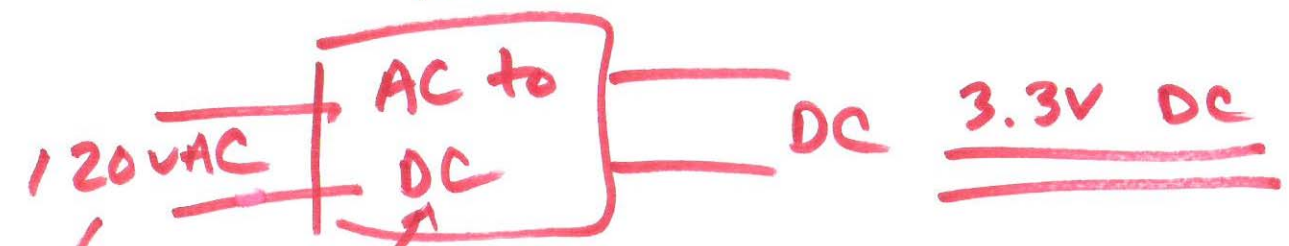
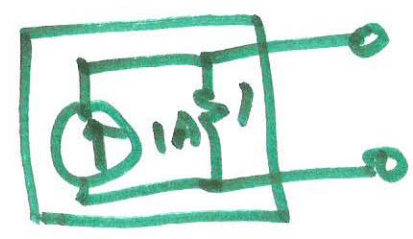
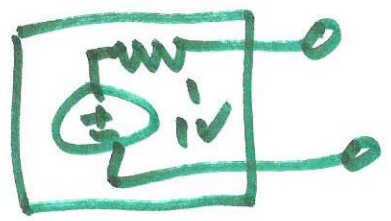
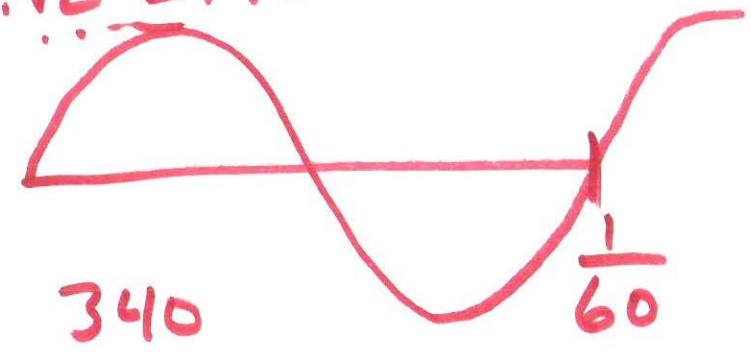
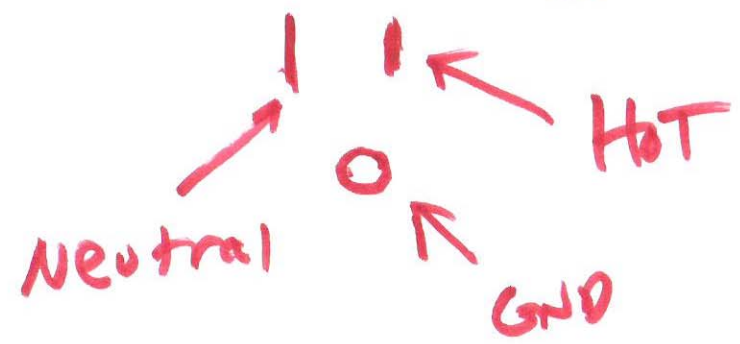


Aug. 23, 2011

Lecture 1 ✓
100% eff.



