

For these problems the transistors should be those of the 4007 package.

The transistors in the 4007 package are the same as those of the CA3600E which have their Spice models in the ANL_MISC.lib. Here are some key parameters:

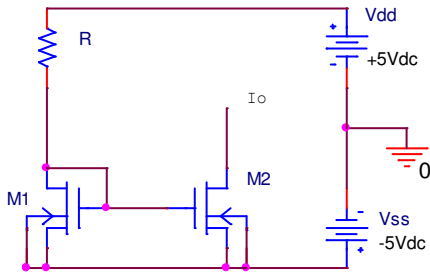
NMOS: KP=20.54u, W=144u, L=8u, VTO=1.3, LAMBDA=15m

PMOS: KP=10.32u, W=328u, L=8u, VTO=-1.5, LAMBDA=15m

1. Run Spice curves for one 4007 NMOS and one PMOS (use the CA3600E)
2. (current source)[helpful may be Fig. 4.33b) p. 286]

Assume that the right hand transistor in the following circuit operates in the saturation region.

(By hand) find the value of R such that the output current I_o is 2mA.



3. (bias of transistors) [helpful may be Fig. 4.31 p. 283]

(By hand) find the two left hand resistors such that the transistor is correctly biased. Give the region of operation of the transistor.

