MAX20074EVKIT

Evaluation Kit for the MAX20074

Description

The MAX20074 evaluation kit demonstrates the performance and behavior of the MAX20074, a part in the MAX20015–MAX20018/MAX20073/MAX20074 family of pin-compatible, low-voltage, step-down switching regulator ICs.

The regulator delivers current up to 3A at an output voltage between 0.5V and 3.8V. The device operates from a 2.7V to 5.5V input supply voltage, making it ideal for post-regulation and point-of-load applications. The total error over load, line, and temperature ranges is 1.5%. The base switching frequency is 2.2MHz, which allows for all-ceramic capacitor application designs. The regulator can either be synchronized to an external clock or placed in a power-saving skip mode for increased efficiency at light loads.

The regulator provides an enable input and fault flag output. The output voltage can be set using an external resistor-divider and an internal 0.5V reference. Alternatively, it can be programmed at the factory for a specific output voltage, achieving 1.5% output accuracy without resorting to expensive 0.1% resistors. The soft-start time and fault hold time can also be factory programmed.

The regulators include overtemperature shutdown and overcurrent limiting. They are designed to continuously operate over the -40°C to 125°C ambient temperature. range

Key Features

- 2.7V to 5.5V Input Voltage Range
- 0.5V to 3.8V Output Voltage Range
  - Set by External Resistive Divider or Preprogrammed at Factory
  - Base EV Kit Configuration Set to 1.8V/3A Output
- High-Frequency Switching (2.2MHz) Allows for an All-Ceramic Capacitor Design
- Continuously Produces Output Current Up to 3A
- Compact Solution Size
  - Externally Adjustable Output Implementation Fits Inside 65mm^2 Area
  - Preprogrammed Output Implementation Fits Inside 55mm^2 Area

Applications/Uses

- Automotive
- Point-of-Load