perlMakeModelTables2.pl is being run

nmos	180nm	130nm	130nm	90nm	90nm	65nm	65nm	45nm	45nm	32nm	22nm	
==========BSIM4.3.0 Model Selectors/Controllers==========												
LEVEL	49	54	49	54	49	54	54	54	54	54	54	SPICE3 model selector
VERSION		4		4		4	4	4	4	4	4	Model version
BINUNIT	2	1	2	1	2	1	1	1	1	1	1	Binning unitr
PARAMCHK		1		1		1	1	1	1	1	1	Switch for parameter value check
MOBMOD	1	0	1	0	1	0	0	0	0	0	0	Mobility model
RDSMOD		0		0		0	0	0	0	0	0	Bias-dependent source/drain resis?tance model
IGCMOD		1		1		1	1	1	1	1	1	Gate-to-channel tunneling current model
IGBMOD		1		1		1	1	1	1	1	1	Gate-to-substrate tunneling current model
CAPMOD	2	2	2	2	2	2	2	2	2	2	2	Capacitance model
RGATEMOD		1		1		1	1	1	1	1	1	Gate resistance model
RBODYMOD		1		1		1	1	1	1	1	1	Substrate resistance network model
TRNQSMOD		0		0		0	0	0	0	0	0	Transient NQS model
ACNQSMOD		0		0		0	0	0	0	0	0	AC small-signal NQS model
FNOIMOD		1		1		1	1	1	1	1	1	Flicker noise model
TNOIMOD		0		0		0	0	0	0	0	0	Thermal noise model
DIOMOD		1		1		1	1	1	1	1	1	Source/drain junction diode IV
TEMPMOD												Temperature mode selector
PERMOD		1		1		1	1	1	1	1	1	Whether PS/PD includes the gate-edge perimeter
GEOMOD		1		1		1	1	1	1	1	1	Geometry-dependent parasitics
RGEOMOD												Source/drain diffusion resistance and contact model
==========Process Parameters==========												
EPSROX		3.9		3.9		3.9	3.9	3.9	3.9	3.9	3.9	Gate dielectric constant relative to vacuum 3.9 (SiO2)
TOXE		2.25e-09		2.05e-09		1.85e-09	1.7e-09	1.75e-09	1.4e-09	1.65e-09	1.2e-09	Electrical gate equivalent oxide thick?nes
TOXP		1.6e-09		1.4e-09		1.2e-09	1e-09	1.1e-09	7e-10	1e-09	9e-10	Physical gate equivalent oxide thick?ness
TOXM		2.25e-09		2.05e-09		1.85e-09	1.7e-09	1.75e-09	1.4e-09	1.65e-09	1.2e-09	Tox at which parameters are extracted
DTOX		6.5e-10		6.5e-10		6.5e-10	0	6.5e-10	0	6.5e-10	3e-10	Defined as (TOXE-TOXP)
XJ	6e-08	3.92e-08	4.5e-08	2.8e-08	4e-08	1.96e-08	2.5e-08	1.4e-08	2e-08	1e-08	7.2e-09	S/D junction depth
GAMMA1												(g1 in equation) Body-effect coefficient near the sur?face
GAMMA2												(g2 in equation) Body-effect coefficient in bulk
NDEP		1.54e+18		1.94e+18		2.54e+18	2.6e+18	3.24e+18	2.8e+18	4.12e+18	1.2e+19	Channel doping concentration at depletion edge for zero body bias
NSUB												Substrate doping concentration
NGATE	5e+20	2e+20	5e+20	2e+20	5e+20	2e+20	5e+20	2e+20	5e+20	2e+20	2e+20	Poly Si gate doping concentration
NSD		2e+20		2e+20		2e+20	1e+20	2e+20	1e+20	2e+20	2e+20	Source/drain doping concentration
VBX												Vbs at which the depletion region width equalsXT
XT												Doping depth 1.55e-7m Yes -
RSH		5		5	7	5	5	5	3	5	5	Source/drain sheet resistance
RSHG		0.4		0.4		0.4	0.4	0.4	0.4	0.4	0.4	Gate electrode sheet resistance
==========Basic Model Parameters==========												
VTH0	0.3999	0.3782	0.332	0.397	0.2607	0.423	0.22	0.466	0.22	0.5088	0.5118	VTHO Long-channel threshold voltage at Vbs=0 0.7V (NMOS) -0.7V (PMOS) Yes Note-4
VFB		-0.55		-0.55		-0.55	-0.55	-0.55	-0.55	-0.55	-1.058	Flat-band voltage -1.0V Yes Note-4
PHIN		0		0		0	0	0	0	0	0	Non-uniform vertical doping effect on surface potential 0.0V Yes -
K1	0.5613	0.4	0.3661	0.4	0.395	0.4	0.43	0.4	0.35	0.4	0.4	First-order body bias coefficient 0.5V1/2 Yes Note-5
K2	0.01	0.01	0	0.01	0.01	0.01	0.01	0	0.05	0	0	Second-order body bias coefficient 0.0 Yes Note-5
K3	0	0	0	0	0	0	0	0	0	0	0	Narrow width coefficient 80.0 Yes -
K3B	0	0	0	0	0	0	0	0	0	0	0	Body effect coefficient of K3 0.0 V-1 Yes -
W0	0	2.5e-06	0	2.5e-06	0	2.5e-06	2.5e-06	2.5e-06	2.5e-06	2.5e-06	2.5e-06	Narrow width parameter 2.5e-6m Yes -
LPE0		0		0		0	5.75e-08	0	5.75e-08	0	0	Lateral non-uniform doping parameter at Vbs=0 1.74e-7m Yes -
LPEB		0		0		0	2.3e-10	0	2.3e-10	0	0	Lateral non-uniform doping effect on K1 0.0m Yes -
VBM												Maximum applied body bias in VTH0 calculation -3.0V Yes -
