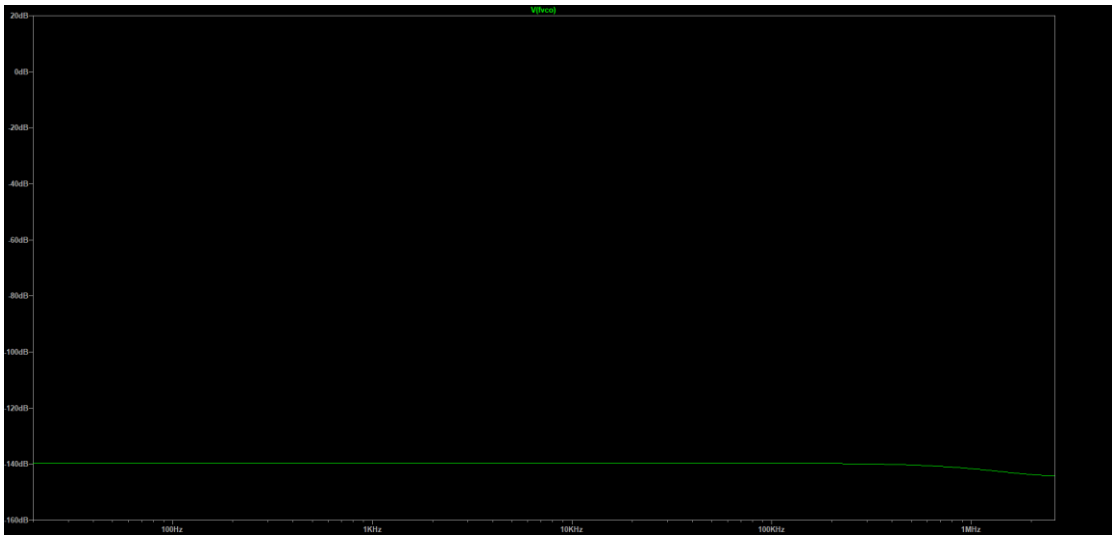
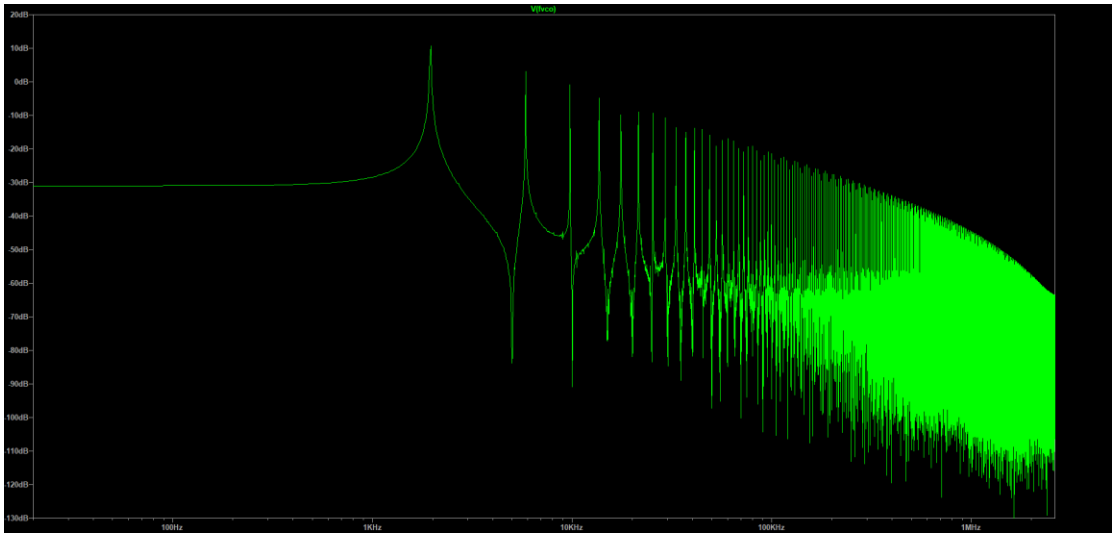
1. On peut trouver f0 = $7.5*10^4$ HZ, fmax = 2f0 = $1.5*10^5$ HZ, Donc la plage est environ $1.5*10^5$HZ

