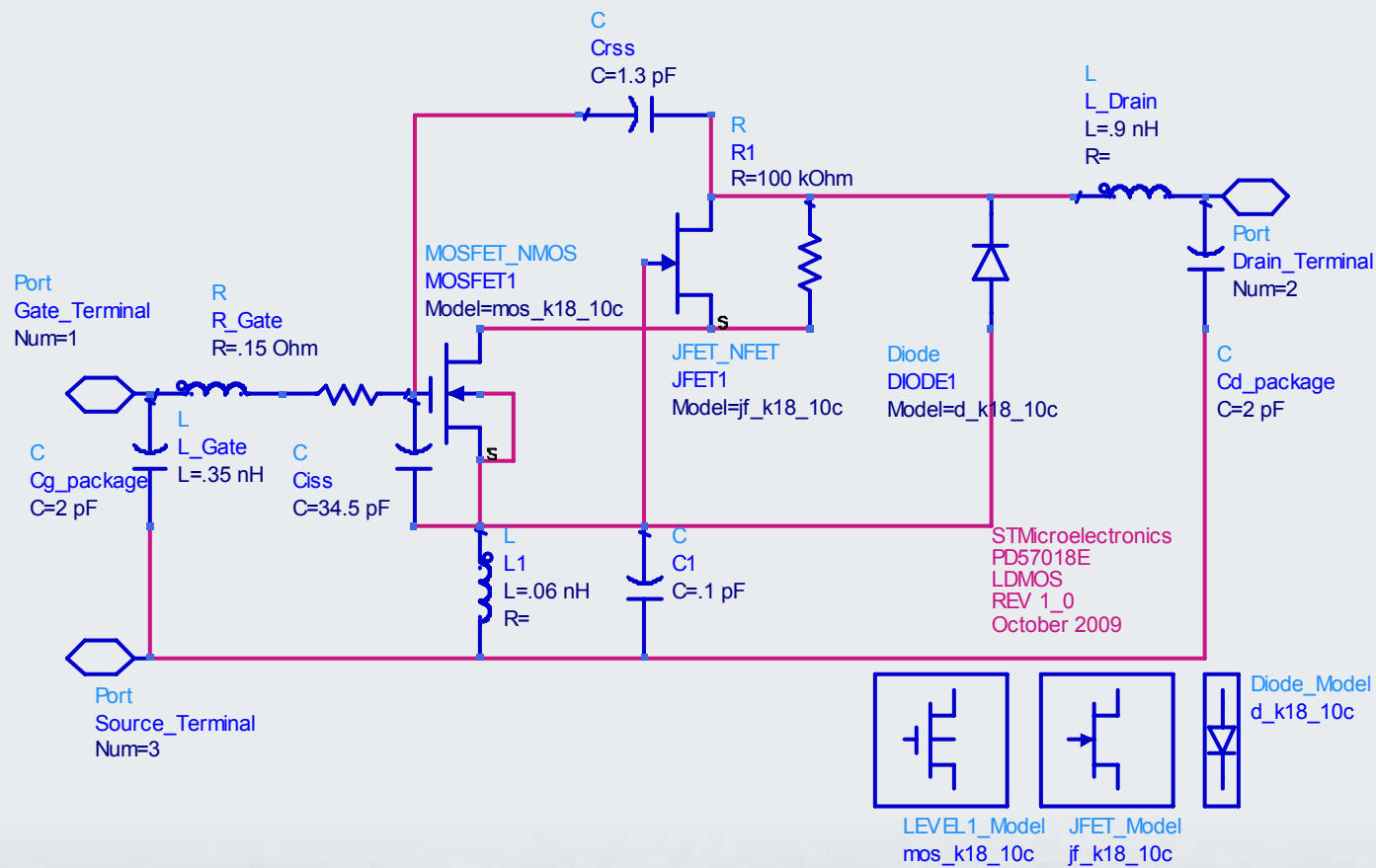


PD57018E_rev1_0
Model Information



Quakertown , PA
Qtn-MS09013-rev0
October 28 , 2009

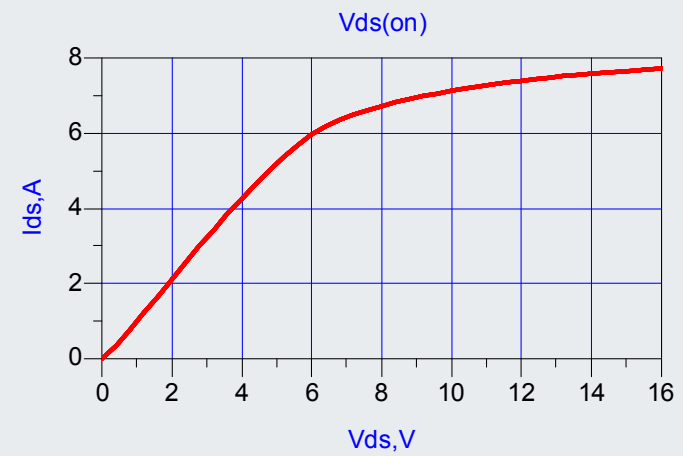
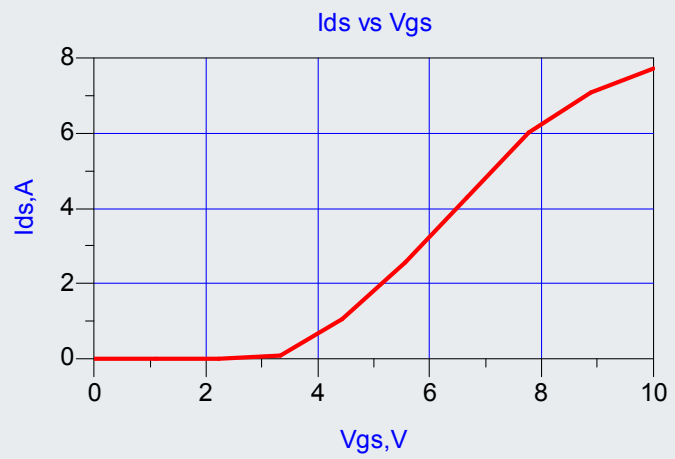


