

mos_pass_n.sqproj

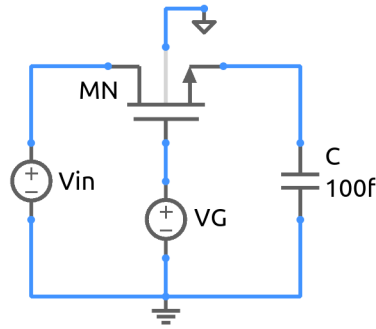


Figure 1: NMOS transmission gate.

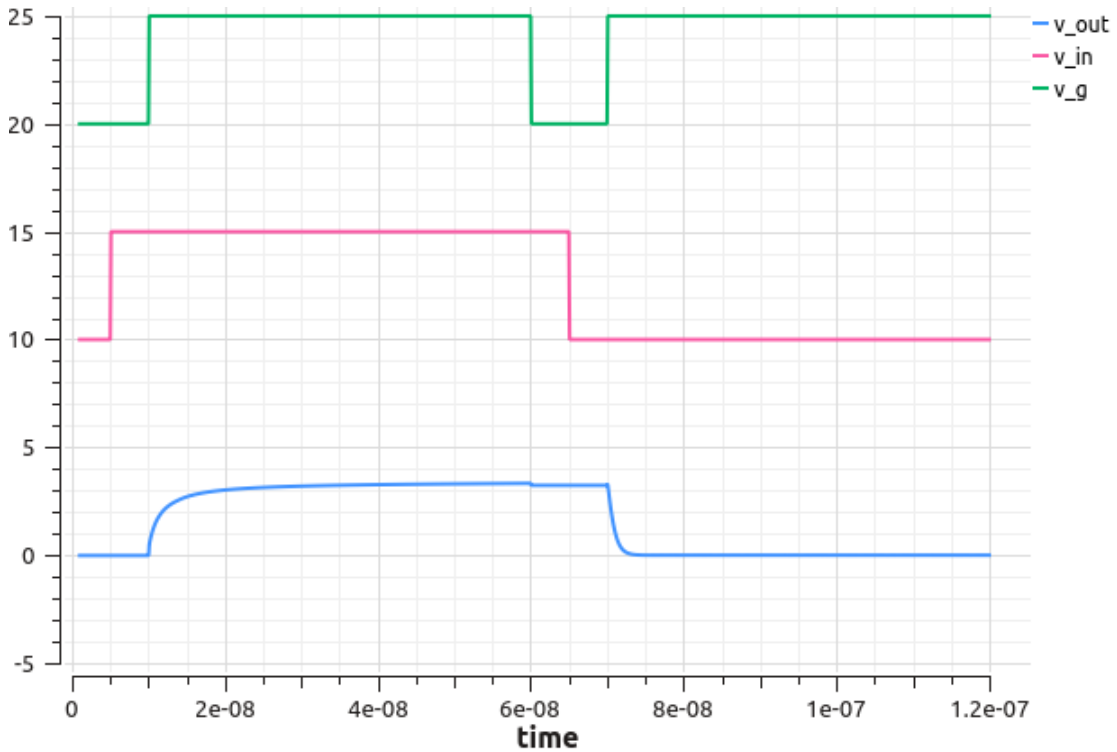


Figure 2: Simulation results for the NMOS transmission gate shown in Fig. 1. Note that the plots are offset by 10, 20 for clarity.

Fig. 1 shows an NMOS transmission gate. The input voltage, the gate voltage, and the output voltage are shown in Fig. 2 as a function of time.

Exercise Set

1. Explain the operation of the transmission gate with the help of the waveforms in Fig. 2.
2. Compare the output voltage of the NMOS transmission gate with that of the CMOS transmission gate (`mos_pass_c.sqproj`).

References

1. R. J. Baker, H. W. Li, and D. E. Boyce, *CMOS Circuit Design, Layout, and Simulation*, Prentice-Hall India, 1998.