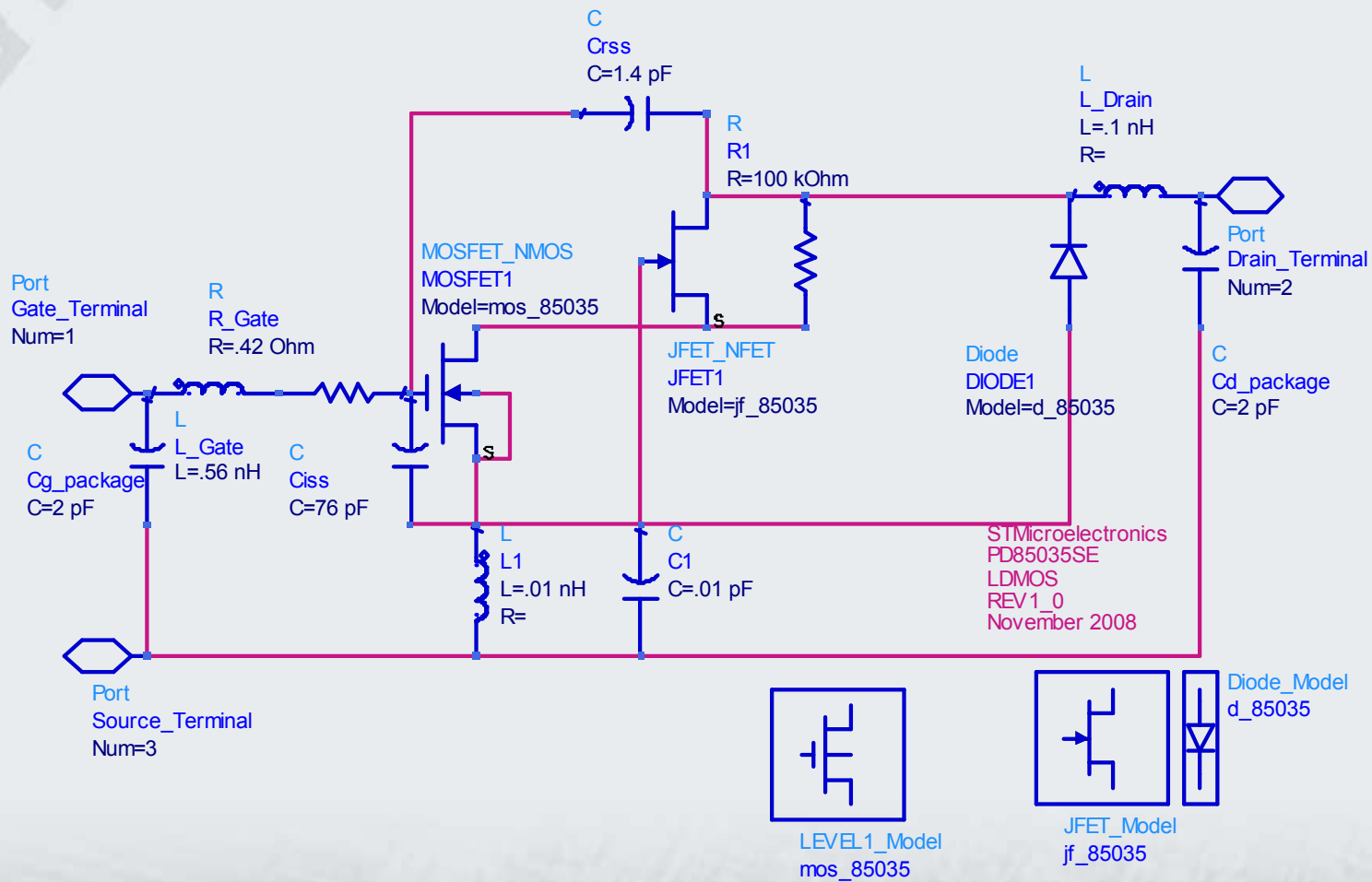


# PD85035SE\_rev1\_0

## Model Information



Quakertown , PA  
Qtn-jp-270-rev1  
November 24 , 2008

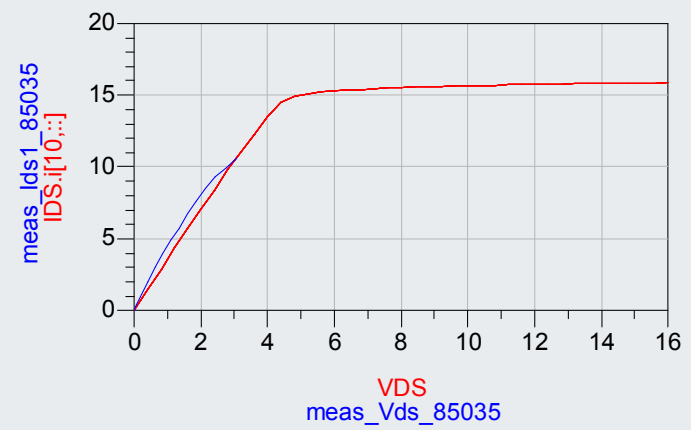
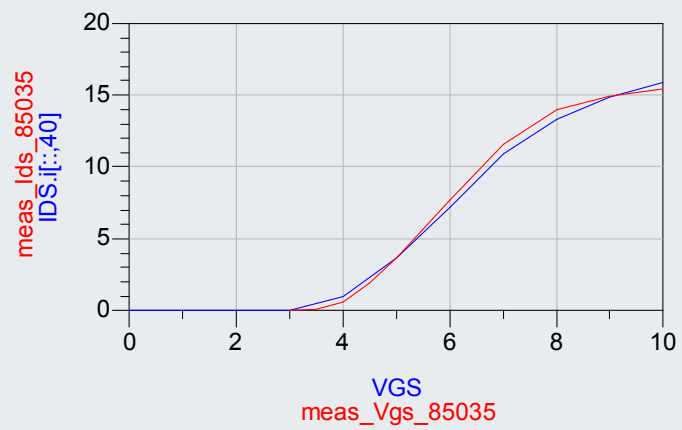