2. V1 = 0V

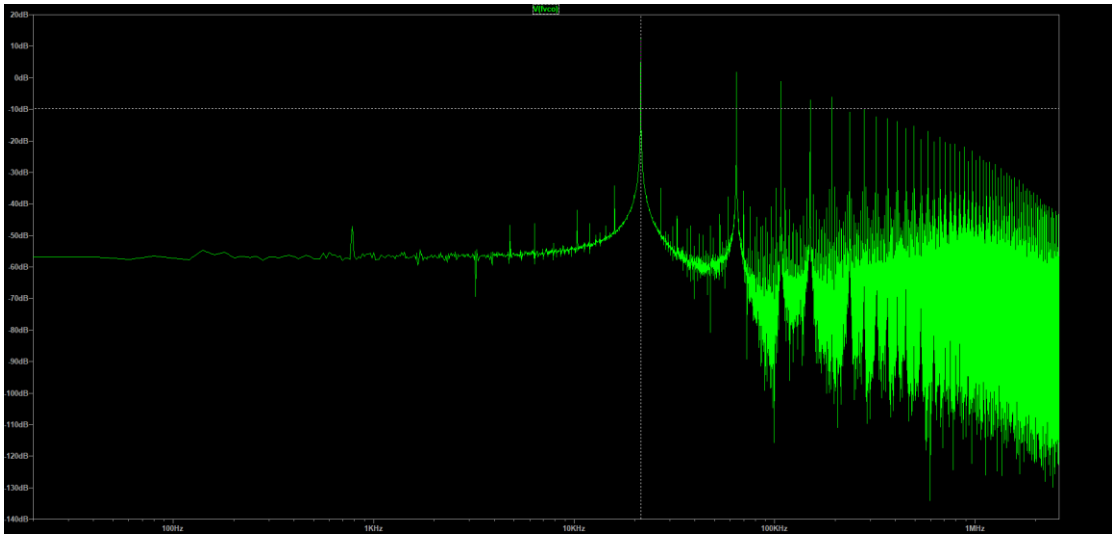


V1 = 1V



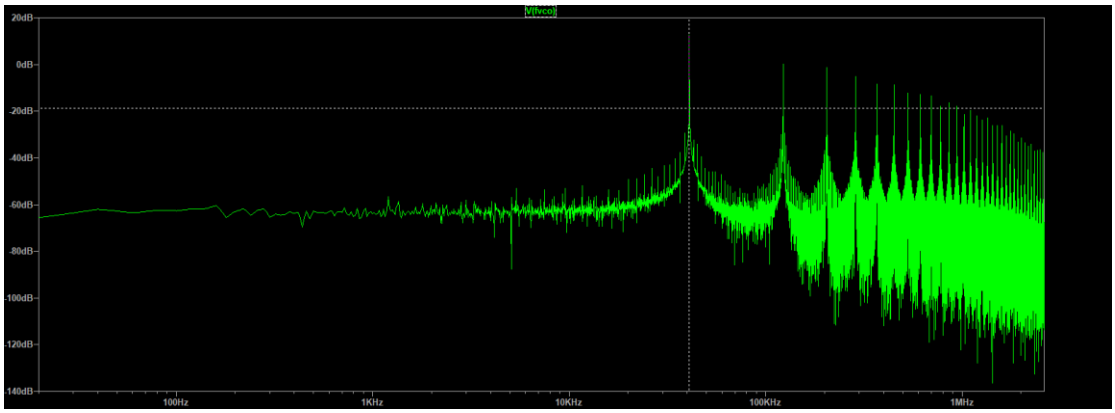
F= 1.9529389KHz

V1 = 2V



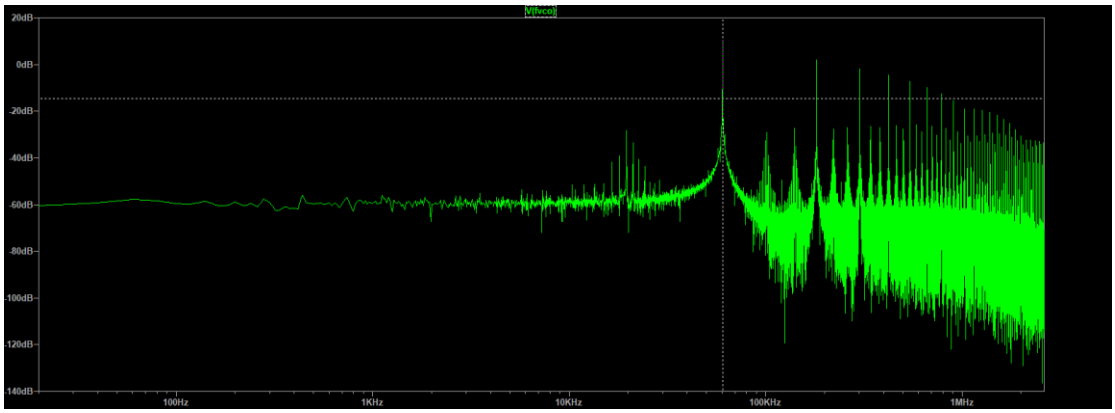
F = 21.521661KHz

V1 = 3V



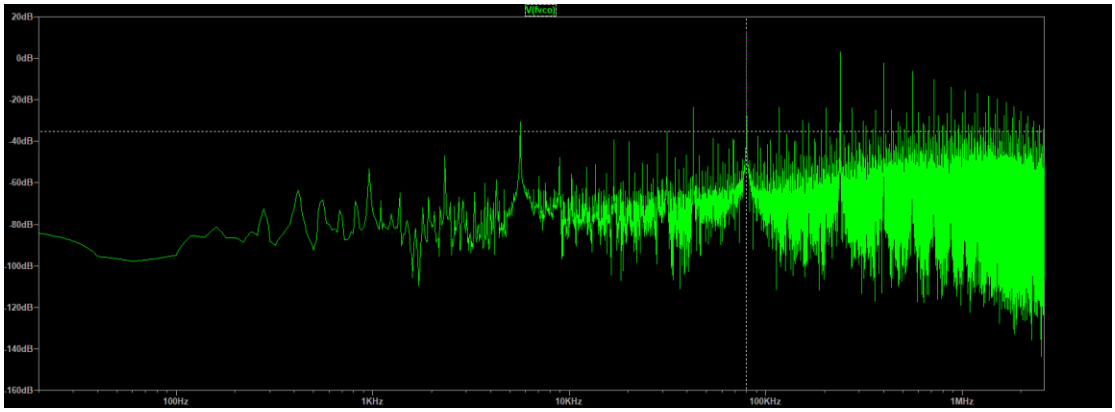
F = 40.843363KHz

V1 = 4V



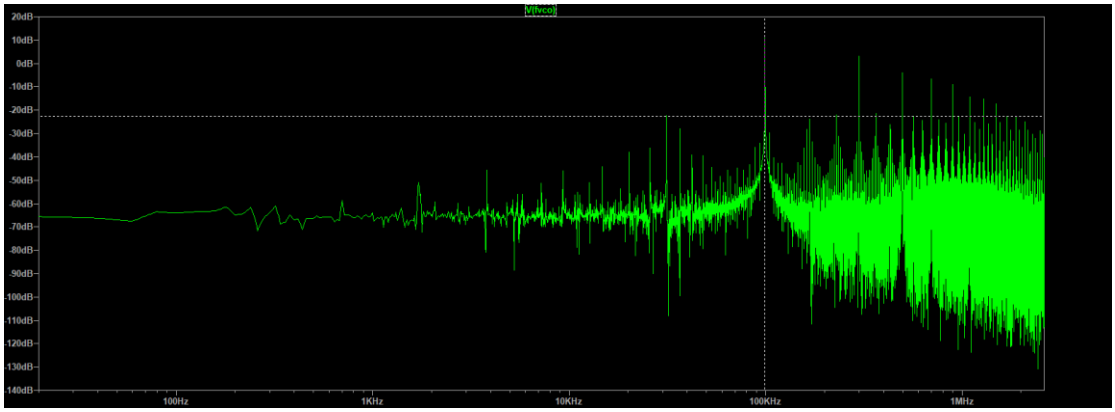
F = 60.639141KHz

V1 = 5V



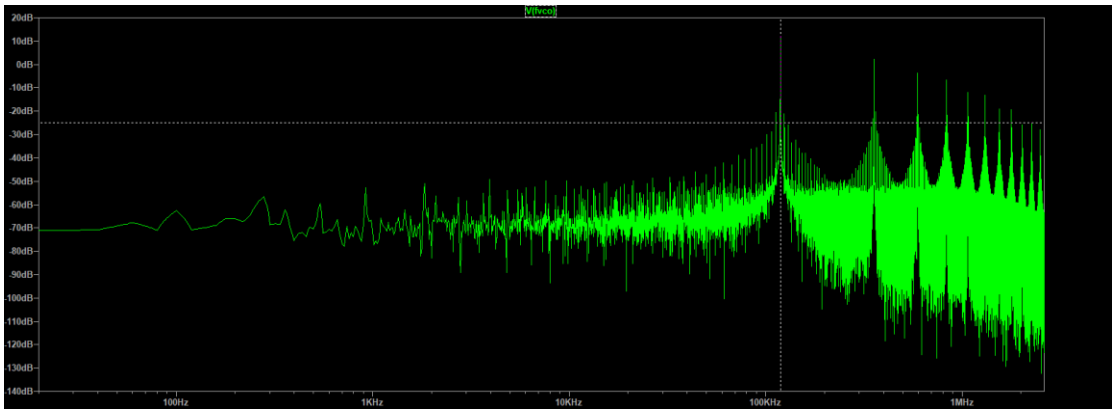
F = 79.771385KHz

V1 = 6V



