

PROBLEM SET #3

Issued: Friday, September 7, 2018

Due: Friday, September 14, 2018, at 12:00 noon via Gradescope.

1. Sedra & Smith, Problem 2.112
2. Sedra & Smith, Problem 2.115
3. Sedra & Smith, Problem 2.117
4. Sedra & Smith, Problem 2.123
5. Sedra & Smith, Problem 2.125
6. It is required to design a voltage follower that uses an operational amplifier and has a gain error of $\leq 0.01\%$. What is the minimum open-loop gain specification for the op amp?
7. A particular noninverting amplifier design must have a closed-loop gain of 54 dB. The only op amp that is available has an open-loop gain of 40,000. What must the tolerance of the feedback resistors be if the total gain error must be $\leq 2\%$? Assume that the resistors all have the same tolerance.