PD57018E model configuration



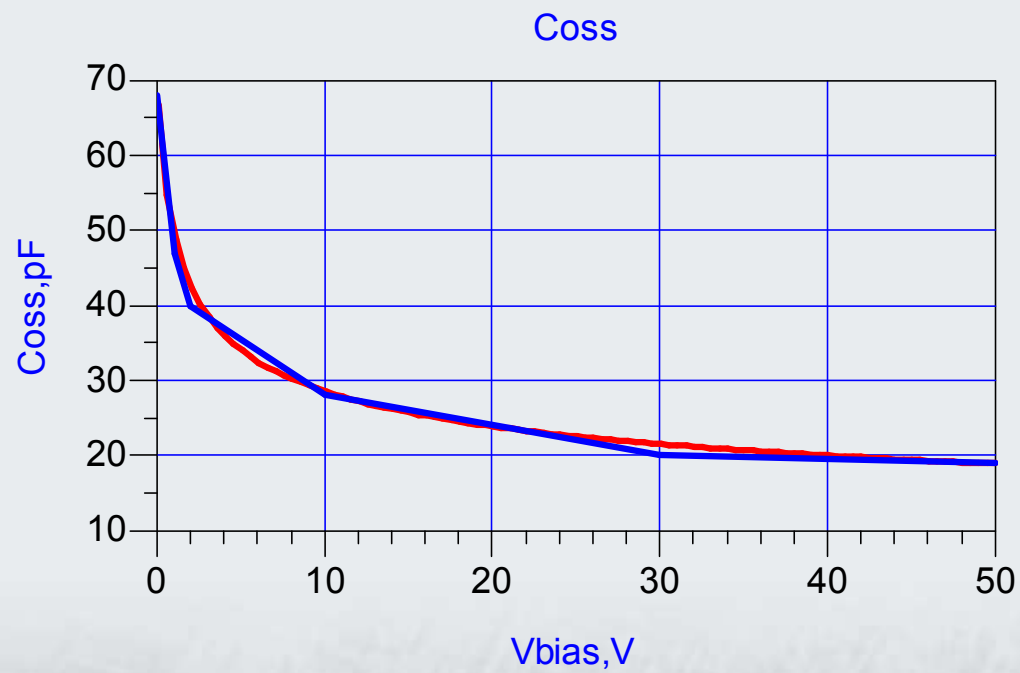
PD57018E

DC



PD57018E

Cds



MODELED, MEASURED



PD57018E

S-Parameters

PD57018E MEASURED S-parameters Vdd=28 V , Idq= 8A

freq	S(1,1)	S(2,1)	S(1,2)	S(2,2)
50.00 MHz	0.868 / -112.000	39.290 / 111.000	0.019 / 24.000	0.523 / -99.000
100.0 MHz	0.841 / -142.000	20.990 / 89.000	0.020 / 5.000	0.507 / -126.000
150.0 MHz	0.940 / -154.000	13.810 / 79.000	0.020 / -8.000	0.532 / -135.000
200.0 MHz	0.852 / -160.000	10.010 / 69.000	0.019 / -13.000	0.573 / -140.000
250.0 MHz	0.860 / -164.000	7.780 / 62.000	0.018 / -19.000	0.615 / -143.000
300.0 MHz	0.871 / -167.000	6.620 / 55.000	0.016 / -25.000	0.660 / -146.000
350.0 MHz	0.883 / -169.000	5.140 / 50.000	0.014 / -29.000	0.699 / -149.000
400.0 MHz	0.892 / -171.000	4.270 / 43.000	0.013 / -32.000	0.734 / -152.000
450.0 MHz	0.903 / -173.000	3.640 / 38.000	0.012 / -36.000	0.762 / -154.000
500.0 MHz	0.911 / -174.000	3.100 / 33.000	0.011 / -37.000	0.791 / -156.000
550.0 MHz	0.921 / -176.000	2.690 / 29.000	0.009 / -36.000	0.814 / -159.000
600.0 MHz	0.927 / -177.000	2.330 / 25.000	0.008 / -35.000	0.832 / -161.000
650.0 MHz	0.931 / -179.000	2.070 / 22.000	0.007 / -32.000	0.847 / -163.000
