



## Product Overview

### NCV8504: Linear Voltage Regulator, LDO, 400 mA, with Delay, Adjustable Reset and General Use Comparator

For complete documentation, see the data sheet

#### Product Description

The NCV8504 is a family of precision micropower voltage regulators with 400mA output current capability. The family has output voltage options for adjustable, 2.5 V, 3.3 V and 5.0 V that are accurate within  $\pm 2.0\%$ . Maximum dropout voltage reaches 0.6 V at full load.

Low quiescent current is a feature drawing only 90  $\mu\text{A}$  with a 100  $\mu\text{A}$  load. This part is ideal for any and all battery operated microprocessor equipment.

Microprocessor control logic includes an active RESET (with DELAY). The active RESET circuit operates correctly at an output voltage as low as 1.0 V. The reset threshold voltage can be decreased by the connection of external resistor divider to RADJ lead. The general use comparator (FLAG/Monitor) is referenced to a temperature stable voltage and provides 1 mA of drive current at its open collector output. It can be used to provide an early warning signal to the microprocessor of a potential impending RESET signal allowing the microprocessor to finish any signal processing before the RESET shuts it down.

The regulator is protected against reverse battery, short circuit, and thermal overload conditions. The device can withstand load dump transients making it suitable for use in automotive environments.

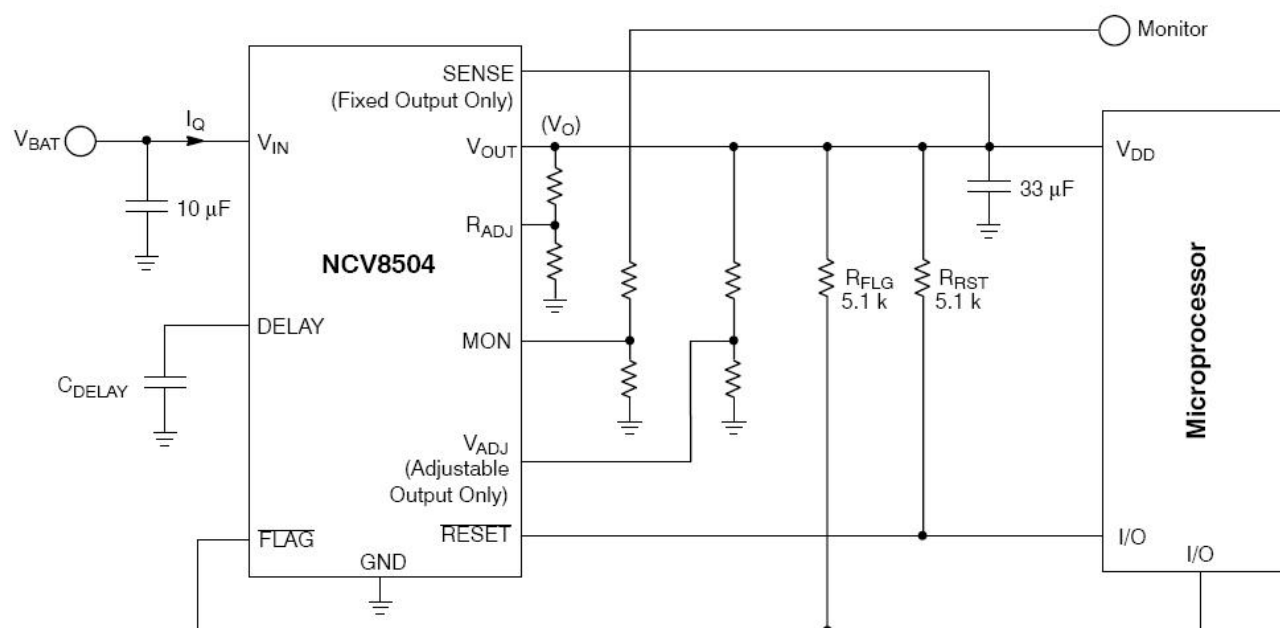
Features	Benefits
<ul style="list-style-type: none"> <li>Adjustable, 2.5V, 3.3V or 5.0V <math>\pm 2\%</math> Output Voltage / 400mA Output Current</li> <li>Reset with Adjustable Delay and Threshold</li> <li>Early Warning through Flag/Monitor Leads or General Use Comparator</li> <li>Integrated Protections: <ul style="list-style-type: none"> <li>+55V Peak Transient Voltage</li> <li>-15 Reverse Voltage</li> <li>Short Circuit Protection</li> <li>Thermal Overload Protection</li> </ul> </li> <li>AEC Qualified</li> <li>PPAP Capable</li> <li>Pb-Free Packages are Available</li> </ul>	<ul style="list-style-type: none"> <li>Tight Regulation Limits</li> <li>MPU control - versatile reset control</li> <li>System benefits and design flexibility</li> <li>Limit number of external components: <ul style="list-style-type: none"> <li>Robust load dump tolerance</li> <li>Reverse battery protection</li> <li>Self protection</li> <li>Self protection</li> </ul> </li> </ul>

Applications	End Products
<ul style="list-style-type: none"> <li>Powertrain</li> <li>Engine Control Unit</li> <li>Body and Chassis</li> </ul>	<ul style="list-style-type: none"> <li>Automotive</li> </ul>

#### 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
NCV8504PW33R2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	3.3	0.4	45	0.4	0.1			SOIC-16W EP
NCV8504PW50R2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.4	45	0.4	0.1			SOIC-16W EP

## Application Diagram



For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com)

Created on: 7/11/2015