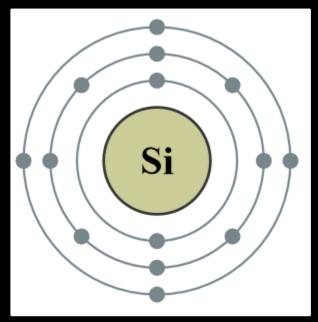
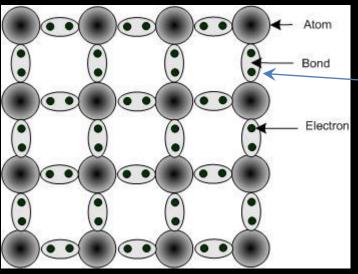
## Silicon (Si) and Doping



Silicon electron configuration:

 $1s^22s^2sp^63s^23p^2$ 

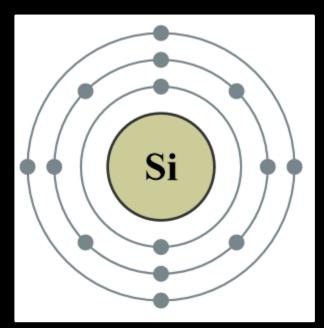
4 valence electrons in 3<sup>rd</sup> shell



covalent bonds

Since valence most electrons participating in bonds... relatively poor conductor

## Silicon (Si) and Doping



Atom
Bond

Electron

Silicon electron configuration:

 $1s^22s^2sp^63s^23p^2$ 

4 valence electrons in 3<sup>rd</sup> shell

## Actual crystal structure of Silicon

