

Product Overview

NCV6356: Synchronous Buck Converter, Processor Supply, I2C Programming, 5.0 A

For complete documentation, see the data sheet.

The NCV6356 is a synchronous AOT (Adaptive On-time) buck converter optimized to supply the different sub systems of automotive applications post regulation system up to 5 V input. The device is able to deliver up to 5.0 A, with programmable output voltage from 0.6 V to 1.4 V. Operation at up to 2.4 MHz switching frequency allows the use of small components. Synchronous rectification and automatic PFM Pseudo-PWM (PPWM) transitions improve overall solution efficiency. The NCV6356 is in low profile 3.0 x 4.0 mm DFN-14 package.

Features

- Input Voltage Range from 2.5 V to 5.5 V
- Up to 2.4 MHz Switching Frequency
- Enabling with pins or I2C
- I2C access in off mode
- Best in class Transient / Ripple
- 4 Level Thermal Warnings

Benefits

- Battery, 3.3 V and 5.0 V Rail Powered Applications
- Reduced output inductor and capacitor size
- Flexible enabling and disabling
- Pre programming at low power
- LPDDR4 memory and ARMcore support
- Precise temperature control

Applications

- Automotive POL
- Instrumentation, Clusters
- Infotainment
- ADAS System (Vision, Radar)
- Snap Dragon

End Products

- Automotive

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	Control Mode	V _{CC} Min (V)	V _{CC} Max (V)	V _O Typ (V)	I _O Typ (A)	Efficiency (%)	f _{SW} Typ (kHz)	Package Type
NCV6356BMTWTXG	0.76	AEC Qualified PPAP Capable Pb-free Halide free	Active	Step-Down	Voltage Mode	2.5	5.5	1.2	5	94	2400	WDFNW-14
NCV6356CMTWTXG	0.76	AEC Qualified PPAP Capable Pb-free Halide free	Active	Step-Down	Voltage Mode	2.5	5.5	1.15	5	94	2400	WDFNW-14
NCV6356QMTWTXG	0.76	AEC Qualified PPAP Capable Pb-free Halide free	Active	Step-Down	Voltage Mode	2.5	5.5	0.875	6.8	94	2400	WDFNW-14

Application Diagram

For more information please contact your local sales support at www.onsemi.com.

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