

Product Overview

NCP1217: PWM Controller, Fixed Frequency, Current Mode

For complete documentation, see the data sheet.

Housed in a SOIC-7 or PDIP-7 package, the NCP1217 represents the second generation of NCP1203-based controllers. Thanks to its high drive capability, NCP1217 drives large gate-charge MOSFETs, which together with internal ramp compensation and built-in over voltage protection, ease the design of modern AC/DC adapters. NCP1217 offers a true alternative to UC384X-based designs. With an internal structure operating at different fixed frequencies (65, 100, 133kHz), the controller features a high-voltage start-up FET, which ensures a clean and loss less startup sequence. Its current-mode control topology provides an excellent input audio-susceptibility and inherent pulse-by-pulse control. Internal ramp compensation easily prevents subharmonic oscillations from taking place in continuous conduction mode designs. When the current setpoint falls below a given value, e.g. the output power demand diminishes, the IC automatically enters the so-called skip cycle mode and provides excellent efficiency at light loads. Because this occurs at a user adjustable low peak current, no acoustic noise takes place. The NCP1217 features two efficient protective circuitries: 1) in presence of an over-current condition, the output pulses are disabled and the device enters a safe burst mode, trying to re-start. Once the default has gone, the device auto-recovers. 2) if an external signal (e.g. a temperature sensor) pulls pin1 above 3.2V, output pulses are immediately stopped and the NCP1217 stays latched in this position. Reset occurs when the VCC collapses to ground, e.g. the user un-plugs the power supply.

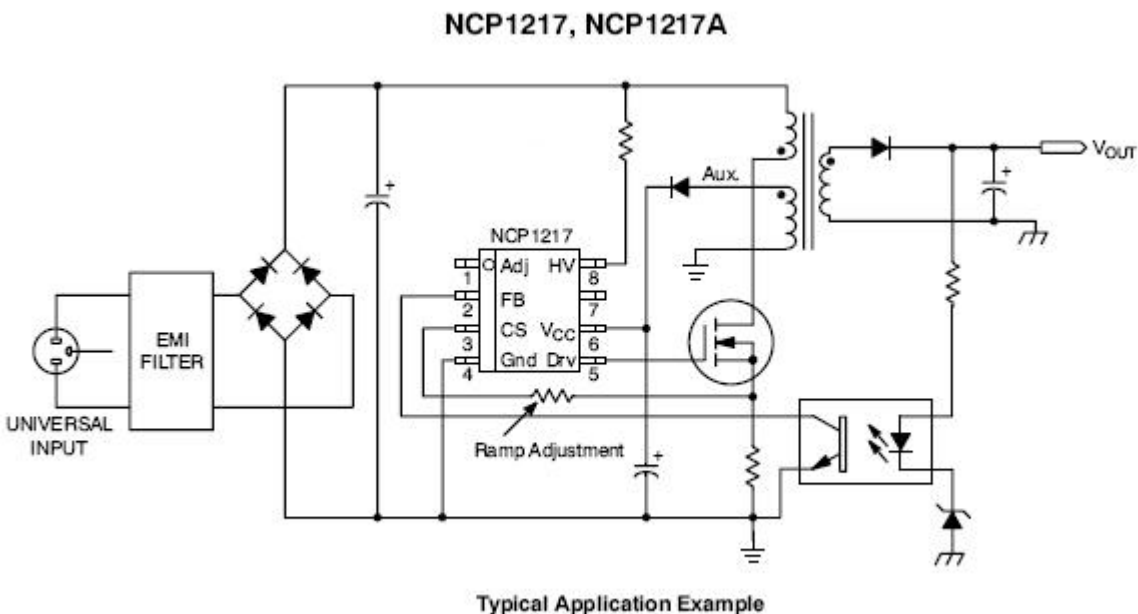
Features

- Current-Mode with adjustable skip-cycle capability
 - Built-in internal ramp compensation
 - Auto-recovery internal output short-circuit protection
 - Full latch-off if Adjustment pin is brought high
 - Extremely low no-load standby power
 - Internal temperature shutdown
 - 500mA peak current capability
 - Fixed frequency versions at 65kHz, 100kHz and 133kHz
 - Direct optocoupler connection
 - Internal Leading Edge Blanking
- For more features, see the data sheet

Applications

- High power AC/DC converters for TVs, set-top boxes etc
- Offline adapters for notebooks
- Telecom DC-DC converters
- All power supplies

Application Diagram



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

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