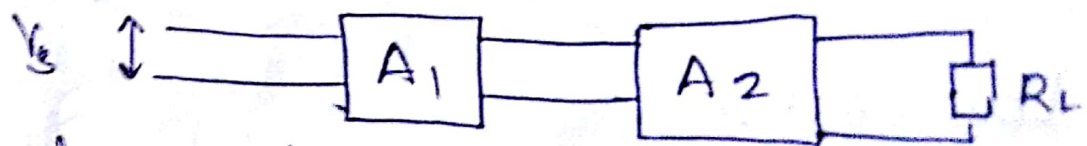
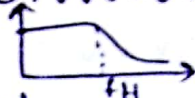


## Different coupling schemes :

- Direct coupling
- RC coupling
- Transformer coupling

### Direct coupling :

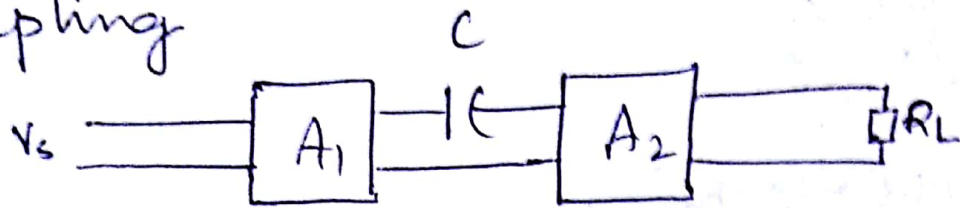
1. No additional components are required.
2. Design complexity is high due to the biasing conditions of the second stage will be affected with that of the first stage.
3. This coupling method amplifies from zero frequency onwards.
4. Medical applications - like ECG.
5. In very low frequency application areas.



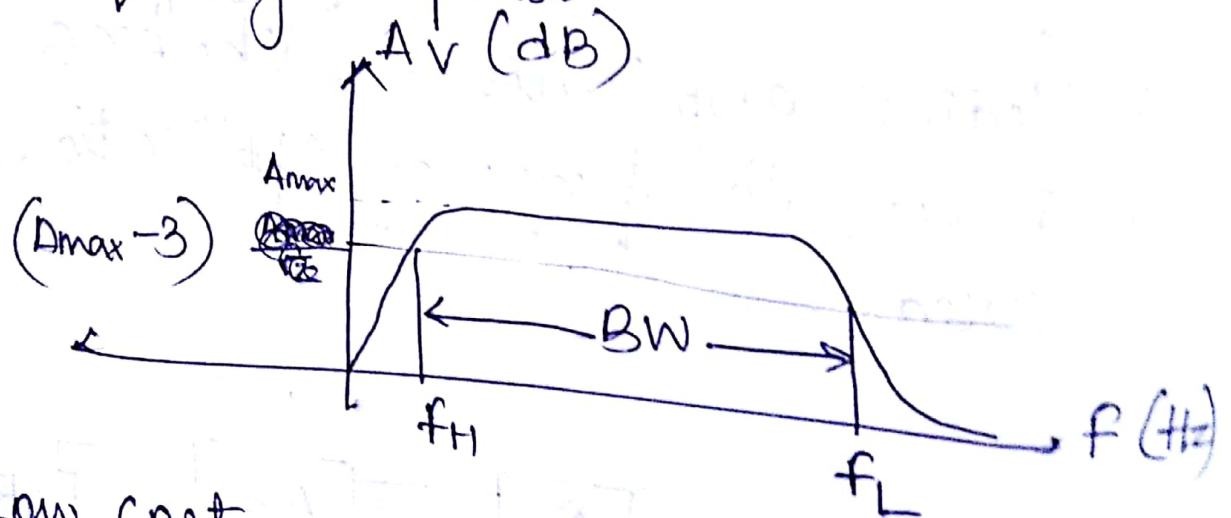
6. Very low cost.
7. Circuit-size and weight is less.

## \* RC coupling :

Capacitive coupling



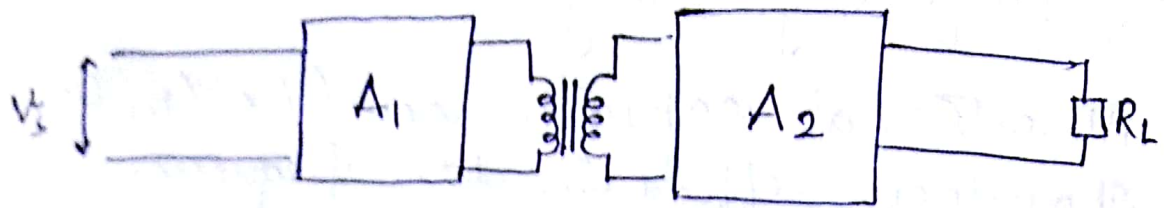
- \* Additional capacitors are required.
- \* Design complexity is less, easy to design.
- \* Biasing conditions of the subsequent stages does not get affected. Hence, different stages can be designed separately and then coupled through a capacitor.
- \* RC coupling is used for amplifying audio range of frequencies.
- \* Frequency response :



- \* Low cost.

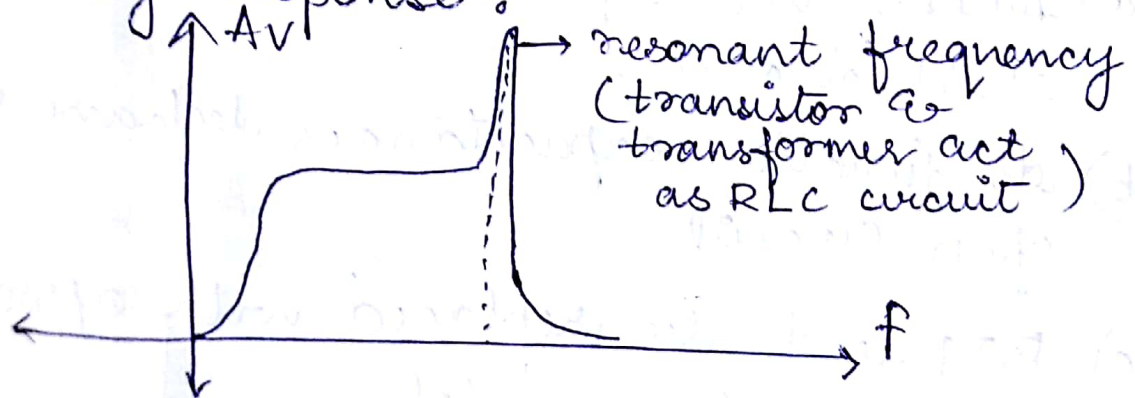


## \* Transformer coupling :



- \* Additional transformer is required.
- \* Design is not much complex.
- \* With transformer coupling, electrical isolation is obtained b/w circuits. Impedance matching can be achieved. Biasing conditions of the subsequent stages, does not get affected as the transformer does not transmit dc signals.

## \* Frequency response :



- \* Frequency response of a transformer coupled amplifier is poor.
- \* Used at the last stage of the cascaded amplifiers.

In power amplifier, load is coupled through transformer for obtaining  $Z$ -matching.

- \* Costly, bulky circuit.