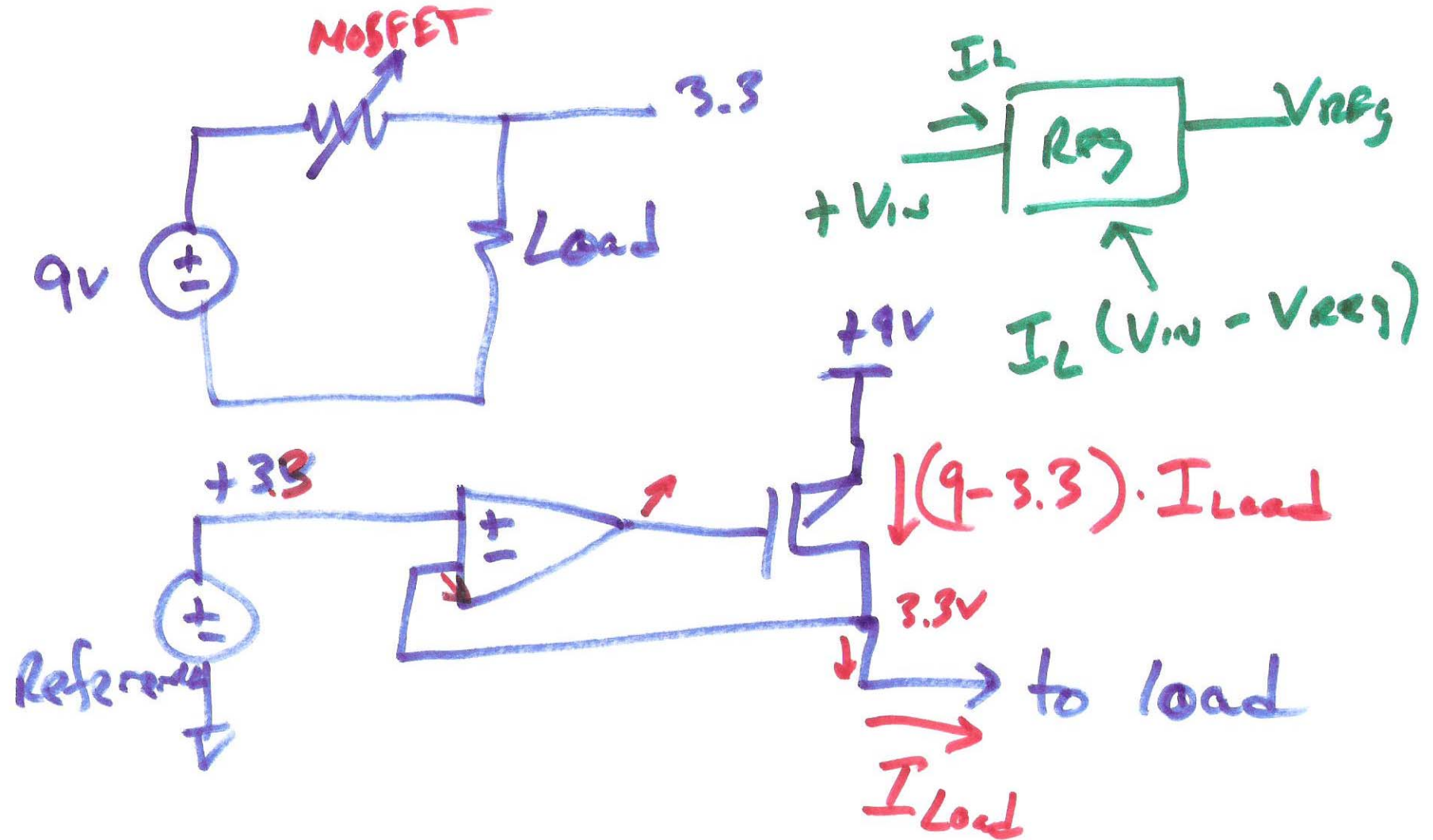
converter $120 \cdot \sqrt{2} = 170$



1)

