Mono-Block Tube 1F Amp open-loop Bode plot 4.5.09

$V_{in(p-p)} = 100mV$

$R_L = 9.6\ \Omega$

f(Hz)	Vout(p-p)	phase(deg) lead = +, lag = −
4	0.700	-86.4
5	0.910	-90
6	~~0.960~~ 1.145	~~-102~~ -86.4
7	~~0.980~~ 1.365	~~-101~~ -88.2
8	~~0.98~~ 1.60	~~-154~~ -86.4
9	~~1.30~~ 1.820	~~-145.8~~ ~~-81~~ -97.2
10	~~1.60~~ 2.04	~~-135~~ -72
20	~~2.85~~ 4.14	~~-90~~ -72
30	5.96	~~-81~~ -64.8
40	7.64	~~-72~~ ~~-57~~
50	8.94	~~-62~~ -54
60	10.08	~~-59.4~~ -54
70	10.82	~~-50.4~~ -44.1
80	11.56	~~-40.2~~ -43.2
90	12.08	-38.28
100	12.46	-36
200	14.34	-14.4
300	14.34	-5.4
400	14.34	0
500	14.0	+3.6
600	14.0	+10.8
700	14.0	+12.6
800	13.68	+17.28
900	13.50	+25.92
1k	13.06	+28.8
2k	10.22	+50.4
3k	7.86	+64.8
4k	6.16	+72
5k	5.16	+72
6k	4.36	+75.6
7k	3.82	+75.6
8k	3.31	+86.4
9k	2.96	+81
10k	2.66	+90
20k	1.30	+97.2
30k	0.820	+108
40k	0.517	+115.2
50k	0.368	+117
60k	~~0.294~~	+108
70K	0.253	+113.4
80k	0.242	+115.2
90k	0.191	+121.5
100k	0.151	+126
200K	0.052	+126
300k	0.023	+108
400k		
500k		

Mono-Block Tube Audio amp. Closed-Loop Bode Plot

$V_{in,p-p} = 600\,mV$

$R_L = 9.6\,\Omega$

f (Hz)	$V_{out,p-p}$	Phase (deg) Lead +, Lag −
4	4.86	−72
5	5.36	−54
6	5.46	−43.2
7	5.33	−37.8
8	5.36	−28.8
9	5.46	−25.92
10	5.49	−27
20	5.73	−14.4
30	5.73	−10.8
40	5.73	−7.2
50	5.73	−9
60	5.73	−10.8
70	5.73	−6.3
80	5.73	−7.2
90	5.73	−3.24
100	5.73	−3.6
200	5.73	0
300	5.73	0
400	5.73	0
500	5.73	0
600	5.73	0
700	5.73	0
800	5.73	0
900	5.73	0
1k	5.75	0
2k	5.75	0
3k	5.75	+2.16
4k	5.75	+7.2
5k	5.75	+7.2
6k	5.75	+9.72
7k	5.75	+12.6
8k	5.75	+14.4
9k	5.66	+16.2
10k	5.66	+18
20k	5.28	+39.6
30k	4.68	+64.8
40k	3.58	+79.2
50k	2.53	+90
60k	1.955	+91.8
70k	1.705	+94.5
80k	1.60	+100.8
90k	1.270	+113.4
100k	0.988	+115.2
200k	0.335	+129.6
300k	0.177	+108
400k		
500k		

Peak output power:

$f = 1\,kHz$

$R_L = 9.6\,\Omega$

$V_{pp} = 53.1$ → $P_{peak} = 293.7\,W$

THD test

$f = 1\,kHz$

$\%THD = 0.675\,\%$