

* BPTM 65nm NMOS

.model nmos nmos level = 54

| | | | |
|--------------------|-------------------|--------------------|-------------------|
| +version = 4.0 | binunit = 1 | paramchk= 1 | mobmod = 0 |
| +capmod = 2 | igcmod = 1 | igbmod = 1 | geomod = 1 |
| +diomod = 1 | rdsmod = 0 | rbodymod= 1 | rgatemod= 1 |
| +permod = 1 | acnqsmode= 0 | trnqsmode= 0 | |
| +tnom = 27 | toxe = 1.7e-9 | toxp = 1e-9 | toxm = 1.7e-9 |
| +dtox = 0 | epsrox = 3.9 | wint = 5e-009 | lint = 1.6e-008 |
| +ll = 0 | wl = 0 | lln = 1 | wln = 1 |
| +lw = 0 | ww = 0 | lwn = 1 | wnn = 1 |
| +lwl = 0 | wwl = 0 | xpart = 0 | toxref = 1.7e-9 |
| +vth0 = 0.22 | k1 = 0.43 | k2 = 0.01 | k3 = 0 |
| +k3b = 0 | w0 = 2.5e-006 | dvt0 = 3.5 | dvt1 = 0.55 |
| +dvt2 = -0.032 | dvt0w = 0 | dvt1w = 0 | dvt2w = 0 |
| +dsb = 1 | minv = 0.05 | voffl = 0 | dvtp0 = 1.2e-008 |
| +dvtp1 = 0.1 | lpe0 = 5.75e-008 | lpeb = 2.3e-010 | xj = 2.5e-008 |
| +ngate = 5e+020 | ndep = 2.6e+018 | nsd = 1e+020 | phin = 0 |
| +cdsc = 0.0002 | cdscb = 0 | cdscd = 0 | cit = 0 |
| +voff = -0.15 | nfactor = 2 | eta0 = 0.24 | etab = 0 |
| +vfb = -0.55 | u0 = 0.06 | ua = 1e-010 | ub = 1e-017 |
| +uc = -3e-011 | vsat = 1.2e+005 | a0 = 1.5 | ags = 1e-020 |
| +a1 = 0 | a2 = 1 | b0 = -1e-020 | b1 = 0 |
| +keta = 0.04 | dwg = 0 | dwb = 0 | pclm = 0.12 |
| +pdiblc1 = 0.02 | pdiblc2 = 0.02 | pdiblc3 = -0.005 | drout = 0.5 |
| +pvag = 1e-020 | delta = 0.01 | pscbe1 = 8.14e+008 | pscbe2 = 1e-007 |
| +fprout = 0.2 | pdits = 0.2 | pditsd = 0.23 | pditsl = 2.3e+006 |
| +rsh = 5 | rdsb = 160 | rsb = 150 | rdw = 150 |
| +rdsbmin = 0 | rdwmin = 0 | rsbmin = 0 | prwg = 0 |
| +prwb = 6.8e-011 | wr = 1 | alpha0 = 0.074 | alpha1 = 0.005 |
