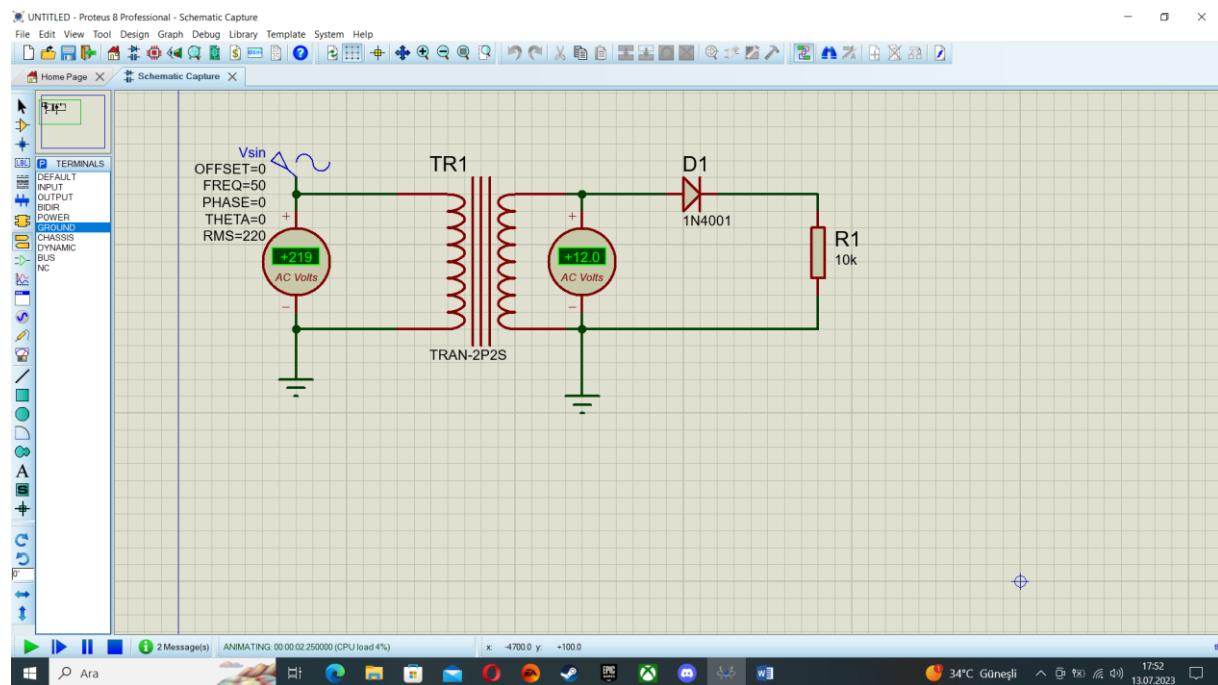
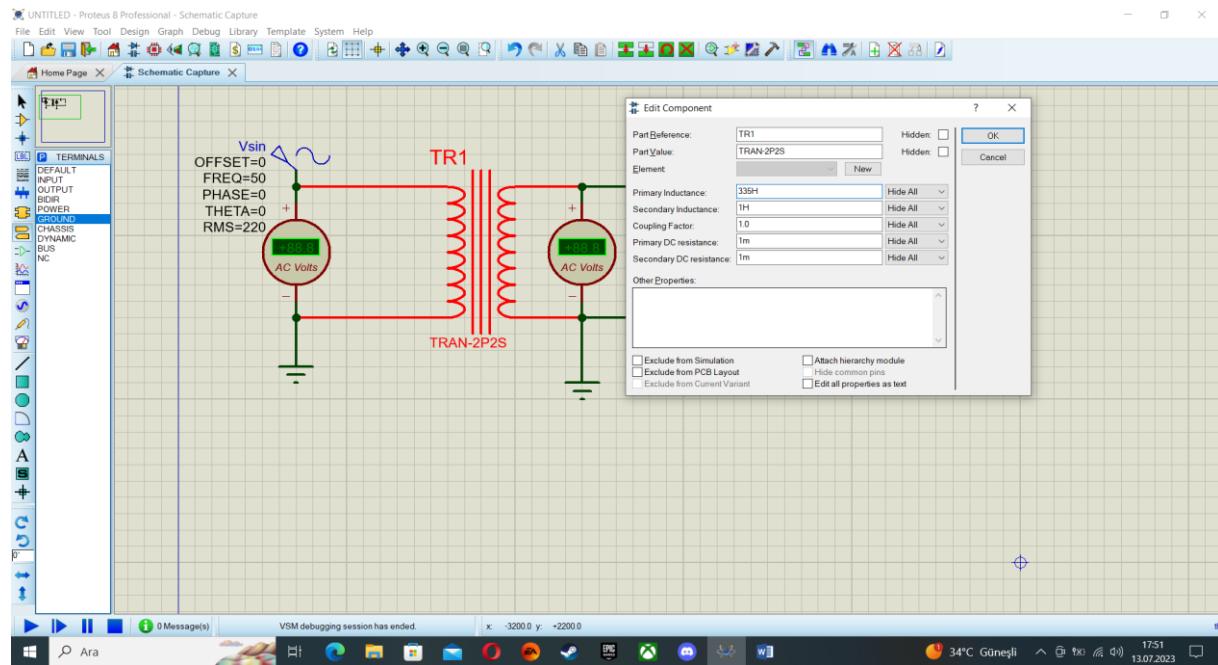
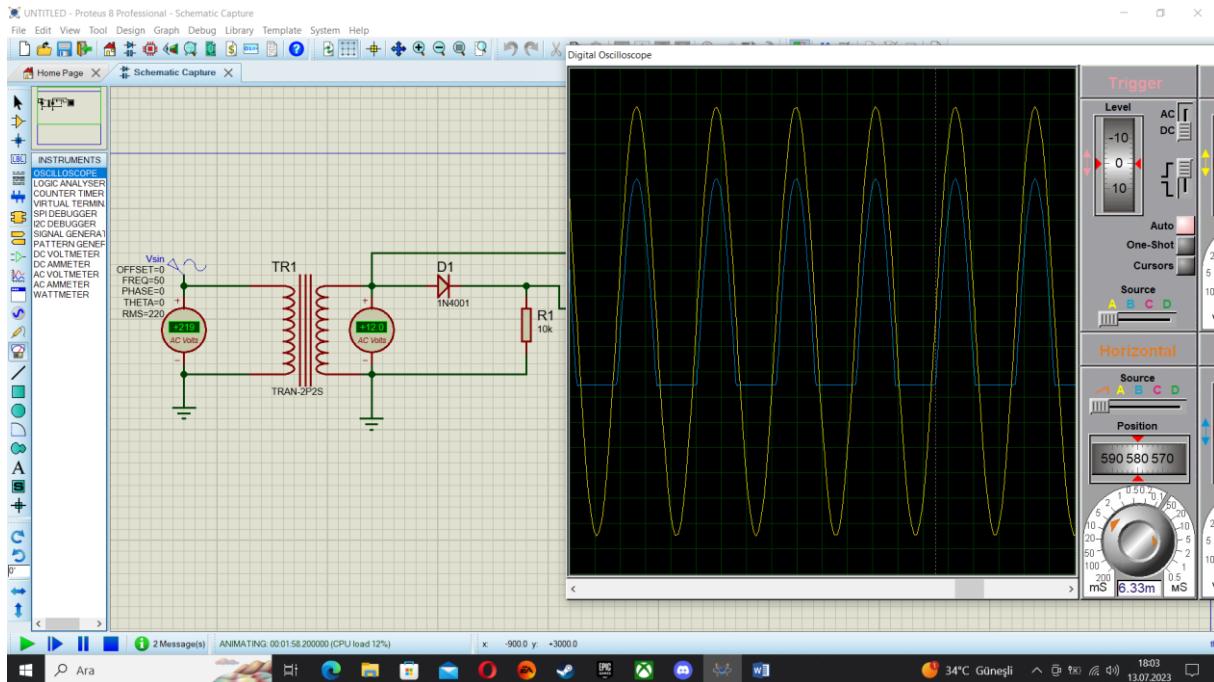


