

### Woofer parameters

Fs	34.0	Hz
Qts	0.834	
Qes	0.90	0.377465
Vas	50.7	Liters
Re	3	Ohms
Dia	26	cm
Xmax	9	mm
Pe_max	150	Watts
Le	0.0015	Henrys
P_input	50	Watts@8ohms
V_in_peak	28.28	Volts

### Woofer Calculated parameters

Sd	0.05309	m^2
Cms	0.000128	m/N
Mdt	0.1711	kg
Bl	11.04	T*m
no	89.56	dB/2.83V
no	85.30	dB/1W
Qms	11.373	
P_dissipation	133.3	Watts
Cone Sag	0.21	mm

21.945234

### Box Parameters

Ql	15.0	
Qb	30.0	
Qp	30.0	
Vb	57	
Fb	33	
# ports	2	
Vent Diameter	7.62	cm
Vent Length	36.28	cm
Sp	0.009121	m^2
	91.2073462375	
alpha	0.889	
h	0.971	
Qcomb	7.500	

### \*If sealed

lossless fc	46.7	
losslessQt	1.15	
Damped Qt	1.67	
fs/Qes	37.78	
Vent Diameter	3.00	in
Vent Length	14.28	in

### Box Dimensions

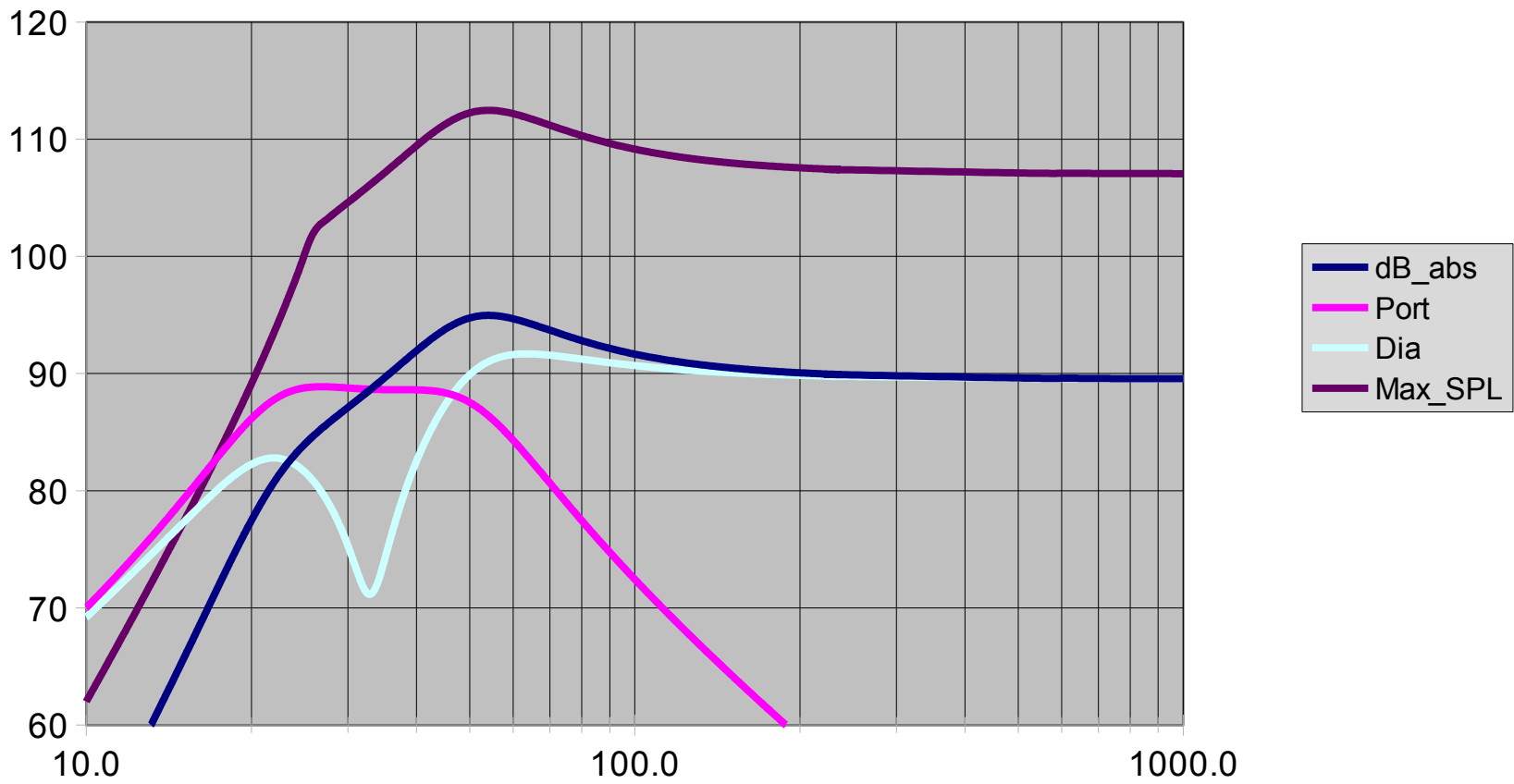
Cube	38.485011	cm
	15.152	in

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	1.362	0.248156
B3	2.992	2.848205
B2	1.290	0.241278
B1	0.944	0.944135