| +beta0 = 30 | agidl = 0.0002 | bgidl = 2.1e+009 | cgidl = 0.0002 |
| +egidl = 0.8 | | | |
| +aigbacc = 0.012 | bigbacc = 0.0028 | cigbacc = 0.002 | |
| +nigbacc = 1 | aigbinv = 0.014 | bigbinv = 0.004 | cigbinv = 0.004 |
| +eigbinv = 1.1 | nigbinv = 3 | aigc = 0.012 | bigc = 0.0028 |
| +cigc = 0.002 | aigsd = 0.012 | bigsd = 0.0028 | cigsd = 0.002 |
| +nigc = 1 | poxedge = 1 | pigcd = 1 | ntox = 1 |
| +xrcrg1 = 12 | xrcrg2 = 5 | | |
| +cgso = 5.458e-010 | cgdo = 5.458e-010 | cgbo = 2.56e-011 | cgdl = 2.653e-10 |
| +cgsl = 2.653e-10 | ckappas = 0.03 | ckappad = 0.03 | acde = 1 |
| +moin = 15 | noff = 0.9 | voffcv = 0.02 | |
| +kt1 = -0.11 | kt1l = 0 | kt2 = 0.022 | ute = -1.5 |
| +ua1 = 4.31e-009 | ub1 = 7.61e-018 | uc1 = -5.6e-011 | prrt = 0 |
| +at = 33000 | | | |
| +fnoimod = 1 | tnoimod = 0 | | |
| +jss = 0.0001 | jsws = 1e-011 | jswgs = 1e-010 | njs = 1 |
| +ijthsfwd= 0.01 | ijthsrev= 0.001 | bvs = 10 | xjbvs = 1 |
| +jsd = 0.0001 | jswd = 1e-011 | jswgd = 1e-010 | njd = 1 |
| +ijthdfwd= 0.01 | ijthdrev= 0.001 | bvd = 10 | xjbvd = 1 |
| +pbs = 1 | cjs = 0.0005 | mjs = 0.5 | pbsws = 1 |
| +cjsws = 5e-010 | mjsws = 0.33 | pbswgs = 1 | cjswgs = 3e-010 |
| +mjswgs = 0.33 | pbd = 1 | cjd = 0.0005 | mjd = 0.5 |
| +pbswd = 1 | cjswd = 5e-010 | mjswd = 0.33 | pbswgd = 1 |
| +cjswgd = 5e-010 | mjswgd = 0.33 | tpb = 0.005 | tcj = 0.001 |
| +tpbsw = 0.005 | tcjsw = 0.001 | tpbswg = 0.005 | tcjswg = 0.001 |
| +xtis = 3 | xtid = 3 | | |
| +dmcg = 0e-006 | dmci = 0e-006 | dmdg = 0e-006 | dmcgt = 0e-007 |
| +dwj = 0.0e-008 | xgw = 0e-007 | xgl = 0e-008 | |
| +rshg = 0.4 | gbmin = 1e-010 | rbpb = 5 | rbpd = 15 |
| +rbps = 15 | rbdb = 15 | rbbs = 15 | ngcon = 1 |

