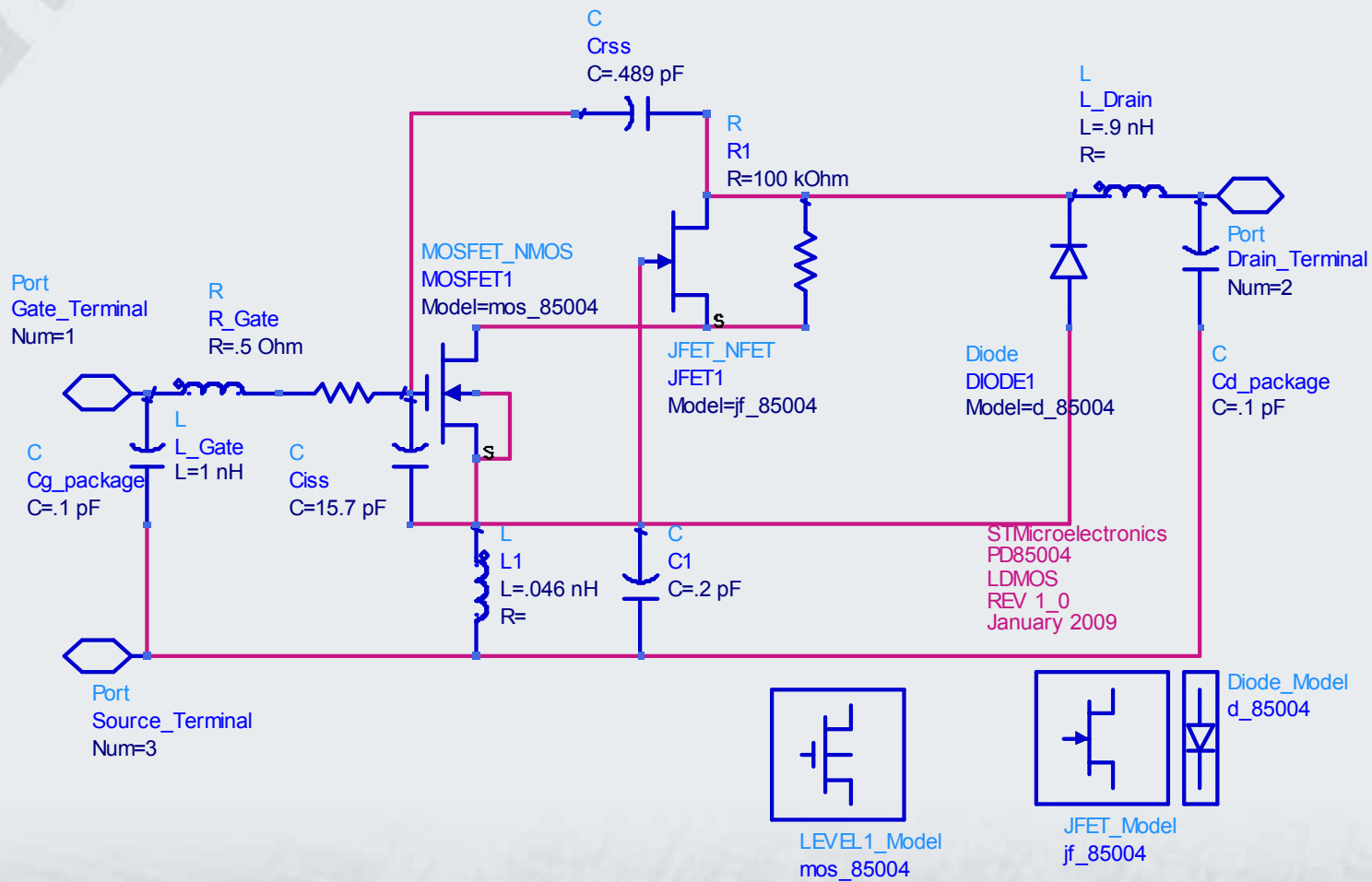


PD85004_rev1_0
Model Information



Quakertown , PA
Qtn-jp-314-rev0
