1. Design a series-shunt feedback amplifier using BJTs. Design specifications are closed loop gain of 25. Use dc power supplies of ±15 V. The lower −3dB frequency is to be 100 Hz or less. The upper −3dB frequency is to be 120 kHz or greater. The input impedance seen by the function generator is to be 100 kΩ or greater. The other parameters are up to the designer. This experiment will be built in lab and compared with the design specifications. Perform a SPICE simulation to obtain the $Q$ point, small signal gain, and clipping behavior. Assume that $R_g$ is zero.