700.0 MHz	0.936 / -180.000	1.850 / 18.000	0.006 / -34.000	0.864 / -165.000
750.0 MHz	0.939 / -179.000	1.660 / 15.000	0.004 / -26.000	0.876 / -166.000
800.0 MHz	0.944 / -177.000	1.500 / 12.000	0.004 / -19.000	0.886 / -168.000
850.0 MHz	0.948 / -176.000	1.350 / 9.000	0.004 / -4.000	0.896 / -169.000
900.0 MHz	0.947 / -175.000	1.230 / 7.000	0.003 / 13.000	0.899 / -171.000
950.0 MHz	0.946 / -174.000	1.130 / 4.000	0.004 / 41.000	0.909 / -172.000
1.000 GHz	0.948 / -173.000	1.030 / 1.000	0.004 / 37.000	0.913 / -173.000
1.050 GHz	0.947 / -173.000	0.950 / -1.000	0.005 / 52.000	0.919 / -174.000
1.100 GHz	0.946 / -171.000	0.890 / -4.000	0.005 / 60.000	0.922 / -175.000
1.150 GHz	0.945 / -170.000	0.830 / -5.000	0.006 / 63.000	0.923 / -177.000
1.200 GHz	0.941 / -169.000	0.770 / -9.000	0.007 / 66.000	0.933 / -178.000
1.250 GHz	0.946 / -168.000	0.720 / -11.000	0.008 / 74.000	0.931 / -178.000
1.300 GHz	0.945 / -167.000	0.670 / -13.000	0.009 / 71.000	0.937 / -180.000
1.350 GHz	0.947 / -166.000	0.630 / -15.000	0.009 / 71.000	0.934 / -179.000
1.400 GHz	0.949 / -164.000	0.580 / -18.000	0.010 / 70.000	0.934 / -178.000
1.450 GHz	0.950 / -163.000	0.550 / -20.000	10.000E-4 / 73.000	0.938 / -177.000
1.500 GHz	0.948 / -162.000	0.510 / -21.000	10.000E-4 / 83.000	0.933 / -176.000