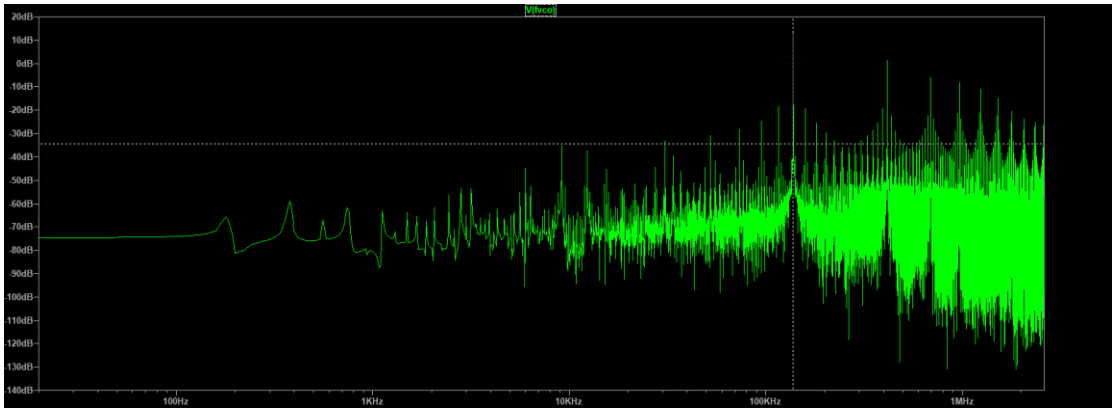
F = 99.178873KHz

V1 = 7V



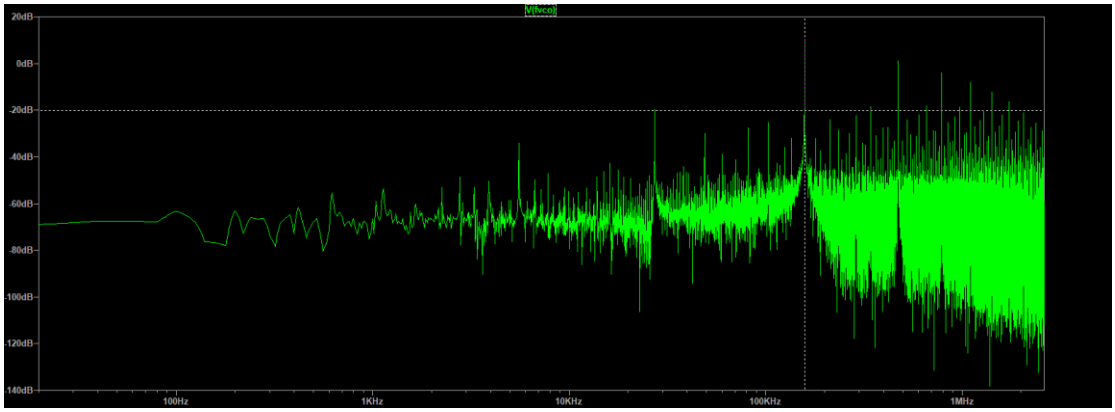
F = 119.39441KHz

V1 = 8V



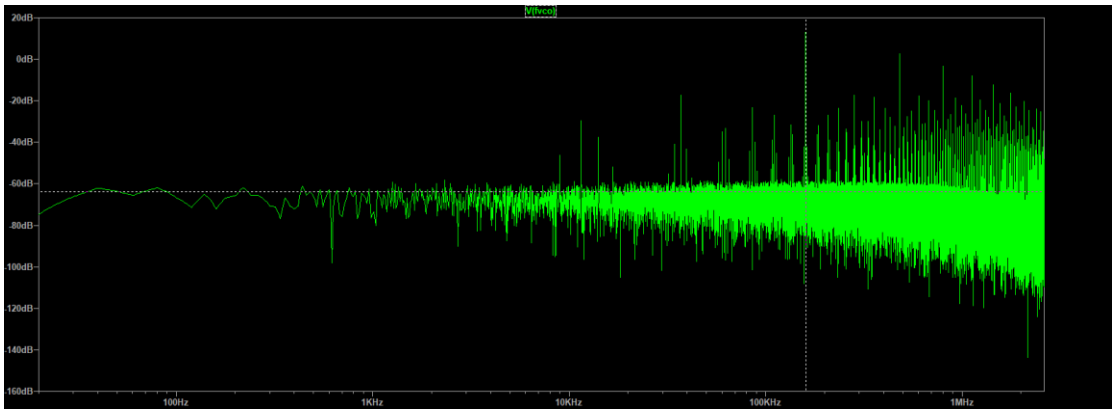
F = 138.04862KHz

V1 = 9V



F = 158.33688KHz

V1 = 10V



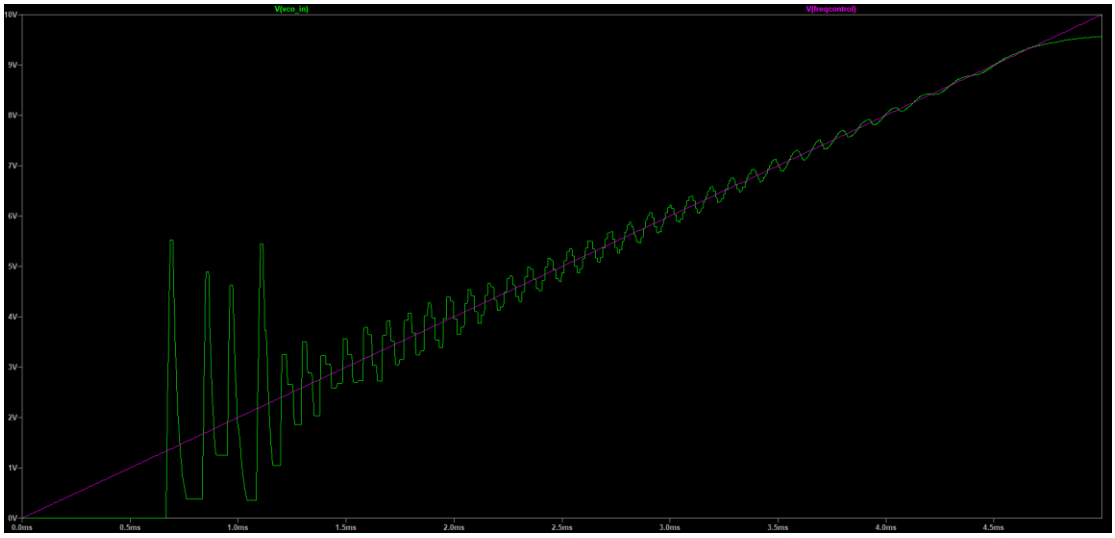
F = 160.91174KHz

On peut trouver que quand 0<V1<10, la relation de F et V1 satisfait que F = 20*(V1-1), et quand V1>9, F est toujours 160KHZ. Donc le VCO fonctionne bien.