PD85035SE model



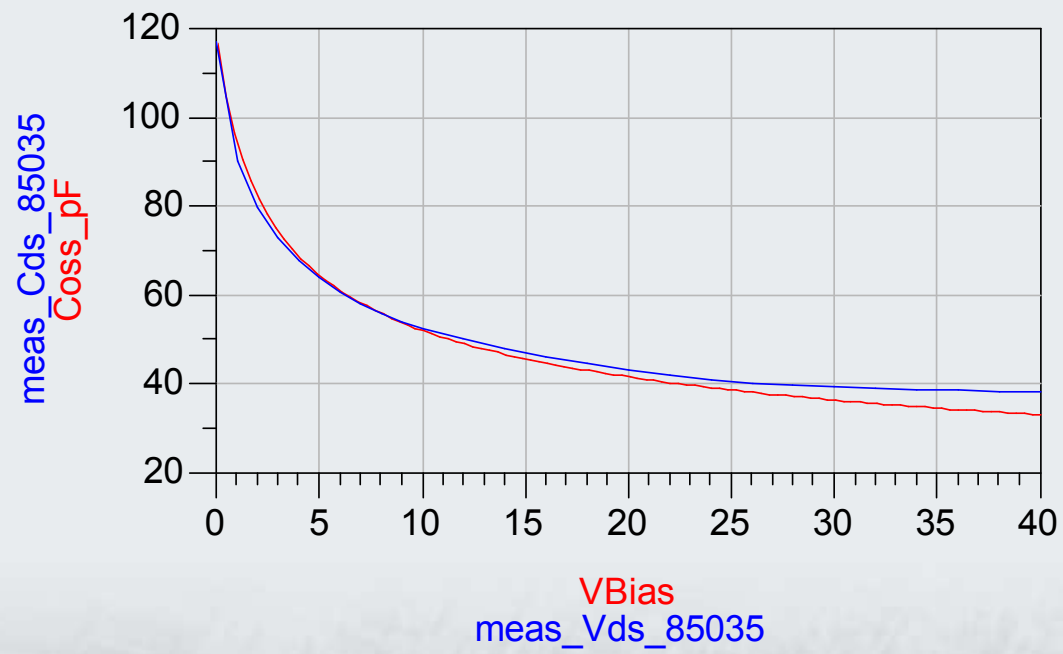
# PD85035SE

## DC



# PD85035SE

## Cds



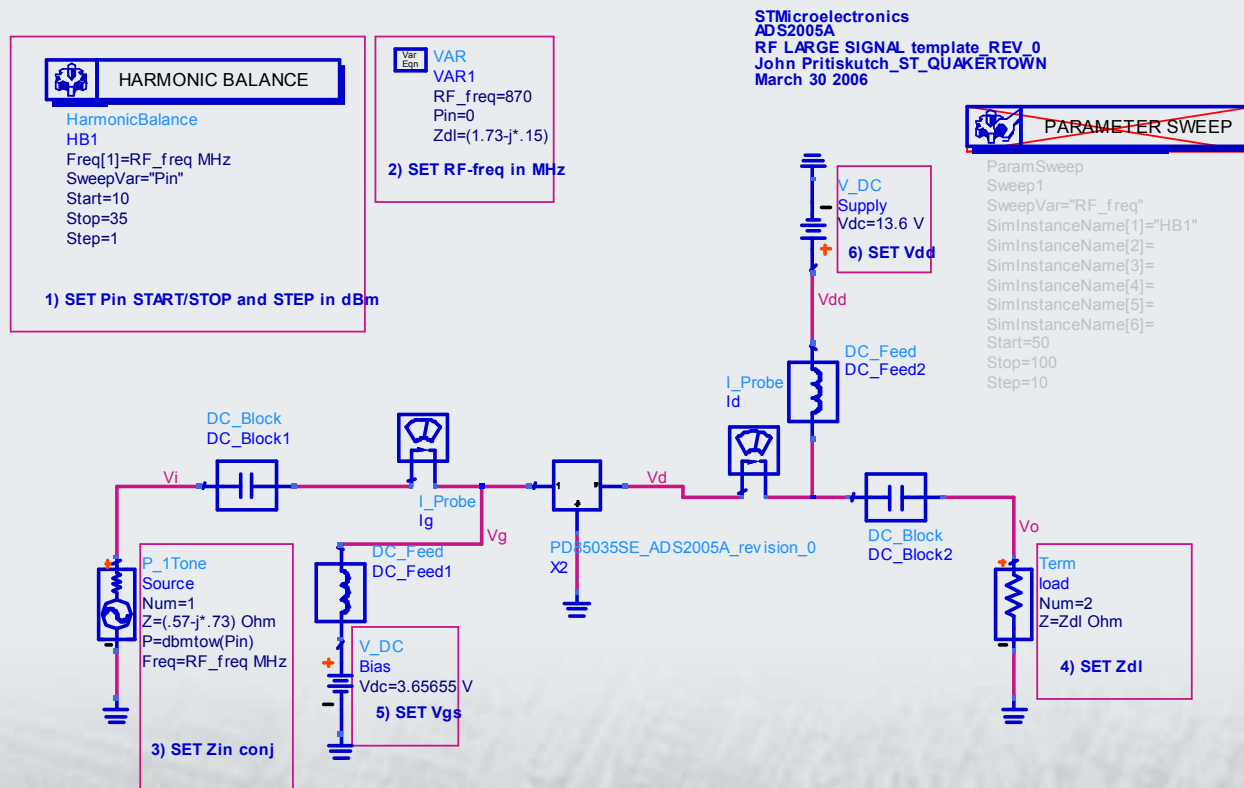
# PD85035SE

## S-parameter

freq	S(1,1)	S(2,1)	S(1,2)	S(2,2)
50.00 MHz	0.794 / -135.960	39.794 / 91.111	0.012 / 1.384	0.616 / -117.354
100.0 MHz	0.823 / -152.799	18.596 / 68.904	0.011 / -20.543	0.675 / -135.059
150.0 MHz	0.866 / -159.263	10.924 / 55.088	0.010 / -34.067	0.757 / -143.482
200.0 MHz	0.900 / -163.383	7.132 / 45.338	0.009 / -43.504	0.820 / -149.460
250.0 MHz	0.925 / -166.477	4.982 / 38.183	0.007 / -50.317	0.864 / -154.008
300.0 MHz	0.942 / -168.941	3.656 / 32.777	0.006 / -55.342	0.895 / -157.545
350.0 MHz	0.954 / -170.970	2.788 / 28.582	0.005 / -59.104	0.916 / -160.346
400.0 MHz	0.963 / -172.684	2.192 / 25.249	0.005 / -61.936	0.931 / -162.606
450.0 MHz	0.970 / -174.164	1.766 / 22.544	0.004 / -64.050	0.942 / -164.461
