■ General Description

The OCP2157 is a 1.5MHz constant frequency; slope compensated current mode PWM step-down converter. The device integrates a main switch and a synchronous rectifier for high efficiency without an external Schottky diode. It is ideal for powering portable equipment that runs from a single cell lithium-Ion (Li+) battery. The OCP2157 can supply 700mA of load current from a 2.5V to 5.5V input voltage. The output voltage can be regulated as low as 0.6V. The OCP2157 can also run at 100% duty cycle for low dropout operation, extending battery life in portable system. Idle mode operation at light loads provides very low output ripple voltage for noise sensitive applications.

The OCP2157 is offered in a low profile (1mm) 5-pin, SOT package, and is available in an adjustable version and fixed output voltage of 1.2V, 1.5V and 1.8V.

■ Applications

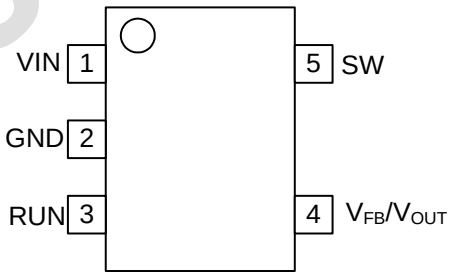
- Cellular and Smart Phones
- PDAs
- MP3 Player
- Digital Still and Video Cameras
- Portable instruments
- Microprocessors and DSP Core Supplies
- Wireless and DSL Modems

■ Features

- High Efficiency : Up to 96%
- 1.5MHz Constant Switching Frequency
- 700mA Output Current at V_{IN}=3.0V
- Integrated Main switch and synchronous rectifier. No Schottky Diode Required
- 2.5V to 5.5V Input Voltage Range
- Output Voltage as low as 0.6V
- 100% Duty Cycle in Dropout
- Low Quiescent Current : 300μA
- ＜1μA Shutdown Current
- Slope Compensated Current Mode Control for Excellent Line and Load Transient Response
- Short Circuit and Thermal Fault Protection
- Space Saving 5-pin Thin SOT23 package

■ Pin Configuration

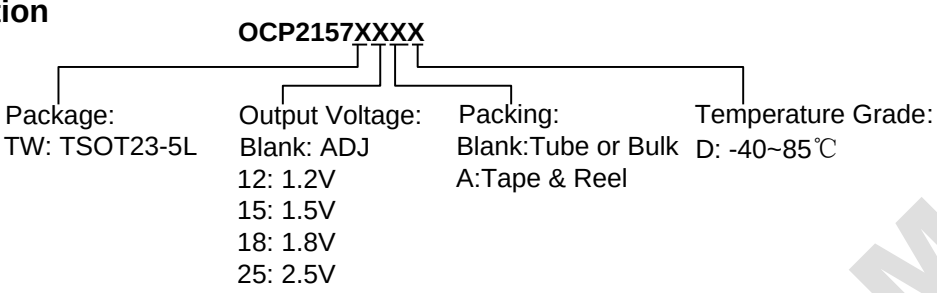
(Top View)



■ Pin Description

Pin Number	Pin Name	Pin Function
1	IN	Supply Input Pin. Must be closely decoupled to GND, pin2, with a 2.2μF or greater ceramic capacitor.
2	GND	Ground
3	RUN	Regulator Enable control input. Drive RUN above 1.5V to turn on the part. Drive RUN below 0.3V to turn it off. In shutdown, all functions are disable drawing ＜1μA supply current. Do not leave RUN floating.
4	FB/VOUT	VFB (OCP2157): Feedback Input Pin. Connected FB to the center point of the external resistor divider. The feedback threshold voltage is 0.6V. VOUT (OCP2157-1.2/1.5/1.8): Output Voltage Feedback Pin. An internal resistive divider divides the output voltage down for comparison to the internal reference voltage.
5	SW	Power Switch Output. It is the Switch node connection to inductor. This pin connects to the drains of the internal P-CH and N-CH MOSFET switches.

■ Ordering Information



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