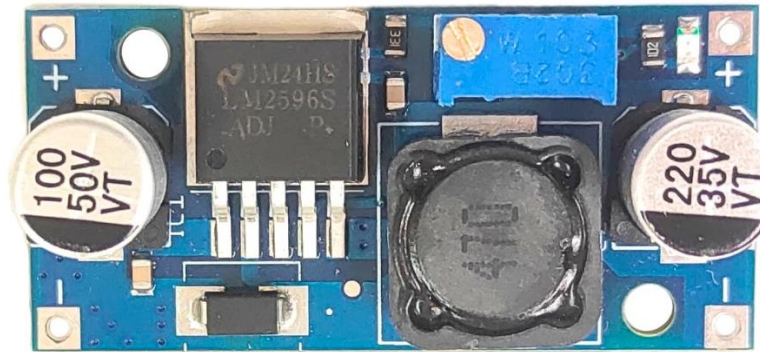




ADIY LM2596 Step Down DC-DC Buck Converter Adjustable Module



Description:

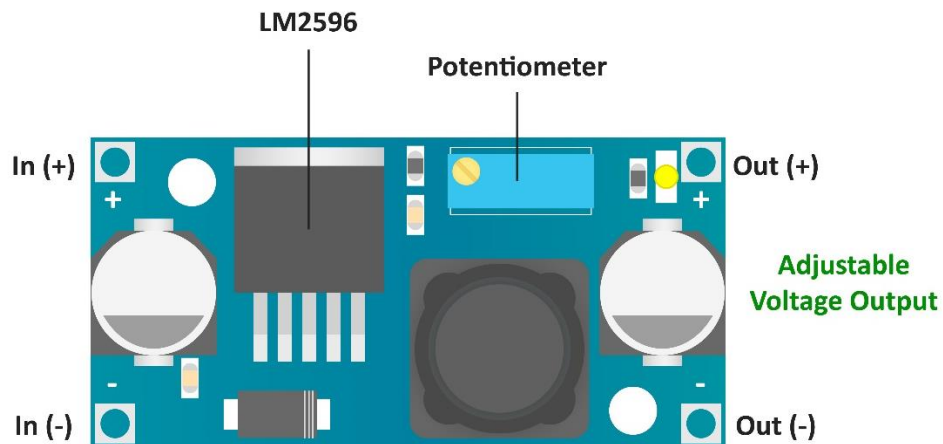
ADIY LM2596 Buck Converter module (Adjustable voltage) is an easy-to-use, nonsynchronous, step-down DC-DC converter with a wide input voltage range up to 40V. The voltage can be varied with the help of potentiometer. The module can deliver up to 3-A DC load current with excellent line and load regulation. If the current exceeds 2-A then heat sink is required. The input should be maintained always greater than required output. Since LM2596 converter is a switch-mode power supply, its efficiency is significantly higher in comparison with popular three-terminal linear regulators, especially with higher input voltages.

The LM2596 operates at a switching frequency of 150 kHz thus allowing smaller sized filter components than what would be needed with lower frequency switching regulators. Other features include a $\pm 4\%$ tolerance on output voltage under specified input voltage and output load conditions, and $\pm 15\%$ on the oscillator frequency. External shutdown is included, featuring typically 80 μ A standby current. Self-protection features include a two stage frequency reducing current limit for the output switch and an over temperature shutdown for complete protection under fault conditions.

Specifications and Features:

1. Input Voltage: 3.2V- 40V DC
2. Output Voltage: 1.25V- 35V DC
3. Output Current: 2A, Max 3A (Additional Heat Sink is required)
4. Rectification: Non-Synchronous Rectification.
5. Thermal shutdown and current-limit protection.
6. Excellent line and load regulation specifications.
7. High efficiency.
8. TTL shutdown capability.
9. Low power standby mode, I_Q , typically $80\mu A$

Pin Configuration:



IN+ VCC or VIN (4.5V - 40V)