January 27 , 2009

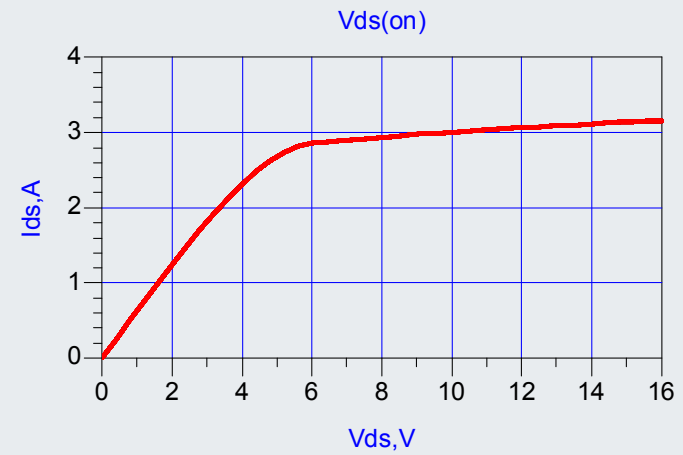
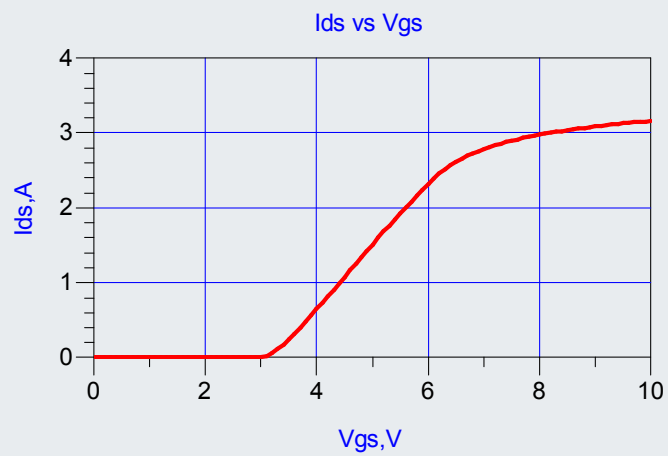


