

## NCP1523B

# Buck Converter, DC-DC, High Efficiency, Adjustable Output Voltage, 3 MHz, 600 mA

## Product Overview

For complete documentation, see the data sheet.

The NCP1523 step-down PWM DC-DC converter is optimized for portable applications powered from 1-cell Li-ion or 3 cell Alkaline/NiCd/NiMH batteries. The device is available in an adjustable output voltage from 0.9 V to 3.3 V. It uses synchronous rectification to increase efficiency and reduce external part count. The device also has a built-in 3 MHz (nominal) oscillator which reduces component size by allowing use of a small inductor and capacitors. NCP1523 is available in automatic switching PWM/PFM (NCP1523FCT2G) improving system efficiency and in PWM mode only (NCP1523BFCT2G) offering a very efficient load transient solution. Additional features include integrated soft-start, cycle-by-cycle current limiting and thermal shutdown protection. The NCP1523 is available in a space saving, 8 pin chip scale package.

### Features

- Up to 93% Efficiency, 60 uA Quiescent Current, Shutdown Current Consumption of 0.3 A
- Auto-switching between PWM and PFM mode at light load conditions (NCP1523FCT2G)
- PWM mode operation (NCP1523BFCT2G)
- Adjustable output voltage from 0.9V to 3.3V

### Applications

- Power supply for application processor
- Power supply for processor with low core voltage

### Benefits

- Extends battery life and 'play-time'
- Low power consumption at light loading
- Very efficient load transient solution, low output voltage ripple at light load

### End Products

- Cellular phones, smart phones, and PDAs
- MP3 players and portable audio systems
- Digital still cameras and video cameras