

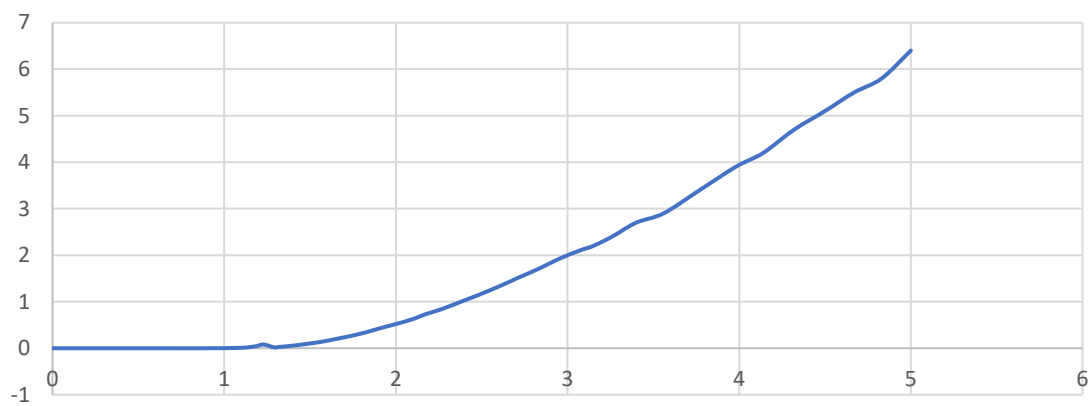
vds=200mv

vgs	ids
0.174	0
0.229	0
0.422	0
0.602	0
0.784	0
0.977	0
1.086	0
1.175	0.001
1.217	0.003
1.313	0.012
1.389	0.025
1.455	0.039
1.536	0.056
1.594	0.068
1.713	0.094
1.799	0.111
1.881	0.126
1.956	0.14
2.05	0.156
2.13	0.171
2.24	0.187
2.39	0.209
2.53	0.228
2.64	0.242
2.76	0.257
2.88	0.2701
3.06	0.291
3.24	0.31
3.38	0.323
3.56	0.34
3.7	0.353
3.94	0.373
4.11	0.387
4.46	0.413
4.7	0.428
4.92	0.443
5	0.448

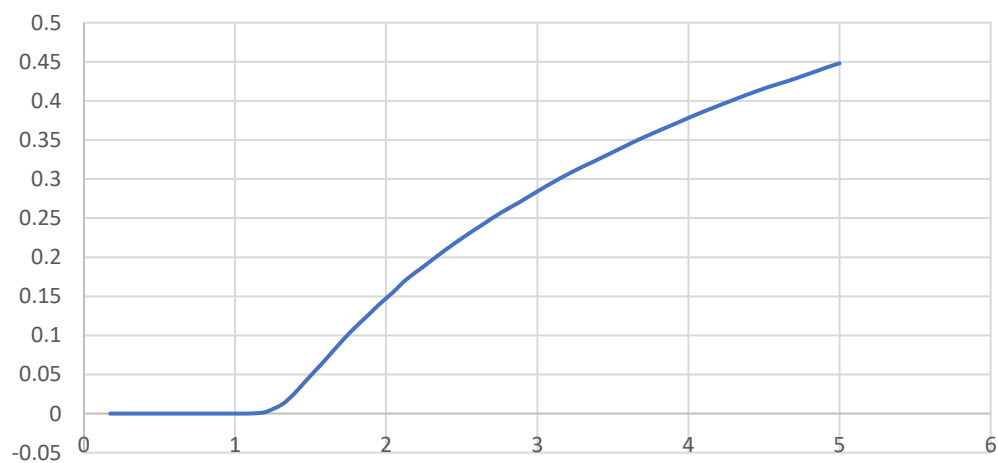
vd=5v

vgs	ids
0	0
0.243	0
0.445	0
0.658	0
0.889	0
1.1	0.01
1.18	0.04
1.23	0.08
1.29	0.019
1.32	0.028
1.39	0.051
1.48	0.093
1.56	0.135
1.62	0.176
1.69	0.228
1.73	0.258
1.81	0.327
1.86	0.379
1.95	0.472
2.01	0.53
2.1	0.627
2.17	0.728
2.27	0.845
2.42	1.058
2.49	1.158
2.61	1.343
2.71	1.511
2.84	1.722
2.95	1.921
3.07	2.1
3.15	2.2
3.26	2.4
3.4	2.7
3.56	2.9
3.77	3.4
3.98	3.9
4.14	4.2
4.32	4.7
4.5	5.1
4.67	5.5
4.83	5.8
5	6.4