DVT0	8	1	8.75	1	1	1	3.5	1	2.8	1	1	First coefficient of short-channel effect on Vth 2.2 Yes -
DVT1	0.75	2	0.7	2	0.4	2	0.55	2	0.52	2	2	Second coefficient of short-channel effect on Vth 0.53 Yes -
DVT2	0.008	-0.032	0.05	-0.032	0.15	-0.032	-0.032	0	-0.032	0	0	Body-bias coefficient of short-channel effect on Vth -0.032V-1 Yes -
DVTP0		1.2e-10		1.2e-09		1e-09	1.2e-08	1e-10	1e-07	1e-11	1e-11	First coefficient of drain-inducedVth shift due to for long-channel pocket devices 0.0m Yes
DVTP1		0.1		0.1		0.1	0.1	0.1	0.05	0.1	0.1	First coefficient of drain-inducedVth shift due to for long-channel pocket devices 0.0V-1 Yes -
DVT0W	0	0	0	0	0	0	0	0	0	0	0	First coefficient of narrow width effect on Vth for small channel length 0.0 Yes -
DVT1W	0	0	0	0	0	0	0	0	0	0	0	Second coefficient of narrow width effect on Vth for small channel length 5.3e6m-1 Yes -
DVT2W	0	0	0	0	0	0	0	0	0	0	0	Body-bias coefficient of narrow width effect for small channel length -0.032V-1 Yes -
U0	0.035	0.05928	0.0134	0.0547	0.018	0.0491	0.06	0.04398	0.032	0.0389	0.0181	Low-field mobility 0.067 m2/(Vs) (NMOS); 0.025 m2/(Vs) PMOS Yes -
UA	-7e-10	6e-10	-1.8e-09	6e-10	-6e-10	6e-10	1e-10	6e-10	1.6e-10	6e-10	-5e-10	Coefficient of first-order mobility degradation due to vertical field 1.0e-9m/V for MOBMOD =0
UB	0.8	1.2e-18	0.52	1.2e-18	0.6	1.2e-18	1e-17	1.2e-18	1.1e-17	1.2e-18	1.7e-18	Coefficient of secon-order mobility degradation due to vertical field 1.0e-19m2/ V2 Yes -
UC	-5.25e-11	0	-3e-11	-3e-11	-3e-11	0	-3e-11	0	-3e-11	0	0	Coefficient of mobility degradation due to body-bias effect -0.0465V-1 for MOB?MOD=1; -0.0465e-9
EU												Exponent for mobility degradation of MOBMOD=2 1.67 (NMOS); 1.0 (PMOS) -
VSAT	1.38e+05	1.004e+05	1.35e+05	1.138e+05	1.1e+05	1.243e+05	1.2e+05	1.474e+05	1.1e+05	1.785e+05	2e+05	Saturation velocity 8.0e4m/s Yes -
A0	30	30	30	30	30	30	30	30	30	30	30	Coefficient of channel-length depen?dence of bulk charge effect 1.0 Yes -
AGS	-0.01	1e-20	-0.1	1e-20	-0.01	1e-20	1e-20	0	1e-20	0	0	Coefficient of Vgs dependence of bulk charge effect 0.0V-1 Yes -
B0	0	0	0	-1e-20	0	0	-1e-20	0	-1e-20	0	0	Bulk charge effect coefficient for channel width 0.0m Yes -
B1	-3.347e-19	7.61e-18	2e-18	7.61e-18	-3.347e-19	7.61e-18	7.61e-18	7.61e-18	-3.5e-19	7.61e-18	7.61e-18	Bulk charge effect width offset 0.0m Yes -
KETA	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	Body-bias coefficient of bulk charge effect -0.047V-1 Yes -
A1	9.583e-10	4.31e-09	-8.63e-10	4.31e-09	9.583e-10	4.31e-09	4.31e-09	4.31e-09	1e-09	4.31e-09	4.31e-09	First non-saturation effect parameter 0.0V-1 Yes -
A2	1	1	0.99	1	1	1	1	1	1	1	1	Second non-saturation factor 1.0 Yes -
WINT	0	5e-09	0	5e-09	0	5e-09	5e-09	5e-09	5e-09	5e-09	5e-09	Channel-width offset parameter 0.0m No -
LINT	4e-08	1.05e-08	2.5e-08	7.5e-09	1.5e-08	5.25e-09	1.6e-08	3.75e-09	1.2e-08	2.7e-09	2e-09	Channel-length offset parameter 0.0m No -
DWG	0	0	0	0	0	0	0	0	0	0	0	Coefficient of gate bias dependence of Weff 0.0m/V Yes -
DWB	0	0	0	0	0	0	0	0	0	0	0	Coefficient of body bias dependence of Weff bias dependence 0.0m/V1/2 Yes -
VOFF	-0.1235	-0.13	-0.0798	-0.13	-0.03	-0.13	-0.15	-0.13	-0.15	-0.13	-0.13	Offset voltage in subthreshold region for large W and L -0.08V Yes -
VOFFL		0		0		0	0	0	0	0	0	Channel-length dependence of VOFF 0.0mV No -
MINV		0.05		0.05		0.05	0.05	0.05	0.05	0.05	0.05	Vgsteff fitting parameter for moderate inversion condition 0.0 Yes -
NFACTOR	0.9	1.5	1.1	1.7	1.5	1.9	2	2.1	1.2	2.3	2.3	Subthreshold swing factor 1.0 Yes -
ETA0	30	30	30	30	30	30	30	30	30	30	30	DIBL coefficient in subthreshold region 0.08 Yes -
ETAB	0	0	0	0	0	0	0	0	0	0	0	Body-bias coefficient for the sub?threshold DIBL effect -0.07V-1 Yes -
DSUB	0.8	0.1	0.52	0.1	0.6	0.1	1	0.1	2	0.1	0.078	DIBL coefficient exponent in sub?threshold region DROUT Yes -
CIT	0	0	0	0	0	0	0	0	0	0	0	Interface trap capacitance 0.0F/m2 Yes -