500.0 MHz	0.975 / -175.467	1.453 / 20.307	0.003 / -65.576	0.951 / -166.010
550.0 MHz	0.979 / -176.634	1.216 / 18.428	0.003 / -66.583	0.957 / -167.321
600.0 MHz	0.982 / -177.695	1.033 / 16.827	0.003 / -67.089	0.962 / -168.446
650.0 MHz	0.984 / -178.673	0.888 / 15.447	0.002 / -67.058	0.966 / -169.423
700.0 MHz	0.986 / -179.584	0.773 / 14.243	0.002 / -66.384	0.969 / -170.281
750.0 MHz	0.988 / 179.558	0.678 / 13.185	0.001 / -64.843	0.972 / -171.040
800.0 MHz	0.989 / 178.744	0.601 / 12.246	0.001 / -61.993	0.974 / -171.719
850.0 MHz	0.990 / 177.965	0.536 / 11.406	8.917E-4 / -56.918	0.976 / -172.331
900.0 MHz	0.991 / 177.214	0.482 / 10.651	6.554E-4 / -47.598	0.978 / -172.885
950.0 MHz	0.992 / 176.486	0.435 / 9.968	4.693E-4 / -29.624	0.979 / -173.391
1.000 GHz	0.992 / 175.777	0.396 / 9.346	3.831E-4 / 1.583	0.980 / -173.856

