



# IW7707C

## Fast Turn-Off Intelligent Synchronous Rectifier

### 1. General Description

IW7707C is a high performance and highly integrated secondary side synchronous rectification controller used for secondary side rectification in switch mode power supply system. It can replace Schottky diode for high efficiency by connecting with an lower voltage drop N-channel MOSFET, and meet the requirement of DOE VI &COC energy efficiency.

It is suitable for multiple mode applications including discontinuous conduction mode (DCM),and quasi-resonant mode (QR).The Drain-to-source voltage ( $V_{SW}$ ) of SR MOSFET is sensed to control the turn on and off of the SR MOSFET.IW7707C can generate its own supply voltage for battery charging applications with potential low output voltage, and at short circuit output condition,or for high-side SR configuration.

IW7707C is offered in SOP8 package.

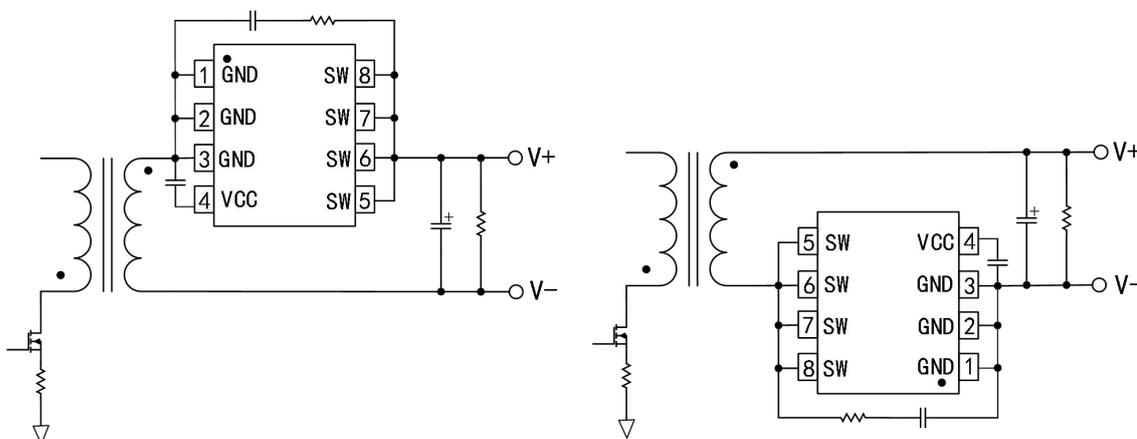
### Features

- ◆ Integrated 60V Power MOSFET
- ◆ Suitable for DCM, and QR
- ◆ Supports both High-side and Low-side Rectification
- ◆ Wide Output Range down to 3V
- ◆ Supports USB PD + PPS
- ◆ No need for Auxiliary Winding or external power supply
- ◆ Ringing Detection Prevents False Turn-on during DCM and Quasi-Resonant Operations
- ◆ 10nS Fast Turn-off delay and 30nS Turn-on delay
- ◆ Accurate secondary side built-in MOSFET  $V_{SW}$  sensing
- ◆ Anti-interference with digital isolation
- ◆ SOP8 Package Available

### Applications

- USB PD Quick Chargers
- Power adapter

### Typical Applications



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### 2. Products Information

#### 2.1 Pin configuration

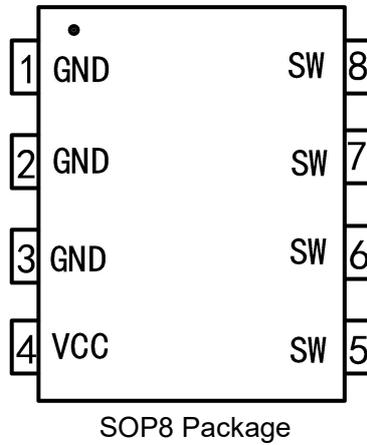


Fig.1. IW7707C Pin Configuration

Pin Num	Pin Name	I/O	Description
1,2,3	GND	P	Ground. GND is also used as a MOSFET source sense reference for SW.
4	VCC	P	Power supply. Bypass a capacitor between VCC and GND.
5,6,7,8	SW	O	Internal MOSFET Drain Pin.