SPICE Model

MAVR-011020-14110 rev B

March 12, 2021

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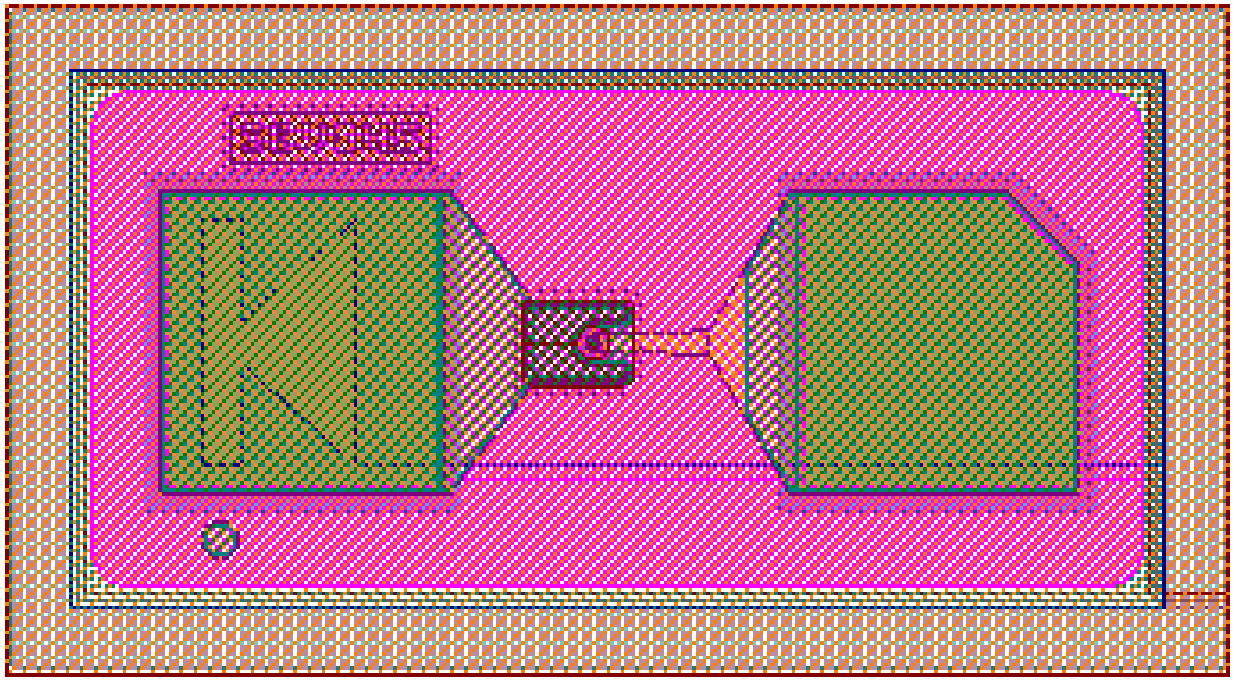
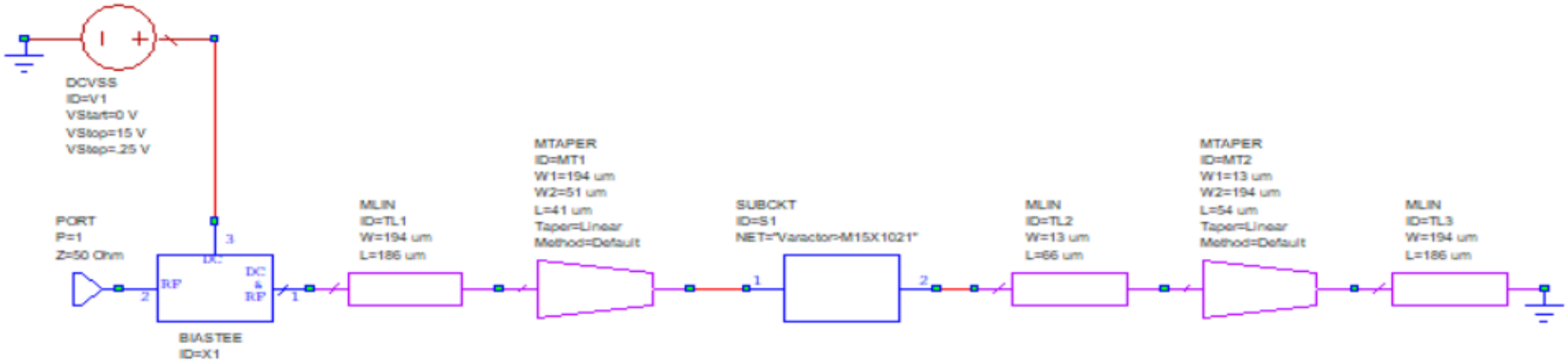
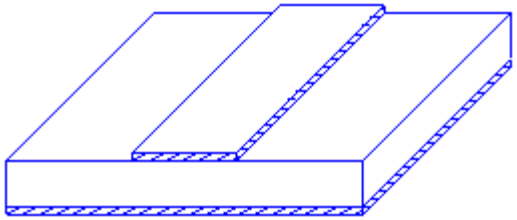
Outline Drawing