PD85004 model configuration



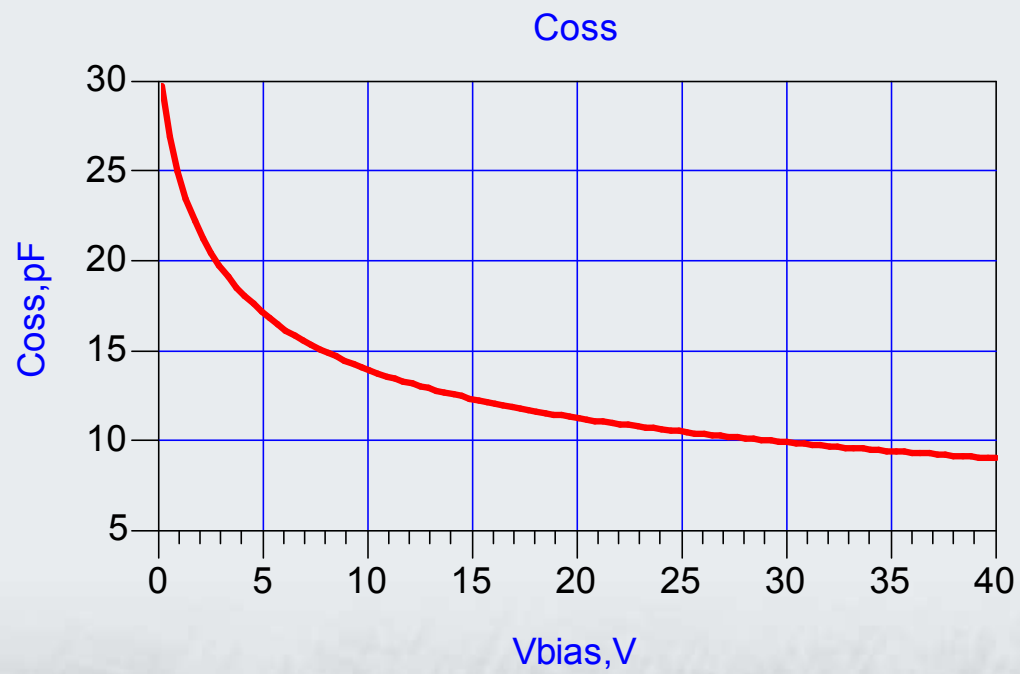
PD85004

DC



PD85004

Cds



PD85004

S-Parameters

13.6 V , 100 mA

Measured

freq	S(1,1)	S(2,1)	S(1,2)	S(2,2)
100.0 MHz	0.896 / -58.623	21.178 / 133.154	0.016 / 51.387	0.846 / -47.195
200.0 MHz	0.940 / -97.002	15.006 / 103.607	0.023 / 16.291	0.759 / -76.576
300.0 MHz	0.836 / -118.687	11.007 / 82.521	0.023 / -1.065	0.737 / -96.862
400.0 MHz	0.841 / -132.361	7.997 / 67.808	0.021 / -15.390	0.762 / -111.590
500.0 MHz	0.855 / -142.804	6.017 / 55.338	0.019 / -24.644	0.787 / -122.287
600.0 MHz	0.871 / -150.538	4.687 / 45.417	0.017 / -32.437	0.805 / -131.284
700.0 MHz	0.889 / -156.577	3.727 / 37.567	0.014 / -37.051	0.831 / -138.478
800.0 MHz	0.897 / -161.643	3.034 / 30.616	0.011 / -43.065	0.850 / -144.440
900.0 MHz	0.911 / -166.457	2.512 / 24.191	0.009 / -45.348	0.860 / -149.990
1.000 GHz	0.913 / -170.461	2.104 / 18.434	0.007 / -42.075	0.876 / -155.320
1.100 GHz	0.927 / -174.580	1.798 / 13.201	0.005 / -37.312	0.886 / -159.752
1.200 GHz	0.936 / -177.627	1.537 / 8.877	0.003 / -13.475	0.901 / -163.152
1.300 GHz	0.942 / 178.893	1.338 / 4.839	0.003 / 9.565	0.904 / -165.929
1.400 GHz	0.943 / 176.440	1.171 / 1.122	0.004 / 49.701	0.912 / -170.667
1.500 GHz	0.951 / 173.510	1.043 / -2.476	0.005 / 62.209	0.911 / -173.355
1.600 GHz	0.954 / 171.124	0.928 / -5.789	0.007 / 65.714	0.918 / -177.310
1.700 GHz	0.959 / 169.092	0.832 / -8.942	0.008 / 69.205	0.916 / -178.762
1.800 GHz	0.956 / 167.077	0.749 / -11.615	0.009 / 70.929	0.919 / -179.200
1.900 GHz	0.958 / 165.448	0.682 / -14.086	0.011 / 69.640	0.918 / 177.327
2.000 GHz	0.951 / 163.057	0.615 / -16.500	0.012 / 68.525	0.920 / 175.231
2.100 GHz	0.950 / 161.795	0.568 / -18.129	0.014 / 67.690	0.915 / 172.474
2.200 GHz	0.954 / 159.443	0.519 / -21.205	0.015 / 65.908	0.921 / 171.825
2.300 GHz	0.960 / 158.475	0.493 / -23.537	0.016 / 62.939	0.925 / 169.004
2.400 GHz	0.959 / 156.771	0.459 / -25.449	0.018 / 65.057	0.933 / 168.408
2.500 GHz	0.960 / 154.608	0.428 / -26.438	0.019 / 60.890	0.945 / 165.895
2.600 GHz	0.963 / 152.333	0.403 / -31.409	0.021 / 62.868	0.933 / 166.154
2.700 GHz	0.961 / 150.064	0.376 / -34.015	0.021 / 58.763	0.946 / 163.253
2.800 GHz	0.962 / 147.635	0.360 / -36.854	0.024 / 56.957	0.945 / 159.727
2.900 GHz	0.958 / 145.322	0.341 / -38.710	0.025 / 57.023	0.962 / 159.442
3.000 GHz	0.965 / 142.190	0.326 / -41.520	0.025 / 55.128	0.969 / 156.915

