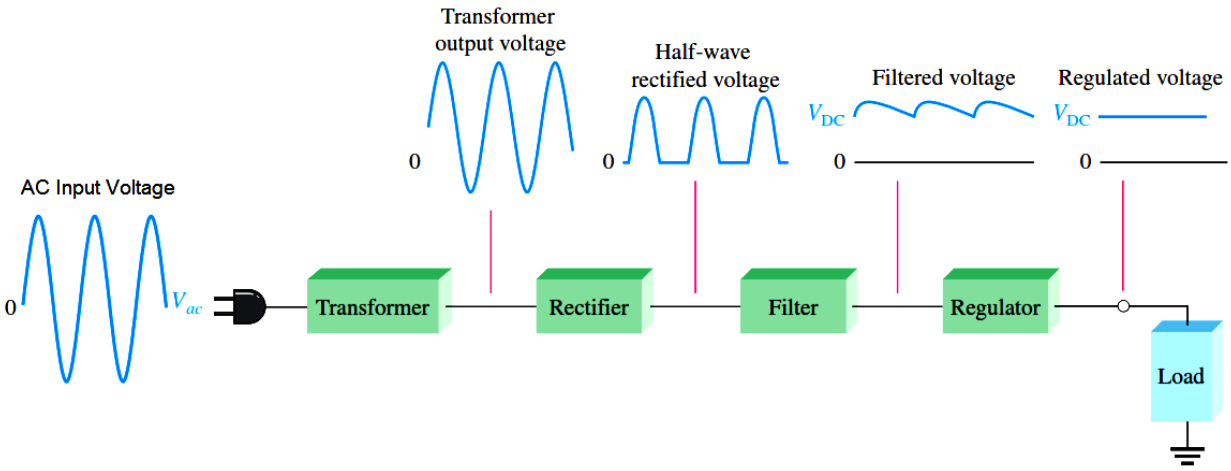
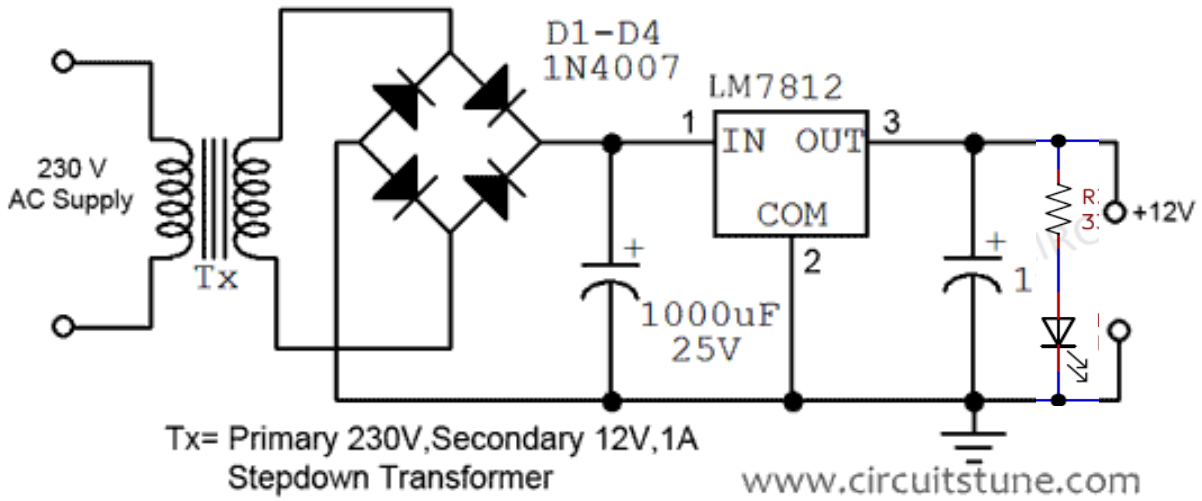
Project

Regulated Power Supply Circuit Diagram



Here this circuit diagram is for **+12V regulated (fixed voltage) DC power supply**. This **power supply circuit diagram** is ideal for an average current requirement of 1Amp. This circuit is based on IC **LM7812**. It is a 3-terminal (+ve) voltage regulator IC. It has short circuit protection , thermal overload protection. LM7812 IC is from LM78XX series. The LM78XX series IC is positive voltage regulator IC for different voltage requirements, for example LM7805 IC is made for 5 volt fixed output voltage . There is LM79XX IC series for negative voltage .



A transformer(Tx=Primary 230 Volt, Secondary 12 Volt , 1Amp step down transformer) is used to covert 230V to 12V from mains. Here used a bridge rectifier made by four 1N4007 or 1N4003 diode to convert AC to DC . The filtering capacitor 1000uF,25V is used to reduce the ripple and get a smooth DC voltage. This circuit is very easy to build. For good performance input voltage should be greater than 12Volt in pin-1 of IC LM7812. Use a heat sink to IC LM7812 for safeguarding it from overheating.