Lab 6

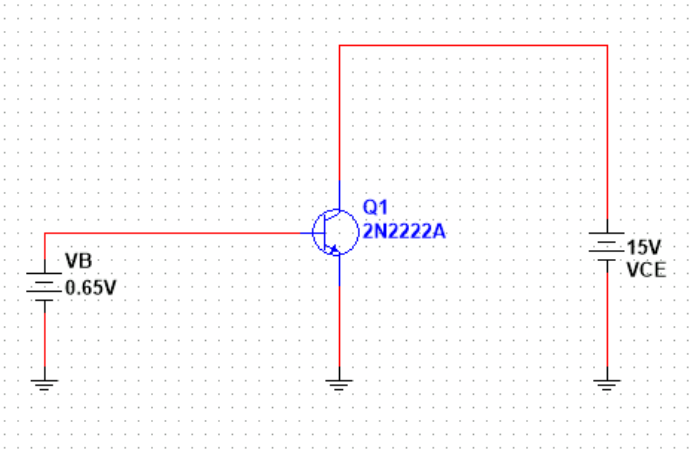
BJT Transistor Characteristics

Learning outcomes

1) Studying the relation between I_C vs V_{BE}
2) Studying the relation between I_C vs V_{CE} at constant V_{BE}

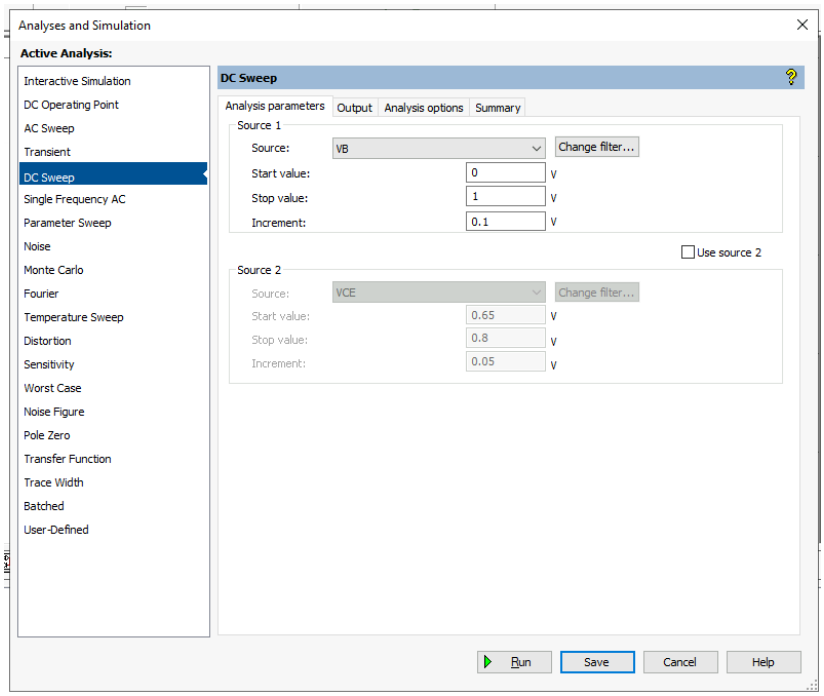
Experiment 1) Studying the relation between I_C vs V_{BE}

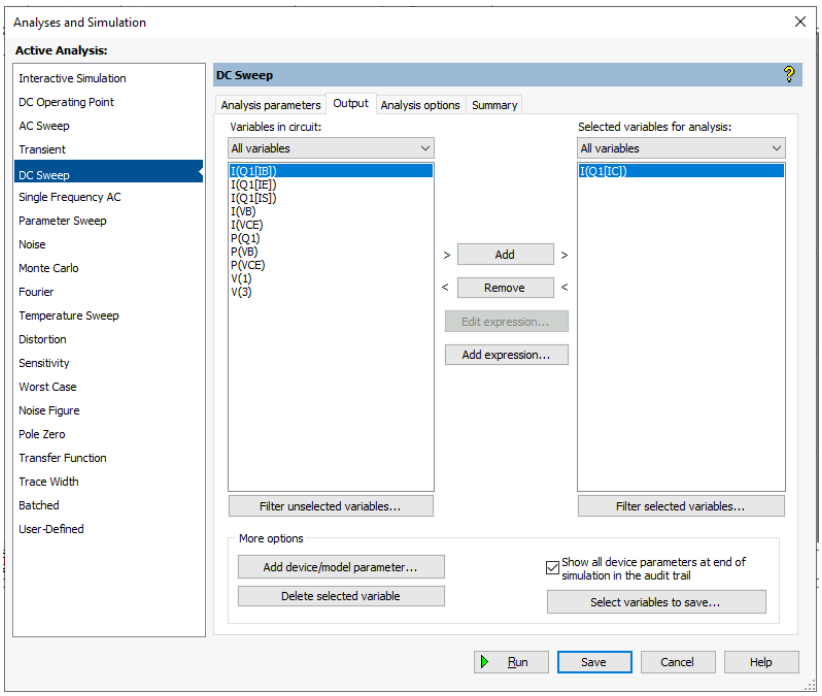
A) Create a new Multisim project and construct the circuit shown



