

Product Overview

FAN23SV06P: 6A, 18V High Efficiency PoL Regulators

For complete documentation, see the data sheet.

The FAN23SV06/FAN23SV06P is a highly efficient integrated synchronous buck regulator. The regulator is capable of operating with an input range from 7 V to 15 V and supporting 6 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. These devices utilize Fairchild's constant on-time control architecture to provide excellent transient response and to maintain a relatively constant switching frequency. The FAN23SV06 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. The FAN23SV06P with forced Pulse Width Modulation (PWM) mode is available for applications that require a relatively constant switching frequency across the full load range. 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: 7 V to 15 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 96% Peak
- Continuous Output Current: 6 A
- Accurate Enable Facilitates VIN UVLO Functionality
- PFM Mode for Light-Load Efficiency
- Forced PWM Mode Option (FAN23SV06P)
- 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

- This product is general usage and suitable for many different applications.

For more information please contact your local sales support at www.onsemi.com.

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