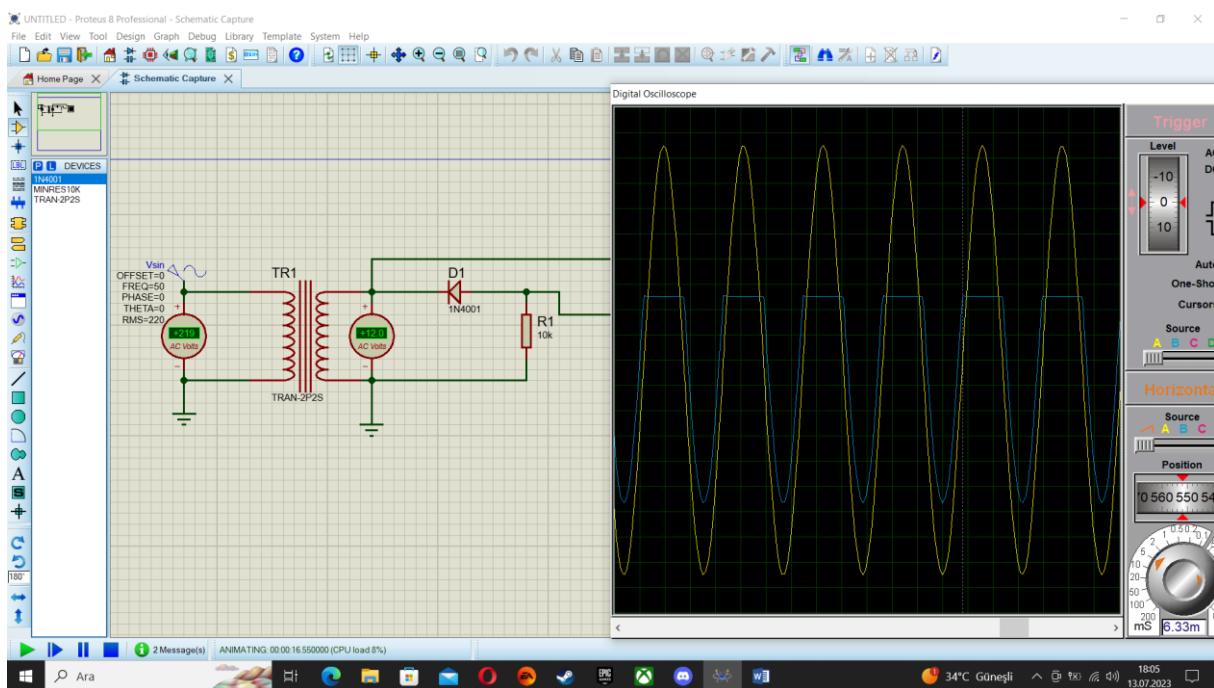
Adjustable Power Supply Design Steps



Yarım Dalga Doğrultma-Half wave rectification

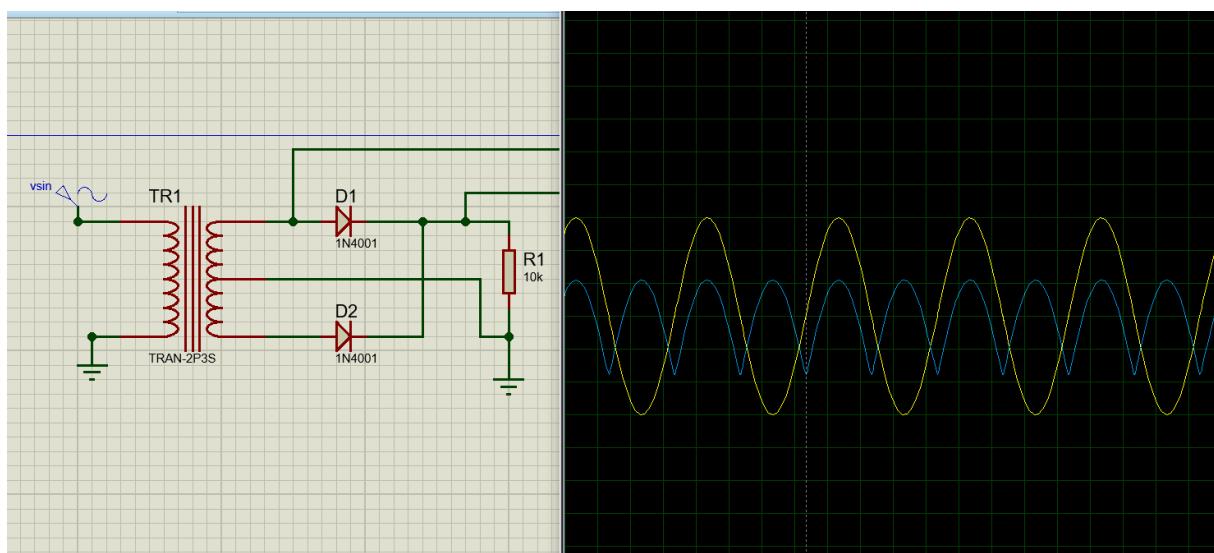
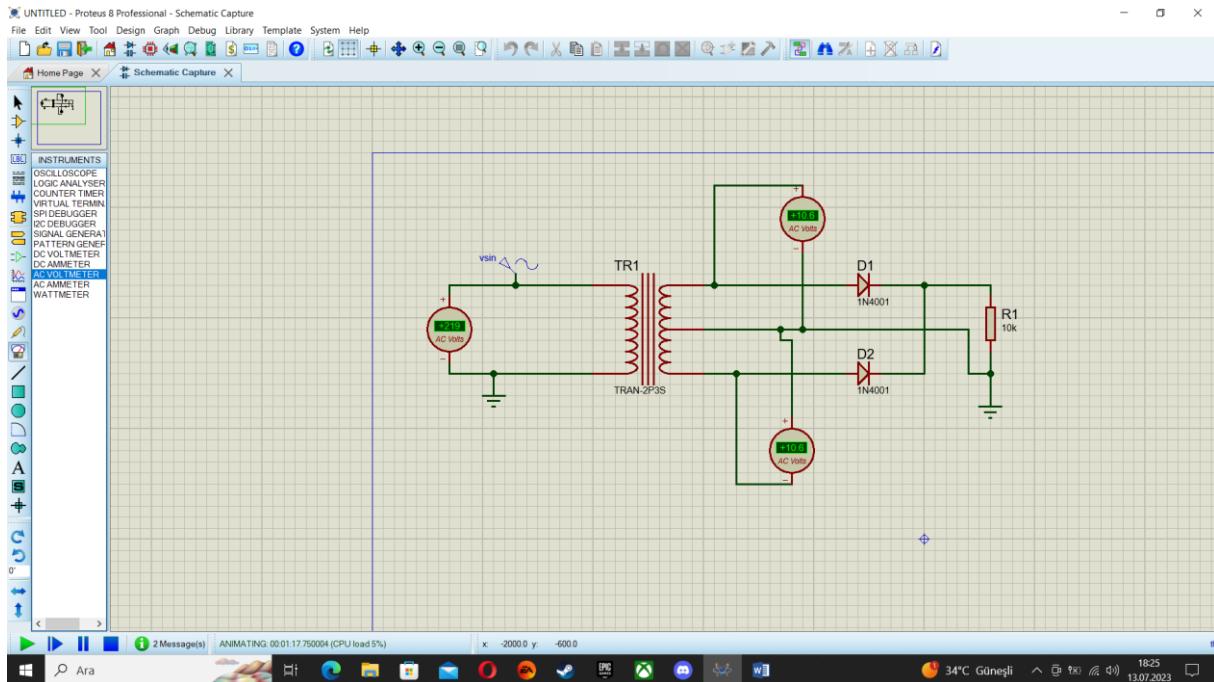


Diyot yönü değiştiğinde-when the diode direction changes



2P3S için değer hesaplama örneğin 10 v için $10 * 1.5 = 15v$ $220 / 15 = 14.667$ $14.667^2 = 215.111$

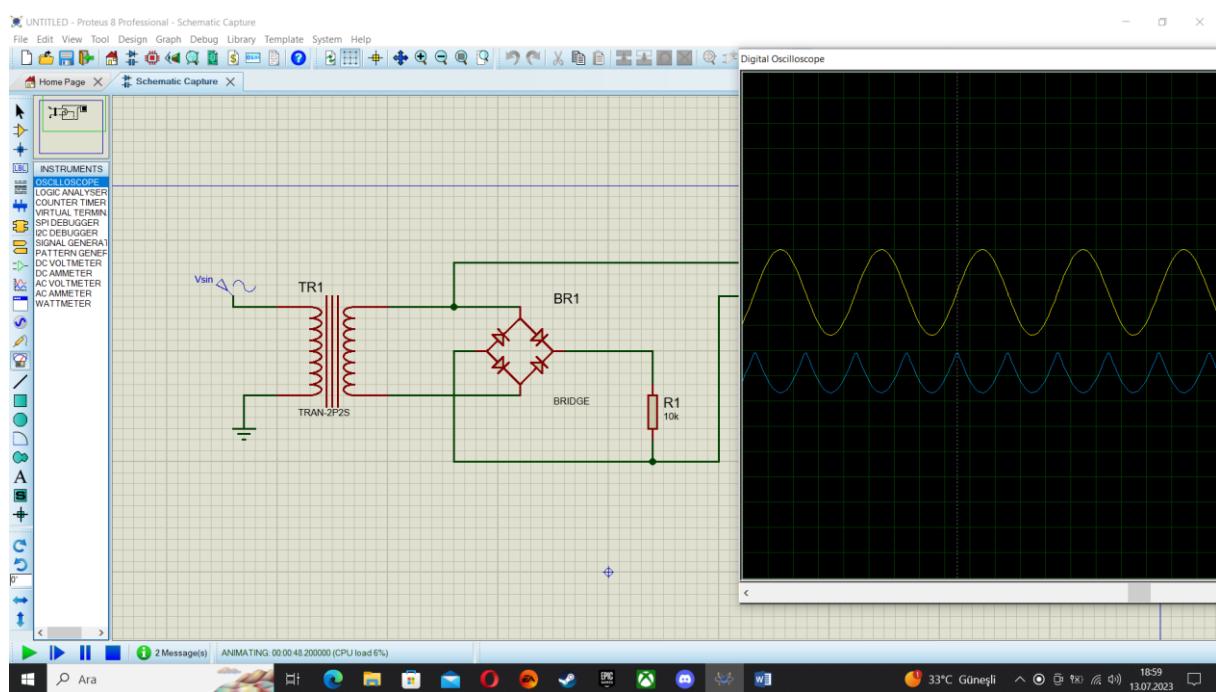
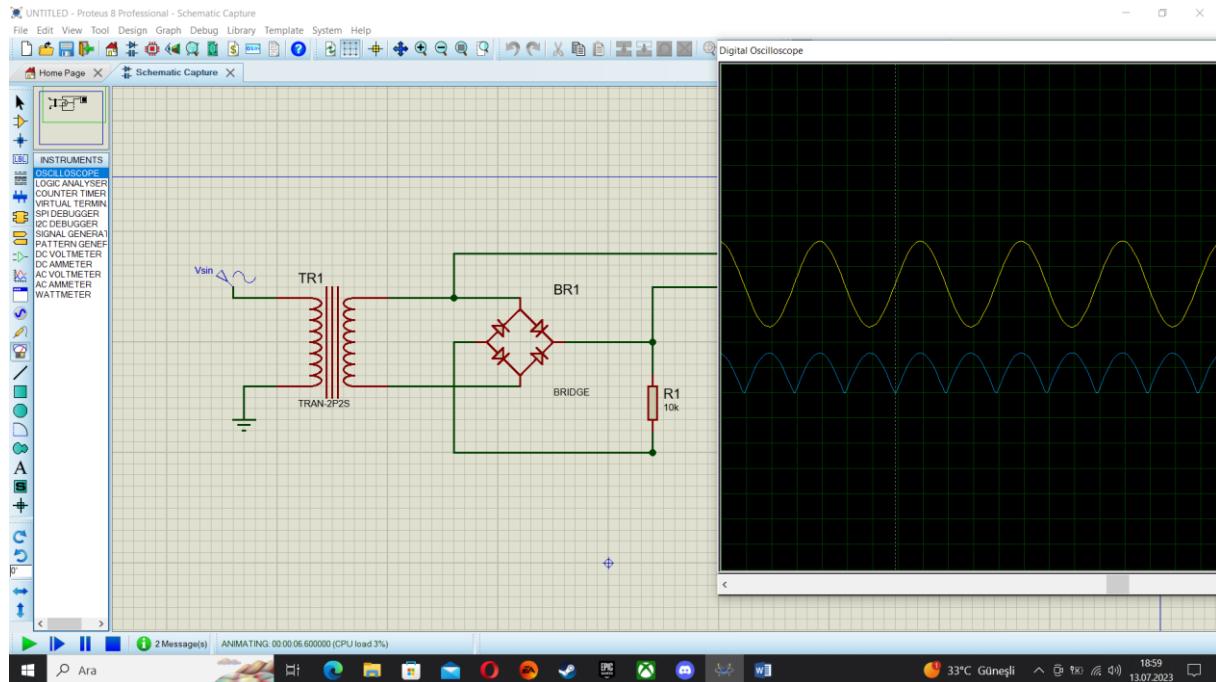
P=215.111H S=1H



Köprü tipi-bridge type rectification

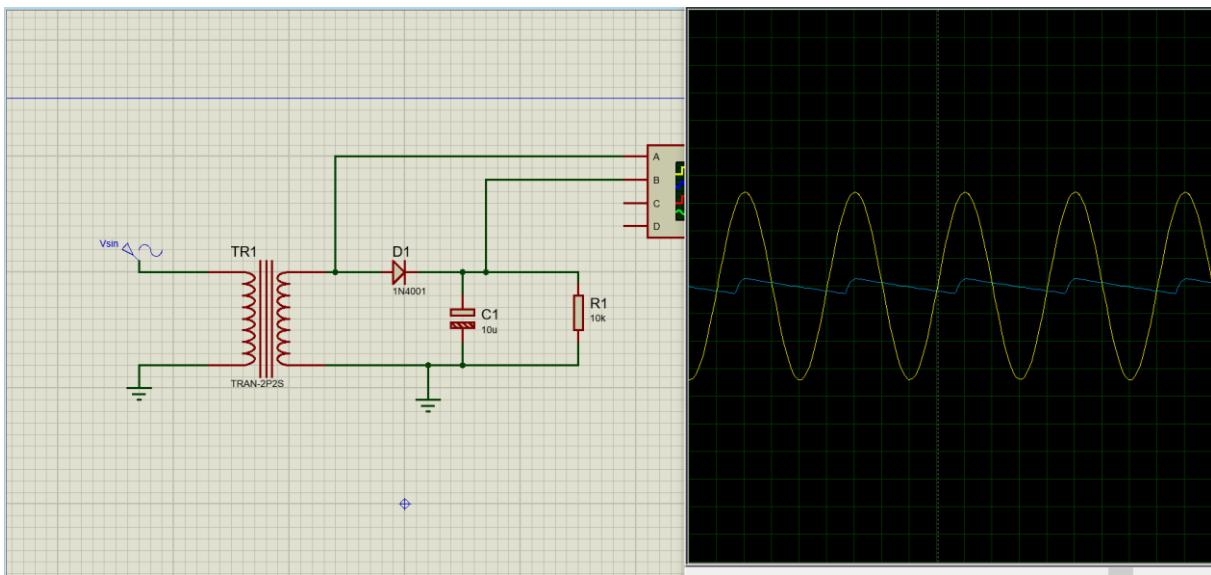
Osiloskopun bir ucunu yükün üst ucuna bağladığım zaman çıkışta pozitif, yükün diğer ucuna bağladığımında negatif değerler üretildiğini gözlemedim.

I observed that when I connect one end of the oscilloscope to the upper end of the load, positive values are produced at the output, and when I connect it to the other end of the load, negative values are produced.