* BPTM 65nm PMOS

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| +capmod = 2 | igcmmod = 1 | igbmod = 1 | geomod = 1 |
| +diomod = 1 | rdsmod = 0 | rbodymod= 1 | rgatemod= 1 |
| +permod = 1 | acnqsmode= 0 | trnqsmode= 0 | |
| +tnom = 27 | toxe = 1.7e-009 | toxp = 1e-009 | toxm = 1.7e-009 |
| +dtox = 0 | epsrox = 3.9 | wint = 5e-009 | lint = 1.6e-008 |
| +ll = 0 | wl = 0 | lln = 1 | wln = 1 |
| +lw = 0 | ww = 0 | lwn = 1 | wwn = 1 |
| +lwl = 0 | wwl = 0 | xpart = 0 | toxref = 1.7e-009 |
| +vth0 = -0.22 | k1 = 0.43 | k2 = -0.01 | k3 = 0 |
| +k3b = 0 | w0 = 2.5e-006 | dvt0 = 3.68 | dvt1 = 0.53 |
| +dvt2 = -0.032 | dvt0w = 0 | dvt1w = 0 | dvt2w = 0 |
| +dsub = 0.8 | minv = 0.05 | voffl = 0 | dvtp0 = 1e-008 |
| +dvtp1 = 0.05 | lpe0 = 5.75e-008 | lpeb = 2.3e-010 | xj = 2.5e-008 |
| +ngate = 5e+020 | ndep = 2.6e+018 | nsd = 1e+020 | phin = 0 |
| +cdsc = 0.000258 | cdscb = 0 | cdscd = 6.1e-008 | cit = 0 |
| +voff = -0.15 | nfactor = 2 | eta0 = 0.2 | etab = 0 |
| +vfb = 0.55 | u0 = 0.014 | ua = 1.8e-009 | ub = 6e-018 |
| +uc = -3e-011 | vsat = 90000 | a0 = 1.2 | ags = 1e-020 |
| +a1 = 0 | a2 = 1 | b0 = -1e-020 | b1 = 0 |
| +keta = -0.047 | dwg = 0 | dwb = 0 | pclm = 0.55 |
| +pdiblc1 = 0.12 | pdiblc2 = 0.0075 | pdiblc3 = 3.4e-008 | dROUT = 0.56 |
| +pvag = 1e-020 | delta = 0.014 | pscbe1 = 8.14e+008 | pscbe2 = 9.58e-007 |
| +fprout = 0.2 | pdits = 0.2 | pditsd = 0.23 | pditsl = 2.3e+006 |
| +rsh = 5 | rdsw = 280 | rsd = 160 | rdw = 160 |
| +rdswmin = 0 | rdwmin = 0 | rsdmin = 0 | prwg = 3.22e-008 |
| +prwb = 6.8e-011 | wr = 1 | alpha0 = 0.074 | alpha1 = 0.005 |
| +beta0 = 30 | agidl = 0.0002 | bgidl = 2.1e+009 | cgidl = 0.0002 |
| +egidl = 0.8 | | | |
| +aigbacc = 0.012 | bigbacc = 0.0028 | cigbacc = 0.002 | |
| +nigbacc = 1 | aigbinv = 0.014 | bigbinv = 0.004 | cigbinv = 0.004 |
| +eigbinv = 1.1 | nigbinv = 3 | aigc = 0.69 | bigc = 0.0012 |
| +cigc = 0.0008 | aigsd = 0.0087 | bigsd = 0.0012 | cigsd = 0.0008 |
| +nigc = 1 | poxedge = 1 | pigcd = 1 | ntox = 1 |
| +xrcrg1 = 12 | xrcrg2 = 5 | | |
| +cgso = 5.458e-010 | cgdo = 5.458e-010 | cgbo = 2.56e-011 | cgdl = 2.653e-10 |
| +cgsl = 2.653e-10 | ckappas = 0.03 | ckappad = 0.03 | acde = 1 |
| +moin = 15 | noff = 0.9 | voffcv = 0.02 | |
| +kt1 = -0.11 | kt1l = 0 | kt2 = 0.022 | ute = -1.5 |
| +ua1 = 4.31e-009 | ub1 = 7.61e-018 | uc1 = -5.6e-011 | pRT = 0 |
| +at = 33000 | | | |
| +fnoimod = 1 | tnoimod = 0 | | |
| +jss = 0.0001 | jsws = 1e-011 | jswgs = 1e-010 | njs = 1 |
| +ijthsfwd= 0.01 | ijthsrev= 0.001 | bvs = 10 | xjbvs = 1 |
| +jsd = 0.0001 | jswd = 1e-011 | jswgd = 1e-010 | njd = 1 |
| +ijthdfwd= 0.01 | ijthdrev= 0.001 | bvd = 10 | xjbvd = 1 |
| +pbs = 1 | cjs = 0.0005 | mjs = 0.5 | pbsws = 1 |
| +cjsws = 5e-010 | mjsws = 0.33 | pbswgs = 1 | cjswgs = 3e-010 |
| +mjswgs = 0.33 | pbd = 1 | cjd = 0.0005 | mjd = 0.5 |
| +pbswd = 1 | cjswd = 5e-010 | mjswd = 0.33 | pbswgd = 1 |
| +cjswgd = 5e-010 | mjswgd = 0.33 | tpb = 0.005 | tcj = 0.001 |
| +tpbsw = 0.005 | tcjsw = 0.001 | tpbswg = 0.005 | tcjswg = 0.001 |
| +xtis = 3 | xtid = 3 | | |
| +dmcg = 0e-006 | dmci = 0e-006 | dmdg = 0e-006 | dmcgt = 0e-007 |
| +dwj = 0.0e-008 | xgw = 0e-007 | xgl = 0e-008 | |
| +rshg = 0.4 | gbmin = 1e-010 | rbpb = 5 | rbpd = 15 |
| +rbps = 15 | rbdb = 15 | rbbs = 15 | ngcon = 1 |