3. Pc2

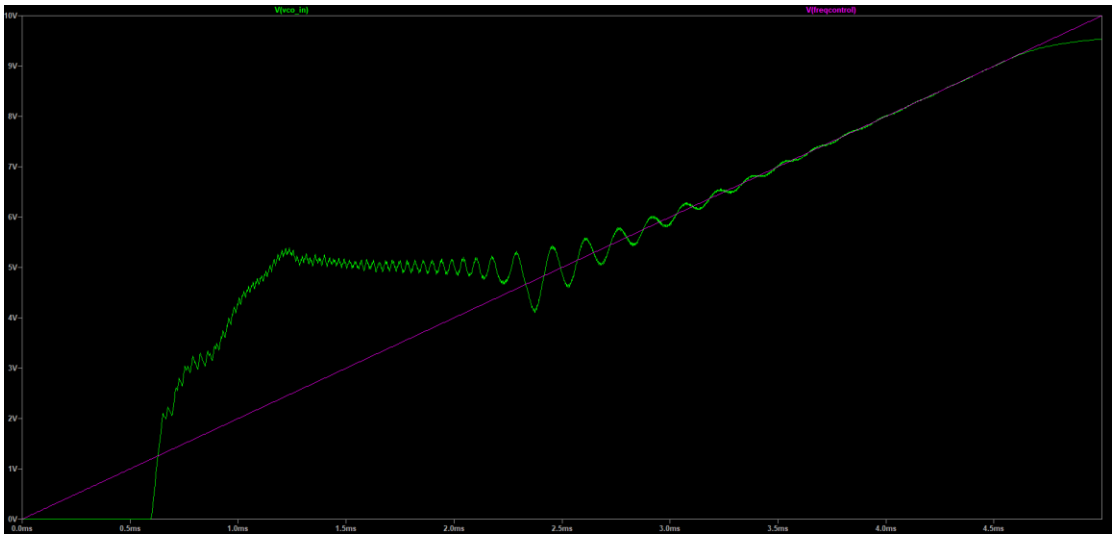
C2 = 100nF

C2 = 10nF

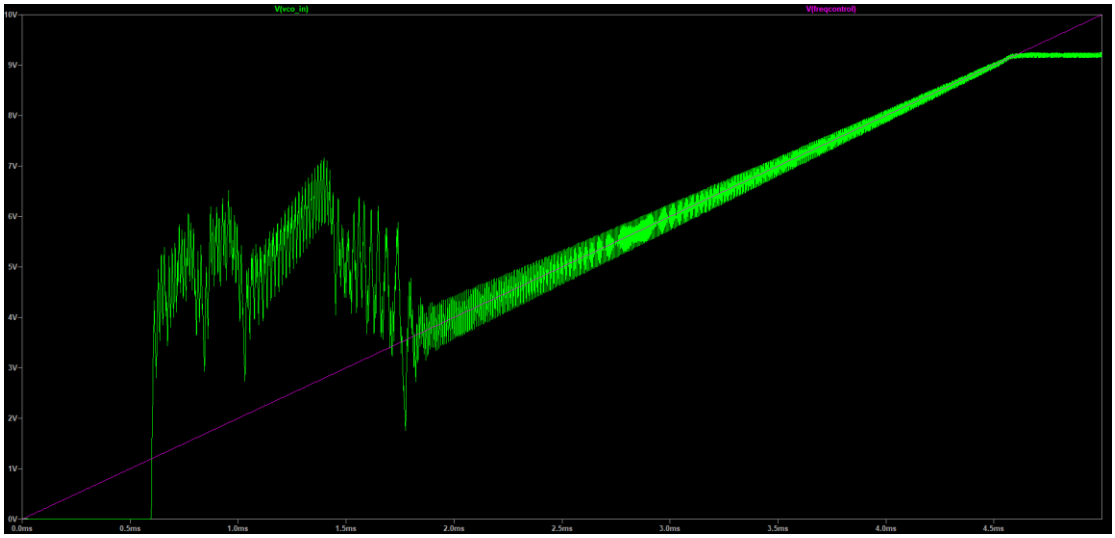


PC1

C2 = 100nF

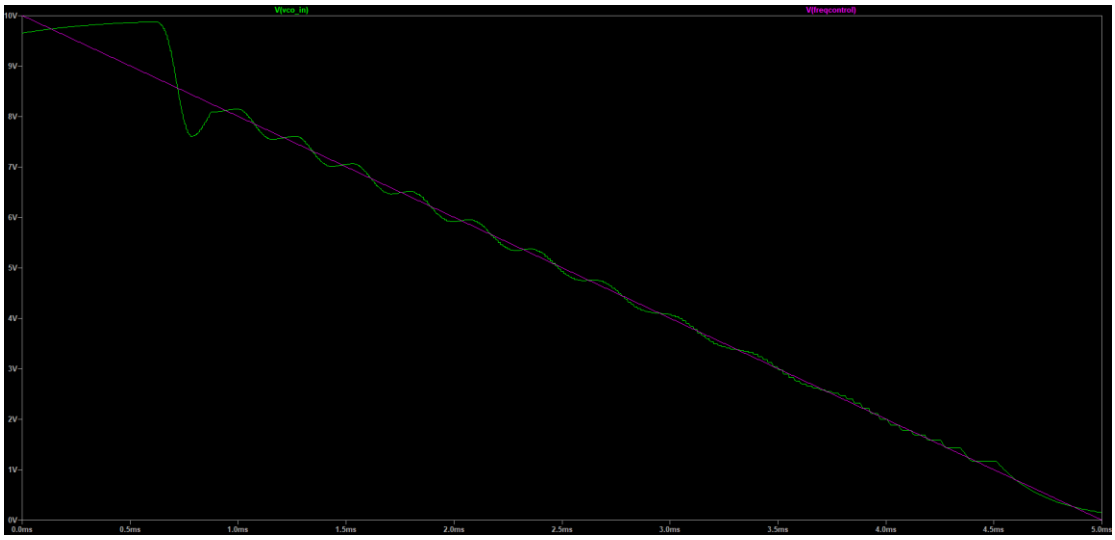


C2 = 10nF

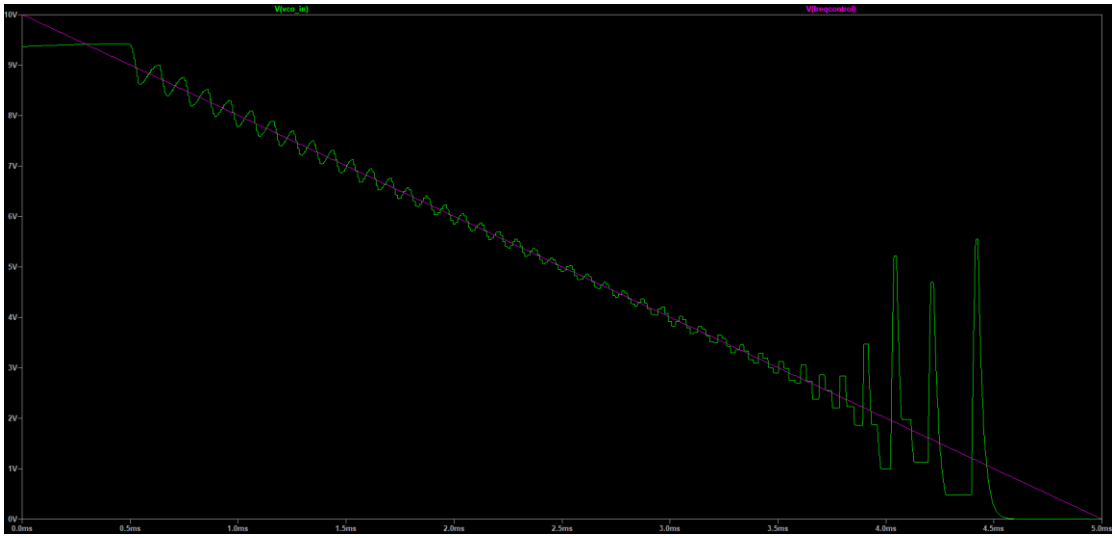


4. Pc2

C2 = 100nF

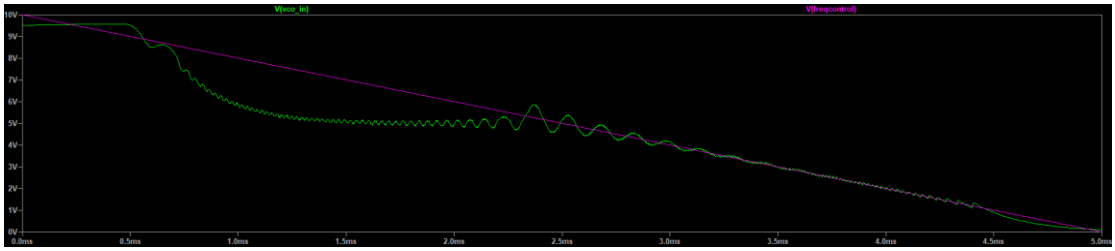


C2 = 10nF

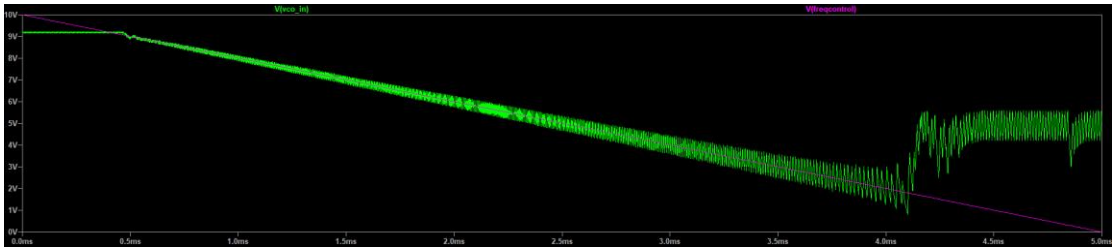


Pc1

C2 = 100nF

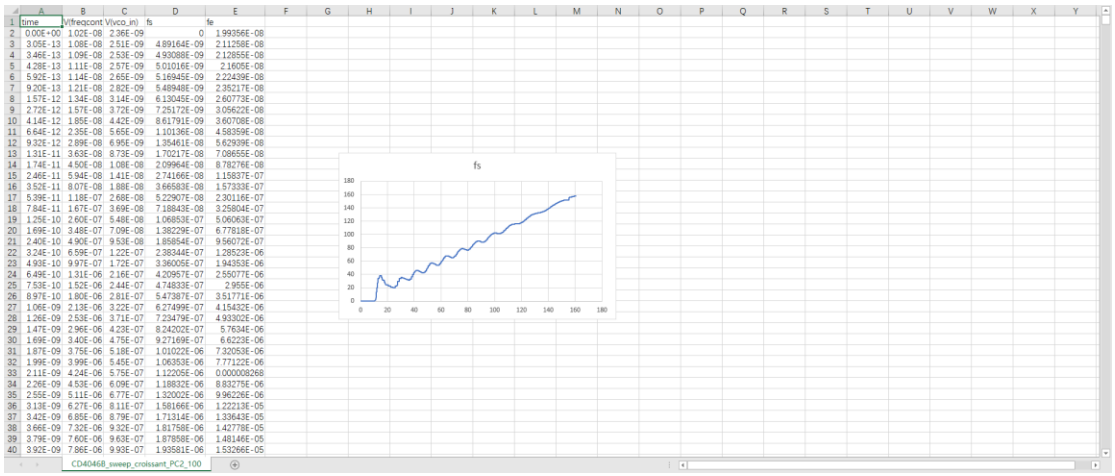


C2 = 10nF

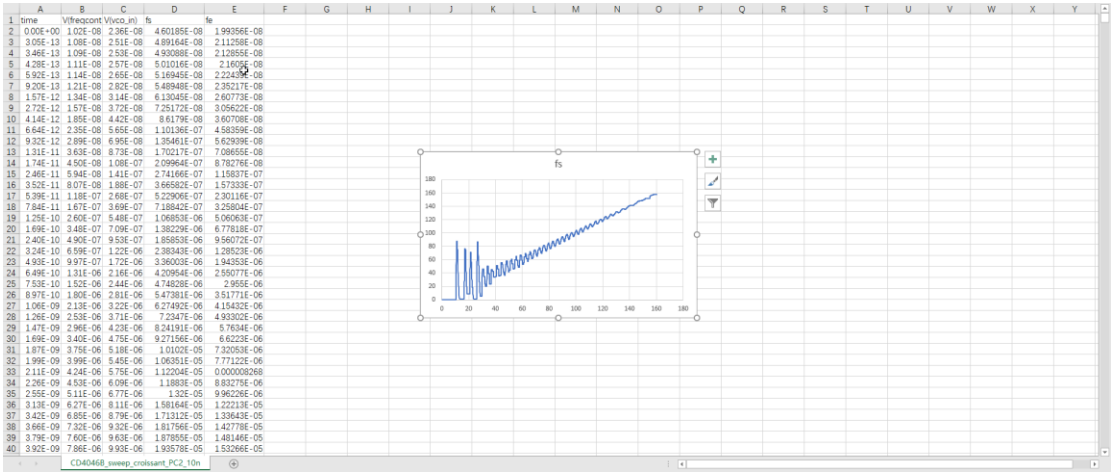


5. On utilise le formule comme IF(C2<1,1.95*C2,IF(C2>9,5.19*C2+108.46,C2*18.503-14.335))

CD4046B_sweep_croissant_PC2_100nF



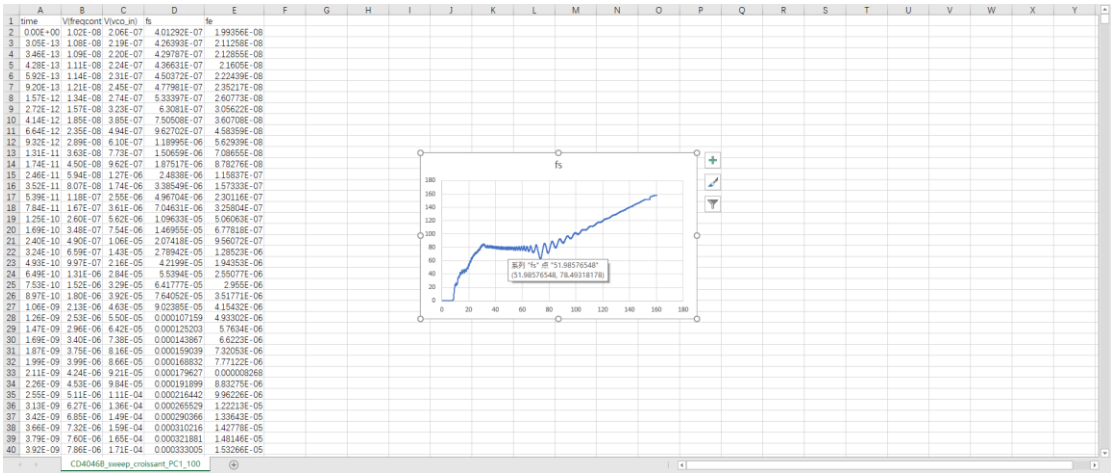
CD4046B_sweep_croissant_PC2_10nF



time	Vfreqcont	Vvco_in)	fs	fe
0.00E+00	1.02E-08	2.36E-08	4.60185E-08	1.99356E-08
3.05E-13	1.08E-08	2.51E-08	4.89164E-08	2.11258E-08
3.46E-13	1.09E-08	2.53E-08	4.93088E-08	2.12855E-08
4.28E-13	1.11E-08	2.57E-08	5.01016E-08	2.1605E-08
5.92E-13	1.14E-08	2.65E-08	5.16945E-08	2.22439E-08
9.20E-13	1.21E-08	2.82E-08	5.48948E-08	2.35217E-08
1.57E-12	1.34E-08	3.14E-08	6.13045E-08	2.60773E-08
2.72E-12	1.57E-08	3.72E-08	7.25172E-08	3.05622E-08
4.14E-12	1.85E-08	4.42E-08	8.6179E-08	3.60708E-08
6.64E-12	2.35E-08	5.65E-08	1.10136E-07	4.58359E-08
9.32E-12	2.89E-08	6.95E-08	1.35461E-07	5.62939E-08
1.31E-11	3.63E-08	8.73E-08	1.70217E-07	7.08655E-08
1.74E-11	4.50E-08	1.08E-07	2.09964E-07	8.78276E-08
2.46E-11	5.94E-08	1.41E-07	2.74166E-07	1.15837E-07
3.52E-11	8.07E-08	1.88E-07	3.66582E-07	1.57333E-07
5.39E-11	1.18E-07	2.68E-07	5.22906E-07	2.30116E-07
7.84E-11	1.67E-07	3.69E-07	7.18842E-07	3.25804E-07
1.25E-10	2.60E-07	5.48E-07	1.06853E-06	5.06063E-07
1.69E-10	3.48E-07	7.09E-07	1.38229E-06	6.77818E-07
2.40E-10	4.90E-07	9.53E-07	1.85853E-06	9.56072E-07
3.24E-10	6.59E-07	1.22E-06	2.38343E-06	1.28523E-06
4.93E-10	9.97E-07	1.72E-06	3.36003E-06	1.94353E-06
6.49E-10	1.31E-06	2.16E-06	4.20954E-06	2.55077E-06
7.53E-10	1.52E-06	2.44E-06	4.74828E-06	2.955E-06
8.97E-10	1.80E-06	2.81E-06	5.473811E-06	3.51771E-06
1.06E-09	2.13E-06	3.22E-06	6.27492E-06	4.15432E-06
1.26E-09	2.53E-06	3.71E-06	7.2347E-06	4.93302E-06
1.47E-09	2.96E-06	4.23E-06	8.24191E-06	5.7634E-06
1.69E-09	3.40E-06	4.75E-06	9.271566E-06	6.6223E-06
1.87E-09	3.75E-06	5.18E-06	1.0102E-05	7.32053E-06
1.99E-09	3.99E-06	5.45E-06	1.063515E-05	7.77122E-06
2.11E-09	4.24E-06	5.75E-06	1.122045E-05	0.000008268
2.26E-09	4.53E-06	6.09E-06	1.1883E-05	8.83275E-06
2.55E-09	5.11E-06	6.77E-06	1.32E-05	9.96226E-06