CDSC	0	0.0002	0	0.0002	0	0	0.0002	0	0.0002	0	0	coupling capacitance between source/ drain and channel 2.4e-4F/m2 Yes -
CDSCB	0	0	0	0	0	0	0	0	0	0	0	Body-bias sensitivity of Cdsc 0.0F/(Vm2) Yes -
CDSCD	0	0	0	0	0	0	0	0	0	0	0	Drain-bias sensitivity of CDSC 0.0(F/Vm2) Yes -
PCLM	0.05	0.06	0.1	0.06	0.1	0.04	0.12	0.02	0.18	0.02	0.06	Channel length modulation parameter 1.3 Yes -
PDIBLC1	0.012	0.001	0.012	0.001	0.012	0.001	0.02	0.001	0.028	0.001	0.001	Parameter for DIBL effect on Rout 0.39 Yes -
PDIBLC2	0.0075	0.001	0.0075	0.001	0.0075	0.001	0.02	0.001	0.022	0.001	0.001	Parameter for DIBL effect on Rout 0.0086 Yes -
PDIBLCB	-0.0135	-0.005	-0.0135	-0.005	-0.0135	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	Body bias coefficient of DIBL effect on Rout 0.0V-1 Yes -
DROUT	0.018	0.5	0.28	0.5	2	0.5	0.5	0.45	0.5	0.5	0.5	Channel-length dependence of DIBL effect on Rout 0.56 Yes -
PSCBE1	8.66e+08	8.14e+08	8.66e+08	8.14e+08	8.66e+08	8.14e+08	8.14e+08	8.14e+08	8.14e+08	8.14e+08	8.14e+08	First substrate current induced body-effect parameter 4.24e8V/m Yes -
PSCBE2	1e-20	1e-07	1e-20	1e-07	1e-20	1e-07	1e-07	1e-07	1e-07	1e-07	1e-07	Second substrate current induced body-effect parameter 1.0e-5m/V Yes -
PVAG	-0.28	1e-20	-0.28	1e-20	-0.28	1e-20	1e-20	1e-20	1e-20	1e-20	1e-20	Gate-bias dependence of Early volt?age 0.0 Yes -
DELTA	0.01	0.01	0.0101	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	(d in equation) Parameter for DC Vdseff 0.01V Yes -
FPROUT		0.2		0.2		0.2	0.2	0.2	0.2	0.2	0.2	Effect of pocket implant on Rout deg?radation 0.0V/m0.5 Yes Not mod?eled if binned FPR
PDITS		0.08		0.08		0.08	0.2	0.08	0.2	0.01	0.01	Impact of drain-induced Vth shift on Rout 0.0V-1 Yes Not mod?eled if binned PDITS=0; Fatal
PDITSL		2.3e+06		2.3e+06		2.3e+06	2.3e+06	2.3e+06	2.3e+06	2.3e+06	2.3e+06	Channel-length dependence of drain-induced Vth shift for Rout 0.0m-1 No Fatal error if

PDITSD		0.23		0.23		0.23	0.23	0.23	0.23	0.23	0.23	Vds dependence of drain-induced Vth shift for Rout 0.0V-1 Yes -
LAMBDA												Velocity overshoot coefficient 0.0 Yes If not given or (<=0.0), velocity overshoot will
VTL												Thermal velocity 2.05e5[m/s] Yes If not given or (<=0.0), source end thermal velo
LC	4e-08		2e-08		2e-08							Velocity back scattering coefficient 0.0[m] No 5e9[m] at room tem?perature
XN												Velocity back scattering coefficient 3.0 Yes -
==========Parameters for Asymmetric and Bias-Dependent Rds Model==========												
RDSW	250	200	200	180	180	165	160	155	150	150	130	Zero bias LDD resistance per unit width for RDSMOD=0 200.0 ohm(mm)WR Yes If negative,
RDSWMIN		0		0		0	0	0	0	0	0	LDD resistance per unit width at high Vgs and zero Vbs for RDSMOD=0 0.0 ohm(mm)WR No -
RDW		100		90		85	150	80	150	75	75	Zero bias lightly-doped drain resis?tance Rd(V) per unit width for RDS?MOD=1 100.0 ohm(mm)WR
RDWMIN		0		0		0	0	0	0	0	0	Lightly-doped drain resistance per unit width at high Vgs and zero Vbs for RDSMOD=1 0.0
RSW		100		90		85	150	80	150	75	75	Zero bias lightly-doped source resis?tance Rs(V) per unit width for RDS?MOD=1 100.0 ohm(mm
RSWMIN		0		0		0	0	0	0	0	0	Lightly-doped source resistance per unit width at high Vgs and zero Vbs for RDSMOD=1 0.0 o
PRWG	0	0	0	0	0	0	0	0	0	0	0	Gate-bias dependence of LDD resis?tance 1.0V-1 Yes -
PRWB	0	6.8e-11	0	6.8e-11	0	6.8e-11	6.8e-11	0	6.8e-11	0	0	Body-bias dependence of LDD resis?tance 0.0V-0.5 Yes -
WR	1	1	1	1	1	1	1	1	1	1	1	Channel-width dependence parameter of LDD resistance 1.0 Yes -
NRS												Number of source diffusion squares 1.0 No -
NRD												Number of drain diffusion squares 1.0 No -
==========Impact Ionization Current Model Parameters==========												
ALPHA0	0	0.074	0	0.074	0	0.074	0.074	0.074	0.074	0.074	0.074	First parameter of impact ionization current 0.0Am/V Yes -