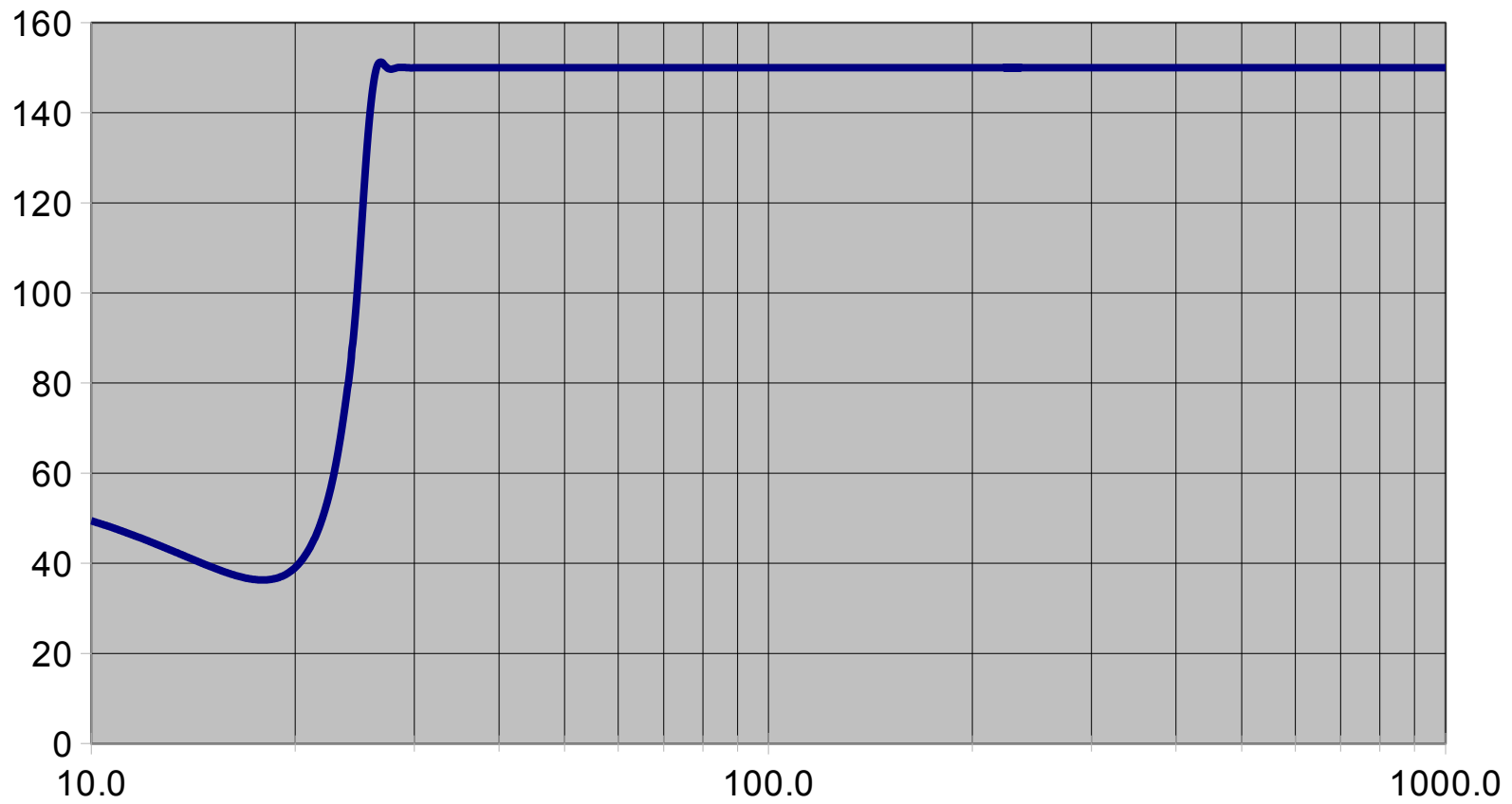
Splmax	120	
upmax	17	
Spmin	427.80749	

