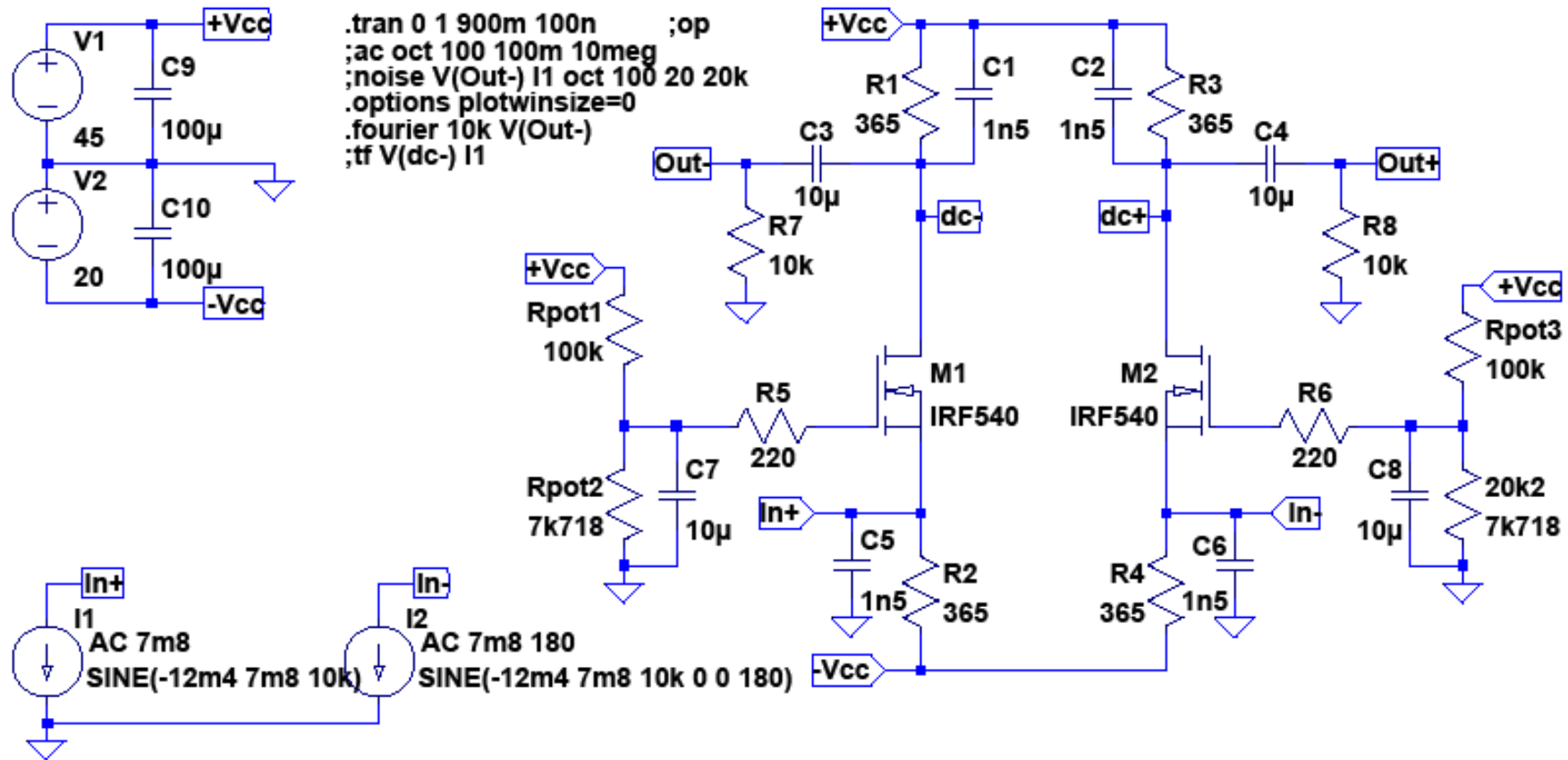


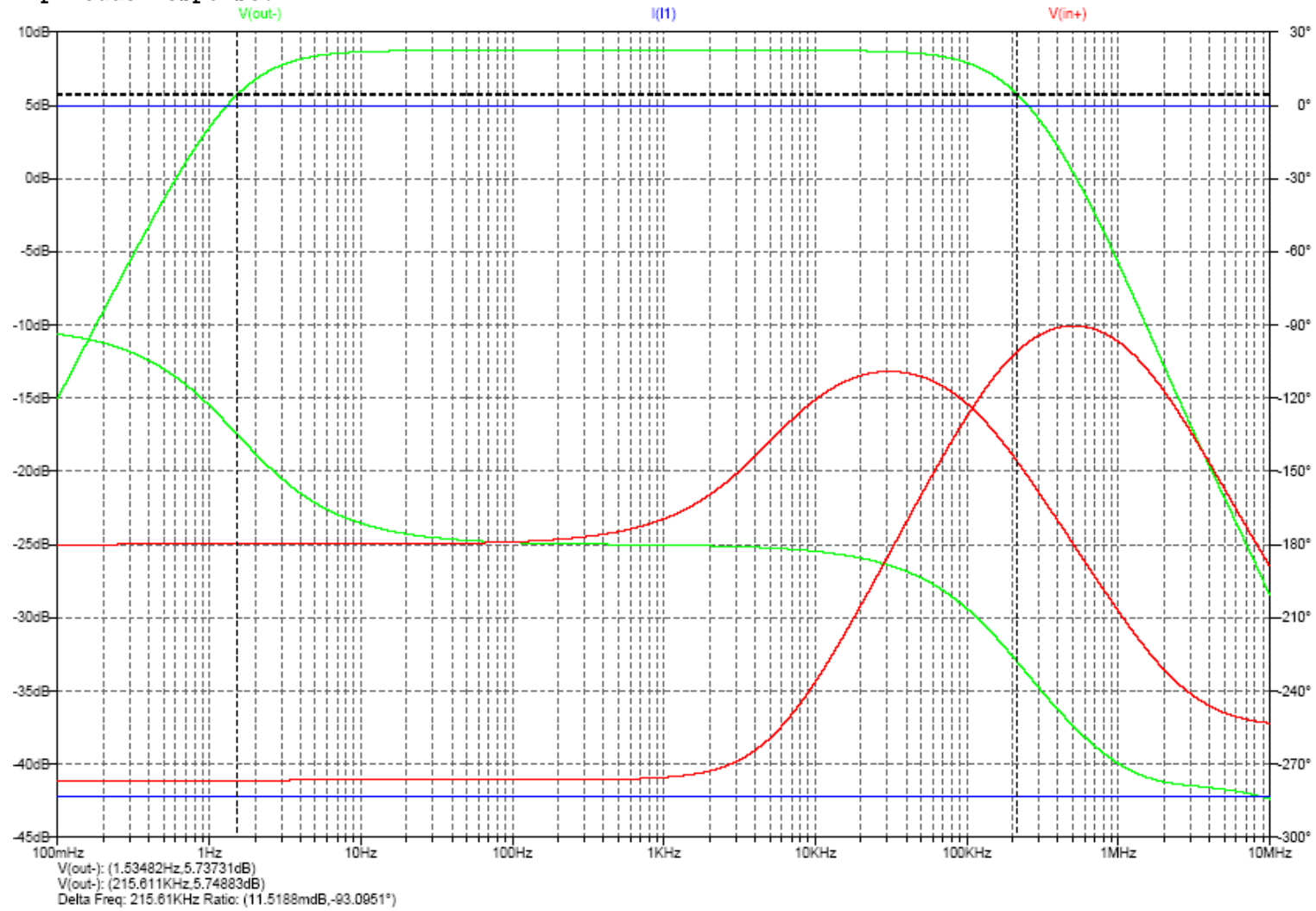
D1 simple I-V IRF540

Schematics and Simulations



Output Voltage: 1.934V_{rms} +8.75dBV

Amplitude response:



Due to peaking input impedance the input voltage develops a peaking response around 500kHz too.

Fourier-Analysis @0dBfs:

DC component:1.12974e-008[V]

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	THD in %	THD in dB	Phase [degree]	Normalized Phase [deg]
1	1.000e+04	2.735e+00	1.000e+00	100	0	177.23°	0.00°
2	2.000e+04	1.936e-04	7.079e-05	0.007079	-83.0	94.64°	-82.60°
3	3.000e+04	9.077e-06	3.318e-06	0.0003318	-109.6	-172.65°	-349.88°
4	4.000e+04	5.296e-07	1.936e-07	0.00001936	-134.3	-81.11°	-258.35°
5	5.000e+04	3.273e-08	1.196e-08	0.000001196		11.27°	-165.96°
6	6.000e+04	4.235e-09	1.548e-09	0.000000155		92.30°	-84.93°
7	7.000e+04	1.032e-08	3.774e-09	0.000000377		139.60°	-37.63°