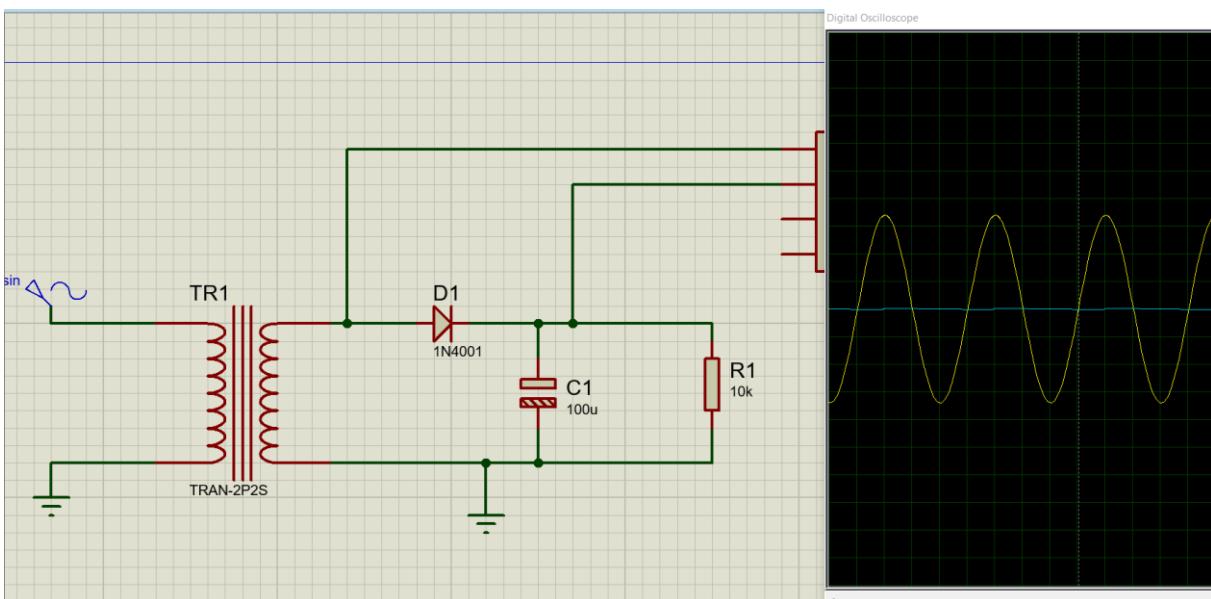


Kondansatörlü filtre devresi-Capacitor filter circuit

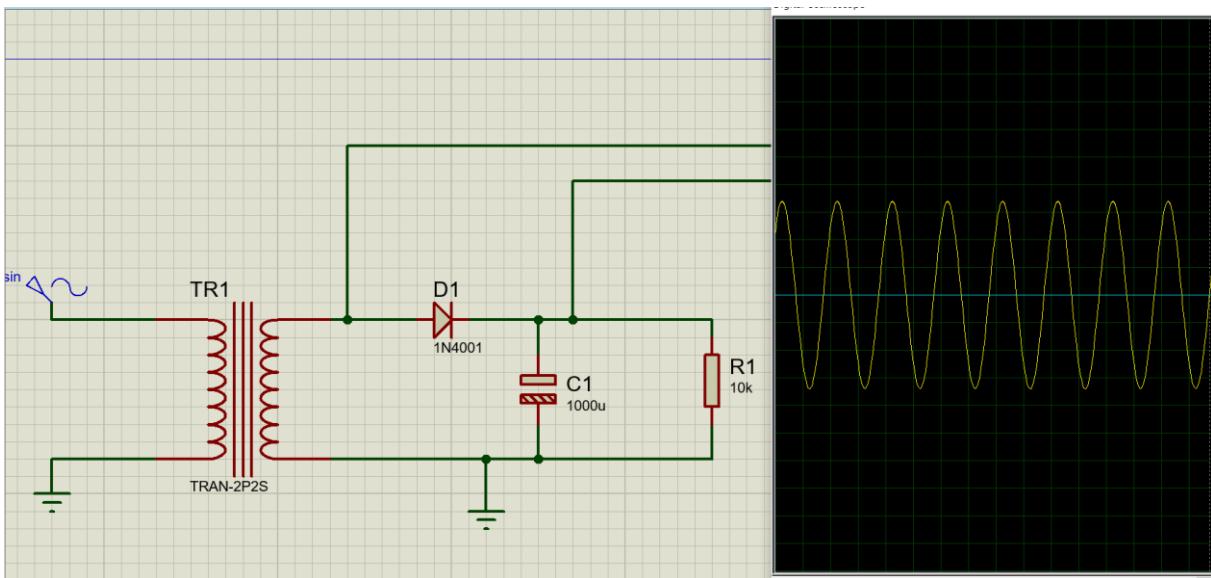
10 μ F



100 μF

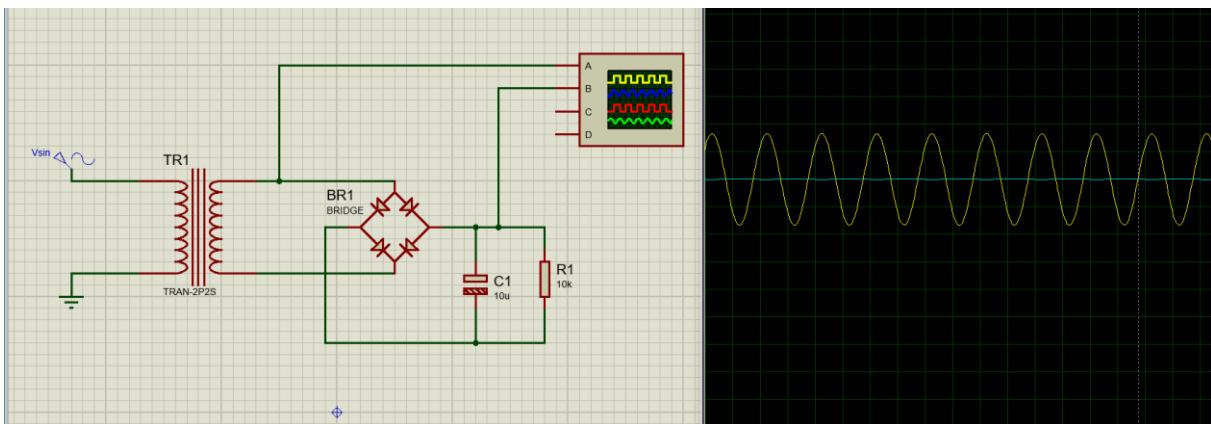


1000 μF

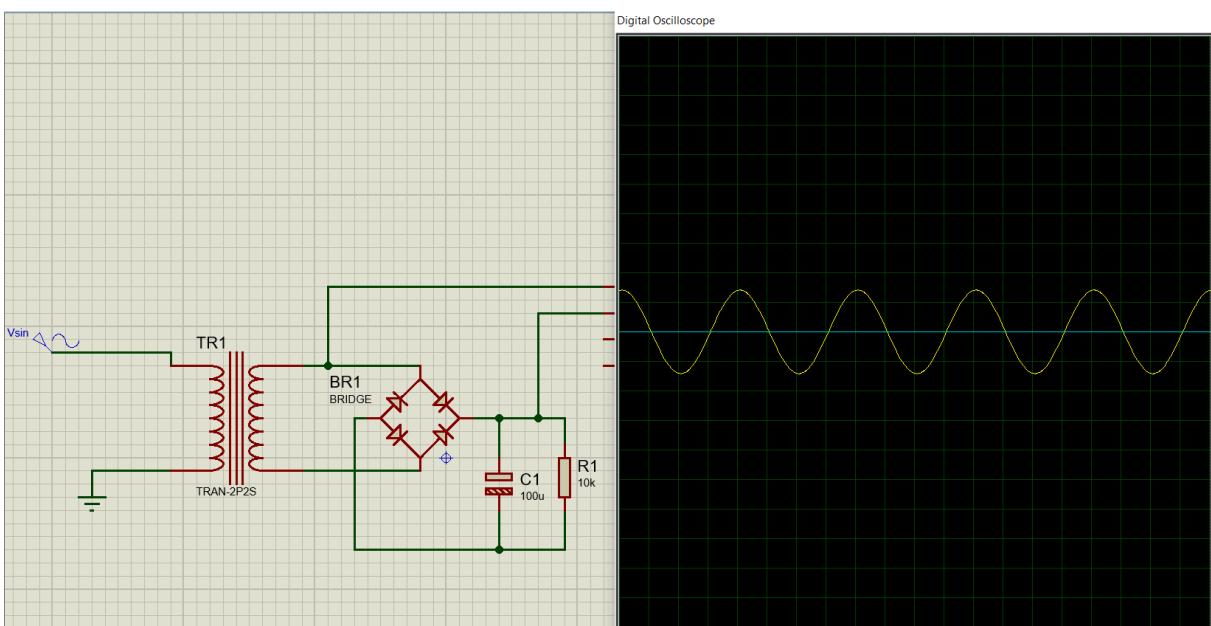


Köprü ile yapınca-Made with bridge diode

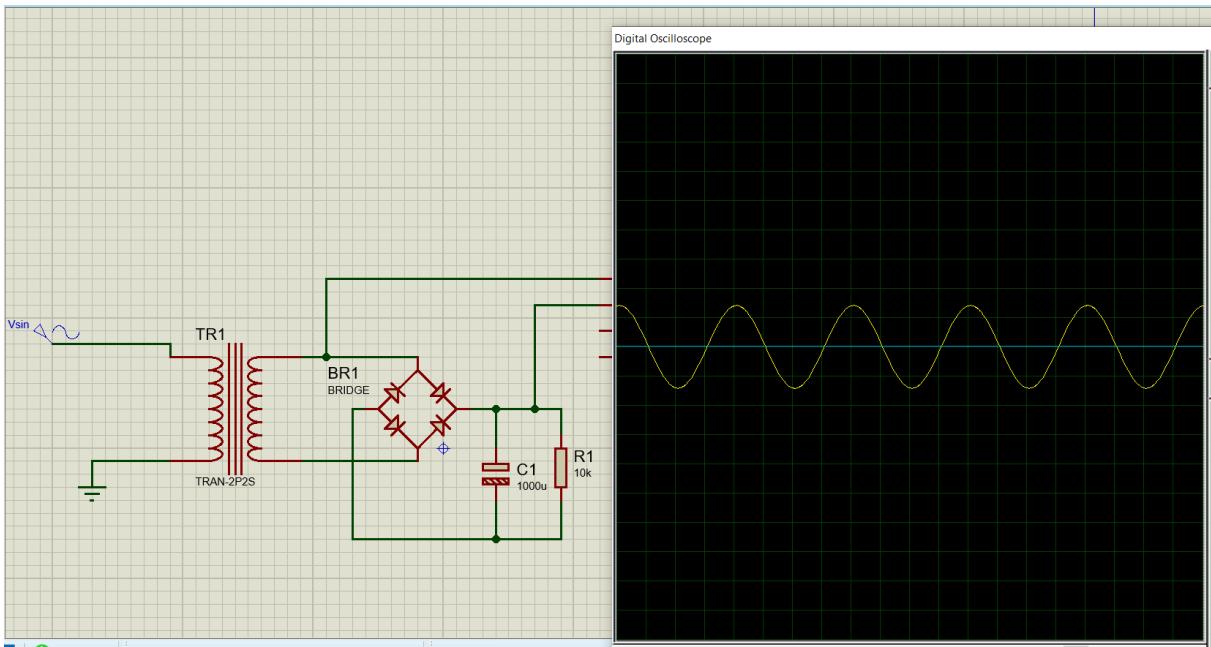
10 μ F



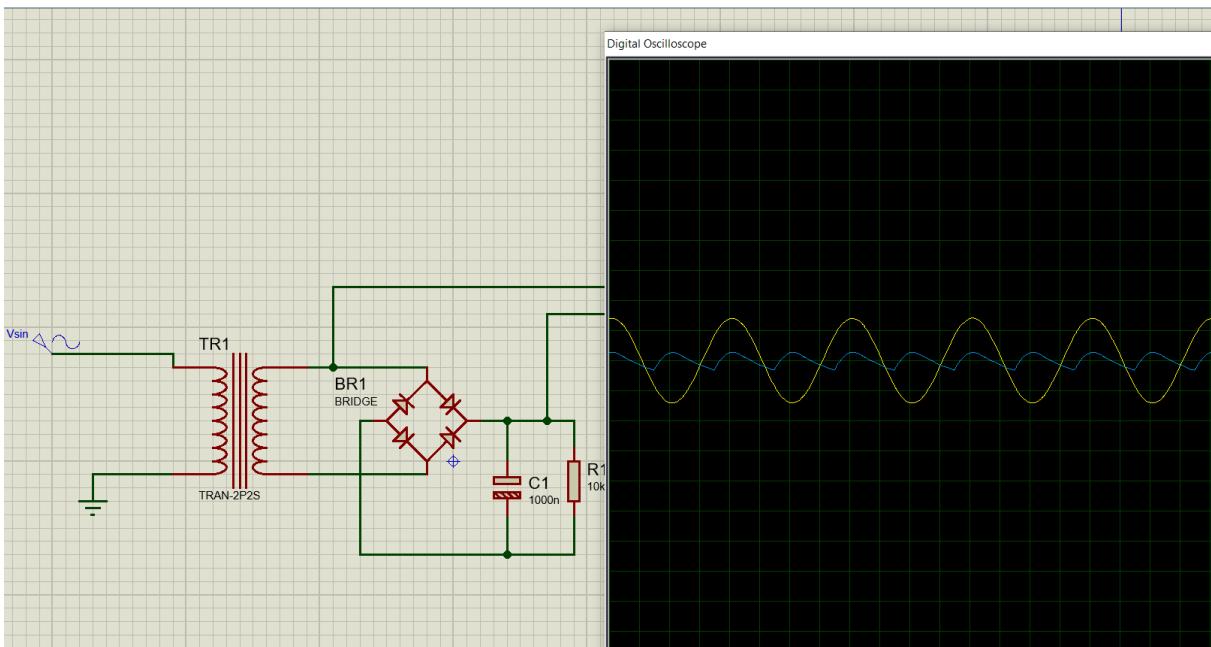
100 μ F



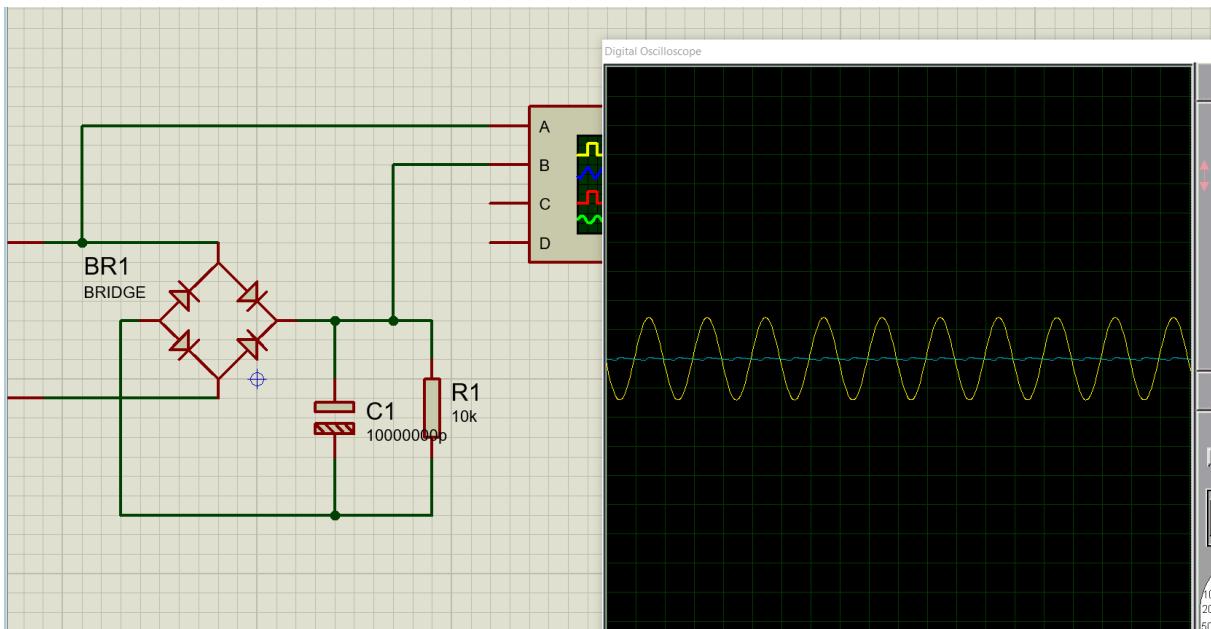
1000 μF



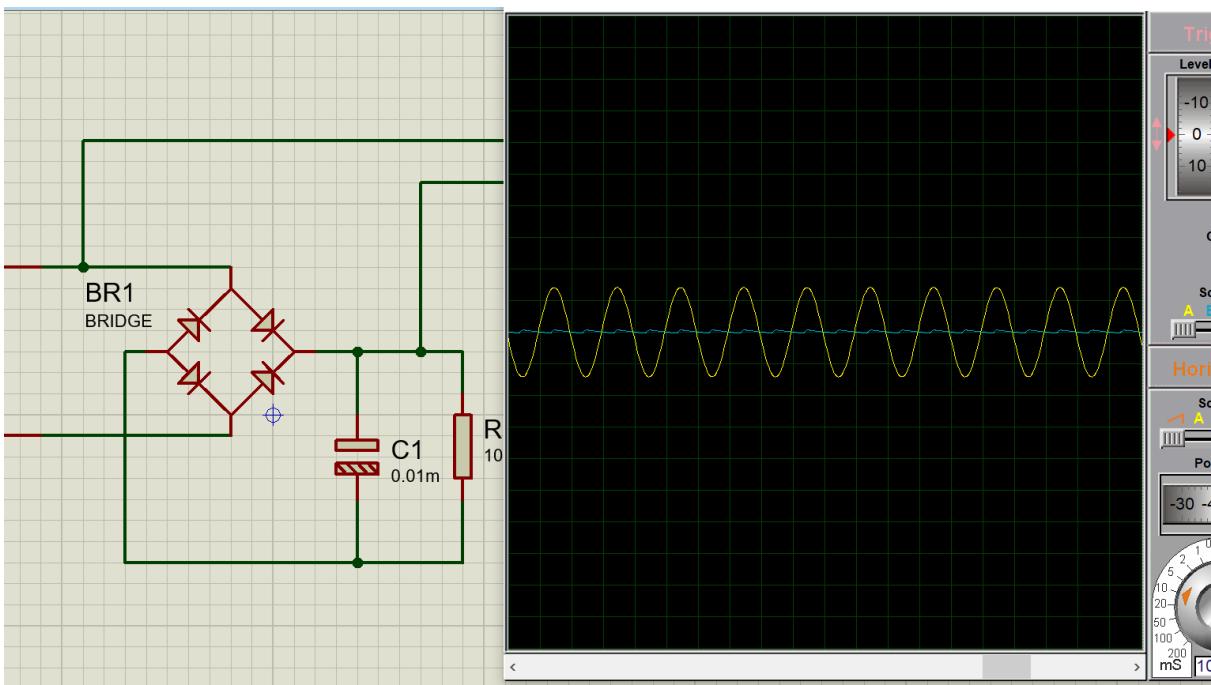
1000 nF



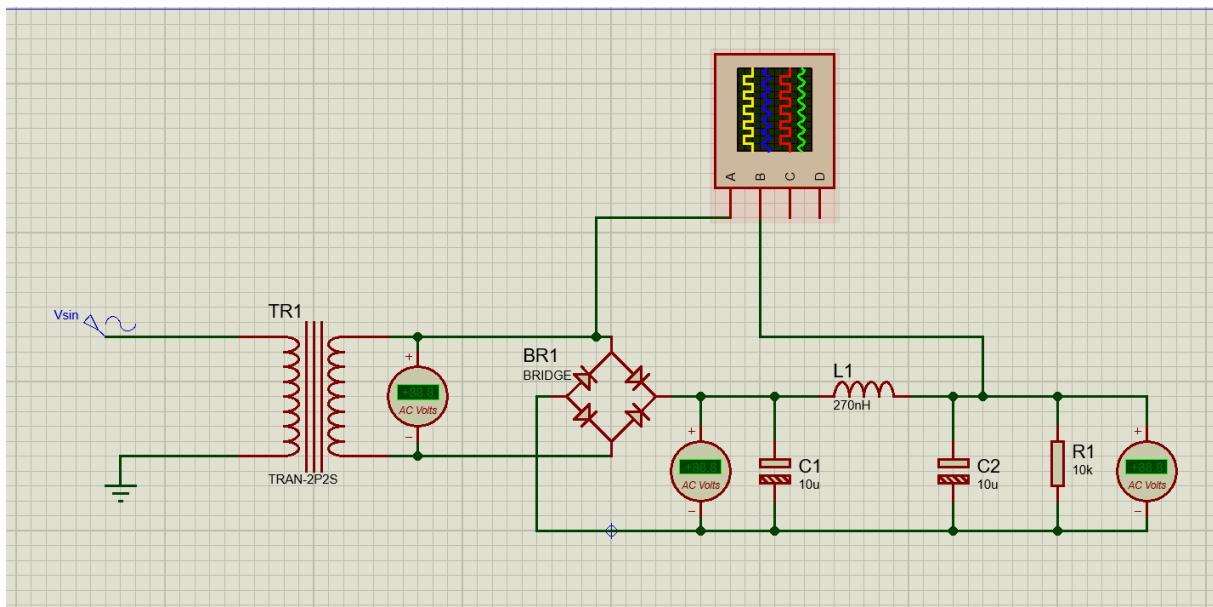
