

## Product Overview

### FAN23SV65AMPX: Buck Regulator, Synchronous, 15 A

For complete documentation, see the data sheet.

The FAN23SV65AMPX is a highly efficient synchronous buck regulator. The regulator is capable of operating with an input range from 7 V to 24 V and supporting up to 15 A continuous load currents. The device can operate from a 5 V rail ( $\pm 10\%$ ) if VIN, PVIN, and PVCC are connected together to bypass the internal linear regulator. The FAN23SV65A utilizes Fairchild's constant on-time control architecture to provide excellent transient response and to maintain a relatively constant switching frequency. This device utilizes Pulse Frequency Modulation (PFM) mode to maximize light-load efficiency by reducing switching frequency when the inductor is operating in discontinuous conduction mode at light loads, while clamping the minimum frequency above the audible range with ultrasonic mode. Switching frequency and over-current protection can be programmed to provide a flexible solution for various applications. Output over-voltage, undervoltage, over-current, and thermal shutdown protections help prevent damage to the device during fault conditions. After thermal shutdown is activated, a hysteresis feature restarts the device when normal operating temperature is reached.

### Features

- VIN Range: 7 V to 24 V Using Internal Linear Regulator for Bias
- VIN Range: 4.5 V to 5.5 V with VIN/PVIN/PVCC Connected to Bypass Internal Regulator
- High Efficiency: Over to 96% Peak
- Continuous Output Current: 15 A
- Internal Linear Bias Regulator
- Accurate Enable Facilitates VIN UVLO Functionality
- PFM Mode for Light-Load Efficiency
- Excellent Line and Load Transient Response
- Precision Reference:  $\pm 1\%$  Over Temperature
- Output Voltage Range: 0.6 to 5.5 V

For more features, see the data sheet

### Applications

- Servers and Desktop Computers
- Notebooks, netbooks
- Game Consoles
- Telecommunication
- Storage

### Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	Control Mode	V <sub>CC</sub> Min (V)	V <sub>CC</sub> Max (V)	V <sub>O</sub> Typ (V)	I <sub>O</sub> Typ (A)	Efficiency (%)	f <sub>sw</sub> Typ (kHz)	Package Type
FAN23SV65AMPX	1.4017	Pb-free Halide free	Active	Step-Down	null	null	24	Adjustable	15	≥90%	Adjustable	PQFN-34

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Created on: 3/28/2020