

Woofer parameters

Fs	30.0	Hz
Qts	0.23	
Qes	0.26	0.377465
Vas	47.9	Liters
Re	5.5	Ohms
Dia	13.1	cm
Xmax	6.5	mm
Pe_max	70	Watts
Le	0.0002	Henrys
P_input	20	Watts@8ohms
V_in_peak	17.89	Volts

Woofer Calculated parameters

Sd	0.01348	m^2
Cms	0.001877	m/N
Mdt	0.0150	kg
Bl	7.73	T*m
no	90.44	dB/2.83V
no	88.81	dB/1W
Qms	1.993	
P_dissipation	29.1	Watts
Cone Sag	0.28	mm

21.945234

Box Parameters

Ql	15.0	
Qb	30.0	
Qp	30.0	
Vb	20	
Fb	35	
# ports	1	
Vent Diameter	5.08	cm
Vent Length	21.15	cm
Sp	0.002027	m^2
	20.2682991639	
alpha	2.395	
h	1.167	
Qcomb	7.500	

*If sealed

lossless fc	55.3	
losslessQt	0.42	
Damped Qt	0.63	
fs/Qes	115.38	

Vent Diameter	2.00	in
Vent Length	8.33	in

Box Dimensions

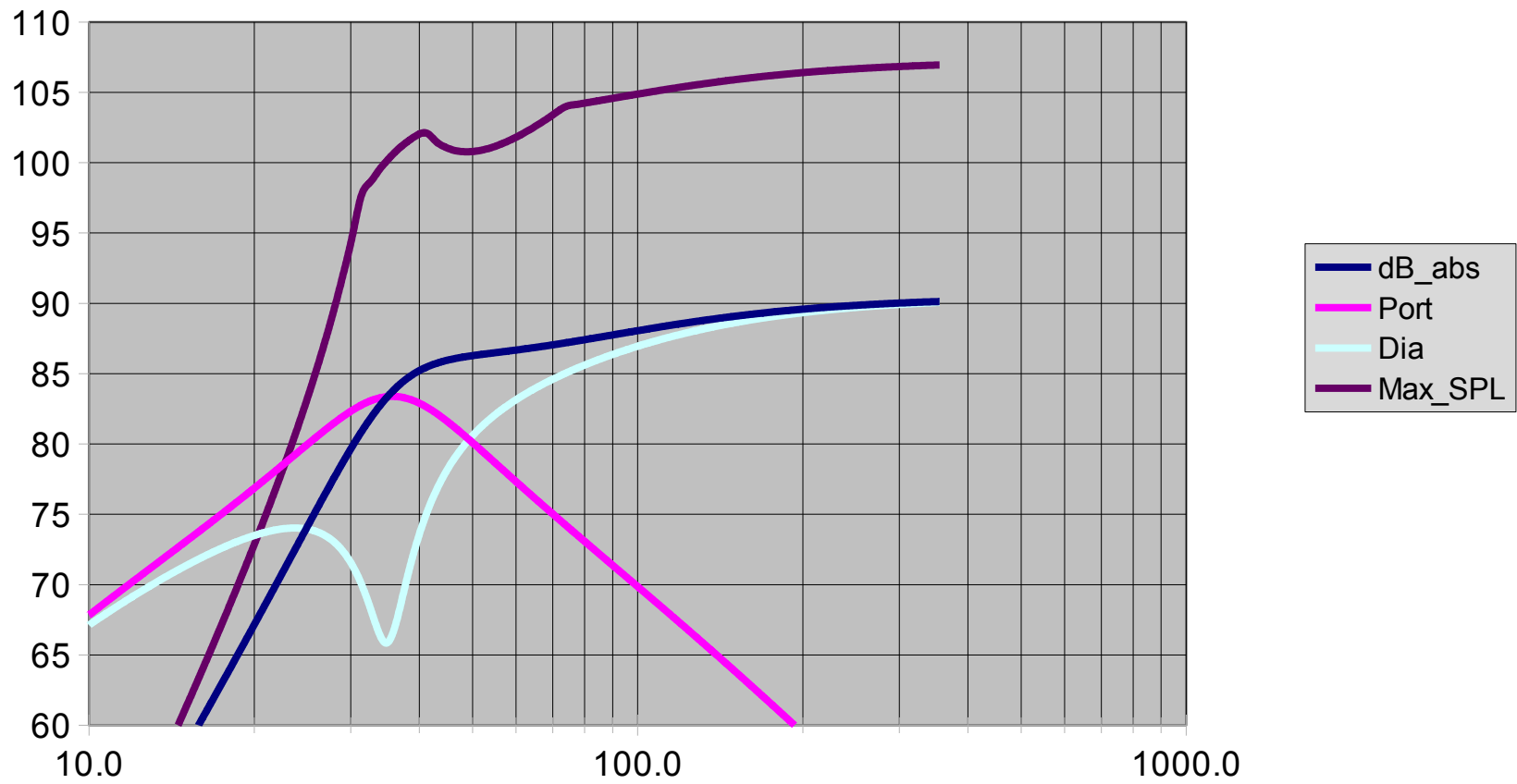
Cube	27.144176	cm
	10.687	in

1/Ql	0.0667	
1/Qb	0.0333	
1/Qp	0.0333	
1/QbQl	0.0022	
1/QlQp	0.0022	
1/QbQp	0.0011	
1/QlQbQp	0.0001	
B5	1.0022	1.0022
B4	4.582	0.726858
B3	5.441	4.8421
B2	6.180	0.93313
B1	1.364	1.364136

