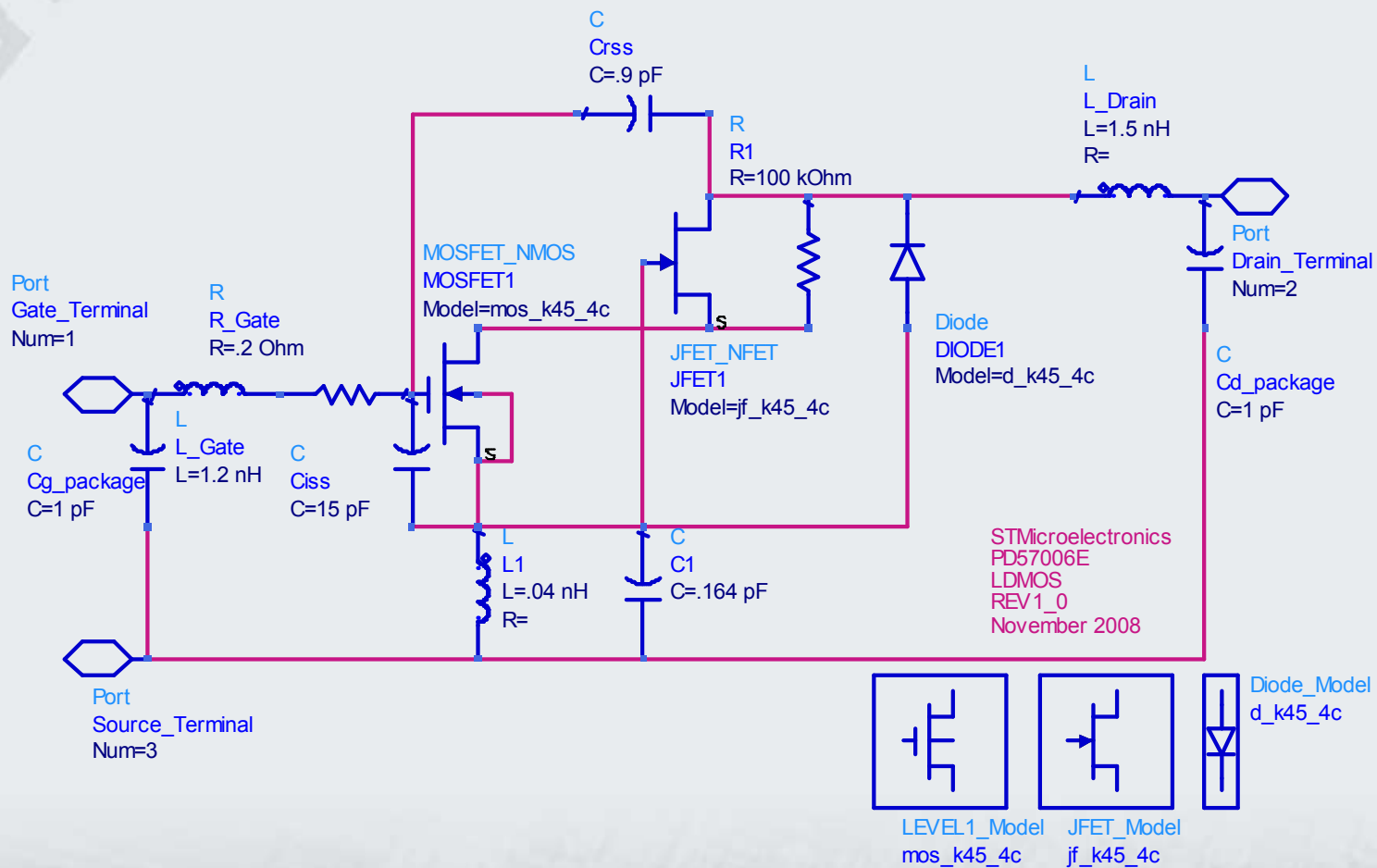


PD57006E_rev1_0
Model validation



Quakertown , PA
Qtn-jp-217-rev1
November 19 , 2008

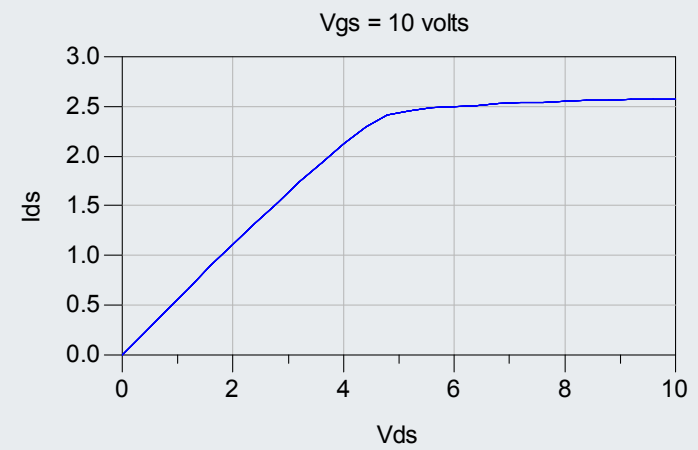
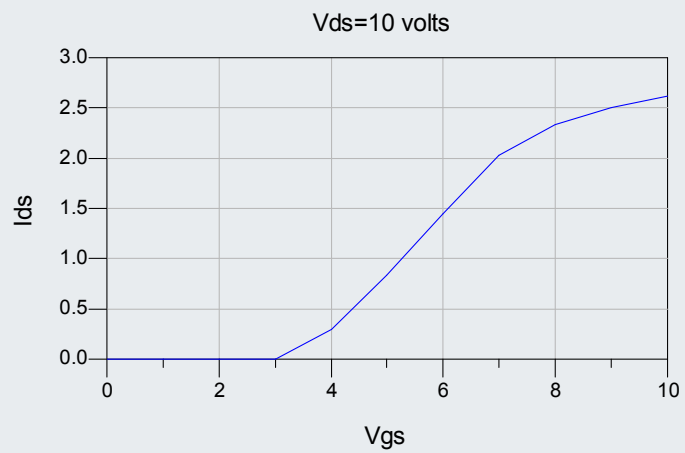


