Schottky Barrier

A Schottky barrier, named after Walter H. Schottky, is a potential barrier formed at a metal–semiconductor junction which has rectifying characteristics, suitable for use as a diode. The largest differences between a Schottky barrier and a p–n junction are its typically lower junction voltage, and decreased (almost nonexistent) depletion width in the metal.

Not all metal–semiconductor junctions form Schottky barriers. A metal–semiconductor junction that does not rectify current is called an ohmic contact. Rectifying properties depend on the metal's work function, the band gap of the intrinsic semiconductor, the type and concentration of dopants in the semiconductor, and other factors. Design of semiconductor devices requires familiarity with the Schottky effect to ensure Schottky barriers are not created accidentally where an ohmic connection is desired.

참고

- 위키피디아