-4.69897

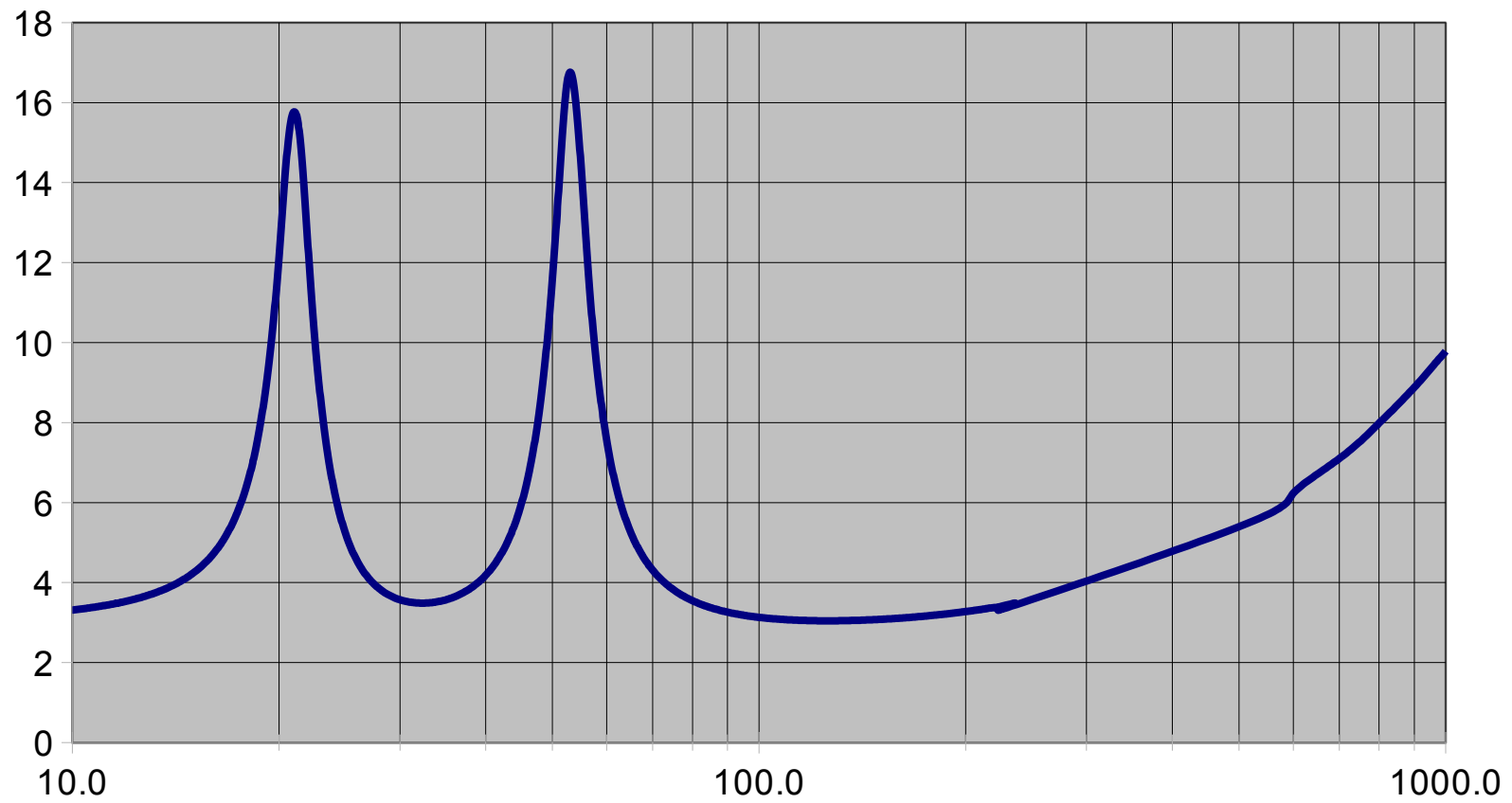
## SPL Max and 2.83V [dB]