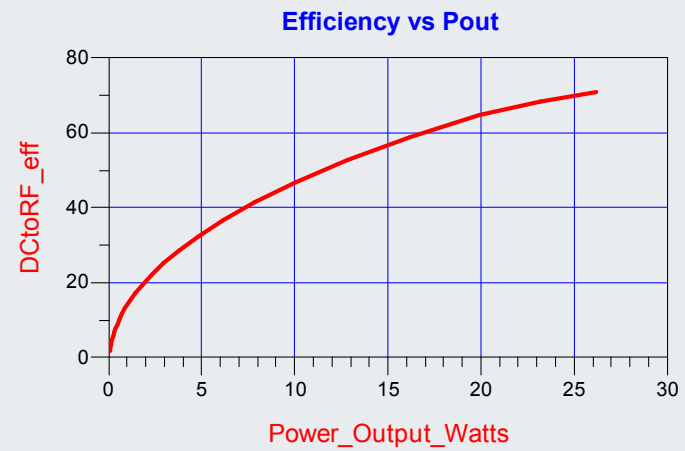
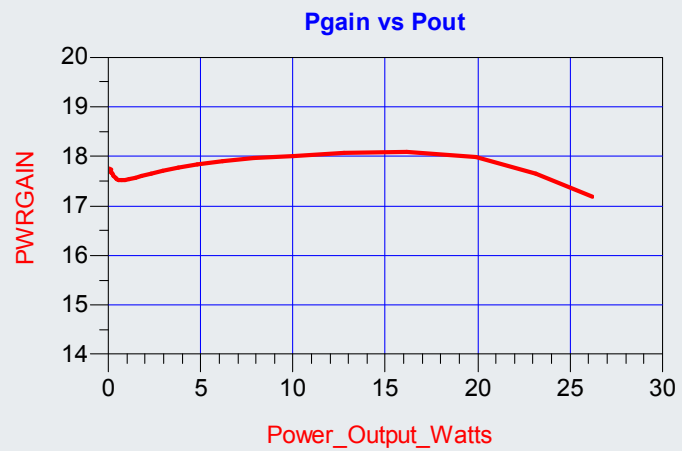
PD57018E SIMULATED S-parameters Vdd=28 V , Idq= 8A

freq	S(1,1)	S(2,1)	S(1,2)	S(2,2)
50.00 MHz	0.814 / -117.253	49.146 / 110.779	0.018 / 22.003	0.654 / -105.398
100.0 MHz	0.782 / -144.000	26.341 / 91.888	0.019 / 4.359	0.593 / -132.440
150.0 MHz	0.795 / -153.516	17.448 / 81.295	0.019 / -4.938	0.601 / -142.095
200.0 MHz	0.796 / -158.183	12.762 / 73.293	0.018 / -11.566	0.626 / -146.898
250.0 MHz	0.811 / -160.989	9.895 / 66.600	0.017 / -16.776	0.657 / -150.963
300.0 MHz	0.827 / -162.989	7.898 / 60.775	0.016 / -20.966	0.688 / -152.621
350.0 MHz	0.842 / -164.567	6.481 / 55.619	0.014 / -24.283	0.719 / -154.923
400.0 MHz	0.857 / -165.918	5.417 / 51.016	0.013 / -26.772	0.747 / -157.089
450.0 MHz	0.870 / -167.128	4.596 / 46.885	0.012 / -28.422	0.772 / -159.158
500.0 MHz	0.882 / -168.240	3.948 / 43.162	0.010 / -29.162	0.794 / -161.141
550.0 MHz	0.893 / -169.275	3.427 / 39.794	0.009 / -28.855	0.813 / -163.039
600.0 MHz	0.902 / -170.247	3.003 / 36.735	0.008 / -27.270	0.830 / -164.855
650.0 MHz	0.910 / -171.164	2.653 / 33.945	0.007 / -24.041	0.845 / -166.594
700.0 MHz	0.917 / -172.032	2.362 / 31.393	0.006 / -18.639	0.858 / -168.259
750.0 MHz	0.924 / -172.855	2.117 / 29.046	0.005 / -10.414	0.869 / -169.856
800.0 MHz	0.929 / -173.639	1.910 / 26.862	0.004 / 1.071	0.878 / -171.391
850.0 MHz	0.934 / -174.387	1.732 / 24.877	0.004 / 15.231	0.887 / -172.871
900.0 MHz	0.939 / -175.103	1.590 / 23.013	0.004 / 29.831	0.894 / -174.301
950.0 MHz	0.942 / -175.790	1.448 / 21.273	0.005 / 42.721	0.901 / -175.689
1.000 GHz	0.946 / -176.450	1.333 / 19.644	0.005 / 52.529	0.906 / -177.039
1.050 GHz	0.949 / -177.085	1.233 / 18.112	0.006 / 59.588	0.911 / -178.357
1.100 GHz	0.951 / -177.702	1.145 / 16.667	0.007 / 64.554	0.916 / -179.649
1.150 GHz	0.954 / -178.298	1.067 / 15.300	0.008 / 68.031	0.920 / -179.961
1.200 GHz	0.956 / -178.878	0.998 / 14.002	0.009 / 70.460	0.923 / -177.828
1.250 GHz	0.958 / -179.443	0.936 / 12.766	0.010 / 72.145	0.926 / -176.588
1.300 GHz	0.959 / -179.995	0.882 / 11.586	0.011 / 73.292	0.929 / -175.358
1.350 GHz	0.961 / -179.466	0.833 / 10.455	0.012 / 74.041	0.931 / -174.132
1.400 GHz	0.962 / -178.936	0.789 / 9.368	0.014 / 74.490	0.933 / -172.907
1.450 GHz	0.963 / -178.415	0.749 / 8.320	0.015 / 74.708	0.935 / -171.681
1.500 GHz	0.964 / -177.903	0.714 / 7.308	0.016 / 74.743	0.936 / -170.448



