



The Future of Analog IC Technology®

# MP1009

## Nu-Pulse™, Half-Bridge and Push-Pull CCFL Inverter Controller

PRELIMINARY SPECIFICATIONS SUBJECT TO CHANGE

MPS CONFIDENTIAL AND PROPRIETARY INFORMATION – INTERNAL USE ONLY

### DESCRIPTION

The MP1009 is a fixed operating frequency inverter controller that controls two external power MOSFETs in Nu-Pulse™, Half-Bridge or Push-Pull configuration for powering one or more cold cathode fluorescent lamps (CCFL) to backlight liquid crystal displays (LCD).

The MP1009 offers cost effective solutions with minimized external components. The controller provides high efficiency power conversion of unregulated DC input voltages to nearly pure sine waves. The featured fault detection and protection scheme (patent pending) includes open lamp regulation, open lamp protection and short lamp protection.

Burst mode dimming is controlled with either an external analog or digital signal. Lamp voltages and lamp currents are continuously regulated under any operating conditions.

The MP1009 is available in a 16-pin SOIC package.

### FEATURES

- Drives Two External, Low Cost, N-Channel MOSFETs
- Fixed Operating Frequency
- Input Voltage Range of 8V to 30V
- Lamp Current and Voltage Regulation
- Burst Mode Dimming Control
- Integrated Burst Mode Oscillator and Modulator
- Soft-On and Soft-Off Burst Envelope
- Open Lamp & Short circuit Protection
- Fault Timer and Indicator
- Available in SOIC 16 Package

### APPLICATIONS

- Desktop LCD Flat Panel Displays
- Flat Panel Video Displays
- LCD TVs and Monitors

"MPS", "The Future of Analog IC Technology", and "Nu-Pulse" are Trademarks of Monolithic Power Systems, Inc.

MP1009 and Nu-Pulse configuration are MPS proprietary technologies covered by US Patents:

6,683,422  
6,316,881

6,114,814  
7,161,305

Other patents are pending.

### TYPICAL APPLICATION

