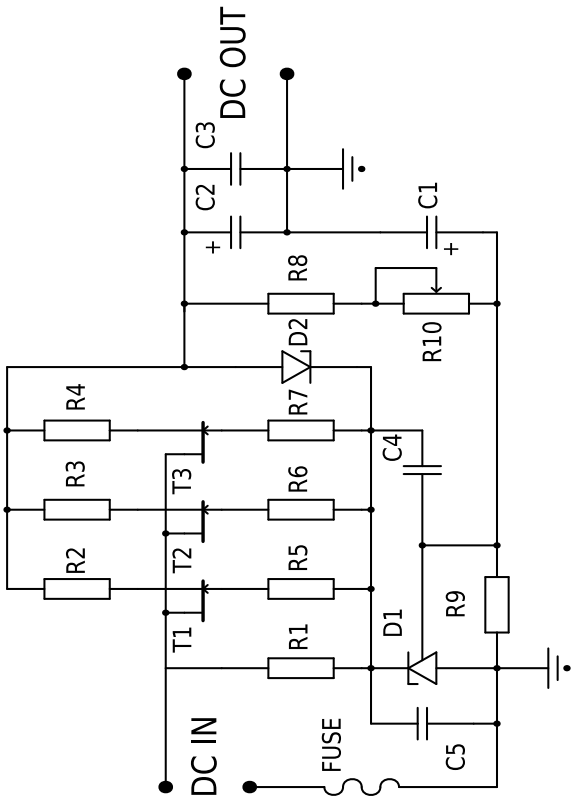
Electric scheme



K212.2

EN 5-27V/20A Adjustable Mosphet Voltage Regulator DIY KIT

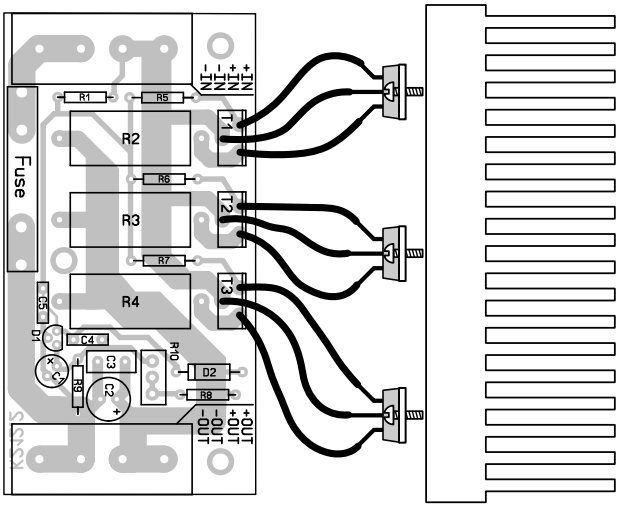
The kit includes:
EN printed circuit board; components according to the list, instruction.
Store under normal climatic conditions
Shelf-life Unlimited

In radio amateur practice, a power source that is easy to implement, small in size, and high in load capacity is often needed. This set will allow you to assemble an adjustable voltage stabilizer with a wide range of output voltage (5...27V) and an output current of up to 20 A

Specifications

Input voltage min, V.....8
Input voltage max, V.....30
Output voltage, V.....5...27
Output current, A.....to 20

Location of elements



Notes:

Transistors T1-T3 must be installed on the radiator evenly over the entire area. The dimensions of the radiator are calculated based on the maximum power dissipated by the transistors.
(which should not exceed 150 W).
Pq=(Uin-Uout)*Inagr where:
Pq - the dissipated power of the transistor;
Uin, Uout - input and output voltage, respectively;
Inagr - load current;
The area of the radiator is calculated on the basis of 20 square cm of dissipated power per 1 Watt. The thickness of the base of the radiator should be at least 5 mm.
In case of using the device at maximum loads, a fan for forced blowing must be installed on the radiator.
For normal operation of the device, the input voltage must be greater than the output voltage by at least 3 volts.
The power tracks on the printed circuit board must be strengthened by applying solder.

List of components

D1.....	TL431	C1.....	10...22uF 35V
D2.....	P6KE18A	C2.....	100 uF 35V
T1-T3.....	IRLZ34,	C3.....	0,1uF 50V
	IRF3205	C4.....	2,2nF 50V
R1.....	4,3...6,8k	C5.....	1,0nF 50V
R2-R4.....	0,1-0,12	FUSE.....	30A
R5-R7.....	200-240	PCB 212.2	
R8.....	1,2k	Terminal.....	2
R9.....	1,8k		
R10.....	50k		