

## DC-DC Automatic Step Up-down Power Module (3~15V to 5V 600mA)

SKU:DFR0569

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### *INTRODUCTION*

This power module contains the function of automatic buck-boost and integrates with the related circuit of buck-boost converter. Its size is just as same as a dime, which is very easy for embedding.

Input voltage range 3~15V, fixed output voltage 5V, 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. The maximum conversion can reach to 85%. So it is suitable for the occasions with high requirements. You can use this power module to DIY mobile power pack and provide constant power for your projects.

## 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

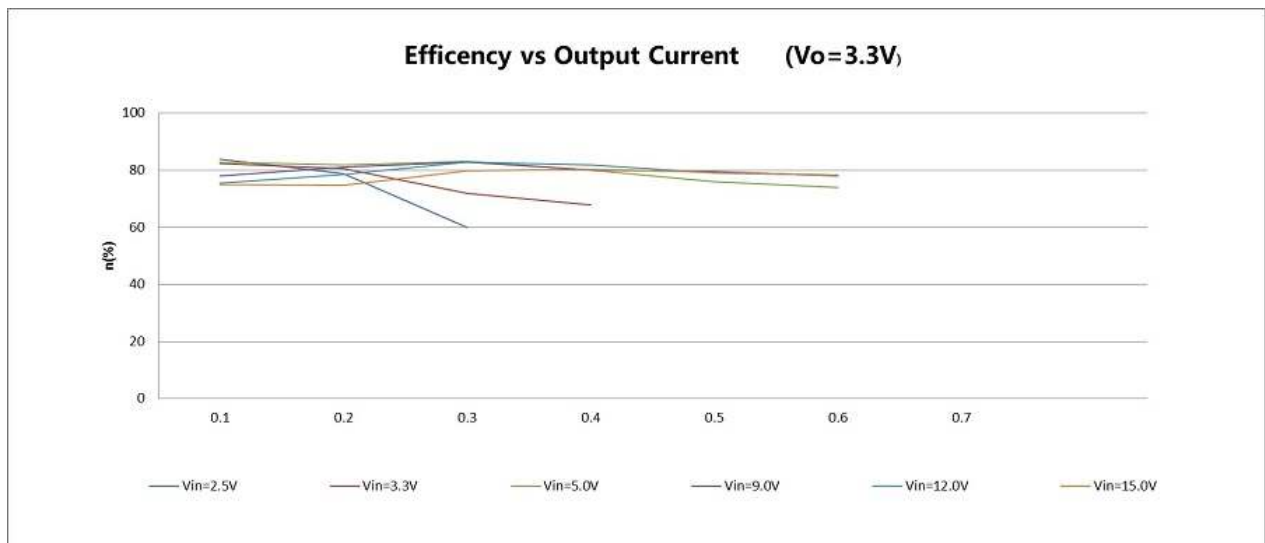


Figure2. Typical Performance Characteristics(Conversion)

## *SPECIFICATION*

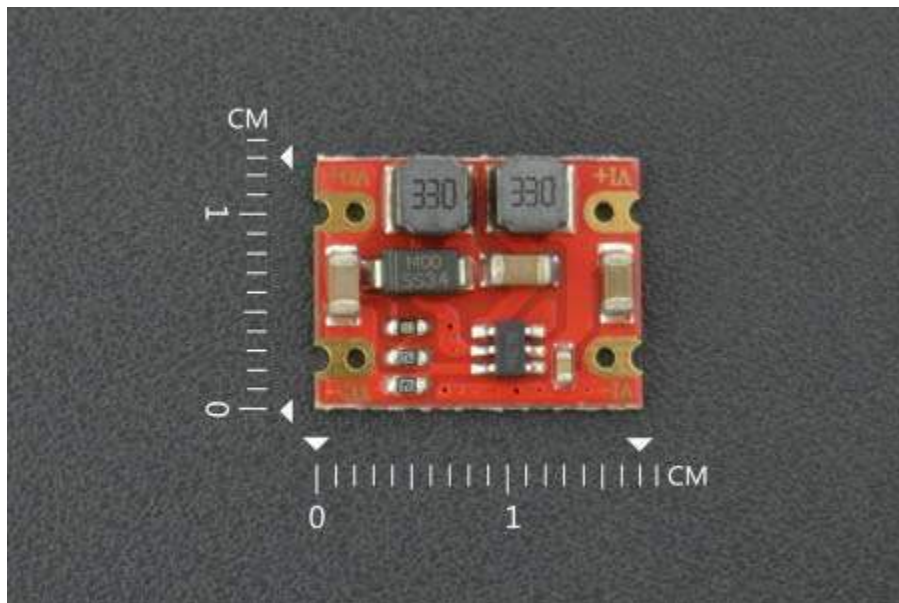
- Input Voltage: 3~15Vdc
- Output Voltage: 5V
- Output Accuracy:  $\pm 0.1V$
- The Maximum Output Peak Current: 600mA
- Full-Load Output Ripple:  $V_{pp} < 50mV$
- No-Load Current:  $I_Q$  180uA
- Switch-Off Function: Not Support
- Operating Temperature:  $-40^{\circ}C \sim +85^{\circ}C$
- Operating Humidity: 20% ~ 90% relative humidity, no condensation
- Storage Temperature:  $-40^{\circ}C \sim +125^{\circ}C$
- 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 (3~15V to 5V 600mA) x1



<https://www.dfrobot.com/product-1766.html> 8-7-18