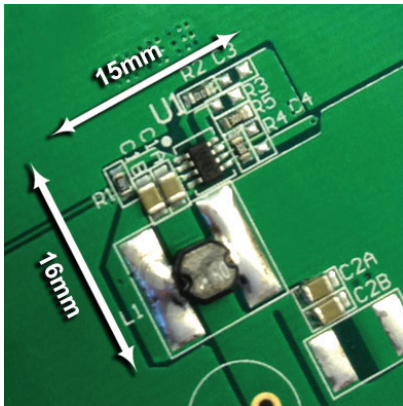


# MPS MP Module Family

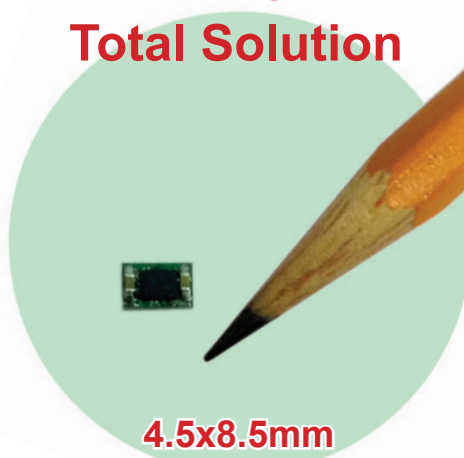
## Tiny Package, Effortless Design

### Discrete Solution



15x16mm  
Total Solution Size

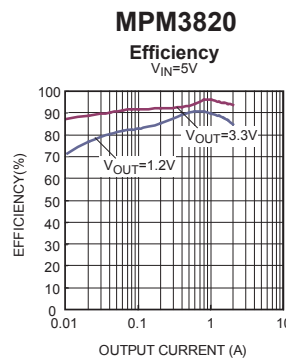
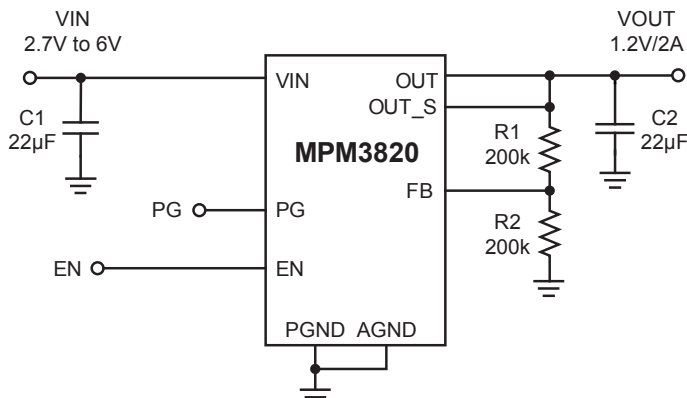
### MPS Total Solution



4.5x8.5mm  
Total Solution Size

Built-In Power  
MOSFETs and Inductor

6V, 2A/3A Step-Down Regulators with “Integrated Inductor” in 3x5mm QFN Package



**MPS**  
Monolithic Power Systems  
[www.monolithicpower.com](http://www.monolithicpower.com)

## Applications



Automotive



Storage



Server



HBA Card



## MP Modules

MPS offers a family of low voltage (6V) and mid voltage (21-24V) modules ranging from 600mA to 3A load current. The MPM3820 and MPM3830 are monolithic step-down switch mode converter modules with built-in power MOSFETs and inductor. These DC/DC modules are surface mount and available in 3x5x1.6mm QFN package.

The MPM3820 and MPM3830 can achieve 2A and 3A continuous output current from 2.7V to 6V input voltage with excellent load and line regulation. Their output voltage can be regulated as low as 0.6V. For adjustable output, only input, output capacitors, and FB resistors are needed to complete the design.

The constant on-time (COT) control scheme provides fast transient response and eases loop stabilization. Fault condition protection includes cycle-by-cycle current limiting and thermal shutdown.

The MPM3820 and MPM3830 are ideal for a wide range of applications, including high-performance DSPs, FPGAs, portable instruments, storage, server, and networking.

### Features

- Wide 2.7V to 6V Operating Input Range
- Output Adjustable From 0.6V
- Up to 2A Output Current (MPM3820)
- Up to 3A Peak Output Current (MPM3830)
- Ultra Low Iq: 40µA
- EN and Power Good for Power Sequencing
- Cycle-by-Cycle Over-Current Protection
- Short-Circuit Protection with Hiccup Mode
- Adjustable Output: Requires 4 Components
- Available in QFN 3x5mm Package
- Total Solution Size 4.5x8.5mm

Part Number	Input Range	Output Range	Iout	Package	Features
MPM3805	2.5V to 6V	Adjustable 1.2V, 1.8V, 2.5V, and 3.3	600mA	QFN 2.5x3.0x0.9mm	Integrated Inductor, PG
MPM3810	2.5V to 6V	Adjustable 1.2V, 1.8V, 2.5V, and 3.3	1.2A	QFN 2.5x3.0x0.9mm	Integrated Inductor, PG
MPM3820	2.7V to 6V	Adjustable from 0.6V	2A	QFN 3.0x5.0x1.6mm	Integrated Inductor, PG
MPM3830	2.7V to 6V	Adjustable from 0.6V	3A	QFN 3.0x5.0x1.6mm	Integrated Inductor, PG
MPM3606	4.5V to 21V	Adjustable from 0.8V	600mA	QFN 3.0x5.0x1.6mm	Integrated Inductor, PG
MPM3610	4.5V to 21V	Adjustable from 0.8V	1A	QFN 3.0x5.0x1.6mm	Integrated Inductor, AAM (Light-Load Mode)
MPM3620	4.5V to 24V	Adjustable from 0.8V	2A	QFN 3.0x5.0x1.6mm	Integrated Inductor, AAM (Light-Load Mode)

### CODICO GmbH

Zwingenstrasse 6-8

2380 Perchtoldsdorf, Austria

Tel: +43 1 86 305-0

Fax: +43 1 86 305-5000

e-mail: [office@codico.com](mailto:office@codico.com)

[www.codico.com](http://www.codico.com)

[www.monolithicpower.com](http://www.monolithicpower.com)

© 2014 Monolithic Power Systems, Inc. Patents Protected. All rights reserved.