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浙 江 宇 力 微 新 能 源 科 技 有 限 公 司

U6116 Data Sheet

V 1.1

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General Description

U6116 is a high performance Primary Side Regulation (PSR) controller with high precision CV/CC control ideal for charger applications. The IC can also support Quasi-Resonant(QR) Buck constant current topology for LED lighting if SEL pin is short to GND.In CV mode, U6116 adopts Multi Mode Control which uses the hybrid of AM (Amplitude Modulation) mode and (Frequency Modulation) FM mode to improve system efficiency and reliability.In CC mode.the IC uses PFM control with line and load CC compensation.The IC can achieve audio noise free operation and optimized dynamic response.The built-in Cable Drop Compensation (CDC) function can provide excellent CV performance.U6116 integrates functions and protections of Under Voltage Lockout (UVLO), VDD over Voltage Protection (VDD OVP),Cycle-by-cycle Current Limiting (OCP), Short Load Protection (SLP), Gate Clamping,and VDD Clamping.

Applications

- Battery Chargers for Cellular Phones
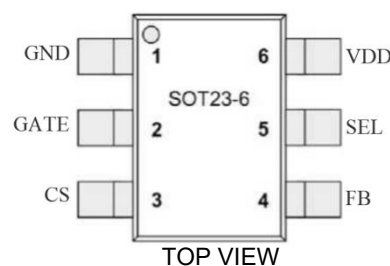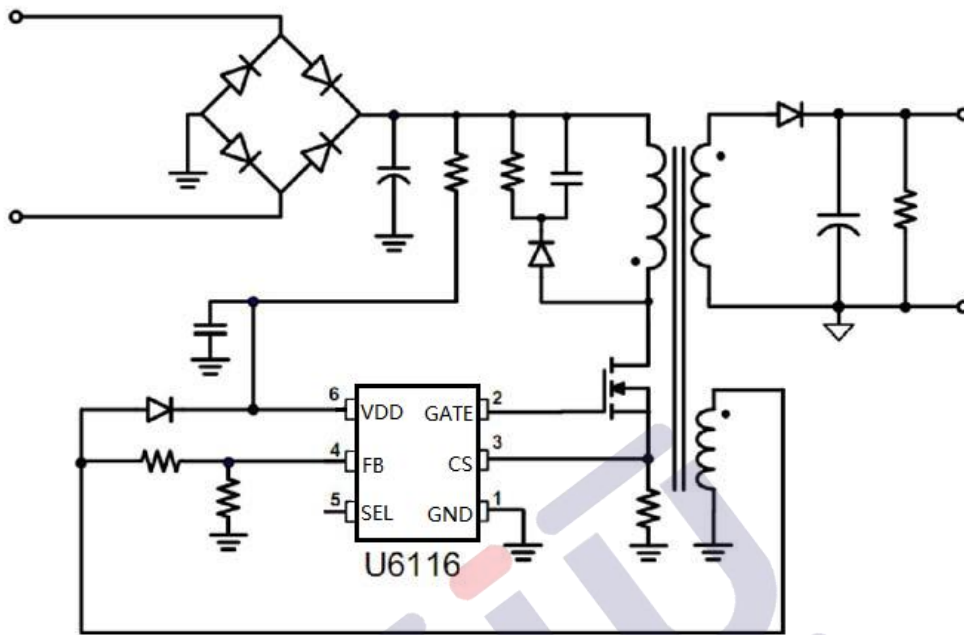- AC/DC Power Adapter
- LED Drivers

Pin Configuration

Key Features

- Support Flyback and Buck Topology:
    Flyback PSR Control (SEL= Floating)
    QR-Buck CC Control (SEL= GND)
- Multi Mode PSR Control
- Audio Noise Free Operation for PSR
- Optimized Dynamic Response for PSR
- Low Standby Power <70mW
- ±4% CC and CV Regulation
- Programmable Cable Drop Compensation：(CDC) in PSR CV Mode
- Built-in AC Line & Load CC Compensation
- Build in Protections:
    Short Load Protection (SLP)
    On-Chip Thermal Shutdown (OTP)
    Cycle-by-Cycle Current Limiting
    Leading Edge Blanking (LEB)
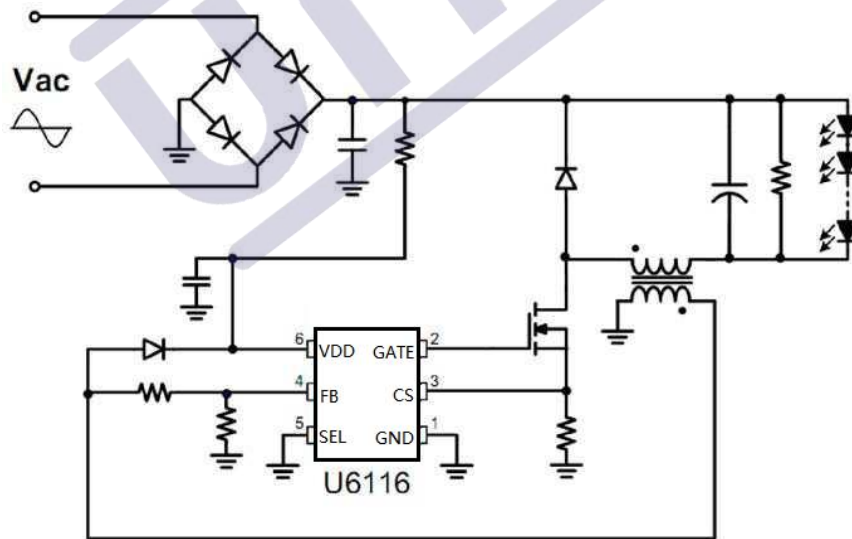   Pin Floating Protection
- VDD UVLO OVP & Clamp
- Package (SOT23-6)

Package Information

TOP VIEW

Pin Number	Pin Name	Function
1	GND	The Ground of the IC
2	GATE	Gate Driver for External MOSFET Switch
3	CS	Current Sense Input Pin
4	FB	System feedback pin which regulates both the output voltage in CV mode and output current in CC mode based on the flyback voltage of the auxiliary winding
5	SEL	Select Buck or Flyback configuration. Leave this pin floating for Flyback PSR control, while tying to GND for QR-Buck control
6	VDD	Power Supply Pin of the Chip

Typical Application Circuit

(Charger Application)

(LED Lighting Application)

1.版本记录

DATE	REV.	DESCRIPTION
2018/04/19	1.0	First Release
2021/11/10	1.1	Layout adjustment

2.免责声明

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