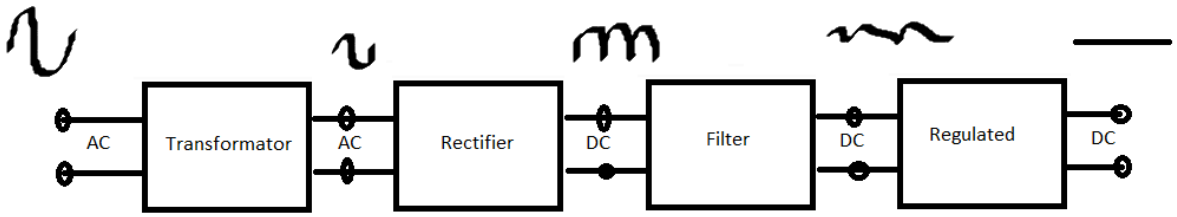
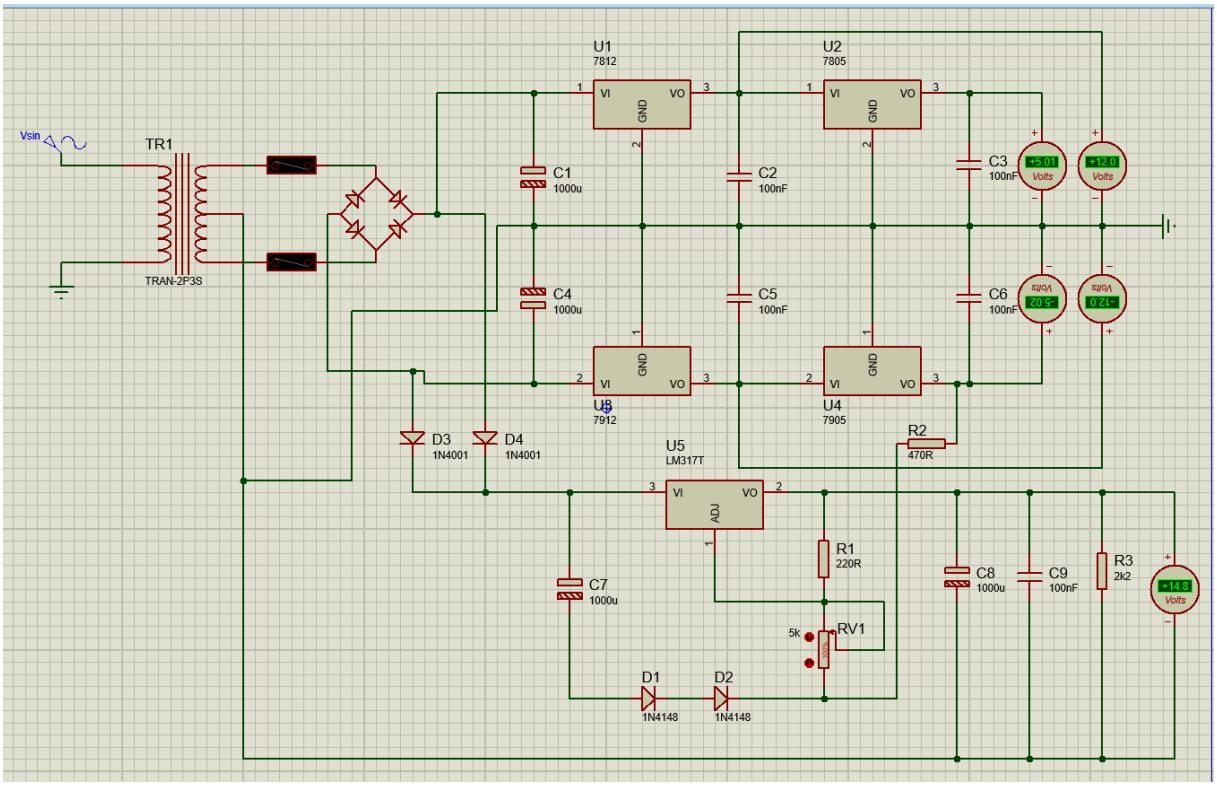
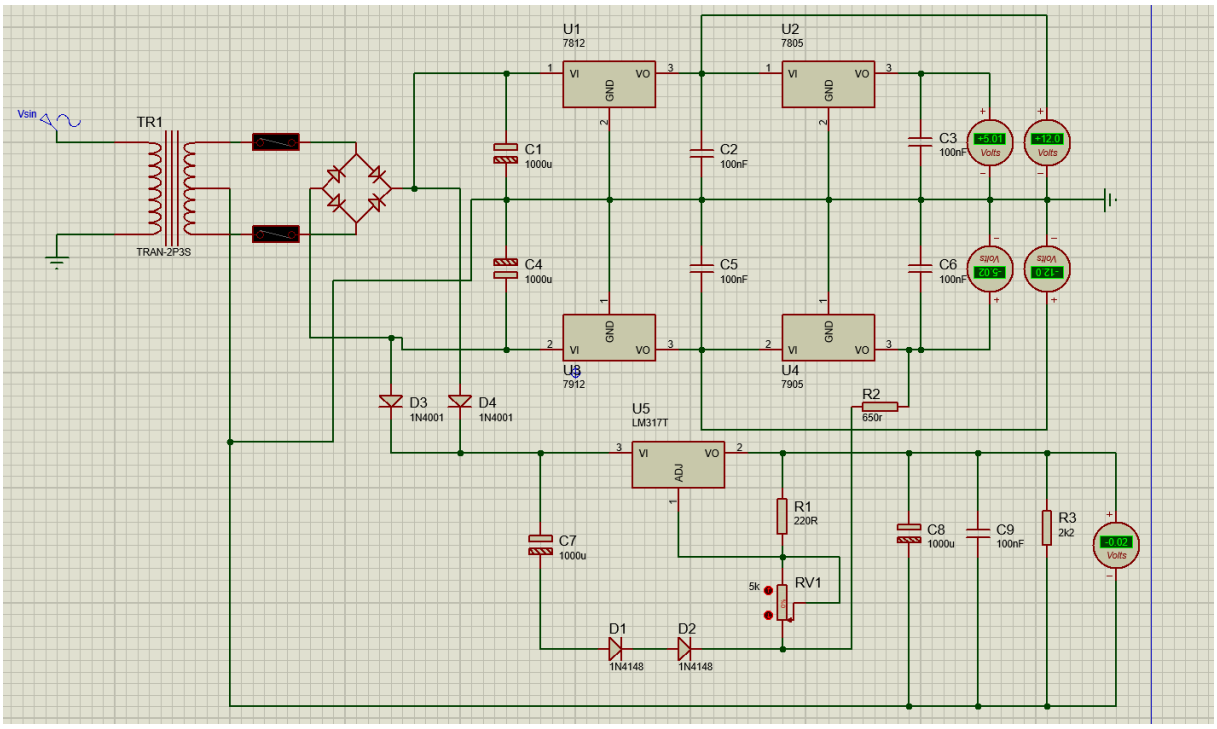
Adjustable Power Supply