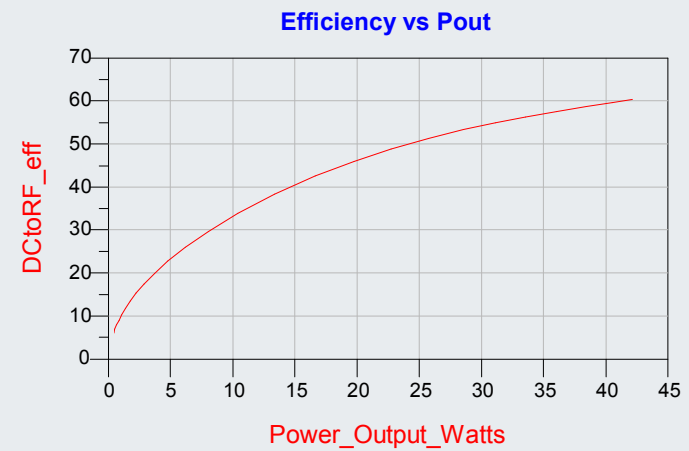
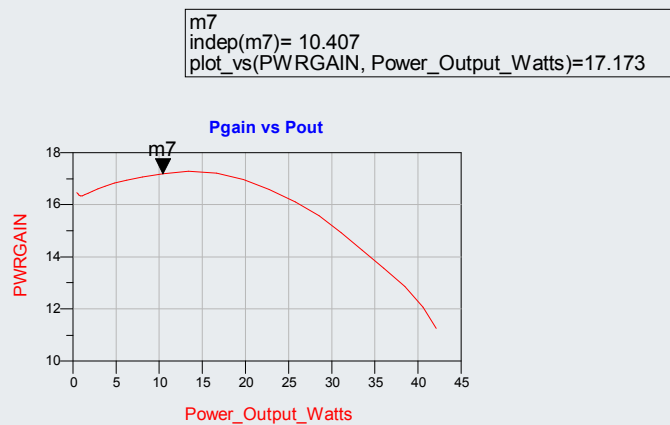


