ZHEJIANG UNIU-NE Technology CO.,LTD

浙 江 宇 力 微 新 能 源 科 技 有 限 公 司

U3502C Data Sheet

V 1.1

100V Input, Switching Current Limit Step-Down Converter

General Description

The U3502C is a high voltage, step-down, switching regulator built-in MOSFET. It integrates a high-side, high-voltage, power MOSFET with a current limit of 3A(I_{PK}) typically. The input ranges 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. UNIU'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 U3502C to be used in battery-powered applications.

The U3502C is available in a ESOP-8 package with an exposed pad.

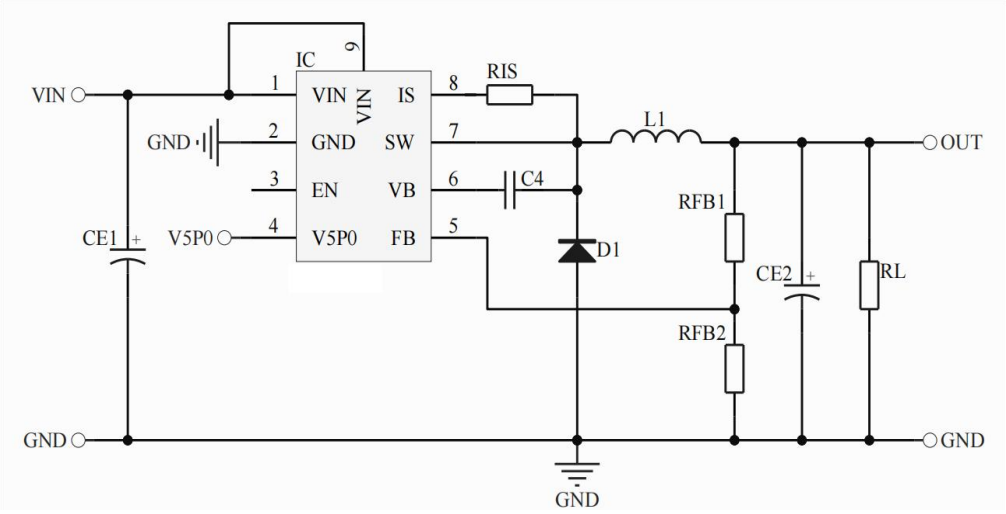
Key Features

- Integrated high voltage start circuit
- Integrated 5.5V reference
- Built-In 100V/135 mΩ MOSFET
- Built-in Bootstrap Diode
- Hysteretic Control: No Compensation
- 150 KHz 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

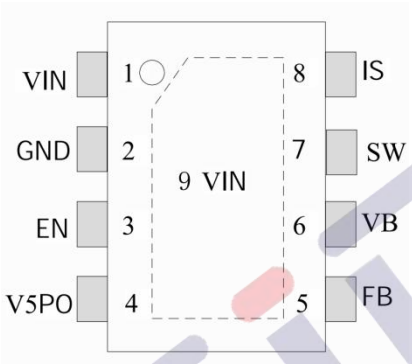


Ordering Information

Part Number	Package	Vo	VIN MAX	I_{PK}	Description
U3502C	ESOP-8	＞2V	100V	3A	4000Pcs/Reel

