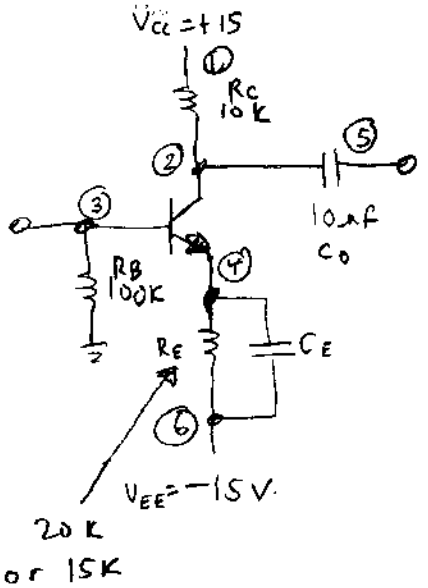
EE 329 Transistor Lab 2

Build this amplifier.



Spice model parameters:

Is = 15f

Bf = 50 or 200

VAF = 100

CJE = 25p

CJC = 10p

Pre-lab.

Calculate the capacitors for 50 Hz low frequency corner. (use 100uf)

Hand calculate gain.

Simulate it —

Verify:

operating point

AC Gain at 1KHz.

Input & output impedance.

Frequency response

Transient —

max output before clipping.

Harmonic distortion, 1 KHz.

1 Vp-p out.

just below clipping.

Do above for $\beta = 50, 200$ (spice parameter BF)

In lab:

Measure what you simulated, but with the real transistor.

Report:

How does it compare?

Explain differences.