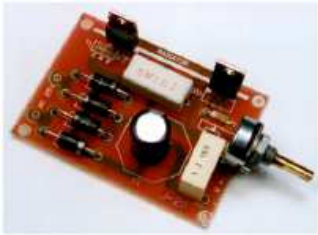




J-020

# Adjustable power supply 1 ... 25V/3A

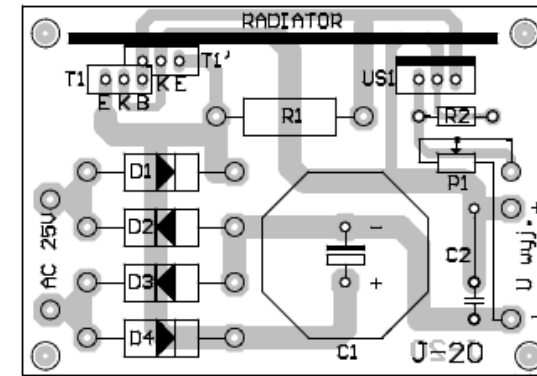


Pieces in set allow assembling adjustable, stabilized power supply based on LM317T circuit board with output voltage range being widened by additional transistor. Output voltage is continuously adjustable between 1,2-25V. This power supply doesn't have output current limit and short circuit protection (only LM317T stabilizer circuit is protected). Power supply can be used for powering electronic tools (built in) or prototype circuits etc. Power

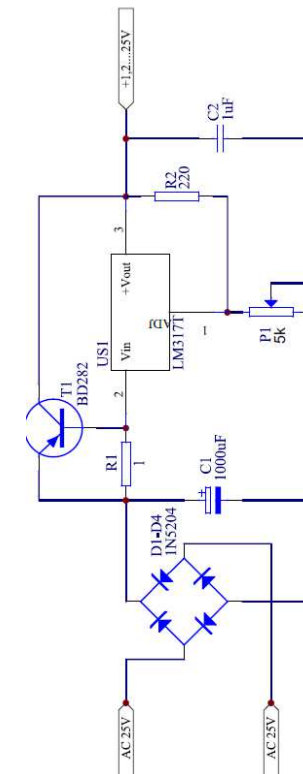
supply design is simple and circuit board proven and reliable. It doesn't need special power-up or regulation and works correctly immediately after switching on if it's assembled correctly. Power supply transformer with secondary winding voltage maximum 28V rms and current value at least equals expected power supply output current should be connected with printed circuit board with as short cables as possible with big cross-section. Output voltage regulator can be connected by longer cables allowing placing it in convenient place on the housing. When powered tool is far from power supply it's recommended to lock power supply outputs with additional capacitor with minimum capacitance of 100nF (suggested ceramic 35/40V as close to powered tool as possible). Stabilizer – LM317T circuit and T1 transistor should be mounted onto a radiator transferring heat out. This can be used for both parts together and should be at least 1.5dm<sup>2</sup> surface. To lower power losses (transferred as heat) you can use power transistor with divided secondary winding which will be switched to supply higher voltage i.e. 28V rms for output voltages above 10V. Keeping U<sub>in</sub> – U<sub>out</sub> difference on low (about 4-6V) level allows obtaining better power supply parameters.

### Package contains:

US1 .....	LM317T	P1 .....	reg. with axis 5k/A
R1 .....	0,82 -2,2 / 5W	C1 .....	1000uF/min35V
R2 .....	220-240	C2 .....	100nF-1uF/40-100V MKSE
T1 .....	BD282,240,244	PRINTED CIRCUIT BOARD	
D1,D4 .....	1N5408 (400V/3A)		



Assembly diagram



Schematic diagram