

## Product Overview

### LP2950: LDO Regulator, 100 mA, Low Power

For complete documentation, see the data sheet.

The LP2950 and LP2951 are micropower 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 feature a very low quiescent bias current of 75  $\mu$ A and are capable of supplying output currents in excess of 100 mA. Internal current and thermal limiting protection is provided. The LP2951 LDO linear voltage regulator has three additional features. The first is the Errorbar Output that can be used to signal external circuitry of an out of regulation condition, or as a microprocessor power-on reset. The second feature allows the output voltage to be preset to 5.0 V, 3.3 V or 3.0 V output (depending on the version) or programmed from 1.25 V to 29 V. It consists of a pinned out resistor divider along with direct access to the Error Amplifier feedback input. The third feature is a Shutdown input that allows a logic level signal to turn-off or turn-on the regulator output. Due to the low input-to-output voltage differential and bias current specifications, these devices are ideally suited for battery powered computer, consumer, and industrial equipment where an extension of useful battery life is desirable. The LP2950 is available in the three pin case 29 and DPAK packages, and the LP2951 is available in the eight pin dual-in-line, SO-8 and Micro-8 surface mount packages. The 'A' suffix devices feature an initial output voltage tolerance  $\pm$ 0.5%.

### Features

- Low Quiescent Bias Current of 75  $\mu$ A
  - Low Input-to-Output Voltage Differential of 50 mV at 100 mA and 380 mV at 100 mA
  - 5.0 V, 3.3 V or 3.0 V  $\pm$  0.5% Allows Use as a Regulator or Reference
  - Extremely Tight Line and Load Regulation
  - Requires Only a 1.0 mF Output Capacitor for Stability
  - Internal Current and Thermal Limiting
  - LP2951 also has Error(bar) Output Signals an Out of Regulation Condition
  - LP2951 also has Output Programmable from 1.25 V to 29 V
  - LP2951 also has Logic Level Shutdown Input
  - Pb-Free Packages are Available
- For more features, see the data sheet

### Applications

- 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	Power Good	Package Type
LP2950ACDT-3.0G	0.2927	Pb-free Halide free	Active	Single	Positive	3	0.1	3.1	30	0.35	0.093	48	56	No	No	DPA K-3
LP2950ACDT-3.3RG	0.1924	Pb-free Halide free	Active	Single	Positive	3.3	0.1	3.1	30	0.35	0.093	48	56	No	No	DPA K-3
LP2950ACDT-3RKG	0.2927	Pb-free Halide free	Active	Single	Positive	3	0.1	3.1	30	0.35	0.093	48	56	No	No	DPA K-3
LP2950ACDT-5.0G	0.2801	Pb-free Halide free	Active	Single	Positive	5	0.1	3.1	30	0.35	0.093	48	56	No	No	DPA K-3
LP2950ACDT-5RKG	0.2647	Pb-free Halide free	Active	Single	Positive	5	0.1	3.1	30	0.35	0.093	48	56	No	No	DPA K-3
LP2950ACZ-3.0G	0.1544	Pb-free Halide free	Active	Single	Positive	3	0.1	3.1	30	0.35	0.093	48	56	No	No	TO-92
LP2950ACZ-3.0RAG	0.3193	Pb-free Halide free	Active	Single	Positive	3	0.1	3.1	30	0.35	0.093	48	56	No	No	TO-92
LP2950ACZ-3.3G	0.2881	Pb-free Halide free	Active	Single	Positive	3.3	0.1	3.1	30	0.35	0.093	48	56	No	No	TO-92
LP2950ACZ-3.3RAG	0.3193	Pb-free Halide free	Active	Single	Positive	3.3	0.1	3.1	30	0.35	0.093	48	56	No	No	TO-92
LP2950ACZ-5.0G	0.2529	Pb-free Halide free	Active	Single	Positive	5	0.1	3.1	30	0.35	0.093	48	56	No	No	TO-92
LP2950ACZ-5.0RAG	0.3333	Pb-free Halide free	Active	Single	Positive	5	0.1	3.1	30	0.35	0.093	48	56	No	No	TO-92
LP2950CDT-3.0G	0.3045	Pb-free Halide free	Active	Single	Positive	3	0.1	3.1	30	0.35	0.093	48	56	No	No	DPA K-3
LP2950CDT-3.0RKG	0.2311	Pb-free Halide free	Active	Single	Positive	3	0.1	3.1	30	0.35	0.093	48	56	No	No	DPA K-3
LP2950CDT-3.3G	0.2623	Pb-free Halide free	Active	Single	Positive	3.3	0.1	3.1	30	0.35	0.093	48	56	No	No	DPA K-3
LP2950CDT-3.3RKG	0.2244	Pb-free Halide free	Active	Single	Positive	3.3	0.1	3.1	30	0.35	0.093	48	56	No	No	DPA K-3
LP2950CDT-5.0G	0.2137	Pb-free Halide free	Active	Single	Positive	5	0.1	3.1	30	0.35	0.093	48	56	No	No	DPA K-3
LP2950CDT-5.0RKG	0.2201	Pb-free Halide free	Active	Single	Positive	5	0.1	3.1	30	0.35	0.093	48	56	No	No	DPA K-3
LP2950CZ-3.0G	0.2777	Pb-free Halide free	Active	Single	Positive	3	0.1	3.1	30	0.35	0.093	48	56	No	No	TO-92
LP2950CZ-3.0RAG	0.2775	Pb-free Halide free	Active	Single	Positive	3	0.1	3.1	30	0.35	0.093	48	56	No	No	TO-92
LP2950CZ-3.3G	0.2653	Pb-free Halide free	Active	Single	Positive	3.3	0.1	3.1	30	0.35	0.093	48	56	No	No	TO-92
LP2950CZ-3.3RAG	0.2492	Pb-free Halide free	Active	Single	Positive	3.3	0.1	3.1	30	0.35	0.093	48	56	No	No	TO-92
LP2950CZ-5.0G	0.2824	Pb-free Halide free	Active	Single	Positive	5	0.1	3.1	30	0.35	0.093	48	56	No	No	TO-92
LP2950CZ-5.0RAG	0.32	Pb-free Halide free	Active	Single	Positive	5	0.1	3.1	30	0.35	0.093	48	56	No	No	TO-92
LP2950CZ-5.0RPG	0.2779	Pb-free Halide free	Active	Single	Positive	5	0.1	3.1	30	0.35	0.093	48	56	No	No	TO-92

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