

Exam 1 next Wednesday

PSPICE for project 1 due Feb. 10th

→ Separate submission to homework locker

• make a copy in notebook

built prototype due by Feb. 17th

Exam is closed notes/book.

1 8 1/2 x 11 sheet handwritten notes

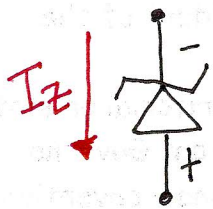
1. Bode Plots

2. op amp (single input)

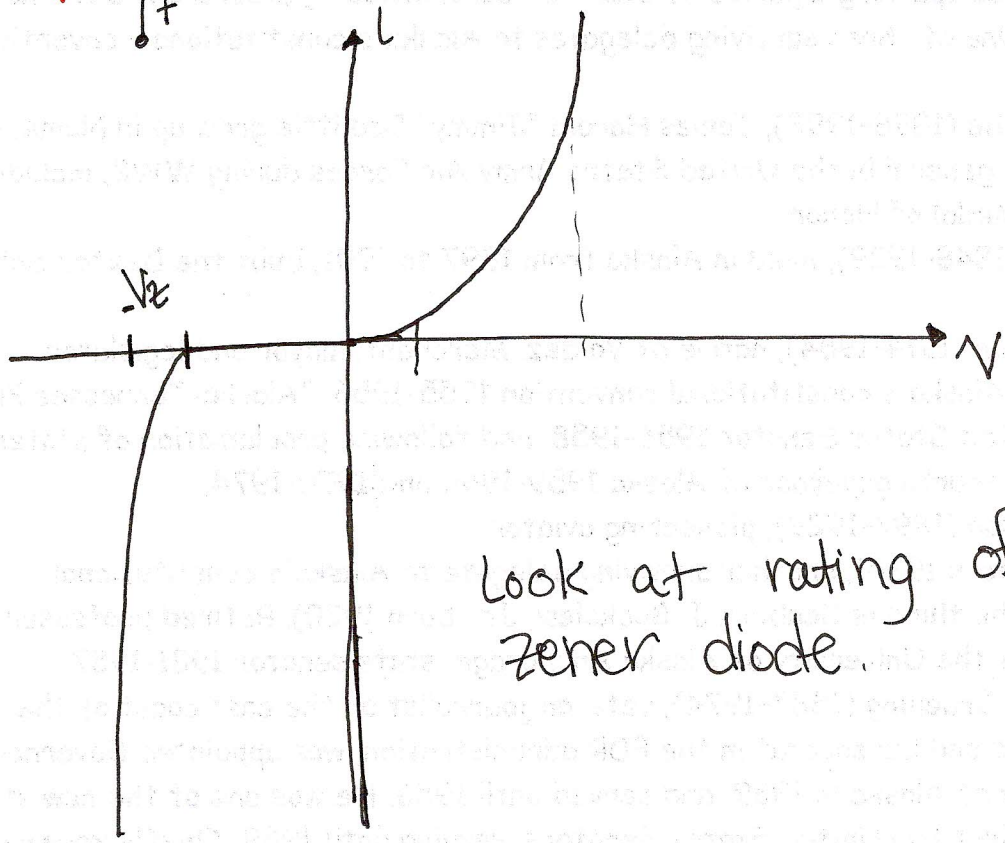
3. op amp (imperfections)

4. Diode

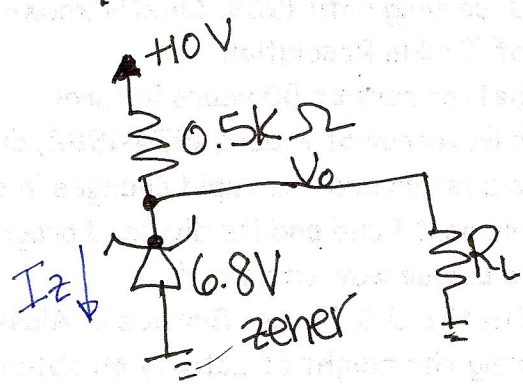
Zener diode



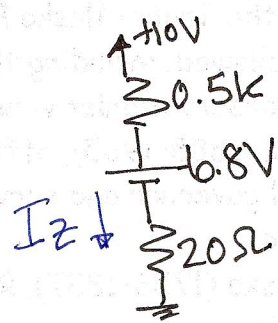
• current flows opposite a normal diode



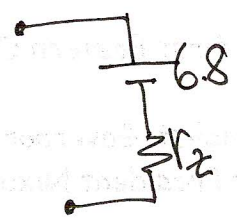
Look at rating of the Zener diode.

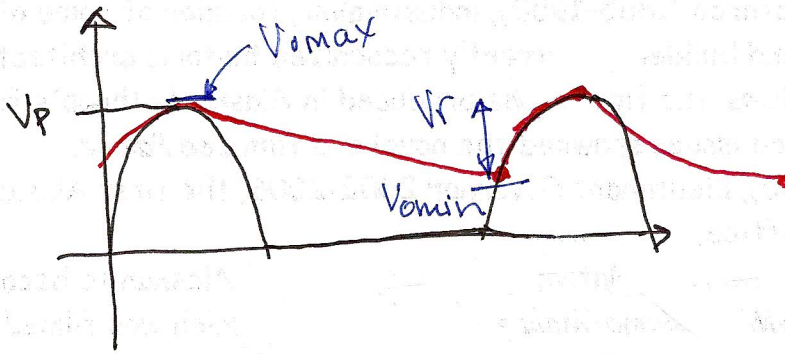
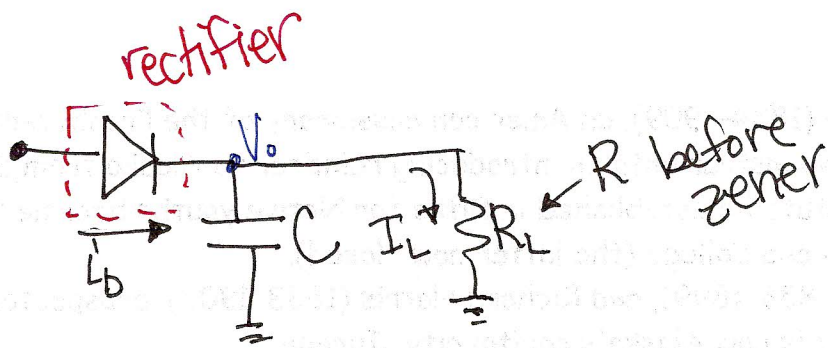


$V_z = 6.8V$ at $I_z = 5mA$, $r_z = 20\Omega$
without load:



$$I_z = \frac{10 - 6.8}{0.5k + 20} \approx 6mA$$





$$V_r = \frac{V_p}{f C R_L}$$

$$I_{DAV} = I_L \left(1 + \pi \sqrt{2 \frac{V_p}{V_r}} \right)$$

$$I_{Dmax} = I_L \left(1 + 2\pi \sqrt{2 \frac{V_p}{V_r}} \right)$$