

## Product Overview

### FAN2356AMPX: 6 A Synchronous Buck Regulator

For complete documentation, see the data sheet.

The FAN2356AMPX is a highly efficient integrated synchronous buck regulator. The regulator is capable of operating with an input range from 4.5 V to 24 V and supporting up to 6 A continuous load currents. The FAN2356 utilizes ON Semiconductor'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, under-voltage, 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: 4.5 V to 24 V
- High Efficiency: Over to 96% Peak
- Continuous Output Current: 6 A
- 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
- Programmable Frequency: 200 kHz to 1.5 MHz
- Programmable Soft-Start
- Low Shutdown Current

For more features, see the data sheet

### Applications

- Servers, 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
FAN2356AMPX	1.2152	Pb-free Halide free non AEC-Q and PPAP	Active	Step-Down	Hysteretic	4.5	24	Adjustable	6	≥90%	Adjustable	PQFN-34

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

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