10 000 000 pF



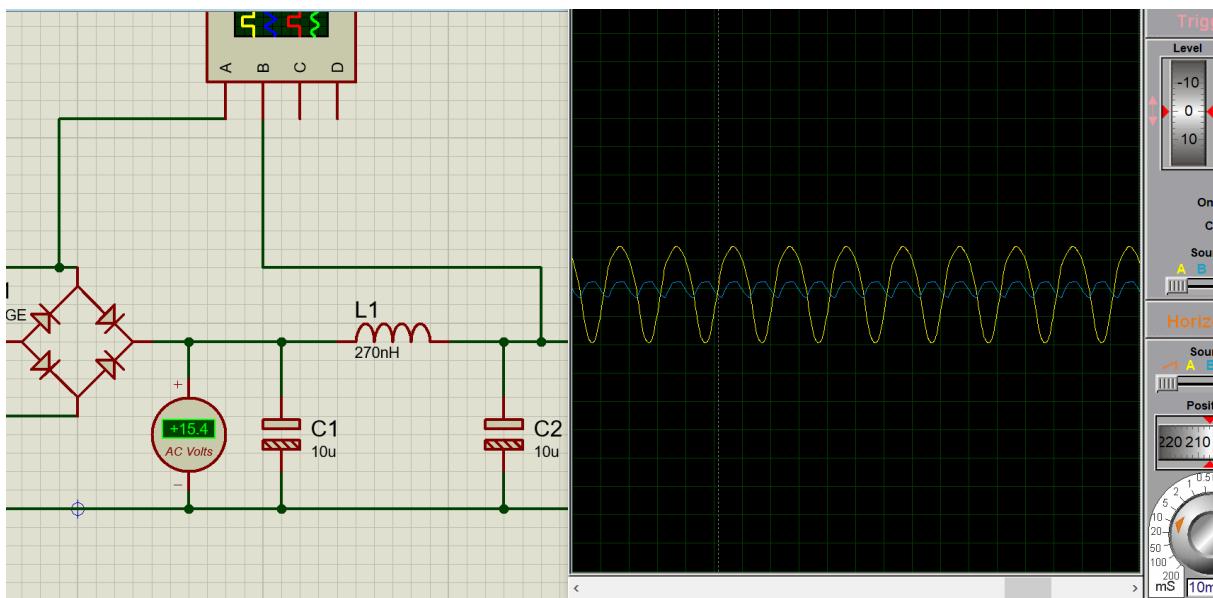
0.01 mF

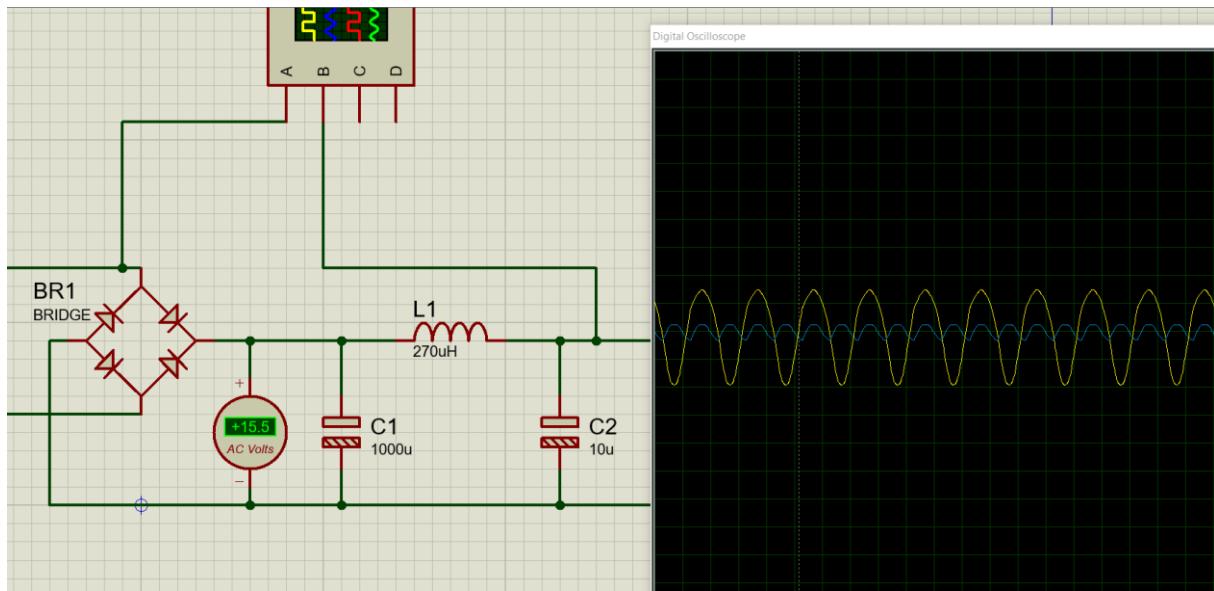


Bobin ile Akım Regülasyonu-Current regulation with coil



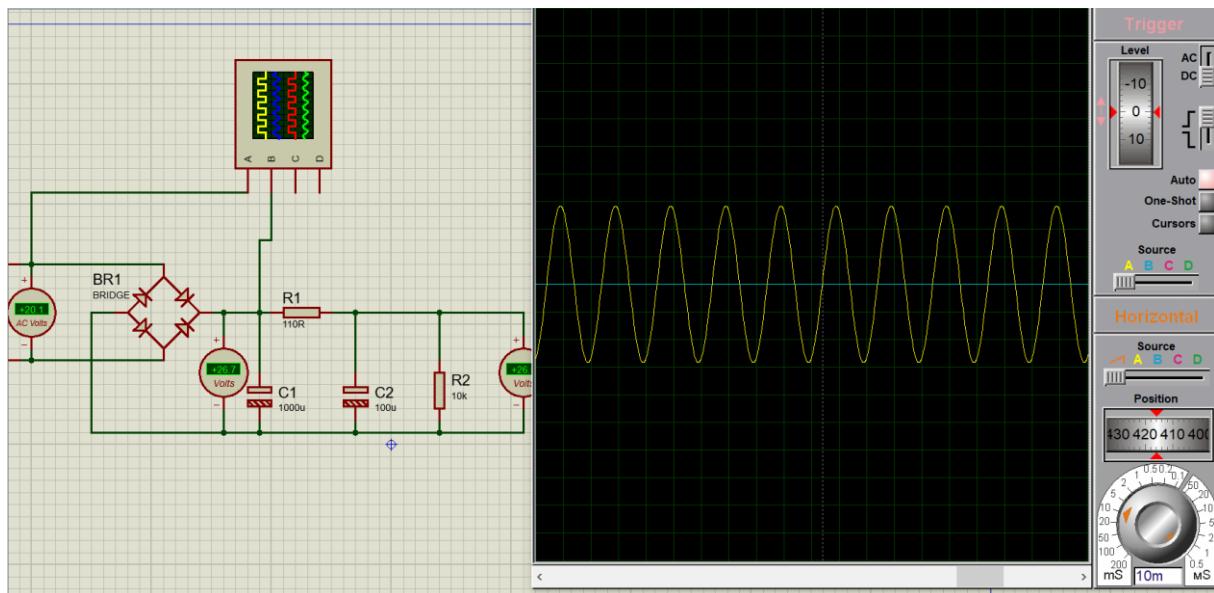
270 nH



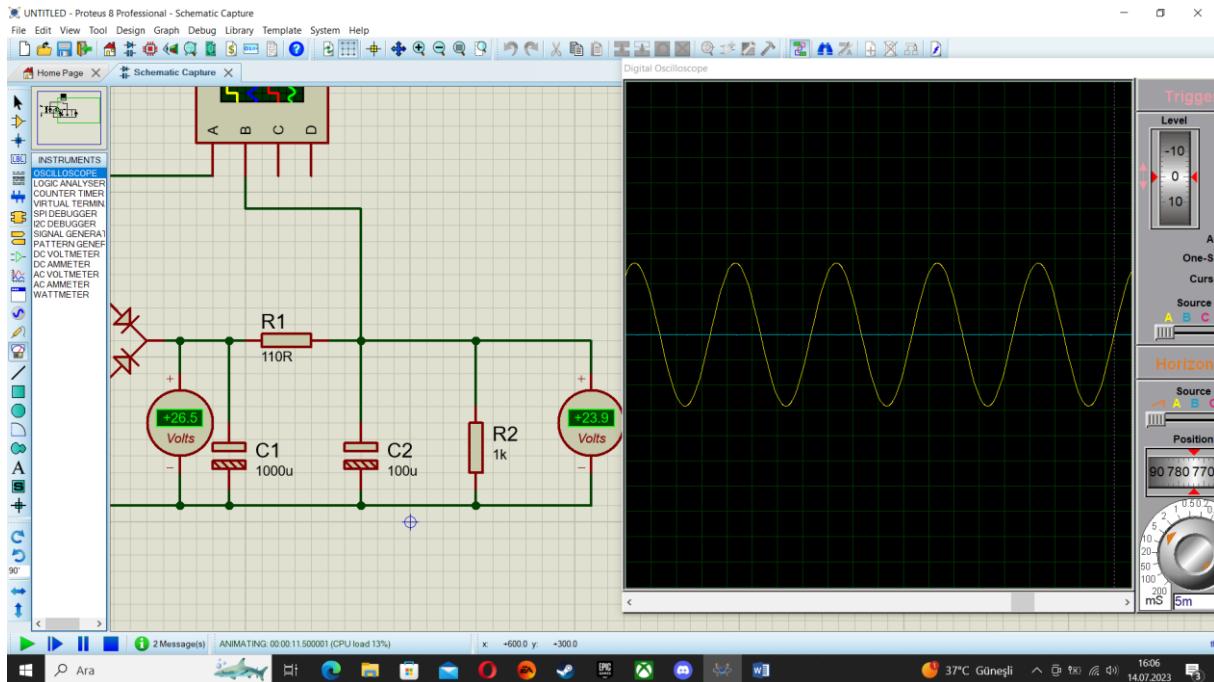


Pi Tipi Filtre Devresi-Pi(R-C) Type Filter Circuit

10k yük ile daha düzgün-more regular with 10k load



1k yük ile-with 1k load



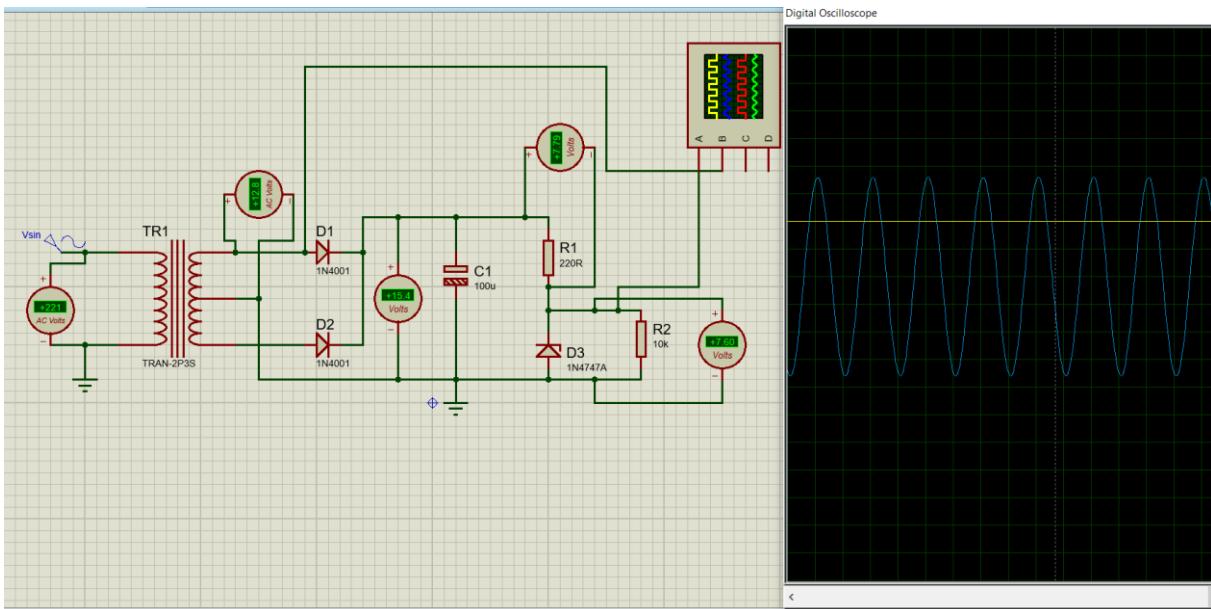
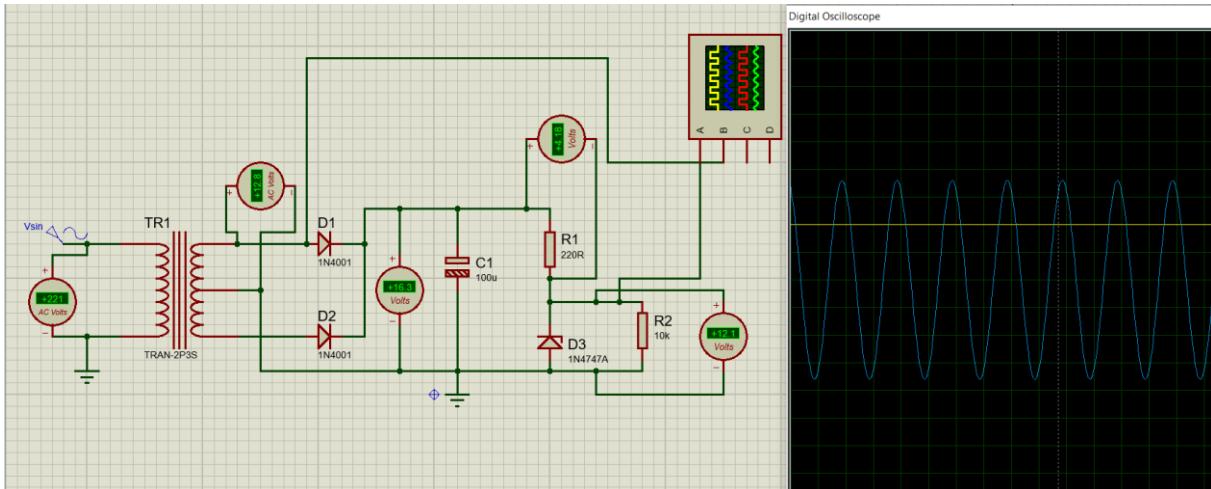
REGÜLE DEVRELERİ-Regulated Circuits

