HFC0511

Fixed-Frequency Flyback Controller with Ultra-Low, No-Load Power Consumption

Consumption

DESCRIPTION

The HFC0511 is a fixed-frequency, current-mode controller with internal slope compensation specifically designed for medium-power, offline, flyback, switch-mode power supplies. The HFC0511 is a highly efficient green-mode controller. At light loads, the controller freezes the peak current and reduces its switching frequency down to 27kHz to achieve excellent light-load efficiency. At very light loads, the controller enters burst mode to achieve very low standby power consumption.
The HFC0511 offers frequency jittering to help dissipate energy generated by the conducted noise.
The HFC0511 employs an over-power compensation function to narrow the difference of the over-power protection point between the low line and high line.
The HFC0511 also has an X-cap discharge function to discharge the X-capacitor when the input is unplugged. This helps lower the power at no load.
Full protection features include thermal shutdown, VCC under-voltage lockout (UVLO), overload protection (OLP), over-voltage protection (OVP), and brown-out protection.
The HFC0511 is available in a SOIC8-7A package.

FEATURES

- Fixed-Frequency, Current-Mode Control with Internal Slope Compensation
- Frequency Foldback down to 27kHz at Light Load
- Burst Mode for Low Standby Power Consumption, Meeting EuP Lot 6
- Frequency Jitter to Reduce EMI Signature
- X-Cap Discharge Function
- Adjustable Over-Power Compensation
- Internal High-Voltage Current Source
- VCC Under-Voltage Lockout (UVLO) with Hysteresis
- Brown-Out Protection on HV
- Overload Protection with Programmable Delay
- Thermal Shutdown (Auto-Restart with Hysteresis)
- Latch-Off for External Over-Voltage Protection (OVP) and Over-Temperature Protection (OTP) on TIMER
- Latch-Off for VCC Over-Voltage Protection (OVP)
- Short-Circuit Protection (SCP)
- Programmable Soft Start (SS)

- Available in a SOIC8-7A Package

APPLICATIONS

- AC/DC Power for Small and Large Appliances
- AC/DC Adapters for Notebook Computers, Tablets, and Smart Phones
- Offline Battery Chargers
- LCD TVs and Monitors

TYPICAL APPLICATION