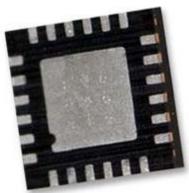




LTC3614 - 4A, 4MHz Monolithic Synchronous Step-Down DC-DC Converter

General Description:

The LTC3614 is a low quiescent current monolithic synchronous buck regulator using a current mode, constant frequency architecture. The no-load DC supply current in sleep mode is only 75µA while maintaining the output voltage (Burst Mode operation) at no load, dropping to zero current in shutdown. The 2.25V to 5.5V input supply voltage range makes the LTC3614 ideally suited for single Li-lon as well as fixed low voltage input applications. 100% duty cycle capability provides low dropout operation, extending the operating time in battery-powered systems.



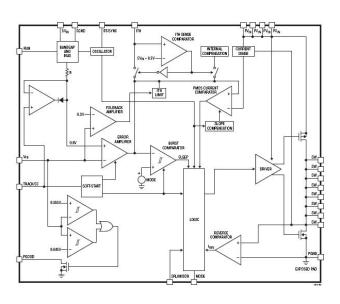
The operating frequency is externally programmable up to 4MHz, allowing the use of small surface mount inductors. For switching-noise-sensitive applications, the LTC3614 can be synchronized to an external clock at up to 4MHz.

Forced continuous mode operation in the LTC3614 reduces noise and RF interference. Adjustable compensation allows the transient response to be optimized over a wide range of loads and output capacitors.

The internal synchronous switch increases efficiency and eliminates the need for an external catch diode, saving external components and board space. The LTC3614 is offered in a leadless 24-pin 3mm × 5mm thermally enhanced QFN package.

Key Features:

- 4A Output Current
- 2.25V to 5.5V Input Voltage Range
- Low Output Ripple Burst Mode® Operation:
 I_Q = 75μA
- ±1% Output Voltage Accuracy
- Output Voltage Down to 0.6V
- High Efficiency: Up to 95%
- Low Dropout Operation: 100% Duty Cycle





- Programmable Slew Rate on SW Node Reduces Noise and EMI
- Adjustable Switching Frequency: Up to 4MHz
- Optional Active Voltage Positioning (AVP) with Internal Compensation
- Selectable Pulse-Skipping/Forced Continuous/Burst Mode Operation with Adjustable Burst Clamp
- Programmable Soft-Start
- Inputs for Start-Up Tracking or External Reference
- DDR Memory Mode, I_{OUT} = ±3A
- Available in a 24-Pin 3mm × 5mm QFN Thermally Enhanced Package

Applications:

- Point-of-Load Supplies
- Distributed Power Supplies
- Portable Computer Systems
- DDR Memory Termination
- Handheld Devices

Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
LTC3614EUDD#PBF	1799846	71R4678	4A, 4MHz Monolithic Synchronous Step-Down
			DC-DC Converter, QFN
LTC3614EUDD#TRPBF	-	71R4679	4A, 4MHz Monolithic Synchronous Step-Down
			DC-DC Converter, QFN
LTC3614IUDD#PBF	-	71R4680	4A, 4MHz Monolithic Synchronous Step-Down
			DC-DC Converter, QFN
LTC3614IUDD#TRPBF	-	71R4681	4A, 4MHz Monolithic Synchronous Step-Down
			DC-DC Converter, QFN

