

## NCP630

# Linear Voltage Regulator, 3 A, Ultra-High PSRR

## Product Overview

For complete documentation, see the data sheet.

The NCP630 is a low dropout (LDO) positive linear voltage regulator that is capable of providing a guaranteed output current of 3.0 A with a maximum dropout voltage of 1.25 V at 3.0 A over temperature. The fast turn on time allows step changes in loads commonly found in low voltage microprocessor applications. The NCP630 is currently offered as an adjustable output version that can be programmed down to 1.2 V with two external resistors and as a fixed output version at 3.47 V. On chip trimming adjusts the reference/output voltage within  $\pm 1.5\%$  accuracy. Internal protection features consist of output current limiting and thermal shutdown. NCP630 is available in D2PAK package.

## Features

- Output Current of 3.0 A
- 1.25 V Maximum Dropout Voltage at 3.0 A Over Temperature
- Voltage on Shutdown Pin is TTL Compatible
- Reference/Output Voltage Trimmed to  $\pm 1.5\%$
- Current Limit Protection
- Thermal Shutdown Protection
- $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$  Junction Temperature Range
- Pb-Free Packages are Available

## Applications

- Microprocessor Power Supplies
- DSP Power Supplies
- SMPS Post Regulation
- Battery Chargers

## Part Electrical Specifications

| Product       | Pricing (\$/Unit) | Compliance | Status | Output | Polarity | $V_O$ (V) | $I_O$ Typ (A) | $V_I$ Min (V) | $V_I$ Max (V) | $V_{DO}$ Typ (V) | $I_Q$ Typ (mA) | PSRR (dB) | Noise ( $\mu\text{V}_r$ ms) | Enable | PowerGood | Application | Package Type         |
|---------------|-------------------|------------|--------|--------|----------|-----------|---------------|---------------|---------------|------------------|----------------|-----------|-----------------------------|--------|-----------|-------------|----------------------|
| NCP630AD2TR4G | 0.5631            |            | Active | Single | Positive | Adj       | 3             | 2.5           | 12            | 1.25             | 0.4            | 85        | 210                         | Yes    | No        |             | D <sup>2</sup> PAK-5 |