3.13E-09	6.27E-06	8.11E-06	1.581645E-05	1.22213E-05
3.42E-09	6.85E-06	8.79E-06	1.713125E-05	1.33643E-05
3.66E-09	7.32E-06	9.32E-06	1.817565E-05	1.42778E-05
3.79E-09	7.60E-06	9.63E-06	1.878555E-05	1.48146E-05
3.92E-09	7.86E-06	9.93E-06	1.935785E-05	1.53266E-05

CD4046B_sweep_croissant_PC2_10n

CD4046B_sweep_croissant_PC1_100nF



time	Vfreqcont	Vvco_in)	fs	fe
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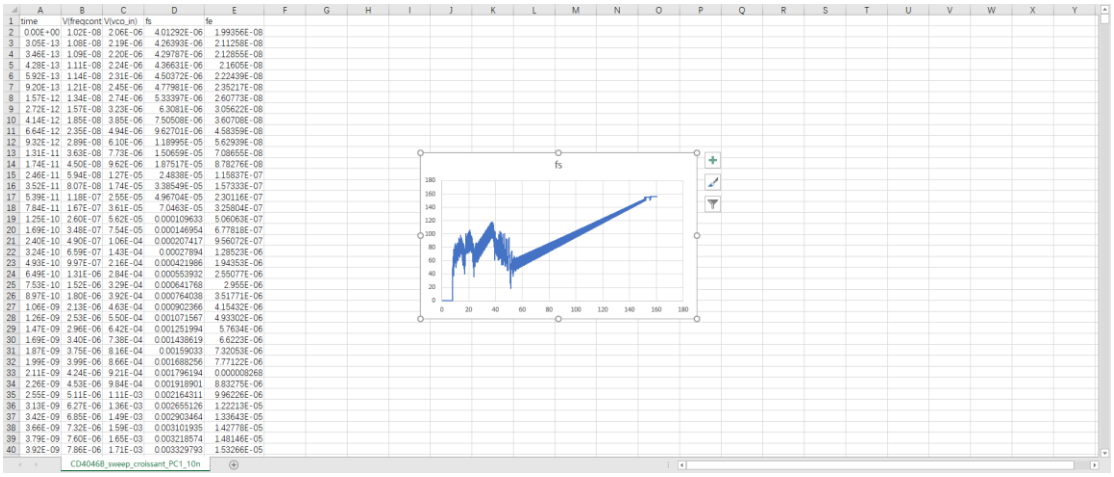
3.05E-13	1.08E-08	2.19E-07	4.26393E-07	2.11258E-08
3.46E-13	1.09E-08	2.20E-07	4.29787E-07	2.12855E-08
4.28E-13	1.11E-08	2.24E-07	4.36631E-07	2.1605E-08
5.92E-13	1.14E-08	2.31E-07	4.50372E-07	2.22439E-08
9.20E-13	1.21E-08	2.45E-07	4.779811E-07	2.35217E-08
1.57E-12	1.34E-08	2.74E-07	5.33397E-07	2.60773E-08
2.72E-12	1.57E-08	3.23E-07	6.30811E-07	3.05622E-08
4.14E-12	1.85E-08	3.85E-07	7.50508E-07	3.60708E-08
6.64E-12	2.35E-08	4.94E-07	9.627012E-07	4.58359E-08
9.32E-12	2.89E-08	6.10E-07	1.189955E-06	5.62939E-08
1.31E-11	3.63E-08	7.73E-07	1.506596E-06	7.08655E-08
1.74E-11	4.50E-08	9.62E-07	1.875176E-06	8.78276E-08
2.46E-11	5.94E-08	1.27E-06	2.4838E-06	1.15837E-07
3.52E-11	8.07E-08	1.74E-06	3.385496E-06	1.57333E-07
5.39E-11	1.18E-07	2.55E-06	4.96704E-06	2.30116E-07
7.84E-11	1.67E-07	3.61E-06	7.04631E-06	3.25804E-07
1.25E-10	2.60E-07	5.62E-06	1.096335E-05	5.06063E-07
1.69E-10	3.48E-07	7.54E-06	1.469555E-05	6.77818E-07
2.40E-10	4.90E-07	1.06E-05	2.074185E-05	9.56072E-07
3.24E-10	6.59E-07	1.43E-05	2.78942E-05	1.28523E-06
4.93E-10	9.97E-07	2.16E-05	4.2199E-05	1.94353E-06
6.49E-10	1.31E-06	2.84E-05	5.5394E-05	2.55077E-06
7.53E-10	1.52E-06	3.29E-05	6.417775E-05	2.955E-06
8.97E-10	1.80E-06	3.92E-05	7.64052E-05	3.51771E-06
1.06E-09	2.13E-06	4.63E-05	9.023085E-05	4.15432E-06
1.26E-09	2.53E-06	5.50E-05	0.000107159	4.93302E-06
1.47E-09	2.96E-06	6.42E-05	0.000125203	5.7634E-06
1.69E-09	3.40E-06	7.38E-05	0.000143867	6.6223E-06
1.87E-09	3.75E-06	8.16E-05	0.000159039	7.32053E-06
1.99E-09	3.99E-06	8.66E-05	0.000168832	7.77122E-06
2.11E-09	4.24E-06	9.21E-05	0.000179627	0.000008268
2.26E-09	4.53E-06	9.84E-05	0.000191899	8.83275E-06
2.55E-09	5.11E-06	1.11E-04	0.000216442	9.96226E-06
3.13E-09	6.27E-06	1.36E-04	0.000265529	1.22213E-05
3.42E-09	6.85E-06	1.49E-04	0.000290366	1.33643E-05
3.66E-09	7.32E-06	1.59E-04	0.000310216	1.42778E-05
3.79E-09	7.60E-06	1.65E-04	0.000321881	1.48146E-05
3.92E-09	7.86E-06	1.71E-04	0.000333005	1.53266E-05