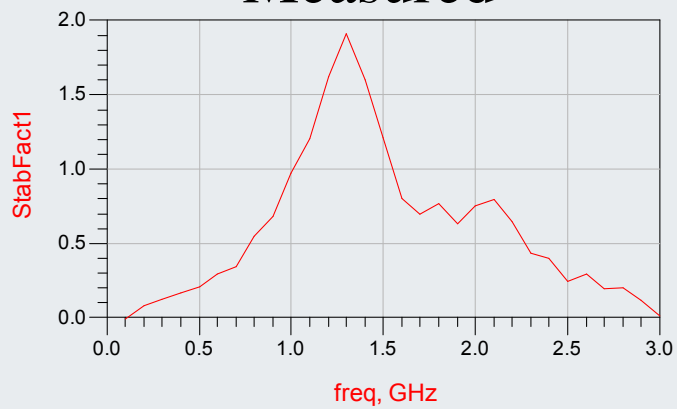
Modeled

freq	S(1,1)	S(2,1)	S(1,2)	S(2,2)
100.0 MHz	0.826 / -84.992	38.893 / 119.258	0.019 / 30.271	0.776 / -75.856
200.0 MHz	0.756 / -119.540	21.364 / 91.896	0.022 / 3.961	0.698 / -108.047
300.0 MHz	0.761 / -135.484	14.046 / 75.407	0.021 / -11.351	0.698 / -123.966
400.0 MHz	0.786 / -145.087	9.977 / 63.234	0.018 / -22.174	0.734 / -134.191
500.0 MHz	0.814 / -152.045	7.438 / 53.490	0.016 / -30.277	0.773 / -141.923
600.0 MHz	0.840 / -157.642	5.737 / 45.397	0.013 / -36.253	0.808 / -148.264
700.0 MHz	0.862 / -162.405	4.541 / 36.529	0.011 / -40.203	0.837 / -153.662
800.0 MHz	0.880 / -166.590	3.671 / 32.604	0.008 / -41.753	0.861 / -158.420
900.0 MHz	0.895 / -170.344	3.020 / 27.423	0.006 / -39.612	0.881 / -162.634
1.000 GHz	0.908 / -173.763	2.522 / 22.836	0.004 / -30.012	0.897 / -166.439
1.100 GHz	0.918 / -176.913	2.134 / 18.732	0.003 / -3.625	0.910 / -169.890
1.200 GHz	0.926 / -179.947	1.826 / 15.024	0.003 / 36.355	0.921 / -173.075
1.300 GHz	0.933 / 177.399	1.578 / 11.646	0.004 / 59.412	0.930 / -176.032
1.400 GHz	0.939 / 174.795	1.376 / 8.545	0.006 / 68.544	0.938 / -178.799
1.500 GHz	0.944 / 172.316	1.210 / 5.680	0.007 / 72.075	0.944 / 176.593
1.600 GHz	0.948 / 169.945	1.071 / 3.019	0.009 / 73.202	0.949 / 176.120
1.700 GHz	0.951 / 167.664	0.953 / 0.536	0.010 / 73.155	0.954 / 173.762
1.800 GHz	0.954 / 165.463	0.854 / -1.791	0.012 / 72.478	0.957 / 171.504
1.900 GHz	0.957 / 163.331	0.769 / -3.978	0.014 / 71.439	0.961 / 169.332
2.000 GHz	0.959 / 161.258	0.696 / -6.039	0.015 / 70.183	0.964 / 167.234
2.100 GHz	0.961 / 159.239	0.632 / -7.985	0.017 / 68.793	0.966 / 165.202
2.200 GHz	0.963 / 157.266	0.576 / -9.827	0.018 / 67.319	0.968 / 163.227
2.300 GHz	0.965 / 155.326	0.528 / -11.570	0.019 / 65.792	0.970 / 161.304
2.400 GHz	0.966 / 153.443	0.485 / -13.223	0.021 / 64.232	0.972 / 159.427
2.500 GHz	0.967 / 151.584	0.447 / -14.788	0.022 / 62.654	0.974 / 157.591
2.600 GHz	0.968 / 149.756	0.413 / -16.274	0.023 / 61.066	0.975 / 155.792
2.700 GHz	0.969 / 147.957	0.383 / -17.680	0.024 / 59.475	0.976 / 154.025
2.800 GHz	0.970 / 146.183	0.355 / -19.012	0.026 / 57.884	0.977 / 152.290
2.900 GHz	0.971 / 144.433	0.331 / -20.272	0.027 / 56.296	0.978 / 150.582
3.000 GHz	0.972 / 142.705	0.309 / -21.462	0.028 / 54.714	0.979 / 148.899

