

LTC1436/LTC1436-PLL/LTC1437

High Efficiency, Low Noise, Synchronous Step-Down Switching Regulators

FEATURES

- Maintains Constant Frequency at Low Output Currents
- Dual N-Channel MOSFET Synchronous Drive
- Programmable Fixed Frequency (PLL Lockable)
- Wide V_{IN} Range: 3.5V to 36V Operation
- Ultrahigh Efficiency
- Very Low Dropout Operation: 99% Duty Cycle
- Low Dropout, 0.5A Linear Regulator for 12V VPP Generation or Low Noise Audio Supply
- Built-In Power-On Reset Timer
- Programmable Soft Start
- Low-Battery Detector
- Remote Output Voltage Sense
- Foldback Current Limiting (Optional)
- Pin Selectable Output Voltage
- Logic Controlled Micropower Shutdown: $I_Q < 25\mu A$
- Available in 24- and 28-Lead SSOP Packages

APPLICATIONS

- Notebook and Palmtop Computers, PDAs
- Cellular Telephones and Wireless Modems
- Portable Instruments
- Battery-Operated Digital Devices
- DC Power Distribution Systems

DESCRIPTION

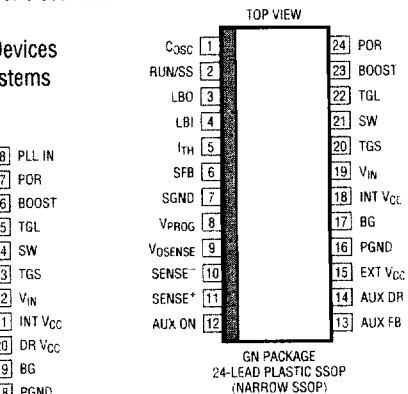
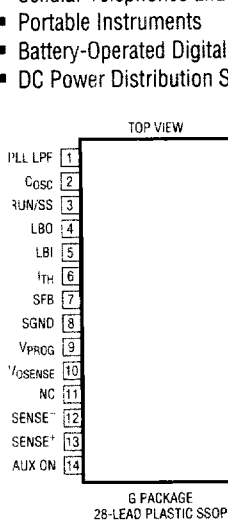
The LTC[®]1436/LTC1437 are synchronous step-down switching regulator controllers which drive external N-channel power MOSFETs in a phase lockable, fixed frequency architecture. The Adaptive Power[™] output stage selectively drives two N-channel MOSFETs at frequencies up to 400kHz while reducing switching losses to maintain high efficiencies at low output currents.

An auxiliary 0.5A linear regulator using an external PNP pass device provides a low noise, low dropout voltage source. A secondary winding feedback control pin (SFB) guarantees regulation of a secondary or tertiary output regardless of load on the main output by forcing continuous operation.

An additional comparator is available for use as a low-battery detector. A power-on reset timer (POR) is included which generates a signal delayed by $65536/f_{CLK}$ (300ms typically) after the output is within 5% of the regulated output voltage. Internal resistive dividers provide pin selectable output voltages with remote sense capability.

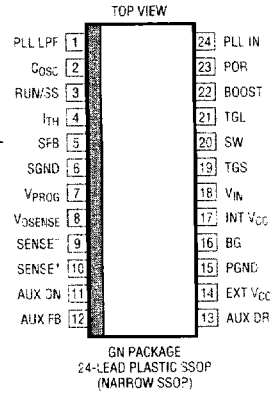
The operating current level is user-programmable via an external current sense resistor. Wide input supply range allows operation from 3.5V to 30V (36V maximum).

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LTC1436CGN

LTC1436CGN-PLL



LTC1436-PLL 5V, 3A Fixed Output with 12V, 200mA Auxiliary Output and Uncommitted Comparator

