

## Product Overview

### NCV48220: LDO Regulator, 150 mA, Ultra-Low Dropout, Low Iq

For complete documentation, see the data sheet.

The NCV48220 is very low quiescent current 150 mA LDO regulator with integrated battery voltage charge pump boost converter for automotive applications requiring full functionality during battery voltage drop events (e.g. cranking). The NCV48220 require very low number of external components. Very low quiescent current as low as 35  $\mu$ A typical for NCV48220 makes it suitable for applications permanently connected to battery requiring very low quiescent current. The Enable function can be used for further decrease of quiescent current down to 1  $\mu$ A. The NCV48220 contains protection functions as current limit, thermal shutdown and reverse bias current protection.

#### Features

- Output Voltage: 5 V
- LDO Output Current: up to 150 mA
- Very Wide Input Voltage Operation Range: from 3 V to 40 V
- Very Low Quiescent Current: typ 35  $\mu$ A
- Microprocessor Compatible Control Functions: Reset Output
- AEC-Q100 Grade 1 Qualified and PPAP Capable
- Protection Features: Current Limitation, Thermal Shutdown, Reverse Bias Output Current
- Enable Function (1  $\mu$ A max quiescent current when disabled)
- Pb-Free Device

#### Benefits

- Perfect for powering microprocessors.
- Our vast portfolio of automotive regulators allows you to select the one which fits your application.
- Maintains regulated voltage through load dump and battery undervoltage.
- Meets the latest automotive module requirement of less than 100  $\mu$ A.
- Prohibits the microprocessor from performing unrequested tasks at low voltage.
- Meets automotive Site and change control & AEC-Q100 Qualification requirements.
- Protects the device from permanent damage.

#### Applications

- Stop-Start Applications
- Instruments and Clusters
- Infotainment
- Telematics
- Navigation

#### End Products

- Automotive

#### Part Electrical Specifications

| Product        | Pricing (\$/Unit) | Compliance  | Status | Output | Polarity | V <sub>O</sub> (V) | I <sub>O</sub> Typ (A) | V <sub>I</sub> Min (V) | V <sub>I</sub> Max (V) | V <sub>DO</sub> Typ (V) | I <sub>Q</sub> Typ (mA) | PSR R (dB) | Noise (μV <sub>rms</sub> ) | Enable | PowerGood | Application | Package Type |
|----------------|-------------------|---|--------|--------|----------|--------------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|------------|----------------------------|--------|-----------|-------------|--------------|
| NCV48220D50R2G | 0.932             | AEC Qualified<br>PPAP Capable<br>Pb-free<br>Halide free | Active | Single | Positive | 5                  | 0.15                   | 3                      | 40                     | 0.15                    | 0.035                   | 60         | -                          | Yes    | Yes       | Automotive  | SOIC-8       |

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