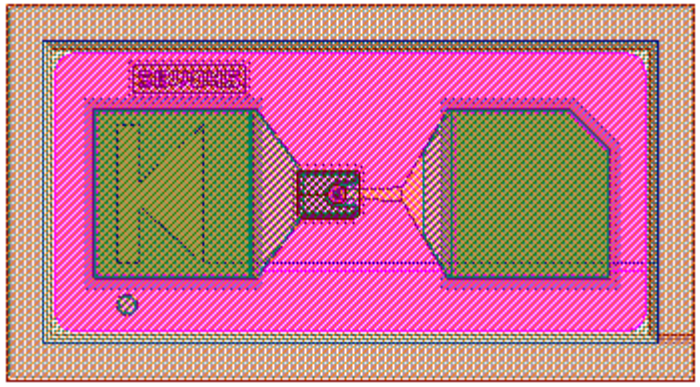


Package
Microstrip Transmission Lines



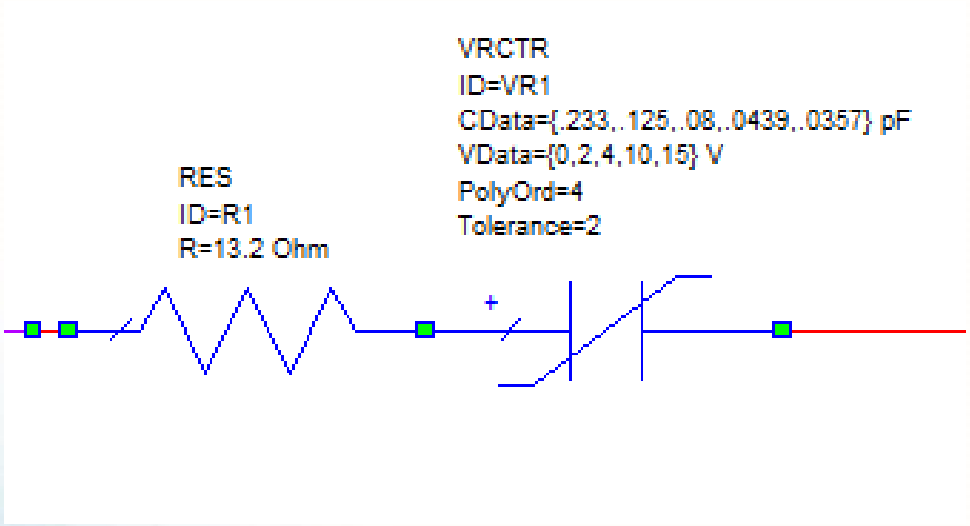
MSUB
Er=12.9
H=203 um
T=.3 um
Rho=1
Tand=.00056
ErNom=12.9
Name=SUB1