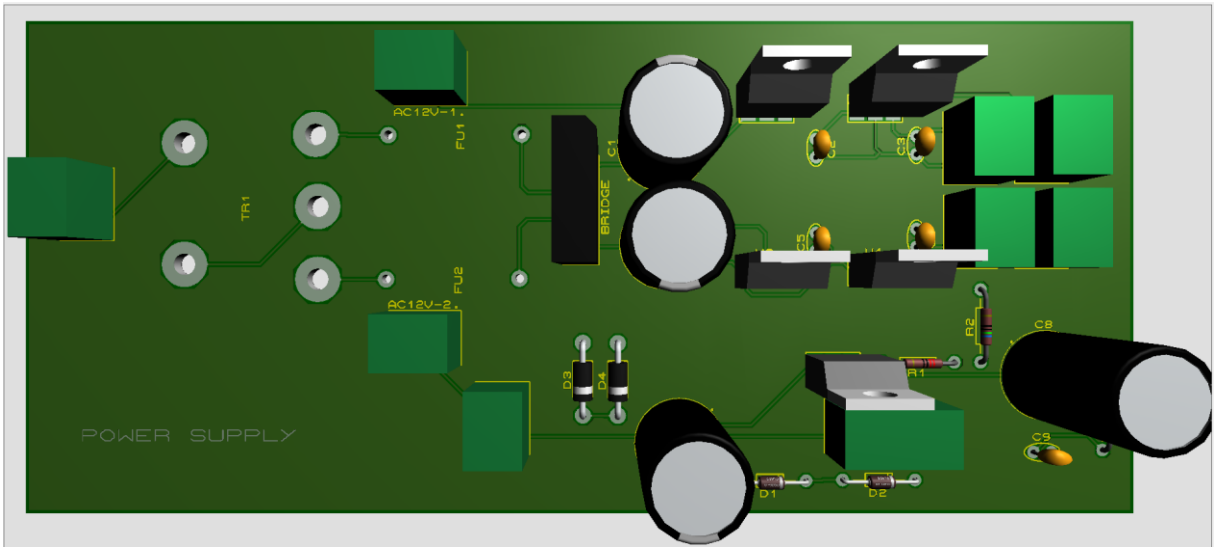
DC signals are generally preferred to run electrical circuits.Also dc signals generally run low voltage values for this reason voltage values of ac signals are reduced to more low values. This transaction are made use transformator. AC signals continue to come at the transformer output. Diodes are using for convert the AC signals to DC signals.Becasuse,diodes are pass current one direction.These circuits are called Rectifier circuits.There are wavy DC signals at the output of the rectifier circuits.Filter circuits are used to generate constant values of signals.Capasitor are generally used in filter circuits. However, filter circuits are affected by changes in input signals and load changes in the circuit. Therefore, regulation circuits are used to ensure that the output voltage value always takes a constant value independent of the load and the input signal.Zener diode,transistor or regulation ICs can be used in regulated circuits.I was used 7812 integrated for +12V DC ,7805 integrated for +5V DC,7912 integrated for -12V DC ,7905 integrated for -5V DC and LM317T integrated for 0-15V DC adjustable power supply.Also, there are 2*(12V AC) and 24V AC values at transformator output and 220V AC at transformator input too.

