

High Current Regulator

This circuit can supply 10A at 5V which falls to about 8A at 15V, (make sure your transformer can take it!). The circuit is fairly straightforward. Most of the output current flows through Rsc and Q1 (less than 1A flows through the e-b junction of Q1). Voltage is regulated by the μ A7805 and controlled by RV1, giving a variation from 5V to 15V.

Output current is limited by Rsc and can be calculated from

$$R_{sc} = \frac{0.9}{I_{max}}$$

For currents greater than 5A, Q1 should be mounted on a heatsink. Q2 and the regulator should run cold (if not there's something wrong!).