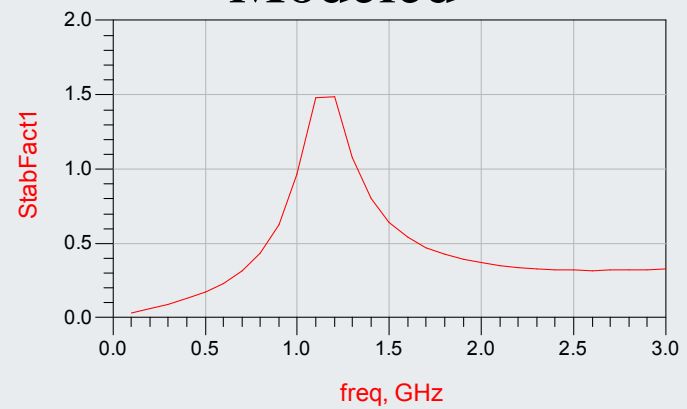


PD85004
Stability factor
13.6 V , 100 mA

Measured

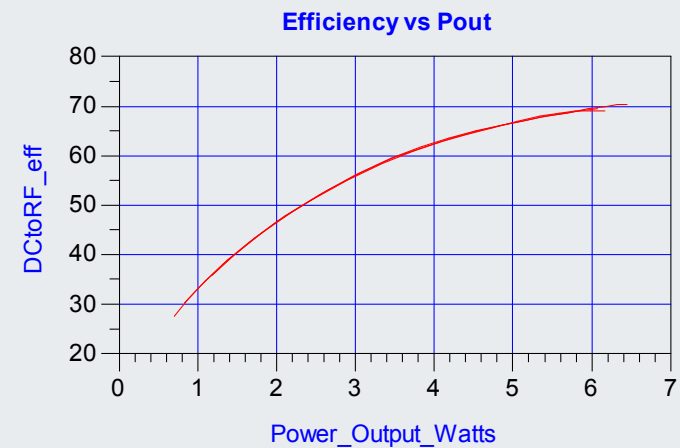
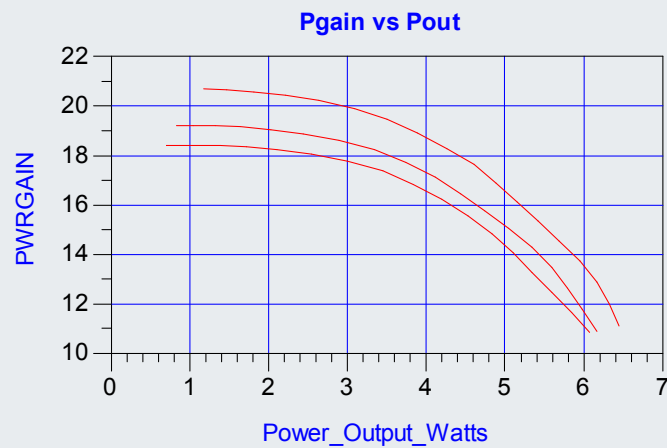


Modeled



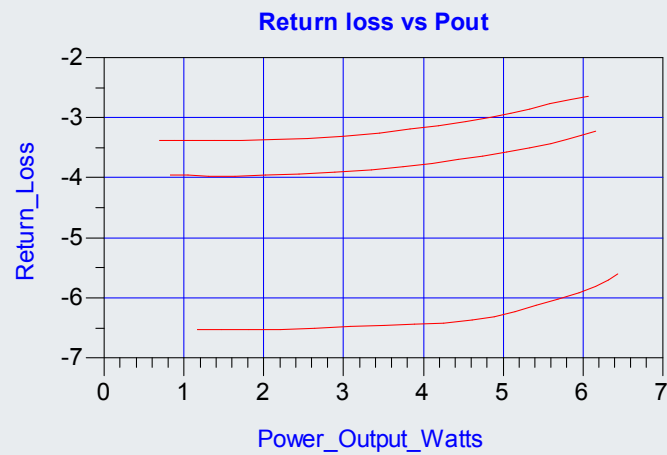
PD85004

860 MHz ,910 MHz, 960 MHz
Large Signal RF



PD85004

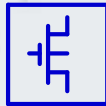
860 MHz ,910 MHz, 960 MHz
Large Signal RF



