

### DESCRIPTION

The MP3437 is a 600kHz fixed frequency, wide input range, highly integrated boost converter. The MP3437 starts from an input voltage as low as 2.7V and supports up to 20W of load power from a 1-cell battery with integrated low  $R_{DS(ON)}$  power MOSFETs.

The MP3437 adopts constant-off-time (COT) control topology providing fast transient response. QFN package has MODE pin which can support the selection of pulse-skip mode (PSM), forced continuous conduction mode (FCCM) and ultrasonic mode (USM) in light-load condition. The cycle-by-cycle current limit on low-side MOSFET prevents current runaway, and the high-side MOSFET eliminates the need for an external Schottky diode.

The MP3437 supports auto-pass-through mode when  $V_{IN}$  is higher than  $V_{OUT-SET}$  in PSM mode. It also features with programmable input under-voltage lockout (UVLO) and over temperature protection.

The MP3437 is available in QFN-10 (2mmx2.5mm) and TSOT23-8 package.

### FEATURES

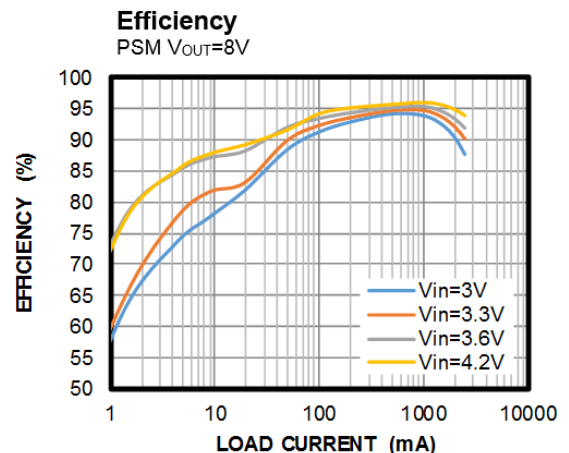
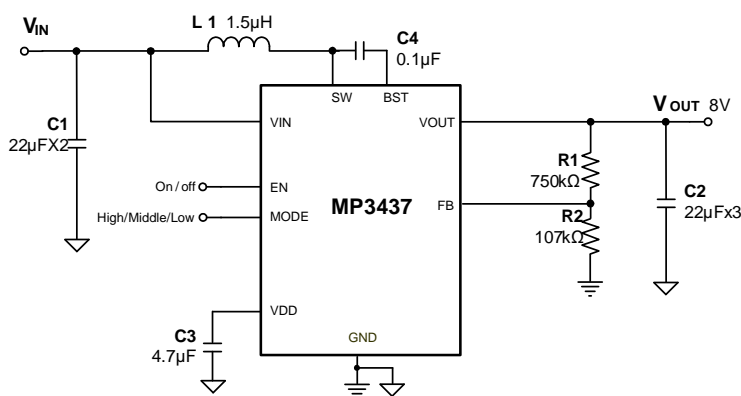
- 2.7V-to-16V Startup Voltage
- 0.8V-to-16V Operation Voltage
- Up to 16V Output Voltage
- Support 20W Power Load from 3.3V
- 9.5A Internal Switch Current Limit
- Integrated 14mΩ & 21mΩ Power MOSFET
- >90% Efficiency for 3.3V VIN to 8V/2.5A
- Auto Pass-Through Function in PSM Mode
- 600kHz Fixed Switching Frequency
- Adaptive COT for Fast Transient Response
- Internal Soft Start and Compensation
- Programmable UVLO and Hysteresis
- 150°C Over Temperature Protection
- Over Voltage Protection
- Available in QFN-10 (2mmx2.5mm) and TSOT23-8 Package.

### APPLICATIONS

- Notebook
- AI Speaker
- Bluetooth Speaker
- Portable POS System

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. "MPS", the MPS logo, and "Simple, Easy Solutions" are trademarks of Monolithic Power Systems, Inc. or its subsidiaries.

### TYPICAL APPLICATION





### ORDERING INFORMATION

| Part Number | Package            | Top Marking |
|-------------|--------------------|-------------|
| MP3437GRP*  | QFN-10 (2mmx2.5mm) | See Below   |
| MP3437GJ**  | TSOT23-8           |             |

\* For Tape & Reel, add suffix –Z (e.g. MP3437GRP–Z).

\*\* For Tape & Reel, add suffix –Z (e.g. MP3437GJ–Z).

### TOP MARKING (MP3437GRP)

—  
JDY  
LLL

JD: product code  
Y: year code  
LLL: lot number

### TOP MARKING (MP3437GJ)

|BGZY

BGZ: product code  
Y: year code