Transistörlerin gerilim kazancı (voltage gain) ve akım kazancı (current gain), giriş sinyallerinin amplifikasyonunu sağlar. Giriş sinyalinin düşük güçlü bir sinyal olmasına rağmen, transistörlerin gerilim ve akım kazancı sayesinde çıkışta daha yüksek bir güç sahip bir sinyal elde edilir.

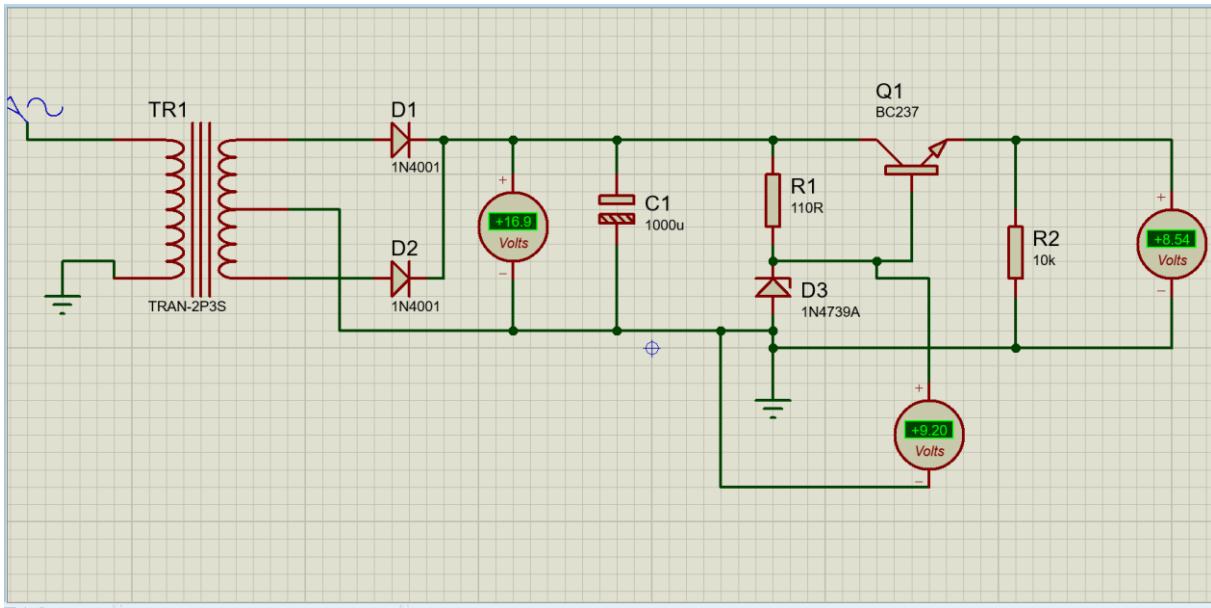
The voltage gain and current gain of the transistors provide amplification of the input signals. Although the input signal is a low power signal, a higher power signal is obtained at the output thanks to the voltage and current gain of the transistors.

