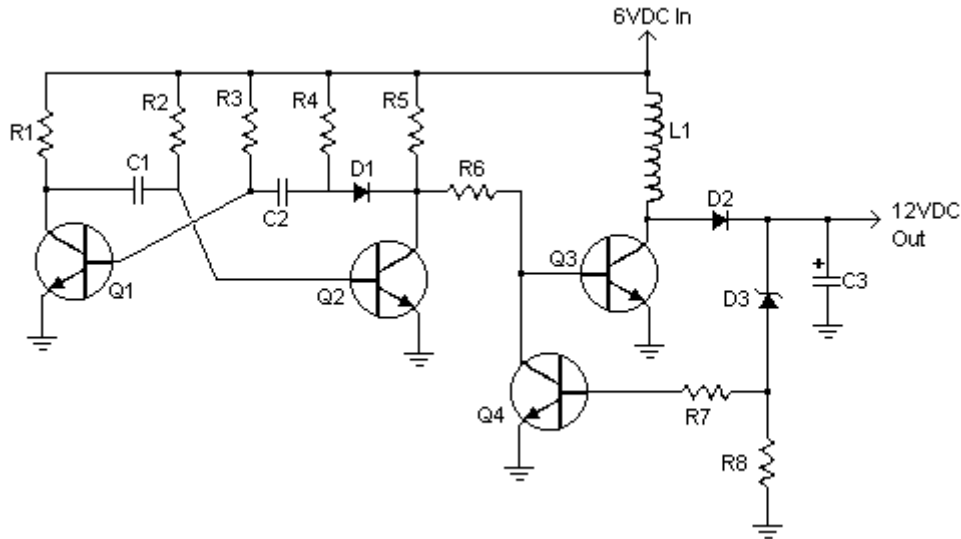




### 6V to 12V Converter



C3  
1  
470uF 25V Electrolytic Capacitor

D1  
1  
1N914 Diode

D2  
1  
1N4004 Diode

D3  
1  
12V 400mW Zener Diode

Q1, Q2, Q4  
3  
BC547 NPN Transistor

Q3  
1  
BD679 NPN Transistor

L1  
1  
See Notes

MISC  
1  
Heatsink For Q3, Binding Posts (For Input/Output),  
Wire, Board

#### Part

#### Total Qty. Description Substitutions

R1, R4  
2  
2.2K 1/4W Resistor

R2, R3  
2  
4.7K 1/4W Resistor

R5  
1  
1K 1/4W Resistor

R6  
1  
1.5K 1/4W Resistor

R7  
1  
33K 1/4W Resistor

R8  
1  
10K 1/4W Resistor

C1,C2  
2  
0.1uF Ceramic Disc Capacitor



### Notes

1. L1 is a custom inductor wound with about 80 turns of 0.5mm magnet wire around a toroidal core with a 40mm outside diameter.
2. Different values of D3 can be used to get different output voltages from about 0.6V to around 30V. Note that at higher voltages the circuit might not perform as well and may not produce as much current. You may also need to use a larger C3 for higher voltages and/or higher currents.
3. You can use a larger value for C3 to provide better filtering.
4. The circuit will require about 2A from the 6V supply to provide the full 800mA at 12V.

رسول شیری

[www.kuservice.blogfa.com](http://www.kuservice.blogfa.com)  
[kuservice@yahoo.com](mailto:kuservice@yahoo.com)