



ZHEJIANG UNIÜ-NE Technology CO., LTD

浙江宇力微新能源科技有限公司



## U3505C Data Sheet

V 1.1

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## 150V Input, 1.5A, Switching Current Limit Step-Down Converter

### General Description

The U3505C is a high-voltage, step-down, switching regulator that delivers up to 1.5A of max current to the load. It integrates a high-side, high-voltage, power MOSFET with a current limit of 2A, typically. The wide 9V to 150V input range accommodates a variety of step-down applications, making it ideal for automotive, industry, and lighting applications. Hysteretic voltage-mode control is employed for very fast response. UNI's proprietary feedback control scheme minimizes the number of required external components.

The switching frequency is 150KHz, allowing for small component size. Thermal shutdown and short-circuit protection (SCP) provide reliable and fault-tolerant operations. Low quiescent current allows the U3505C to be used in battery-powered applications.

The U3505C is available in a ESOP-8 package with an exposed pad.

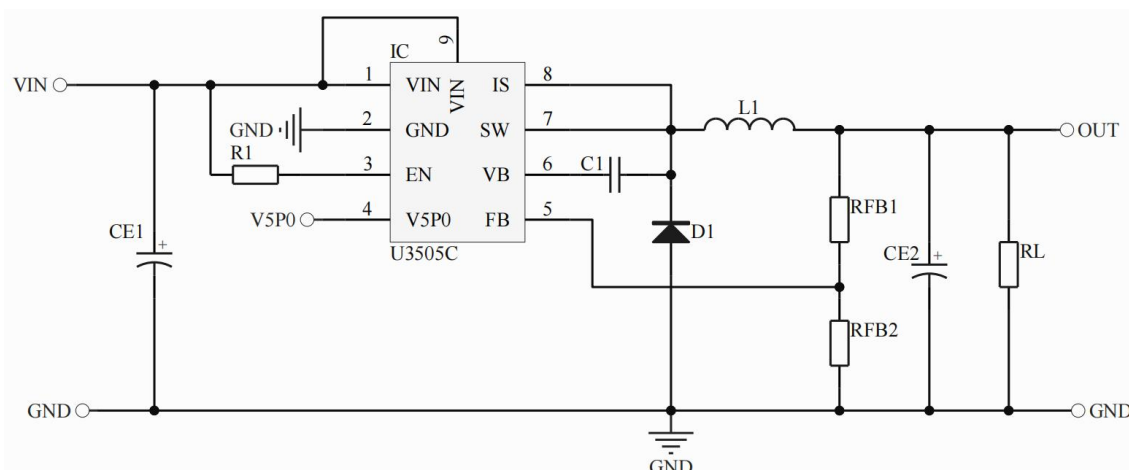
### Key Features

- Integrated 200V high voltage start circuit
- Integrated 5V reference
- Built-In 150V/850mΩ MOSFET
- Built-in Bootstrap Diode
- Hysteretic Control: No Compensation
- 150KHz Switching Frequency
- PWM Dimming Control Input for step-down Application
- Short-Circuit Protection (SCP) with Integrated High-Side MOSFET
- Low Quiescent Current
- Thermal Shutdown
- Available in a ESOP-8 Package with an Exposed Pad

### Applications

- Scooters, E-Bike Control Power Supplies
- Solar Energy Systems
- Automotive System Power
- Industrial Power Supplies
- High-Power LED Drivers
- USB

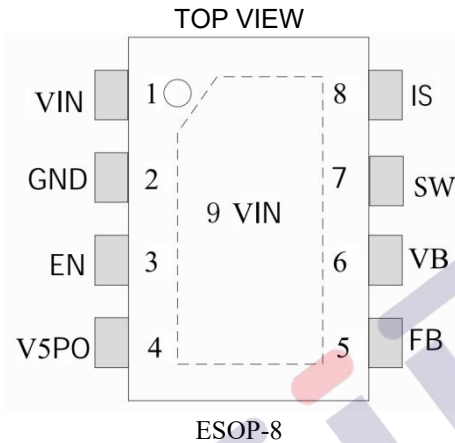
### Simplified Application



## Ordering Information

Part Number	Package	Vo	VIN MAX	IPK	Description
U3505C	ESOP-8	>2V	150V	1.5A	4000Pcs/Reel

## Pin Description



## Pin Functions

ESOP-8 Pin #	Name	Description
1	VIN	Input supply. VIN supplies power to all of the internal control circuitries
2	GND	Ground. GND should be placed as close to the output capacitor as possible to avoid the high-current switch paths. Connect the exposed pad to GND plane for optimal thermal performance.
3	EN	En input. Pull EN below the specified threshold or leave EN floating to shut down the U3505C. Pull EN above the specified threshold to enable the U3505C.
4	V5P0	The output voltage is 5V
5	FB	Feedback. FB is the input to the voltage hysteretic comparators. The average FB voltage is maintained at 200mV by loop regulation.
6	VB	VB is the positive power supply for the internal, floating, high-side MOSFET driver. Connect a bypass capacitor between VB and SW.
7	SW	Switch node.
8	IS	Current detection. internal current sensing resistor ( Connected to SW Pin )
9	EP	Input supply. VIN supplies power to all of the internal control circuitries

## 1、版本记录

DATE	REV.	DESCRIPTION
2023/7/25	1.0	首次发布
2023/9/25	1.1	修改管脚命名

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## 3、联系我们

浙江宇力微新能源科技有限公司

总部地址：绍兴市越城区斗门街道袍渚路25号中节能科创园45幢4/5楼

电话：0575-85087896（研发部）

传真：0575-88125157

E-mail:htw@uni-semic.com

无锡地址：无锡市锡山区先锋中路6号中国电子（无锡）数字芯城1#综合楼503室

电话:0510-85297939

E-mail:zh@uni-semic.com

深圳地址：深圳市宝安区西乡街道南昌社区宝源路泳辉国际商务大厦410

电话：0755-84510976

E-mail:htw@uni-semic.com