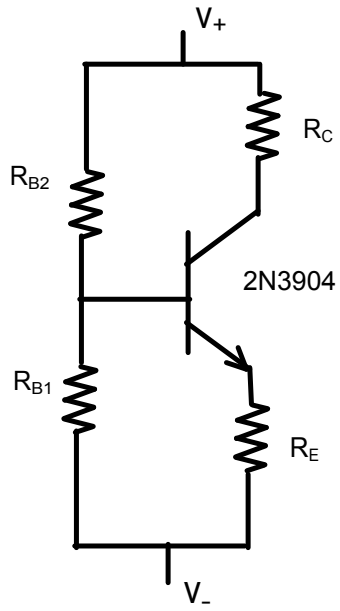
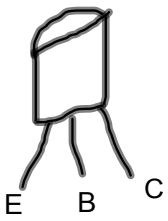
Measuring Transistor Parameters

Consider the following circuit using the 2N3904 NPN transistor.





2N3904

Looking

at the flat side of the transister the pins from left to right are E (emitter), B (base), and C (collector). The transistor is powered by about -15 volts. Resister R_C connects the collector to the positive side of the power supply, which is called v_+. Resistor R_E connects the negative side of the power supply, which is called v_-, to the emitter. A pair of resistors in series, R_{B2} and R_{B1}, connect v_+ to v_-. The center point of the pair is connected to the base of the 2N3904. These resistors form a voltage divider.