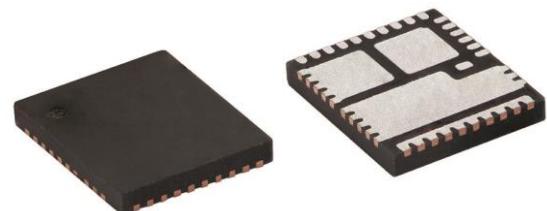


# New SiC820, SiC822, SiC830, SiC832, and SiC840 70 A, 80 A, and 100 A VRPower® Smart Power Stages Increase Efficiency and Accuracy to Support Latest Generation of Microprocessors

## Product Benefits:

- Integrated current and temperature monitors
- Current reporting accuracy of < 3 %
- Combine power MOSFETs and an advanced driver IC with a bootstrap switch
- Offered in the thermally enhanced 5 mm by 6 mm PowerPAK® MLP56-39L package
- A diode emulation mode can be enabled at light loads for high efficiency over the full load range using the GLCTRL pin
- High switching frequencies of up to 2 MHz
- Fault protection features
  - High side MOSFET short and overcurrent alerts
  - Over-temperature protection
  - Undervoltage lockout (UVLO)
- Support 3.3 V and 5 V PWM logic with tri-state for compatibility with a wide range of PWM controllers



## Market Applications:

- Synchronous buck converters; multi-phase VRDs for CUPs, GPUs, and memory; and DC/DC VR modules

## The News:

Vishay Intertechnology introduces five new 70 A, 80 A, and 100 A VRPower® smart power stages with integrated current and temperature monitors in the thermally enhanced PowerPAK MLP56-39L package. Designed to reduce energy costs for data centers and other high performance computing and 5G mobile telecom infrastructure applications, the Vishay Siliconix SiC820, SiC822, SiC830, SiC832, and SiC840 deliver the industry's highest energy efficiency and current reporting accuracy.

- The devices' high energy efficiency is a result of their internal MOSFETs' state of the art TrenchFET® Gen IV technology, which delivers industry benchmark performance to significantly reduce switching and conduction losses
- While solutions that monitor power consumption using inductor DCR sensing offer current reporting accuracy of 7 %, the SiC820, SiC822, SiC830, SiC832, and SiC840 utilize low side MOSFET sensing for accuracy of < 3 %
  - This translates into better performance and improved thermal management in Intel Xeon, AMD Epyc, and other high current processors and SoCs



# NEW PRODUCT INFORMATION

Product Group: Vishay Siliconix, ICs / March 2021



## The Key Specifications:

- Package: PowerPAK MLP56-39L
- Continuous current: 70 A (SiC822 and SiC832); 80 A (SiC820, and SiC830); 100 A (SiC840)
- Input voltage range:
  - SiC820, SiC822, and SiC840: 4.5 V to 16 V
  - SiC830 and SiC832: 4.5 V to 21 V
- Current sense monitor (IMON) and Temperature monitor (TMON)

Part Number	PWM Level	Current	Input Voltage
<a href="#">SiC822</a>	5 V	70 A	4.5 V - 16 V
<a href="#">SiC822A</a>	3.3 V		
<a href="#">SiC820</a>	5 V	80 A	4.5 V - 16 V
<a href="#">SiC820A</a>	3.3 V		
<a href="#">SiC840</a>	5 V	100 A	4.5 V - 21 V
<a href="#">SiC840A</a>	3.3 V		
<a href="#">SiC832</a>	5 V	70 A	4.5 V - 21 V
<a href="#">SiC832A</a>	3.3 V		
<a href="#">SiC830</a>	5 V	80 A	4.5 V - 21 V
<a href="#">SiC830A</a>	3.3 V		

## Availability:

Samples and production quantities of the smart power stages are available now, with lead times of 20 weeks.

To access the product datasheets on the Vishay Website, go to

<http://www.vishay.com/ppg?77084> (SiC820, SiC820A)

<http://www.vishay.com/ppg?74588> (SiC822, SiC822A)

<http://www.vishay.com/ppg?77047> (SiC830, SiC830A)

<http://www.vishay.com/ppg?66846> (SiC832, SiC832A)

<http://www.vishay.com/ppg?63041> (SiC840, SiC840A)

## Contact Information:

### THE AMERICAS

Vishay Americas  
PIC\_Americas@vishay.com

### EUROPE

Vishay Electronic GmbH  
PIC\_Europe@vishay.com

### ASIA/PACIFIC

Vishay Intertechnology Asia Pte Ltd.  
PIC\_Asia@vishay.com