ALPHA1		0.005		0.005		0.005	0.005	0.005	0.005	0.005	0.005	Isub parameter for length scaling 0.0A/V Yes -
BETA0	30	30	30	30	30	30	30	30	30	30	30	The second parameter of impact ion?ization current 30.0V Yes -
==========Gate-Induced Drain Leakage Model Parameters==========												
AGIDL		0.0002		0.0002		0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Pre-exponential coefficient for GIDL 0.0mho Yes Igidl=0.0 if binned AGIDL =0.0
BGIDL		2.1e+09		2.1e+09		2.1e+09	2.1e+09	2.1e+09	2.1e+09	2.1e+09	2.1e+09	Exponential coefficient for GIDL 2.3e9V/m Yes Igidl=0.0 if binned BGIDL =0.0
CGIDL		0.0002		0.0002		0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Paramter for body-bias effect on GIDL 0.5V3 Yes -
EGIDL		0.8		0.8		0.8	0.8	0.8	0.8	0.8	0.8	Fitting parameter for band bending for GIDL 0.8V Yes -
==========Gate Dielectric Tunneling Current Model Parameters ==========												
AIGBACC		0.012		0.012		0.012	0.012	0.012	0.012	0.012	0.012	Parameter for Igb in accumulation 0.43 (Fs2/g)0.5m-1 Yes -
BIGBACC		0.0028		0.0028		0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	Parameter for Igb in accumulation 0.054 (Fs2/g)0.5 m-1V-1 Yes -
CIGBACC		0.002		0.002		0.002	0.002	0.002	0.002	0.002	0.002	Parameter for Igb in accumulation 0.075V-1 Yes -
NIGBACC		1		1		1	1	1	1	1	1	Parameter for Igb in accumulation 1.0 Yes Fatal error if binned value not positive
AIGBINV		0.014		0.014		0.014	0.014	0.014	0.014	0.014	0.014	Parameter for Igb in inversion 0.35 (Fs2/g)0.5m-1 Yes -
BIGBINV		0.004		0.004		0.004	0.004	0.004	0.004	0.004	0.004	Parameter for Igb in inversion 0.03 (Fs2/g)0.5 m-1V-1 Yes -
CIGBINV		0.004		0.004		0.004	0.004	0.004	0.004	0.004	0.004	Parameter for Igb in inversion 0.006V-1 Yes -
EIGBINV		1.1		1.1		1.1	1.1	1.1	1.1	1.1	1.1	Parameter for Igb in inversion 1.1V Yes -
NIGBINV		3		3		3	3	3	3	3	3	Parameter for Igb in inversion 3.0 Yes Fatal error if binned value not positive
AIGC		0.012		0.012		0.012	0.012	0.012	0.012	0.012	0.012	Parameter for Igcs and Igcd 0.054 (NMOS) and 0.31 (PMOS) (Fs2/g)0.5m-1 Yes -
BIGC		0.0028		0.0028		0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	Parameter for Igcs and Igcd 0.054 (NMOS) and 0.024 (PMOS) (Fs2/g)0.5 m-1V-1 Yes -
CIGC		0.002		0.002		0.002	0.002	0.002	0.002	0.002	0.002	Parameter for Igcs and Igcd 0.075 (NMOS) and 0.03 (PMOS) V-1 Yes -
AIGSD		0.012		0.012		0.012	0.012	0.012	0.012	0.012	0.012	Parameter for Igs and Igd 0.43 (NMOS) and 0.31 (PMOS) (Fs2/g)0.5m-1 Yes -
BIGSD		0.0028		0.0028		0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	Parameter for Igs and Igd 0.054 (NMOS) and 0.024 (PMOS) (Fs2/g)0.5 m-1V-1 Yes -
CIGSD		0.002		0.002		0.002	0.002	0.002	0.002	0.002	0.002	Parameter for Igs and Igd 0.075 (NMOS) and 0.03 (PMOS) V-1 Yes -
DLCIG												Source/drain overlap length for Igs and Igd LINT Yes -
NIGC		1		1		1	1	1	1	1	1	Parameter for Igcs, Igcd ,Igs and Igd 1.0 Yes Fatal error if binned value not positive
POXEDGE		1		1		1	1	1	1	1	1	Factor for the gate oxide thickness in source/drain overlap regions 1.0 Y
PIGCD		1		1		1	1	1	1	1	1	Vds dependence of Igcs and Igcd 1.0 Yes Fatal error if binned value not positive
NTOX		1		1		1	1	1	1	1	1	Exponent for the gate oxide ratio 1.0 Yes -
TOXREF		2.25e-09		2.05e-09		1.85e-09	1.7e-09	1.75e-09	1.4e-09	1.65e-09	1.2e-09	Nominal gate oxide thickness for gate dielectric tunneling current model only 3.0e-9m N
==========Charge and Capacitance Model Parameters==========												
XPART	1	0	1	0	1	0	0	0	0	0	0	Charge partition parameter 0.0 No -
CGSO	2.786e-10	2.4e-10	2.75e-10	1.9e-10	3.493e-10	1.5e-10	5.458e-10	1.1e-10	6.238e-10	8.5e-11	6.5e-11	Non LDD region source-gate overlap capacitance per unit channel width calculated (F/m) No Note-6
CGDO	2.786e-10	2.4e-10	2.75e-10	1.9e-10	3.493e-10	1.5e-10	5.458e-10	1.1e-10	6.238e-10	8.5e-11	6.5e-11	Non LDD region drain-gate overlap capacitance per unit channel width calculated (F/m) No Note-6
