

Product Overview

NCV8508B: Linear Voltage Regulator, LDO, 250 mA, with Watchdog, Wake Up, Reset and Delay Reset

For complete documentation, see the data sheet

Product Description

The NCV8508B is a 5.0 V and 3.3 V precision micropower Low Dropout (LDO) voltage regulator with 250 mA output current capability. Microprocessor control logic includes an active RESET (with DELAY), wakeup and watchdog. The NCV8508B Wakeup function brings the microprocessor out of Sleep mode. The microprocessor in turn signals its Wakeup status back to the NCV8508B by issuing a Watchdog signal. The active RESET circuit operates correctly at an output voltage as low as 1.0 V. The RESET function is activated during the power up sequence, during normal operation if the output voltage drops below the regulation limits or if the regulator does not receive a Watchdog signal within a Wakeup period. The Watchdog logic function monitors an input signal (WDI) from the microprocessor. The NCV8508B responds to the falling edge of the Watchdog signal which it expects at least once during each Wakeup period. Its robustness and integrated protection features make it suitable for severe automotive environments.

Features

- 5.0V and 3.3V +/-3% Output Voltage / 250mA Output Current
- Low Quiescent Current (100 μ A typ) at full load
- Wakeup, Watchdog, Reset and Adjustable Delay
- Integrated Protection Features:
+60V Input Peak Transient
Thermal Shutdown
Short Circuit
- AEC Q100 qualified, PPAP capable

Benefits

- Tight Regulation Limits
- Quiescent current independent from load current; ideal for systems requiring
- MPU control - design flexibility
- Limit number of external components:
Robust load dump tolerance
Self protection
Self protection

Applications

- Body and Chassis
- Powertrain
- Engine Control Unit

End Products

- Automotive

Part Electrical Specifications

Product	Compliance	Status	Output	Polarity	V _O (V)	I _O Typ (A)	V _I Max (V)	V _{DO} Typ (V)	I _Q Typ (mA)	PSRR (dB)	Noise (μ V _{rms})	Package Type
NCV85081BDS50R4G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.25	45	0.45	0.1	55		D ² PAK-7
NCV85081BPD50R2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.25	45	0.45	0.1	55		SOIC-8 EP
NCV85082BPD33R2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	3.3	0.25	45	0.45	0.1	55		SOIC-8 EP

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