Product Overview

NCV4276B: Linear Voltage Regulator, LDO, 400 mA

For complete documentation, see the data sheet.

The NCV4276B is a 400 mA output current integrated low dropout regulator family designed for use in harsh automotive environments. It includes wide operating temperature and input voltage ranges. The device is offered with fixed and adjustable voltage versions available in 2% output voltage accuracy. It has a high peak input voltage tolerance and reverse input voltage protection. It also provides overcurrent protection, overtemperature protection and inhibit for control of the state of the output voltage. The NCV4276B is available in DPAK and D2PAK surface mount package. The output is stable over a wide output capacitance and ESR range. The NCV4276B has improved startup behavior during input voltage transients.

Features

- Output Current up to 400 mA
- Enable
- Protections: +45 V Peak Transient Voltage, -42V Reverse Voltage, Short Circuit, Thermal Overload
- AEC-Q100 Qualified
- 500 mV (max) Dropout Voltage
- Fixed 5.0 V, 3.3 V and Adjustable Voltage Version (from 2.5 V to 20 V) 2% Output Voltage

Benefits

- Our vast portfolio of automotive regulators allows you to select the one which fits your application.
- Save battery life - quiescent current down to 10µA max.
- No external components required to enable protections required within any automotive applications.
- Meets automotive qualification requirements.
- Regulates during cranking.

Applications

- Body and Chassis
- Engine Control Unit
- Powertrain

Application Diagram

Figure 3. Applications Circuit; Fixed Voltage Version

\[ V_Q = \left[ \frac{(R_1 + R_2) \times V_{\text{ref}}}{R_2} \right] \]

Figure 4. Applications Circuit; Adjustable Voltage Version

\[ C_b^+ \] – Required if usage of low ESR output capacitor \( C_Q \) is demand, see Regulator Stability Considerations section