**1-)**

**a-)**

.DC VIN 0 5 0.1

**b-)**

VDC 3 0 DC 5V

VPULSE 1 0 PULSE (-1mV 1mV 2ns 2ns 50ns 100ns)

PULSE (<*v1*> <*v2*> <*td*> <*tr*> <*tf*> <*pw*> <*per*>)

<*v1*> initial voltage

<*v2*> pulsed voltage

<*td*> delay

<*tr*> rise time

<*tf*> fall time

<*pw*> pulse width

<*per*> period

c-)

.TRAN 1N 100N

d-)

.MODEL NTYPE NMOS (VTO=-3 KP=1E-5 LAMBDA=.1 W=10U L=50U)

e-)

.PLOT DC V(1) vs V(2)

f-)

2-)