

EE 322 Advanced Analog Electronics, Spring 2008

Homework #1 Problem 1

1. Read section 6.5 in Horowitz and Hill.
2. Derive the relationship between the maximum output current and output voltage for the circuit in Figure 6.5.
3. Derive the relationship between the maximum output current and output voltage for the circuit in Figure 6.7A (In both Figure 6.5 and 6.7A you may assume that the nominal output of +15 V is accurate).
4. Plot those two relationships on the same graph with units on both axes. You should get something similar to Figure 6.7B.
5. Additionally, mark any other I-V relationships which are possible in these two circuits.