

GENERAL DESCRIPTION

OB2278 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 OB2278. A large value resistor could thus be used in the startup circuit for reduced power loss.

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.

OB2278 offers comprehensive protection coverage including Cycle-by-Cycle current limiting(OCP), VDD Under Voltage Lockout(UVLO), VDD Over Voltage Protection(OVP), VDD Clamp, Gate Clamp, Over Load protection(OLP) and Over Temperature protection (OTP).

OB2278 offers 3 different version with selective protections set as latch shutdown mode. V version OB2278 has OVP Latch shutdown only. T version OB2278 supports both OVP and OTP latch shutdown. L version OB2278 provides all OVP, OTP and OLP latch shutdown control.

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 is eliminated during operation.

OB2278 is offered in SOP-8 and DIP-8 packages.

FEATURES

- Power On Soft Start
- 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(3uA) and Low Operating Current (2.3mA)
- Leading Edge Blanking on Current Sense Input
- Complete Protection Coverage with selective protections on Latch Shutdown
 - VDD Over Voltage Protection(OVP) - Latch
 - Over Temperature Protection(OTP) – Auto recovery or Latch
 - Over Load Protection. (OLP) – Auto recovery or Latch
 - VDD Under Voltage Lockout with Hysteresis (UVLO)
 - Gate Output Voltage Clamp (16.5V)
 - Built-in OCP Slope Compensation to Achieve Minimum OPP Variation over universal AC input.

APPLICATIONS

Offline AC/DC flyback converter for

- Adaptor
- Notebook Adaptor
- LCD Monitor/TV/PC/Set-Top Box Power Supplies
- Open-frame SMPS
- Printer Power

TYPICAL APPLICATION