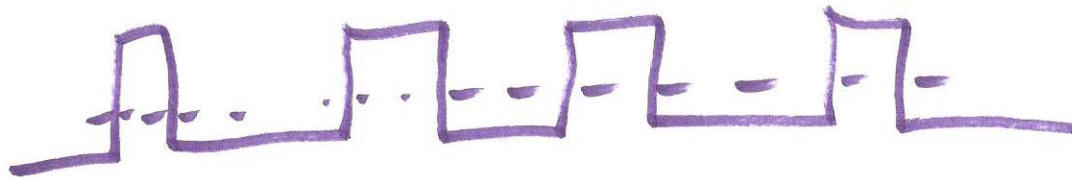
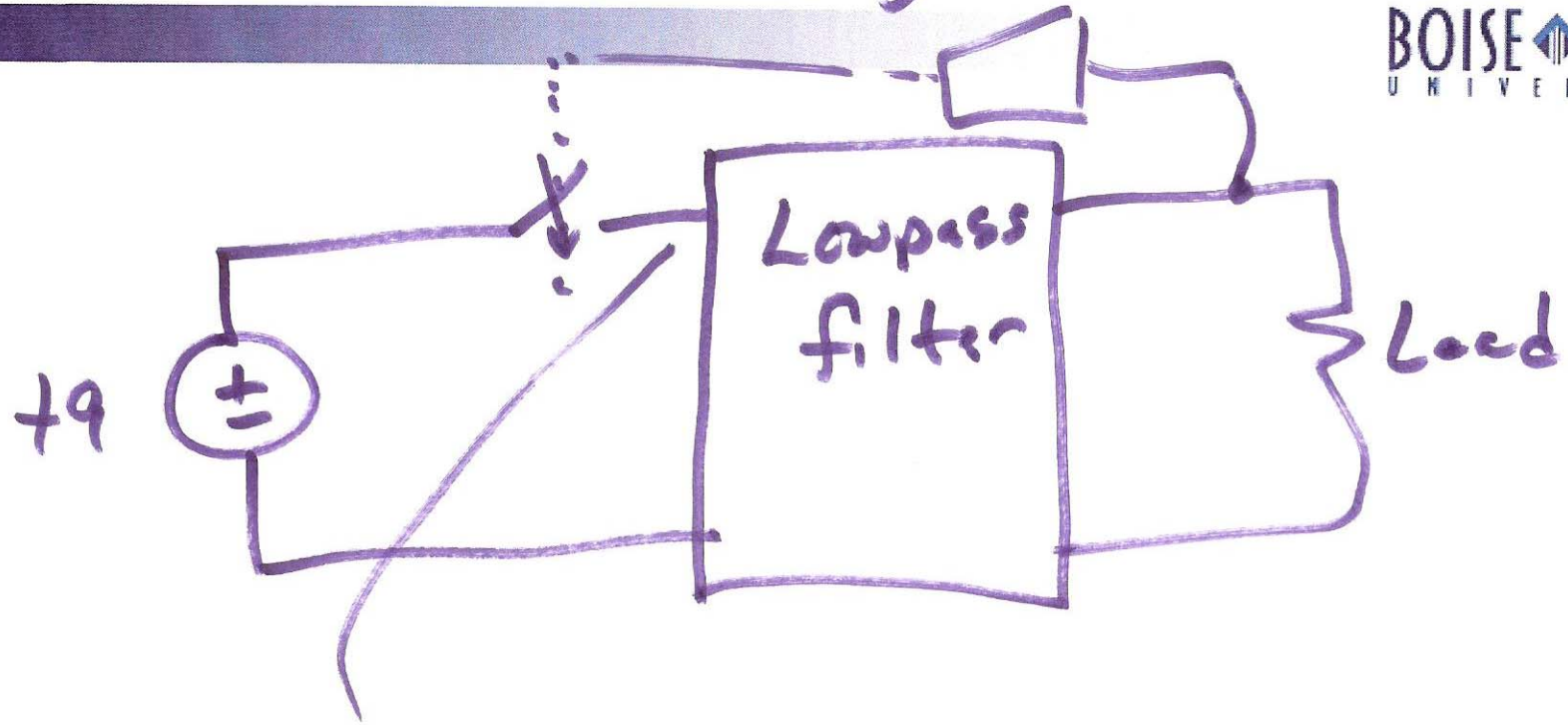
Linear Regulator