GENERIC NETLIST

- *PD85004_rev1_0
- *1/27/2009
- *STMicroelectronics
- *port 1 = GATE , 2 = Drain , 3 = Source
- *
- .SUBCKT PD85004 10 20 30
- LGATE 10 11 1N
- RGATE 11 12 .5
- CG 10 30 .1P
- CRSS 12 17 .489P
- CISS 12 14 15.7P
- LS 14 30 0.046N
- CS 14 30 .2P
- R 17 13 100K
- LD 17 20 0.9N
- CD 20 30 .1P
- MOS 13 12 14 14 mos_85004 L=.5UM W= 20mM
- JFET 17 14 13 jf_85004
- DBODY 14 17 d_85004
- .MODEL mos_85004 nmos (vto=3 KP=1.54E-5 LAMBDA=1 RD=0.6 RS=0.6)
- .MODEL jf_85004 njf (VTO=-6 BETA=.6 LAMBDA=.1)
- .MODEL d_85004 d (CJO=30p RS=0.25 VJ=1.1 M=0.35 BV=75)
- .ENDS





LEVEL1_Model

mos_85004

NMOS=yes

PMOS=no

Vto=3

Kp=1.54e-5

Gamma=

Phi=

Lambda=1

Rd=0.6

Rs=0.6

Cbd=

Cbs=

Is=

Pb=

Cgso=

Cgdo=

Cgbo=

Rsh=

Cj=

Mj=

Cjsw=

Mjsw=

Js=

Tox=

Nsub=

Nss=

Tpg=

Ld=

Uo=

Nlev=

Gdsnoi=

Kf=

Af=

Fc=

Rg=

Rds=

Tnom=27

Trise=

N=