8	8.000e+04	4.354e-09	1.592e-09	0.000000159		-163.89°	-341.12°
9	9.000e+04	6.225e-09	2.276e-09	0.000000228		-158.19°	-335.43°

Total Harmonic Distortion: **0.007087% -83.0dB****Fourier-Analysis @-6dBfs:**

DC component:1.30377e-007

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	THD in %	THD in dB	Phase [degree]	Normalized Phase [deg]
1	1.000e+03	1.369e+00	1.000e+00	100	0	179.88°	0.00°
2	2.000e+03	4.633e-05	3.384e-05	0.003384	-89.4	91.08°	-88.80°
3	3.000e+03	1.058e-06	7.731e-07	0.00007731	-122.2	-178.38°	-358.26°
4	4.000e+03	3.050e-08	2.228e-08	0.000002228	-153.2	-88.90°	-268.79°
5	5.000e+03	5.013e-09	3.662e-09	0.000000366		174.82°	-5.07°
6	6.000e+03	4.017e-10	2.935e-10	0.000000029		86.34°	-93.55°
7	7.000e+03	2.268e-09	1.657e-09	0.000000166		2.83°	-177.06°
8	8.000e+03	6.810e-10	4.975e-10	0.00000005		-5.76°	-185.65°
9	9.000e+03	3.146e-09	2.299e-09	0.000000023		26°	-184.14°

