Product Overview

NCV8877: Automotive Grade Start-Stop Non-Synchronous Boost Controller

For complete documentation, see the data sheet.

The NCV8877 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 NCV8877 is enabled when the supply voltage drops below the wake up threshold. Boost Operation is initiated when the supply voltage drops below the regulation set point.

Features

- Factory programmable output voltage
- 2 V to 45 V operation
- -40°C to 150°C operation
- Automatic enable
- Disable function

Benefits

- Flexibility
- Operates through cranking and load dump
- Automotive grade
- Extra functionaligy in compact SOIC-8 package
- Permits disabling by a microcontroller

Applications

- Start-stop Applications

End Products

- Automotive

Part Electrical Specifications

Product	Compliance	Status	Topology	Phases	Control Mode	V_{CC} Min (V)	V_{CC} Max (V)	f_{SW} Typ (kHz)	Package Type
NCV887700D1R2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Step-Up	1	Current Mode	3.8	45	Up to 500	SOIC-8
NCV887701D1R2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Step-Up	1	Current Mode	3.8	45	Up to 500	SOIC-8
NCV887711D1R2G	AEC Qualified PPAP Capable Pb-free Halide free	Active							SOIC-8
NCV887720D1R2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Step-Up	1	Current Mode	3.8	45	Up to 500	SOIC-8
NCV887740D1R2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Step-Up	1	Current Mode	3.8	45	Up to 500	SOIC-8

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