PD57006E model



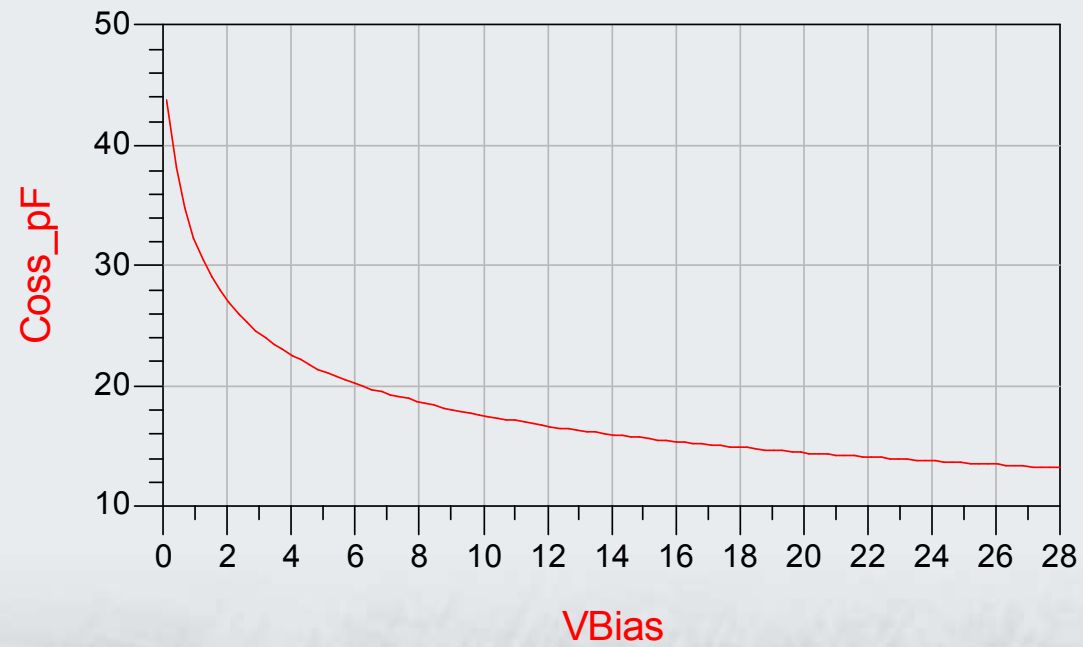
PD57006E

DC



PD57006E

Cds



PD57006E

S-parameter

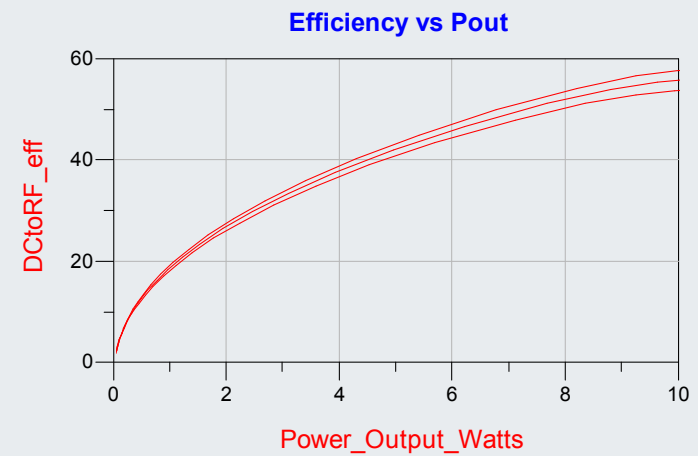
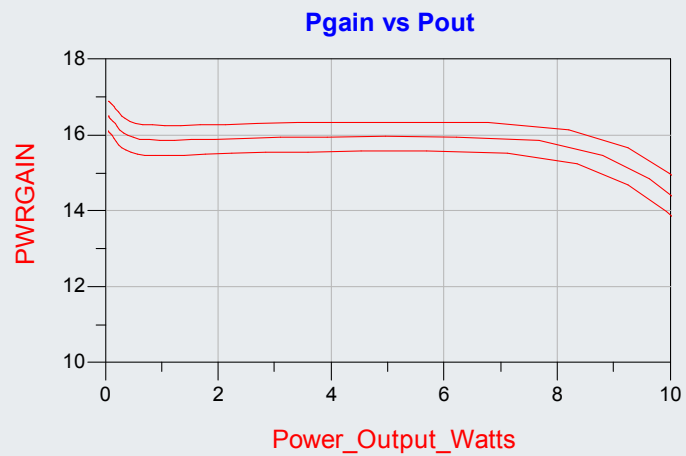
Modeled				
freq	S(1,1)	S(2,1)	S(1,2)	S(2,2)
50.00 MHz	0.912 / -57.765	34.332 / 140.409	0.023 / 50.749	0.885 / -51.969
100.0 MHz	0.812 / -94.022	24.364 / 115.733	0.033 / 26.413	0.752 / -85.264
150.0 MHz	0.767 / -114.771	17.857 / 100.419	0.036 / 11.444	0.689 / -105.047
200.0 MHz	0.753 / -127.440	13.750 / 89.525	0.037 / 0.899	0.669 / -117.578
250.0 MHz	0.753 / -135.875	11.000 / 80.927	0.037 / -7.343	0.669 / -126.212
300.0 MHz	0.760 / -141.961	9.050 / 73.697	0.036 / -14.209	0.679 / -132.667
350.0 MHz	0.771 / -146.669	7.601 / 67.383	0.035 / -20.150	0.695 / -137.841
400.0 MHz	0.784 / -150.523	6.487 / 61.739	0.033 / -25.406	0.713 / -142.220
450.0 MHz	0.797 / -153.820	5.606 / 56.621	0.032 / -30.123	0.732 / -146.075
500.0 MHz	0.811 / -156.736	4.897 / 51.931	0.030 / -34.392	0.750 / -149.563
550.0 MHz	0.824 / -159.377	4.315 / 47.604	0.029 / -38.278	0.768 / -152.778
600.0 MHz	0.836 / -161.813	3.831 / 43.588	0.027 / -41.828	0.784 / -155.780
650.0 MHz	0.847 / -164.087	3.425 / 39.844	0.026 / -45.076	0.800 / -158.610