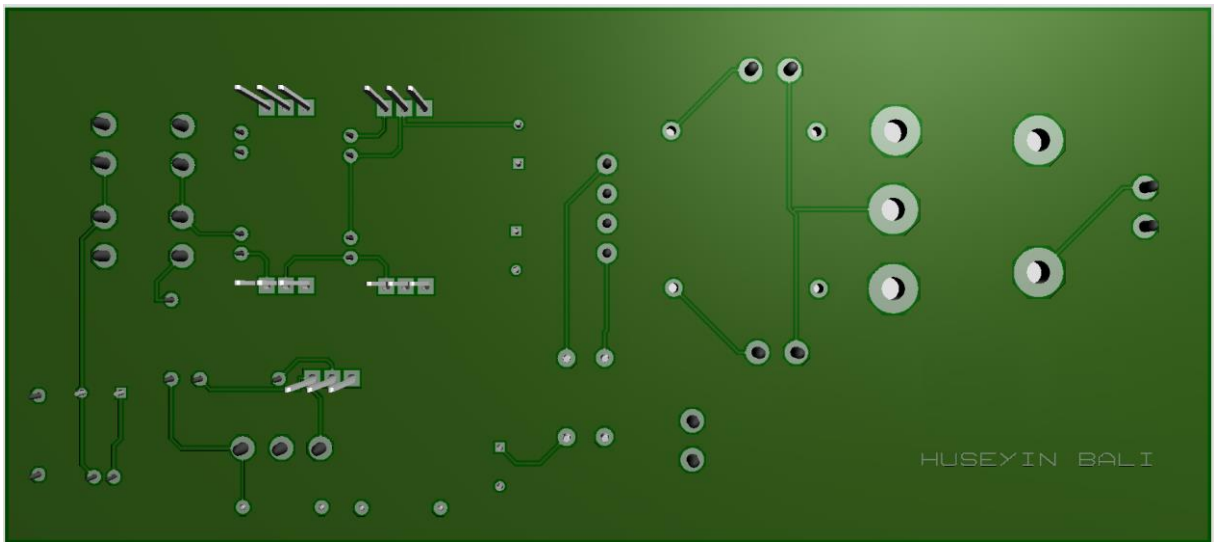


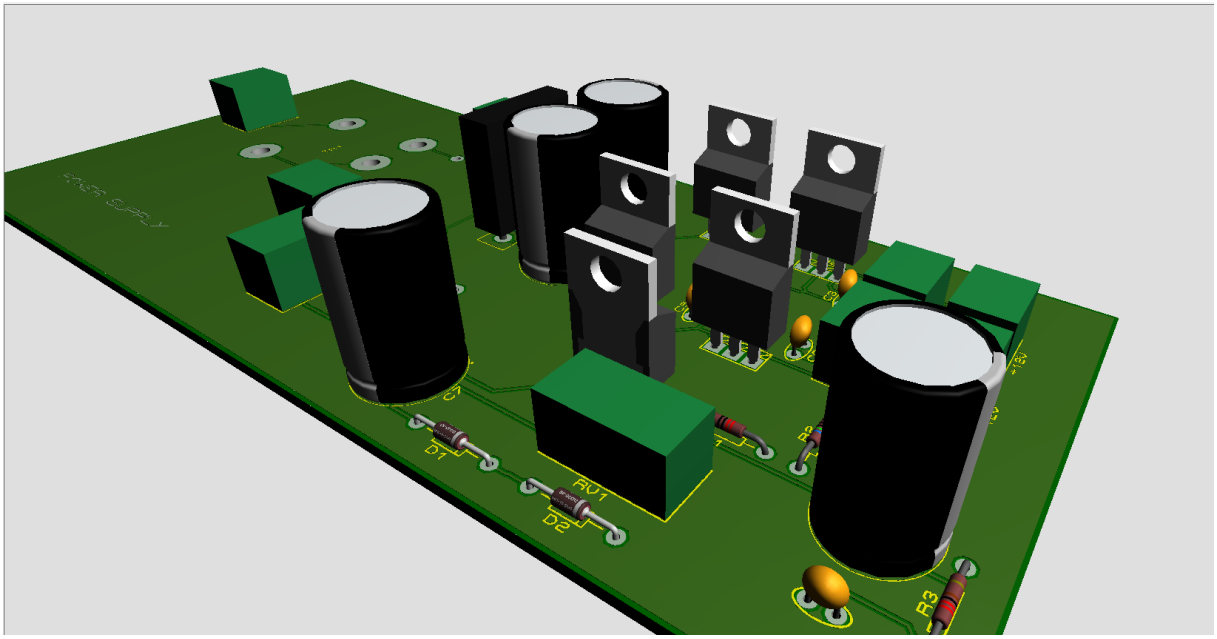




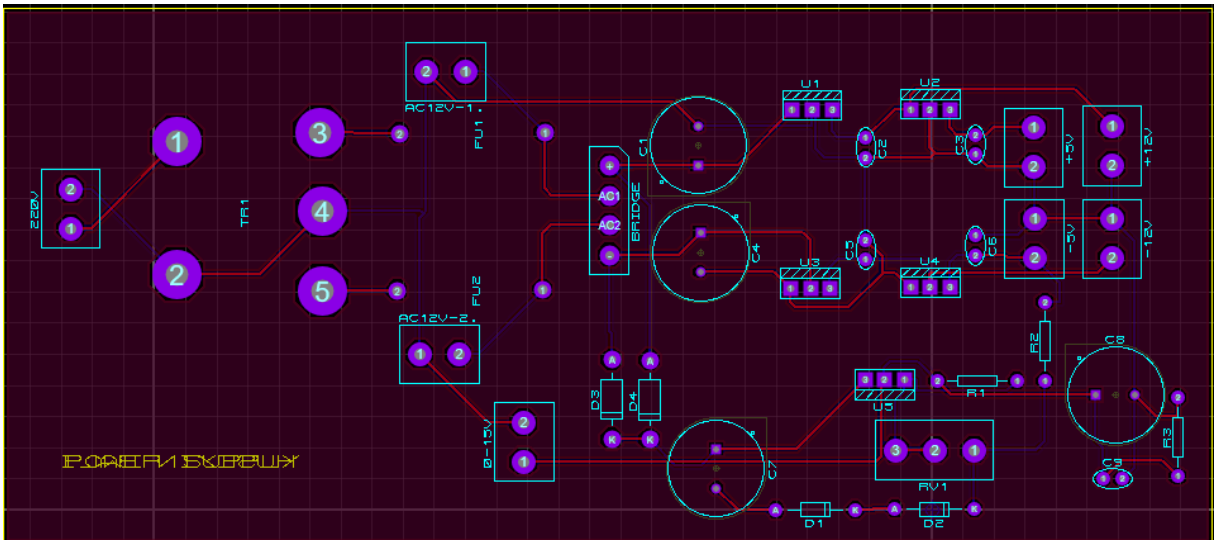
Power supply-PCB Design



