Manufacturer

Monolithic Power Systems

Part

MPM3570E

Product/Category Name

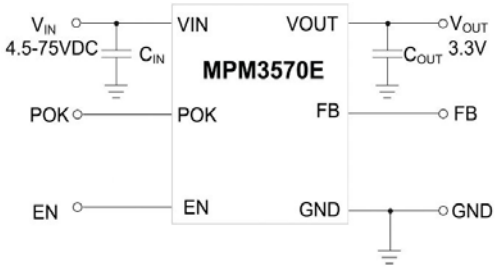
Power Module

Short Description

Ultra Low EMI, 75V Input, 0.3A Step-Down Power Module with Integrated Inductor

Applications

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



Long Description

The MPM3570E is a high density, non-isolated, DC/DC power module for space-sensitive applications. It offers a very compact solution that achieves 0.3A of output current over a wide 4.5V to 75V input supply range and can provide an adjustable output voltage from 1.0V to 12V via an external FB resistor (default 3.3V output).

The MPM3570E integrates a switching controller, power switches, inductors, a modest amount of input and output capacitors, and all supporting components in a small package size. This compact solution helps system design and production significantly by offering a greatly simplified board design, layout, and manufacturing requirements.

Ultra-high efficiency is achieved through synchronous rectification and control techniques, especially under light-load conditions. A 25µA shutdown quiescent current in the full temperature range is optimal for battery-powered applications.

The MPM3570E offers standard features, including internal fixed soft start (SS), remote enable (EN) control, and power OK indication (POK). Full protection features include over-current protection (OCP), under-voltage lockout (UVLO), and thermal shutdown.

The MPM3570E requires a minimal number of external components and is available in a compact LGA8 (10mmx10mmx4.2mm) package.

Features

- Integrated Inductor, Switches, and Controller
- High Efficiency, Synchronous
- Low Component Count and Small Size
- Ease of Design and Fastest Time to Market
- Wide 4.5V to 75V Operating Input Range
- Output Adjustable from 1V to 12V
- 0.3A Output Current
- 40µA Quiescent Current
- Ultra-Fast Transient Response
- Internal Fixed Soft-Start (SS) Time
- Power OK Indicator (POK)
- Non-Latch Over-Current Protection (OCP) and Under-Voltage Lockout (UVLO)
- Thermal Shutdown Protection
- Remote Enable (EN) Control
- Weight: 0.80g
- Operating Temperature: -40°C to +125°C
- CISPR25 Class 5 Compliant
- Available in a LGA8 (10mmx10mmx4**.2mm) Package**