700.0 MHz	0.857 / -166.232	3.081 / 36.337	0.024 / -48.053	0.814 / -161.296
750.0 MHz	0.867 / -168.270	2.786 / 33.040	0.023 / -50.778	0.826 / -163.859
800.0 MHz	0.876 / -170.217	2.533 / 29.928	0.022 / -53.270	0.838 / -166.316
850.0 MHz	0.883 / -172.087	2.314 / 26.982	0.020 / -55.539	0.848 / -168.681
900.0 MHz	0.890 / -173.891	2.123 / 24.182	0.019 / -57.593	0.858 / -170.966
950.0 MHz	0.897 / -175.637	1.955 / 21.512	0.018 / -59.434	0.866 / -173.180
1.000 GHz	0.903 / -177.333	1.808 / 18.959	0.016 / -61.059	0.874 / -175.333
1.050 GHz	0.908 / -178.986	1.677 / 16.508	0.015 / -62.459	0.881 / -177.433
1.100 GHz	0.913 / -179.399	1.562 / 14.150	0.014 / -63.615	0.887 / -179.487
1.150 GHz	0.917 / -177.816	1.459 / 11.873	0.013 / -64.502	0.893 / -178.499
1.200 GHz	0.921 / -176.261	1.367 / 9.668	0.012 / -65.076	0.898 / -176.517
1.250 GHz	0.925 / -174.729	1.284 / 7.528	0.011 / -65.280	0.903 / -174.564
1.300 GHz	0.928 / -173.216	1.210 / 5.445	0.010 / -65.025	0.907 / -172.632
1.350 GHz	0.931 / -171.720	1.143 / 3.411	0.009 / -64.186	0.911 / -170.719
1.400 GHz	0.934 / -170.236	1.082 / 1.421	0.008 / -62.582	0.915 / -168.819
1.450 GHz	0.937 / -168.761	1.027 / -0.530	0.007 / -59.944	0.918 / -166.927
1.500 GHz	0.939 / -167.293	0.977 / -2.449	0.006 / -55.891	0.921 / -165.041

