The NCP1205 combines a true Current Mode Control modulator and a demagnetization detector to ensure full Discontinuous Conduction Mode in any load/line conditions and minimum drain voltage switching (Quasi-Resonant operation, also called critical conduction operation). Thanks to its inherent Variable Frequency Mode (VFM), the controller decreases its operating frequency at constant peak current whenever the output power demand diminishes. Associated with automatic multiple valley switching, this unique architecture guarantees minimum switching losses and the lowest power drawn from the mains when operating at no-load conditions. This latest statement pushes the NCP1205 as a natural candidate for applications targeting the next International Energy Agency (IEA) recommendations for standby power. The internal High-Voltage current source provides a reliable charging path for the Vcc capacitor and ensures a clean and short start-up sequence without deteriorating the efficiency once off. Finally, the continuous feedback signal monitoring implemented with an over-current fault protection circuitry (OCP) makes the final design rugged and reliable. An internal Over Voltage Protection (OVP) circuit continuously monitors the Vcc pin and stops the IC whenever its level exceeds 36 V. DIP14 and SO-16 versions offer an adjustable version of the OVP threshold via an external resistive network.

Features

- Natural Drain Valley Switching for Lower EMI and Quasi-Resonant Operation (QR)
- Smooth Frequency Foldback for Low Standby and Minimum Ripple at Light-Load
- Adjustable Maximum Switching Frequency
- Internal 200 ns Leading Edge Blanking on Current Sense
- 250 mA Sink and Source Driver
- Wide Operating Voltages: 8.0 to 36 V
- Wide UVLO Levels: 7.2 to 15 V Typical
- Auto-Recovery Internal Short-Circuit Protection (OCP)
- Integrated 3.0 mA Typ. Start-Up Source
- Current Mode Control

For more features, see the data sheet.

Applications

- High Power AC/DC Adapters for Notebooks, etc.
- Offline Battery Chargers
- Power Supplies for DVD, CD Players, TVs, Set-Top Boxes, etc.
- Auxiliary Power Supplies (USB, Appliances, etc.)
Typical Application Example for PDIP-8 Version

For more information please contact your local sales support at www.onsemi.com.
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