

Current Mode PWM Controller

OB2268 is offered in SOP-8 and DIP-8 packages.

GENERAL DESCRIPTION

OB2268 is a highly integrated current mode PWM control IC optimized for high performance, low standby power and cost effective offline flyback converter applications.

PWM switching frequency at normal operation is externally programmable and trimmed to tight range. At no load or light load condition, the IC operates in extended 'burst mode' to minimize switching loss. Lower standby power and higher conversion efficiency is thus achieved.

VDD low startup current and low operating current contribute to a reliable power on startup design with OB2268. A large value resistor could thus be used in the startup circuit to minimize the standby power.

The internal slope compensation improves system large signal stability and reduces the possible sub-harmonic oscillation at high PWM duty cycle output. Leading-edge blanking on current sense input removes the signal glitch due to snubber circuit diode reverse recovery. and greatly reduces the external component count and system cost in the design.

OB2268 offers complete protection coverage with automatic self-recovery feature including Cycle-by-Cycle current limiting (OCP), over load protection (OLP), over temperature protection (OTP), VDD over voltage protection (OVP) and under voltage lockout (UVLO). The Gate-drive output is clamped at 18V to protect the power MOSFET.

Excellent EMI performance is achieved with soft switching control at the totem pole gate drive output. The tone energy at below 20KHZ is minimized in operation. Consequently, audio noise performance is greatly improved.

FEATURES

- Extended Burst Mode Control For Improved Efficiency and Minimum Standby Power Design
- Audio Noise Free Operation
- External Programmable PWM Switching Frequency
- Internal Synchronized Slope Compensation
- Low VIN/VDD Startup Current(6.5uA) and Low Operating Current (2.3mA)
- Leading Edge Blanking on Current Sense Input
- Complete Protection Coverage With Auto Self-Recovery
 - External Programmable Over Temperature Protection (OTP)
 - With or Without On-chip VDD OVP for System OVP
 - Under Voltage Lockout with Hysteresis (UVLO)
 - Gate Output Maximum Voltage Clamp (18V)
 - Line Compensated Cycle-by-Cycle Over-current Threshold Setting For Constant Output Current Limiting Over Universal Input Voltage Range (OCP)
 - Over Load Protection. (OLP)

APPLICATIONS

Offline AC/DC flyback converter for

- Laptop Power Adaptor
- PC/TV/Set-Top Box Power Supplies
- Open-frame SMPS
- Battery Charger

TYPICAL APPLICATION

