COMMON EMITTER CONFIGURATION

Common Emitter Curves:

The common emitter configuration of BJT is shown in fig. 1.

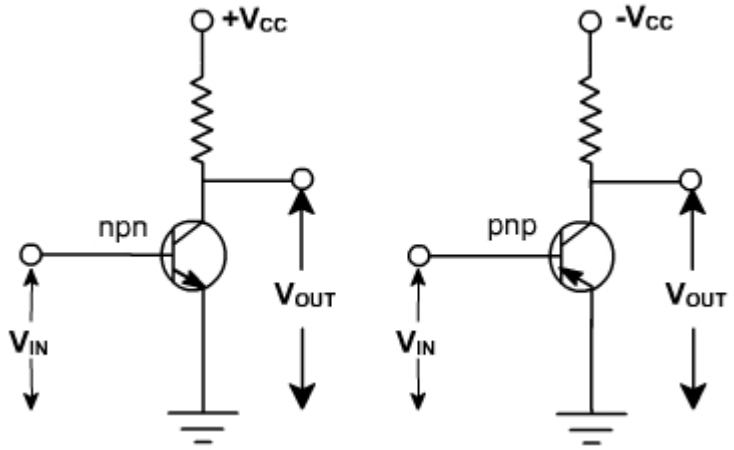

Fig. 1

In C.E. configuration the emitter is made common to the input and output. It is also referred to as grounded emitter configuration. It is most commonly used configuration. In this, base current and output voltages are taken as impendent parameters and input voltage and output current as dependent parameters

$V_{BE} = f_1 (I_B, V_{CE})$

$I_C = f_2(I_B, V_{CE})$

Input Characteristic:

The curve between I_B and V_{BE} for different values of V_{CE} are shown in fig. 2. Since the base emitter junction of a transistor is a diode, therefore the characteristic is similar to diode one. With higher values of V_{CE} collector gathers slightly more electrons and therefore base current reduces. Normally this effect is neglected. (Early effect). When collector is shorted with emitter then the input characteristic is the characteristic of a forward biased diode when V_{BE} is zero and I_B is also zero.

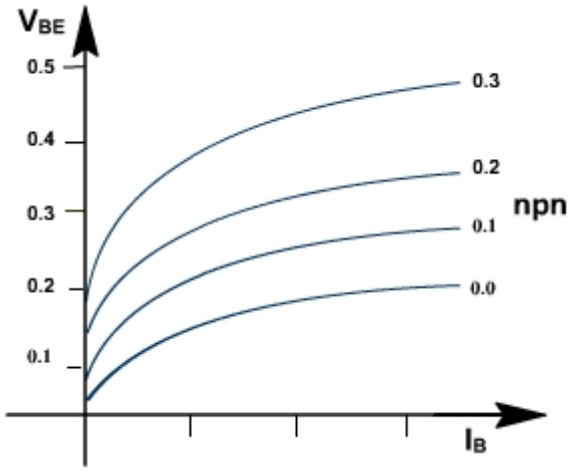

Fig. 2