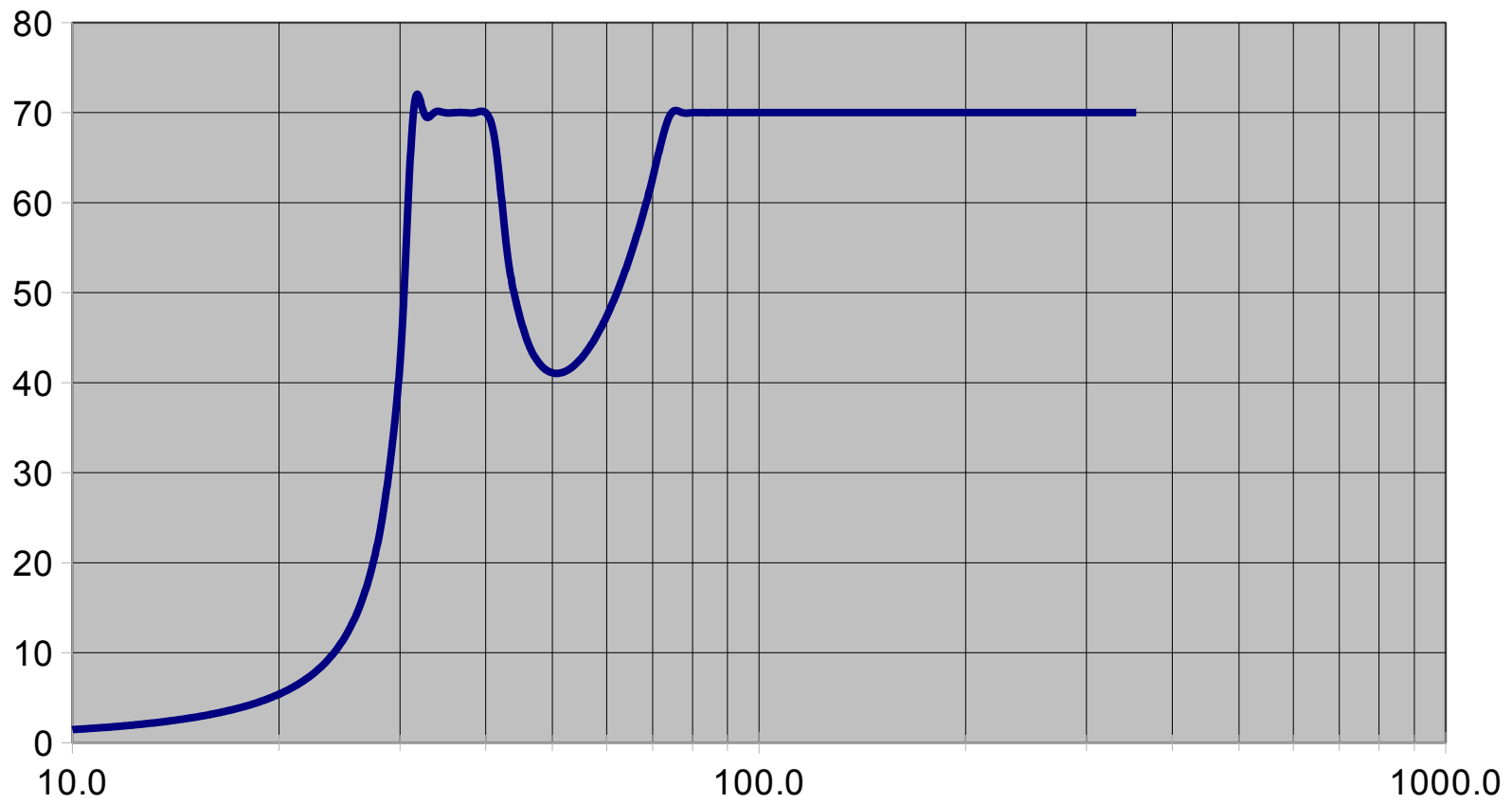
Splmax	120	
upmax	17	
Spmin	403.36134	

