



Product Overview

NCV2931: Linear Voltage Regulator, LDO, Adjustable Output, 100 mA, with 60 V Load Dump Protection

[For complete documentation, see the data sheet](#)

Product Description

The LM2931 series consists of positive fixed and adjustable output low dropout (LDO) linear voltage regulators that are specifically designed to maintain proper regulation with an extremely low input-to-output voltage differential. These devices are capable of supplying output currents in excess of 100 mA and feature a low bias current of 0.4 mA at 10 mA output. Designed primarily to survive in the harsh automotive environment, these devices will protect all external load circuitry from input fault conditions caused by reverse battery connection, two battery jump starts, and excessive line transients during load dump. This series also includes internal current limiting, thermal shutdown, and additionally, is able to withstand temporary power-up with mirror-image insertion. Due to the low dropout voltage and bias current specifications, the LM2931 series is ideally suited for battery powered industrial and consumer equipment where an extension of useful battery life is desirable. The 'C' suffix adjustable output regulators feature an output inhibit pin which is extremely useful in microprocessor-based systems.

Features

- Input-to-Output Voltage Differential of < 0.6 V @ 100 mA
- Output Current in Excess of 100 mA
- Low Bias Current
- 60 V Load Dump Protection
- -50 V Reverse Transient Protection
- Internal Current Limiting with Thermal Shutdown
- Temporary Mirror-Image Protection
- Ideally Suited for Battery Powered Equipment
- Economical 5-Lead TO-220 Package with Two Optional Leadforms
- Available in Surface Mount SOP-8, D²PAK and DPAK Packages

Applications

- Battery Powered Consumer Products
- Handheld Instruments
- 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
NCV2931ACDR2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	Adjustable	0.1	40	0.16		90		SOIC-8
NCV2931AD-5.0R2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.1	40	0.16		90		SOIC-8
NCV2931ADT5.0RKG	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.1	40	0.16		90		DPAK-3
NCV2931AST-5T3G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.1	40	0.16		90		SOT-223-4 / TO-261-4
NCV2931AZ-5.0G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.1	40	0.16		90		TO-92
NCV2931AZ-5.0RAG	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.1	40	0.16		90		TO-92
NCV2931CDR2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	Adjustable	0.1	40	0.16		90		SOIC-8
NCV2931D-5.0R2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.1	40	0.16		90		SOIC-8
NCV2931D2T5.0R4G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.1	40	0.16		90		D ² PAK-3
NCV2931DT-5.0RKG	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.1	40	0.16		90		DPAK-3

For more information please contact your local sales support at www.onsemi.com

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