TI isolated amplifier, modulator enable high-precision current measurement in motor control, green energy applications

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Devices improve system performance while reducing power consumption

PR Newswire

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DALLAS, July 13, 2011 /PRNewswire/ -- Texas Instruments Incorporated (TI) (NYSE: TXN) today introduced an isolated amplifier and a delta-sigma modulator that enable best-in-class shunt-based current measurement in motor control and green energy applications. The AMC1200 isolated amplifier and AMC1204 delta-sigma modulator allow designers to increase accuracy, temperature stability and immunity to magnetic fields in equipment such as AC drives, solar inverters and uninterruptible power supplies. For more information and to order samples, visit www.ti.com/amc1200-pr.

The AMC1200 is a 4-kV peak isolated amplifier providing 80-percent better linearity and gain drift compared to competitive devices while reducing power consumption by 50 percent. The AMC1204 is a 20-MHz, externally-clocked, isolated delta-sigma modulator that provides 40-percent better linearity than the competition.

**Key features and benefits**

- AMC1200 isolated amplifier:
  - High precision with a maximum non-linearity of 0.07 percent and gain drift of 56 ppm/C.
  - Reduced power consumption with a low high-side supply current of no more than 8 mA at 5 V.
  - Fully specified over the extended industrial temperature range of -40 to 105 degrees C – 20 degrees higher than competitive offerings.
- Easy connection to analog-to-digital converters (ADCs) and microcontrollers (MCUs) with 5-V or 3.3-V operation on the low side and self-adjusting common mode voltage.

- AMC1204 isolated delta-sigma modulator:
  - Ultra-high accuracy with best-in-class non-linearity of +/- 8 LSB, maximum, and a digital output that allows designers to define digital filter characteristics based on system requirements.
  - Includes an external clock interface to enable simultaneous measurement of multiple channels.
- Both devices provide high electromagnetic interference immunity and a robust isolation barrier certified by UL 1577 and IEC 60747-5-2. The AMC1204 is also CSA-certified.

**Tools and support**

TI offers a variety of tools and support to speed design for customers. Design tools for the AMC1200 include an evaluation module, as well as simulation models. An evaluation module and IBIS model are available for the AMC1204.

Engineers can also ask questions and help solve problems in the Precision Data Converter Forum in the TI E2E™ Community.

**Availability, packaging and pricing**

The AMC1200 is available now in a 10-mm x 7-mm SOIC package for a suggested retail price of $2.20 in 1,000-unit quantities.

The AMC1204 is available now in a 10-mm x 10-mm SOIC package for a suggested retail price of $3.45 in 1,000-unit quantities.

**Complementary analog solutions**

Customers can speed time-to-market when combining the AMC1200 or AMC1204 with complementary products in TI's analog portfolio. Examples include:

- Data converters, such as the dual, 16-bit ADS8363 SAR ADC and the quad-channel AMC1210 digital filter.
- Amplifiers, such as the OPA333 zero drift operational amplifier and the INA333 precision instrumentation amplifier.
- Power management, such as the REF5050 low drift voltage reference.

Learn more about TI's precision data converter portfolio by visiting the links below:

- Order AMC1200 samples or evaluation module: [www.ti.com/amc1200-pr](http://www.ti.com/amc1200-pr).
- Order AMC1204 samples or evaluation module: [www.ti.com/amc1204-pr](http://www.ti.com/amc1204-pr).

**About Texas Instruments**

Texas Instruments semiconductor innovations help 80,000 customers unlock the possibilities of the world as it could be – smarter, safer, greener, healthier and more fun. Our commitment to building a
better future is ingrained in everything we do – from the responsible manufacturing of our semiconductors, to caring for our employees, to giving back inside our communities. This is just the beginning of our story. Learn more at www.ti.com.

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