DC to DC

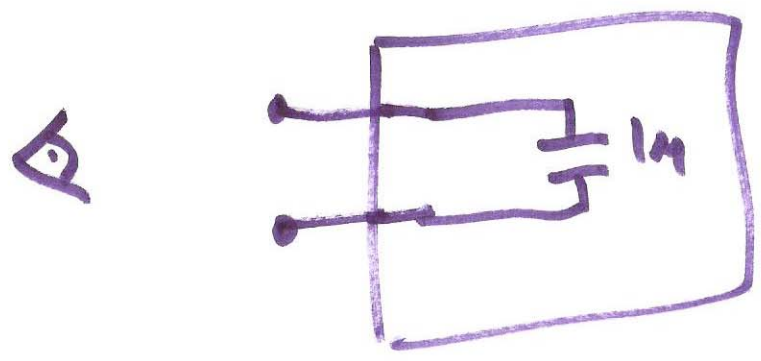


2)

Switching Regulator



3)

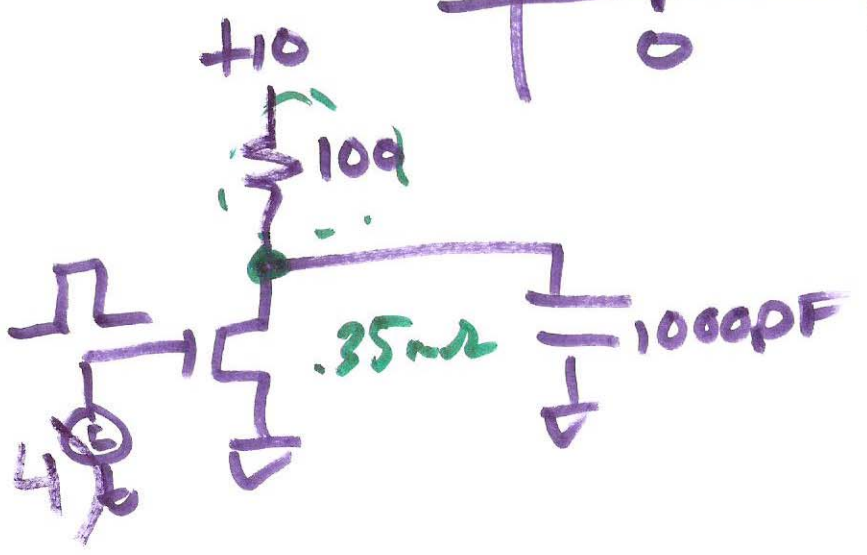
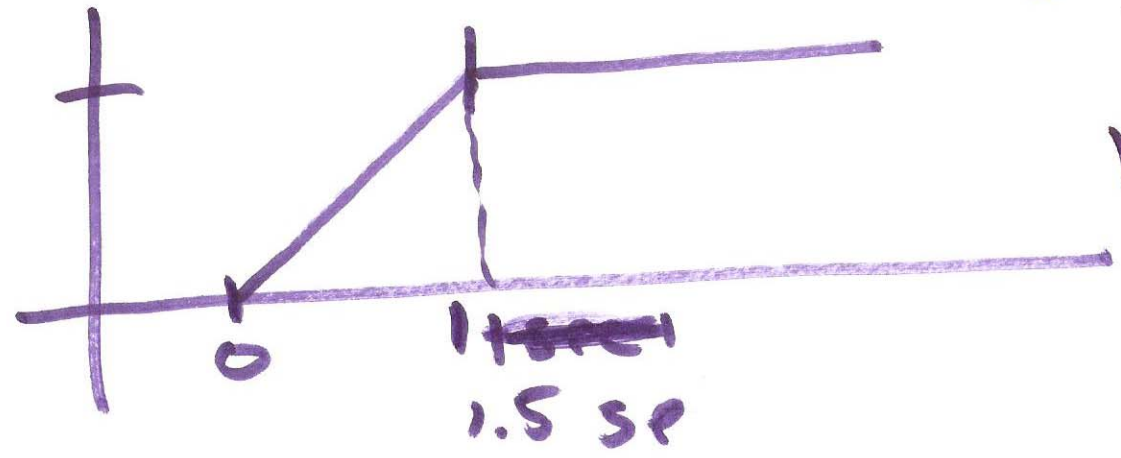


