# Product Overview

## NCV3843B: Current Mode PWM Controller

For complete documentation, see the data sheet.

The NCV3843BV is a high performance fixed frequency current mode controller. They are specifically designed for Off-Line and DC-DC converter applications offering the designer a cost-effective solution with minimal external components. These integrated circuits feature a trimmed oscillator for precise duty cycle control, a temperature compensated reference, high gain error amplifier, current sensing comparator, and a high current totem pole output ideally suited for driving a power MOSFET.

Also included are protective features consisting of input and reference undervoltage lockouts each with hysteresis, cycle-by-cycle current limiting, programmable output deadtime, and a latch for single pulse metering. These devices are available in a surface mount (SOIC-8) plastic package as well as the 14-pin plastic surface mount (SOIC-14). The SOIC-14 package has separate power and ground pins for the totem pole output stage.

The NCV3843BV is tailored for lower voltage applications having UVLO thresholds of 8.5 V (on) and 7.6 V (off).

## Features

- Trimmed Oscillator for Precise Frequency Control
- Oscillator Frequency Guaranteed at 250 kHz
- Current Mode Operation to 500 kHz
- Automatic Feed Forward Compensation
- Latching PWM for Cycle-By-Cycle Current Limiting
- Internally Trimmed Reference with Under-voltage Lockout
- High Current Totem Pole Output
- Under-voltage Lockout with Hysteresis
- Low Startup and Operating Current
- These are Pb-Free Devices

  For more features, see the data sheet

## Part Electrical Specifications

| Product | Pricing ($/Unit) | Compliance | Status | Topology | Control Mode | $f_{sw}$ Typ (kHz) | Stand-by Mode | UVLO (V) | Short Circuit Protection | Latch | Soft Start | $V_{CC}$ Max (V) | Drive Cap. (mA) | Package Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NCV3843BVD1R2G | 0.4211 | AEC Qualified<br>PPAP Capable<br>Pb-free<br>Halide free | Active | Flyback | Current Mode | 52 | No | Yes | Yes | No | Yes | 30 | 200 / 200 | SOIC-8 |
| NCV3843BVDR2G | 0.4 | AEC Qualified<br>PPAP Capable<br>Pb-free<br>Halide free | Active | Flyback | Current Mode | 52 | No | Yes | Yes | No | Yes | 30 | 200 / 200 | SOIC-14 |

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

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