

Spice deck for Power supply variation

*** MODEL Descriptions ***

*** NETLIST Description ***

2.5 supply voltage

M1 out in vdd vdd pmos W=0.9375u L=0.25u

M2 out in 0 0 nmos W=0.375u L=0.25u

clload out 0 10f

Vdd vdd 0 2.5

Vin in 0 2.5

.control

let powerSupply = 2.5

alter Vdd = powerSupply

let voltageSupplyVariation = 0

dowhile voltageSupplyVariation < 5

dc Vin 0 2.5 0.01

let powerSupply = powerSupply - 0.5

alter Vdd = powerSupply

let voltageSupplyVariation = voltageSupplyVariation + 1

end

plot dc1.out vs in dc2.out vs in dc3.out vs in dc4.out vs in dc5.out vs in xlabel "input voltage [V]" ylabel "output voltage [V]" title "Inverter dc characteristics as a function of supply voltage"

* quit

.endc

*** SIMULATION Commands ***

***.op

***.dc Vin 0 2.5 0.05 Vdd 0 2.5 0.5

*** .include tsmc_025um_model.mod ***

.LIB "tsmc_025um_model.mod" CMOS_MODELS

.end