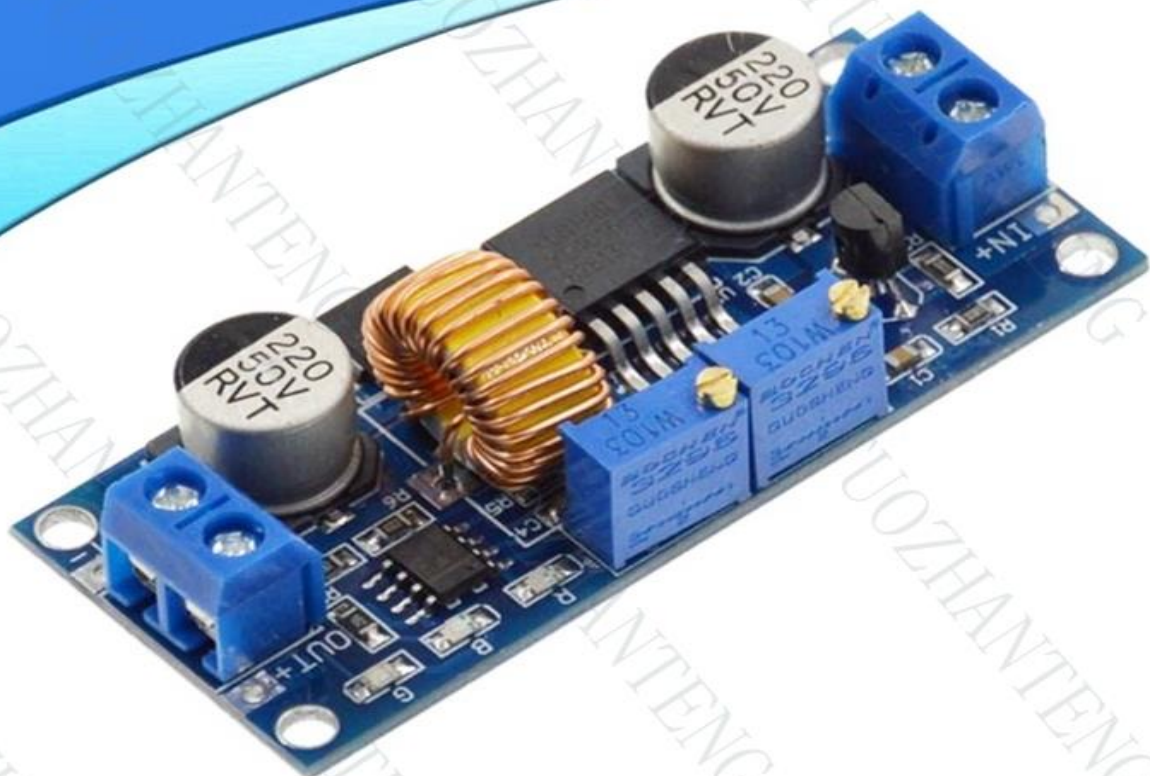


5A DC to DC CC CV Power Converter Step Down Module XL4015

constant voltage constant current

5A

High power, high efficiency, low ripple



Specifications

1. High power, high efficiency, 5A, low ripple;
 2. Three major functions:
 - (1) as a general step-down module with overcurrent protection capability;
 - (2) as a variety of voltage lithium batteries, nickel-cadmium nickel-metal hydride batteries
- Charger used for solar panels, wind turbines and other occasions;
- (3) as a high power LED constant current drive module used;
 3. With constant voltage and constant current mode, the indicator light indicates which mode;
 4. As a lithium battery charger to use, you can set the float voltage and charge current Small, indicating whether the indicator is being charged or filled;
 5. With current limiting protection function, even if the output short circuit will not burn the module.