CD4046B_sweep_croissant_PC1_100

CD4046B_sweep_croissant_PC1_10nF



time	Vfreqcont	Vvco_in)	fs	fe
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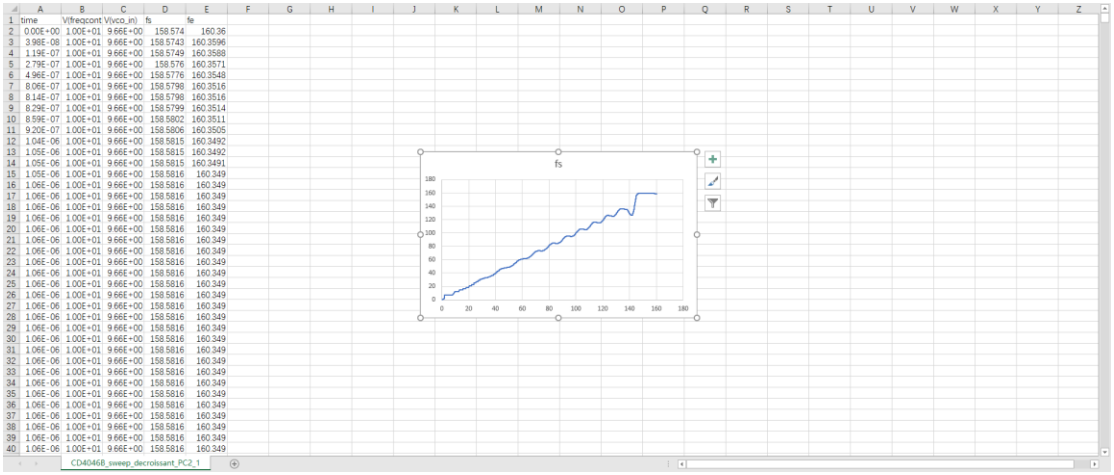
3.05E-13	1.08E-08	2.19E-06	4.26393E-06	2.11258E-08
3.46E-13	1.09E-08	2.20E-06	4.29787E-06	2.12855E-08
4.28E-13	1.11E-08	2.24E-06	4.36631E-06	2.1605E-08
5.92E-13	1.14E-08	2.31E-06	4.50372E-06	2.22439E-08
9.20E-13	1.21E-08	2.45E-06	4.77981E-06	2.35217E-08
1.57E-12	1.34E-08	2.74E-06	5.33397E-06	2.60773E-08
2.72E-12	1.57E-08	3.23E-06	6.3081E-06	3.05622E-08
4.14E-12	1.85E-08	3.85E-06	7.50508E-06	3.60708E-08
6.64E-12	2.35E-08	4.94E-06	9.627012E-06	4.58359E-08
9.32E-12	2.89E-08	6.10E-06	1.189955E-05	5.62939E-08
1.31E-11	3.63E-08	7.73E-06	1.506596E-05	7.08655E-08
1.74E-11	4.50E-08	9.62E-06	1.875176E-05	8.78276E-08
2.46E-11	5.94E-08	1.27E-05	2.4838E-05	1.15837E-07
3.52E-11	8.07E-08	1.74E-05	3.385496E-05	1.57333E-07
5.39E-11	1.18E-07	2.55E-05	4.96704E-05	2.30116E-07
7.84E-11	1.67E-07	3.61E-05	7.0463E-05	3.25804E-07
1.25E-10	2.60E-07	5.62E-05	0.000109633	5.06063E-07
1.69E-10	3.48E-07	7.54E-05	0.000146954	6.77818E-07
2.40E-10	4.90E-07	1.06E-04	0.000207417	9.56072E-07
3.24E-10	6.59E-07	1.43E-04	0.00027894	1.28523E-06
4.93E-10	9.97E-07	2.16E-04	0.000421986	1.94353E-06
6.49E-10	1.31E-06	2.84E-04	0.000553932	2.55077E-06
7.53E-10	1.52E-06	3.29E-04	0.000641768	2.955E-06
8.97E-10	1.80E-06	3.92E-04	0.000764038	3.51771E-06
1.06E-09	2.13E-06	4.63E-04	0.000902366	4.15432E-06
1.26E-09	2.53E-06	5.50E-04	0.001071567	4.93302E-06
1.47E-09	2.96E-06	6.42E-04	0.001251994	5.7634E-06
1.69E-09	3.40E-06	7.38E-04	0.001438619	6.6223E-06
1.87E-09	3.75E-06	8.16E-04	0.00159033	7.32053E-06
1.99E-09	3.99E-06	8.66E-04	0.001688256	7.77122E-06
2.11E-09	4.24E-06	9.21E-04	0.001796194	0.000008268
2.26E-09	4.53E-06	9.84E-04	0.001918901	8.83275E-06
2.55E-09	5.11E-06	1.11E-03	0.002164311	9.96226E-06
3.13E-09	6.27E-06	1.36E-03	0.002655126	1.22213E-05
3.42E-09	6.85E-06	1.49E-03	0.002903464	1.33643E-05
3.66E-09	7.32E-06	1.59E-03	0.003101935	1.42778E-05
3.79E-09	7.60E-06	1.65E-03	0.003218574	1.48146E-05
3.92E-09	7.86E-06	1.71E-03	0.003329793	1.53266E-05

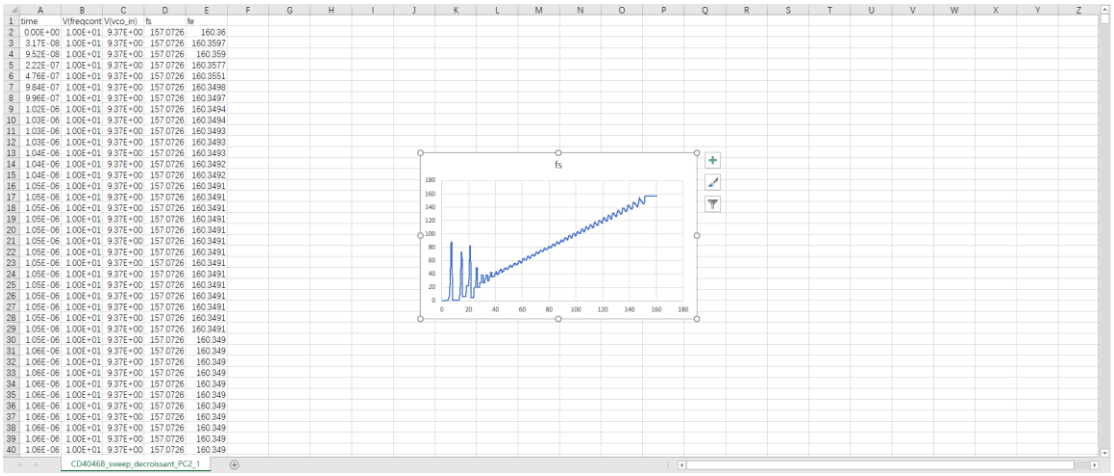
CD4046B_sweep_croissant_PC1_10n

CD4046B_sweep_decroissant_PC2_100nF



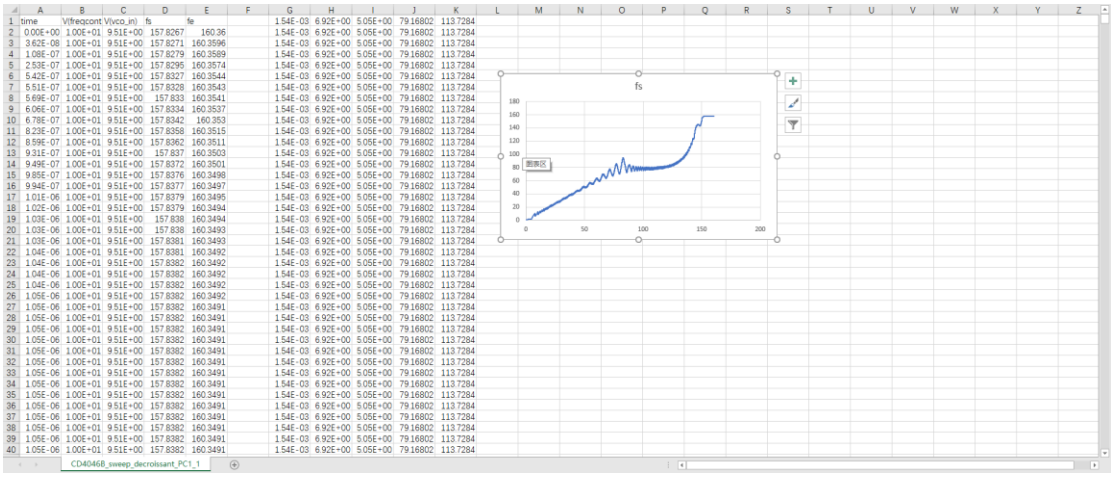
	A	B	C	D	E
1	time	Vfreqcont	Vvco_in)	fs	fe
2	0.00E+00	1.00E+01	9.66E+00	158.574	160.36
3	3.98E-08	1.00E+01	9.66E+00	158.5743	160.3596
4	1.19E-07	1.00E+01	9.66E+00	158.5749	160.3588
5	2.79E-07	1.00E+01	9.66E+00	158.576	160.3571
6	4.96E-07	1.00E+01	9.66E+00	158.5776	160.3548
7	8.06E-07	1.00E+01	9.66E+00	158.5798	160.3516
8	8.14E-07	1.00E+01	9.66E+00	158.5798	160.3516
9	8.29E-07	1.00E+01	9.66E+00	158.5799	160.3514
10	8.59E-07	1.00E+01	9.66E+00	158.5802	160.3511
11	9.20E-07	1.00E+01	9.66E+00	158.5809	160.3505
12	1.04E-06	1.00E+01	9.66E+00	158.5815	160.3492
13	1.05E-06	1.00E+01	9.66E+00	158.5815	160.3492
14	1.05E-06	1.00E+01	9.66E+00	158.5815	160.3491
15	1.05E-06	1.00E+01	9.66E+00	158.5816	160.349
16	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
17	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
18	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
19	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
20	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
21	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
22	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
23	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
24	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
25	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
26	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
27	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
28	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
29	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
30	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
31	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
32	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
33	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
34	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
35	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
36	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
37	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
38	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
39	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349
40	1.06E-06	1.00E+01	9.66E+00	158.5816	160.349