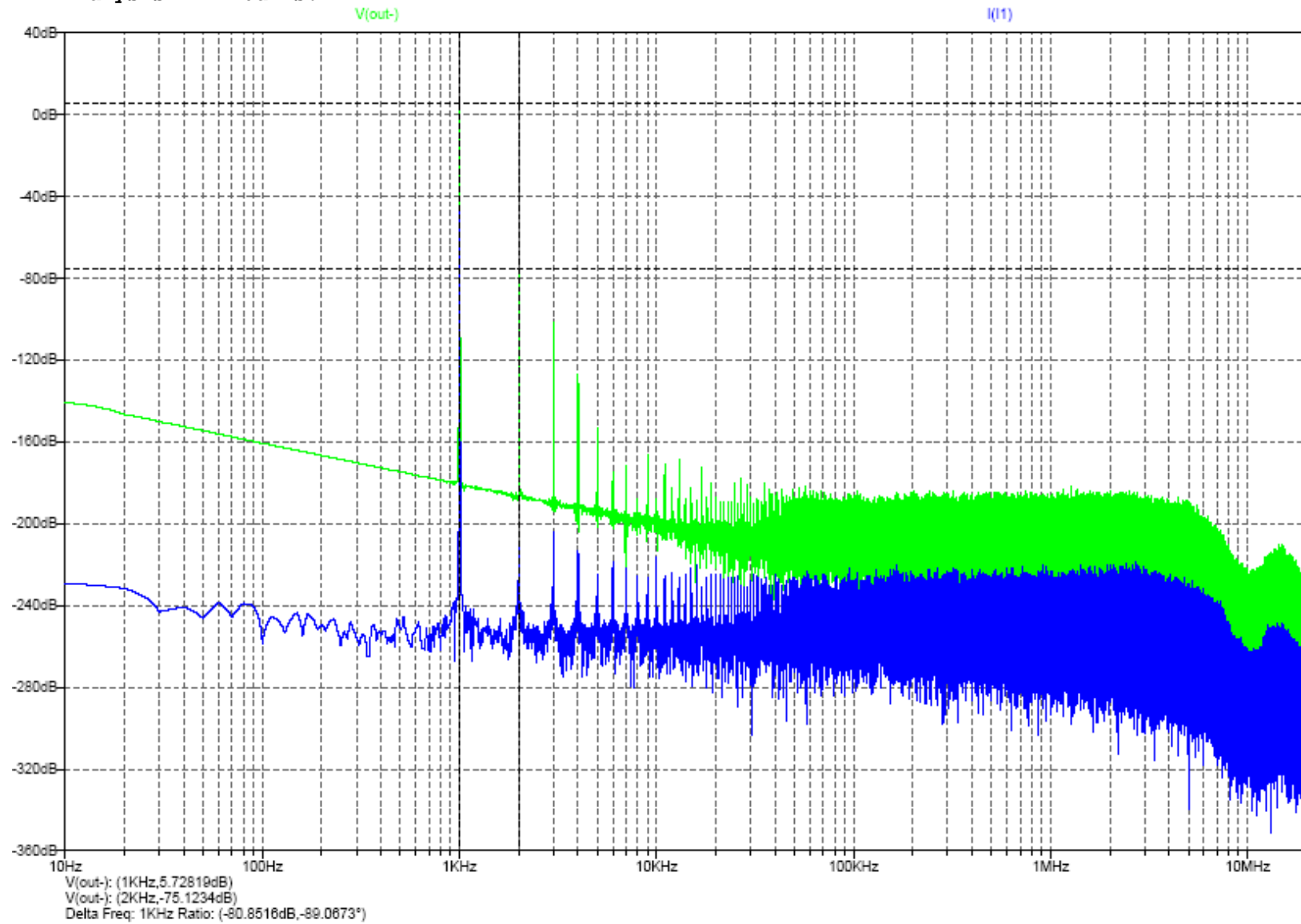
Total Harmonic Distortion: **0.003385% -89.4dB****Fourier-Analysis @-12dBfs:**

DC component:6.50395e-008

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	THD in %	THD in dB	Phase [degree]	Normalized Phase [deg]
1	1.000e+03	6.844e-01	1.000e+00	100	0	179.88°	0.00°
2	2.000e+03	1.156e-05	1.689e-05	0.001689	-95.4	91.08°	-88.80°
3	3.000e+03	1.301e-07	1.901e-07	0.00001901	-134.4	-178.31°	-358.20°
4	4.000e+03	2.119e-09	3.096e-09	0.00000031		-86.56°	-266.45°
5	5.000e+03	2.222e-09	3.247e-09	0.00000032		175.34°	-4.54°

Total Harmonic Distortion: **0.001689% -95.4dB**

FFT Analysis 1kHz 0dBfs:



Transfer function:

-363.879 mV/mA

Input impedance: Output impedance:

1.12Ω

365Ω

Noise:

over BW: 20Hz-20kHz

0.545μV -125,3dBV

