

2A Low Dropout Linear Regulator with Programmable Soft-Start

DESCRIPTION

The EUP7932 is a 2A low-dropout (LDO) linear regulator which features a user-programmable soft-start, an enable input, a fixed or ADJ selectable output and a power-good output.

EUP7932 works with two input voltages: VCC provides 5V voltage to drive the gate of the N-MOS power transistor, while IN is the input voltage which supplies power to the load. The use of an external bias power allows the part to operate in ultra low IN voltage. The EUP7932 features ultra low dropout, ideal for applications where OUT is very close to IN. Soft start is another character of EUP7932, the soft-start can reduce inrush current of the load capacitors and minimizes stress on the input power source during start-up.

Additionally, the EUP7932 has an enable pin to further reduce power dissipation while shutdown. The EUP7932 provides excellent regulation over variations in line, load and temperature. The EUP7932 provides a power OK signal when the output voltage reaches 90% of its normal value.

The EUP7932 is stable with any Ceramic output capacitor of 2.2 μ F or more. A precision reference and feedback control deliver 2% accuracy over load, line, and operating temperature ranges. The EUP7932 is available in SOP-8(EP) packages.

FEATURES

- Low IN and wide IN range:1.0V to 5.5V
- Bias voltage (V_{VCC}) range:2.7V to 5.5V
- Low OUT range:0.8V to 3.3V
- Low dropout:165mV typical at 1.5A, $V_{VCC}=5V$
- Guaranteed 2A Output Current
- 2% accuracy over line, load and temperature range
- Power-Good (PG) output for supply monitoring and for sequencing of other supplies
- Programmable soft-start provides linear voltage startup
- Bias supply permits low IN operation with good transient response
- Auto-Discharge when Shutdown
- Stable with any Ceramic output capacitor $\geq 2.2\mu F$
- Available in SOP-8(EP) Package
- RoHS Compliant and 100% Lead (Pb)-Free Halogen-Free

APPLICATIONS

- PCs, Servers, Modems, and Set-Top-Boxes
- FPGA Applications
- DSP Core and I/O Voltages
- Post-Regulation Applications
- Applications With Sequencing Requirements

Typical Application Circuit

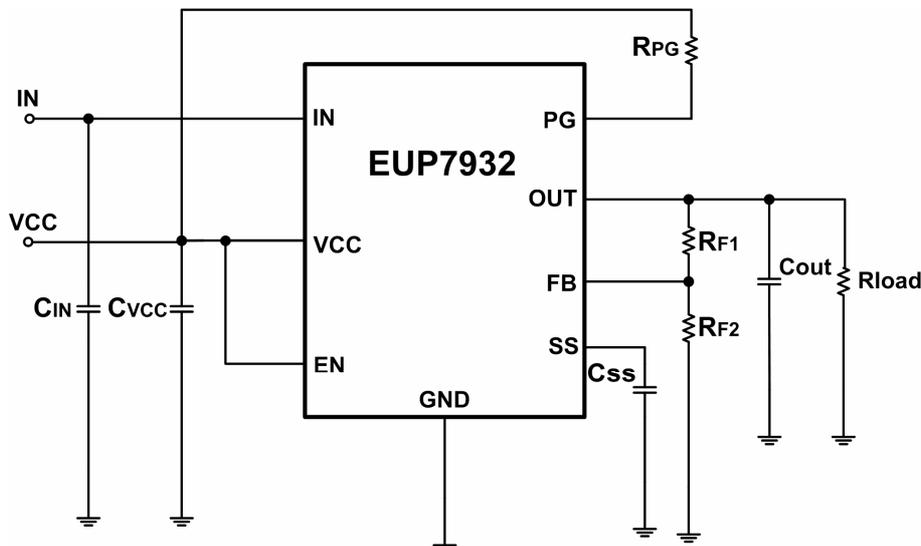


Figure 1.