

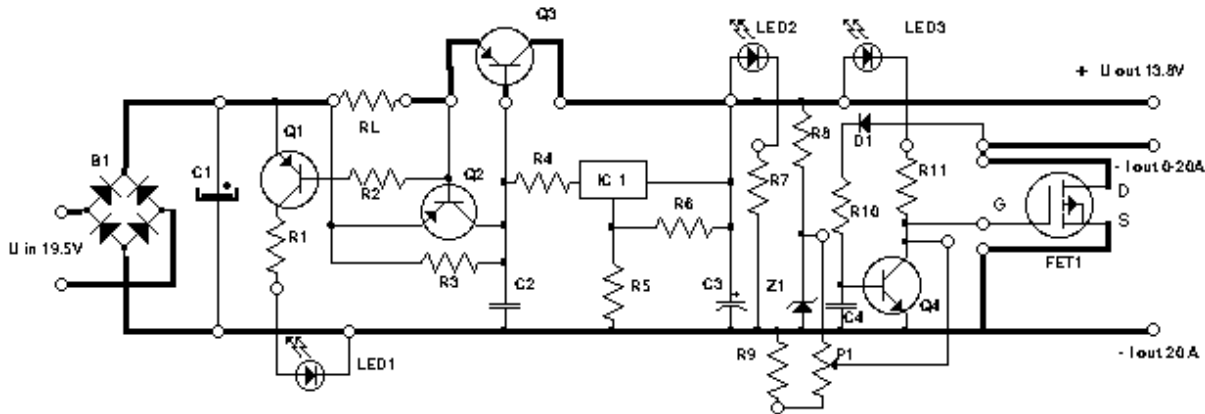
Power Supply/Charger

From:

<https://circuitsstream.blogspot.com/2016/03/simple-138v-and-20a-dc-power-supply.html>

This is the Simple 13.8V and 20A DC Power Supply Circuit Diagram.

The circuit was designed to create a DC power supply that will be rated with 13.8 V and 20 A while having a current limiter and short circuit protection.



Q1 = BC 557B IC 1 = 7812 FET1 = BUZ 11
Q2 = BD 330
Q3 = 2N5683
Q4 = BC 547

B1 = B80C35
D1 = 1N4148
LED1,3 = RED
LED2 = GREEN
Z1 = Z 9V6

R1,7,11 = 330R
R2 = 470R
R3 = 47R
R4 = 18R
R5 = 73R
R6 = 470R
R8 = 1 KR
R9 = 10 KR
R10 = 10KR
RL = 0,03R

C1 = 40.000 μ F
C2 = 33 nF
C3 = 1 μ F Tantal
C4 = 100nF^A

Components

7812

7812 Voltage regulator is a type of self-contained fixed linear voltage regulator integrated circuit. The IC belongs to ic 78xx voltage regulator family.

The 7812 voltage regulator IC is ease-of-use and available in very low cost. The last two digits of 7812 indicates the output voltage that is 12 V

[blocked URL](#)7812 voltage regulator

BUZ11

N-Channel Power MOSFET 50V, 30A, 40 m This is an N-Channel enhancement mode silicon gate power field effect transistor designed for applications such as switching regulators, switching converters, motor drivers, relay drivers and drivers for high power bipolar switching transistors requiring high speed and low gate drive power. This type can be operated directly from integrated circuits.

References

Reference	URL
Simple 13.8v 2-A dc power supply	https://circuitsstream.blogspot.com/2016/03/simple-138v-and-20a-dc-power-supply.html
BUZ11	https://www.onsemi.com/pub/Collateral/BUZ11-D.PDF