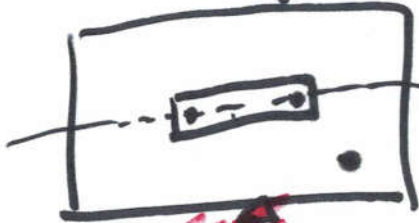


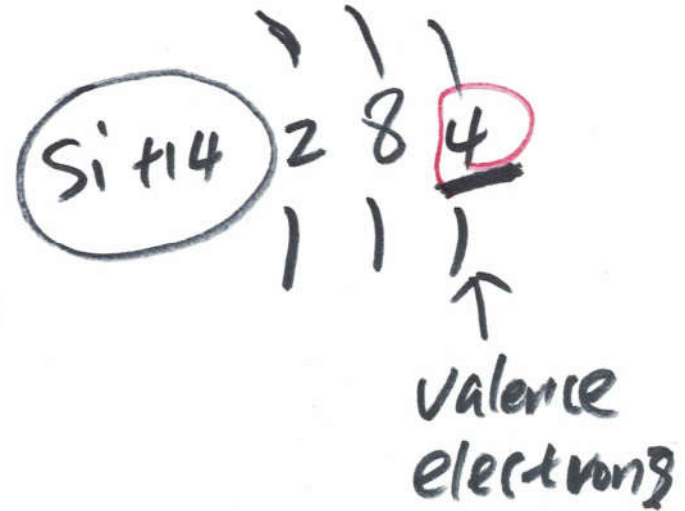
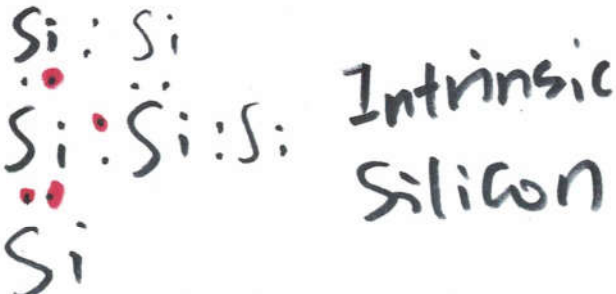
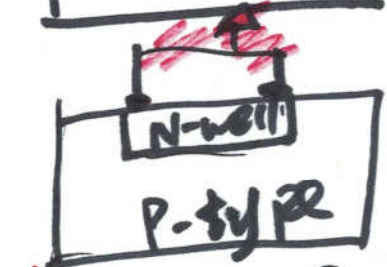
N-well

why N? why well? ~~why~~ why N-well?