CGBO	0	2.56e-11	0	2.56e-11	0	2.56e-11	2.56e-11	2.56e-11	2.56e-11	2.56e-11	2.56e-11	Gate-bulk overlap capacitance per unit channel length 0.0 F/m Note-6
CGSL	1.6e-10	2.653e-10	1.116e-10	2.653e-10	5.82e-11	2.653e-10	2.653e-10	2.653e-10	2.495e-10	2.653e-10	2.653e-10	Overlap capacitance between gate and lightly-doped source region 0.0F/m Yes -
CGDL	1.6e-10	2.653e-10	1.116e-10	2.653e-10	5.82e-11	2.653e-10	2.653e-10	2.653e-10	2.495e-10	2.653e-10	2.653e-10	Overlap capacitance between gate and lightly-doped source region 0.0F/m Yes -
CKAPPAS		0.03		0.03		0.03	0.03	0.03	0.01	0.03	0.03	Coefficient of bias-dependent overlap capacitance for the source side 0.6V Yes -
CKAPPAD		0.03		0.03		0.03	0.03	0.03	0.01	0.03	0.03	Coefficient of bias-dependent overlap capacitance for the drain side CKAPPAS Yes -
CF	1.069e-10		1.113e-10		1.177e-10							Fringing field capacitance calculated (F/m) Yes Note-7
CLC	1e-07		5.475e-08		1e-07							Constant term for the short channel model 1.0e-7m Yes -
CLE	0.6		6.46		0.6							Exponential term for the short channel model 0.6 Yes -
DLC	4e-08		2e-08		2e-08							Channel-length offset parameter for CV model LINT (m) No -
DWC	0		0		0							Channel-width offset parameter for CV model WINT (m) No -
VFBCV	-1		-1									Flat-band voltage parameter (for CAPMOD=0 only) -1.0V Yes -
NOFF		0.9		0.9		0.9	0.9	0.9	0.9	0.9	0.9	CV parameter inVgsteff,CV for weak to strong inversion 1.0 Yes -
VOFFCV		0.02		0.02		0.02	0.02	0.02	0.02	0.02	0.02	CV parameter inVgsteff,CV for week to strong inversion 0.0V Yes -
ACDE		1		1		1	1	1	1	1	1	Exponential coefffor charge thickness in CAPMOD=2 for accumu?lation and depletion regions 1.0m/V
MOIN		15		15		15	15	15	15	15	15	Coefficient for the gate-bias depen?dent surface potential 15.0 Yes -
==========High-Speed/RF Model Parameters==========												
XRCRG1		12		12		12	12	12	12	12	12	Parameter for distributed channel-resistance effect for both intrinsic-input resistance and
XRCRG2		5		5		5	5	5	5	5	5	Parameter account for excess channel diffusion resist for both intrinsic input resis and ch
RBPB		5		5		5	5	5	5	5	5	Resistance between bNodePrime and bNode 50.0ohm No If less than 1.0e-3ohm, reset to 1.0e-3ohm
RBPD		15		15		15	15	15	15	15	15	Resistance between bNodePrime and dbNode 50.0ohm No If less than 1.0e-3ohm, reset to 1.0e-3ohm
RBPS		15		15		15	15	15	15	15	15	Resistance between bNodePrime and sbNode 50.0ohm No If less than 1.0e-3ohm, reset to 1.0e-3ohm
RBDB		15		15		15	15	15	15	15	15	Resistance connected between dbNode and bNode 50.0ohm No less than 1.0e-3ohm, reset to 1.0e-3ohm
RBSB		15		15		15	15	15	15	15	15	Resistance connected between sbNode and bNode 50.0ohm No If less than 1
GBMIN		1e-10		1e-10		1e-10	1e-10	1e-10	1e-10	1e-10	1e-10	Conductance in parallel with each of the five substrate resistances
==========Flicker and Thermal Noise Model Parameters==========												
NOIA												Flicker noise parameter A 6.25e41 (eV)-1s1?EFm-3 for NMOS; 6.188e40 (eV)-1s1?EFm-3 for PMOS No -
NOIB												Flicker noise parameter B 3.125e26 (eV)-1s1?EFm-1 for NMOS; 1.5e25 (eV)-1s1?EFm-1 for PMOS No -
NOIC												Flicker noise parameter C 8.75 (eV)-1s1-EFm No -
EM												Saturation field 4.1e7V/m No -
AF												Flicker noise exponent 1.0 No -
EF	27	2.25e-09	27	2.05e-09	27	1.85e-09	1.7e-09	1.75e-09	1.4e-09	1.65e-09	1.2e-09	Flicker noise frequency exponent 1.0 No -
KF												Flicker noise coefficient 0.0 A2-EFs1-EF F No -
NTNOI												Noise factor for short-channel devices for TNOIMOD=0 only 1.0 No -
TNOIA												Coefficient of channel-length depen?dence of total channel thermal noise 1.5E6 No -
TNOIB												Channel-length dependence parameter for channel thermal noise partitioning 3.5E6 No -
RNOIA												Thermal Noise Coefficient 0.577 No -
