MAX20471EVKIT

Evaluation Kit for the MAX20471

NDA Required. Request Full Data Sheet and Software

Description

The MAX20471 evaluation kit demonstrates the performance of the MAX20471, which is part of the MAX20471–MAX20473 series of high-efficiency, low-voltage DC-DC converters. The converter ICs boost a 3.0V to 4.0V input supply to between 3.8V and 5.25V at up to 500mA. The boost converters achieve ±1.5% output error over load, line, and temperature range.

The IC features a 2.2MHz fixed-frequency forced-PWM (FPWM) mode for better noise immunity and load-transient response, and a pulse-frequency modulation mode (skip) for increased efficiency during light-load operation. The 2.2MHz frequency operation enables the use of all-ceramic capacitors and minimizes external components. The programmable spread-spectrum-frequency modulation minimizes radiated electromagnetic emissions. Integrated low $R_{DS(ON)}$ switches improve efficiency at heavy loads and make the layout a much simpler task with respect to discrete solutions.

The regulator includes True Shutdown™, soft-start, overcurrent, and overtemperature protections.

Key Features

- 3.0V to 4.0V Operating Supply Voltage
- 3.8V to 5.25V Fixed Output
- 500mA Output Version Populated; Compatible with 1A and 2A Output Versions
- 2.2MHz Operation
- Feedback Injection Point to Test Stability
- Robust for the Automotive Environment
    - Current Mode, Forced-PWM and Skip Operation
    - Overtemperature and Short-Circuit Protection
    - -40°C to +125°C Operating Range
- Proven PCB Layout
- Fully Assembled and Tested

Applications/Uses

- Automotive CAN Transceivers
- Automotive Point of Load