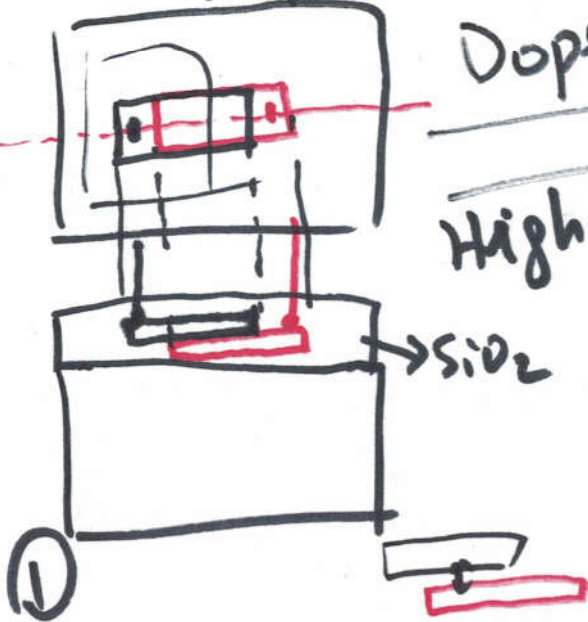
top view



cross sectional view

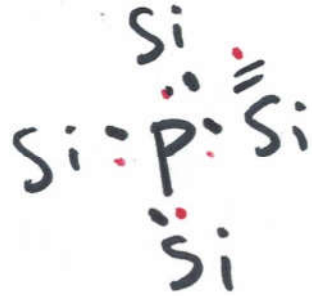


cap-top view

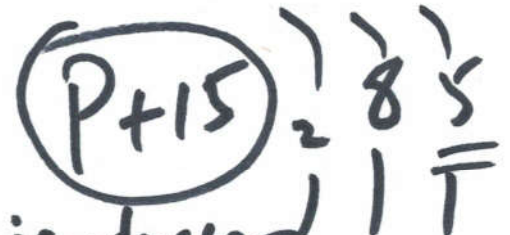


Dope it with impurities

High-temperature High pressure



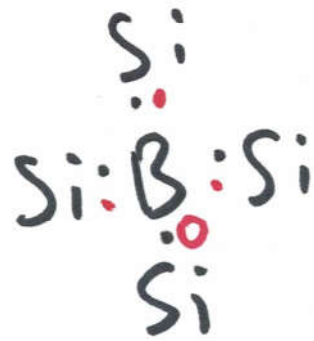
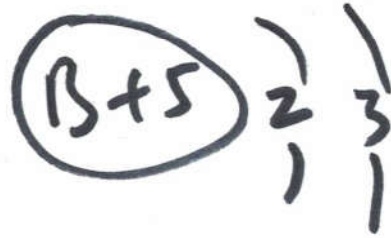
phosphorus



N-type Semiconductor

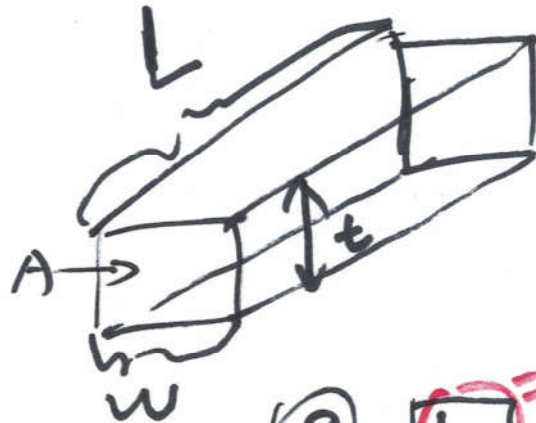
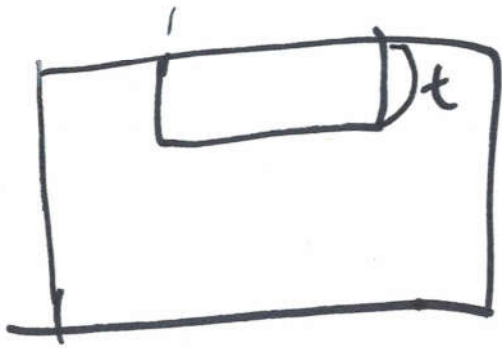
~~C =~~ $C = \frac{Q}{d}$

P-type Semiconductor
Dope it with Boron



P-type

②

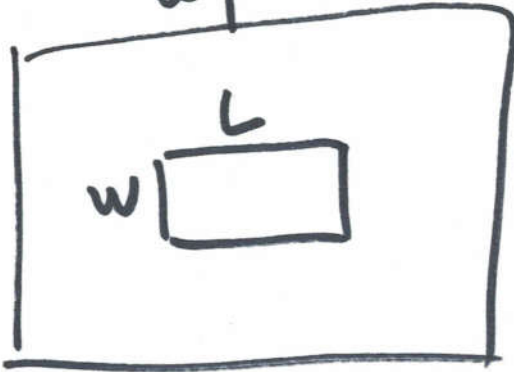


$$R = \rho \frac{L}{A} = \rho \frac{L}{w \cdot t} = \underbrace{\left(\frac{\rho}{t}\right)}_{\text{sheet resistivity}} \times \left(\frac{L}{w}\right) = 1$$

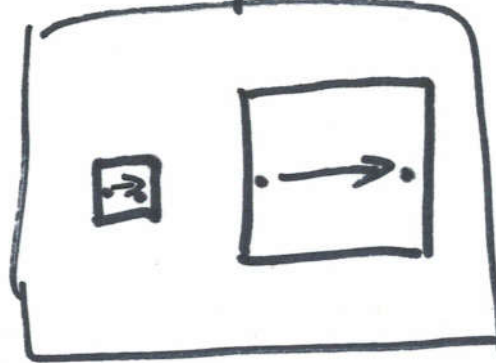
$$R = \frac{\rho}{t}$$

= sheet resistance
= 800 Ω

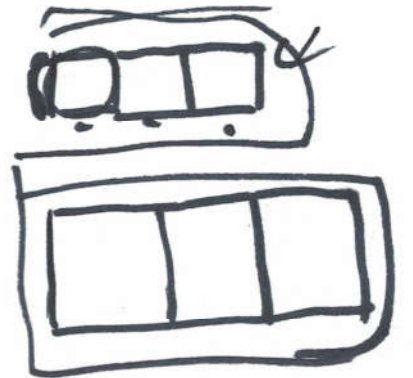
top view



top view



$$\frac{2400 \Omega}{13} = \underline{\underline{187 \Omega}}$$



$$\frac{10 \text{ k}\Omega}{800 \Omega} = \underline{\underline{12.5}}$$

3

