

OCP2161

General Description

The OCP2161 contains two independent 1.5MHz constant frequency, current mode, PWM step-down converters. Each converter integrates a main switch and a synchronous rectifier for high efficiency without an external Schottky diode. The OCP2161 is ideal for powering portable equipment that runs from a single cell Lithium-Ion (Li+) battery. Each converter can supply 800mA of load current from a 2.5V to 6V input voltage. The output voltage can be regulated as low as 0.6V. The OCP2161 can also run at 100% duty cycle for low dropout applications.

Pin Configuration

TOP VIEW



ON BACKSIDE

Pin Description

Pin Number Pin Name **Pin Function** Channel 1 Enable Control Input. Drive EN1 above 1.5V to turn on the 1 EN1 Channel 1. Drive EN1 below 0.3V to turn it off (shutdown current < 0.1µA). Channel 1 Feedback Input. Connect FB1 to the center point of the external 2 FB1 resistor divider. The feedback voltage is 0.6V. Channel 2 Supply Input. Bypass to GND with a 2.2µF or greater ceramic 3 IN2 capacitor. 4 GND2 Ground 2. Channel 2 Power Switch Output. Inductor connection to drains of the 5 SW2 internal PFET and NFET switches. Channel 2 Enable Control Input. Drive EN2 above 1.5V to turn on the EN2 6 Channel 2. Drive EN2 below 0.3V to turn it off (shutdown current < 0.1µA). Channel 2 Feedback Input. Connect FB2 to the center point of the external 7 FB2 resistor divider. The feedback voltage is 0.6V. Channel 1 Supply Input. Bypass to GND with a 2.2µF or greater ceramic 8 IN1 capacitor. GND1 Ground 1. 9 Channel 1 Power Switch Output. Inductor connection to drains of the 10 SW1 internal PFET and NFET switches.

Features

- Up to 95% Efficiency
- 1.5MHz Constant Switching Frequency
- 800mA Load Current on Each Channel
- 2.5V to 6V Input Voltage Range
- Output Voltage as Low as 0.6V
- 100% Duty Cycle in Dropout
- Current Mode Control
- Short Circuit Protection
- Thermal Fault Protection
- <0.1µA Shutdown Current
- Internally Compensated
- Space Saving 10-Pin QFN Package

Applications

- Cellular and Smart Phones
- Microprocessors and DSP Core Supplies
- PDAs
- MP3 Players
- Digital Still and Video Cameras
- Portable Instruments



Dual 1.5MHz, 800mA Synchronous Step-Down Converter

Typical Application



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