

Product Overview

LM2931: LDO Regulator, 100 mA, Ultra-High PSRR

For complete documentation, see the data sheet.

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 $< 0.6\text{ V @ }100\text{ mA}$
- 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

For more features, see the data sheet

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 Min (V)	V _I Max (V)	V _{DO} Typ (V)	I _Q Typ (mA)	PSRR (dB)	Noise (μV _{rms})	Enable	Power Good	Package Type
LM2931ACD2TR4G	Pb-free Halide free	Active	Single	Positive	Adj	0.1	2.5	40	0.16	0.4	90	700	Yes	No	D ² PAK-5
LM2931ACDR2G	Pb-free Halide free	Active	Single	Positive	Adj	0.1	2.5	40	0.16	0.4	90	700	Yes	No	SOIC-8
LM2931ACTVG	Pb-free Halide free	Active	Single	Positive	Adj	0.1	2.5	40	0.16	0.4	90	700	Yes	No	TO-220-5
LM2931AD-5.0G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	SOIC-8
LM2931AD-5.0R2G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	SOIC-8
LM2931AD2T-5.0G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	D ² PAK-3
LM2931AD2T-5R4G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	D ² PAK-3
LM2931ADT-5.0G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	DPAK-3
LM2931ADT-5.0RKG	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	DPAK-3
LM2931AT-5.0G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	TO-220-3
LM2931AZ-5.0G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	TO-92
LM2931AZ-5.0RAG	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	TO-92
LM2931AZ-5.0RPG	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	TO-92
LM2931CD2TG	Pb-free Halide free	Active	Single	Positive	Adj	0.1	2.5	40	0.16	0.4	90	700	Yes	No	D ² PAK-5
LM2931CD2TR4G	Pb-free Halide free	Active	Single	Positive	Adj	0.1	2.5	40	0.16	0.4	90	700	Yes	No	D ² PAK-5
LM2931CDR2G	Pb-free Halide free	Active	Single	Positive	Adj	0.1	2.5	40	0.16	0.4	90	700	Yes	No	SOIC-8
LM2931CTG	Pb-free Halide free	Active	Single	Positive	Adj	0.1	2.5	40	0.16	0.4	90	700	Yes	No	TO-220-5
LM2931D-5.0G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	SOIC-8
LM2931D-5.0R2G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	SOIC-8
LM2931D2T-5.0G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	D ² PAK-3
LM2931D2T-5.0R4G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	D ² PAK-3
LM2931DT-5.0G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	DPAK-3
LM2931T-5.0G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	TO-220-3
LM2931Z-5.0G	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	TO-92
LM2931Z-5.0RAG	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	TO-92
LM2931Z-5.0RPG	Pb-free Halide free	Active	Single	Positive	5	0.1	2.5	40	0.16	0.4	90	700	No	No	TO-92

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