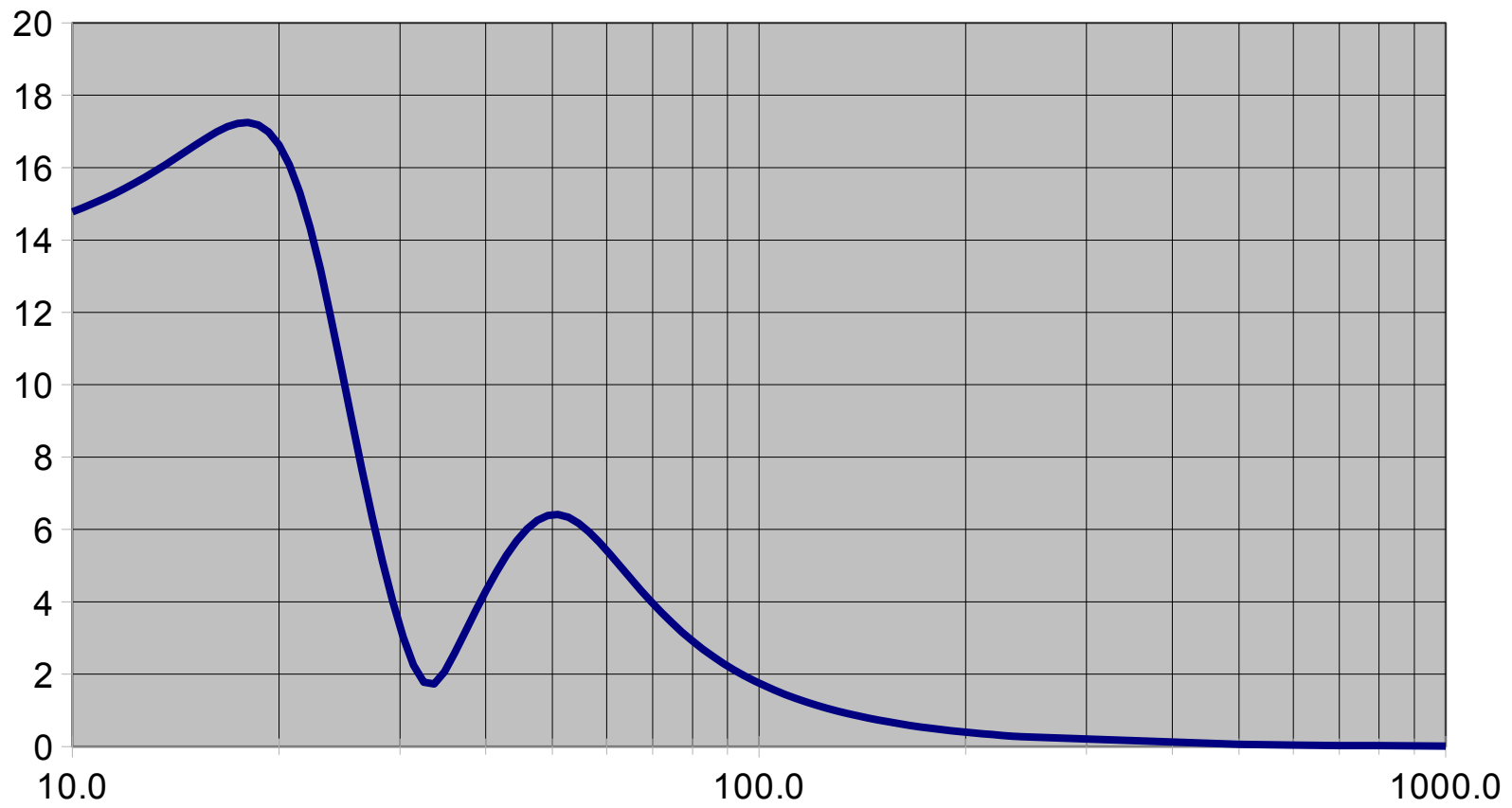
## Excursion Limited Power [Watts]



