



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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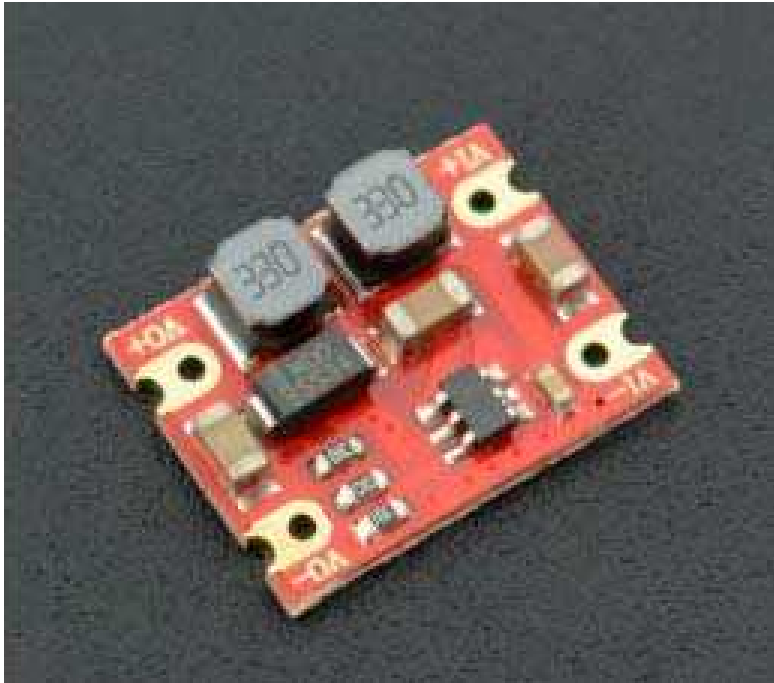
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**DFROBOT**  
DRIVE THE FUTURE



## DC-DC Automatic Step Up-down Power Module (2.5~15V to 3.3V 600mA)

SKU:DFR0568

### *INTRODUCTION*

This power module contains the function of automatic buck-boost and integrates with the related circuit of buck-boost converter. Its mini body is very easy for embedding.

Input voltage range 2.5-15V, fixed output voltage 3.3V, the maximum load current is 0.6A and its quiescent current is as low as 200uA. In theory, the work frequency of the module can reach to 1.2MHz. Besides, it has steady output voltage, which can work long time without voltage shift and is suitable for the occasions with high requirements. You can use this power module to DIY mobile power bank and provide constant power for your project.

### *FEATURES*

- Small size, stable performance, wide voltage range for a variety of DIY applications

## APPLICATIONS

Power supply for controller main-board, DIY current source, floodlight, DIY toy car, communication device, digital radio.

Serial number	Name	Direction	Application
1	Vo+	output	Output positive current source
2	Vo-	output	Ground wire, output port current source reference
3	Vi-	input	Ground wire, link to current source reference
4	Vi+	input	Power supply input:2.5-15Vdc

Figure1. Interface Description

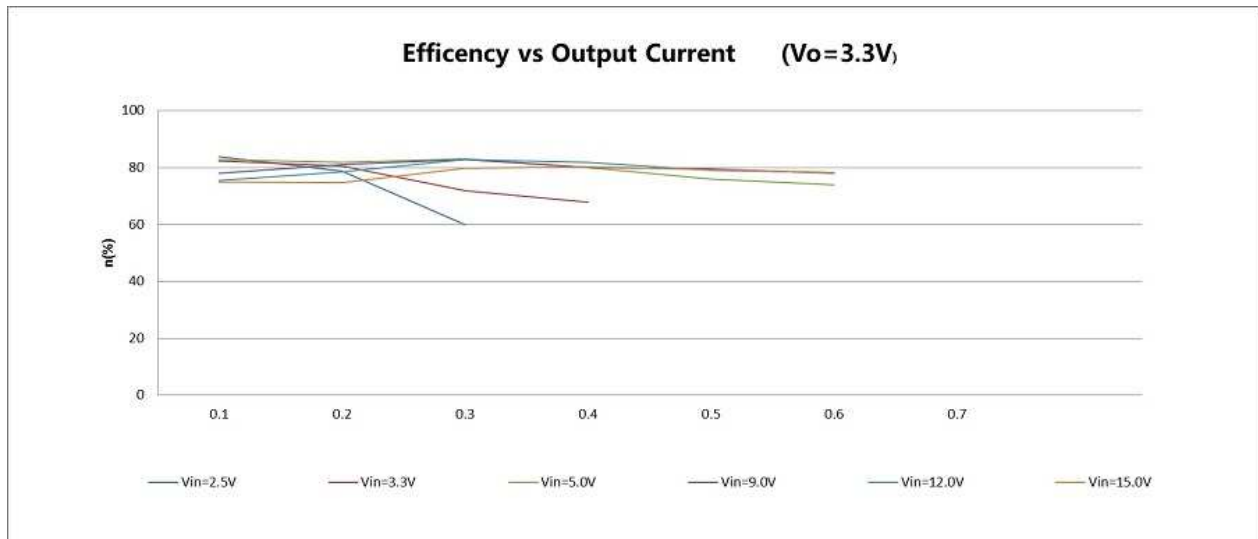


Figure2. Typical Performance Characteristics(Conversion)

## SPECIFICATION

- Input Voltage: 2.5~15Vdc
- Output Voltage: 3.3V
- Output Accuracy:  $\pm 0.1V$
- The Maximum Output Peak Current: 600mA
- Full-load Output Ripple:  $V_{pp} < 50mV$
- No-load Current:  $I_Q \ 180\mu A$



- Switch-off Function: Not Support
- Operating Temperature: -40°C ~ +85°C
- Operating Humidity: 20% ~ 90% relative humidity, no condensation
- Storage Temperature: -40°C ~ +125°C
- Installation Method: Chip-mounting
- With or Without Isolation: Without Isolation
- Service Life: 30000h
- Dimension : 17×13mm/0.67×0.51inch

**NOTE**

1. The input voltage must within 15V.
2. Load current should not be in 600mA or above for a long time, otherwise it will affect the service life of the module and even burn out.
3. If the load current is relatively high, you should increase the minimum input voltage to ensure normal operation.

*SHIPPING LIST*

- DC-DC Automatic Step Up-down Power Module (2.5~15V to 3.3V600mA) x1

