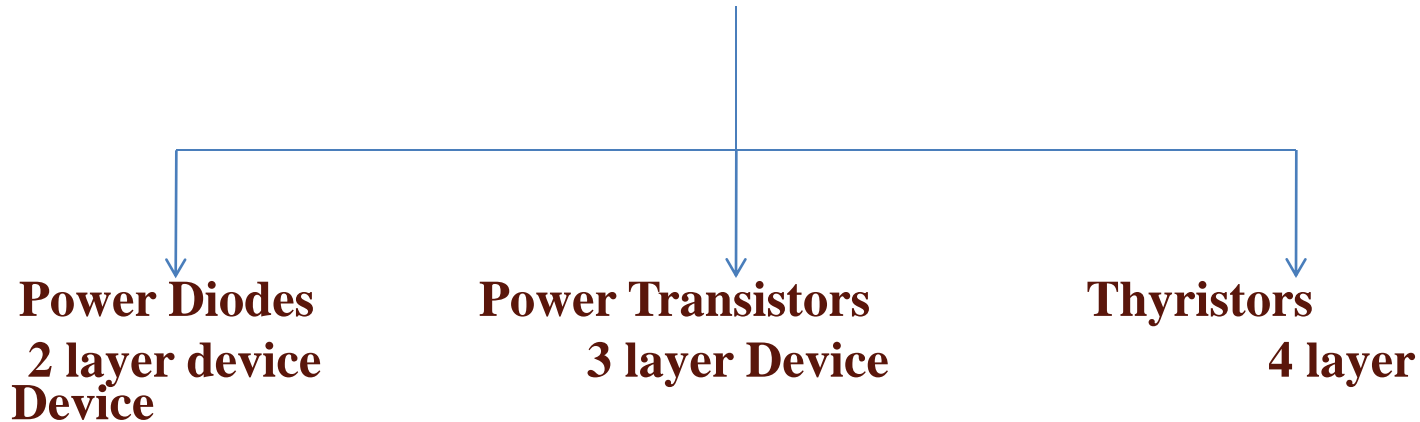


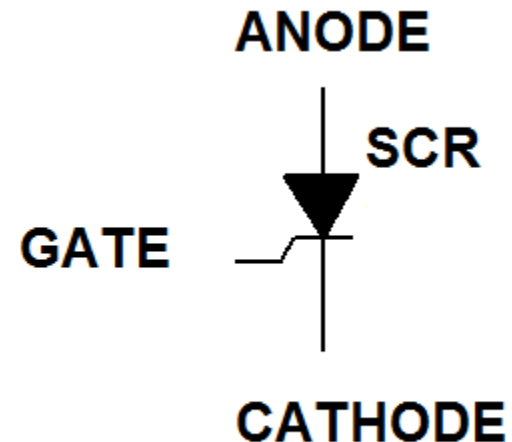
Power Semiconductor Switches



- **Thyristor devices can convert and control large amounts of power in AC or DC systems while using very low power for control.**
- **Thyristor family includes**
 - 1- Silicon controlled switch (SCR)**
 - 2- Gate-turnoff thyristor (GTO)**
 - 3- Triac**
 - 4- Diac**
 - 5- Silicon controlled switch (SCS)**
 - 6- Mos-controlled switch (MCT)**

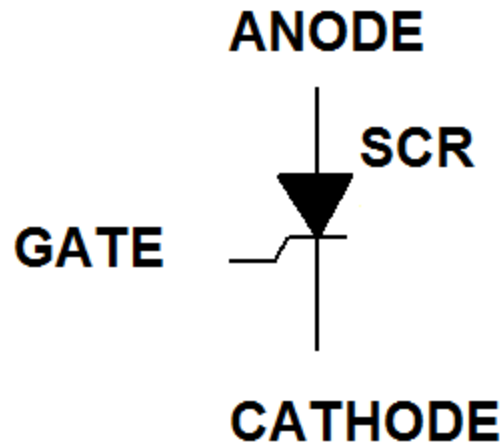
SCR / Thyristor

- Anode and Cathode terminals as conventional pn junction diode
- Gate terminal for a controlling input signal



SCR / Thyristor

- Circuit Symbol and Terminal Identification



SCR/ Thyristor

- An SCR (Thyristor) is a “controlled” rectifier (diode)
- Control the conduction under forward bias by applying a current into the Gate terminal
- Under reverse bias, looks like conventional pn junction diode

SCR / Thyristor

- 4-layer (pnpn) device
- Anode, Cathode as for a conventional pn junction diode
- Cathode Gate brought out for controlling input