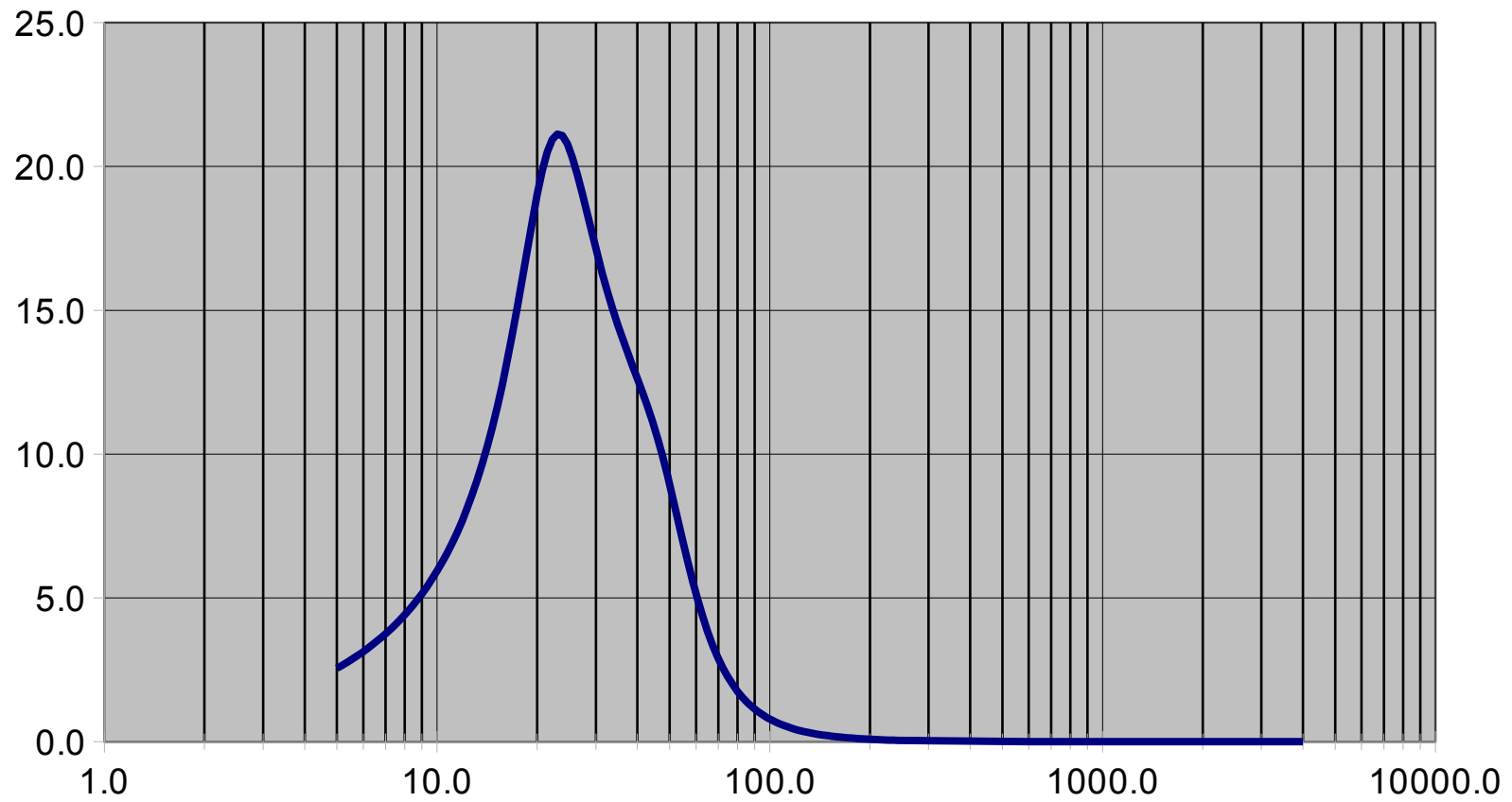
# Impedance [Ohms]