Measured				
freq	S(1,1)	S(2,1)	S(1,2)	S(2,2)
50.00 MHz	0.953 / -65.000	31.010 / 138.000	0.022 / 48.000	0.780 / -52.000
100.0 MHz	0.855 / -104.000	21.590 / 112.000	0.030 / 20.000	0.677 / -85.000
150.0 MHz	0.823 / -124.000	15.490 / 96.000	0.031 / 7.000	0.601 / -101.000
200.0 MHz	0.818 / -136.000	11.840 / 85.000	0.031 / -5.000	0.605 / -113.000
250.0 MHz	0.824 / -144.000	9.540 / 75.000	0.031 / -12.000	0.614 / -118.000
300.0 MHz	0.832 / -150.000	7.850 / 67.000	0.029 / -19.000	0.635 / -126.000
350.0 MHz	0.835 / -155.000	6.480 / 59.000	0.029 / -25.000	0.676 / -129.000
400.0 MHz	0.845 / -159.000	5.510 / 53.000	0.027 / -31.000	0.696 / -134.000
450.0 MHz	0.850 / -162.000	4.690 / 4.000	0.025 / -36.000	0.722 / -137.000
500.0 MHz	0.860 / -165.000	4.110 / 43.000	0.024 / -41.000	0.748 / -141.000
550.0 MHz	0.866 / -168.000	3.580 / 38.000	0.023 / -44.000	0.773 / -144.000
600.0 MHz	0.870 / -170.000	3.210 / 33.000	0.021 / -48.000	0.790 / -147.000
650.0 MHz	0.878 / -172.000	2.880 / 29.000	0.019 / -53.000	0.808 / -150.000
700.0 MHz	0.883 / -174.000	2.600 / 25.000	0.019 / -53.000	0.821 / -152.000
750.0 MHz	0.887 / -177.000	2.370 / 21.000	0.016 / -59.000	0.838 / -154.000
800.0 MHz	0.890 / -179.000	2.160 / 17.000	0.017 / -60.000	0.846 / -156.000
850.0 MHz	0.890 / -179.000	1.980 / 13.000	0.015 / -62.000	0.856 / -158.000
900.0 MHz	0.888 / -178.000	1.820 / 9.000	0.014 / -67.000	0.869 / -160.000
950.0 MHz	0.892 / -176.000	1.690 / 6.000	0.013 / -70.000	0.879 / -162.000
1.000 GHz	0.894 / -174.000	1.570 / 3.000	0.013 / -72.000	0.886 / -163.000
1.050 GHz	0.892 / -172.000	1.470 / 1.529E-10	0.011 / -76.000	0.892 / -165.000
1.100 GHz	0.888 / -170.000	1.360 / -3.000	0.011 / -80.000	0.894 / -166.000
1.150 GHz	0.885 / -169.000	1.280 / -6.000	0.010 / -86.000	0.899 / -168.000
1.200 GHz	0.880 / -167.000	1.210 / -9.000	0.009 / -89.000	0.897 / -170.000
1.250 GHz	0.872 / -165.000	1.160 / -11.000	0.009 / -95.000	0.901 / -171.000
1.300 GHz	0.864 / -163.000	1.110 / -14.000	0.008 / -103.000	0.906 / -173.000
1.350 GHz	0.856 / -161.000	1.090 / -17.000	0.007 / -110.000	0.905 / -174.000
1.400 GHz	0.844 / -159.000	1.060 / -20.000	0.007 / -118.000	0.905 / -176.000
1.450 GHz	0.824 / -156.000	1.060 / -23.000	0.007 / -129.000	0.906 / -177.000
1.500 GHz	0.806 / -154.000	1.040 / -29.000	0.008 / -143.000	0.910 / -178.000



