



MAX5074A

Power IC with Integrated MOSFETs for Isolated IEEE 802.3af PD and Telecom Power-Supply Applications

Description

The MAX5074A isolated PWM power IC features integrated switching power MOSFETs connected in a voltage-clamped, two-transistor, power-circuit configuration. This device can be used in both forward and flyback configurations with a wide input voltage range from 11V to 76V and up to 15W of output power.

The voltage-clamped power topology enables full recovery of stored magnetizing and leakage inductive energy for enhanced efficiency and reliability. A look-ahead signal for driving secondary-side synchronous rectifiers can be used to increase efficiency.

A wide array of protection features includes UVLO, overtemperature shutdown, and short-circuit protection with hiccup current limit for enhanced performance and reliability. Operation up to 500kHz allows smaller external magnetics and capacitors.

The MAX5074A is rated for operation over the -40°C to +125°C temperature range and is available in a 20-pin TSSOP package.

Warning: The MAX5074A is designed to work with high voltages. Exercise caution.

Key Features

- Clamped, Two-Switch Power IC for High Efficiency
- No Reset Winding Required
- Up to 15W Output Power
- Bias Voltage Regulator with Automatic High-Voltage Supply Turn-Off
- 11V to 76V Wide Input Voltage Range
- Integrated High-Voltage 0.4Ω Power MOSFETs
- Feed-Forward Voltage-Mode Control for Fast Input Transient Rejection
- Programmable Brownout Undervoltage Lockout
- Internal Overtemperature Shutdown
- Indefinite Short-Circuit Protection with Programmable Fault Integration
- Integrated Look-Ahead Signal for Secondary-Side Synchronous Rectification

- > 90% Efficiency with Synchronous Rectification
- Up to 500kHz Switching Frequency
- High-Power (1.74W), Small-Footprint 20-Pin Thermally Enhanced TSSOP Package

Applications/Uses

- 48V Input, Isolated Power-Supply Modules
- ADSL Line Cards
- ADSL Line-Driver Power Supplies
- Distributed Power Systems with 48V Bus
- High-Efficiency Telecom/Datacom Power Supplies
- IEEE 802.3af PD Power Supplies
- Isolated IP Phone Power Supplies
- WLAN Access-Point Power Supplies

Part Number	Package
MAX5074AAUP+	TSSOP-EP; 20Pin; 42.9mm ²

Part Number	Package
MAX5074AAUP+T	TSSOP-EP; 20Pin; 42.9mm ²