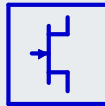
Tt=

Ffe=

Imax=

Imelt=

AllParams=



JFET_Model

jf_85004

NFET=yes

PFET=no

Vto=-6

Beta=.6

Lambda=.1

Rd=

Rs=

Is=

Cgs=

Cgd=

Pb=

Fc=

Tnom=27

Trise=

Kf=

Af=

Imax=

Imelt=

N=

Isr=

Nr=

Alpha=

Vk=

M=

Vtotc=

Betatce=

Xti=

Ffe=

Gdsnoise=no

AllParams=



Diode_Model

d_85004

Is=

Rs=0.25

Gleak=

N=

Cd=

Cjo=30 pF

Vj=1.1

M=0.35

Fc=

Imax=

Imelt=

Isr=

Nr=

Ikf=

Bv=75

Ibv=1e-10

Nbv=

Ibv=

Nbv=

Kf=

Af=

Ffe=

Jsw=

Rsw=

Gleaksw=

Ns=

lkp=

Cjsw=

Msw=

Vjsw=

Fcsw=

AllowScaling=no

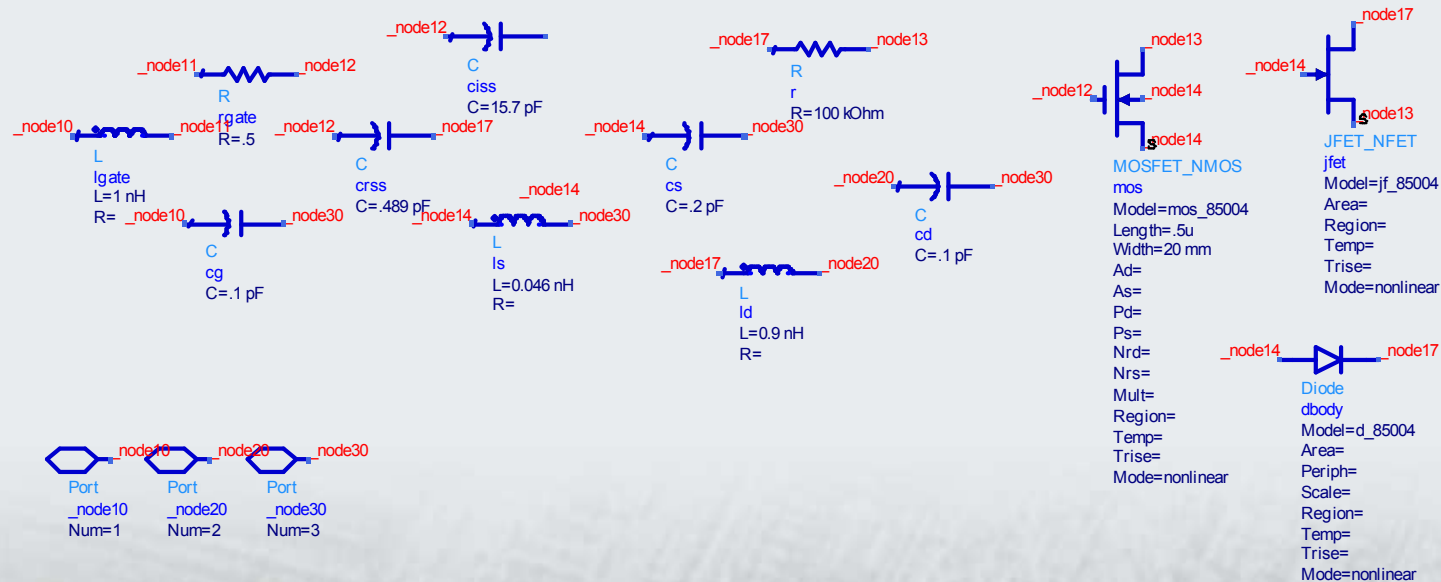
Tnom=27

Trise=

Xti=

Eg=

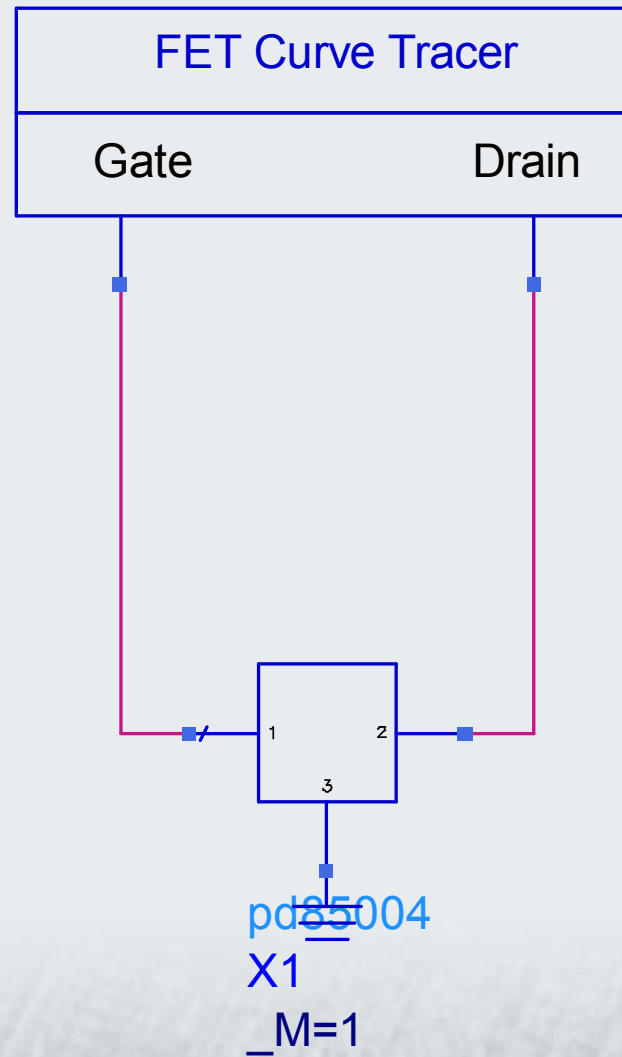
AllParams=



Imported NETLIST of model



DC_FET
DC_FET1
VGS_start=0
VGS_stop=10
VGS_points=101
VDS_start=0
VDS_stop=16.0
VDS_points=41



Example of model netlist attached to DC template

