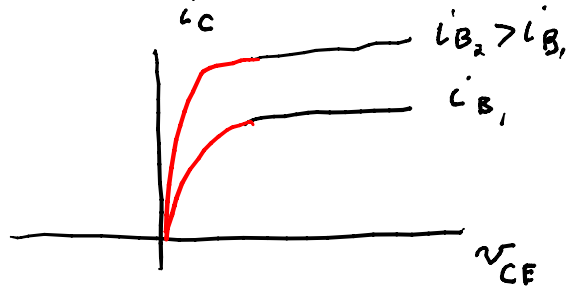
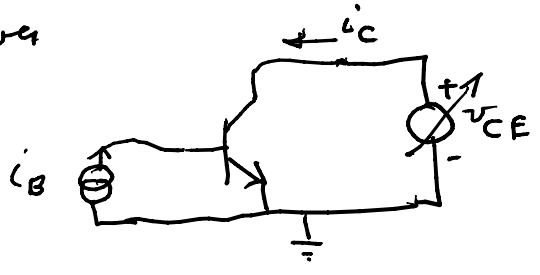


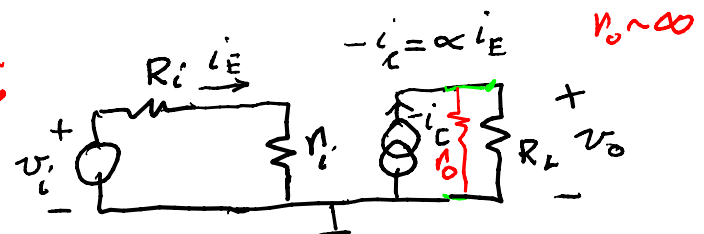
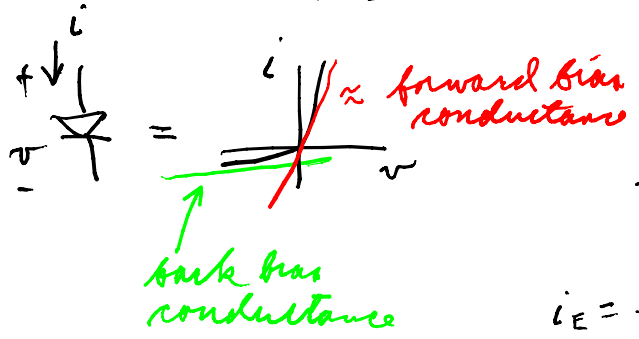
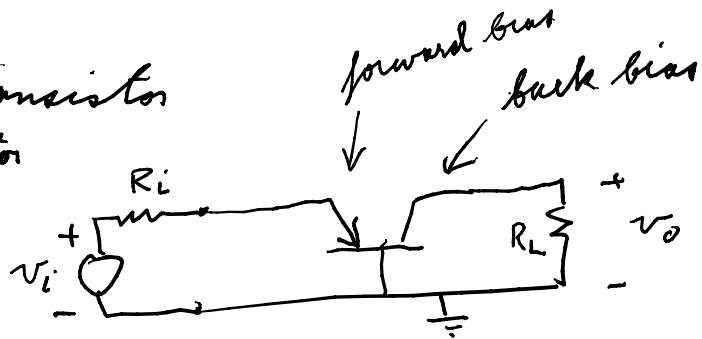
if back bias base to collector diode then ignore  $D_C$  at first  
& forward bias emitter to base to allow forward current



to get these curves

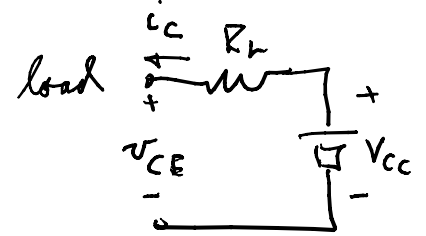
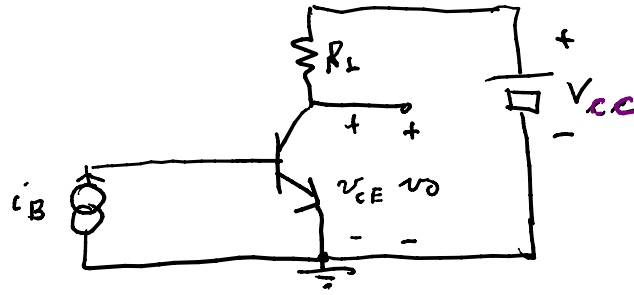


Name transistor  
= transfer resistor  
 $R_i \rightarrow Y_0$

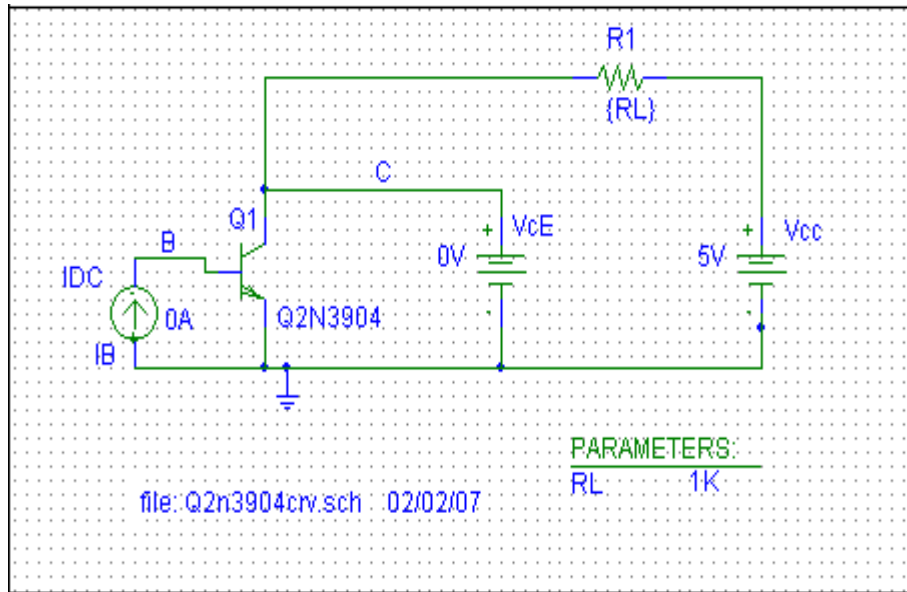
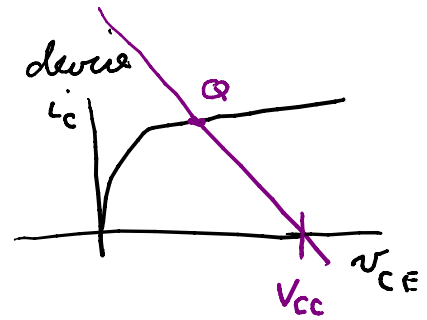


$$i_E = \frac{v_i}{R_i + r_i} ; v_o = \alpha i_E R_L = \frac{\alpha R_L}{R_i + r_i} v_i$$

How load the grounded emitter circuit



$$v_{CE} = -R_L i_C + V_{CC}$$



Run with  $0 \leq v_{CE} \leq 5V$  in  $0.1V$  steps  
 with  $i_B$  nested  $0.2mA \leq i_B \leq 0.6mA$  in  $0.2mA$  steps  
 with  $R_L$  as a parameter  $100\Omega \leq R_L \leq 1000$  in  $500\Omega$  steps

