



MPM3520E

36V, 2A, High-Efficiency, Non-Isolated DC/DC Power Module with Integrated Inductor

PRELIMINARY SPECIFICATIONS SUBJECT TO CHANGE

DESCRIPTION

The MPM3520E is a high density, non-isolated DC/DC power module for space-sensitive applications. It offers a very compact solution to achieve 2A continuous output current with excellent load and line regulation over a 4V to 36V input supply range, and can provide an adjustable output voltage from 1.0V to 5.0V via an external FB resistor (default 3.3V output).

The MPM3520E integrates a switching controller, power switches, inductors, and a modest amount of input and output capacitance. All support components are within an advanced 10mmx10mmx4.2mm size, and the part requires a minimal number of standard external components. This compact solution significantly helps in system design and productivity by greatly simplifying board design, as well as layout and manufacturing requirements.

The module uses fixed-frequency PWM mode which provides fast transient response and eases loop stabilization. It also offers frequency synchronization from 200kHz to 2.2MHz. Ultra-high efficiency is achieved through the use of synchronous rectification and control mode.

The module offers internal fixed soft start, remote enable control, and a power good indicator. It has fully integrated protections including over-current protection, under-voltage lockout and thermal shutdown.

FEATURES

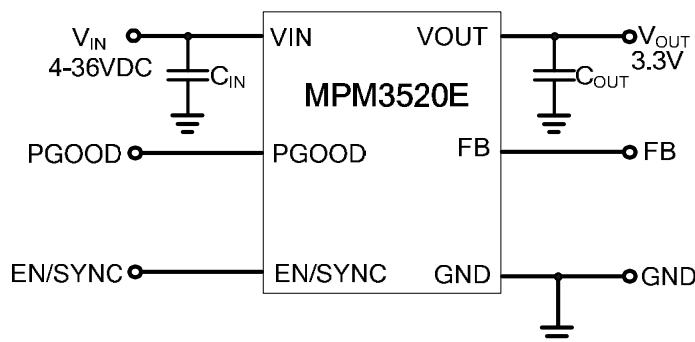
- Integrated Inductor, Switches, Controller
- High-Efficiency Synchronous Mode Control
- Low Component Count and Small Size
- Ease of Design and Fastest Time to Market
- Wide 4V to 36V Operating Input Range
- Output Adjustable from 1.0V to 5.0V
- Guaranteed 2A Continuous Output Current
- Fixed Frequency Operation
- Synchronization from 200kHz to 2.2MHz
- Internal Fixed Soft-Start Time
- Power Good Indicator
- Non-Latch OCP and UVLO
- Thermal Shutdown Protection
- Remote Enable Control
- Dimension: 10mmx10mmx4.2mm
- Weight: 0.78g
- Operating Temperature: -40°C to +125°C
- CISPR25 Class 5 Compliant

APPLICATIONS

- Automotive Systems
- Industrial Supplies
- Telecom and Networking Systems
- Distributed Power and POL Systems

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TYPICAL APPLICATION



V_{OUT}=3.3

