

High-Current Low Dropout Regulators

Features

- High Current Capability:
 - MIC29150/29151/29152/29153: 1.5A
 - MIC29300/29301/29302/29303: 3A
 - MIC29500/29501/29502/29503: 5A
 - MIC29751/29752: 7.5A
- Low Dropout Voltage
- Low Ground Current
- Accurate 1% Guaranteed Tolerance
- Extremely Fast Transient Response
- Reverse-Battery and "Load Dump" Protection
- Zero-Current Shutdown Mode (5-Pin Versions)
- Error Flag Signals Output Out-of-Regulation (5-Pin Versions)
- Also Characterized for Smaller Loads with Industry-Leading Performance Specifications
- Fixed-Voltage and Adjustable Versions

Applications

- Battery-Powered Equipment
- High-Efficiency Green Computer Systems
- Automotive Electronics
- High-Efficiency Linear Power Supplies
- High-Efficiency Post-Regulator for Switching Supply

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General Description

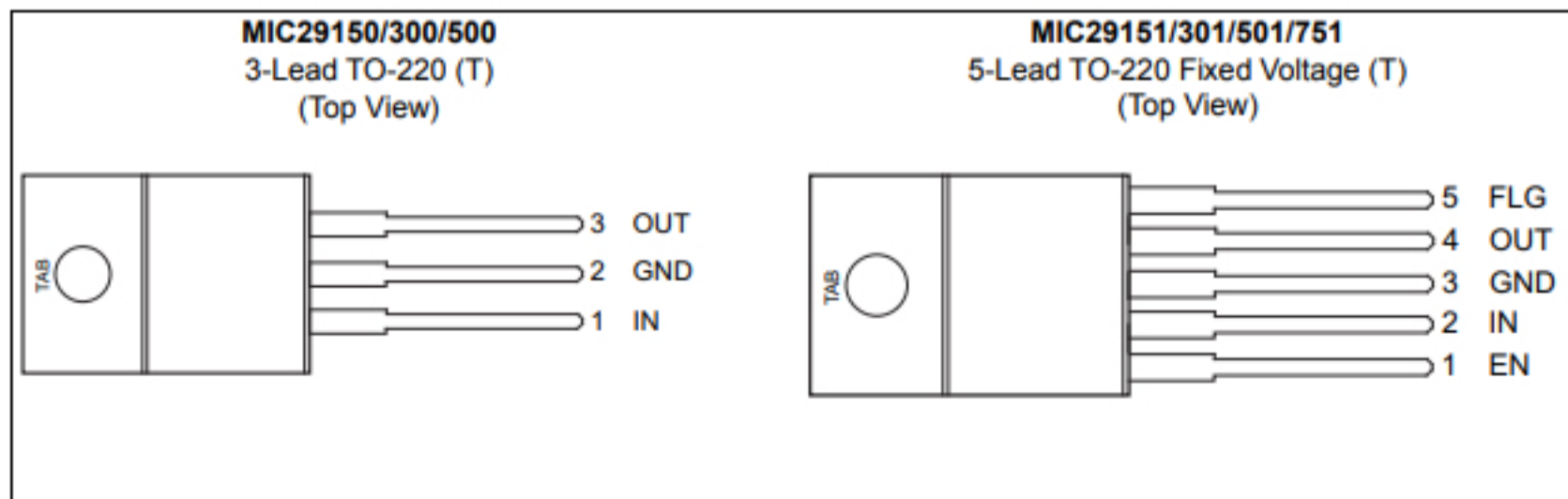
The MIC2915x/2930x/2950x/2975x are high current, high accuracy, low dropout voltage regulators. Using Microchip's proprietary Super β PNP process with a PNP pass element, these regulators feature 350 mV to 425 mV (full load) typical dropout voltages and very low ground current. Designed for high current loads, these devices also find applications in lower current, extremely low dropout-critical systems, where their tiny dropout voltage and ground current values are important attributes.

The MIC2915x/2930x/2950x/2975x are fully protected against overcurrent faults, reversed input polarity, reversed lead insertion, overtemperature operation, and positive and negative transient voltage spikes. Five pin fixed-voltage versions feature logic level ON/OFF control and an error flag that signals whenever the output falls out of regulation. Flagged states include low input voltage (dropout), output current limit, overtemperature shutdown, and extremely high voltage spikes on the input.

On the MIC29xx1 and MIC29xx2, the ENABLE pin may be tied to V_{IN} if it is not required for ON/OFF control. The MIC2915x/2930x/2950x are available in 3-pin and 5-pin TO-220 and surface mount TO-263 (D²Pak) packages. The MIC2975x 7.5A regulators are available in a 5-pin TO-247 package. The 1.5A, adjustable output MIC29152 is available in a 5-pin power D-Pak (TO-252) package.

For applications with input voltage 6V or below, see MIC37xxx LDOs.

Package Types



MIC2915X/30X/50X/75X

Package Types (Continued)