Pin Description

TOP VIEW



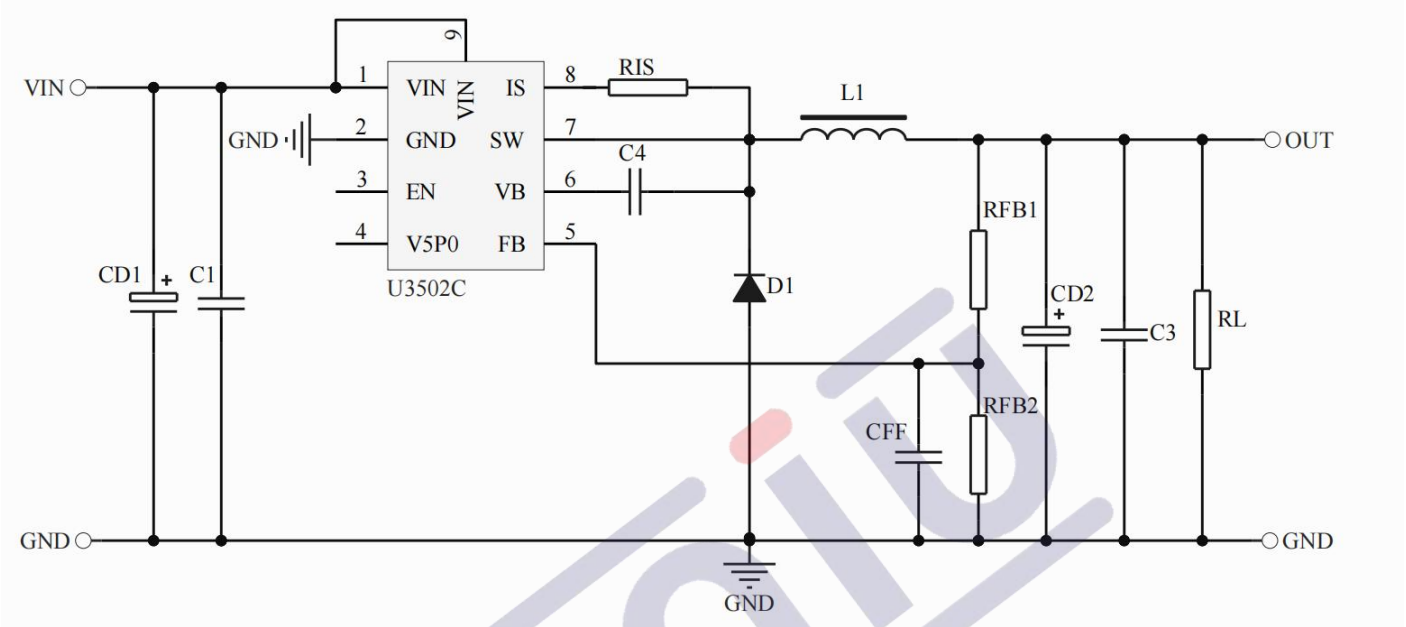
ESOP-8

Pin Functions

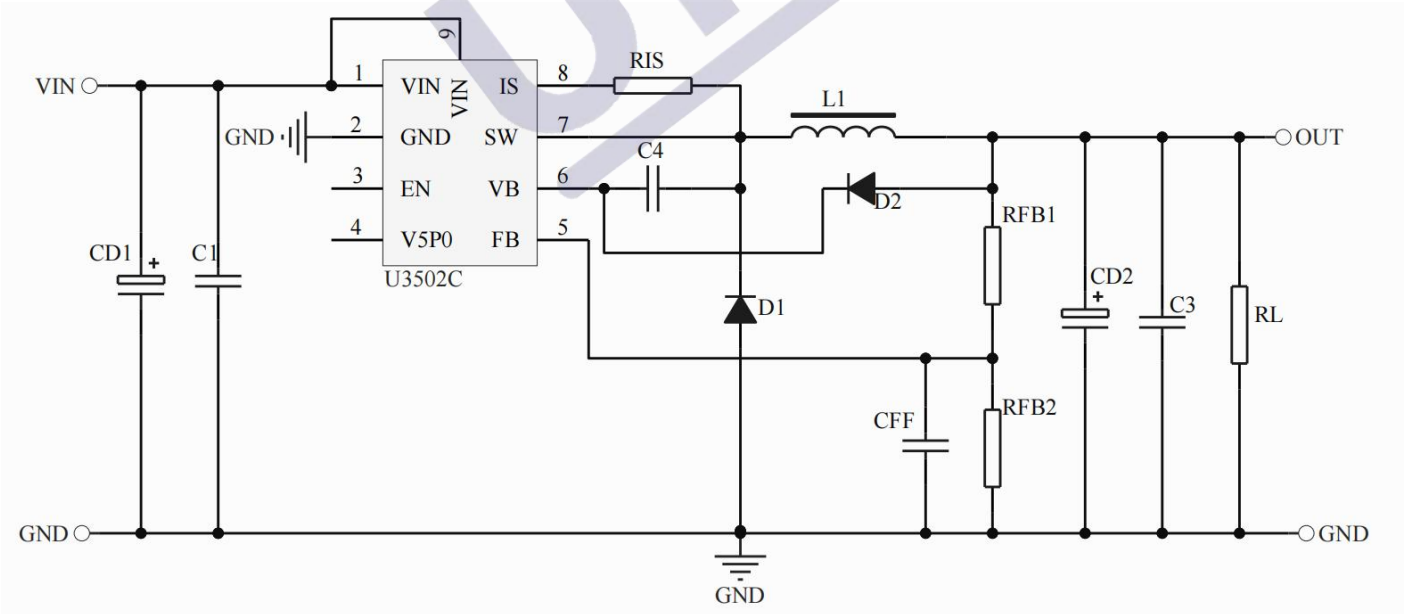
ESOP-8 Pin #	Name	Description
1	VIN	Input supply. VIN supplies power to all of the internal control circuitries.
2	GND	Ground.
3	EN	En input.Default suspension, built-in resistance
4	V5P0	The output voltage is 5.5V (Max current is 5mA)
5	FB	Feedback. FB is the input to the voltage hysteretic comparators.
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. Current Sensing Input.
9	EP	Input supply. VIN supplies power toallofthe internal control circuitries.

