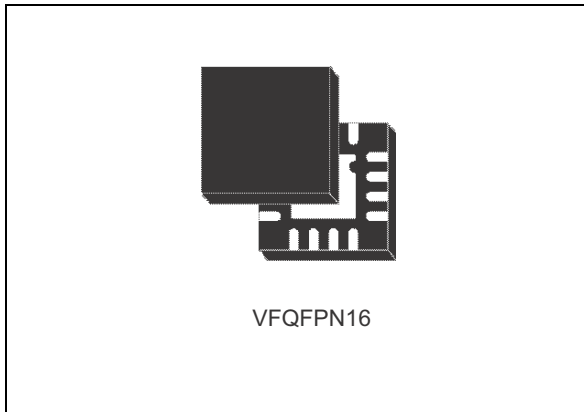


Single-phase PWM controller with light-load efficiency optimization

Data brief



Features

- Flexible power supply from 5 V to 12 V bus
- Power conversion input as low as 1.5 V
- Light-load efficiency optimization
- Embedded bootstrap switch
- VIN detector
- 0.8 V internal reference
- 0.5% output voltage accuracy
- Remote GND recovery
- High current integrated drivers
- Sensorless and programmable precise-OC sense across inductor DCR
- OV protection
- Overtemperature protection
- Programmable oscillator up to 600 kHz
- LS-less to manage pre-bias startup
- Adjustable output voltage
- Disable function
- Internal soft-start
- VFQFPN 16 3 x 3 mm package

Applications

- Memory and termination supply
- Subsystem power supply (MCH, IOCH, PCI)
- CPU and DSP power supply
- Distributed power supply
- General DC-DC converter

Description

The L6739 is a single-phase step-down controller with integrated high current drivers that provides complete control logic and protection to realize a DC-DC converter.

The device flexibility allows to manage conversions with power input V_{IN} as low as 1.5 V and the device supply voltage ranging from 5 V to 12 V bus.

The L6739 device features a proprietary algorithm that allows light-load efficiency optimization, boosting efficiency without compromising the output voltage ripple.

The integrated 0.8 V reference allows generation of output voltages with $\pm 0.5\%$ accuracy over line and temperature variations.

The oscillator is programmable up to 600 kHz.

The L6739 device provides a programmable overcurrent protection and overvoltage protection. The current information is monitored across the inductor DCR.

The L6739 is available in a VFQFPN 16 3 x 3 mm package.

Table 1. Device summary

Order code	Package	Packing
L6739TR	VFQFPN16	Tape and reel

Revision history

Table 2. Document revision history

Date	Revision	Changes
11-Mar-2014	1	Initial release.

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