

GENERAL DESCRIPTION

OB2252 is a highly integrated current mode PWM control IC optimized for high performance, low standby power and cost effective off-line flyback converter applications in sub 10W range.

PWM frequency is internal constant and it is 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 OB2252. 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 higher than 50% PWM duty cycle output. Leading-edge blanking on current sense(CS) input removes the signal glitch due to snubber circuit diode reverse recovery and thus greatly reduces the external component count and system cost in the design.

OB2252 offers complete protection coverage with automatic self-recovery feature including Cycle-by-Cycle current limiting (OCP), over load protection (OLP), VDD over voltage clamp and under voltage lockout (UVLO). Excellent EMI performance is achieved with On-Bright proprietary frequency shuffling technique together with soft switching control at the totem pole Base drive output.

The tone energy at below 20KHZ is minimized in the design and audio noise is eliminated during operation.

OB2252 is offered in SOT23-6, SOP-8 and DIP-8 packages.

FEATURES

- Optimized for sub 10W Application Driving Power BJT
- Soft Start with 4 mS
- Frequency Shuffling for Improved EMI
- Extended Burst Mode Control For Improved Efficiency and Minimum Standby Power Design
- Audio Noise Free Operation
- Fixed 50KHZ Switching Frequency
- Internal Synchronized Slope Compensation
- Low VDD Startup Current and Low Operating Current
- Leading Edge Blanking on Current Sense Input
- Good Protection Coverage With Auto Self-Recovery
 - VDD Over Voltage Clamp and Under Voltage Lockout with Hysteresis (UVLO)
 - On-Bright Proprietary Line Input Compensated Cycle-by-Cycle Over-current Threshold Setting For Constant Output Power Limiting Over Universal Input Voltage Range.
 - Overload Protection (OLP).

APPLICATIONS

Offline AC/DC flyback converter for

- Battery Charger
- PDA power supplies
- Digital Cameras
- Power Adaptor
- Set-Top Box Power Supplies
- Open-frame SMPS

TYPICAL APPLICATION