RNOIB												Thermal Noise Coefficient 0.37 No -
==========Layout-Dependent Parasitics Model Parameters==========												
DMCG		0		0		0	0	0	0	0	0	Distance from S/D contact center to the gate edge 0.0m No -
DMCI		0		0		0	0	0	0	0	0	Distance S/D contact center to isolation edge in the channel-length direction DMCG No -
DMDG		0		0		0	0	0	0	0	0	Same as DMCG but for merged device only 0.0m No -
DMCGT		0		0		0	0	0	0	0	0	DMCG of test structures 0.0m No -
NF												Number of device fingers 1 No Fatal error if less than one
DWJ		0		0		0	0	0	0	0	0	Offset of the S/D junction width DWC (in CVmodel) No -
MIN	1.8e-07	1e-10	1.3e-07	1e-10	1e-07	1e-10	1e-10	1e-10	1e-10	1e-10	1e-10	Whether to minimize numb drain or source diffufor even-number fingered device
XGW		0		0		0	0	0	0	0	0	Distance from the gate contact to the channel edge 0.0m No -
XGL		0		0		0	0	0	0	0	0	Offset of the gate length due to varia?tions in patterning 0.0m No -
XL	0	-6e-08	0	-4e-08	0	-3e-08		-2e-08		-1.4e-08	-9e-09	Channel length offset due to mask/ etch effect 0.0m No -
XW	0		0		0							Channel width offset due to mask/etch effect 0.0m No -

NGCON	1	1	1	1	1	1	1	1	1	Number of gate contacts 1
======================Asymmetric Source/Drain Junction Diode Model Parameters==========										
IJTHSREV	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Limiting current in reverse bias region IJTHSREV =0.1A IJTHDREV =IJTHSREV
IJTHSFWD	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	Limiting current in forward bias region IJTHSFWD =0.1A IJTHDFWD =IJTHS?FWD
XJBVS	1	1	1	1	1	1	1	1	1	Fitting parameter for diode break?down XJBVS=1.0 XJBVD =XJBVS No Note-8
BVS	1	1	1	1	1	1	1	1	1	Breakdown voltage BVS=10.0V BVD=BVS No If not posi?tive, reset to 10.0V
JSS	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	Bottom junction reverse saturation current density JSS= 1.0e-4A/m2 JSD=JSS No -
JSWS	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	Isolation-edge sidewall reverse satura?tion current density JSWS =0.0A/m JSWD =JSWS No -
JSWGS	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	Gate-edge sidewall reverse saturation current density JSWGS =0.0A/m JSWGD =JSWGS No -
CJS	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	Bottom junction capacitance per unit area at zero bias CJS=5.0e-4 F/m2 CJD=CJS No -
MJS	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Bottom junction capacitance grating coefficient MJS=0.5 MJD=MJS No -
MJSWS	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	Isolation-edge sidewall junction capacitance grading coefficient MJSWS =0.33 MJSWD =MJSWS No -
CJSWS	5e-10	5e-10	5e-10	5e-10	5e-10	5e-10	5e-10	5e-10	5e-10	Isolation-edge sidewall junction capacitance per unit area CJSWS= 5.0e-10 F/m CJSWD =CJSWS No -
CJSWGS	3e-10	3e-10	3e-10	3e-10	3e-10	3e-10	3e-10	3e-10	3e-10	Gate-edge sidewall junction capaci?tance per unit length CJSWGS =CJSWS CJSWGD =CJSWS No -
MJSWGS	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	Gate-edge sidewall junction capaci?tance grading coefficient MJSWGS =MJSWS MJSWGD =MJSWS No -
PB 0.982	5 1.249	5 1.25	5	5	5	5	5	5	5	Bottom junction built-in potential PBS=1.0V PBD=PBS No -
PBSWS	1	1	1	1	1	1	1	1	1	Isolation-edge sidewall junction built-in potential PBSWS =1.0V PBSWD =PBSWS No -
PBSWGS	1	1	1	1	1	1	1	1	1	Gate-edge sidewall junction built-in potential PBSWGS =PBSWS PBSWGD =PBSWS No -
IJTHDREV	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Limiting current in reverse bias region IJTHSREV =0.1A IJTHDREV =IJTHSREV
IJTHDFWD	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	Limiting current in forward bias region IJTHSFWD =0.1A IJTHDFWD =IJTHS?FWD
XJBVD	1	1	1	1	1	1	1	1	1	Fitting parameter for diode break?down XJBVS=1.0 XJBVD =XJBVS No Note-8
BVD	1	1	1	1	1	1	1	1	1	Breakdown voltage BVS=10.0V BVD=BVS No If not posi?tive, reset to 10.0V