-4.69897

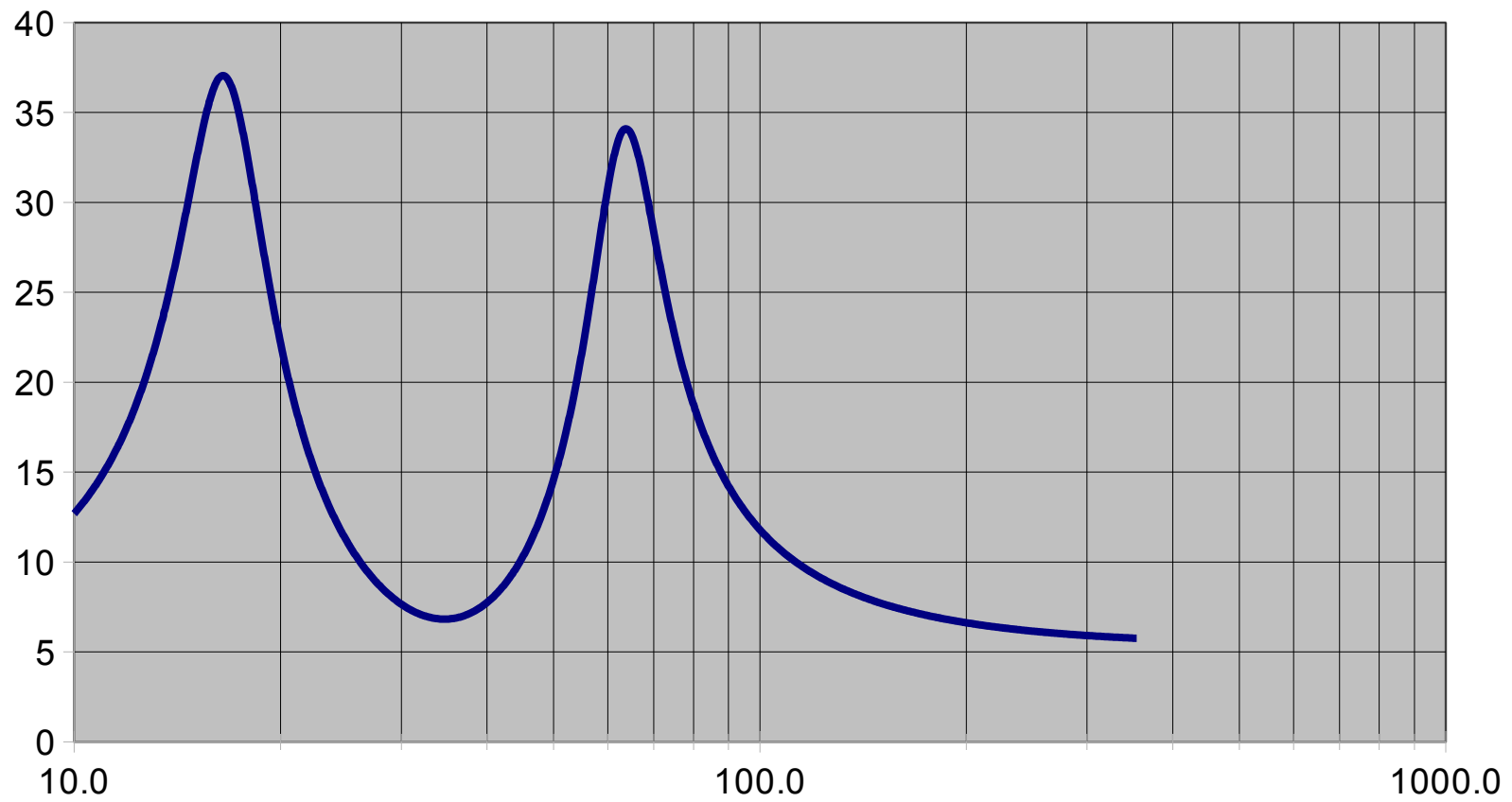
SPL Max and 2.83V [dB]