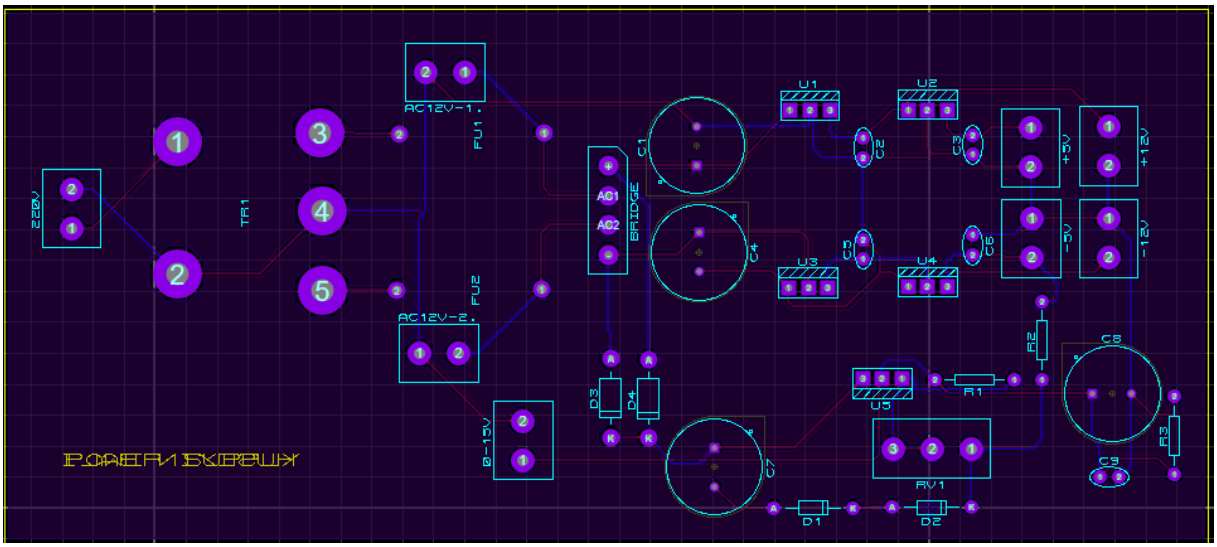

HUSEYIN BALI


D1
D2
RV1
R3

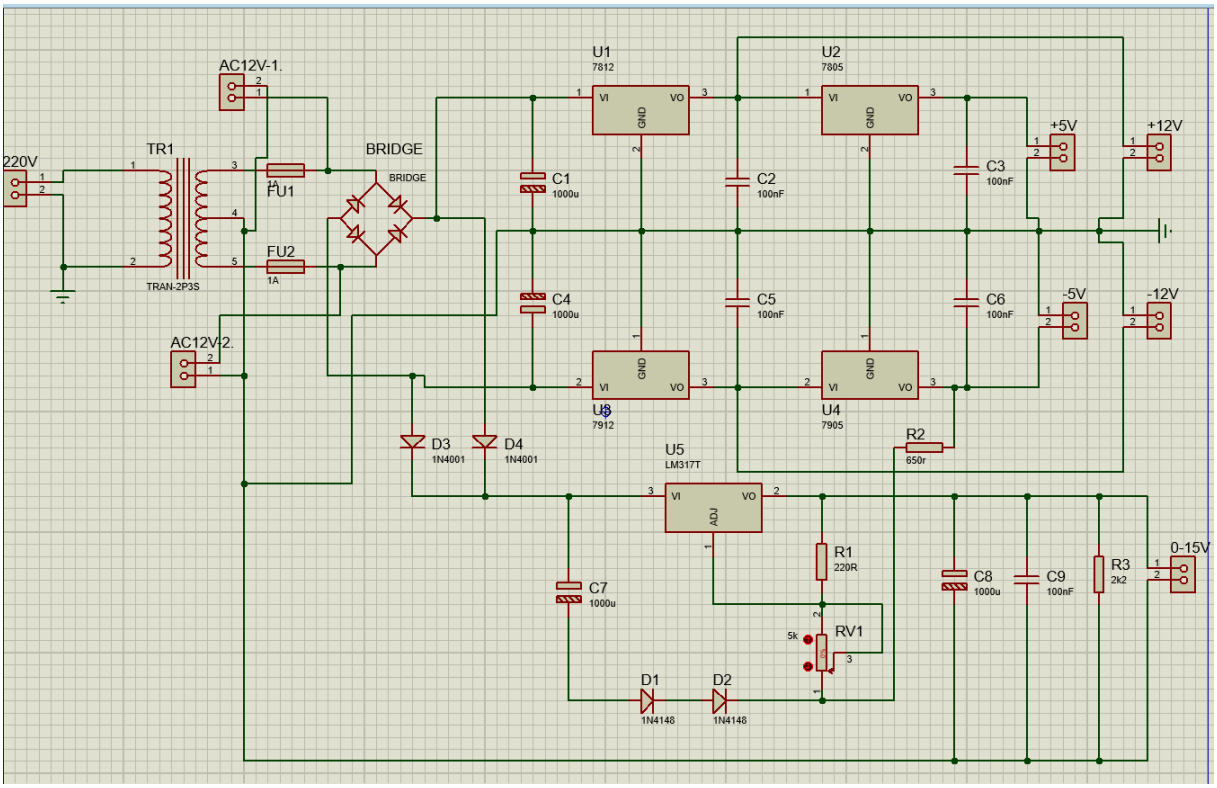
TOP Copper


AC12V-1.
AC12V-2.
220V
TR1
FU1
FU2
BRIDGE
U1
