# BSIM3 Bug Fix-Thermal Noise

**Reporter**: David Zweidinger, Keith Green, Britt Brook      TI

**Problem**: Noise of Rds erroneously omitted from the thermal noise  models , NOIMOD=2 and 4

**Fix**:

In **b3noi.c**:

FROM:

(here->BSIM3ueff * FABS(here->BSIM3qinv) / (pParam->BSIM3leff *pParam->BSIM3leff))

TO:

(here->BSIM3ueff * FABS(here->BSIM3qinv) / (pParam->BSIM3leff *pParam->BSIM3leff + here->BSIM3ueff *FABS(here->BSIM3qinv) *here->BSIM3rds)) for NOIMOD=4.

# BSIM3 Bug Fix-Flicker Noise

**Reporter**: David Zweidinger, Keith Green, Britt Brook     TI

**Problem**: Discontinuity of unified flicker model between linear region and saturation region.

**Fix**:

In **b3noi.c**:

Uses $V_{gsteff}$, $V_{dseff}$ to replace $(V_{gs}-V_{th})$, and $min(V_{ds}, V_{dsat})$. Also the bulk charge effect is taken into account through the inclusion of Abulk.