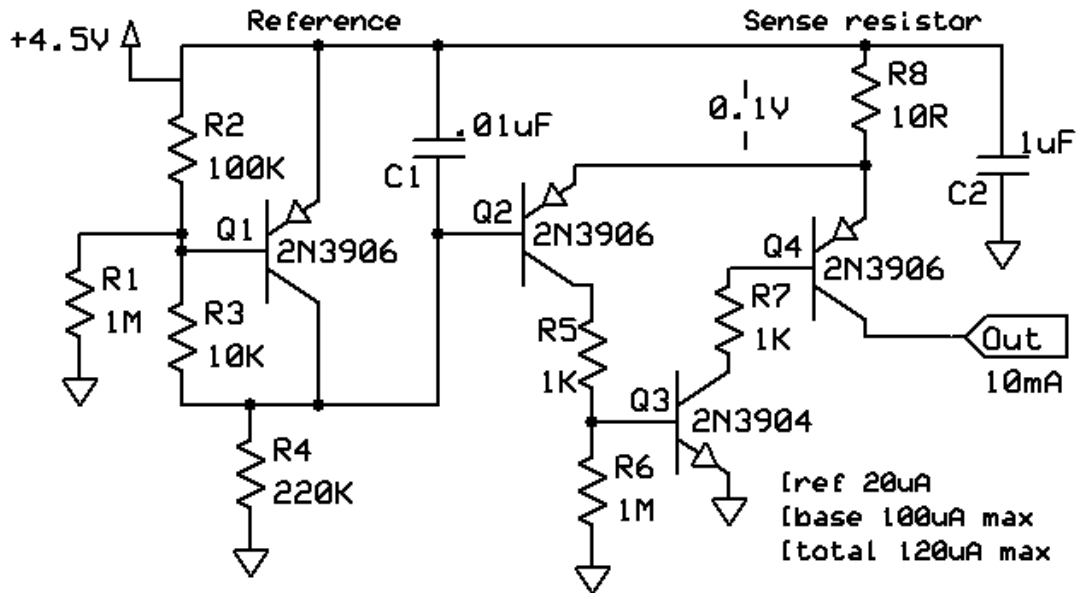


Category: Power supplies

Low-Overhead Current Source

This circuit has a very low overhead of just 120uA, and most of that is transistor base drive. The voltage reference only uses 20uA of current. Also, the circuit is designed to saturate if required, to maintain output current. The overhead current quickly goes up at that point. This circuit is ideal for squeezing out the last bit of battery power for an LED circuit.

Change R1 and R4 for other battery voltages. Adjust R4 to keep the same reference circuit current drain. R1 partially compensates for battery voltage variation effects on the voltage reference. It's a linear compensation for a non-linear effect. Adjust R1 for a precisely consistent output-current throughout your battery voltage area of interest, while readjusting R3 to restore the correct reference voltage. If you can't find a suitable R1 value, change R2 and then readjust R3.



Current Source

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