

Component List

C1 – 100uF 25VDC Electrolytic Radial
C2 – 100uF 25VDC Electrolytic Radial
C3 – 100nF Radial Multilayer Ceramic 50VDC
C4 – 100nF Radial Multilayer Ceramic 50VDC
C5 – 100uF 25VDC Electrolytic Radial
C6 – 100uF 25VDC Electrolytic Radial
C7 – 100nF Radial Multilayer Ceramic 50VDC
C8 – 100nF Radial Multilayer Ceramic 50VDC
D1 ~ D4 – 1N400x diodes
D5, D6 – LEDs
J1 – DC power socket 2.1mm
J2 ~ J5 – 2 way 5mm PCB terminal blocks
R1 – 330R 1/4watt resistor
R2 – 1k 1/4watt resistor
R3 – 1k8 1/4watt resistor
R4 – 330R 1/4watt resistor

SW1 – Ultra miniature PCB slide switch
U1 – LM317T TO220 variable voltage regulator
U2 – TO220 7805 5V regulator

Description

The Triple Output Power Supply has been designed for electronic project work and is ideal to use with breadboards and stripboards.

- Small and compact
- Easily connected to breadboards and stripboards
- Uses 7805 and LM317T voltage regulators
- Has a variable output – uses a LM317T variable voltage regulator
- Triple output, outputs the input voltage, variable and regulated 5VDC
- Power switch and LED power indicators

Instructions

When constructing PCBs always start with the components with the lowest profile, for example the resistors.

Once constructed operation is simple, input 12VDC and the unit will output approx 11VDC, regulated 5VDC and a variable output, to vary this voltage adjust RV1. To ensure the unit is operating correctly test the voltages with a digital multi meter – DVM. The unit has 1N4007 diodes in series with the input voltage incase of reverse polarity, this reduces the input voltage by approx. 0.7V, to overcome this they can be replaced with shorting links or the input voltage can be increased.

To use simply connect the output from the unit to the target circuit using jumper wires inserted into the terminal blocks. A standard 7805 and LM317T can output up to 1Amp, at higher currents a suitable heat sink will be required, 2Amp 7805s are also available.

