



The Future of Analog IC Technology®

# MP8869W

## High-Efficiency, 12A, 18V, Synchronous Step-Down Converter with I<sup>2</sup>C Interface

PRELIMINARY SPECIFICATIONS SUBJECT TO CHANGE

### DESCRIPTION

The MP8869W is a high-frequency, synchronous, rectified, step-down, switch-mode converter with I<sup>2</sup>C control interface. It offers a fully integrated solution to achieve a 12A continuous and 15A peak output current with excellent load and line regulation over a wide input supply range.

In the I<sup>2</sup>C control loop, the output voltage level can be controlled on-the-fly through an I<sup>2</sup>C serial interface. The voltage range can be adjusted from 0.6V to 1.55V in 7.5mV steps. The voltage slew rate, frequency, current limit, hiccup/latch-off protection, enable, and power savings mode are also selectable through the I<sup>2</sup>C interface.

COT control operation provides fast transient response. An open drain power good pin indicates that the output voltage is in the nominal range. Full protection features include over-voltage protection, over-current protection, and thermal shutdown.

The MP8869W is available in a QFN-14(3mmx4mm) package.

### FEATURES

- Wide 3V-to-18V Operating Input Range
- 12A Continuous/15A Peak Output Current
- 1% Internal Reference Accuracy
- I<sup>2</sup>C Programmable Output Range from 0.6V to 1.55V in 7.5mV Steps with Slew Rate Control
- 5% Accuracy Output Voltage and Output Current Read Back via I<sup>2</sup>C
- Selectable PFM/PWM Mode and Adjustable Frequency & Current Limit through I<sup>2</sup>C
- 4 Different I<sup>2</sup>C Addresses Selectable
- External Soft Start
- Open Drain Power Good Indication
- Output Over-Voltage Protection
- Hiccup/Latch Off OCP Protection
- QFN-14(3mmx4mm) Package

### APPLICATIONS

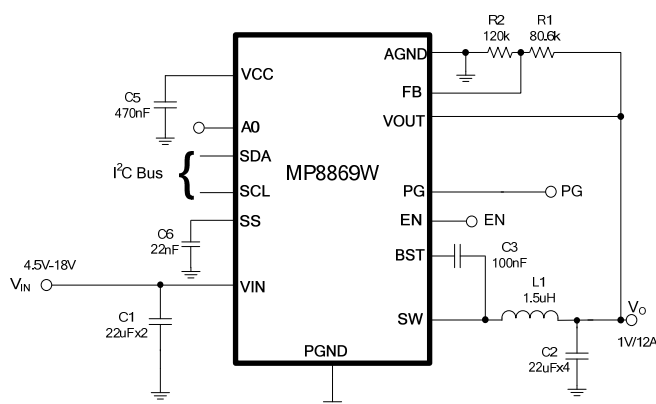
- Solid State Driver (SSD)
- Flat-Panel Television and Monitors
- Digital Set-Top Boxes
- Distributed Power Systems

All MPS parts are lead-free, halogen-free, and adhere to the RoHS directive. For MPS green status, please visit the MPS website under Quality Assurance.

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### TYPICAL APPLICATION



### Efficiency vs. Output Current

V<sub>OUT</sub>=1V, L=1.5µH, DCR=2.1mΩ