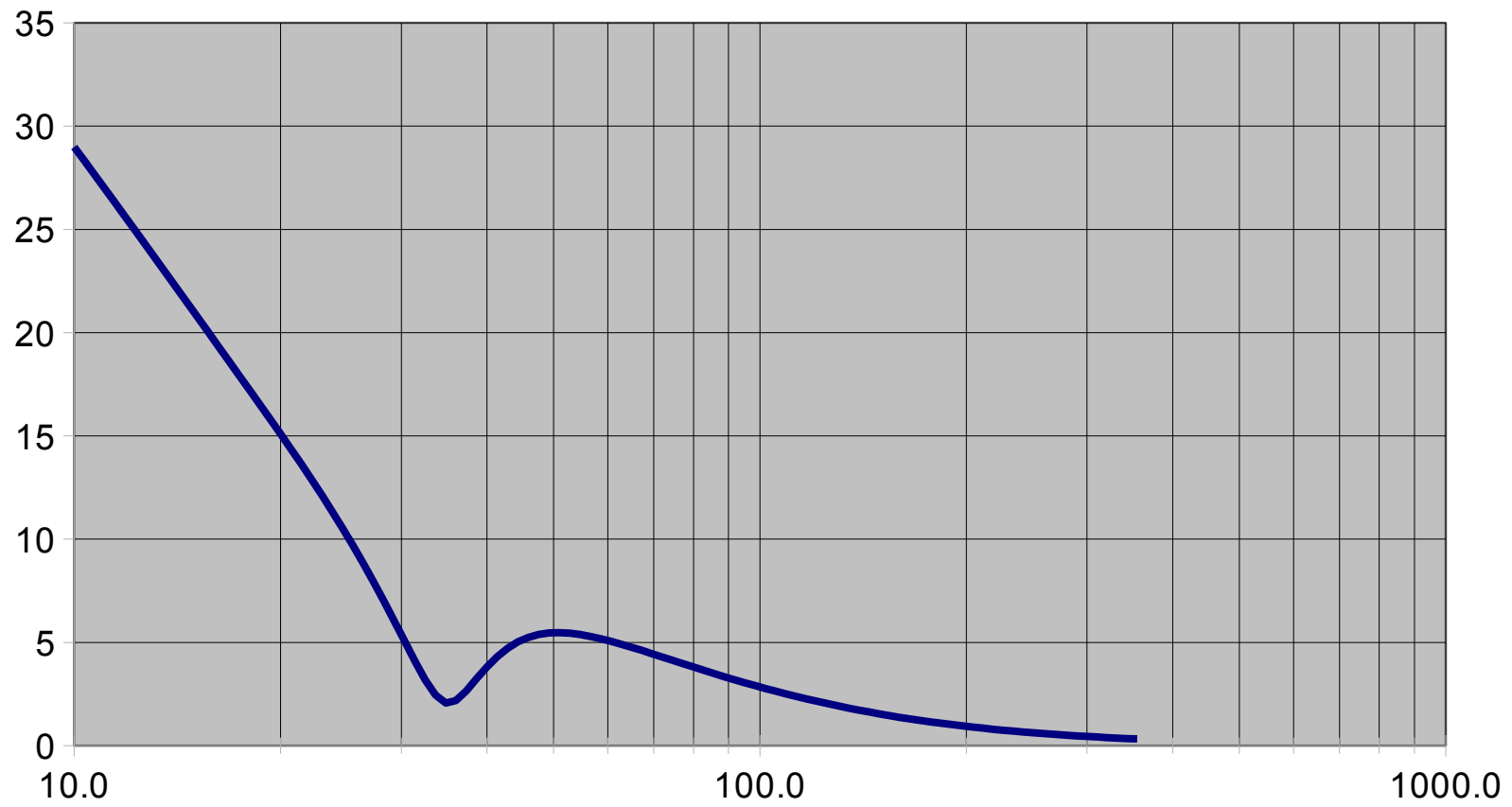
Excursion Limited Power [Watts]



