

## FAN49100

# Buck-Boost Regulator, 2.5 A, 1.8 MHz, TinyPower™

## Product Overview

For complete documentation, see the data sheet.

The FAN49100 is a high efficiency buck-boost switching mode regulator which accepts input voltages either above or below the regulated output voltage. Using full-bridge architecture with synchronous rectification, the FAN49100 is capable of delivering up to 2.5 A at 3.6 V input while regulating the output at 3.3 V. The FAN49100 exhibits seamless transition between step-up and step-down modes reducing output disturbances. At moderate and light loads, Pulse Frequency Modulation (PFM) is used to operate the device in power-save mode to maintain high efficiency. In PFM mode, the part still exhibits excellent transient response during load steps. At moderate to heavier loads or Forced PWM mode, the regulator switches to PWM fixed-frequency control. While in PWM mode, the regulator operates at a nominal fixed frequency of 1.8 MHz, which allows for reduced external component values.

## Features

- 24  $\mu$ A Typical PFM Quiescent Current
- Above 95% Efficiency
- Total Layout Area = 11.61 mm<sup>2</sup>
- Input Voltage Range: 2.5 V to 5.5 V 1.8 MHz Fixed-Frequency Operation in PWM Mode
- Automatic / Seamless Step-up and Step-down Mode Transitions
- Forced PWM and Automatic PFM/PWM Mode Selection
- 0.5  $\mu$ A Typical Shutdown Current
- Low Quiescent Current Pass-Through Mode
- Internal Soft-Start and Output Discharge
- Low Ripple and Excellent Transient Response

For more features, see the data sheet

## Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	Control Mode	V <sub>OC</sub> Min (V)	V <sub>OC</sub> Max (V)	V <sub>O</sub> Typ (V)	I <sub>O</sub> Typ (A)	Efficiency (%)	f <sub>sw</sub> Typ (kHz)	Package Type
FAN49100AUC330X	0.35		Active	Step-Up/Step-Down	Voltage Mode	2.5	5.5	3.3	2.5	96	1800	WLCSP-20
FAN49100AUC360X	0.35		Active	Step-Up/Step-Down	Voltage Mode	2.5	5.5	3.6	2.5	96	1800	WLCSP-20