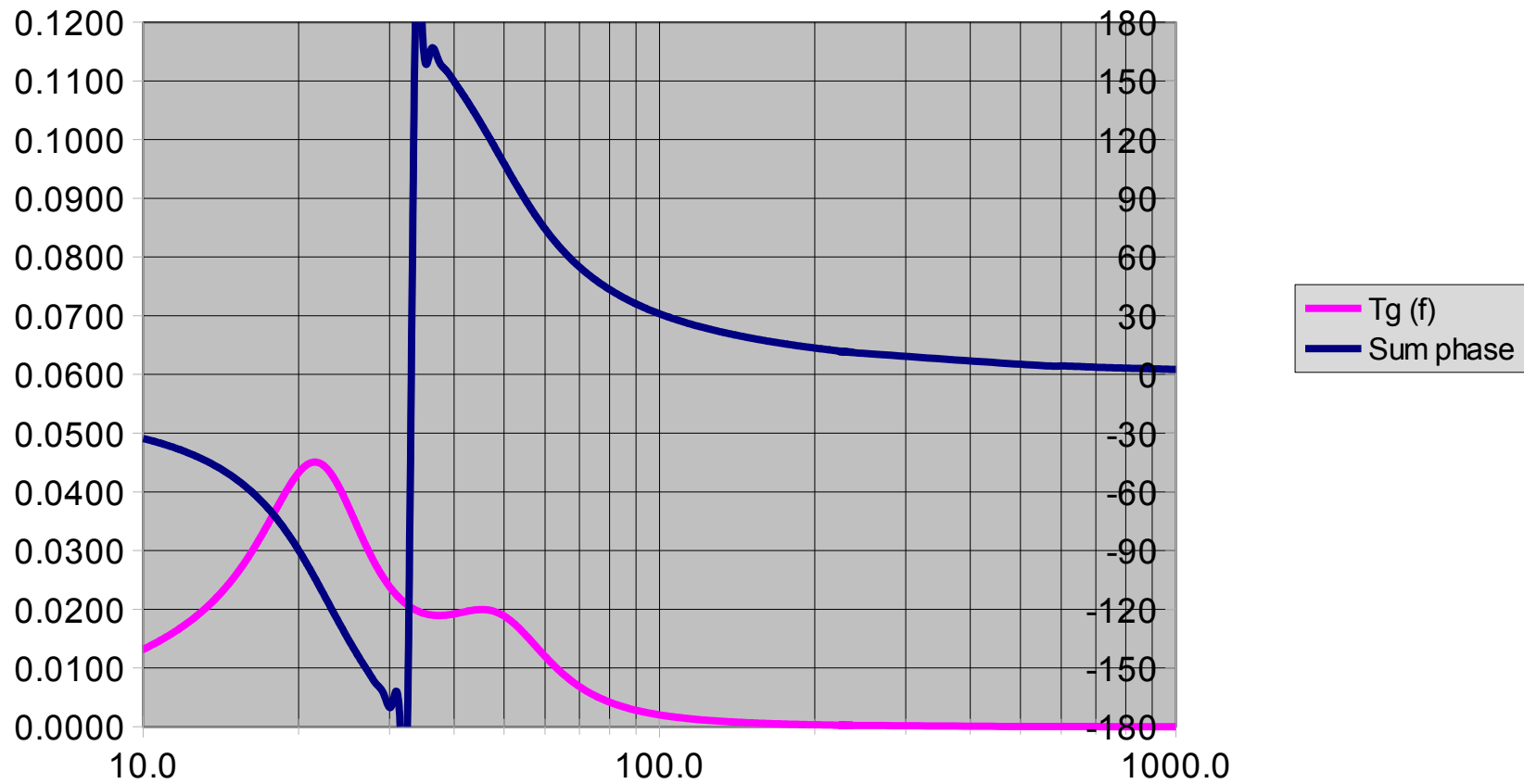
# Excursion [mm]



