

## Product Overview

### NCP5501: Linear Voltage Regulator, LDO, 500 mA

For complete documentation, see the data sheet

#### Product Description

This low dropout (LDO) linear voltage regulator provides up to 500 mA over a user-adjustable output range of 1.25 V to 5.0 V, or at a fixed output voltage of 1.5 V, 3.3 V or 5.0 V, with typical output voltage accuracy better than 3%. An internal PNP pass transistor permits low dropout voltage and operation at full load current at the minimum input voltage. NCV versions are qualified for demanding automotive applications that require extended temperature operation and site and change control. NCP5500 and NCV5500 versions include an Enable/Shutdown function and are available in a DPAK 5 and SOIC 8 packages. NCP5501 and NCV5501 versions are available in DPAK 3 for applications that do not require logical on/off control. This regulator family is ideal for applications that require a broad input voltage range, and low dropout performance up to 500 mA load using low cost ceramic capacitors. Integral protection features include short circuit current and thermal shutdown.

#### Features

- Output Current up to 500 mA
- 2.9% Output Voltage Accuracy
- Low Dropout Voltage (230 mV at 500 mA)
- Enable Control Pin (NCP5500 / NCV5500)
- Reverse Bias Protection
- Short Circuit Protection
- Thermal Shutdown
- Wide Operating Temperature Range  
NCV5500 / NCV5501; -40 °C to +125 °C Ambient Temperature  
NCP5500 / NCP5501; -40 °C to +85 °C Ambient Temperature
- NCV Prefix for Applications that Require Site and Change Control
- Stable with Low Cost Ceramic Capacitors

#### Applications

- Automotive
- Industrial and Consumer
- Post SMPS Regulation
- Point of Use Regulation

#### 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 (μV <sub>rms</sub> )	Package Type
NCP5501DT15G	Pb-free Halide free	Active	Single	Positive	1.5	0.5	18	1	0.3	75	35	DPAK-3
NCP5501DT15RKG	Pb-free Halide free	Active	Single	Positive	1.5	0.5	18	1	0.3	75	35	DPAK-3
NCP5501DT33G	Pb-free Halide free	Active	Single	Positive	3.3	0.5	18	0.3	0.3	75	35	DPAK-3
NCP5501DT33RKG	Pb-free Halide free	Active	Single	Positive	3.3	0.5	18	0.3	0.3	75	35	DPAK-3
NCP5501DT50G	Pb-free Halide free	Active	Single	Positive	5	0.5	18	0.3	0.3	75	35	DPAK-3
NCP5501DT50RKG	Pb-free Halide free	Active	Single	Positive	5	0.5	18	0.3	0.3	75	35	DPAK-3

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