

PSU15 Parts List

1	PCB		
6	R1, R2, R3, R4, R5, R6	100R	MRS25 or similar
6	C1, C2, C3, C4, C5, C6	0.1uF 250V	RS 622-4684
4	D1, D2, D3, D4	1N4007 or FR106	RS 796-5973
2	R7, R8	10R	MRS25 or similar
2	R9, R10	0.22R	MRS25 or similar
4	C13, C14, C15, C16	0.1uF 250V	RS 622-4684
4	F1, F2, F3, F4	100mA – 250mA Polyswitch	
2	C21, C22	39uF 100V	RS 572-126
1	U1	LM2940CT-15	RS 535-8988
1	U2	LM2990T-15	RS 460-657
10	C7, C8, C9, C10, C11, C12, C17, C18, C19, C20	1500uF 50V, Low ESR	RS 449-1113
2	HS1, HS2	Heatsinks Multicomp MC33289, MC33292, Thermalloy 437868 or similar; 1" / 25.4mm pin spacing, 0.5" / 12.7mm thick, 1.5" / 37mm or more tall. Plus mica washer and insulating bush on HS2.	

R1-6 and C1-6 are optional, rectifier snubbers to reduce any possible switching transients from the diodes and transformer. R1/C1 and R2/C2 are across the transformer input, R3-6 and C3-6 are across D1-D4.

For minimal configuration:

Install only D1-D4, C9, C11, C17, C19, C13 – C16, R9 & R10. Fit links in R7 & R8 positions. Fit U1 & U2, and either polyswitches or links in F1-F4.

Any parts combination between the minimum and full set can be used, to suit your preferences and requirements.

The heatsinks are optional for low input voltages and low load current, where the regulator ICs do not get unduly warm.

If the regulators get hot in use, they are then essential. Small direct mounting types such as Thermalloy ML7G or Fischer FK213SA32 can be used with the regulator ICs free standing, or PCB mounted types of the appropriate dimensions can be used for higher dissipation and mechanical stability.

If a PCB mounted type is used, it is *vital* that an insulating kit (mica washer and bush etc.) is used on U2 to prevent the tab being shorted to ground by the fixing and heatsink.

For DC input only, using eg. a dual 18 or 20V lithium battery:

Omit D1-D4, R1-R6 and C1-C6. Input positive to DC+, input common to COM, input – to DC-

When operating from a transformer, DC+, COM and DC- can be used for an unregulated output to other moderate current items (no more than 750mA) each. That could be eg. a small power amp or other supply regulators.