$$I = C \frac{dv}{dt}$$

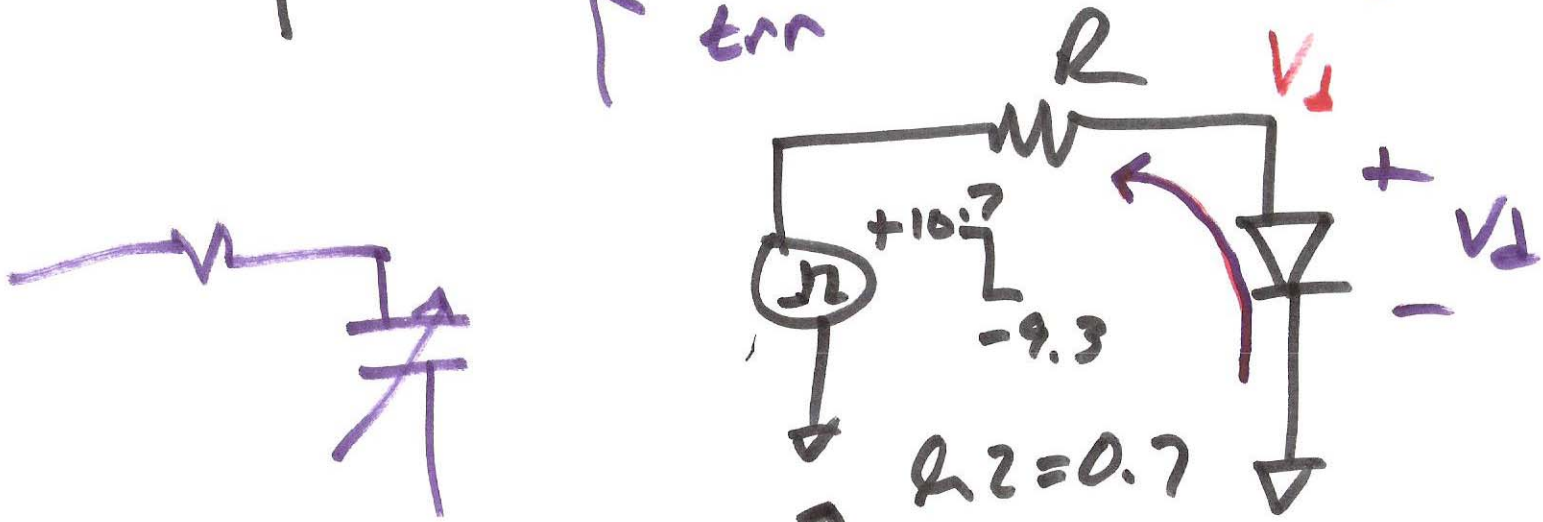
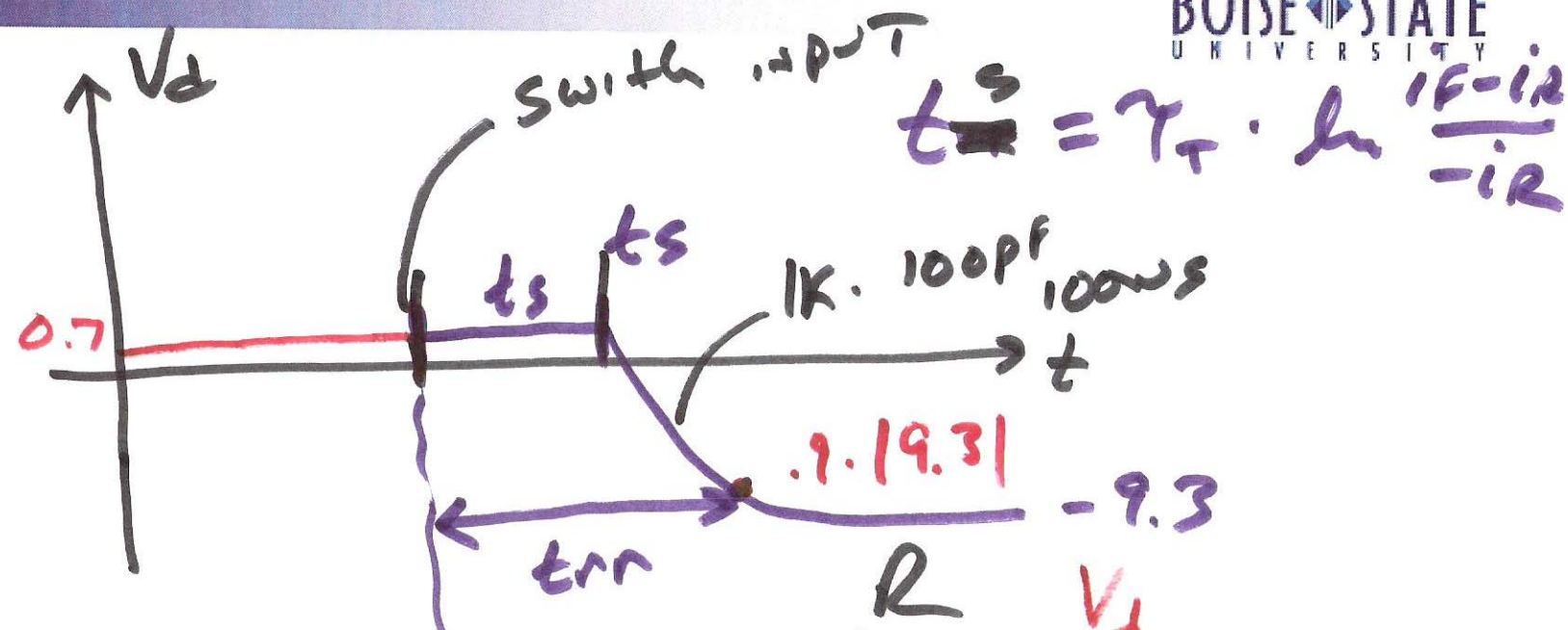
$$V = \frac{1}{C} \int_0^t i \cdot dt$$