TİPİ	GERİLİM REGÜLASYONU			MAKSİMUM AKIM DEĞERİ							MİNİMUM GİRİŞ GERİLİMİ		
	78LXX 78MXX	78SXX 78HXX	78XX	78LXX	78MXX	78XX	78SXX	78HXX	78HXXKC	78LXX 78MXX	78SXX 78HXX	78XX	
7805	+5V	+5V	+5V							+7V	+8V	+7V	
7806	-	-	+6V							-	-	+8V	
7808	-	-	+8V							-	-	+10.5V	
7809	-	+9V	-							-	+12V	-	
7812	+12V	+12V	+12V							+14.5V	+15V	+14.5V	
7815	+15V	+15V	+15V							+17.5V	+18V	+17.5V	
7824	-	+-	+24V							-	-	+26V	

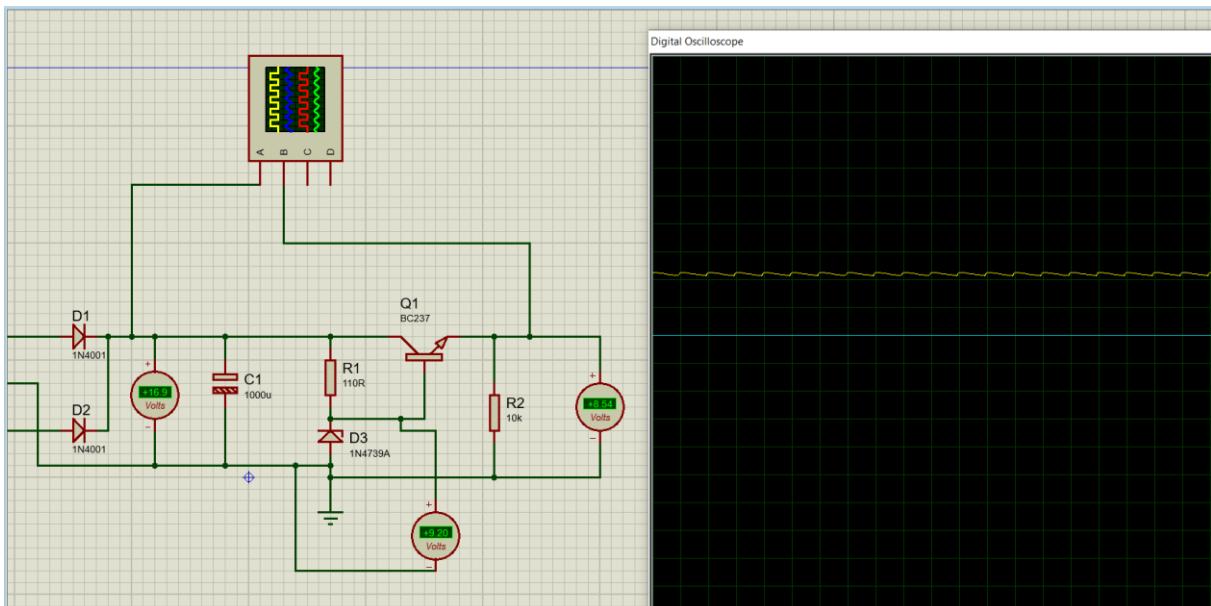
+12v regüle devresi - +12V regulated circuit



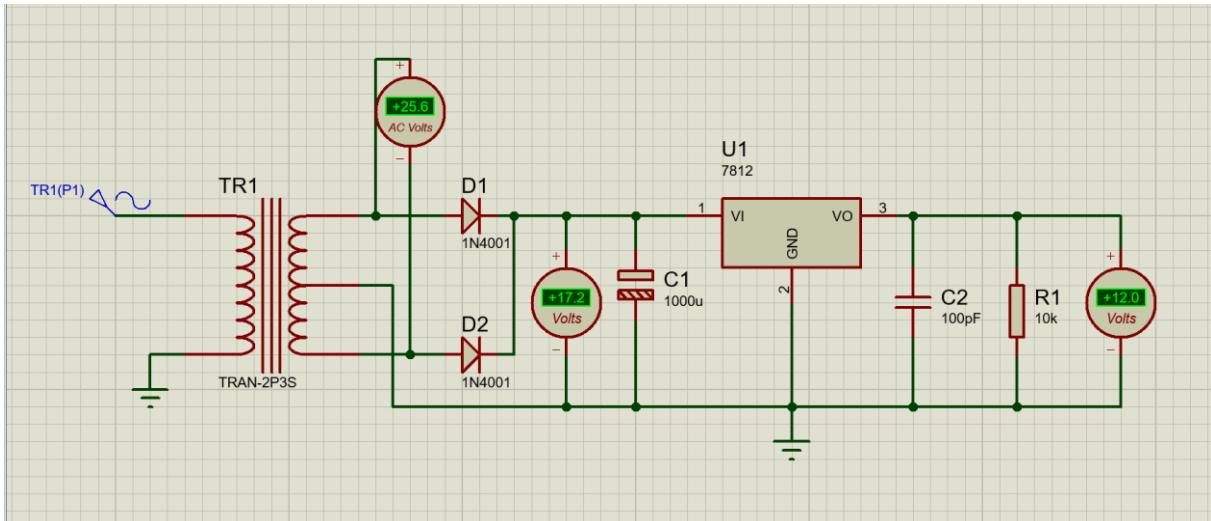
9.1V Seri Regüle Devresi-9.1V series regulated circuit



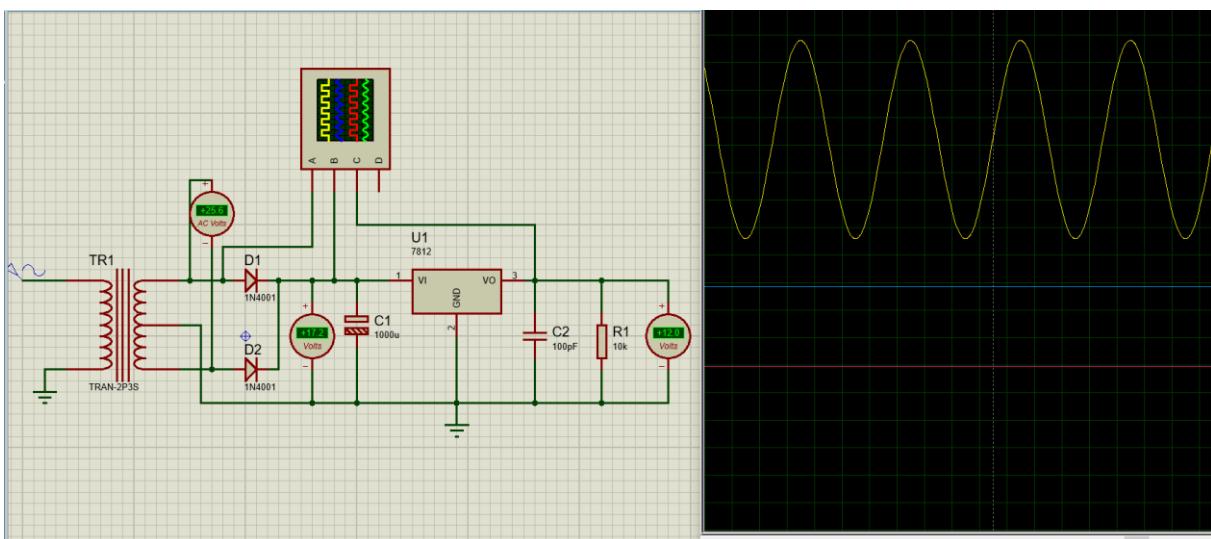
Filtrelenmiş ve Regüle edilmiş sinyaller-Filtered and regulated signals



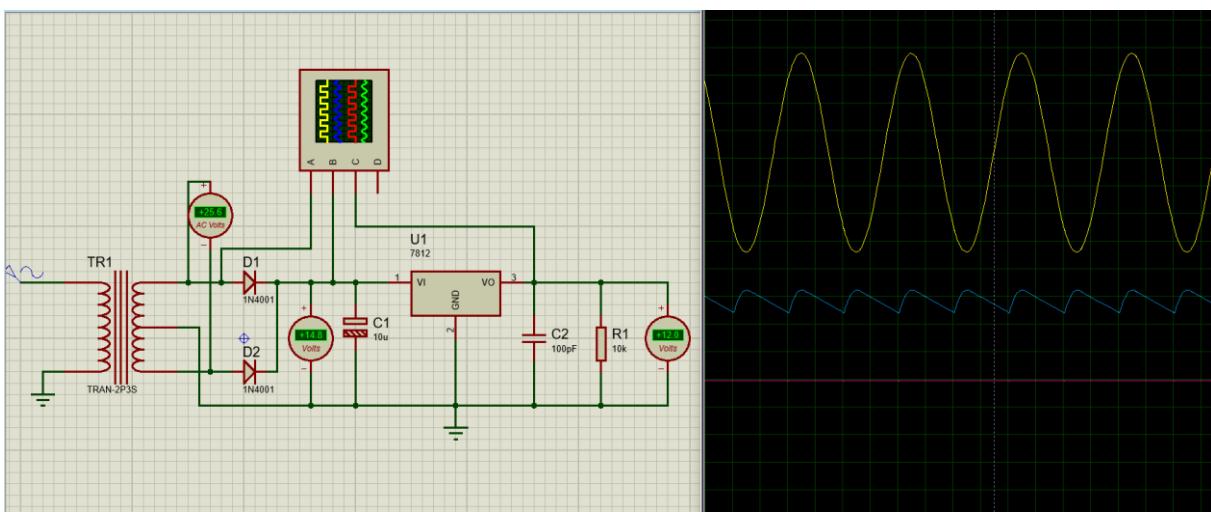
7812 Pozitif regüle entegresi – 7812 Positive regulated integrated



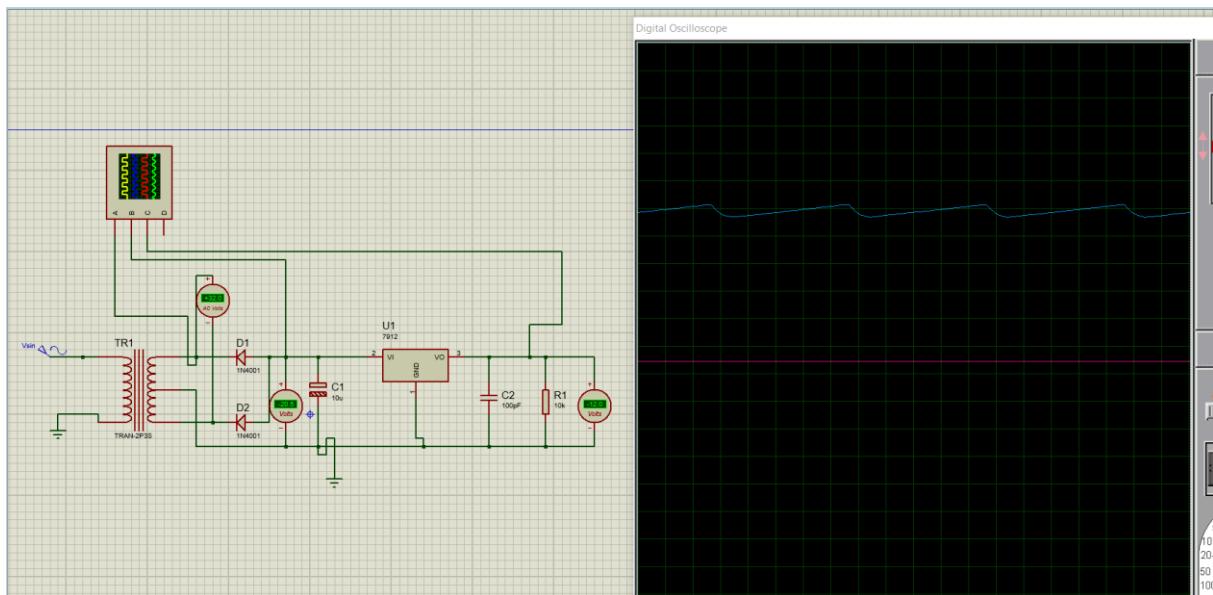
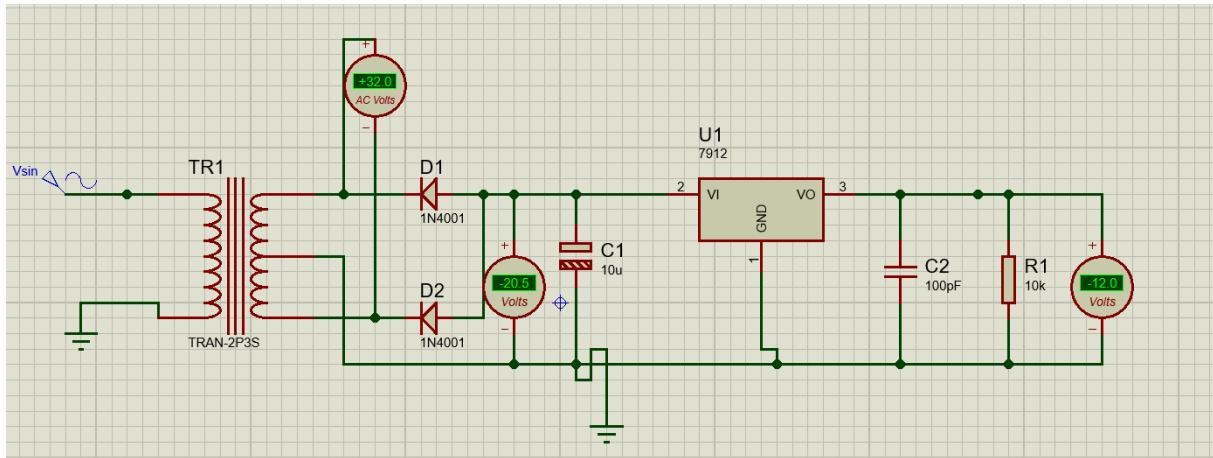
1000 μF