# Large Signal template using PD85035SE data sheet 870 MHz large signal impedances



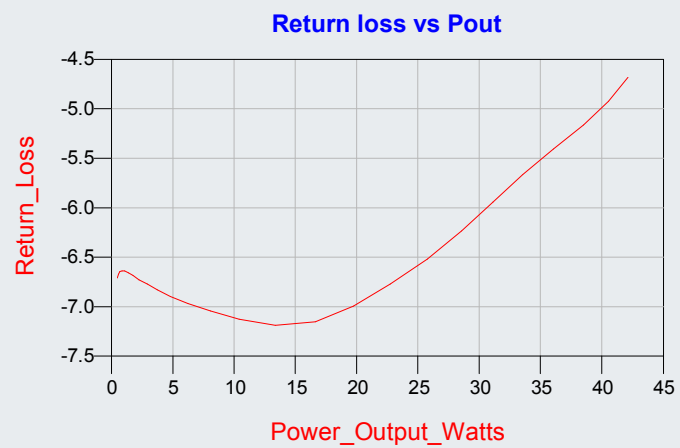
# PD85035SE

## 870 MHz Large Signal RF



# PD85035SE

## 870 MHz Large Signal RF





- \*PD85035SE\_rev1\_0
- \*11/24/2008
- \*STMicroelectronics
- \*port 1 = GATE , 2 = Drain , 3 = Source
- \*
- .SUBCKT PD85035SE 10 20 30
- LGATE 10 11 .56N
- RGATE 11 12 .42
- CG 10 30 2P
- CRSS 12 17 1.4P
- CISS 12 14 76P
- LS 14 30 0.01N
- CS 14 30 .01P
- R 17 13 100K
- LD 17 20 .1N
- CD 20 30 2P
- MOS 13 12 14 14 mos\_85035SE L=.3UM W= 78mM
- JFET 17 14 13 jf\_85035SE
- DBODY 14 17 d\_85035SE
- .MODEL mos\_85035SE nmos (vto=3.2 KP=.9E-5 LAMBDA=0.15 RD=0.105 RS=0.105)
- .MODEL jf\_85035SE njf (VTO=-4.75 BETA=50 LAMBDA=1)
- .MODEL d\_85035SE d (CJO=117p RS=0.25 VJ=1.1 M=0.38 BV=75)
- .ENDS





LEVEL1\_Model  
 mos\_85035se  
 NMOS=yes  
 PMOS=no  
 Vto=3.2  
 Kp=.9e-5  
 Gamma=  
 Phi=  
 Lambda=0.15  
 Rd=0.105  
 Rs=0.105  
 Cbd=  
 Cbs=  
 Is=  
 Pb=  
 Cgso=  
 Cgdo=

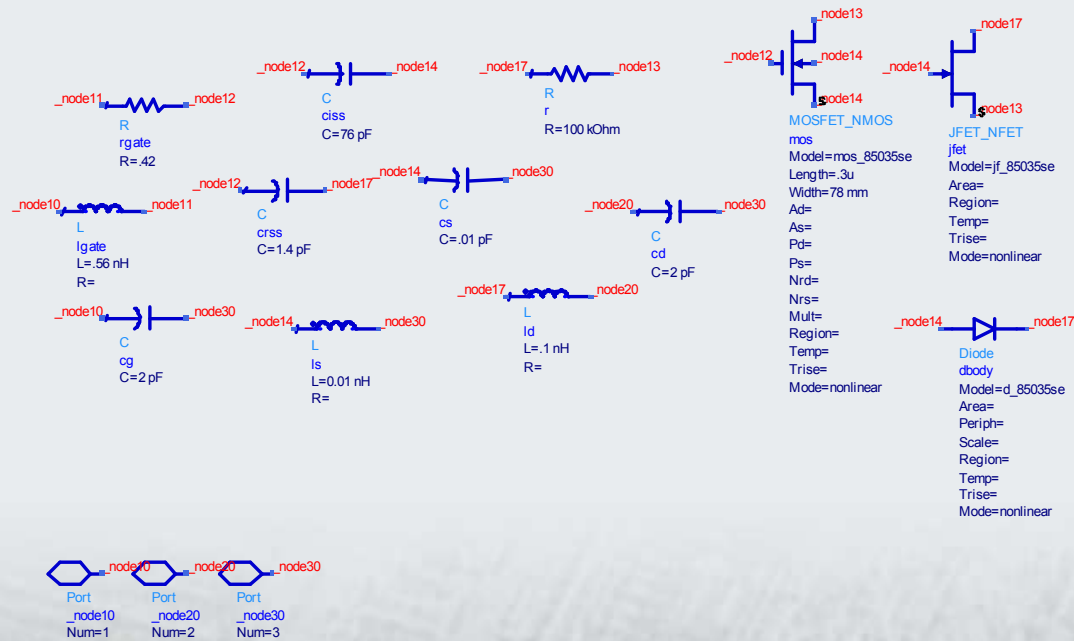
Cgbo=  
 Rsh=  
 Cj=  
 Mjsw=  
 Js=  
 Tox=  
 Nsub=  
 Tpg=  
 Ld=  
 Uo=  
 Nlev=  
 Gdsnoi=  
 Kf=  
 Af=  
 Fc=  
 Rg=  
 Rds=  
 Tnom=27  
 Trise=  
 N=  
 Tt=  
 Ffe=  
 Imax=  
 Imelt=  
 AllParams=