U2
U3
U4
U5
+5V
+12V
-5V
-12V
RV1
D1
D2
D3
D4
R1
R2
R3
C8
C9

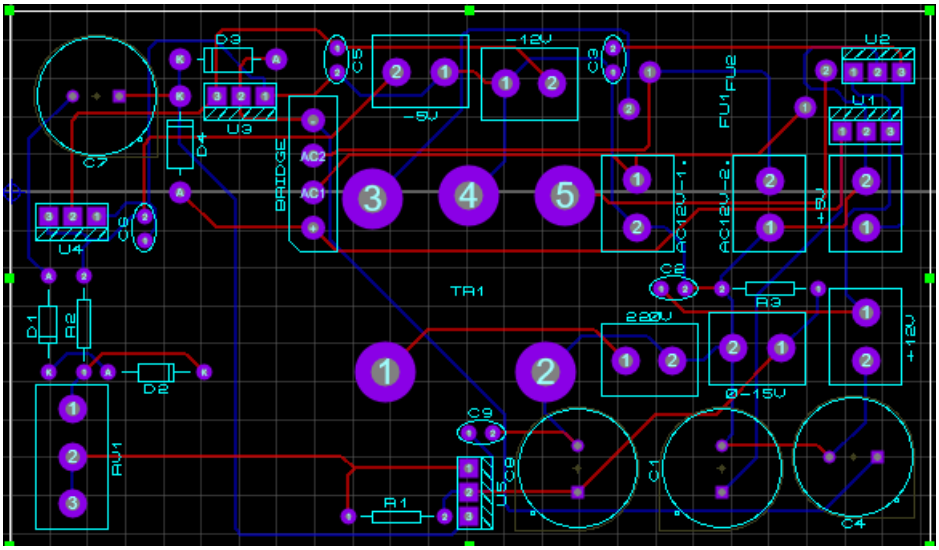
Bottom Copper

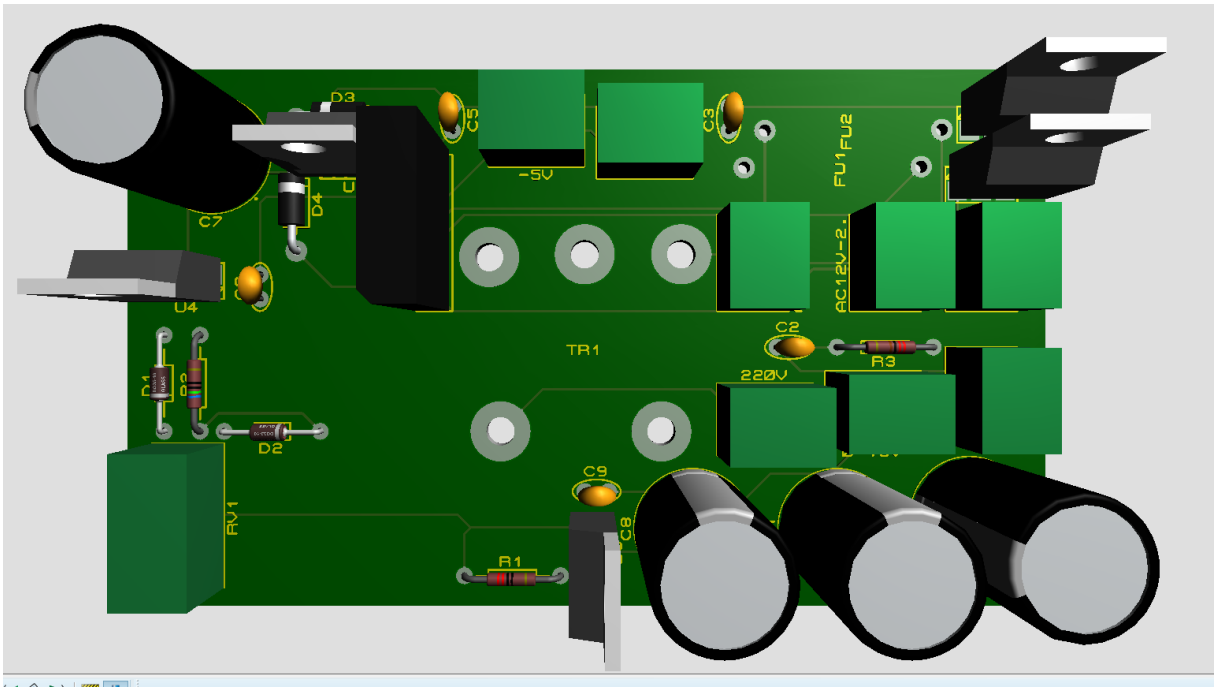


