DC-to-DC converters shrinks board space by 75 percent compared to competing solutions

Analog Devices [1] introduced the industry's smallest isolated DC-to-DC converters. The ADuM5010, ADuM6010, ADuM521x and ADuM621x use ADI's proprietary isoPower isolated DC-to-DC converter technology to deliver 150 mW of output power while using less board space than competing module-based solutions. The ADuM521x and ADuM621x also integrate two channels of ADI's award winning iCoupler data isolation technology to reduce board space by up to 75 percent compared to optocoupler-based alternatives. The converters expand ADI's isolated power portfolio by providing designers with a compact, easy-to-implement, cost-effective approach to meeting both isolated power and data requirements. The combination of size and output power also addresses the growing space and power constraints engineers must consider when designing control systems, test and measurement equipment, power supplies, motor drives, and other industrial and instrumentation applications.

- View product page, download data sheet and order samples: http://www.analog.com/isopower [2].
- Register for the Jan. 23, 2013 Avnet co-sponsored Webcast, "Isolated Interface Solutions for Industrial Sensor and Monitoring Applications:" http://seminar2.techonline.com/s/adi_jan2313 [3].
- Learn more about ADI's digital isolation technology: http://www.analog.com/en/interface-isolation/digital-isolators/products/index.html [4].

- View discussions and FAQs on Analog Devices' interface and products on EngineerZone, an online technical support community:

http://ez.analog.com/community/interface-isolation [5].

“This new line of isoPower DC-to-DC converters delivers an excellent balance between power and size that will allow customers to design more functionality and efficiency into smaller form factors while continuing to minimize system cost,” said David Krakauer, product line manager, iCoupler Digital Isolator Products, Analog Devices. “ADI’s collaborative approach, design support and system-level knowledge help our customers take full advantage of our power isolation technology.”

All of the new DC-to-DC converters provide regulated, isolated power, adjustable between 3.15 V and 5.25 V. The ADuM5010 and ADuM521x are certified for 2.5-kV rms (1-minute) isolation, while the ADuM6010 and ADuM621x are certified for 3.75-kV rms (1-minute) isolation with further certification for reinforced insulation per VDE 0884-10. By incorporating ADI’s iCoupler digital isolator technology, the ADuM521x and ADuM621x reduce component count and simplify and improve design speed, reliability, and efficiency by eliminating the need for optocouplers. Quad-channel versions of these products using ADI’s smaller, lower cost isoPower technology are forthcoming.

Isolated DC-to-DC converters reduce system development time

Analog Devices pre-certifies its converter modules to help designers reduce system development time, unlike multi-component discrete DC-to-DC converters, which require that designers undertake the costly and time consuming process of individually certifying a dozen or more parts. Additionally, ADI’s isolated DC-to-DC converter modules require no added components aside from two bypass capacitors, easing design complexity and reducing time to market.

ADuM5010/ADuM6010 and ADuM521x/ADuM621x Isolated DC-to-DC Converter Key Features

- Small package: 20-lead SSOP with 5-mm creepage
- Regulated 3.15-V or 5.25-V output
- Up to 150-mW output power
- High speed: 100 Mbps
- High-temperature operation: 105˚C
- High common-mode transient immunity: >25-kV/µs

Availability and pricing

Catalog distributors Digi-Key Corp. [6] and Premier Farnell plc [7] are stocking inventory of both silicon and evaluation boards.

www.analog.com [8]

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http://www.ecnmag.com/product-releases/2012/11/dc-dc-converters-shrinks-board-

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Links:
[1] http://cts.businesswire.com/ct/CT?id=smartlink&url=http%3A%2F%2Fwww.analog.com%2F&esheet=50473171&lan=en-US&anchor=Analog+Devices%2C+Inc.&index=1&md5=f0b244bef28df73c6463aeadd3f42220
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[8] http://www.analog.com