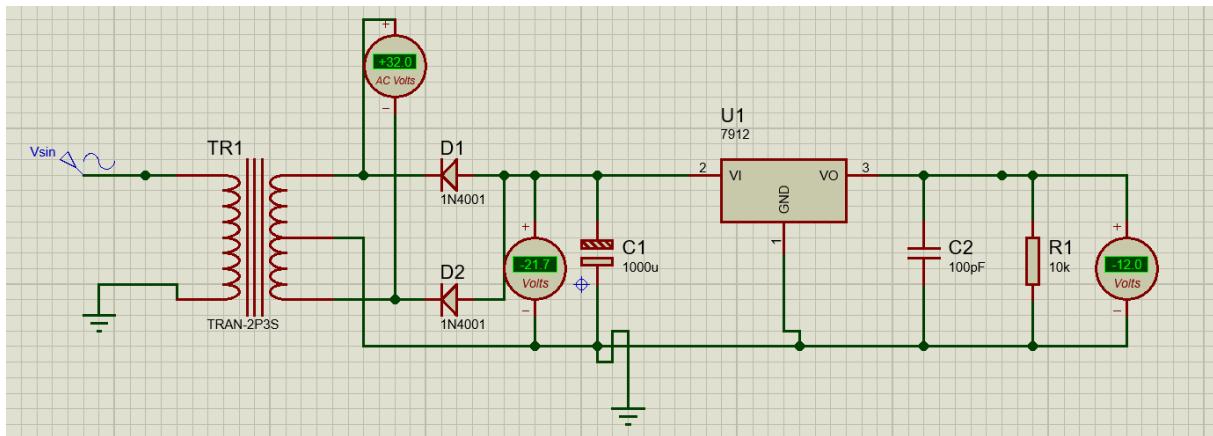
10 μF



7912 Negatif regüle entegresi-7912 Negative regulated integrated



Kondansatör çıkış yönü – Different Capacitor output direction

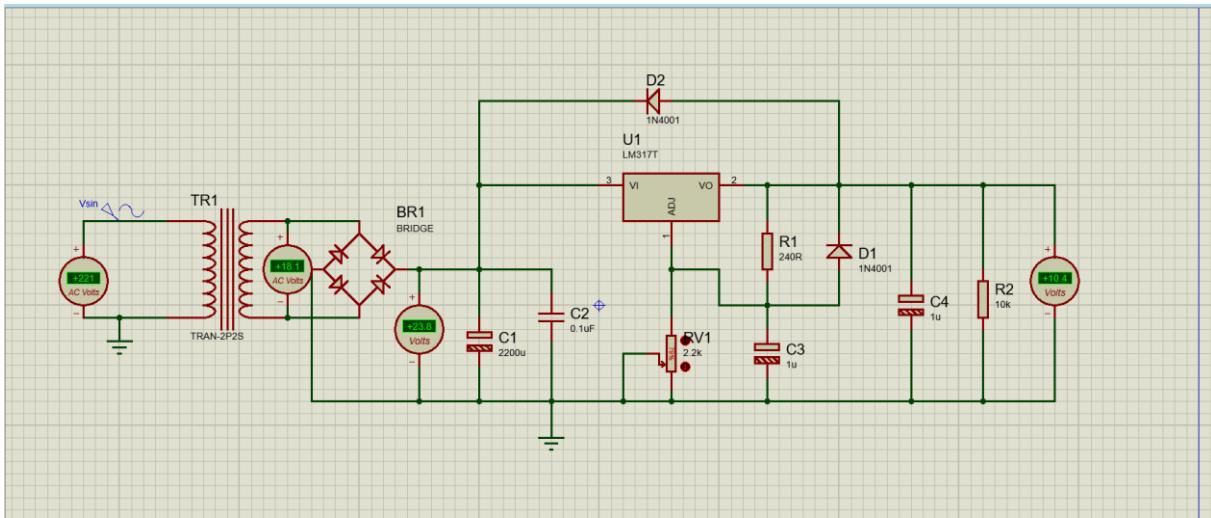


Ayarlı entegreli regüle devresi ile Ayarlı DC Gerilim elde etme

To obtain Adjustable DC Voltage with adjustable integrated regulation circuit

Pot direnç değeri artırılarak çıkış voltajı artırılabilir.

Can be output voltage increase by increasing Pot resistor values.



7812 regüle entegresi kullanarak +12v,7805 entegresi kullanarak +5v

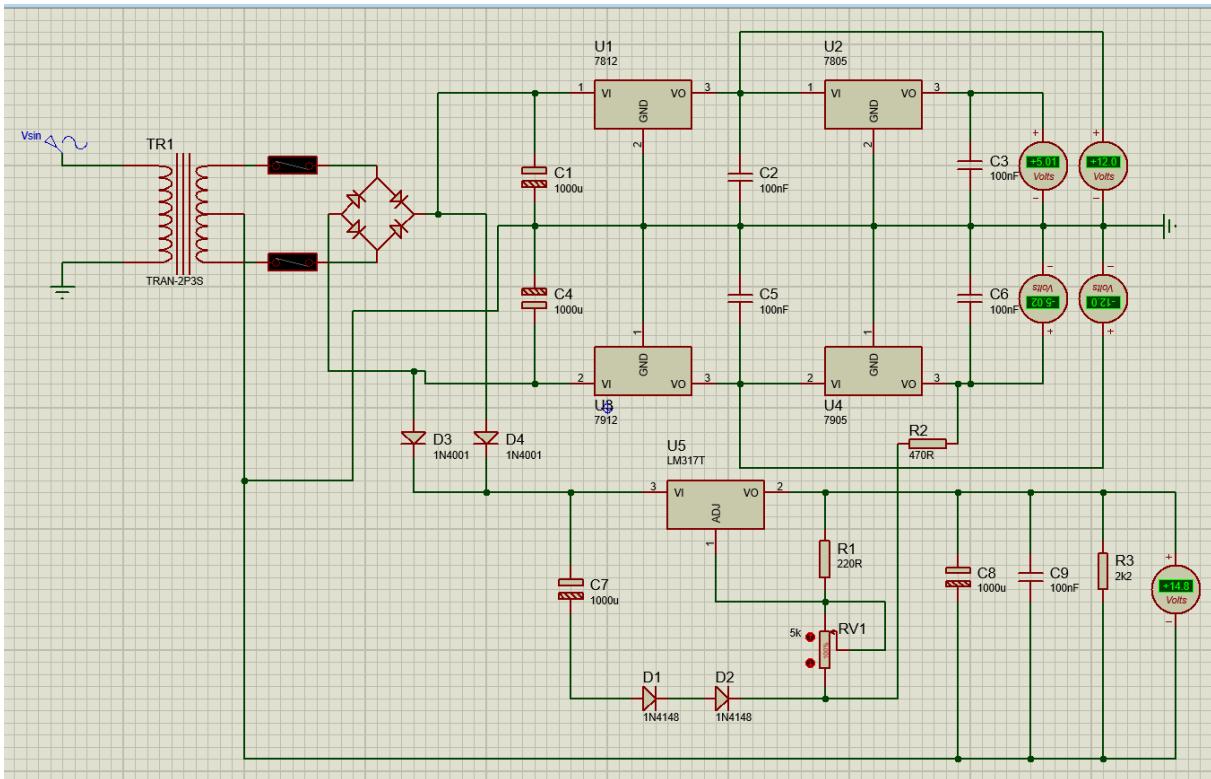
To obtain +12V, Use 7812 regulated integrated , To obtain +5V Use 7805 regulated integrated

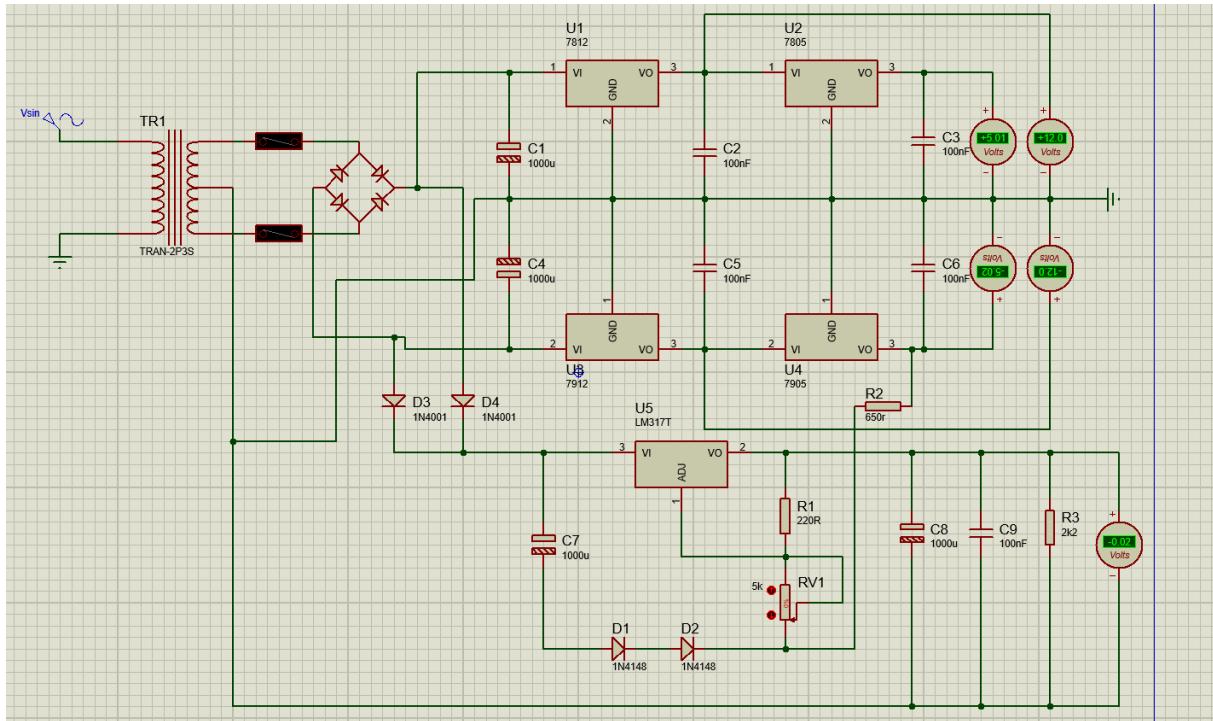
7912 regüle entegresi kullanarak -12v,7905 entegresi kullanarak -5v

To obtain -12V, Use 7912 regulated integrated , To obtain -5V Use 7905 regulated integrated

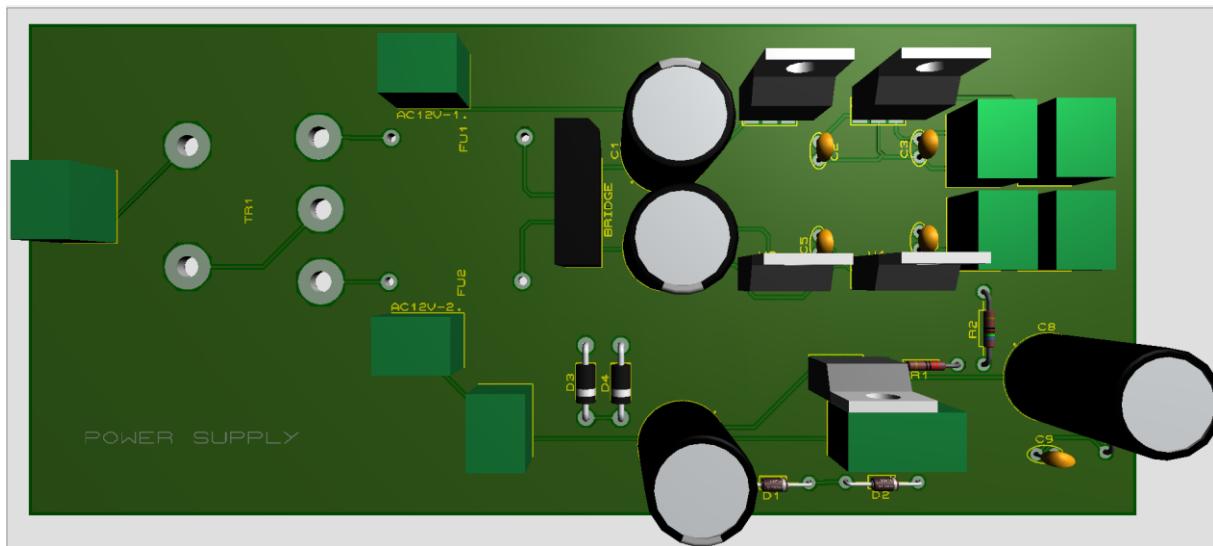
LM317T ayarlı regüle entegresi kullanarak 0-15V Sabit DC üreten elektrik devresi.

