

## Product Overview

## NCV890200: Automotive Switching Regulator, Buck, 2 A, 2 MHz

**For complete documentation, see the data sheet**

## Product Description

The NCV890200 is a fixed-frequency, monolithic, Buck switching regulator intended for Automotive, battery-connected applications that must operate with up to a 36V input supply. The regulator is suitable for systems with low noise and small form factor requirements often encountered in automotive driver information systems. The NCV890200 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.

The NCV890200 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

- 2 MHz Free-running Switching Frequency
- Internal N-Channel Power Switch
- Low  $V_{IN}$  Operation Down to 4.5 V
- High  $V_{IN}$  Operation to 36 V
- Withstands Load Dump to 40 V
- 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
- Output Voltage Adjustable Down to 0.8 V

## Benefits

- Enable using small size, low cost inductors and EMI filters

## Applications

- Audio
- Infotainment
- Safety - Vision Systems
- Instrumentation

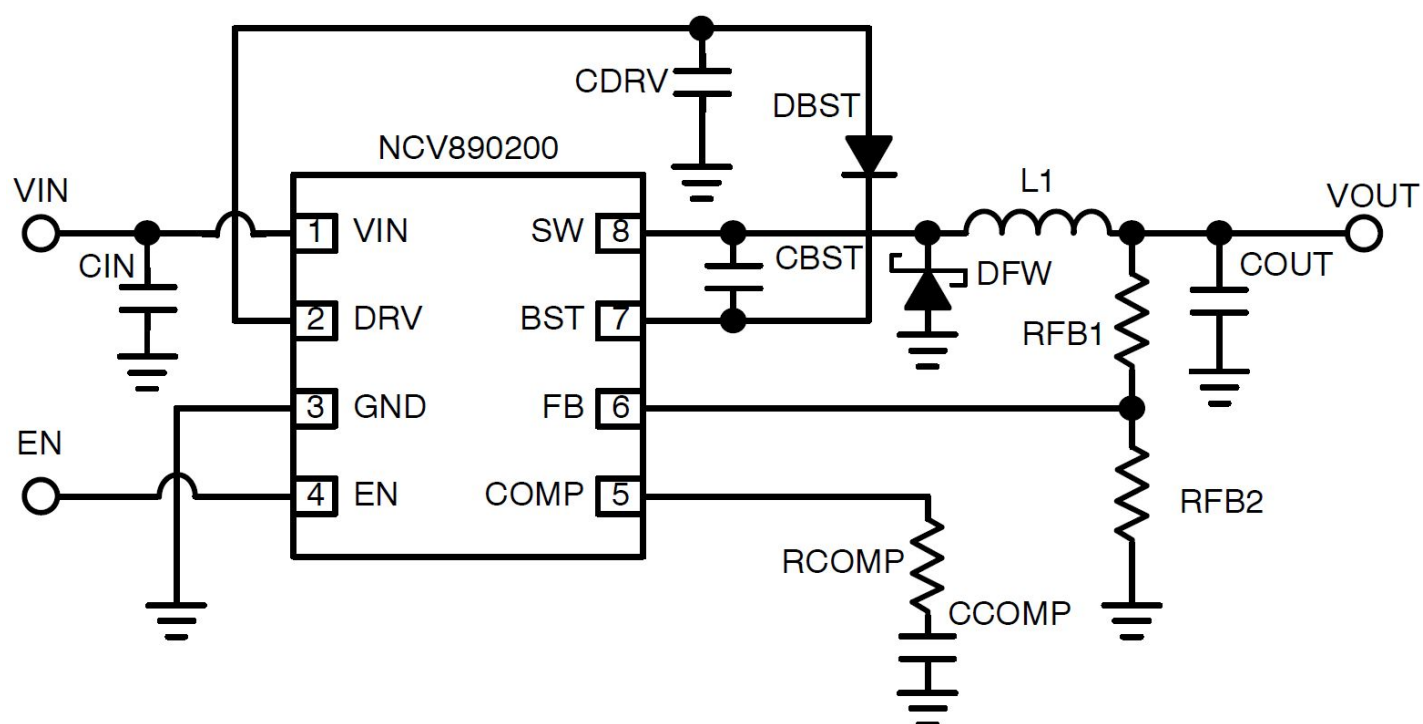
## End Products

- Automotive

## Part Electrical Specifications

Product	Compliance	Status	Topology	Control Mode	V <sub>CC</sub> Min (V)	V <sub>CC</sub> Max (V)	V <sub>O</sub> Typ (V)	I <sub>O</sub> Typ (A)	Efficiency (%)	f <sub>sw</sub> Typ (kHz)	Package Type
NCV890200PDR2G	AEC Qualified	Active	Step-Down	Current Mode	4.5	40	Adjustable	2		Up to 2200	SOIC-8 EP
	PPAP Capable										
	Pb-free										

## Application Diagram



For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com)

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