June 1995

Mitel Semiconductor has been using for several years SPICE parameters for internal IC Design.

For Custom Silicon Wafer Foundry, we are now offering expanded services with State-of-the-Art Hardware and Software Data extraction.

Available Models:

MOS MODEL 3

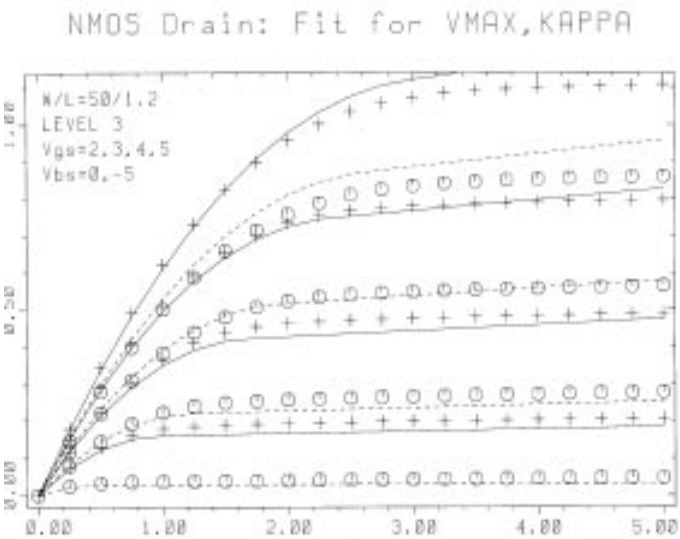
Parameters are routinely extracted on sampling of production PCM (Process Control Monitor).

Additional MODELS

All Standard models supported by HSPICE™ and BERKELEY SPICE™ can be made available on request.

ACCESS

- Hard Copy
- Floppy Disk
- Electronic Mail
- Internet Network



Example of Simulations Fit for (50x1.2)um NMOS Transistor

Example of Nominal Values for 1.2um NMOS Transistor:

```
.lib nnom
.MODEL qn nmos
+    level=    3.0
+    ld =      5.980e-09
+    dw=       -1.453e-07
+    xl =      -1.178e-07
+    vto=      0.7658
+    tpg=      1.0
+    nsub=     2.433e+16
+    cgdo=     1.127e-10
+    cgso=     1.127e-10
+    capop=    4.0
+    tox=      2.233e-08
+    acm=      0.0
+    js =      2.50e-03
+    cj =      3.793e-04
+    cjsw=     1.529e-10
+    mj=       0.3222
+    mjsw=     0.5792
+    pb=       0.6614
+    rsh=      452.6
+    gap1=     4.73e-04
+    gap2=     6.36e+02
+    delta=    1.789
+    eta=      1.940e-02
+    kappa=    1.197
+    nfs=      5.020e+11
+    theta=    4.623e-02
+    vmax=     2.546e+05
+    xj =      4.126e-08
+    uo=       491.5
+    tref=     25.0
.endl
```

Notes: