

Coleman Regulator Raw dc Supply PCB kit.

Supports up to 2A filaments with 1N5822 diodes, and 5A dc using STPS1545FP TO220 diodes.

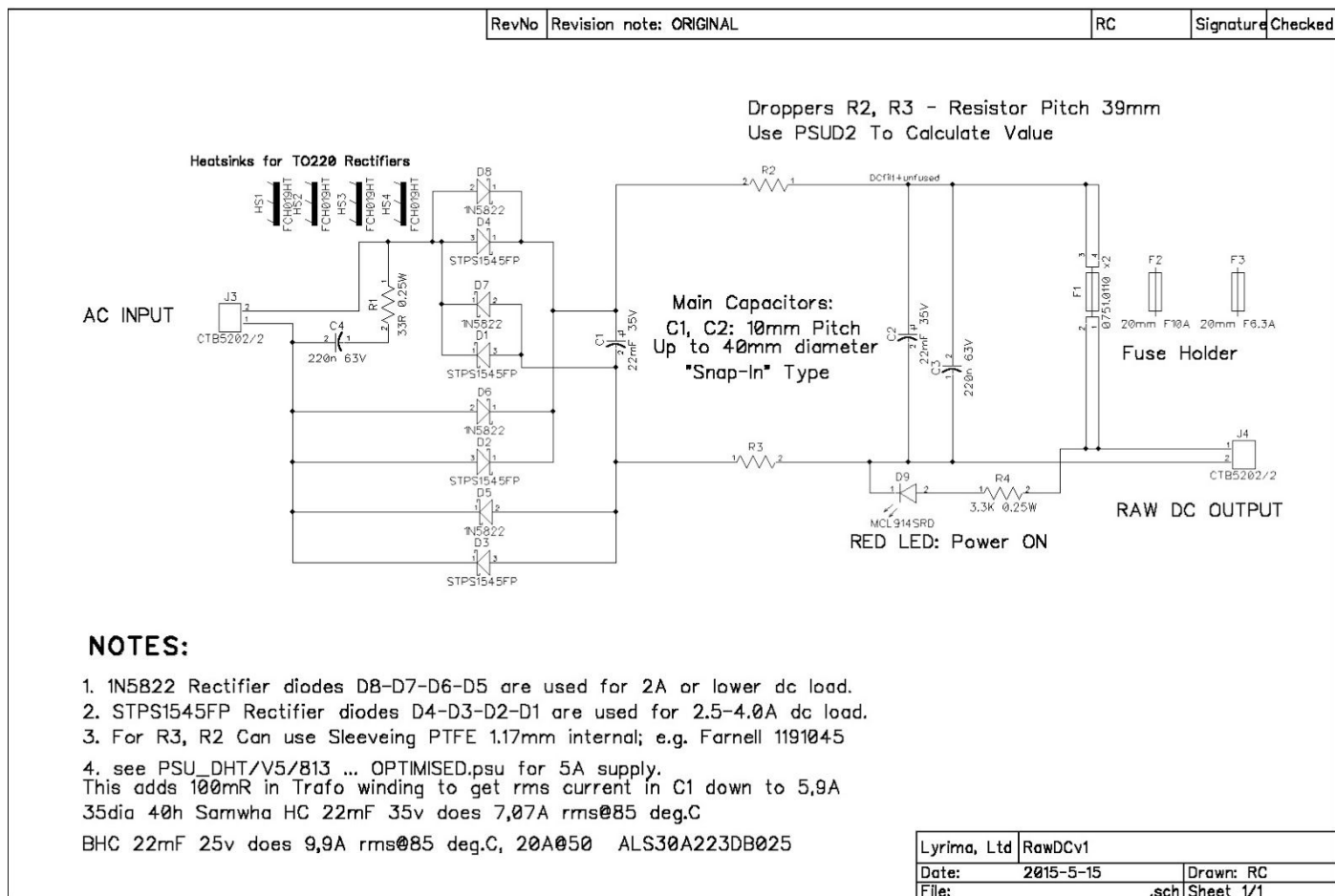
- 2x PCB 170 x 18mm
- 8x Schottky Rectifier Diodes (to make 2x bridge rectifiers);
- 2x R-C Snubbers for Transformer Primary;
- 4x Screw Terminals for Input & Output;
- 2x LED & resistor;
- 2x Fuse Clip sets for 20mm fuses

Circuit follows the example given in the Regulator PDFs - see below.

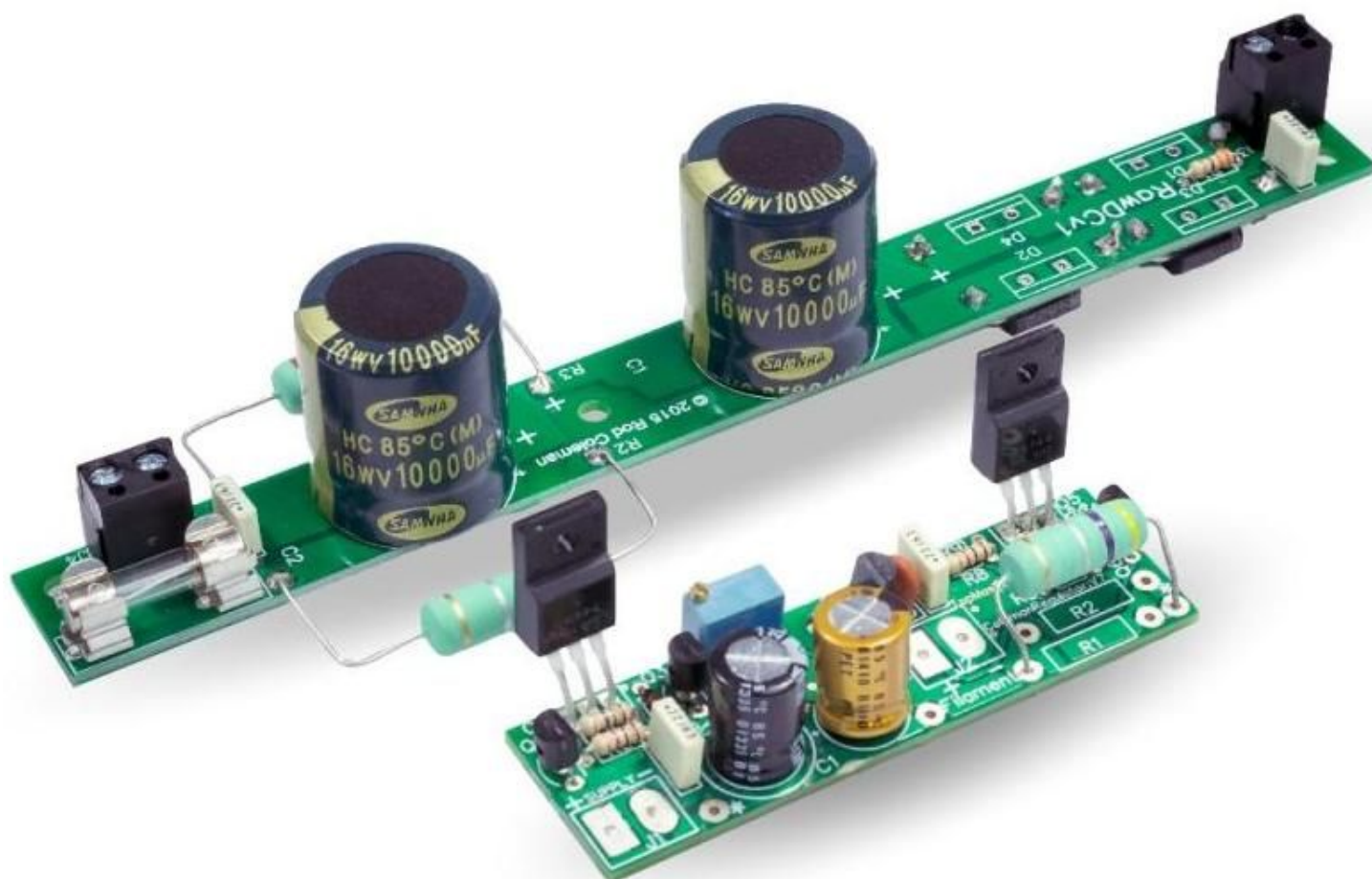
Please add your own parts (not included in the kit):

1. Electrolytic Capacitors C1, C2 - up to 40mm diameter will fit. See PDF manual for recommended capacitor choices.
2. Dropper resistors R1, R2 (or choke, if preferred).
3. Fuse 20mm (F3.15 to F5A for kits up to 2A; and e.g. F6A or F10A for Transmitters)
4. **At 3A and higher:** heatsinking for the TO220 rectifier diodes

SCHEMATIC:



Build: Photo of completed 2A version shown.



Components:

1. Terminals J3, J4 [SUPPLIED]: screw terminals are supplied to allow solderless connexion in and out of the PCB.
2. Rectifier diodes [SUPPLIED]: 1N5822 for 2A or below [D5-D8], STPS1545FP for up to 5A [D1-D4]. The TO220 diodes may be heat-sunked directly to a chassis, as they are fully insulated.
3. Capacitors C1, C2. Main electrolytics. [NOT SUPPLIED]. Any Snap-In caps can be used, all the way up to 40mm diameter.
4. Dropper Resistors R1, R2. [NOT SUPPLIED]. typically 0.1 to 0.47 Ω (5-10W) each. when you have chosen a transformer, use PSUD2 (Search Duncan PSUD2 for the Windows/WINE App). Calculate the resistor value to give a raw dc supply of 4-5V above the filament voltage, for optimum performance of the Coleman Filament Regulator. Have some extra values around, to fine-tune the voltage. See Filament Regulator Manual ANdht01v7.PDF manual, on this site, for more details on designing a raw dc supply.
5. Fuse. [Clips are SUPPLIED, Fuse is NOT SUPPLIED] choose a fast fuse [F rated], eg F2A for 4P1L, F5A for a 300B or 2A3, and F10A for a Transmitter filament.
6. LED light D9, R4. [LED and 3.3K SUPPLIED].
7. **At 3A and higher:** heatsinking for the TO220 rectifier diodes[NOT SUPPLIED]. TO220 slide-on clip: Aavid 574502B00, available as RS 7124197 or Mouser 532-574502B00, Digikey HS198-ND, etc.