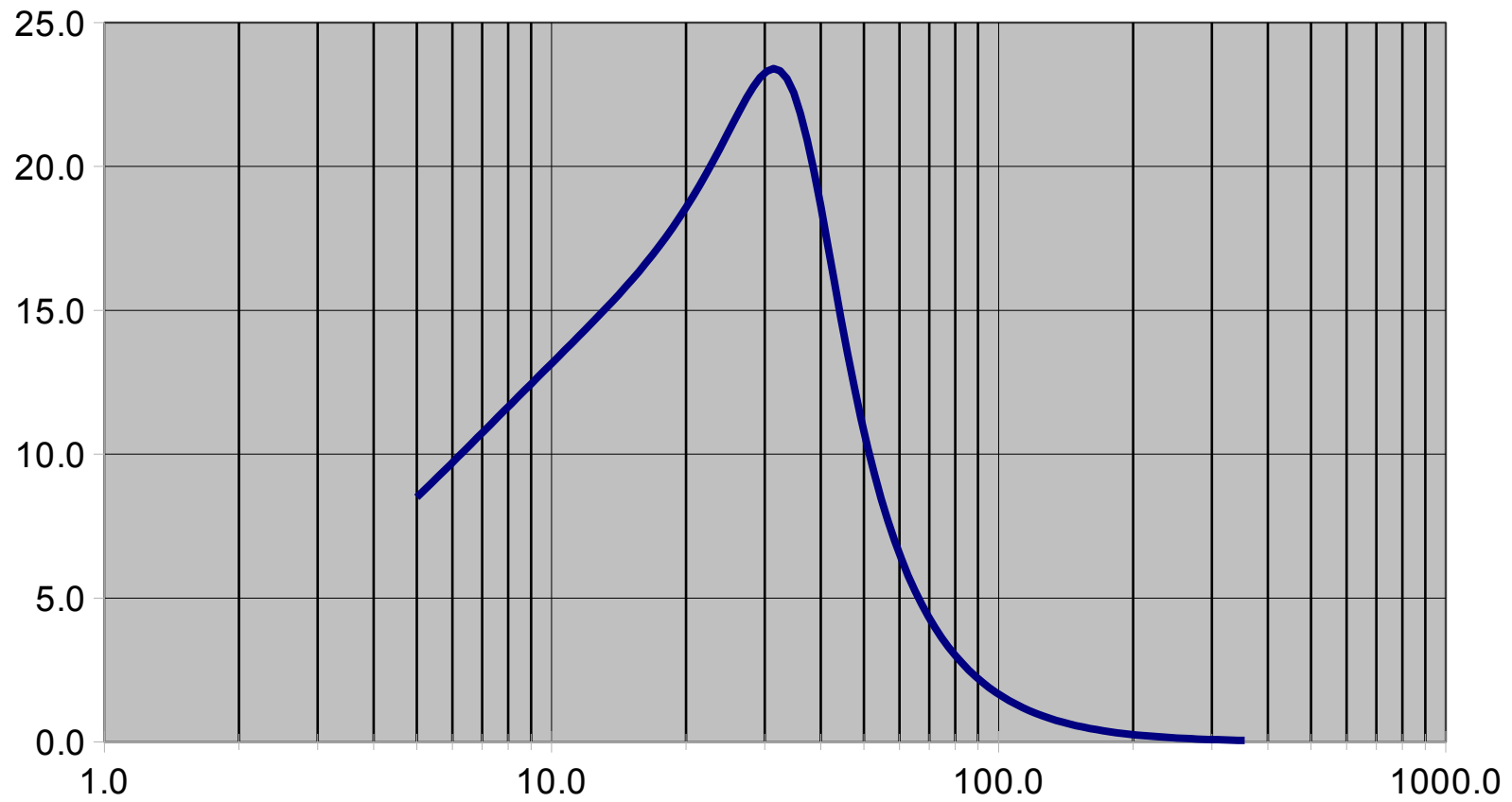
Impedance [Ohms]



