

Equation

Model_parameters

$V_v=0.4$

$V_T=0.025$

$I_p=1e-5$

$V_p=0.1$

$I_v=1e-6$

$K=5$

$I_s=1e-12$

Equation

Model_equations

$I_{diode}=I_s \cdot (\exp(V_{pn}/V_T)-1.0)$

$I_{excess}=I_v \cdot \exp(K \cdot (V_{pn}-V_v))$

$I_{pn}=I_{diode}+I_{excess}+I_{tunnel}$

$I_{tunnel}=I_p \cdot (V_{pn}/V_p) \cdot \exp((V_p-V_{pn})/V_p)$

dc simulation

DC1

Parameter
sweep

SW1

Sim=DC1

Type=lin

Param= V_{pn}

Start=-0.05

Stop=0.4

Points=451

