Avago Debuts Integrated Switch and Low-Noise Amplifier Modules for TD-SCDMA and TD-LTE Base Stations

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Compact, Fully-Matched Solutions Replace Three Discrete Devices to Save PCB Space, While Delivering Superior Noise Figure, Linearity and Power Handling Performance

SAN JOSE, Calif. & SINGAPORE, Jun 01, 2011 (BUSINESS WIRE) -- Avago Technologies (Nasdaq: AVGO), a leading supplier of analog interface components for communications, industrial and consumer applications, today announced a series of high-power switch low-noise amplifier (LNA) modules dedicated for use in front-end receiver designs of TD-SCDMA and TD-LTE base transceiver station (BTS) applications. The new small-footprint ALM-12x24 modules replace existing three-piece discrete solutions, providing significant board space savings that is especially critical for BTS designs with 8 transceiver channels in a single radio card. The fully-matched solutions also shorten design cycle time by eliminating the need for tuning with external matching circuitry. The modules deliver best-in-class noise performance, high-gain and high linearity from a compact package.

The Avago ALM-12x24 LNA modules integrate a high-power 50W Single Pole, Double Throw (SPDT) switch, a first-stage LNA and a second-stage high-linearity amplifier in an 8-mm-by-8-mm package. Constructed with an Avago PIN diode, the SPDT switch prevents the LNA from damage by high-power signals potentially leaking over from the transmit chain in conditions where the antenna is mismatched. The LNA and high-linearity amplifier leverage the company's proprietary 0.25 um GaAs Enhancement-mode pHEMT process to achieve robust RF performance. Avago will exhibit the modules, along with its complete RF and Microwave portfolio, at the 2011 IEEE Microwave Theory & Techniques Society International Microwave Symposium in booth number 1602 at the Baltimore Convention Center from June 7-9.

The wireless infrastructure industry must provide optimum coverage with the best signal quality in a crowded spectrum. Receiver sensitivity is the most critical requirement in a BTS receiver's design, and LNA selection greatly affects the receiver's performance. For front-end design architectures, low noise figure (NF) is a key design goal. Another key design factor is linearity, which affects the receiver's ability to distinguish between wanted and spurious signals that are closely spaced. Output third-order intercept (OIP3) is used to specify linearity. The ALM-12124 module covers 1880-2025 MHz with 0.80 dB NF and 36.4 dBm OIP3 typical performance at 1900 MHz in receiver mode, while ALM-12224 module covers 2300-2400 MHz with 0.99 dB NF and 38.5 dBm OIP3 typical performance at 2400 MHz in receiver mode.

Additional ALM-12x24 Product Features

- 50 dB isolation between the first and second stage amplifiers, enabling external addition of an attenuator or RF filter without affecting the overall module performance
- High power handling capability of 47.5 dBm
- Low distortion silicon PIN diode technology
- Highly reliable MSL2a rating and lead-free package

U.S. Pricing and Availability

The ALM-12x24 switch LNA modules ship in a 24-pin MCOB package. The ALM-12124 and ALM-12224 modules are priced at $8.58 each in 10,000 piece quantities. Samples and production quantities are available now through the Avago direct sales channel and via worldwide distribution partners.

About Avago Technologies

Avago Technologies is a leading supplier of analog interface components for communications, industrial and consumer applications. By leveraging its core competencies in III-V compound and silicon semiconductor design and processing, the company provides an extensive range of analog, mixed signal and optoelectronics components and subsystems to approximately 40,000 end customers. Backed by strong customer service support, the company's products serve four diverse end markets: wireless communications, wired infrastructure, industrial and automotive electronics, and consumer and computing peripherals. Avago has a global employee presence and heritage of technical innovation dating back nearly 50 years to its Hewlett-Packard roots. Information about Avago is available on the Web at www.avagotech.com.

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