

Product Overview

NCV8876: Automotive Grade Start-Stop Non-Synchronous Boost Controller

For complete documentation, see the data sheet.



The NCV8876 is a Non-Synchronous Boost controller designed to supply a minimum output voltage during Start-Stop vehicle operation battery voltage sags. The controller drives an external N-channel MOSFET. The device uses peak current mode control with internal slope compensation. The IC incorporates an internal regulator that supplies charge to the gate driver. Protection features include, cycle-by-cycle current limiting, protection and thermal shutdown. Additional features include low quiescent current sleep mode operation. The NCV8876 is enabled when the supply voltage drops below 7.3 V, with boost operation initiated when the supply voltage is below 6.8 V.

Use the NCV8876 Evaluation Board SystemVision design and simulation environment to verify parametric and functional performance, and gain a better understanding of the features and behavior through live, virtual testing.

Features

- Automatic enable below 7.3 V (factory programmable)
- -40 C to 150 C operation
- 2 V to 45 V operation
- Low Quiescent Current in Sleep Mode (<12 uA Typical)
- Status monitoring

Benefits

- Extra functionality in compact SOIC8 package
- Automotive grade
- Operates through cranking and load dump
- Meets Automotive Low Iq requirements
- Provides operating status to microcontroller

Applications

- Start-Stop applications

End Products

- Automotive applications

Part Electrical Specifications

Product	Compliance	Status	Topology	Phases	Control Mode	V _{CC} Min (V)	V _{CC} Max (V)	f _{SW} Typ (kHz)	Package Type
NCV887600D1R2G	AEC Qualified	Active	Step-Up	1	Current Mode	3.6	45	Up to 500	SOIC-8
	PPAP Capable								
	Pb-free								
	Halide free								
NCV887601D1R2G	AEC Qualified	Active	Step-Up	1	Current Mode	3.6	45	Up to 500	SOIC-8
	PPAP Capable								
	Pb-free								
	Halide free								

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