Diode Model A

- Use 4th order polynomial to model non-linear capacitance

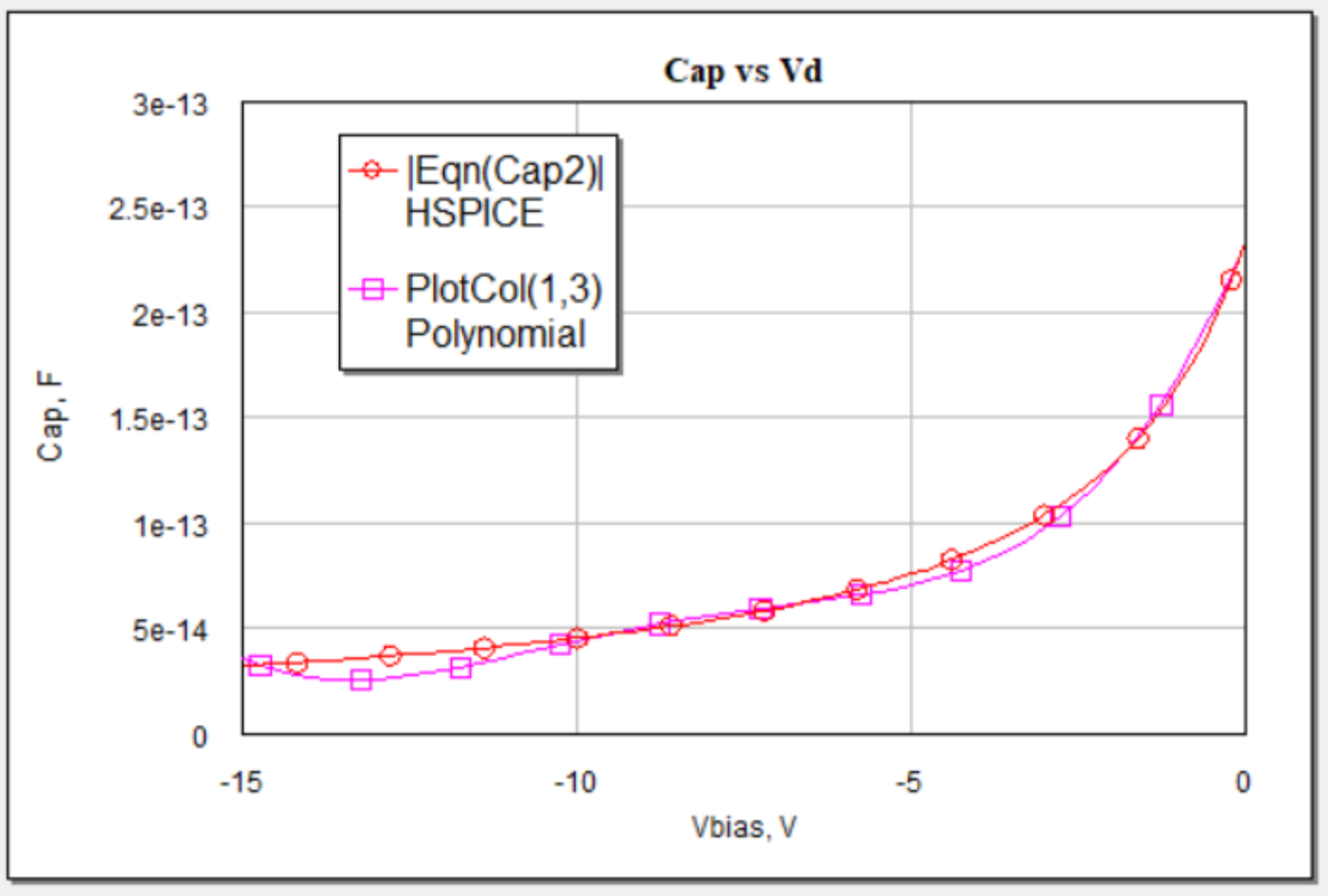


Diode Model B, HSPICE/Netlist

```
DIM
    TEMP   C
    FREQ   HZ
     RES   OH
    COND   /OH
     IND   H
     CAP   F
     LNG   M
    TIME   SEC
     ANG   DEG
     VOL   V
     CUR   A
     PWR   DBM

CKT
SDIODE 1 2 ID="D1" IS=1e-14 RS=13.2 N=2 TT=3e-09 CJ0=2.33e-13 &
    VJ=2.4 M=1 EG=1.42 XTI=3 KF=0 AF=1 FC=0.5 BV=20 &
    IBV=1e-05 IKF=0 FFE=1
DEF2P 1 2 "MAVR_011020 1"
```

CV Curve


Cap vs Vd
3e-13
2.5e-13
2e-13
1.5e-13
1e-13
5e-14
0
Cap, F
|Eqn(Cap2)|
HSPICE
PlotCol(1,3)
Polynomial
-15
-10
-5
0
Vbias, V