JFET\_Model  
 jf\_85035se  
 NFET=yes  
 PFET=no  
 Vto=-4.75  
 Beta=50  
 Lambda=1  
 Rd=  
 Rs=  
 Is=  
 Cgs=  
 Cgd=  
 Pb=  
 Fc=  
 Tnom=27  
 Trise=  
 Kf=  
 Af=  
 Imax=  
 Imelt=  
 N=  
 Isr=  
 Vr=  
 M=  
 Vtote=  
 Betatce=  
 Xti=  
 Ffe=  
 Gdsnoise=no  
 AllParams=



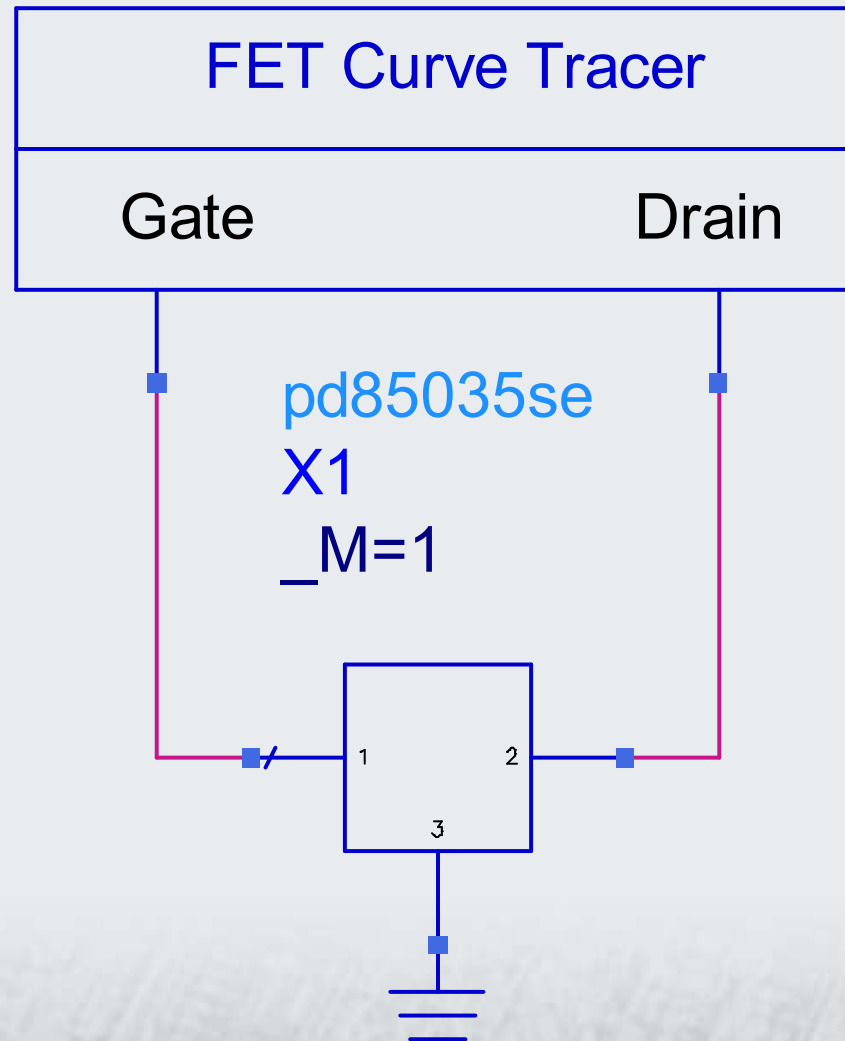
Diode\_Model  
 d\_85035se  
 Is=  
 Rs=0.25  
 Gleak=  
 N=  
 Tt=  
 Cd=  
 Cjo=117 pF  
 Vj=1.1  
 M=0.38  
 Fc=  
 Imax=  
 Imelt=  
 Isr=  
 Nr=  
 Ikt=  
 Bv=75  
 Ibv=1e-10  
 Nbv=  
 Ibv=  
 Kf=  
 Ffe=  
 Jsw=  
 Rsw=  
 Gleaksw=  
 Ns=  
 Ikp=  
 Cjsw=  
 Msw=  
 Vjsw=  
 Fcsw=  
 AllowScaling=no  
 Tnom=27  
 Trise=  
 Xti=  
 Eg=  
 AllParams=



Imported netlist



DC\_FET  
DC\_FET1  
VGS\_start=0  
VGS\_stop=10  
VGS\_points=101  
VDS\_start=0  
VDS\_stop=16.0  
VDS\_points=41



Imported netlist attached to "X"

