Product Overview

NCV4299: Linear Voltage Regulator, LDO, 150 mA

For complete documentation, see the data sheet

Product Description

The NCV4299 is a 150 mA precision micropower voltage regulator available with output voltages of 3.3 and 5.0 V. It is available in an 8?lead SON and in a 14?lead SON (fused) package. The output voltage is accurate within ±2% with a maximum dropout voltage of 0.5 V at 100 mA for the 5.0 V version. The NCV4299 features low quiescent current of only 90 µA with a 1 mA load.

The device features an adjustable reset output and an adjustable system monitor to provide shutdown early warning. The 14L version includes an inhibit function to turn the device off while consuming less than 1.0 µA of quiescent current.

Features

- 3.3 or 5.0 V, +/-2%, 150 mA
- Low Current Consumption 90 uA (Typ) in the ON Mode Extremely Low Current Consumption 1.0 uA in the Off Mode
- Early Warning Output Capability
- Adjustable Reset Threshold and Reset Output Low Down to VQ = 1.0 V
- Fault protection:
  60 V peak Transient Voltage protection
  -40 V Reverse Input Voltage protection
  Short circuit protection
  Thermal overload protection

Benefits

- Tight regulation limits
- Save battery life
- Microprocessor power management feature, design flexibility
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- No external components required to enable protections required within any automotive applications

Applications

- Body and Chassis
- Powertrain, Engine Control Unit
- Infotainment

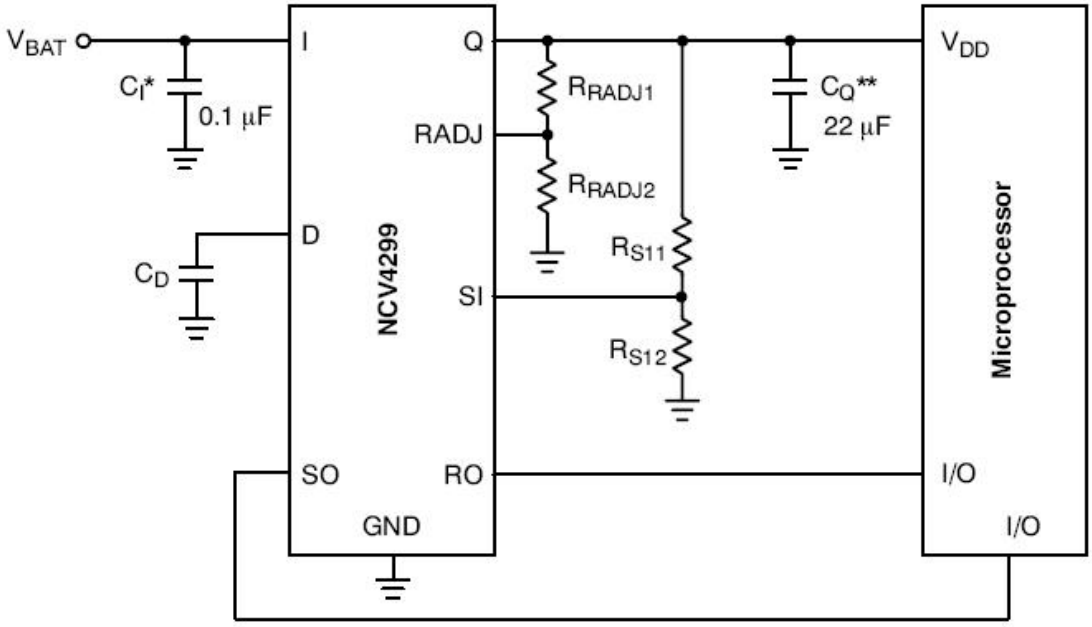
End Products

- Automotive

Part Electrical Specifications

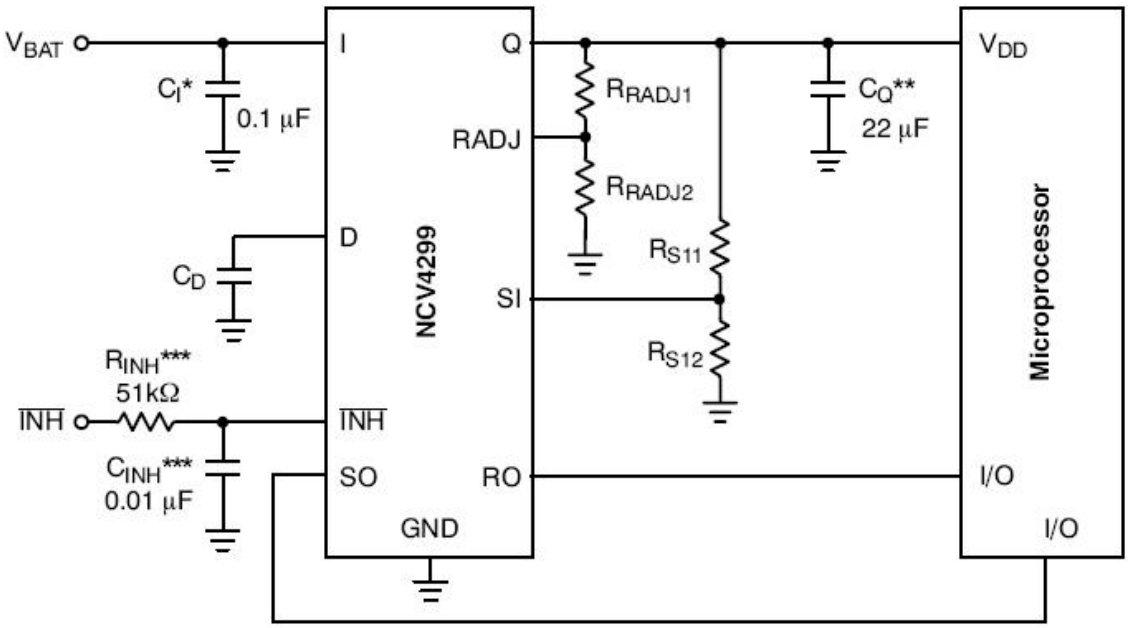
Product	Compliance	Status	Output	Polarity	V_O (V)	I_O Typ (A)	V_I Max (V)	V_{DO} Typ (V)	I_q Typ (mA)	PSRR (dB)	Noise (μV_{rms})	Package Type
NCV4299D1R2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.15	45	0.22	0.086	66		SOIC-8

Application Diagram



*C_I required if regulator is located far from the power supply filter.
**C_Q required for stability. Cap must operate at minimum temperature expected.

Test and Application Circuit Showing all Compensation and Sense Elements for the 8 Pin Package Part



*C_I required if regulator is located far from the power supply filter.
**C_Q required for stability. Cap must operate at minimum temperature expected.
***This RC filter is only required when transients with slew rate in excess of 10 V/ms may be present on the $\overline{INH}$ voltage source during operation. The filter is not required when $\overline{INH}$ is connected to a noise−free DC voltage.

Test and Application Circuit Showing all Compensation and Sense Elements for the 14 Pin Package Part with Inhibit Function

Created on: 7/11/2015