IN- Ground, GND or V-

OUT+ Positive voltage of the power distribution circuit or a component powered

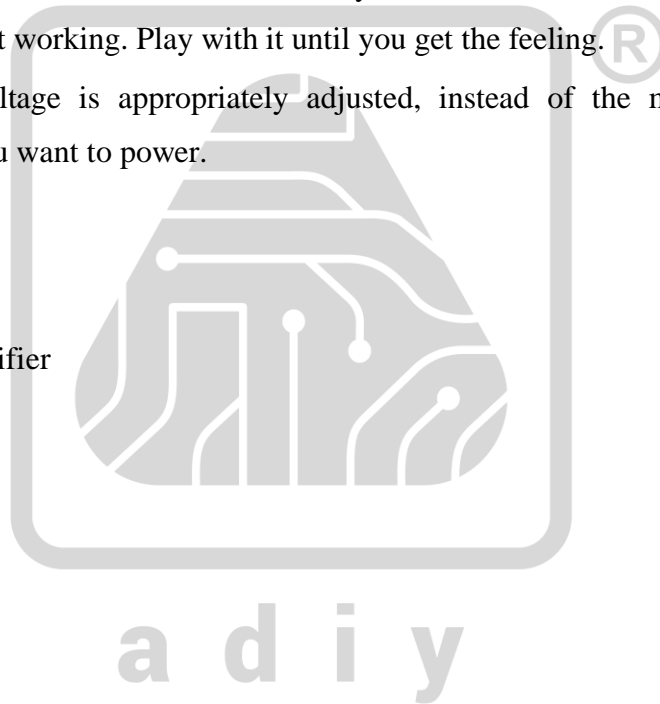
OUT- Ground of the power distribution circuit or a component powered

How it works:

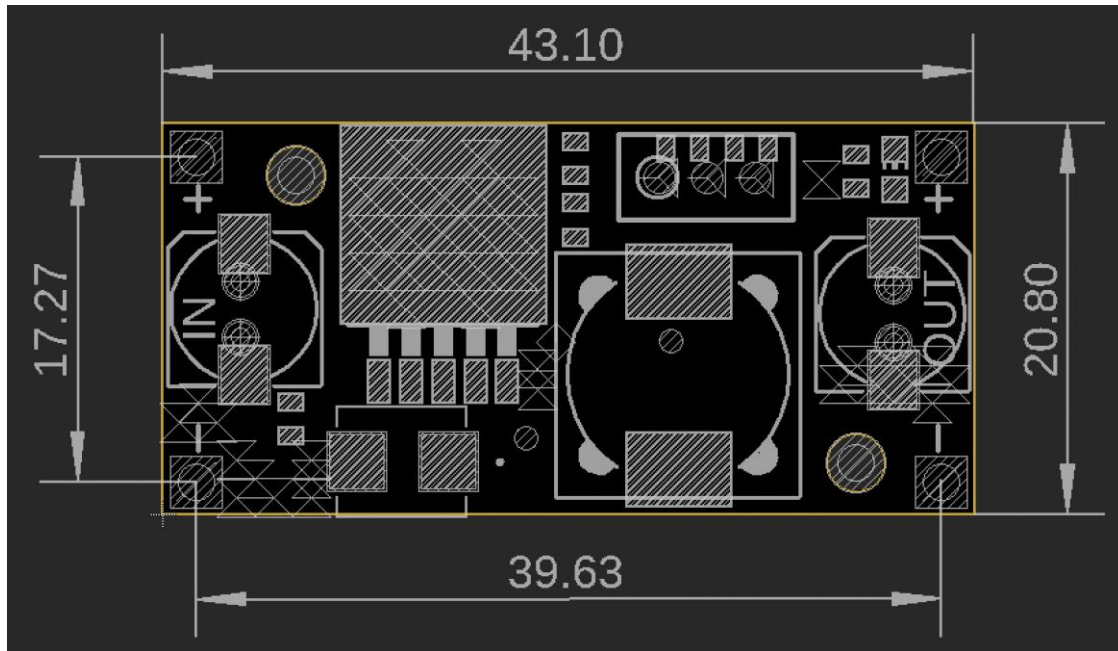
- Connect the converter with the battery or other power source. Know how much voltage you have inputted in the converter.
- Set the multimeter to read the voltage and connect the output of the converter to it. Now you can already see the voltage on the output.
- Adjust the trimmer with a tiny screwdriver until the voltage is set to the desired output. Feel free to turn the trimmer in both directions to get the feeling how to work with it. Sometimes when you use the converter for the first time you will have to rotate the trimmer screw 5-10 full circles to get it working. Play with it until you get the feeling.
- Now that the voltage is appropriately adjusted, instead of the multimeter connect the device/module you want to power.

Advantages:

- Power audio amplifier
- Solar charger
- Battery charger
- Quad Copters



Dimensions:



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