id vs vgs for vd=5v



id vs vgs for vd=200mv



vds=5v

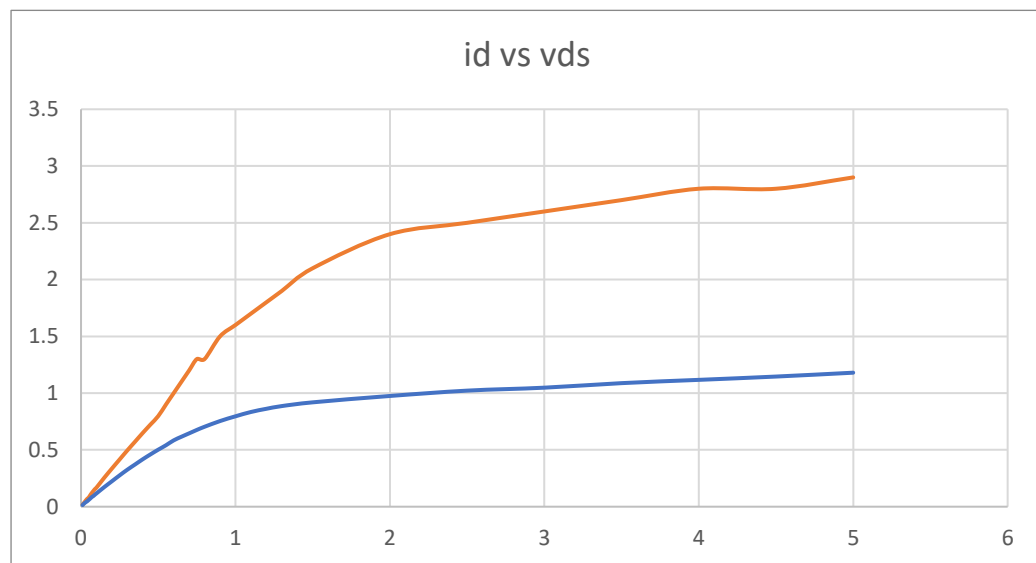
0	0
0.5	0
1	0
1.2	0
1.43	0
1.55	0
1.57	0
1.6	0.001
1.69	0.006
1.75	0.016
1.88	0.056
1.97	0.099
2.09	0.172
2.19	0.246
2.33	0.371
2.46	0.503
2.63	0.681
2.76	0.859
2.91	1.036
3.05	1.245
3.18	1.448
3.31	1.639
3.41	1.834
3.66	2.2
3.87	2.5
4.05	2.9
4.3	3.4
4.6	4
4.92	4.7
5	4.9

vgs=2.5

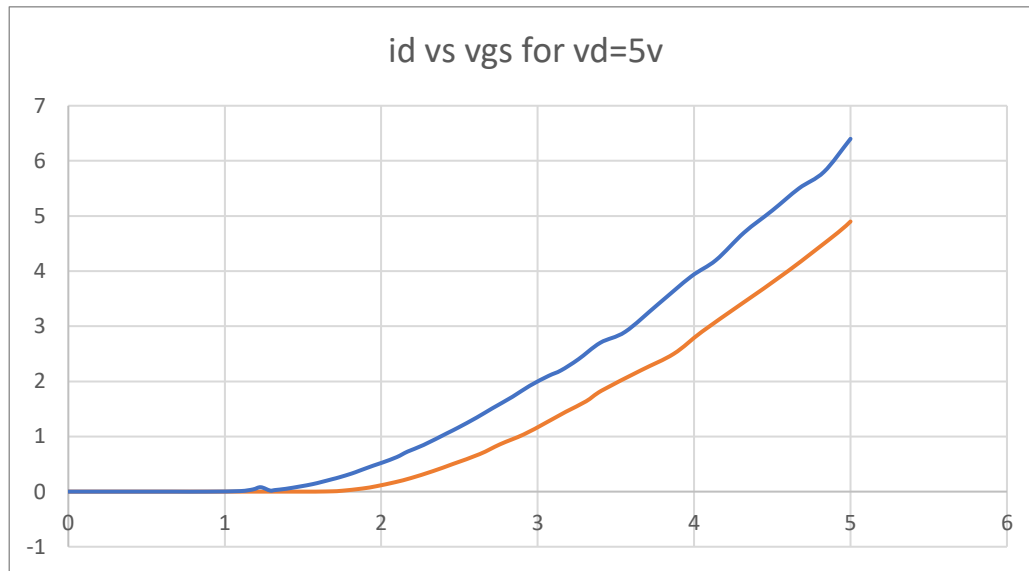
vsd	id
0.01	0.014
0.02	0.028
0.03	0.039
0.04	0.048
0.05	0.06
0.06	0.072
0.07	0.085
0.08	0.094
0.09	0.106
0.1	0.117
0.15	0.172
0.2	0.224
0.25	0.276
0.3	0.326
0.35	0.372
0.4	0.418
0.45	0.461
0.5	0.502
0.55	0.541
0.6	0.584
0.65	0.616
0.7	0.646
0.75	0.676
0.8	0.704
0.9	0.754
1	0.796
1.1	0.834
1.2	0.862
1.3	0.886
1.5	0.919
2	0.975
2.5	1.022
3	1.048
3.5	1.088
4	1.117
4.5	1.146
5	1.18

vgs=3.5

vsd	id
0.01	0.019
0.02	0.035
0.03	0.053
0.04	0.069
0.05	0.081
0.06	0.102
0.07	0.121
0.08	0.138
0.09	0.155
0.1	0.168
0.15	0.254
0.2	0.336
0.25	0.416
0.3	0.496
0.35	0.573
0.4	0.65
0.45	0.724
0.5	0.798
0.55	0.9
0.6	1
0.65	1.1
0.7	1.2
0.75	1.3
0.8	1.3
0.9	1.5
1	1.6
1.1	1.7
1.2	1.8
1.3	1.9
1.5	2.1
2	2.4
2.5	2.5
3	2.6
3.5	2.7
4	2.8
4.5	2.8
5	2.9



orange for  $v_{gs}=3.5\text{V}$   
blue is for  $v_{gs}=2.5\text{V}$



orange is after applying body effect  
blue is before applying body effect

vt=1.1v  
vt=1.6v