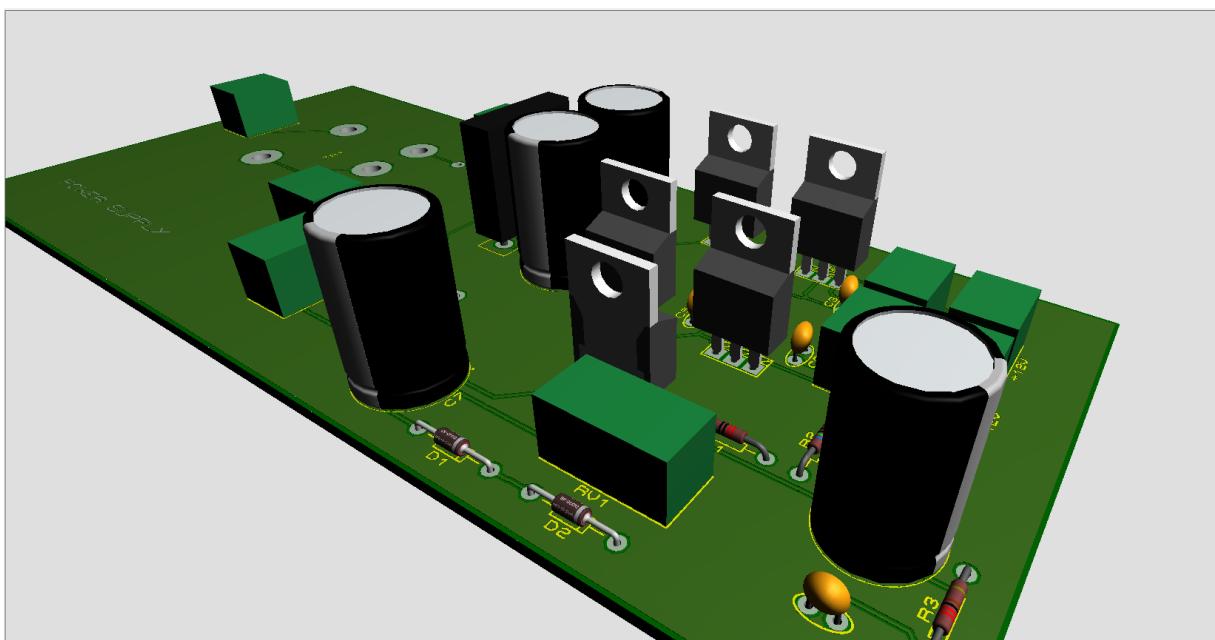
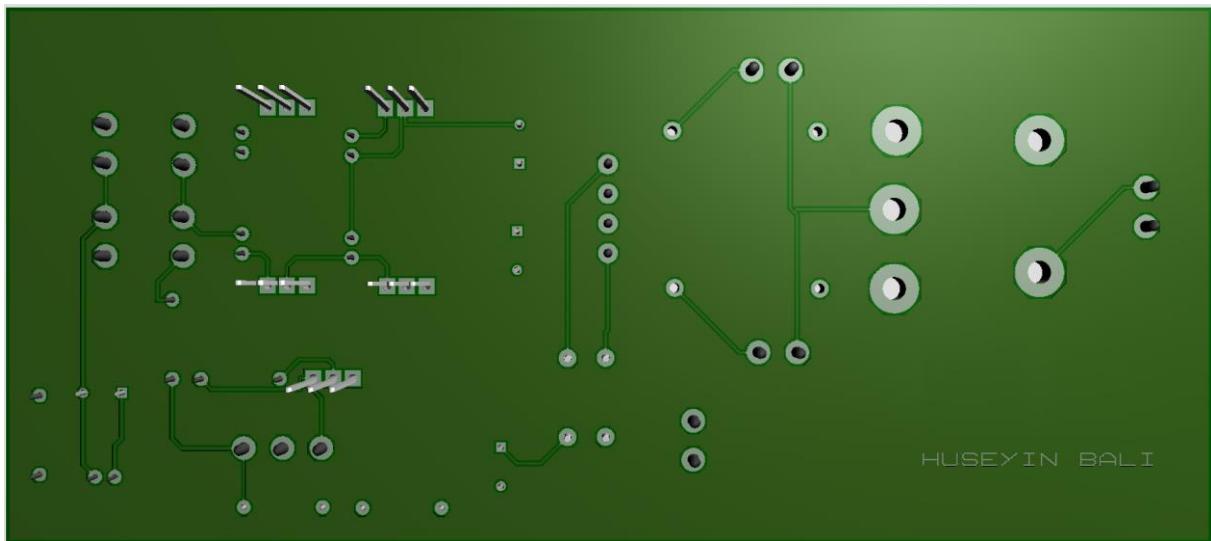
To obtain 0-15V adjustable DC generator circuit use LM317T adjustable regulated integrated.



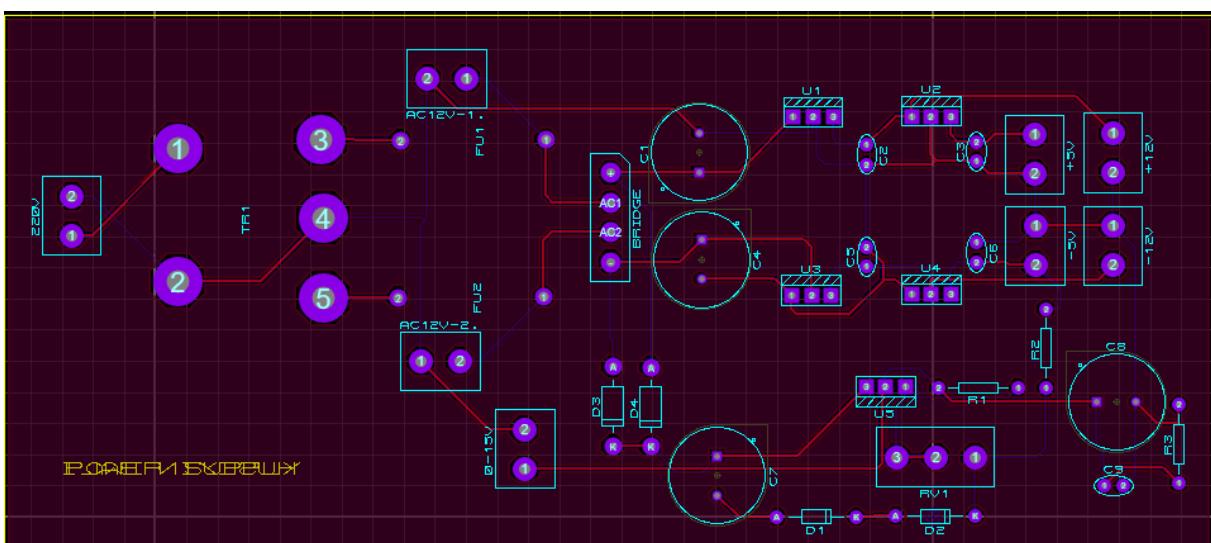


Power supply-PCB Design

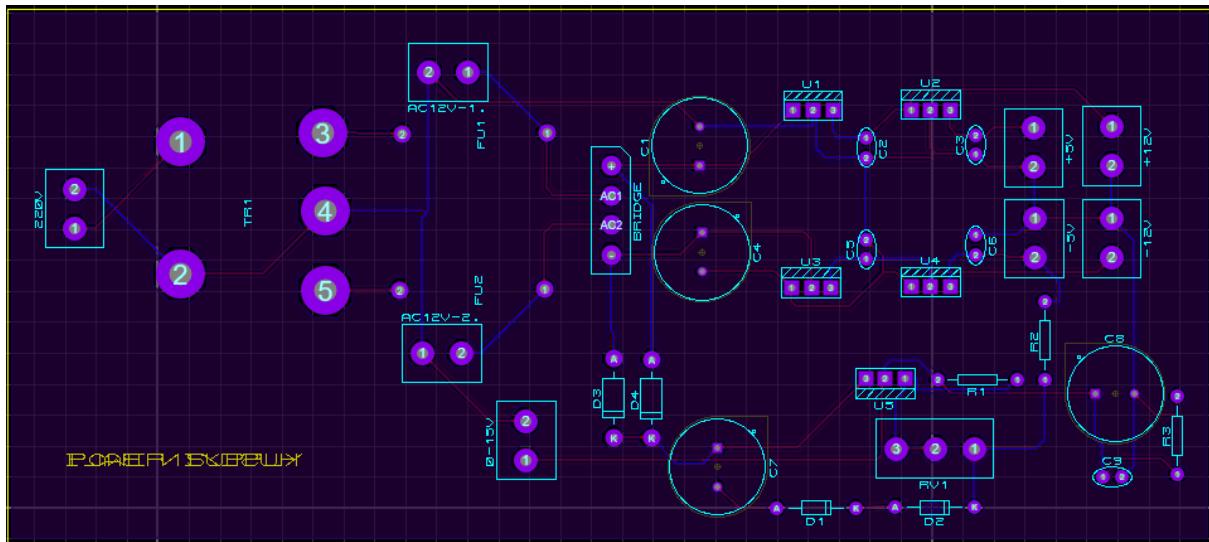




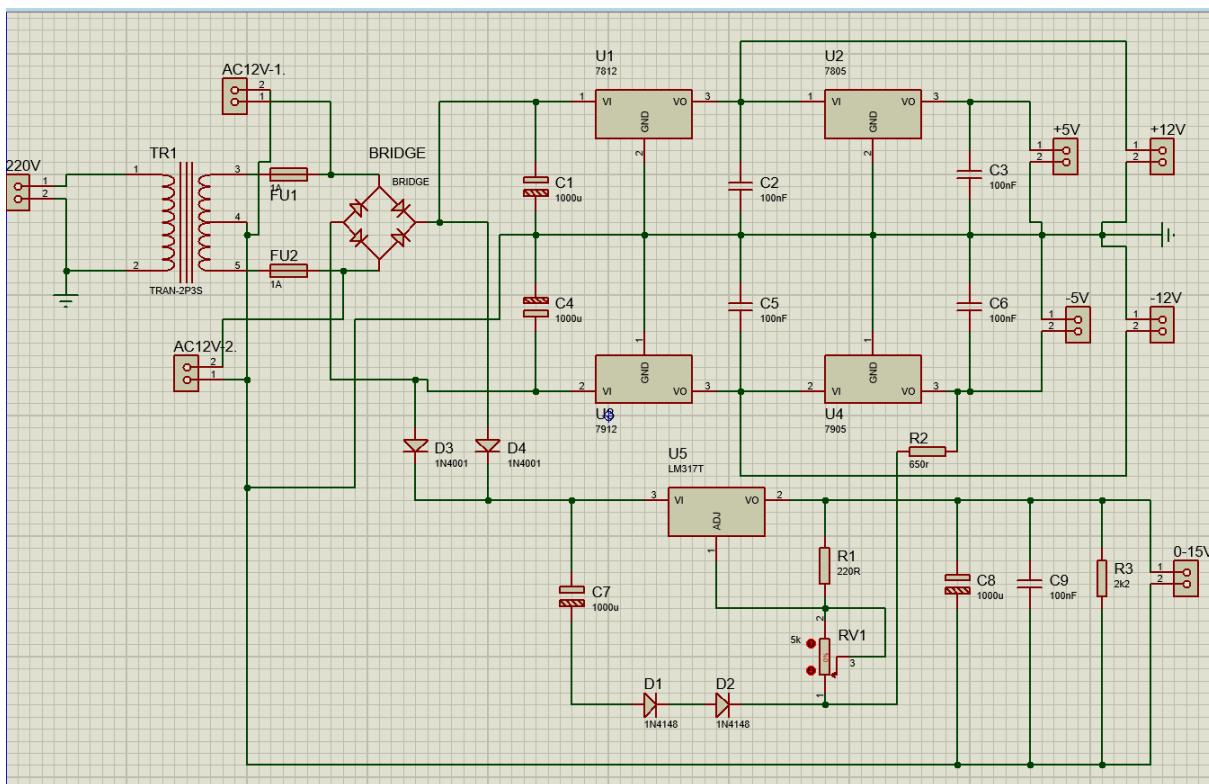
TOP Copper



Bottom Copper



Schematic Capture



Otomatik olarak oluşturulan PCB tasarımı - Automatically created PCB design