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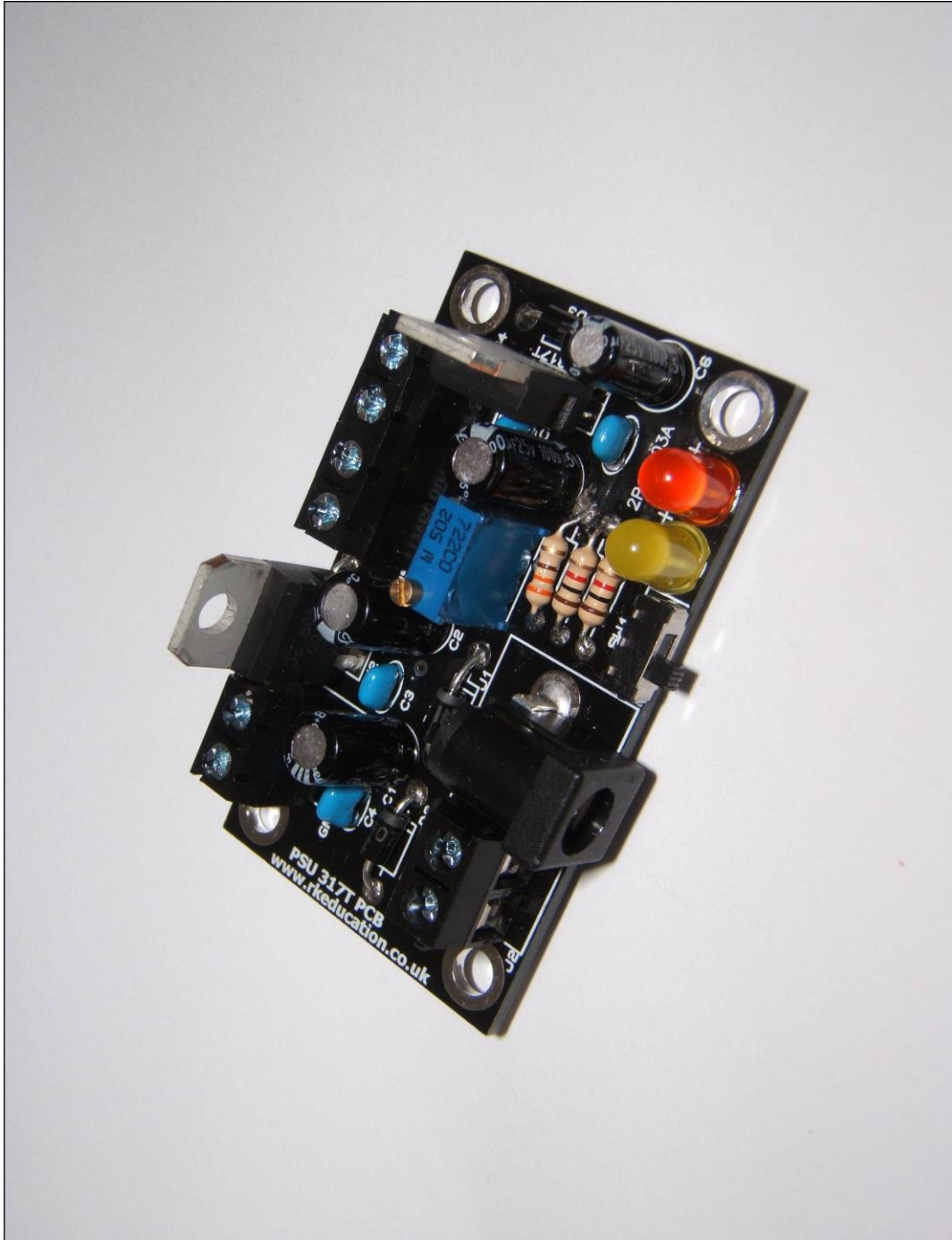
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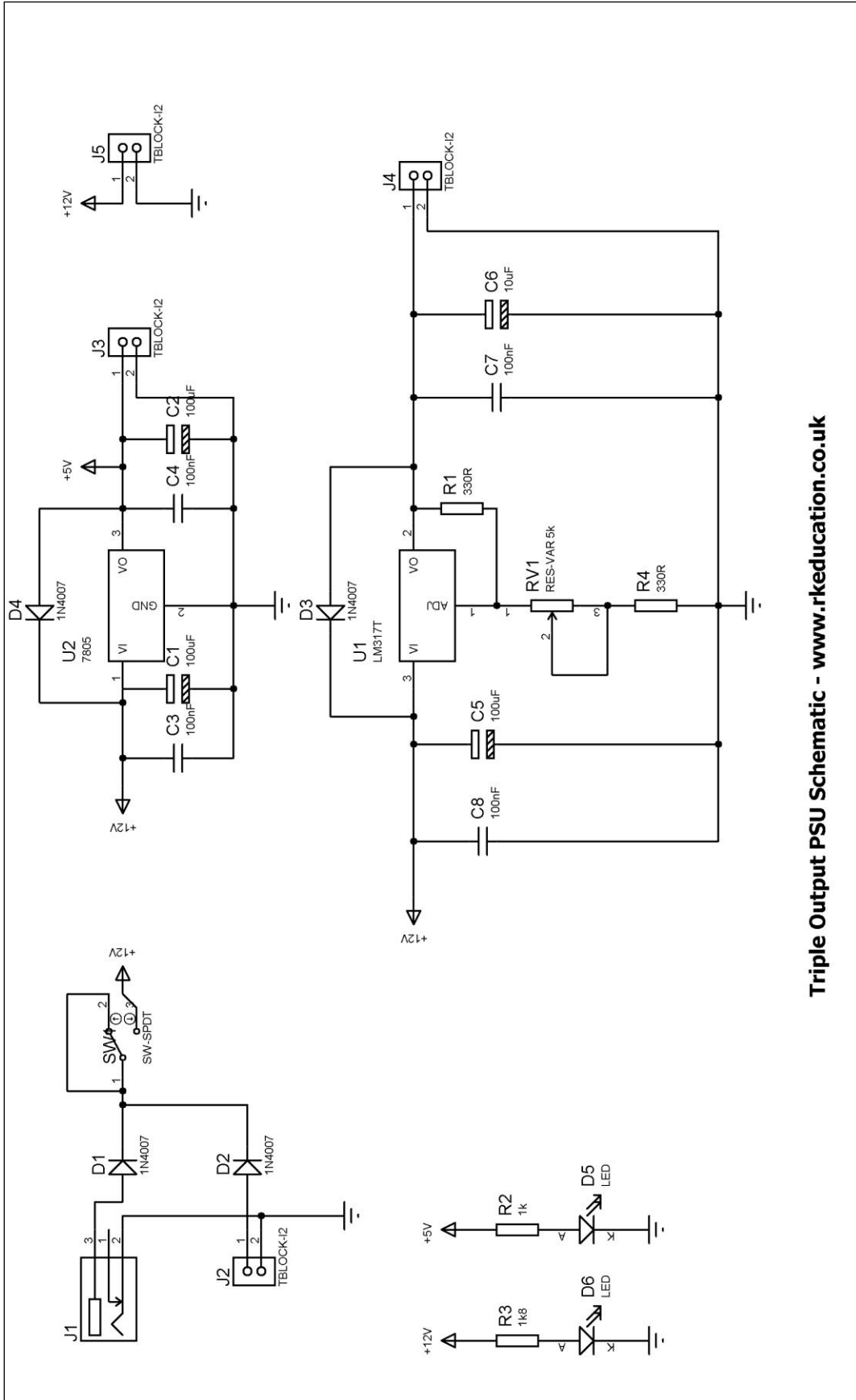
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Triple Output PSU Schematic - www.rkeducation.co.uk