$$V = \frac{1}{C}$$

$$C = \frac{1}{V}$$



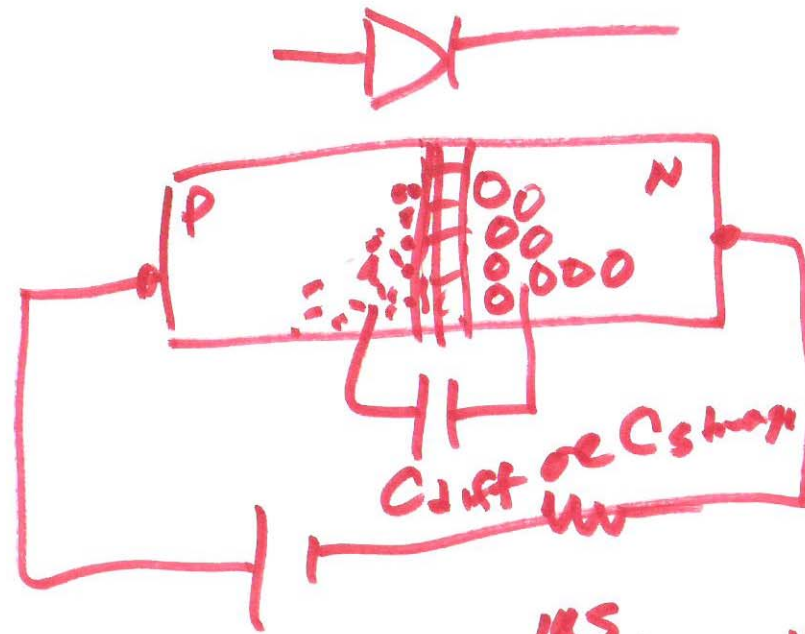
$$t_r = 2.2 RC$$



$$t_{rr}^s = 14 \cdot \ln \frac{20mA}{10mA}$$

$$t_{rr}^s = 0.7 \mu s$$

s)



γ_T
 γ_N
 γ_P
 124001

$$C_{diff} = \gamma_T \cdot \frac{I_0}{V_T} \Rightarrow \underline{\underline{54F}}$$

$\frac{KT}{q} \approx 26\text{-v}$

6)