# 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 0	
Fs	34.0 Hz	Fs	34.0 Hz	Fs	34.0 Hz	Fs	34.0 Hz
Qts	0.834	Qts	0.834	Qts	1.554	Qts	0.834
Qes	0.900	Qes	0.900	Qes	1.800	Qes	1.800
Vas	50.7 liters	Vas	50.7 liters	Vas	50.7 liters	Vas	50.7 liters
Re	3.00 Ohms	Re	12 Ohms	Re	6 Ohms	Re	6 Ohms
Dia	26.0 cm	Dia	26 cm	Dia	26 cm	Dia	26.0 cm
Xmax	9.0 mm	Xmax	9.0 mm	Xmax	9.0 mm	Xmax	9.0 mm
Pe_max	150.0 Watts	Pe_max	150 Watts	Pe_max	75 Watts	Pe_max	75 Watts
Le	0.00150 Henrys	Le	0.003 Henrys	Le	0.0015 Henrys	Le	0.00150 Henrys
Qms	11.37	Qms	11.37	Qms	11.37	Qms	1.55
Sd	0.0531 m^2	Sd	0.0531 m^2	Sd	0.0531 m^2	Sd	0.0531 m^2
Mmd	0.1711 kg	Mmd	0.1711 kg	Mmd	0.1711 kg	Mmd	0.1711 kg
Cms	0.000128 m/N	Cms	0.000128 m/N	Cms	0.000128 m/N	Cms	0.000128 m/N
Bl	11.04 Tesla*m	Bl	22.08 Tesla*m	Bl	11.04 Tesla*m	Bl	11.04 Tesla*m
Rms	3.21 kg/s	Rms	3.21 kg/s	Rms	3.21 kg/s	Rms	23.52 kg/s
no	89.56 dB/2.83V	no	83.54 dB/2.83V	no	83.54 dB/2.83V	no	83.54 dB/2.83V
no	85.30 dB/1W	no	85.30 dB/1W	no	82.29 dB/1W	no	82.29 dB/1W



### Woofer parameters

Fs **34** Hz  
 Qts **0.834**  
 Qes **0.9**  
 Vas **50.7** Liters  
 Re **3** Ohms  
 Dia **26** cm  
 Xmax **9** mm  
 Pe\_max **150** Watts  
 Le **0.0015** Henrys

Ql **15** Dvent\_cm  
 Qb **30** Nports  
 Qp **30** Lvent  
 Vb **34.5**  
 Fb **38.3**  
 Qcomb 7.500

### Calculated parameters

Sd 0.0531 m<sup>2</sup>  
 Cms 0.000128 m/N  
 Mdt 0.1711 kg  
 Bl 11.04 T\*m  
 no 89.56 dB/2.83V  
 no 85.30 dB/1W  
 Qms 11.37273

alpha 1.470  
 h 1.126

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 1.395471 0.28189  
 B3 3.925367 3.75839  
 B2 1.730347 0.317285  
 B1 1.271756 1.271756

### Sealed Box specify Q or V

#### Lossless Box

Qtc **0.707106**  
 Vb -180.3  
 Fb 28.8  
 Vb **50**  
 Qtc 1.18  
 Fb 48.3

#### Small Margolis method

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

Qtc **0.7071**  
 Vb -1699.7  
 Fb 33.6 52.17518

Vb **70**  
 Qtc 0.87  
 Fb 43.1

#### 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  
 0.1353  
 13.53  
 135.3  
 5.33

Length  
 75.30582

x

golis

557.0394

16.99843

451.6955

16.8143

yder

13.212 (1 to 8) 4, 5.7, 8 are common values

542.5772 Factor~= $18.5 \cdot \text{qts} - 1.82$

15.89928

/ent Diameter

meters

cm

mm

inches

cm