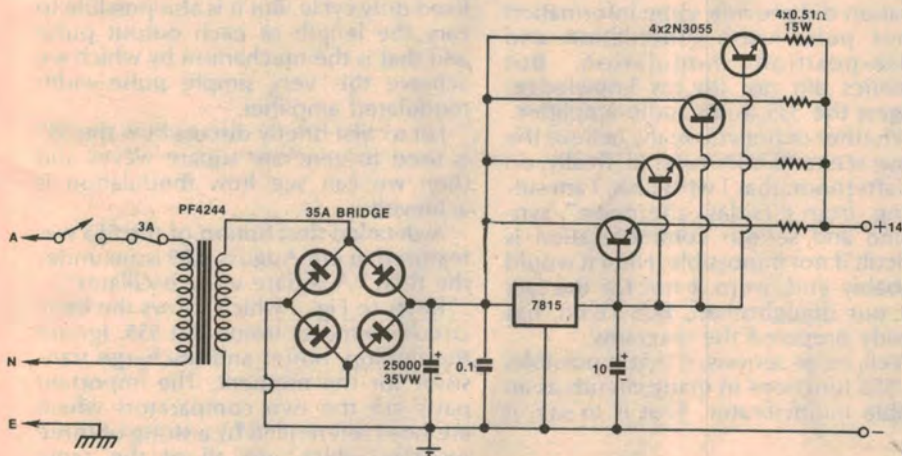


Simple high current regulated power supply



The need arose for a simple high current regulated power supply and the circuit shows how that need was met. The circuit delivers approximately 14V up to about 18A.

A Ferguson type PF4244 transformer is used. It is rated at 300VA and the two secondary windings, rated at 16V and 9A are connected in parallel. The rectifier unit is a diode bridge rated at 35A. Filtering is by a 25000µF 35VW electrolytic capacitor.

A series regulator consists of four 2N3055 power transistors in parallel. These are supplied with 15V from a type 7815 regulator IC. This gives an output voltage very close to 14V. A 7812 IC may be used but this would only give an output of about 11V, which is not really sufficient for mobile use.

In the prototype, the output voltage dropped less than 0.5V at a load of 10A. It is most important to provide adequate heat sinking for the diode bridge and the 2N3055s.

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