Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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To request the full datasheet, please visit www.intersil.com/products/ISL91127

High Efficiency Buck-Boost Regulator with 4.5A Switches

ISL91127

The ISL91127 is a high-current, buck-boost switching regulator for systems using new battery chemistries. It uses Intersil's proprietary buck-boost algorithm to maintain voltage regulation while providing excellent efficiency and very low output voltage ripple when the input voltage is close to the output voltage.

The ISL91127 is capable of delivering at least 2.1A continuous output current (V_{OUT} = 3.3V) across a battery voltage range of 2.5V to 4.35V. This maximizes the energy utilization of advanced, single-cell Li-ion battery chemistries that have significant capacity left at voltages below the system voltage. Its fully synchronous low ON-resistance 4-switch architecture and a low quiescent current of only 30µA optimize efficiency under all load conditions.

The ISL91127 supports stand-alone applications with a fixed 3.3V or 3.5V output voltage or adjustable output voltage with an external resistor divider. Output voltages as low as 1V or as high as 5.2V are supported.

The ISL91127 is available in a 20 bump, 0.4mm pitch WLCSP (2.15mmx1.74mm) with a 2.5MHz switching frequency, which further reduces the size of external components.

Related Literature

- For a full list of related documents, visit our website
  - ISL91127 product page

Features

- Accepts input voltages above or below regulated output voltage
- Automatic and seamless transitions between Buck and Boost modes
- Input voltage range: 1.8V to 5.5V
- Continuous output current: up to 2.1A (PVIN = 2.5V, V_{OUT} = 3.3V)
- High efficiency: up to 96%
- 30µA quiescent current maximizes light-load efficiency
- 2.5MHz switching frequency minimizes external component size
- Fully protected for short-circuit, over-temperature, and undervoltage
- Small 2.15mmx1.74mm WLCSP

Applications

- Brownout-free system voltage for smartphones and tablet PCs
- Wireless communication devices
- 2G/3G/4G RF power amplifiers

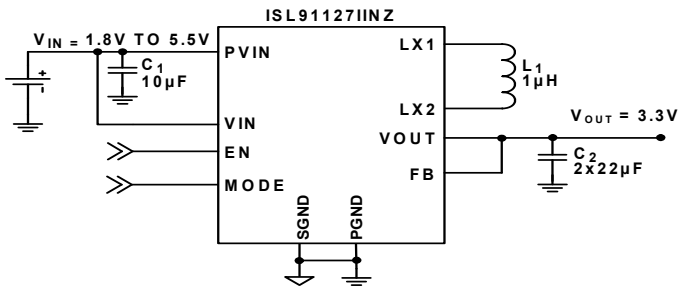

FIGURE 1. TYPICAL APPLICATION: V_{OUT} = 3.3V

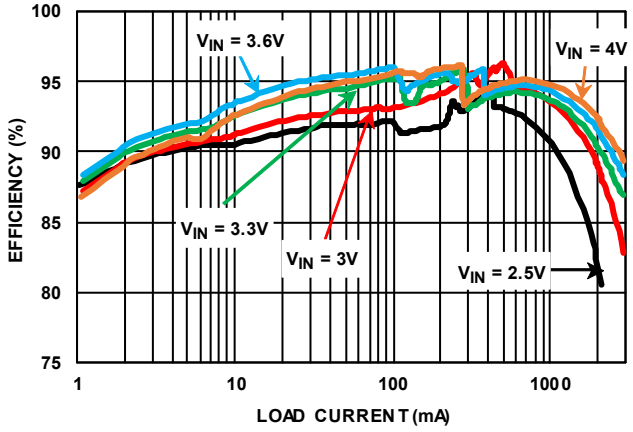

FIGURE 2. EFFICIENCY: V_{OUT} = 3.3V