The new model features an optimized circuit structure compared to the previous version, ensuring more stable power operation. Additionally, it includes
Enable anti-reverse input protection (using 150A MOS anti-reverse) and low battery (low voltage) protection, with adjustable low battery protection voltage from 9-50V to accommodate various batteries. When using battery power, do not neglect battery depletion, as it may damage the power module and battery.
Power specifications: This power supply has a maximum input current of 20A. The output power depends on the input voltage—the higher the voltage, the greater the power. For example, a 12V*20A input delivers 240W, while a 24V*20A input provides 480W, which is the maximum power output. Due to limited heat dissipation capacity, if the input voltage exceeds 10A or the output current reaches 10A, install a 12V fan for cooling.

Module parameters:
Module model: SZ-BT07CCCV-A
Module Name: 1200W Boosting Constant Current Module
Module type: Non-isolated boost module (BO0ST)
Input voltage: DC10-60V (direct input of 10-60V without jumper cap for voltage selection)
Input current: 20A (MAX). If the current exceeds 15A, add a fan for cooling (the fan can handle up to 25A when the input voltage is between 12-24V).
Static operating current: 15mA (increased when the output voltage rises from 12V to 20V)
output voltage 12-80V continuously adjustable
Output current: 18A. If the maximum current exceeds 10A, enhance heat dissipation (this is related to the input-output voltage difference; the greater the voltage difference, the lower the output current).
Constant current range: 0.5-18A (+/-0.3A)
Anti-reverse input: Yes (150A power MOS anti-reverse)
Low battery protection: available (9-50V adjustable)
Operating temperature: -40~+85°C (Enhance heat dissipation when ambient temperature is excessively high)
Working frequency: 150KHz
Conversion efficiency: 92%-97% (efficiency depends on input and output voltage, current, and voltage difference; higher efficiency is achieved with smaller voltage difference)
Overcurrent protection: Yes (If input exceeds 25A, automatic protection activates and the power supply does not boost voltage)
Short-circuit protection: Features dual protection (with 30A input fuse) for enhanced safety.
Reverse protection input: Yes (150A power MOSFET reverse protection, supports prolonged reverse connection)
Installation method: 4 x 3mm copper posts

Wiring method: Use terminal blocks (with high-current pure copper wire)
Module dimensions: 130mm long, 52mm wide, and 53mm high
Single module weight: 300 grams
Output power:
The input voltage is 20A, for example: 12V × 20A = 240W. The maximum power output is 240W when the input voltage is 12V.
Input voltage × 20A. For example, 24V × 20A = 480W, meaning the maximum power output is 480W at 24V input.
Note: The maximum power is 240W at 12V,480W at 24V, and 720W at 36V.
The power supply features a robust design with 4 high-frequency low-impedance electrolytic capacitors (63V/470UF) at the input and 3100V/470UF capacitors at the output. Its 33mm ultra-high-power iron-silicon-aluminum magnetic ring is wound with 3 strands of 1.2mm pure copper wire to prevent magnetic saturation under high current conditions. A 116mm×58mm×14mm aluminum heat sink with 5mm×5mm×15mm mounting holes for 5015 fans ensures efficient cooling. The imported power management chip provides continuous adjustable output voltage and current.

applied range ：
1. Build a DIY voltage regulator with a 12V input and adjustable output ranging from 12V to 80V.
2. Power your electronic devices and set the output value according to your system voltage.
3. As a vehicle-mounted power supply, it powers your laptop, PDA, or other digital devices.
4. DIY a high-capacity laptop power bank: With a large 12V lithium battery pack, your laptop stays powered wherever you go.
5. Solar panel voltage stabilization.
6. Charge batteries, including lithium batteries.
7. Drive high-power LED lights.
usage method ：
voltage adjustment
When the power is on and the device is unloaded, use a one-way screwdriver to adjust the output 'V-ADJ' potentiometer (marked in the diagram) clockwise for higher voltage and counterclockwise for lower voltage. Due to the large capacitance of the output capacitor, the voltage response becomes slower when decreasing from high to low levels. The adjustment range for the Jianyi device is slightly smaller.
Current adjustment:
Clockwise adjust the "A-ADJ" potentiometer 30 turns to set the output current to a low level. Connect the LED and clockwise adjust the "A-ADJ" potentiometer to your desired current. For battery charging, first discharge the battery completely before connecting it to the output. Set RV2 to your required current. Note: Always use a fully discharged battery for charging, as higher residual charge results in lower charging current. Important warning: Never adjust current using a short-circuit output method. The boost module's circuit structure cannot be modified through short-circuit adjustments.
Enter low battery protection setting:
Low battery protection is designed to prevent over-discharge when the input power source is a battery, which could damage both the power module and the battery. For example, setting the low battery protection to 12V. Connect a 10V voltage to the power module's input and adjust RV1 with a screwdriver (increase clockwise to raise the protection voltage, decrease counterclockwise to lower it) until the UVLO light illuminates. At this point, the low battery protection voltage is set to 10V. When the battery voltage drops to 10V, the power module will not increase its output voltage (the input voltage equals the output voltage).
matters need attention ：
1 The input voltage must be at least 10V.
2. When using a switching power supply as the input power source, first connect the input power and adjust the voltage under no-load conditions. Then connect the load (ensure the switching power supply remains continuously operational). Alternatively, adjust the voltage under no-load conditions first, then disconnect the switching power supply before connecting the load. Connect the switching power supply to the power module while it is on (since the switching power supply has a rise time. When the voltage drops below 10V, the chip remains inactive, which can easily cause MOSFET breakdown).