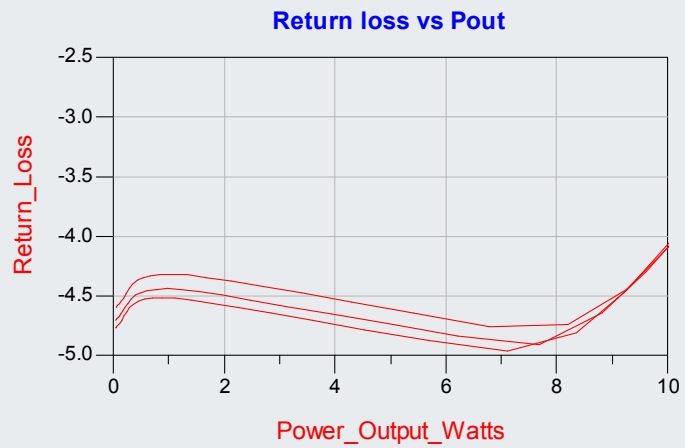
PD57006E

925 MHz – 960 MHz Large Signal RF



PD57006E

925 MHz – 960 MHz Large Signal RF



NETLIST

- *PD57006E_rev1_0
- *11/19/2008
- *STMicroelectronics
- *port 1 = GATE , 2 = Drain , 3 = Source
- *
- .SUBCKT PD57006E 10 20 30
- LGATE 10 11 1.2N
- RGATE 11 12 3
- CG 10 30 1P
- CRSS 12 17 .9P
- CISS 12 14 15P
- LS 14 30 0.04N
- CS 14 30 .164P
- R 17 13 100K
- LD 17 20 1.5N
- CD 20 30 1P
- MOS 13 12 14 14 mos_57006E L=.6UM W= 17mM
- JFET 17 14 13 jf_57006E
- DBODY 14 17 d_57006E
- .MODEL mos_57006E nmos (vto=3 KP=2E-5 LAMBDA=0.15 RD=0.75 RS=0.75)
- .MODEL jf_57006E njf (VTO=-5 BETA=6 LAMBDA=1)
- .MODEL d_57006E d (CJO=45p RS=0.25 VJ=.4 M=0.325 BV=80)
- .ENDS