JSD	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	Bottom junction reverse saturation current density JSS= 1.0e-4A/m2 JSD=JSS No -
JSWD	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	Isolation-edge sidewall reverse satura?tion current density JSWS =0.0A/m JSWD =JSWS No -
JSWGD	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	Gate-edge sidewall reverse saturation current density JSWGS =0.0A/m JSWGD =JSWGS No -
CJD	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	Bottom junction capacitance per unit area at zero bias CJS=5.0e-4 F/m2 CJD=CJS No -
MJD	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Bottom junction capacitance grating coefficient MJS=0.5 MJD=MJS No -
MJSWD	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	Isolation-edge sidewall junction capacitance grading coefficient MJSWS =0.33 MJSWD =MJSWS No -
CJSWD	5e-10	5e-10	5e-10	5e-10	5e-10	5e-10	5e-10	5e-10	5e-10	Isolation-edge sidewall junction capacitance per unit area CJSWS= 5.0e-10 F/m CJSWD =CJSWS No -
CJSWGD	5e-10	5e-10	5e-10	5e-10	5e-10	5e-10	5e-10	5e-10	5e-10	Gate-edge sidewall junction capaci?tance per unit length CJSWGS =CJSWS CJSWGD =CJSWS No -
MJSWGD	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	Gate-edge sidewall junction capaci?tance grading coefficient MJSWGS =MJSWS MJSWGD =MJSWS No -
PBSWD	1	1	1	1	1	1	1	1	1	Isolation-edge sidewall junction built-in potential PBSWS =1.0V PBSWD =PBSWS No -
PBSWGD	1	1	1	1	1	1	1	1	1	Gate-edge sidewall junction built-in potential PBSWGS =PBSWS PBSWGD =PBSWS No -
======================Temperature Dependence Parameters==========										
TNOM	27	27	27	27	27	27	27	27	27	Temperature at which parameters are extracted 27oC No -
UTE -1.48	-1.5 -1.23	-1.5 -1.48	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	Mobility temperature exponent -1.5 Yes -
KT1 -0.37	-0.11 -0.34	-0.11 -0.37	-0.11	-0.11	-0.11	-0.37	-0.11	-0.11	-0.11	Temperature coefficient for threshold voltage -0.11V Yes -
KT1L 4e-09	0 4e-09	0 4e-09	0	0	0	0	0	0	0	Channel length dependence of the temperature coefficient for threshold voltage 0.0Vm Yes -
KT2 -0.04	0.022 -0.0527	0.022 -0.04	0.022	0.022	0.022	-0.042	0.022	0.022	0.022	Body-bias coefficient of Vth tempera?ture effect 0.022 Yes -
UA1 9.583e-10	4.31e-09 -8.63e-10	4.31e-09 9.583e-10	4.31e-09	4.31e-09	4.31e-09	1e-09	4.31e-09	4.31e-09	4.31e-09	Temperature coefficient for UA 1.0e-9m/V Yes -
UB1 -3.347e-19	7.61e-18 2e-18	7.61e-18-3.347e-19	7.61e-18	7.61e-18	7.61e-18	-3.5e-19	7.61e-18	7.61e-18	7.61e-18	Temperature coefficient for UB -1.0e-18 (m/V)2 Yes -
UC1 0	-5.6e-11 0	-5.6e-11 0	-5.6e-11	-5.6e-11	-5.6e-11	0	-5.6e-11	-5.6e-11	-5.6e-11	Temperature coefficient for UC 0.056V-1 for MOB?MOD=1; 0.056e-9m/ V2 for MOB?MOD=0 and 2 Yes -
AT 5.5e+04	3.3e+04 0	3.3e+04 5.5e+04	3.3e+04	3.3e+04	3.3e+04	5.3e+04	3.3e+04	3.3e+04	3.3e+04	Temperature coefficient for satura?tion velocity 3.3e4m/s Yes -
PRT 0	0 0	0 0	0	0	0	0	0	0	0	Temperature coefficient for Rdsw 0.0ohm-m Yes -
NJS	1	1	1	1	1	1	1	1	1	Emission coefficients of junction for source and drain junctions, NJS=1.0; NJD=NJS No -
XTIS	3	3	3	3	3	3	3	3	3	Junction curre temperature expo for source and drain junctions, XTIS=3.0; XTID=XTIS No -
NJD	1	1	1	1	1	1	1	1	1	Emission coefficients o junction for source and drain junctions, NJS=1.0; NJD=NJS No -
XTID	3	3	3	3	3	3	3	3	3	Junction current temperature expo?nents for source and drain junctions,XTIS=3.0; XTID=XTIS
TPB	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	Temperature coefficient of PB 0.0V/K No -
TPBSW	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	Temperature coefficient of PBSW 0.0V/K No -
TPBSWG	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	Temperature coefficient of PBSWG 0.0V/K No -
TCJ	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Temperature coefficient of CJ 0.0K-1 No -