Application

1

As an overcurrent protection step-down module

- (1) adjust the "voltage potentiometer" so that the output voltage reaches the value you want.
- (2) use a multimeter to measure the output short-circuit current with 10A stalls, while regulating the "current potentiometer" so that the output current reaches a predetermined overcurrent protection value. (For example, the meter displays the current value of 4A, then you can use the module to a maximum current of 4A)
- (3) Connected to the load.

2

Use as a battery charger

- (1) Make sure you need to charge the battery float voltage and charging current; (if lithium parameters 3.7V/2200mAh, then the float voltage is 4.2V, the maximum charging current 1C, ie 2200mA)
- (2) Under no-load conditions, adjust the "Voltage potentiometer" so that the output voltage reaches the float voltage; (if to 3.7V rechargeable lithium battery, the output voltage can be adjusted to 4.2V)

- (3) use a multimeter to measure the output short-circuit current with 10A stalls, while regulating the “current potentiometer” so that the output current reaches a predetermined Charging current value.
- (4) Charge turn lamp current factory default is 0.1 times the charging current; (Battery during charging current is gradually reduced, if the charge current setting is 1A, then when the charge current is less than 0.1A, blue lights turned off, the green light is on, which means that the battery is fully charged)
- (5) connected to the battery charge.

3

As LED constant current driver

- (1) adjust the “voltage potentiometer” so that the output voltage reaches the value you want.
 - (2) use a multimeter to measure the output short-circuit current with 10A stalls, while regulating the “current potentiometer” so that the output current reaches a predetermined LED operating current.
 - (3) Connect LED, work.
- (1,2 steps as: Output is unloaded, do not connect LED)

Product parameters

Input voltage range:	6~38VDC (Note: input voltage not exceeding 38V)
Output voltage range:	1.25~36VDC adjustable
Output current:	0~5A
Output power:	75W (High efficiency up to 96%)
thermal shutdown function	YES
current limit function	YES
output short protection	YES
Input reverse polarity	None (if required, high current diode in series with the input).
Size:	61.7*26.2*15mm (L x W x H)
Weight:	20g
Package:	Electrostatic bag packaging

NOTE

When you use the product, the module inputs and outputs to be isolated from ground!!!

Product analysis

Voltage regulation:

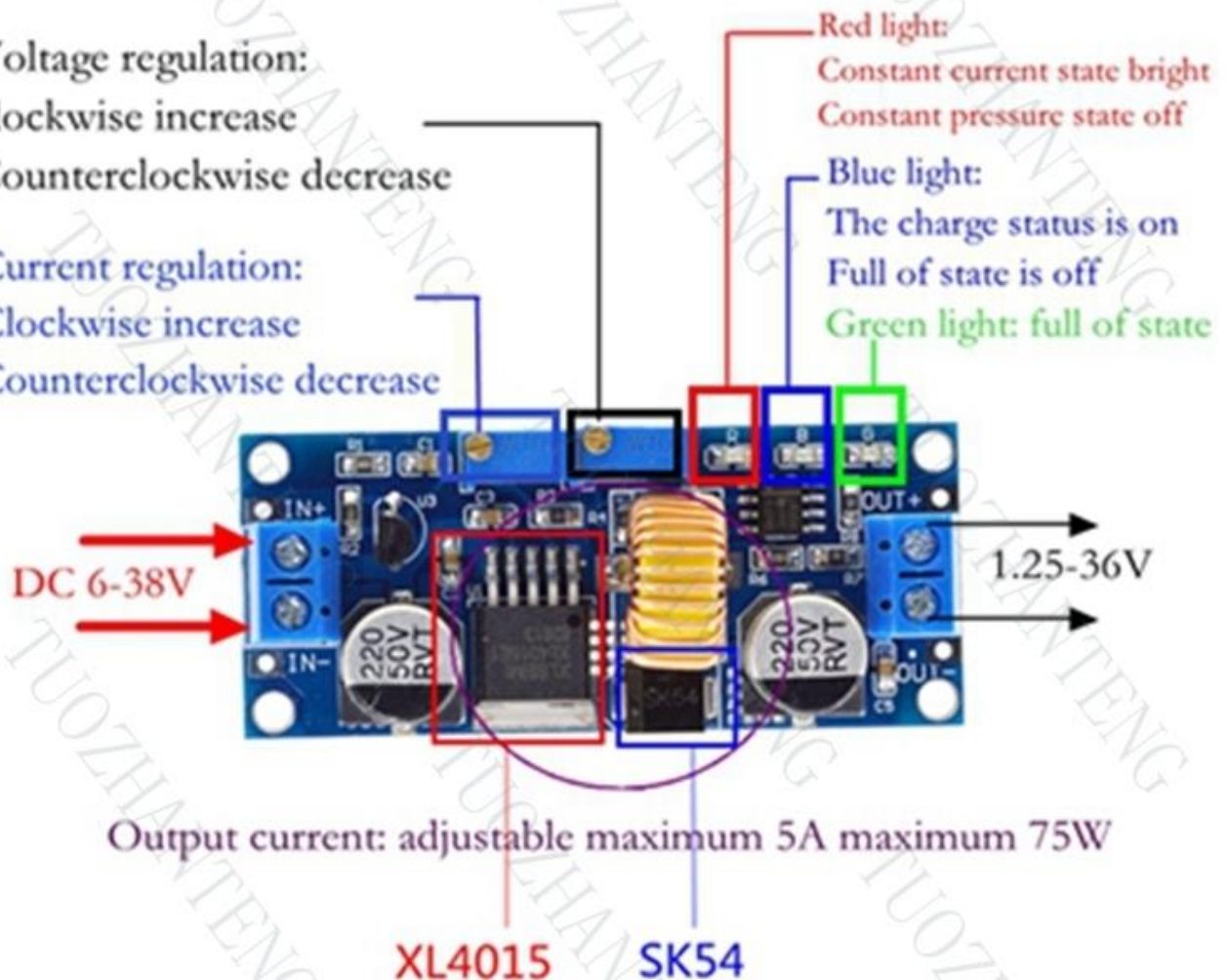
clockwise increase

Counterclockwise decrease

Current regulation:

Clockwise increase

Counterclockwise decrease



**The back of a large area
of copper to help heat better**

XL4015

Datasheet

5A 180KHz 36V Buck DC to DC Converter

XL4015

Features

- Wide 8V to 36V Input Voltage Range
- Output Adjustable from 1.25V to 32V
- Maximum Duty Cycle 100%
- Minimum Drop Out 0.3V
- Fixed 180KHz Switching Frequency
- 5A Constant Output Current Capability
- Internal Optimize Power MOSFET
- High efficiency up to 96%
- Excellent line and load regulation
- Built in thermal shutdown function
- Built in current limit function
- Built in output short protection function
- Available in TO263-5L package

General Description

The XL4015 is a 180-KHz fixed frequency PWM buck (step-down) DC/DC converter, capable of driving a 5A load with high efficiency, low ripple and excellent line and load regulation. Requiring a minimum number of external components, the regulator is simple to use and include internal frequency compensation and a fixed-frequency oscillator.

The PWM control circuit is able to adjust the duty ratio linearly from 0 to 100%. An over current protection function is built inside. When short protection function happens, the operation frequency will be reduced from 180KHz to 48KHz. An internal compensation block is built in to minimize external component count.

Applications

- LCD Monitor and LCD TV
- Portable instrument power supply
- Telecom / Networking Equipment

SK54

Silicon epitaxial planer type

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 Utilizing Flame Retardant Epoxy Molding Compound.
- For surface mounted applications.
- Exceeds environmental standards of MIL-S-19500 / 228
- Low leakage current

Mechanical data

Case : Molded plastic, JEDECDO-214AA
 Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
 Polarity : Indicated by cathode band
 Mounting Position : Any
 Weight : 0.00878 ounce, 0.293 gram

