



## Product Overview

### NCV8614B: Linear Voltage Regulator, Triple-Output, Power Saving, Ultra Low Iq, Automotive System Power Supply

For complete documentation, see the data sheet

#### Product Description

The NCV8614B is a multiple output linear regulator IC's with an Automatic Switchover (ASO) input voltage selector. The ASO circuit selects between three different input voltage sources to reduce power dissipation and to maintain the output voltage level across varying battery line voltages associated with an automotive environment.

The NCV8614B is specifically designed to address automotive radio systems and instrument cluster power supply requirements. The NCV8614B can be used in combination with the 4-Output Controller/Regulator IC, NCV885x, to form a complete automotive radio or instrument cluster power solution. The NCV8614B is intended to supply power to various ?always on? loads such as the CAN transceivers and microcontrollers (core, memory and IO). The NCV8614B has three output voltages, a reset/delay circuit, and a host of control features suitable for the automotive radio and instrument cluster systems.

#### Features

- Operating Range 7.0 V to 18.0 V
- Output Voltage Tolerance, All Rails,  $\pm 2\%$
- < 50  $\mu\text{A}$  Quiescent Current
- Independent Input for LDO3 Linear Regulator
- High Voltage Ignition Buffer
- Automatic Switchover Input Voltage Selector
- Independent Input Voltage Monitor with a High Input Voltage and Low Input Voltage Indicators
- Thermal Warning Indicator with Thermal Shutdown
- Single Reset with Externally Adjustable Delay for the 3.3 V rail
- Push-Pull Outputs for Logic Level Control Signals

#### Benefits

- Maintains output voltage regulation during battery voltage variation.
- Perfect for supplying new microprocessors as well as input voltage sensitive devices.
- Meet 100  $\mu\text{A}$  max module car manufacturer quiescent current requirement. Ideal for supplying ?always on? loads.
- Possibility to supply LDO3 from an independent source.
- Possibility to mute radio output during ignition.
- Selects between Input Voltage Sources to reduce power dissipation.
- Cost and space saving as no external device is required.
- Provide information about overheating of the device.
- Power on indicator to the microcontroller.
- No external pull-up resistors are required.

#### Applications

- Automotive Radio
- Instrument Cluster

#### End Products

- Automotive systems

#### Part Electrical Specifications

Product	Compliance	Status	Output	Polarity	V <sub>O</sub> (V)	I <sub>O</sub> Typ (A)	V <sub>I</sub> Max (V)	V <sub>DO</sub> Typ (V)	I <sub>q</sub> Typ (mA)	PSRR (dB)	Noise ( $\mu\text{V}_{\text{rms}}$ )	Package Type
NCV8614BMNR2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Triple	Positive	5, 3.3, Adjustable	0.1	40	0.5	0.034	60		DFN-20

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Created on: 7/11/2015