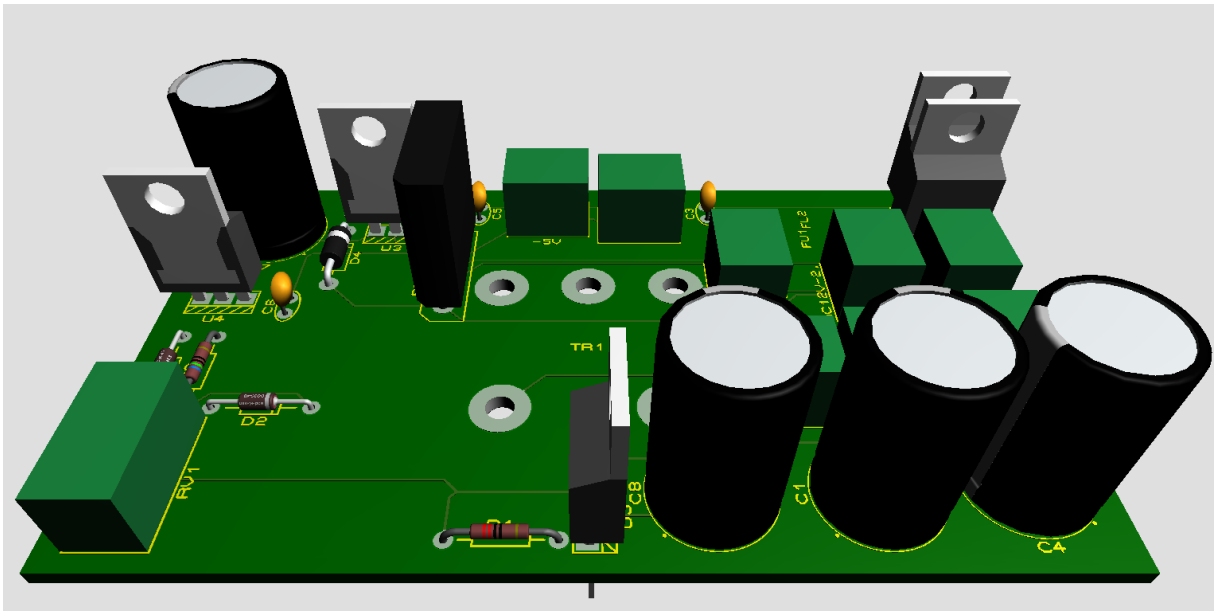
Schematic Capture



Automatically created PCB design


D3
C5
-12V
C3
U2
U1
FU1
FU2
C7
D4
U3
BRIDGE
AC2
AC1
-5V
AC12V-1.
AC12V-2.
+5V
U4
C6
C2
R3
TR1
220V
+12V
D1
R2
D2
0-15V
C9
RV1
C8
C1
C4
R1


D3
C5
C3
FU1
FU2
-5V
C7
D4
U4
AC12V-2.
C2
R3
TR1
220V
D1
R2
D2
C9
RV1
C8
R1


TR1
D2
RV1
C1
C4