0 C, pressure 1 013,25 mbar giving density 1,2041 kg/m³, c 343,2 m/s

XT32-4 SPECIFICATIONS

Electrical and Mechanical Properties

Rms Noise Test [W]	20
Long-term Max Power [W]	40
Frequency Range [Hz] ¹	35Hz – 17kHz
Nominal Impedance [Ohm]	4
DC Resistance [Ohm]	3.66
Le [mH] Re2 [Ohm] Le2 [mH]	0.07 2.38 0.05

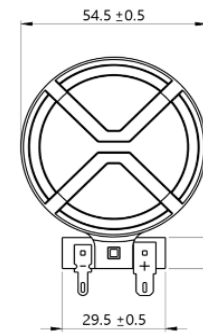
Kms [N/mm]	8.47
Cms [mm/N]	0.12
Bl [N/A]	4.27
Motor Efficiency Factor β [dB] ²	6.97
Linear Xmax - IEC 60268 [mm]	± 1.6
Mechanical Xmax [mm]	± 3.5

Position Related Properties ³ Magnet Coil

Fs [Hz]	40.5	312
Mms [g]	131	2.21
Rms [Kg/s]	0.85	0.20
Qts	4.78	0.87
Qms	18.7	21.9
Qes	6.42	0.91

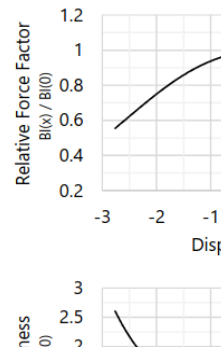
Physical Properties

Total Weight [g]	133
Outer Diameter [mm]	54.5
Total Height [mm]	24.8



Distortion Relevant Properties

At higher amplitudes, excursions are primarily from Bl(x) and Kms(x) to generate low harmonic and intermodulation distortion.



Thiele-Small Parameters

Measurement method

Added mass

Free Air Measurement

5: Xcite XT32-4 0.0 g

Added mass measurement

6: Xcite XT32-4 2.0 g

Added mass (g):

2,080

Motional Impedance (Ritter 3PC)

R₀ (ohm):

89,85

C_{MES} (uF):

137,3

L₀ (mH):

1,815

β :

0,0000

ω_0 :

2982,8

Blocked Impedance (T-F)

dR (ohm):

0,370

L_{EB} (uH):

19,8

L_E (mH):

0,136

R_{SS} (ohm):

60235,29

K_E (S-H):

0,0203

Manually Entered Values

Voice Coil DC Resistance (ohm):

3,000

Effective Area (cm²):

1,00

Air Temperature (Celsius):

20

Air Pressure (mbar):

1013,25

Simplified Model Parameters

Results area

An error has occurred in TS parameter calculation

! java.util.concurrent.ExecutionException: java.lang.IllegalArgumentException: fromIndex(48) > toIndex(33) occurred, see Details for more information to report.

Save any unsaved measurements and restart REW

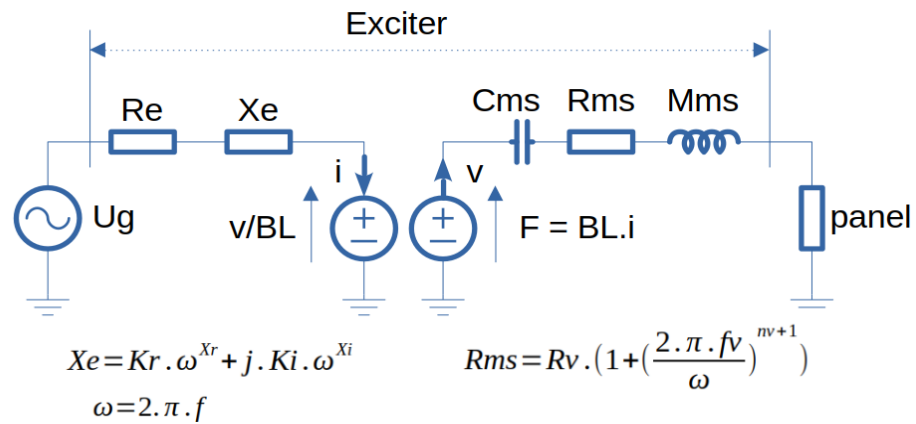
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Exit REW

Détails >>

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Measurements									
Parameter	DAEX25FHE			DAEX25VT				XT25	XT32
	Sample A	Sample B	Sample C	Sample A	Sample B	Sample C	Sample D	Sample A	Sample A
Re	4,47		4,51	3,498	3,42	3,505	3,43	3,061	2,968
Xr	0,8895		0,8655	0,8527	0,8207	0,7942	0,8144	0,7614	0,8663
Xi	0,7933		0,8017	0,7647	0,7272	0,7129	0,7695	0,7368	0,7989
Kr	0,0001		0,000122	0,0001996	0,0002959	0,0003989	0,0003069	0,0004725	0,0001381
Ki	0,000714		0,00066	0,001013	0,001562	0,00184	0,0009604	0,001247	0,0006292
BL	3,67		3,63	4,094	4,382	4,172	4,075	3,797	4,053
Mms	1,235		1,273	1,543	1,738	1,529	1,542	1,719	2,207
Cms	0,4139		0,441	0,3553	0,3766	0,3771	0,3664	0,1445	0,1163
Rv	0,0408		0,0378	0,0936	0,1062	0,1194	0,07164	0,01	0,1278
fv	181		199	201	184,7	195	276	1702	360
nv	1		1	1	1	1	0,6	0,69	1,105



MODEL					
Parameter	DAEX25FHE	DAEX25VT	XT25	XT32	unit
Re	4,3	3,5	3	3	ohm
Xr	0,87	0,82	0,76	0,86	see model
Xi	0,8	0,74	0,74	0,8	see model
Kr	0,0001	0,0003	0,0005	0,0014	see model
Ki	0,0007	0,0013	0,0012	0,0006	see model
BL	3,65	4,2	3,8	4	Tm (=N/A)
Mms	1,3	1,6	1,7	2,2	g
Cms	0,43	0,37	0,14	0,12	mm/N
Rv	0,041	0,1	0,01	0,13	kg/s
fv	190	215	1700	360	Hz
nv	1	0,9	0,7	1,1	without