

ECE 2C Homework #2 Due: 10/8/09 at 5 PM

Relevant readings:

S&S 4.1-4.3, 4.5-4.6

5 problems

- (1) [10 pt.] S&S Problem 4.18 from the textbook. {MOSFET IV characteristics; “diode-connected transistor”}
- (2) [10 pt.] S&S Problem 4.19 from the textbook. {MOSFET IV characteristics; channel length modulation, output resistance}
- (3) [10 pt.] S&S Problem 4.42 from the textbook {DC analysis of MOSFET circuits}
- (4) [10 pt.] S&S Problem 4.77 from the textbook. {DC analysis and small-signal model of a common-source amplifier; voltage gain and input resistance}
- (5) [10 pt.] S&S Problem 4.88 from the textbook. {Single-stage MOSFET amplifier: source follower (i.e. common-drain amplifier) and common-gate amplifier; voltage gain, input resistance and output resistance}