



The Future of Analog IC Technology®

# EV2234-J-00A

High-Efficiency, 2A, 16V, 800kHz, Sync. Step-Down Switcher Evaluation Board

## DESCRIPTION

The EV2234-J-00A demonstrates MPS's MP2234, a high-frequency, synchronous, rectified, step-down converter with built-in high-side and low-side power MOSFETs. The MP2234 offers a very compact solution to achieve a 2A continuous output current with excellent load and line regulation over a wide input supply range. The MP2234 has synchronous mode operation for higher efficiency over the output current load range.

Current-mode operation provides fast transient response and eases loop stabilization.

Protective features includes OCP and thermal shutdown.

The MP2234 is available in a space saving 8-pin TSOT23 package.

## ELECTRICAL SPECIFICATION

Parameter	Symbol	Value	Units
Input Voltage	$V_{IN}$	5 – 16	V
Output Voltage	$V_{OUT}$	3.3	V
Output Current	$I_{OUT}$	2	A

## FEATURES

- Wide 5V to 16V Operating Input Range
- 100mΩ/40mΩ Low  $R_{DS(ON)}$  Internal Power MOSFET
- Proprietary Switching-Loss-Reduction Technique
- High-Efficiency Synchronous Mode Operation
- Default 800kHz Switching Frequency
- Externally-Programmable Soft-Start
- OCP Protection and Hiccup
- Thermal Shutdown
- Output Adjustable from 0.8V
- Available in an 8-pin TSOT-23 Package

## APPLICATIONS

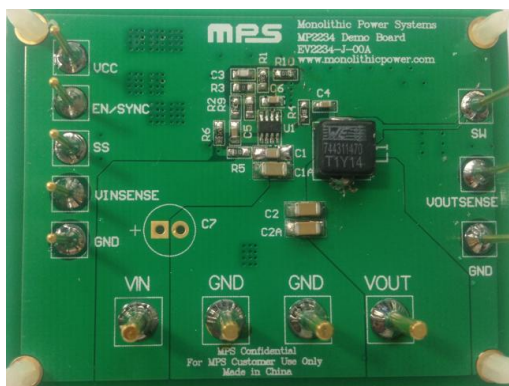
- Notebook System and I/O Power
- Digital Set-Top Boxes
- Flat-Panel Television and Monitors
- Distributed Power Systems

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

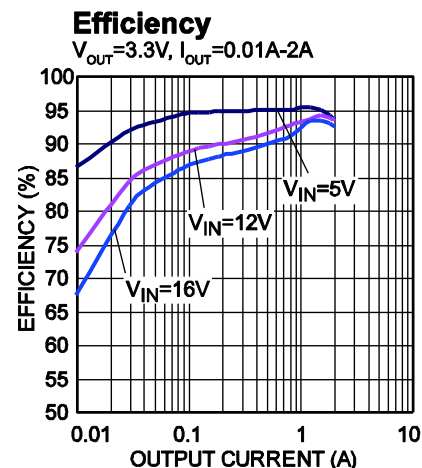
"MPS" and "The Future of Analog IC Technology" are registered trademarks of Monolithic Power Systems, Inc.

ADAM (Analog Digital Adaptive Modulation) and AAM (Advanced Asynchronous Mode) are trademarks of Monolithic Power Systems, Inc.

## EV2234-J-00A EVALUATION BOARD



Board Number	MPS IC Number
EV2234-J-00A	MP2234GJ





## PRINTED CIRCUIT BOARD LAYOUT

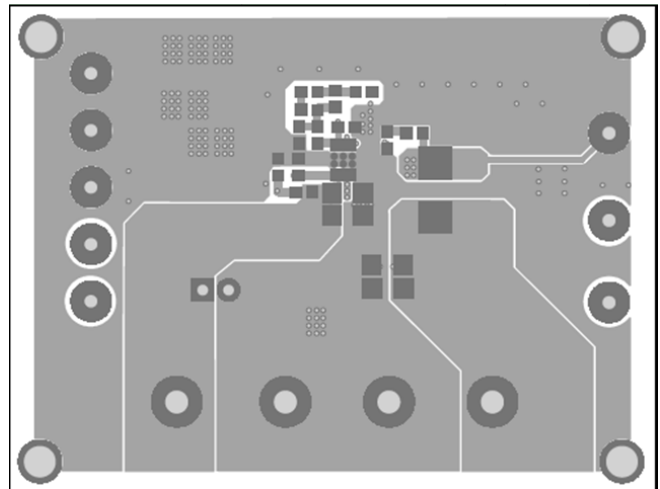
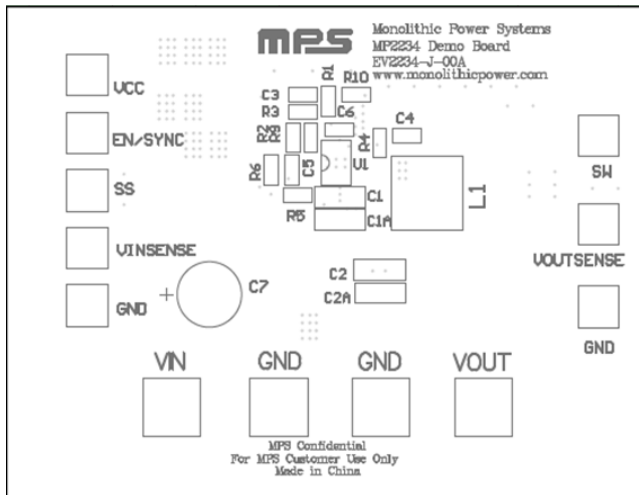


Figure 1—Top Silk Layer

Figure 2—Top Layer

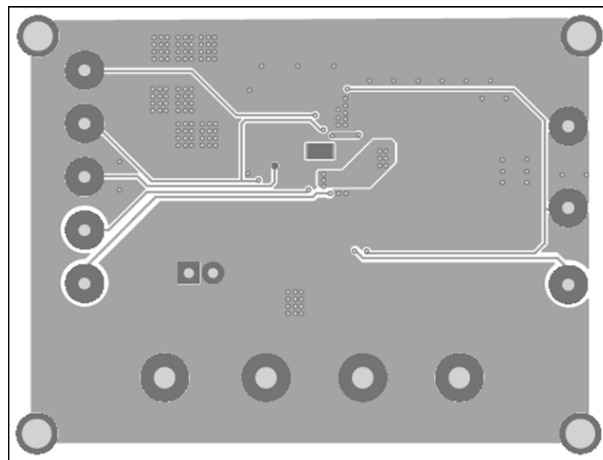


Figure 3—Bottom Layer

## QUICK START GUIDE

1. Connect the positive and negative terminals of the load to the VOUT and GND pins, respectively.
2. Preset the power supply output between 5V and 16V, and then turn off the power supply.
3. Connect the positive and negative terminals of the power supply output to the VIN and GND pins, respectively.
4. Turn the power supply on. The board will automatically start up.
5. To use the Enable function, apply a digital input to the EN pin. Drive EN higher than 1.4V to turn on the regulator or less than 1.25V to turn it off.

**NOTICE:** The information in this document is subject to change without notice. Please contact MPS for current specifications. Users should warrant and guarantee that third party Intellectual Property rights are not infringed upon when integrating MPS products into any application. MPS will not assume any legal responsibility for any said applications.