



Diode

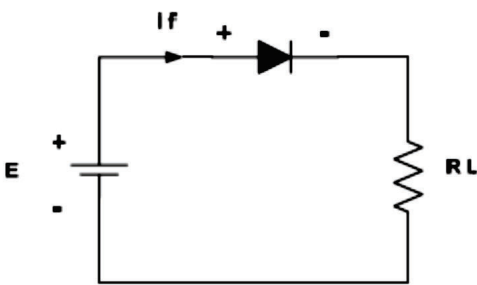
1. Diode characteristic.
2. Diode applications .

A- Know diode characteristic.

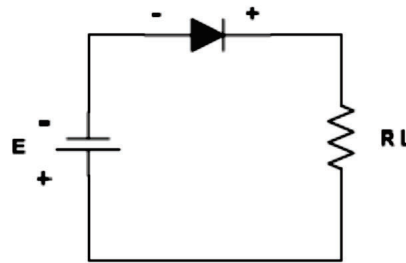
B- Know the application of diode.

C- Know half wave rectifier .

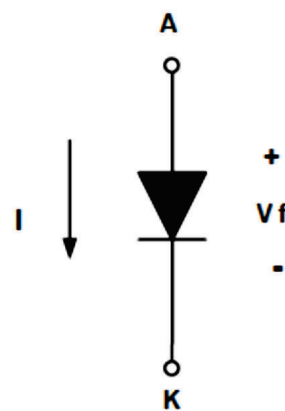
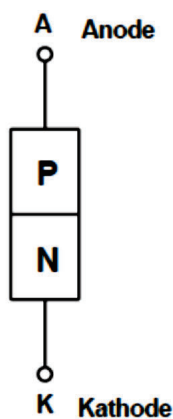
D- Know the efficiency of half wave rectifier .



Forward bias



Reverse bias

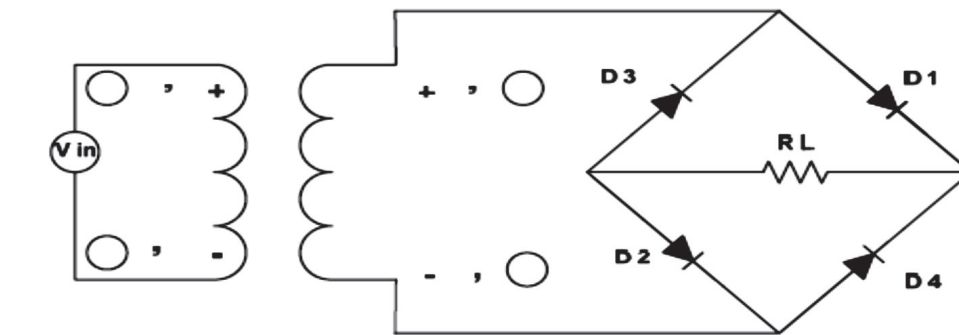
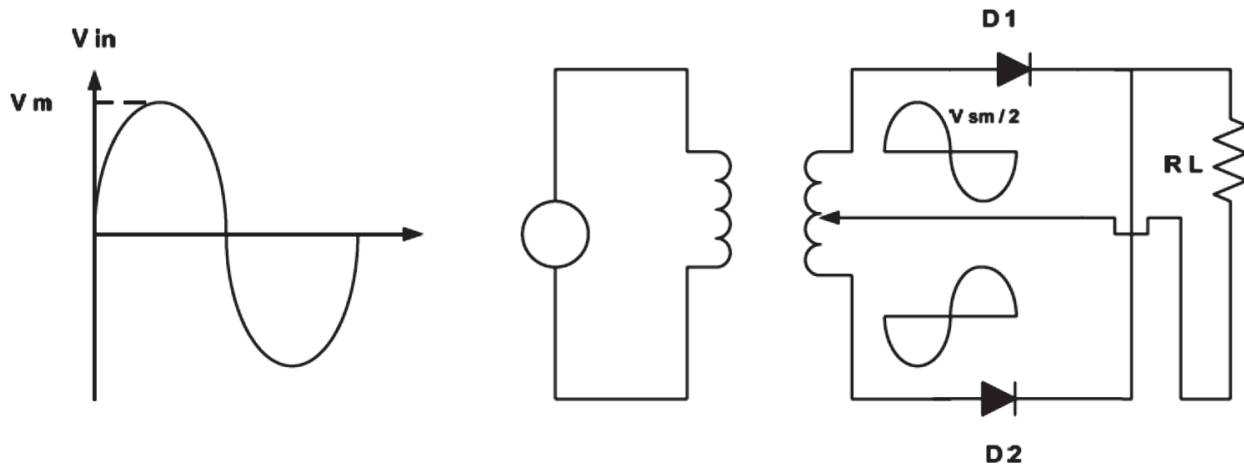


Full – wave rectifier

1. Full – wave rectifier .
2. Types of full – wave rectifier .

Center – tapped full wave rectifier:

A center – tapped full wave rectifier uses two diodes connected to the secondary of a center – tapped transformer as shown in figure below .



+ , - (D1 , D2) Forward biased
 + , - (D3 , D4) Reversed biased

$$V_{av} = \frac{2V_{out}}{\pi}$$

$V_{out} = V_m(\sec) - 1.4$ (because two diodes conduct at the same time)