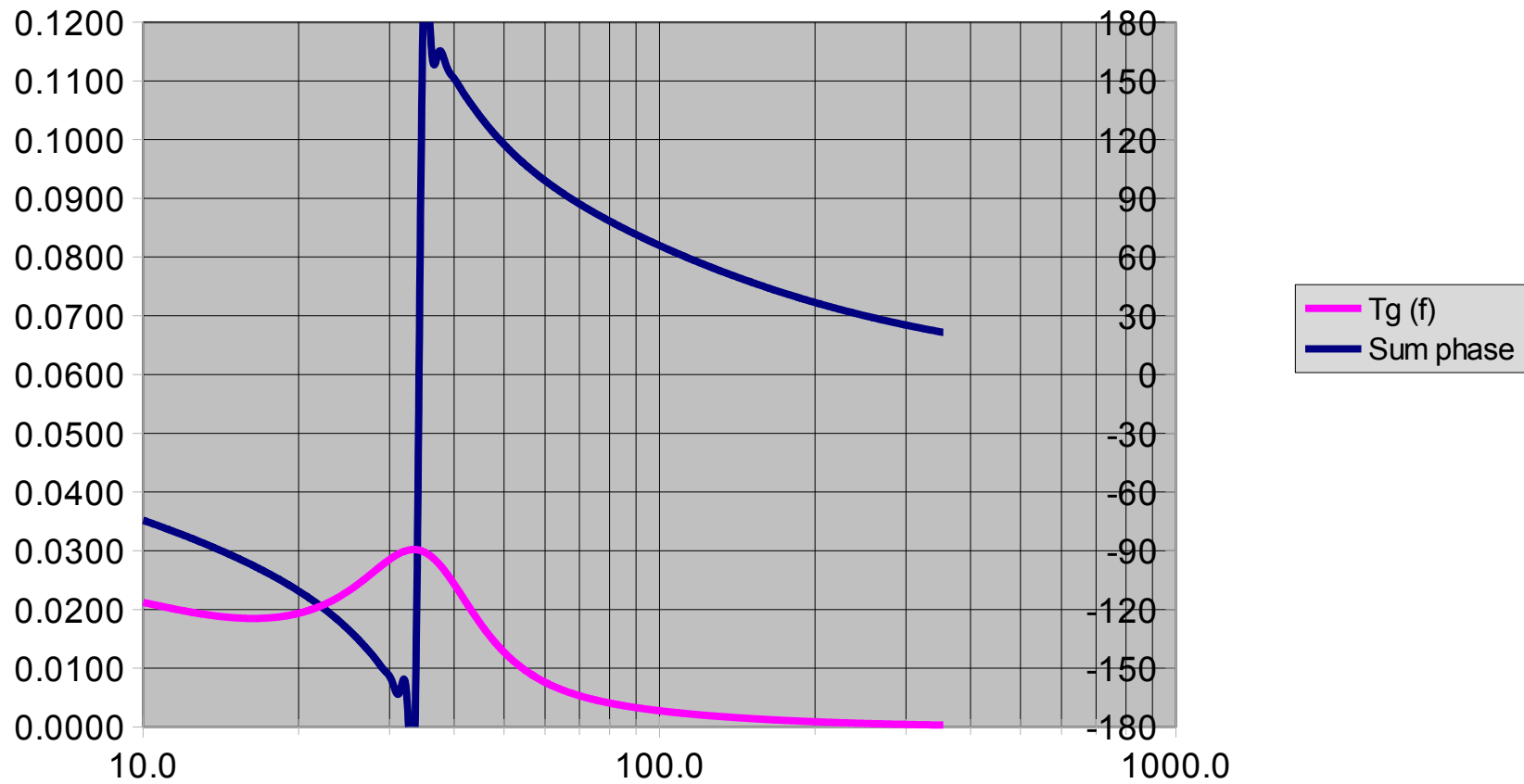
Excursion [mm]



Port Velocity [m/s]



Group Delay [s], Phase [degrees]