B) Run sweep analysis as follows:

1. Set DC sweep parameters as shown below





2. Click Run and export output to excel
3. In Excel plot I_C vs V_{BE} and copy and paste the figure below here

Place holder for I_C vs V_{BE} figure

4. Put your comments below here

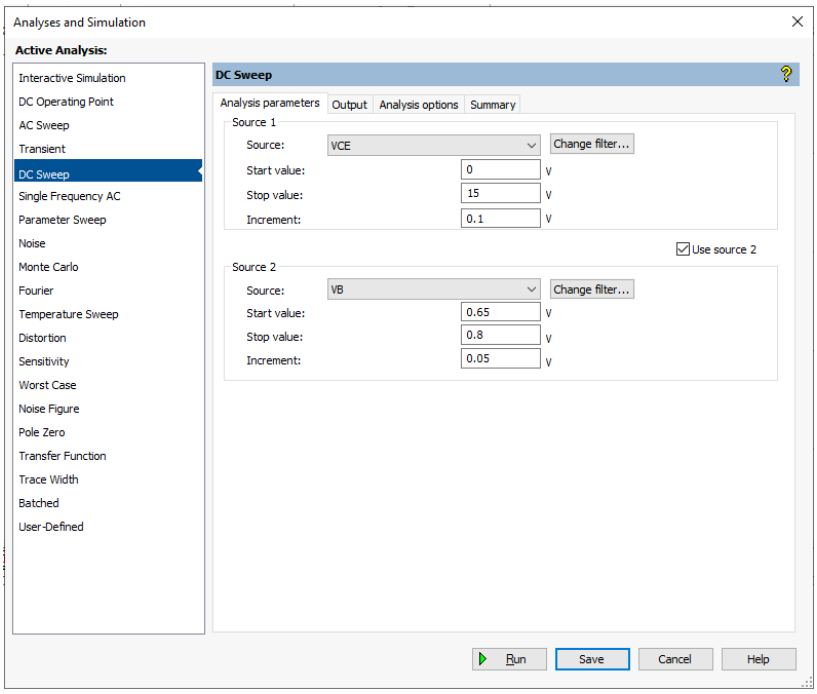
Place holder for comments on Exp 1

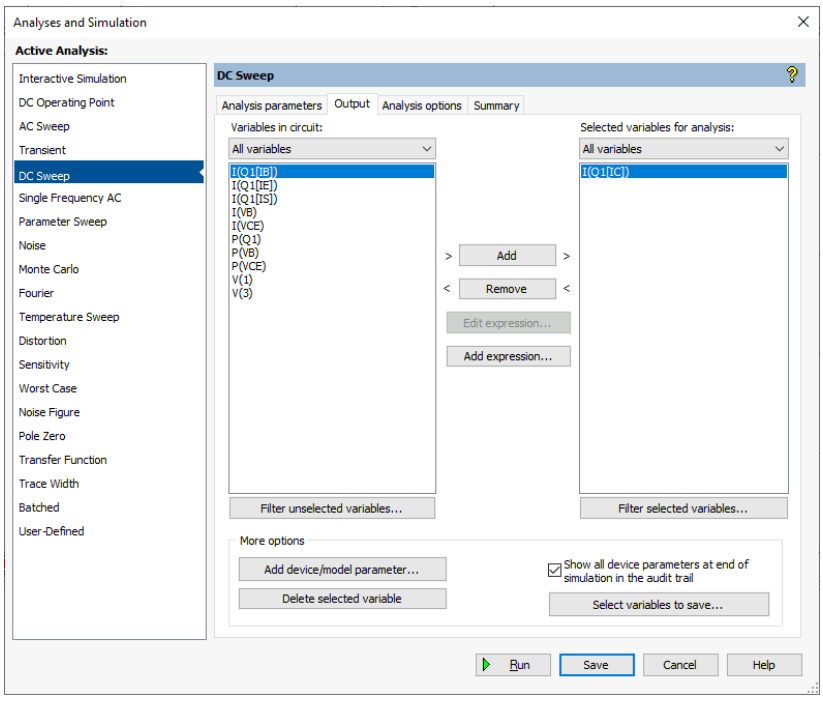
Experiment 2) Studying the relation between I_C vs V_{CE} at constant V_{BE}

A) Using the same circuit of experiment 1

B) Run sweep analysis as follows:

1. Set DC sweep parameters as shown below





2. Click Run and export output to excel

3. In Excel plot I_C vs V_{CE} and copy and paste the figure below here

Place holder for I_C vs V_{CE} figure

4. Put your comments below here

Place holder for comments on Exp 2