Typical Application Circuit

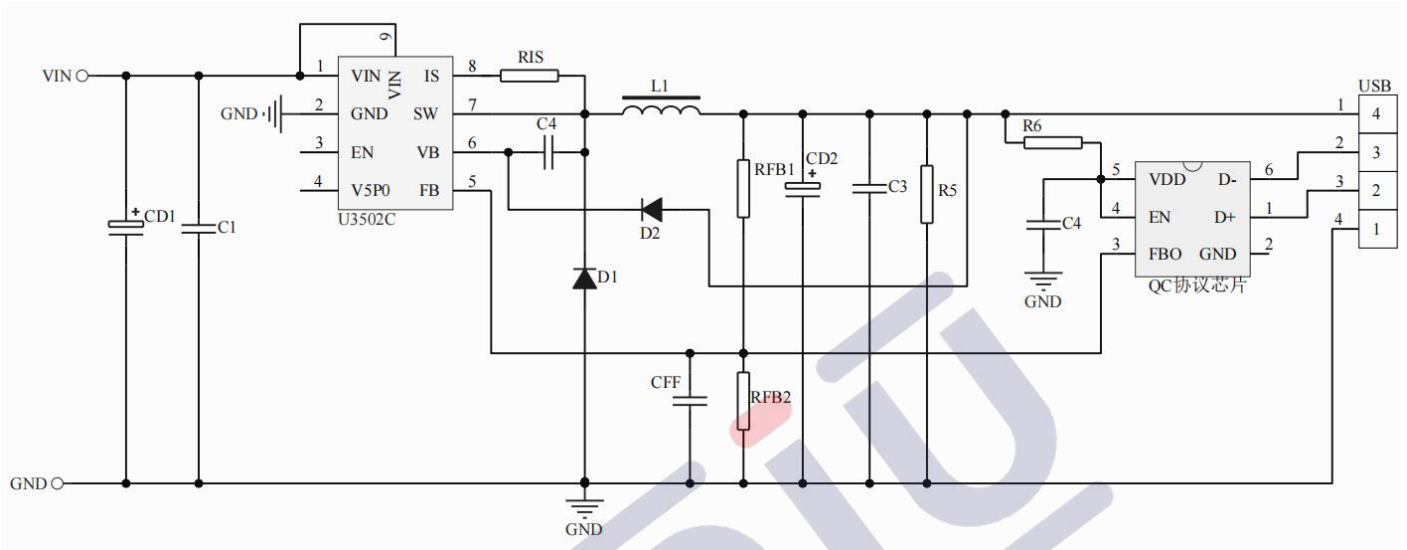
APP1: V_{OUT} <10V



APP2:VOUT=10~15V



APP3: QC2.0/QC3.0



Note:Typical application circuit and parameters for reference, the actual application circuit parameters please set on the basis of measurement, mass production please communicate with the original factory, other unknown please contact our engineers.

1、版本记录

DATE	REV.	DESCRIPTION
2023/2/25	1.0	首次发布
2023/7/12	1.1	优化参数

2、免责声明

浙江宇力微新能源科技有限公司保留对本文档的更改和解释权力，不另行通知!

客户在下单前应获取我司最新版本资料，并验证相关信息是否最新和完整。量产方案需使用方自行验证并自担所有批量风险责任。未经我司授权，该文件不得私自复制和修改。

产品不断提升，以追求高品质、稳定性强、可靠性高、环保、节能、高效为目标，我司将竭诚为客户提供性价比高的系统开发方案、技术支持等更优秀的服务。

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渎路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：江苏省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