

Product Overview

NCV890203: Automotive Switching Regulator, Buck, 2.0 A, 2 MHz, Reset, Adjustable Delay

For complete documentation, see the data sheet.

The NCV890203 is a fixed-frequency, monolithic, Buck switching regulator intended for Automotive, battery-connected applications that must operate with up to a 36 V input supply. The regulator is suitable for systems with low noise and small form factor requirements often encountered in automotive driver information systems. The NCV890203 is capable of converting the typical 4.5 V to 18 V automotive input voltage range to outputs as low as 3.3 V at a constant switching frequency above the sensitive AM band, eliminating the need for costly filters and EMI countermeasures. A Reset pin signals when the output is in regulation, and a pin is provided to adjust the delay before the RSTB signal goes high. The NCV890203 also provides several protection features expected in Automotive power supply systems such as current limit, short circuit protection, and thermal shutdown. In addition, the high switching frequency produces low output voltage ripple even when using small inductor values and an all-ceramic output filter capacitor - forming a space-efficient switching regulator solution.

Features

- Internal N-Channel Power Switch
- Low VIN Operation Down to 4.5 V
- High VIN Operation to 36 V
- Withstands Load Dump to 40 V
- 2 MHz Free-running Switching Frequency
- Reset with Adjustable Delay
- Logic level Enable Input Can be Directly Tied to Battery
- 2.2 A (min) Cycle-by-Cycle Peak Current Limit
- Short Circuit Protection enhanced by Frequency Foldback
- $\pm 1.75\%$ Output Voltage Tolerance

For more features, see the data sheet

Applications

- Audio
- Infotainment
- Safety - Vision Systems
- Instrumentation

End Products

- Automotive

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