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Isolated Error Amplifiers Outperform Optocouplers and Shunt Regulators in Power Supply Applications

NORWOOD, Mass.--(BUSINESS WIRE)-- Analog Devices, Inc. (NASDAQ: ADI), a global leader in high-performance semiconductors for signal-processing applications and a pioneer in digital isolator technology, today introduced isolated error amplifiers that provide power supply designers with a higher performing, single-chip alternative to isolation techniques based on optocouplers and shunt regulators. Designed for linear feedback power supplies using primary side controllers, the ADuM3190 and ADuM4190 isolated error amplifiers have a 400-kHz bandwidth, with 0.5% typical initial accuracy at 25°C and 1% total accuracy over the extended temperature range of —40˚C to +125˚C. This provides manufacturers of ac-to-dc and dc-to-dc power supplies, including those that are DOSA (Distributed-power Open Standards Alliance)-compliant, with a significant upgrade in speed and operating temperature range, as well as a 5× improvement in transient response.

- View product pages, download data sheets and order samples: http://www.analog.com/ADuM3190 and http://www.analog.com/ADuM4190
- View discussions and FAQs on Analog Devices' interface and isolation products on EngineerZone™, an online technica support community: http://ez.analog.com/community/interface-isolation

Designed with ADI's *i*Coupler® digital isolation technology, the ADuM3190 and ADuM4190 eliminate the CTR (current-transfer ratio) of optocouplers that degrades over the lifetime of the devices and limits operation to 85˚C. The ADuM3190 and ADuM4190 include a highly accurate 1.225-V reference and a wideband operational amplifier that can be used to set up a variety of commonly used power supply loop compensation techniques.

ADuM3190/4190 Isolated Error Amplifiers Key Features

- Bandwidth: 400 kHz
- 0.5% initial accuracy at 25°C
- 1% total accuracy over —40˚C to +125˚C
- Low power operation: < 7 mA
- Isolation voltage:
  - ADuM3190: 2.5 kV rms
  - ADuM4190: 5 kV rms (reinforced)

Pricing and Availability

Product	Availability	Price at 1K Quantity	Package	Temperature Range (°C)
ADuM3190A	Now	$1.04	QSOP-16	—40 to +85
ADuM3190B	Now	$1.12	QSOP-16	—40 to +85
ADuM3190S	Now	$1.14	QSOP-16	—40 to +125
ADuM3190T	Now	$1.23	QSOP-16	—40 to +125
ADuM4190A	April '13	$1.20	Wide-body SO-16	—40 to +85
ADuM4190B	April '13	$1.28	Wide-body SO-16	—40 to +85
ADuM4190S	April '13	$1.30	Wide-body SO-16	—40 to +125
ADuM4190T	April '13	$1.39	Wide-body SO-16	—40 to +125
EVAL-ADUM3190EBZ	Now	$49 per	-	-

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 industry-wide 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. Analog Devices is headquartered in Norwood, Massachusetts, with design and manufacturing facilities throughout the world. Analog Devices is included in the S&P 500 Index. http://www.analog.com

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