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* E:\LTSpice\Upload_3_dead\mosfet.asc
M1 Vds N001 0 0 NMOS
V1 N001 0 {V1}
V2 Vds 0 PULSE(0 15 0 1 0 0 1)
.model NMOS NMOS
.model PMOS PMOS
.lib C:\Users\Khalid\Documents\LTSpiceXVII\lib\cmp\standard.mos
*
* Predictive Technology Model Beta Version
* 180nm NMOS SPICE Parametersv (normal one)
*

.model NMOS NMOS
+Level = 49

+Lint = 4.e-08 Tox = 4.e-09
+Vth0 = 0.3999 Rdsw = 250

+Imin=1.8e-7 Imax=1.8e-7 wmin=1.8e-7 wmax=1.0e-4 Tref=27.0 version =3.1
+Xj= 6.0000000E-08      Nch= 5.9500000E+17
+Iln= 1.0000000      lwn= 1.0000000      wln= 0.00
+wwn= 0.00      ll= 0.00
+lw= 0.00      lwl= 0.00      wint= 0.00
+wl= 0.00      ww= 0.00      ww1= 0.00
+Mobmod= 1      binunit= 2      xl= 0
+xw= 0
+Dwg= 0.00      Dwb= 0.00

+K1= 0.5613000      K2= 1.0000000E-02
+K3= 0.00      Dvt0= 8.0000000      Dvt1= 0.7500000
+Dvt2= 8.0000000E-03      Dvt0w= 0.00      Dvt1w= 0.00
+Dvt2w= 0.00      Nlx= 1.6500000E-07      W0= 0.00
+K3b= 0.00      Ngate= 5.0000000E+20

+Vsat= 1.3800000E+05      Ua= -7.0000000E-10      Ub= 3.5000000E-18
+Uc= -5.2500000E-11      Prwb= 0.00
+Prwg= 0.00      Wr= 1.0000000      U0= 3.5000000E-02
+A0= 1.1000000      Keta= 4.0000000E-02      A1= 0.00
+A2= 1.0000000      Ags= -1.0000000E-02      B0= 0.00
+B1= 0.00

+Voff= -0.12350000      NFactor= 0.9000000      Cit= 0.00
+Cdsc= 0.00      Cdsb= 0.00      Cdsd= 0.00

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+Eta0= 0.2200000 Etab= 0.00 Dsub= 0.8000000

 +Pclm= 5.0000000E-02 Pdiblc1= 1.2000000E-02 Pdiblc2= 7.5000000E-03
 +Pdiblc3= -1.3500000E-02 Drout= 1.7999999E-02 Pscbe1= 8.6600000E+08
 +Pscbe2= 1.0000000E-20 Pvag= -0.2800000 Delta= 1.0000000E-02
 +Alpha0= 0.00 Beta0= 30.0000000

 +kt1= -0.3700000 kt2= -4.0000000E-02 At= 5.5000000E+04
 +Ute= -1.4800000 Ua1= 9.5829000E-10 Ub1= -3.3473000E-19
 +Uc1= 0.00 Kt1l= 4.0000000E-09 Prt= 0.00

 +Cj= 0.00365 Mj= 0.54 Pb= 0.982
 +Cjsw= 7.9E-10 Mjsw= 0.31 Php= 0.841
 +Cta= 0 Ctp= 0 Pta= 0
 +Ptp= 0 JS=1.50E-08 JSW=2.50E-13
 +N=1.0 Xti=3.0 Cgdo=2.786E-10
 +Cgso=2.786E-10 Cgbo=0.0E+00 Capmod= 2
 +NQSMOD= 0 Elm= 5 Xpart= 1
 +Cgs1= 1.6E-10 Cgdl= 1.6E-10 Ckappa= 2.886
 +Cf= 1.069e-10 Clc= 0.0000001 Cle= 0.6
 +Dlc= 4E-08 Dwc= 0 Vfbcv= -1

*
 * Predictive Technology Model Beta Version
 * 180nm PMOS SPICE Parametersv (normal one)
 *

.model PMOS PMOS

+Level = 49

+Lint = 3.e-08 Tox = 4.2e-09

+Vth0 = -0.42 Rdsr = 450

+lmin=1.8e-7 lmax=1.8e-7 wmin=1.8e-7 wmax=1.0e-4 Tref=27.0 version =3.1

+Xj= 7.0000000E-08 Nch= 5.9200000E+17

+lln= 1.0000000 lwn= 1.0000000 wln= 0.00

+wwn= 0.00 ll= 0.00

+lw= 0.00 lwl= 0.00 wint= 0.00

+wl= 0.00 ww= 0.00 ww1= 0.00

+Mobmod= 1 binunit= 2 xl= 0.00

+xw= 0.00

+binflag= 0 Dwg= 0.00 Dwbl= 0.00

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+ACM= 0          Idif=0.00          hdif=0.00
+rsh= 0          rd= 0              rs= 0
+rsc= 0          rdc= 0

+K1= 0.5560000   K2= 0.00
+K3= 0.00        Dvt0= 11.2000000   Dvt1= 0.7200000
+Dvt2= -1.0000000E-02   Dvt0w= 0.00   Dvt1w= 0.00
+Dvt2w= 0.00        Nlx= 9.5000000E-08   W0= 0.00
+K3b= 0.00        Ngate= 5.0000000E+20

+Vsat= 1.0500000E+05   Ua= -1.2000000E-10   Ub= 1.0000000E-18
+Uc= -2.9999999E-11   Prwb= 0.00
+Prwg= 0.00        Wr= 1.0000000   U0= 8.0000000E-03
+A0= 2.1199999   Keta= 2.9999999E-02   A1= 0.00
+A2= 0.4000000   Ags= -0.1000000   B0= 0.00
+B1= 0.00

+Voff= -6.40000000E-02   NFactor= 1.4000000   Cit= 0.00
+Cdsc= 0.00        Cdscb= 0.00   Cdscd= 0.00
+Eta0= 8.5000000   Etab= 0.00   Dsub= 2.8000000

+Pclm= 2.0000000   Pdiblc1= 0.1200000   Pdiblc2= 8.0000000E-05
+Pdiblc3= 0.1450000   Drout= 5.0000000E-02   Pscbe1= 1.0000000E-20
+Pscbe2= 1.0000000E-20   Pvag= -6.0000000E-02   Delta= 1.0000000E-02
+Alpha0= 0.00   Beta0= 30.0000000

+kt1= -0.3700000   kt2= -4.0000000E-02   At= 5.5000000E+04
+Ute= -1.4800000   Ua1= 9.5829000E-10   Ub1= -3.3473000E-19
+Uc1= 0.00        Kt1l= 4.0000000E-09   Prt= 0.00

+Cj= 0.00138   Mj= 1.05   Pb= 1.24
+Cjsw= 1.44E-09   Mjsw= 0.43   Php= 0.841
+Cta= 0.00093   Ctp= 0   Pta= 0.00153
+Ptp= 0   JS=1.50E-08   JSW=2.50E-13
+N=1.0   Xti=3.0   Cgdo=2.786E-10
+Cgso=2.786E-10   Cgbo=0.0E+00   Capmod= 2
+NQSMOD= 0   Elm= 5   Xpart= 1
+Cgsl= 1.6E-10   Cgdl= 1.6E-10   Ckappa= 2.886
+Cf= 1.058e-10   Clc= 0.0000001   Cle= 0.6
+Dlc= 3E-08   Dwc= 0   Vfbcv= -1
.step param V1 2 10 2
.tran 1s

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.backanno
.end

