

# MP5423GN-P Datasheet



DiGi Electronics Part Number	MP5423GN-P-DG
Manufacturer	<a href="#">Monolithic Power Systems Inc.</a>
Manufacturer Product Number	MP5423GN-P
Description	100V POWER MANAGEMENT IC WITH 30
Detailed Description	PMIC - Voltage Regulators - Linear Switching 3 Output Step-Down (Buck) Synchronous (1), Linear (LDO) (2) 200kHz 8-SOIC-EP

<https://www.DiGi-Electronics.com>



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

MP5423GN-P

Series:

MP

Topology:

Step-Down (Buck) Synchronous (1), Linear (LDO) (2)

Frequency - Switching:

200kHz

Voltage/Current - Output 2:

5V, 100mA

w/LED Driver:

No

w/Sequencer:

No

Operating Temperature:

-

Package / Case:

8-SOIC (0.154", 3.90mm Width) Exposed Pad

Manufacturer:

Monolithic Power Systems Inc.

Product Status:

Active

Number of Outputs:

3

Voltage/Current - Output 1:

14V, 300mA

Voltage/Current - Output 3:

3.3V, 40mA

w/Supervisor:

No

Voltage - Supply:

25V ~ 100V

Mounting Type:

Surface Mount

Supplier Device Package:

8-SOIC-EP

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8542.39.0001

Moisture Sensitivity Level (MSL):

2A (4 Weeks)

ECCN:

EAR99





The Future of Analog IC Technology<sup>®</sup> with 300mA Buck Converter and Two LDOs

# MP5423

## 100V Power Management IC

### with 300mA Buck Converter and Two LDOs

**PRELIMINARY SPECIFICATIONS SUBJECT TO CHANGE**

## DESCRIPTION

The MP5423 is a high input voltage power management IC with one buck converter and two LDOs. It is designed for small size & high integration electric-bike control board power management. Integrated buck and LDOs minimize the system components.

The Buck converter adopts peak current mode control, providing 300mA current for load and downstream LDO regulators, while the following LDOs provide 5V and 3.3V regulated power source to system. The current-mode buck converter provides fast transient response and cycle-by-cycle switching current limit. All output voltages are fixed internally with little external components.

The MP5423 features a lot of protection including: VIN ULVO, cycle-by-cycle buck current limit, SCP and OTP.

The MP5423 is available in SOIC8-EP package.

## FEATURES

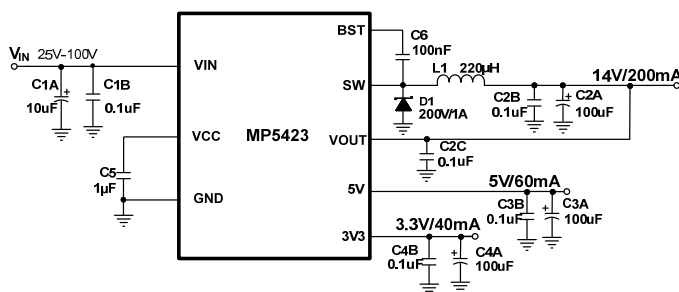
- 25V to 100V Input Operation Voltage
- Fixed 14V, 5V, 3.3V Output Voltage
- Buck Converter
  - 14V  $\pm$ 2% Output Voltage
  - 650mA Switching Current Limit
  - 1.45 $\Omega$  Buck High-side MOSEFT
  - 200kHz Switching Frequency
  - Frequency Stretch Down in SCP
- 5V LDO Regulator
  - 100mA Total Load Capability
  - 5.04V  $\pm$ 2% Output Voltage
  - Current Limit Flodback in SCP
- 3.3V LDO Regulator
  - 40mA Load Capability
  - 3.3V  $\pm$ 1% Output Voltage
  - Current Limit Flodback in SCP
- 170°C OTP Protection
- SOIC8-EP Package

## APPLICATIONS

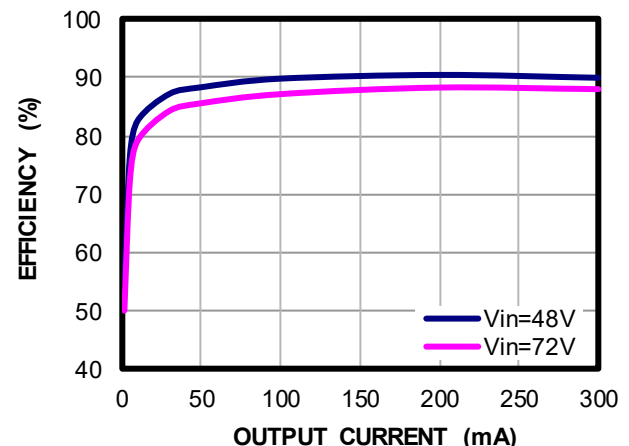
- Electric-Bike Power Management
- Motor Driver Control Board Power Supply

All MPS parts are lead-free, halogen free, and adhere to the RoHS directive. For MPS green status, please visit MPS website under Quality Assurance. "MPS" and "The Future of Analog IC Technology" are Registered Trademarks of Monolithic Power Systems, Inc.

## TYPICAL APPLICATION



**Buck Efficiency vs. Output Current**





## ORDERING INFORMATION

Part Number	Package	Top Marking
MP5423GN	SOIC8-EP	See below

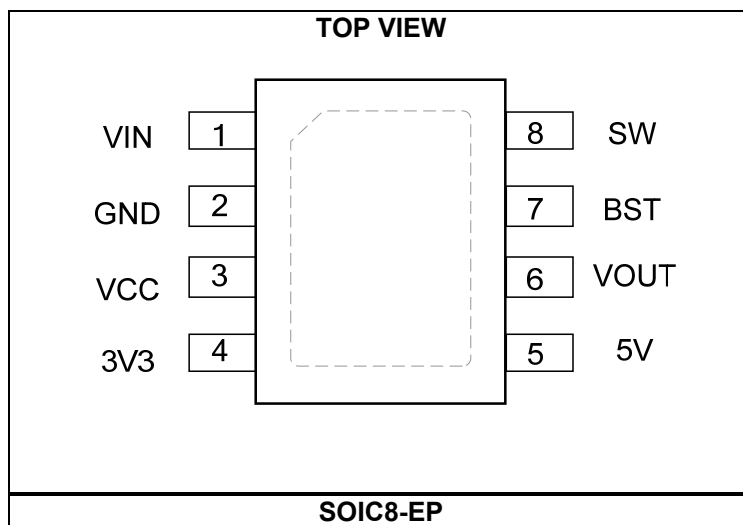
\* For Tape & Reel, add suffix -Z (e.g. MP5423GN-Z)

## TOP MARKING

\_\_\_\_\_  
**MP5423**  
**LLLLLLLL**  
**MPSYWW**

MPS: MPS prefix  
 Y: year code  
 WW: week code  
 MP5423: part number  
 LLLLLLLL: lot number

## PACKAGE REFERENCE



## OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we stricly control the quality of products and services. Welcome your RFQ to

Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.