Dual Voice Coil Parameter guide

Coils Parallel		Coils Series		Single Coil (other open)		Rs= Resistive Damped
Fs	30.0 Hz	Fs	30.0 Hz	Fs	30.0 Hz	0
Qts	0.230	Qts	1.192	Qts	1.492	Fs
Qes	0.260	Qes	2.968	Qes	5.935	30.0 Hz
Vas	47.9 liters	Vas	47.9 liters	Vas	47.9 liters	Qts
Re	5.50 Ohms	Re	22 Ohms	Re	11 Ohms	2.625
Dia	13.1 cm	Dia	13.1 cm	Dia	13.1 cm	Qes
Xmax	6.5 mm	Xmax	6.5 mm	Xmax	6.5 mm	5.935
Pe_max	70.0 Watts	Pe_max	70 Watts	Pe_max	35 Watts	Vas
Le	0.00020 Henrys	Le	0.0004 Henrys	Le	0.0002 Henrys	Re
						11 Ohms
						Dia
						13.1 cm
						Xmax
						6.5 mm
						Pe_max
						35 Watts
						Le
						0.00020 Henrys
Qms	1.99	Qms	1.99	Qms	1.99	Qms
Sd	0.0135 m^2	Sd	0.0135 m^2	Sd	0.0135 m^2	4.71
Mmd	0.0150 kg	Mmd	0.1711 kg	Mmd	0.1711 kg	Sd
Cms	0.001877 m/N	Cms	0.001877 m/N	Cms	0.000128 m/N	0.0135 m^2
Bl	7.73 Tesla*m	Bl	15.46 Tesla*m	Bl	7.73 Tesla*m	Mmd
Rms	1.42 kg/s	Rms	1.42 kg/s	Rms	1.42 kg/s	0.1711 kg
no	90.44 dB/2.83V	no	73.85 dB/2.83V	no	73.85 dB/2.83V	Cms
no	88.81 dB/1W	no	78.24 dB/1W	no	75.23 dB/1W	0.000128 m/N
						Bl
						7.73 Tesla*m
						Rms
						6.85 kg/s
						no
						73.85 dB/2.83V
						no
						75.23 dB/1W

Woofer parameters

Fs 30 Hz
 Qts 0.23
 Qes 0.26
 Vas 47.9 Liters
 Re 5.5 Ohms
 Dia 13.1 cm
 Xmax 6.5 mm
 Pe_max 70 Watts
 Le 0.0002 Henrys

Ql 15 Dvent_cm
 Qb 30 Nports
 Qp 30 Lvent
 Vb 34.5
 Fb 38.3
 Qcomb 7.500

Calculated parameters

Sd 0.0135 m²
 Cms 0.001877 m/N
 Mdt 0.0150 kg
 Bl 7.73 T*m
 no 90.44 dB/2.83V
 no 88.81 dB/1W
 Qms 1.993333

alpha 1.388
 h 1.277

1/Ql 0.066667
 1/Qb 0.033333
 1/Qp 0.033333
 1/QbQl 0.002222
 1/QlQp 0.002222
 1/QbQp 0.001111
 1/QlQbQp 7.4E-005
 B5 1.002222 1.002222
 B4 4.564056 0.709355
 B3 4.766178 4.111114
 B2 7.331574 1.048883
 B1 1.6335 1.6335

Sealed Box specify Q or V

Lossless Box

Qtc 0.707106
 Vb 5.7
 Fb 92.2
 Vb 50
 Qtc 0.32
 Fb 42.0

Small Margolis method

Gamma 1.2 1.2=stuffed, 1.0=unstuffed
 Qa 5 5=stuffed, 10=unstuffed

Qtc 0.7071
 Vb 3.4
 Fb 107.4 166.9339

Vb 70
 Qtc 0.27
 Fb 37.6

Cubic feet Liters

1.2 33.9804

Liters cubic feet
 60 2.118869

Vented Box

Small-Marg
 Vb
 Fb

Keele
 Vb
 Fb

Patrick Sny
 Factor
 Vb
 Fb

Minimum V
 0.0579
 5.79
 57.9
 2.28

Length
 11.38229

x

golis

7.500105

51.65494

10.58244

47.29503

yder

2.435 (1 to 8) 4, 5.7, 8 are common values

7.884627 Factor~= $18.5 \cdot \text{qts} - 1.82$

50.86957

/ent Diameter

meters

cm

mm

inches

cm