CD4046B_sweep_decroissant_PC2_10nF



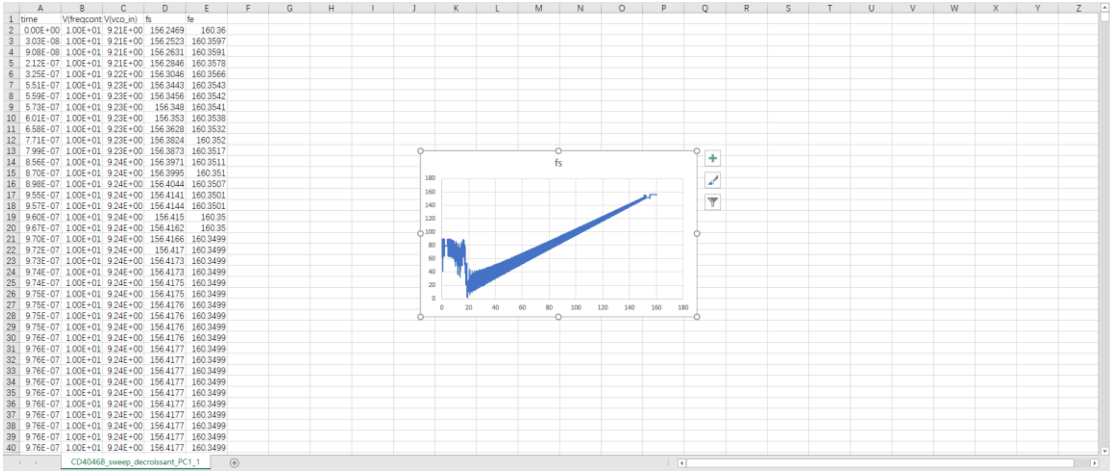
	A	B	C	D	E
1	time	Vfreqcont	Vvco_in)	fs	fe
2	0.00E+00	1.00E+01	9.37E+00	157.0726	160.36
3	3.17E-08	1.00E+01	9.37E+00	157.0726	160.3597
4	9.52E-08	1.00E+01	9.37E+00	157.0726	160.359
5	2.22E-07	1.00E+01	9.37E+00	157.0726	160.3577
6	4.76E-07	1.00E+01	9.37E+00	157.0726	160.3551
7	9.84E-07	1.00E+01	9.37E+00	157.0726	160.3498
8	9.96E-07	1.00E+01	9.37E+00	157.0726	160.3497
9	1.02E-06	1.00E+01	9.37E+00	157.0726	160.3494
10	1.03E-06	1.00E+01	9.37E+00	157.0726	160.3494
11	1.03E-06	1.00E+01	9.37E+00	157.0726	160.3493
12	1.03E-06	1.00E+01	9.37E+00	157.0726	160.3493
13	1.04E-06	1.00E+01	9.37E+00	157.0726	160.3493
14	1.04E-06	1.00E+01	9.37E+00	157.0726	160.3492
15	1.04E-06	1.00E+01	9.37E+00	157.0726	160.3492
16	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
17	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
18	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
19	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
20	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
21	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
22	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
23	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
24	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
25	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
26	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
27	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
28	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
29	1.05E-06	1.00E+01	9.37E+00	157.0726	160.3491
30	1.05E-06	1.00E+01	9.37E+00	157.0726	160.349
31	1.06E-06	1.00E+01	9.37E+00	157.0726	160.349
32	1.06E-06	1.00E+01	9.37E+00	157.0726	160.349
33	1.06E-06	1.00E+01	9.37E+00	157.0726	160.349
34	1.06E-06	1.00E+01	9.37E+00	157.0726	160.349
35	1.06E-06	1.00E+01	9.37E+00	157.0726	160.349
36	1.06E-06	1.00E+01	9.37E+00	157.0726	160.349
37	1.06E-06	1.00E+01	9.37E+00	157.0726	160.349
38	1.06E-06	1.00E+01	9.37E+00	157.0726	160.349
39	1.06E-06	1.00E+01	9.37E+00	157.0726	160.349
40	1.06E-06	1.00E+01	9.37E+00	157.0726	160.349

CD4046B_sweep_decroissant_PC1_100nF



	A	B	C	D	E	G	H	I	J	K
1	time	Vfreqcont	Vvco_in)	fs	fe	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
2	0.00E+00	1.00E+01	9.51E+00	157.8267	160.36	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
3	3.62E-08	1.00E+01	9.51E+00	157.8271	160.3596	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
4	1.08E-07	1.00E+01	9.51E+00	157.8279	160.3589	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
5	2.53E-07	1.00E+01	9.51E+00	157.8295	160.3574	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
6	5.42E-07	1.00E+01	9.51E+00	157.8327	160.3544	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
7	5.51E-07	1.00E+01	9.51E+00	157.8328	160.3543	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
8	5.69E-07	1.00E+01	9.51E+00	157.833	160.3541	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
9	6.06E-07	1.00E+01	9.51E+00	157.8334	160.3537	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
10	6.78E-07	1.00E+01	9.51E+00	157.8342	160.353	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
11	8.23E-07	1.00E+01	9.51E+00	157.8358	160.3515	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
12	8.59E-07	1.00E+01	9.51E+00	157.8362	160.3511	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
13	9.31E-07	1.00E+01	9.51E+00	157.837	160.3503	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
14	9.49E-07	1.00E+01	9.51E+00	157.8372	160.3501	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
15	9.85E-07	1.00E+01	9.51E+00	157.8376	160.3498	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
16	9.94E-07	1.00E+01	9.51E+00	157.8377	160.3497	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
17	1.01E-06	1.00E+01	9.51E+00	157.8379	160.3495	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
18	1.02E-06	1.00E+01	9.51E+00	157.8379	160.3494	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
19	1.03E-06	1.00E+01	9.51E+00	157.838	160.3494	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
20	1.03E-06	1.00E+01	9.51E+00	157.838	160.3493	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
21	1.03E-06	1.00E+01	9.51E+00	157.8381	160.3493	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
22	1.04E-06	1.00E+01	9.51E+00	157.8381	160.3492	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
23	1.04E-06	1.00E+01	9.51E+00	157.8382	160.3492	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
24	1.04E-06	1.00E+01	9.51E+00	157.8382	160.3492	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
25	1.04E-06	1.00E+01	9.51E+00	157.8382	160.3492	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
26	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3492	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
27	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
28	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
29	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
30	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
31	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
32	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
33	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
34	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
35	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
36	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
37	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
38	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
39	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284
40	1.05E-06	1.00E+01	9.51E+00	157.8382	160.3491	1.54E-03	6.92E+00	5.05E+00	79.16802	113.7284