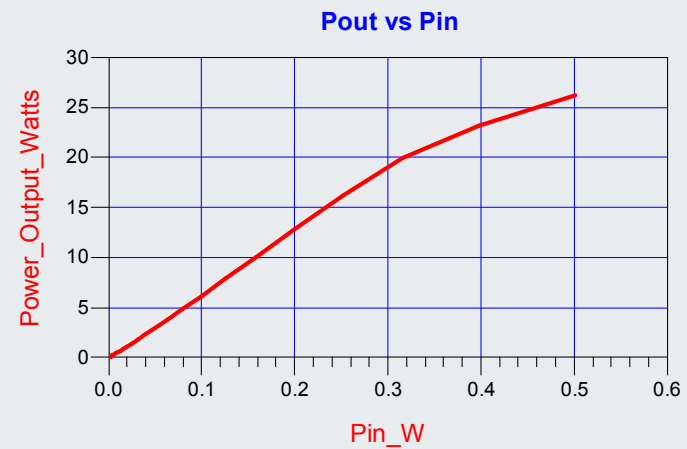
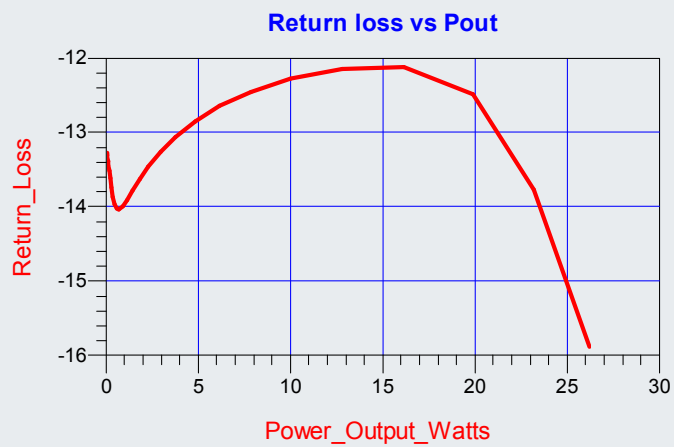
PD57018E

945 MHz Large Signal RF



PD57018E

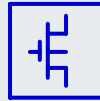
945 MHz Large Signal RF



GENERIC NETLIST

- *PD57018E_rev1_0
- *10/28/2009
- *STMicroelectronics
- *port 1 = GATE , 2 = Drain , 3 = Source
- *
- .SUBCKT PD57018E 10 20 30
- LGATE 10 11 .35N
- RGATE 11 12 .15
- CG 10 30 2P
- CRSS 12 17 1.3P
- CISS 12 14 34.5P
- LS 14 30 0.06N
- CS 14 30 .1P
- R 17 13 100K
- LD 17 20 .9N
- CD 20 30 2P
- MOS 13 12 14 14 mos_57018 L=.8UM W= 42mM
- JFET 17 14 13 jf_57018
- DBODY 14 17 d_57018
- .MODEL mos_57018 nmos (vto=3.0 KP=1.5E-5 LAMBDA=0.15 RD=0.24 RS=0.24)
- .MODEL jf_57018 njf (VTO=-6.8 BETA=.1 LAMBDA=4.5)
- .MODEL d_57018 d (CJO=68p RS=0.25 VJ=.4 M=0.304 BV=80)
- .ENDS

