



Pr1

D1

$$I1 = I_s \cdot (\exp(V1/V_T) - 1.0)$$

$$Q1 = C \cdot V1$$

$$I2 = I_v \cdot \exp(K \cdot (V1 - V_v))$$

$$I3 = I_p \cdot (V1/V_p) \cdot \exp((V_p - V1)/V_p)$$

dc simulation

DC1

Parameter
sweep

SW1

Sim=DC1

Type=lin

Param=Vdc

Start=-0.05

Stop=0.4

Points=51

Equation

Eqn1

$$V_T = (k_B \cdot \text{Temp}) / q$$

$$\text{Temp} = 300$$

$$I_s = 1e-12$$

$$I_p = 1e-5$$

$$I_v = 1e-6$$

$$V_p = 0.1$$

$$V_v = 0.4$$

$$C = 0.01p$$

$$K = 5$$