CD4046B_sweep_decroissant_PC1_10nF

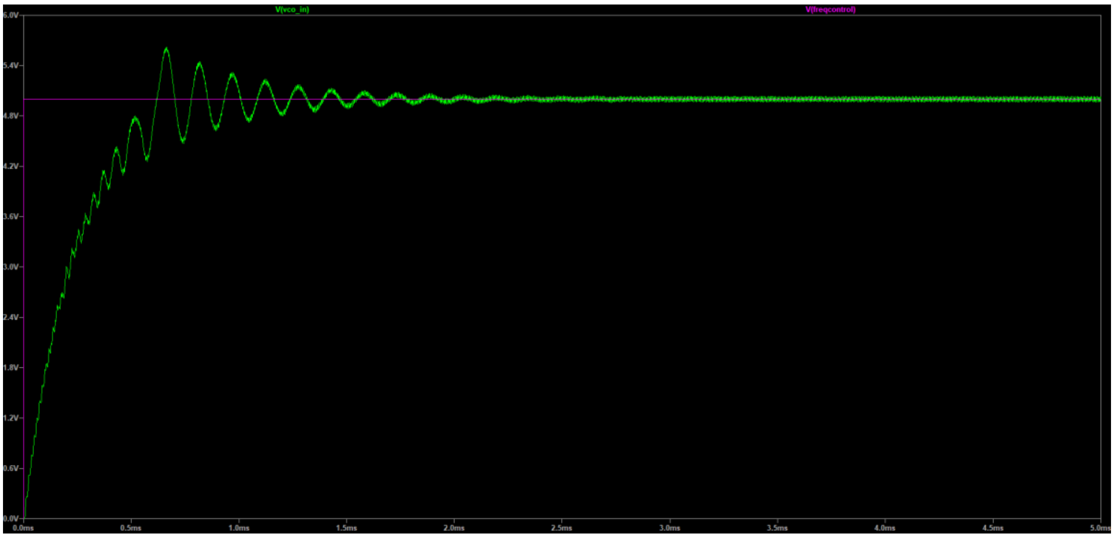


	A	B	C	D	E
1	time	V(freqcont	V(vco_in)	fs	fe
2	0.00E+00	1.00E+01	9.21E+00	156.2469	160.36
3	3.03E-08	1.00E+01	9.21E+00	156.2523	160.3597
4	9.08E-08	1.00E+01	9.21E+00	156.2631	160.3591
5	2.12E-07	1.00E+01	9.21E+00	156.2846	160.3578
6	3.25E-07	1.00E+01	9.22E+00	156.3046	160.3566
7	5.51E-07	1.00E+01	9.23E+00	156.3443	160.3543
8	5.59E-07	1.00E+01	9.23E+00	156.3456	160.3542
9	5.73E-07	1.00E+01	9.23E+00	156.348	160.3541
10	6.01E-07	1.00E+01	9.23E+00	156.353	160.3538
11	6.58E-07	1.00E+01	9.23E+00	156.3628	160.3532
12	7.71E-07	1.00E+01	9.23E+00	156.3824	160.352
13	7.99E-07	1.00E+01	9.23E+00	156.3873	160.3517
14	8.56E-07	1.00E+01	9.24E+00	156.3971	160.3511
15	8.70E-07	1.00E+01	9.24E+00	156.3995	160.351
16	8.98E-07	1.00E+01	9.24E+00	156.4044	160.3507
17	9.55E-07	1.00E+01	9.24E+00	156.4141	160.3501
18	9.57E-07	1.00E+01	9.24E+00	156.4144	160.3501
19	9.60E-07	1.00E+01	9.24E+00	156.415	160.35
20	9.67E-07	1.00E+01	9.24E+00	156.4162	160.35
21	9.70E-07	1.00E+01	9.24E+00	156.4166	160.3499
22	9.72E-07	1.00E+01	9.24E+00	156.417	160.3499
23	9.73E-07	1.00E+01	9.24E+00	156.4173	160.3499
24	9.74E-07	1.00E+01	9.24E+00	156.4173	160.3499
25	9.74E-07	1.00E+01	9.24E+00	156.4175	160.3499
26	9.75E-07	1.00E+01	9.24E+00	156.4175	160.3499
27	9.75E-07	1.00E+01	9.24E+00	156.4176	160.3499
28	9.75E-07	1.00E+01	9.24E+00	156.4176	160.3499
29	9.75E-07	1.00E+01	9.24E+00	156.4176	160.3499
30	9.76E-07	1.00E+01	9.24E+00	156.4176	160.3499
31	9.76E-07	1.00E+01	9.24E+00	156.4177	160.3499
32	9.76E-07	1.00E+01	9.24E+00	156.4177	160.3499
33	9.76E-07	1.00E+01	9.24E+00	156.4177	160.3499
34	9.76E-07	1.00E+01	9.24E+00	156.4177	160.3499
35	9.76E-07	1.00E+01	9.24E+00	156.4177	160.3499
36	9.76E-07	1.00E+01	9.24E+00	156.4177	160.3499
37	9.76E-07	1.00E+01	9.24E+00	156.4177	160.3499
38	9.76E-07	1.00E+01	9.24E+00	156.4177	160.3499
39	9.76E-07	1.00E+01	9.24E+00	156.4177	160.3499
40	9.76E-07	1.00E+01	9.24E+00	156.4177	160.3499

Q3.

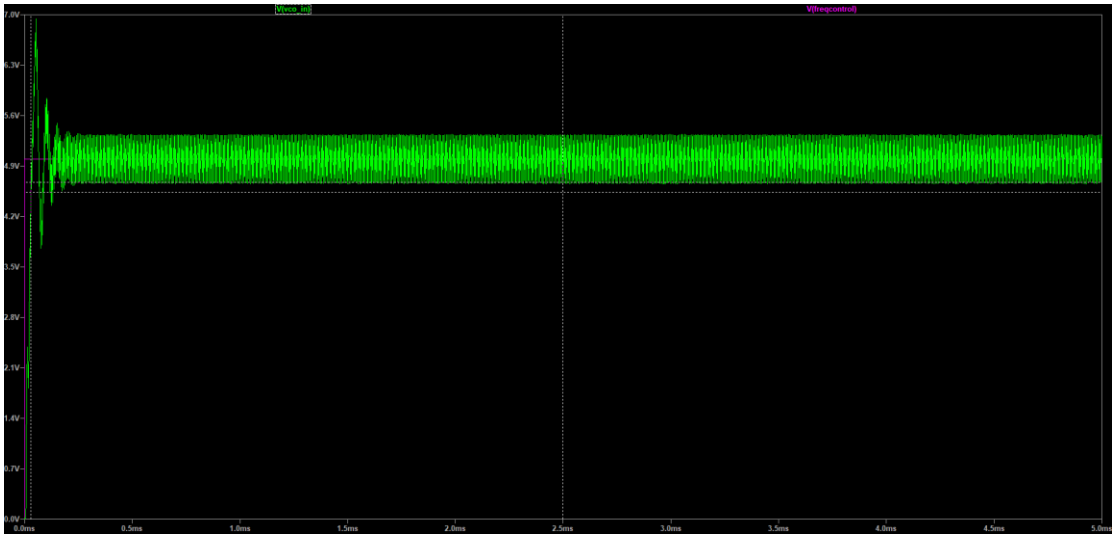
PC1

C2 = 100nF



T = 485.77671µs

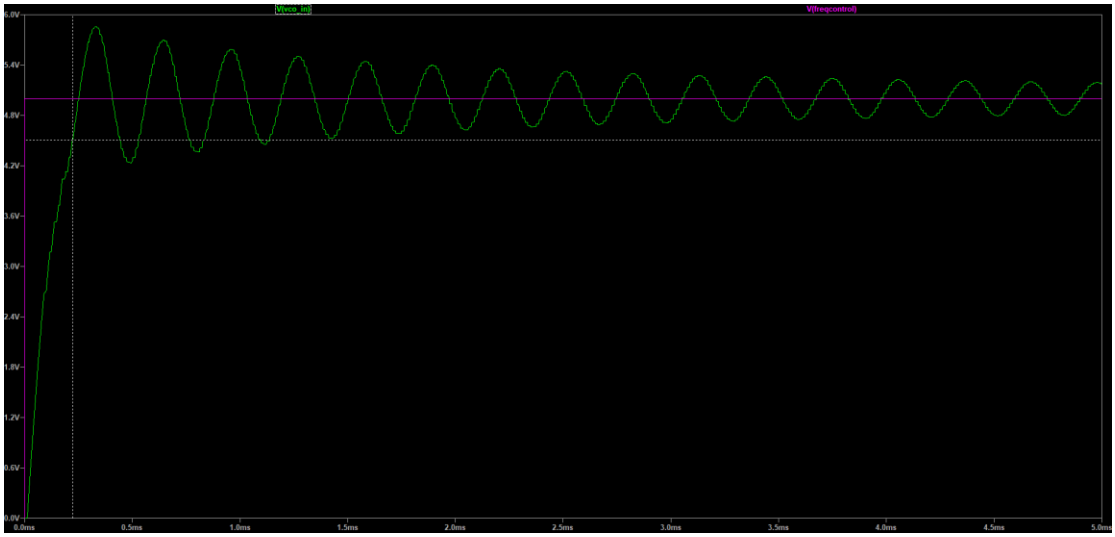
C2 = 10nF



T = 29.522308µs

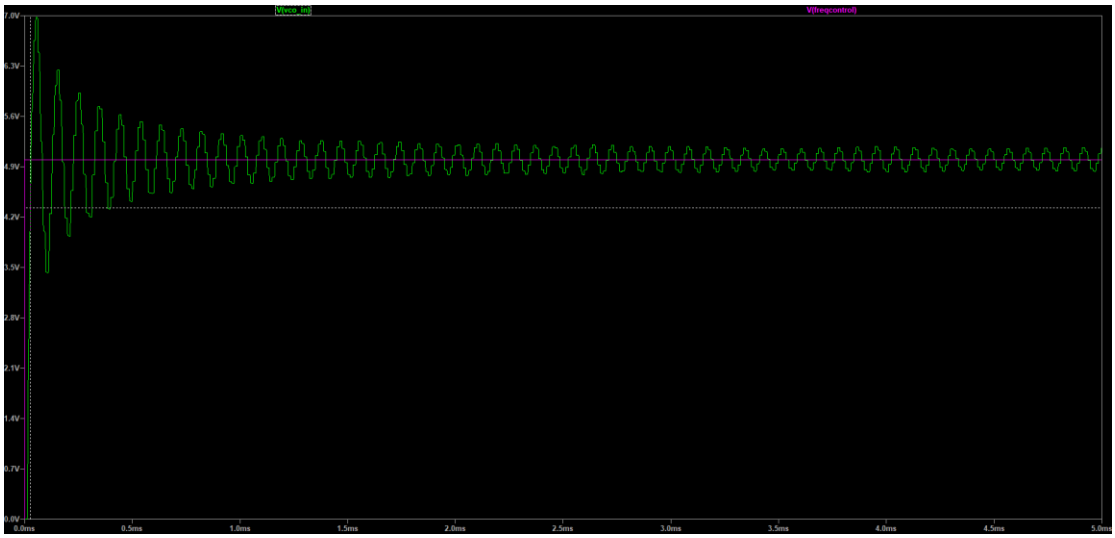
PC2

C2 = 100nF



T = 222.46344µs

C2 = 10nF



T = 26.838701µs

On sait que $\tau = RC$

Donc, pour $R = 1.8K\Omega, C = 10nF$

$$\tau = 18\mu s$$

Mais, on trouve que pour PC1,$\tau = 29.522308\mu s$, PC2,$\tau = 26.838701\mu s$

pour $R = 1.8K\Omega, C = 100nF$

$$\tau = 180\mu s$$

Mais, on trouve que pour PC1,$\tau = 485.77671\mu s$, PC2,$\tau = 222.46344\mu s$