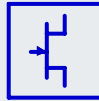




LEVEL1_Model

```

mos_57018
NMOS=yes      Cgbo=    Kf=
PMOS=no       Rsh=     Af=
Vto=3.0       Cj=      Fc=
Kp=1.5e-5     Mj=      Rg=
Gamma=        Cjsw=    Rds=
Phi=          Mjsw=    Tnom=27
Lambda=0.15   Js=      Trise=
Rd=0.24       Tox=     N=
Rs=0.24       Nsub=    Tt=
Cbd=          Nss=     Ffe=
Cbs=          Tpg=     Imax=
Is=           Ld=      Imelt=
Pb=           Uo=      AllParams=
Cgso=         Nlev=
Cgdo=         Gdsnoi=
  
```



JFET_Model

```

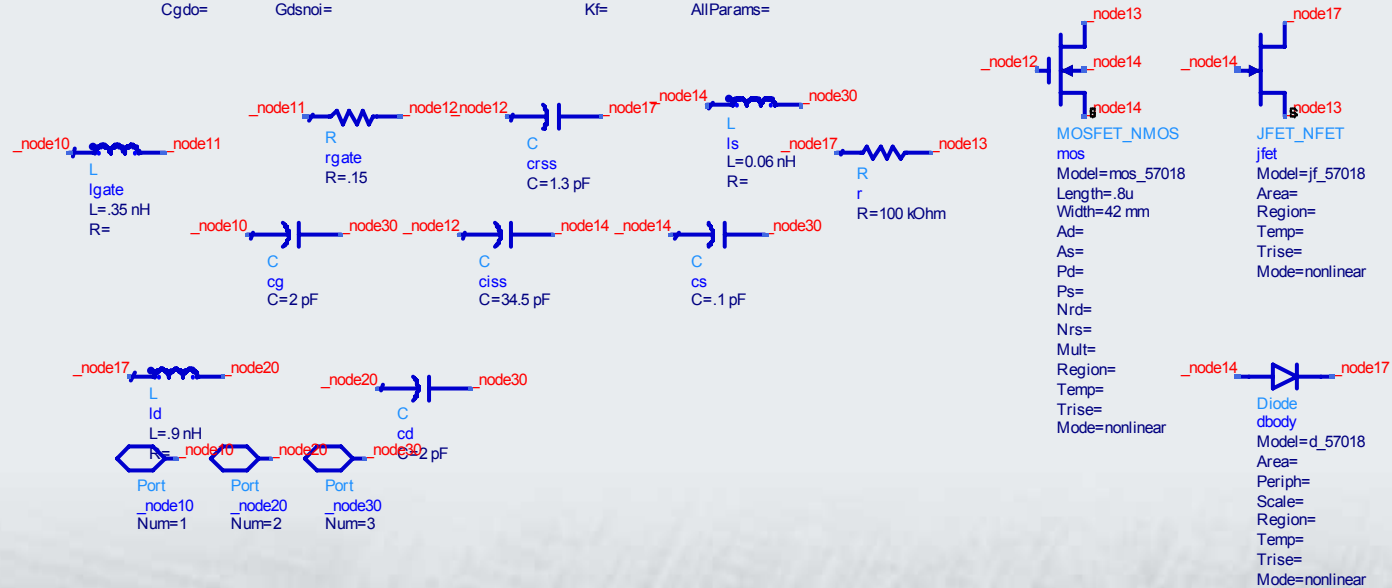
jf_57018
NFET=yes      Af=
PFET=no       Imax=
Vto=-6.8      Imelt=
Beta=.1       N=
Lambda=4.5    Isr=
Rd=           Nr=
Rs=           Alpha=
Is=           Vt=
Cgs=          M=
Cgd=          Vt0c=
Pb=           Betatce=
Fc=           Xt=
Tnom=27       Ffe=
Trise=        Gdsnoise=no
Kf=           AllParams=
  
```



Diode_Model

```

d_57018
Is=           Bv=80      Vjsw=
Rs=0.25       Ibv=1e-10 Fcsw=
Gleak=        Nbv=      AllowScaling=no
N=            Ibv=      Tnom=27
Tt=           Nbv=      Trise=
Cd=           Kf=       Xti=
Cjo=68 pF     Af=       Eg=
Vj=.4         Ffe=      AllParams=
M=0.304       Jsw=
Fc=           Rsw=
Imax=         Gleaksw=
Imelt=        Ns=
Isr=          Ikp=
Ikf=          Msw=
  
```



Imported NETLIST of model