LEVEL1_Model
mos_57006e
NMOS=yes
PMOS=no
Vto=3
Kp=2e-5
Gamma=
Phi=
Lambda=0.15
Rd=0.75
Rs=0.75
Cbd=
Cbs=
Is=
Pb=
Cgso=
Cgdo=

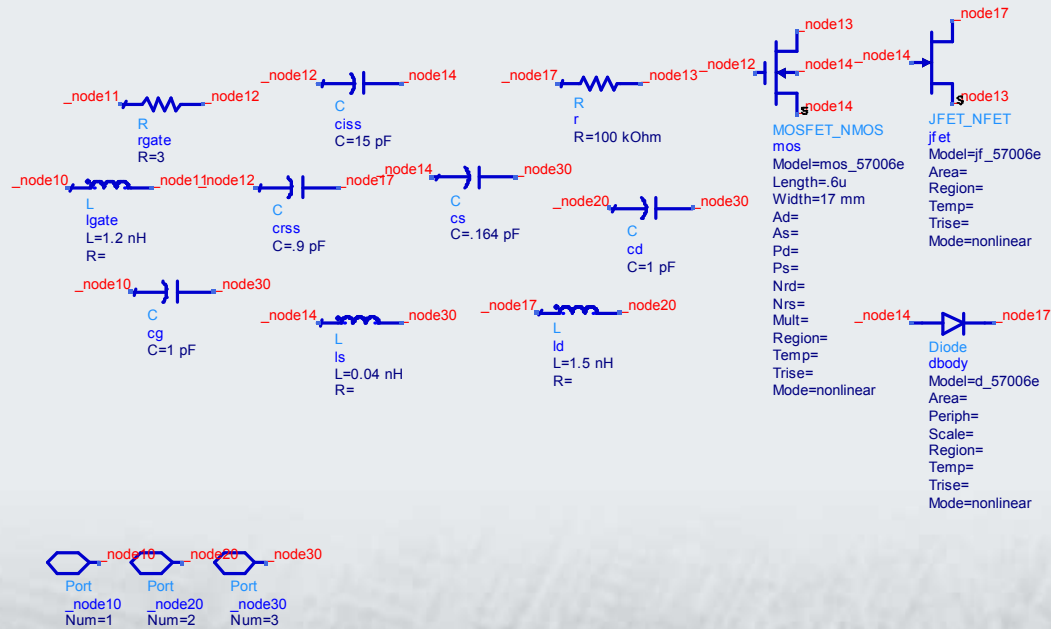
Cgbo=
Rsh=
Cj=
Mj=
Cjsw=
Mjsw=
Js=
Tox=
N=
Nsub=
Nss=
Tpg=
Ld=
Uo=
Nlev=
Gdsnoi=
Kf=
Af=
Fc=
Rg=
Rds=
Tnom=27
Trise=
N=
Tt=
Ffe=
Imax=
Imelt=
AllParams=



JFET_Model
jf_57006e
NFET=yes
PFET=no
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_57006e
Is=
Rs=0.25
Gleak=
N=
Tt=
Cd=
Cjo=45 pF
Vj=4
M=0.325
Fc=
Imax=
Imelt=
Isr=
Nr=
Ikf=
Bv=80
Ibv=1e-10
Nbv=
IbvI=
NbvI=
Kf=
Af=
Ffe=
Jsw=
Rsw=
Ns=
Gleaksw=
Ikp=
Cjsw=
Msw=
Vjsw=
Fcs=
AllowScaling=no
Tnom=27
Trise=
Xi=
Eg=
AllParams=



Imported netlist

