

## Quasi-Resonant Flyback PWM Controller

### GENERAL DESCRIPTION

OB2202 is a highly integrated Quasi-Resonant (QR) controller optimized for high performance offline flyback converter applications.

At normal load condition, it operates in QR mode with minimum drain voltage switching. To meet the CISPR-22 EMI starting at 150KHz, the maximum switching frequency is internally limited to 130KHz. It operates in PFM mode for high power conversion efficiency at light load condition. When the loading is very small, the IC operates in 'Extended Burst Mode' to minimize the switching loss. As a result, lower standby power consumption and higher conversion efficiency can be achieved.

OB2202 offers comprehensive protection coverage including Cycle-by-Cycle Current Limiting, VCC Under Voltage Lockout(UVLO), Programmable Output Over Voltage Protection(OVP), VCC Clamp, Gate Clamp, Over Load Protection(OLP), On-chip Thermal Shutdown, Programmable Soft Start, Programmable Brownout Protection, Programmable Over Power Protection (OPP) Compensation, and External Latch Triggering, Max On-time Limit, etc. OB2202 is offered in SOP-8 and DIP-8 packages.

### FEATURES

- Multi-Mode Operation
- Quasi-Resonant Operation at Normal Loading
- Pulse Frequency Modulation (PFM) Operation at Light Load
- Programmable Brownout Protection and Line OVP Protection
- Burst Mode at No Load
- Excellent OPP Compensation
- 20KHz Minimum Frequency Limit at QR Mode
- 130KHz Maximum Frequency Limit
- Internal Minimum  $T_{off}$  for Ringing Suppression
- 35us Maximum On Time Limit
- 50us Maximum Off Time Limit
- Internal Leading Edge Blanking
- Programmable Soft-start
- Cycle-by-cycle Current Limiting
- External Latch Triggering
- Internal Thermal Shutdown
- 1A Peak Current Sink/Source Capability
- Programmable Output OVP

### APPLICATIONS

Offline AC/DC flyback converter for

- Power Adaptor and Open-frame SMPS
- LCD Monitor/TV/PC/Set-Top Box Power Supplies
- NB/DVD/Portable DVD Power Supplies

### TYPICAL APPLICATION

