MP87190

90A, Intelli-Phase™ DrMOS Solution in TLGA-41 (5mmx6mm) Package with Quiet Switcher™ Technology and 5V PVCC

DESCRIPTION

The MP87190 is a monolithic half-bridge with built-in internal power MOSFETs and gate drivers. It achieves up to 90A of continuous output current (I_{OUT}) across a wide input voltage (V_{IN}) supply range.

Quiet Switcher™ technology (QST) utilizes a proprietary circuit design that can only be achieved in a monolithic architecture to suppress voltage ringing. This technology limits the peak switching voltage to <2V above V_{IN}, improving device reliability, lowering EMI, and reducing sensitivity to PCB layout.

The MP87190 offers many features to simplify system design. This device operates with tri-state pulse-width modulation (PWM) signal controllers, and features Accu-Sense™ current sensing and temperature sensing, to monitor the inductor current (I_L) and report the junction temperature (T_J), respectively.

The MP87190 is ideal for server and telecom applications where efficiency and small size are at a premium. The MP87190 is available in TLGA-41 (5mmx6mm) package.

FEATURES

- Quiet Switcher™ Technology (QST) Limits Peak Switching Voltages to <2V above the Input Voltage (V_{IN}) with Minimal Reliance on PCB Layout
- Wide 3V to 16V Operating V_{IN} Range
- 90A Output Current (I_{OUT})
- 5V PVCC Operation
- Current Sense: Accu-Sense™
- Temperature Sense
- Accepts Tri-State Pulse-Width Modulation (PWM) Signal
- Current-Limit Protection
- Over-Temperature Protection (OTP)
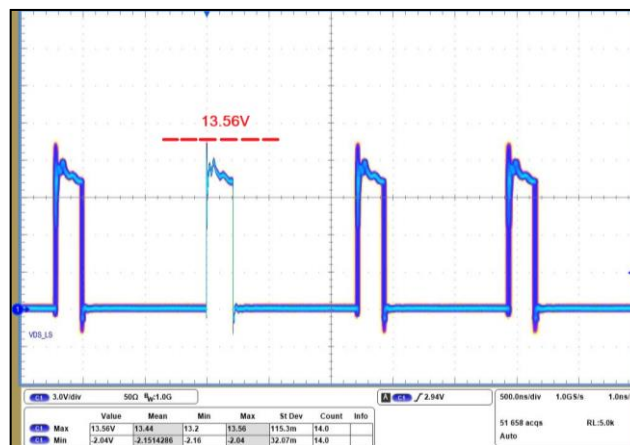- Fault Reporting
- Available in a TLGA-41 (5mmx6mm) Package

APPLICATIONS

- Server Core Voltage
- Telecom and Networking Systems
- Power Modules

QUIET SWITCHER WAVEFORM

V_{IN} = 12V, I_{OUT} = 90A, products without QST reach 26.5V