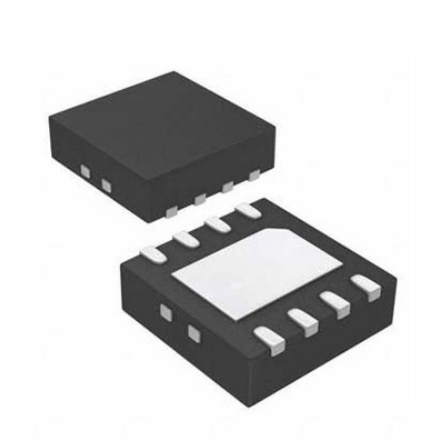
LT8614IUDC#TRPBF

Data Sheet

LINEAR TECHNOLOGY LT8614IUDC#TRPBF DC-DC Switching Step Down Regulator, Adjustable, 3.4V-42Vin, 970mV-41.8Vout, 4Aout, QFN-18

Manufacturers	Analog Devices, Inc
Package/Case	QFN-18P
Product Type	Power Management ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for LT8614IUDC#TRPBF or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The LT8614 step-down regulator features Silent Switcher architecture designed to minimize EMI emissions while delivering high efficiency at frequencies up to 3MHz. Assembled in a 3mm × 4mm QFN, the monolithic construction with integrated power switches and inclusion of all necessary circuitry yields a solution with a minimal PCB footprint. An ultralow 2.5µA quiescent current—with the output in full regulation— enables applications requiring highest efficiency at very small load currents. Transient response remains excellent and output voltage ripple is below 10mVP-P at any load, from zero to full current.

The LT8614 allows high VIN to low VOUT conversion at high frequency with a fast minimum top switch on-time of 30ns. Operation is safe in overload even with a saturated inductor.

Essential features are included and easy to use: An open-drain PG pin signals when the output is in regulation. The SYNC pin allows clock synchronization and choice of Burst Mode operation or pulse-skipping mode. Soft-start and tracking functionality is accessed via the TR/SS pin. An accurate enable threshold can be set using the EN/UV pin and a resistor at the RT pin programs switch frequency.

Features

Silent Switcher® Architecture

Ultralow EMI Emissions

High Efficiency at High Frequency

Up to 96% Efficiency at 1MHz, 12VIN to 5VOUT

Up to 94% Efficiency at 2MHz, 12VIN to 5VOUT

Wide Input Voltage Range: 3.4V to 42V

Ultralow Quiescent Current Burst Mode® Operation:

2.5µA IQ Regulating 12VIN to 3.3VOUT

Output Ripple < 10mVP-P

Fast Minimum Switch On-Time: 30ns

Low Dropout Under All Conditions: 125mV at 1A

Safely Tolerates Inductor Saturation in Overload

Adjustable and Synchronizable: 200kHz to 3MHz

Peak Current Mode Operation

Accurate 1V Enable Pin Threshold

Internal Compensation

Output Soft-Start and Tracking

Small 18-Lead 3mm × 4mm QFN

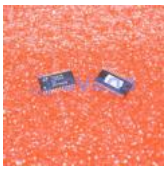
Application

Automotive and Industrial Supplies

General Purpose Step-Down

GSM Power Supplies

Related Products



LT3763EFE

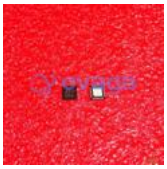
Analog Devices, Inc

TSSOP28

LT1038CK

Analog Devices, Inc

TO-3



LTC4417IUF

Analog Devices, Inc

QFN-24

LTC3440EMS

Analog Devices, Inc

MSOP10

LTC1966CMS8#PBF

Analog Devices, Inc

MSOP-8P

LTC2990IMS#PBF

Analog Devices, Inc

10MSOP

LTM8045EY#PBF

Analog Devices, Inc

BGA40

LT4295IUFD#PBF

Analog Devices, Inc

28-WFQFN