TCJSW	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Temperature coefficient of CJSW 0.0K-1 No -
TCJSWG	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	Temperature coefficient of CJSWG 0.0K-1 No -
======================Stress Effect Model Parameters==========										
SA										Distance OD edge to Poly from one side 0.0 If not given or(<=0), stress be turned off
SB	15	15	15	15	15	15	15	15	15	Distance OD edge to Poly from other side 0.0 If not given or(<=0), stress be turned off
SD	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	Distance between neighbouring fin?gers 0.0 For NF>1 :If not given or(<=0), stress be turned off
SAref										Reference distance between OD and edge to poly of one side 1E-06[m] No >0.0
SBref										Reference distance between OD and edge to poly of the other side 1E-06[m] No >0.0
WLOD										Width parameter for stress effect 0.0[m] No -
KU0										Mobility degradation/enhancement coefficient for stress effect 0.0[m] No -
KVSAT										Saturation velocity degradation/ enhancement parameter for stress effect 0.0[m] No -1<=kvsat< =1
TKU0										Temperature coefficient of KU0 0.0 No -
LKU0										Length dependence of ku0 0.0 No -
WKU0										Width dependence of ku0 0.0 No -
LLODKU0										Length parameter for u0 stress effect 0.0 No >0
WLODKU0										Width parameter for u0 stress effect 0.0 No >0
KVTH0										Threshold shift parameter for stress effect 0.0[Vm] No -
LKVTH0										Length dependence of kvth0 0.0 No -
WKVTH0										Width dependence of kvth0 0.0 No -
PKVTH0										Cross-term dependence of kvth0 0.0 No -
LLODVTH										Length parameter for Vth stress effect 0.0 No >0
WLODVTH										Width parameter for Vth stress effect 0.0 No >0
STK2										K2 shift factor related to Vth0 change 0.0[m] No
LODK2										K2 shift modification factor for stress effect 1.0 No >0
STETA0										eta0 shift factor related to Vth0 change 0.0[m] No
LODETA0										eta0 shift modification factor for stress effect 1.0 No >0
==================dW and dL Parameters==========										
WL	0	0 0	0	0	0	0	0	0	0	Coefficient of length dependence for width offset 0.0mWLN No -
WLN	0	1 0	1	0	1	1	1	1	1	Power of length dependence of width offset 1.0 No -
WW	0	0 0	0	0	0	0	0	0	0	Coefficient of width dependence for width offset 0.0mWWN No -
WWN	0	1 1	1	0	1	1	1	1	1	Power of width dependence of width offset 1.0 No -
WWL	0	0 0	0	0	0	0	0	0	0	Coefficient of length and width cross term dependence for width offset 0.0 mWWN+WLN No -
LL	0	0 0	0	0	0	0	0	0	0	Coefficient of length dependence for length offset 0.0mLLN No -
LLN	1	1 1	1	1	1	1	1	1	1	Power of length dependence for length offset 1.0 No -
LW	0	0 0	0	0	0	0	0	0	0	Coefficient of width dependence for length offset 0.0mLWN No -
LWN	1	1 0	1	1	1	1	1	1	1	Power of width dependence for length offset 1.0 No -
LWL	0	0 0	0	0	0	0	0	0	0	Coefficient of length and width cross term dependence for length offset 0.0 mLWN+LLN No -
LLC										Coefficient of length dependence for CV channel length offset LL No -
LWC										Coefficient of width dependence for CV channel length offset LW No -
LWLC										Coefficient of length and width cross-term dependence for CV channel length offset LWL No -
WLC										Coefficient of length dependence for CV channel width offset WL No -
WWC										Coefficient of width dependence for CV channel width offset WW No -
WWLC										Coefficient of length and width cross-term dependence for CV channel width offset WWL No -
==================Range Parameters for Model Application==========										
LMIN 1.8e-07	1.3e-07	1e-07								Minimum channel length 0.0m No -
LMAX 1.8e-07	1.3e-07	1e-07								Maximum channel length 1.0m No -
WMIN 1.8e-07	0 1.3e-07	0 1e-07	0	0	0	0	0	0	0	Minimum channel width 0.0m No -
WMAX 0.0001	0.0001	0.0001								Maximum channel width 1.0m No -