LT1083/LT1084/LT1085

7.5A, 5A, 3A Low Dropout Positive Adjustable Regulators

FEATURES

- 3-Terminal Adjustable
- Output Current of 3A, 5A or 7.5A
- Operates Down to 1V Dropout
- Guaranteed Dropout Voltage at Multiple Current Levels
- Line Regulation: 0.015%
- Load Regulation: 0.1%
- 100% Thermal Limit Functional Test
- Fixed Versions Available
- Available in 3-Lead Plastic TO-220 and DD Packages

APPLICATIONS

- High Efficiency Linear Regulators
- Post Regulators for Switching Supplies
- Constant Current Regulators
- Battery Chargers

DEVICE	OUTPUT CURRENT*
LT1083	7.5A
LT1084	5.0A
LT1085	3.0A

*For a 1.5A low dropout regulator see the LT1086 data sheet.

DESCRIPTION

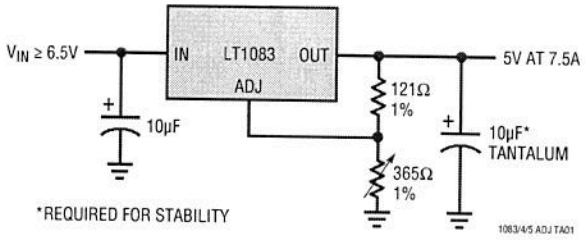
The LT®1083 series of positive adjustable regulators are designed to provide 7.5A, 5A and 3A with higher efficiency than currently available devices. All internal circuitry is designed to operate down to 1V input-to-output differential and the dropout voltage is fully specified as a function of load current. Dropout is guaranteed at a maximum of 1.5V at maximum output current, decreasing at lower load currents. On-chip trimming adjusts the reference voltage to 1%. Current limit is also trimmed, minimizing the stress on both the regulator and power source circuitry under overload conditions.

The LT1083/LT1084/LT1085 devices are pin compatible with older 3-terminal regulators. A 10µF output capacitor is required on these new devices. However, this is included in most regulator designs.

Unlike PNP regulators, where up to 10% of the output current is wasted as quiescent current, the LT1083 quiescent current flows into the load, increasing efficiency.

TYPICAL APPLICATION

5V, 7.5A Regulator



Dropout Voltage vs Output Current