

## Product Overview

### NCP1216: PWM Controller, Fixed Frequency, Current Mode

For complete documentation, see the data sheet.



Housed in an SOIC-8 or DIP-7 package, the NCP1216 represents an enhanced version of NCP1200-based controllers. Due to its high drive capability, NCP1216 drives large gate-charge MOSFETs, which together with internal ramp compensation and built-in frequency jittering, ease the design of modern AC/DC adapters. With an internal structure operating at different fixed frequencies, the controller supplies itself from the high-voltage rail, avoiding the need of an auxiliary winding. This feature naturally eases the designer task in some particular applications, e.g. battery chargers or TV sets. Current-mode control also provides an excellent input audio-susceptibility and inherent pulse-by-pulse control. Internal ramp compensation easily prevents sub-harmonic 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 NCP1216 features an efficient protective circuitry, which in presence of an overcurrent condition disables the output pulses while the device enters a safe burst mode, trying to restart. Once the default has gone, the device auto-recovers.

### Features

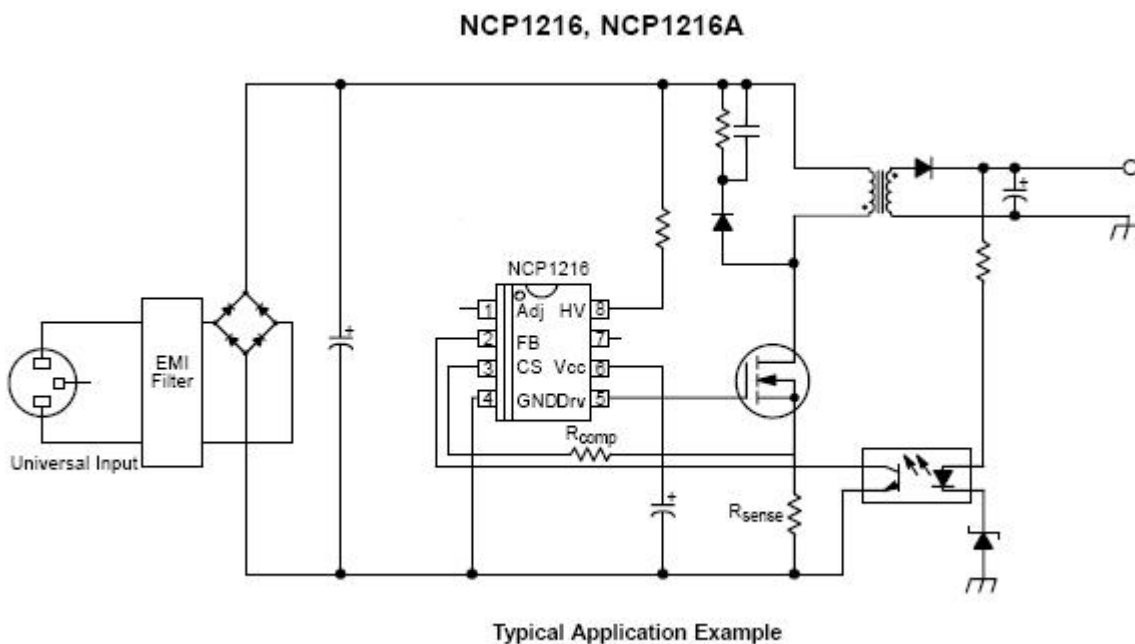
- No auxiliary winding operation
- Current-mode control with adjustable skip-cycle capability
- Internal ramp compensation
- Built-in frequency jittering for better EMI signature
- Auto-recovery internal output short circuit protection
- Extremely low no-load standby power
- 500mA peak current capability
- Fixed frequency versions at 65 kHz, 100 kHz, 133 kHz
- Internal temperature shutdown
- Direct optocoupler connection

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



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