Highly Integrated Step-down dc-to-dc Synchronous Regulators Enable High-density Point-of-load Designs

Analog Devices, Inc. (ADI), a global leader in high-performance semiconductors for signal-processing applications, today introduced the ADP2119 and ADP2120 dc-to-dc switching regulators, the latest in ADI's portfolio of integrated power management switching regulators. The highly integrated 2A/1.25A, step-down, dc-to-dc synchronous regulators include low on-resistance switching FETs (field-effect transistors) that deliver power conversion efficiencies up to 93 percent. Internal loop compensation and integrated soft-start circuitry are also featured and enable high-density solutions for point-of-load applications. The ADP2119 and ADP2120 accommodate a diversity of point-of-load applications with a 1.2-MHz fixed switching frequency and a wide 2.3-V to 5.5-V operating range. Output voltage is adjustable from 0.6 V to input voltage (VIN), and available in preset output voltage options of 3.3 V, 2.5 V, 1.8 V, 1.5 V, 1.2 V, and 1.0 V. The ADP2119 and ADP2120 regulators are available in small 3 mm x 3 mm LFCSP (lead-frame chip-scale package) packages.

"For the design engineer looking to cost effectively replace less efficient low dropout regulators, the ADP2119 and ADP2120 combined with the availability of online ADIsimPower™ design tools make these regulators very easy to use," said Martin Ng, product marketing manager, Analog Devices. "Our goal is to address our customers' power management challenges with products that use less space and reduce their time to market."

ADP2119 and ADP2120 dc-to-dc Switching Regulators Features and Benefits:

Current-mode, fixed-frequency PWM (pulse-width modulation) architecture provides excellent stability and transient response
Power-good output, precision-enable and voltage tracking features enable a simple and reliable start-up sequence
Regulators can be synchronized to eliminate beat frequencies between converters and remove the possibility of audible system noise
OVP (over-voltage protection), OCP (over-current protection), UVLO (under-voltage lockout) and TSD (thermal shutdown) enhance system reliability and protection.
Availability and Pricing

Product Samples Availability Output Options (A) Junction Temperature Range Price Each Per 1,000 Packaging
ADP2119
Now Now 2 ?40°C to
+125°C
$1.27 3 mm × 3 mm
10-lead

LFCSP

ADP2120
Now Now 1.25 ?40°C to
+125°C
$1.17 3 mm × 3 mm
10-lead
LFCSP

The ADP2119 and ADP2120 regulators and previously announced ADP2118 are well suited for establishing distributed low-noise analog rails to support other Analog Devices components, including the latest generation of ADCs (analog-to-digital converters), amplifiers and DACs (digital-to-analog converters). The fast transient response and ease-of-use make the regulators effective for powering FPGAs and Analog Devices' Blackfin® and SHARC® processors. ADI's integrated power management switching regulators are also supported by the ADIsimPower™ design tool, which makes selecting components, simulating power supply performance and building evaluation circuits easy and fast.

About Analog Devices

Innovation, performance, and excellence are the cultural pillars on which Analog Devices has built one of the longest standing, highest growth companies within the technology sector. Acknowledged throughout the industry as the world leader in data-conversion and signal-conditioning technology, Analog Devices serves over 60,000 customers, representing virtually all types of electronic equipment. Celebrating over 40 years as a leading global manufacturer of high-performance integrated circuits for analog and digital signal-processing applications, Analog Devices is headquartered in Norwood, Massachusetts, with design and manufacturing facilities throughout the world. Analog Devices' common stock is listed on the New York Stock Exchange under the ticker "ADI" and is included in the S&P 500 Index. http://www.analog.com