



May 6, 2008

## **WJ Communications Introduces One of the First 5V Gain Block Amplifiers Offering +37 dBm OIP3 at 1.9GHz in a SOT-89 Package (WJ Communications)**

### **The latest addition of 5V InGaP HBT Gain Block for 50 to 4000 MHz frequency range**

**SAN JOSE, Calif., May 06, 2008** -- WJ Communications, Inc. (NASDAQ:WJCI), a leading designer and supplier of radio frequency (RF) products and solutions for the wireless infrastructure and radio frequency identification (RFID) reader markets, today introduced the availability of WJA1021, the latest addition to the WJA family of +5V active bias InGaP HBT gain block amplifiers. The WJA1021 is one of the first 5V gain block amplifiers – not requiring any external matching components – in the industry that offers +37 dBm OIP3 at 2 GHz in a SOT-89 package and is ideal for general-purpose high linearity applications within the 50 to 4000 MHz frequency range. With this new addition, the WJA family has a more complete selection of cascadable gain blocks offering a wide variety of performances that complement different gain, OIP3, and Icc levels.

This new amplifier offers an exceptional blend of power, gain, linearity, and supply current performance. At 1.9 GHz, the WJA1021 typically provides 17.5 dB gain, +37.5 dBm OIP3, and +19 dBm P1dB, drawing only 90 mA current from a 5V supply. The amplifier also works well at the 900 MHz cellular band with 18.5 dB gain, +40 dBm OIP3, and +20 dBm P1dB. The WJA1021 consists of Darlington-pair amplifiers using a high reliability InGaP/GaAs HBT process technology, and is internally matched to 50 ohm. An internal active bias is designed to enable stable performance over temperature and allow for operation directly from a +5V supply voltage. Only DC blocking / bypass capacitors and a bias inductor are needed for operation. This new device is housed in a lead-free/green/RoHS-compliant industry-standard SOT-89 SMT package using a NiPdAu plating to eliminate the possibility of tin whiskering. The WJA1021 is ideal for current and next generation wireless infrastructure applications requiring high linearity such as Multi-Carrier GSM, CDMA, W-CDMA, WiBro, and WiMAX.

"The WJA1021 design incorporates an internal active bias to ensure ease of application implementation and stable performance," said Rufino Olay, Director World-Wide Marketing at WJ Communications. "Moreover, this dynamic range amplifier gives design engineers the flexibility to meet the complex requirements of wireless infrastructure applications in a cost effective manner".

### **Product Overview**

The WJA1021 is a broadband amplifier, utilizes advanced InGaP/GaAs HBT technology and has been optimized internally to offer very high linearity performance at 1.9 GHz, while drawing very low current. This MMIC amplifier is internally matched to 50 ohm and only requires DC-blocking / bypass capacitors and a bias inductor for operation. The amplifier features high gain with 17.5 dB gain at 1.9 GHz, a +19 dBm 1-dB compression point and +37.5 dBm OIP3 at 1.9 GHz while drawing only 90mA of current with operation directly from a +5V supply voltage. At the 900 MHz, the cascadable gain block offers 18.5 dB gain, +40 dBm OIP3, and +20 dBm P1dB. The device is ideal for wireless applications within the 50 to 4000 MHz frequency range and is available in a surface-mount lead-free/green/RoHS compliant SOT-89 package.

### **Value Proposition**

Responding to market needs for gain block amplifiers with high linearity and low current, the WJA1021 reflects these inputs by concurrently lowering the overall total cost of ownership and maintaining industry-leading linearity performance for a gain block amplifier. The following are key features of the WJA1021:

- **Broadband:**  
Operates from 50 to 4000 MHz frequency
- **High Linearity:**  
Provides excellent linearity, 37.5 dBm OIP3 at 1.9GHz, 40 dBm OIP3 at 0.9 GHz
- **Low Current:**  
Low current consumption: 90mA
- **SMT Package:**  
Lead-free / green / RoHS-compliant SOT-89 package using NiPdAu plating

### **Positive Market Feedback**

The WJA1021 is presently sampling with key strategic customers; the customers' feedback has been very positive with special

emphasis on WJA's high performance and cost-saving benefits.

### **Target Applications**

The WJA1021 is targeted in various usages of current and next generation wireless technologies such as GSM, PCS, CDMA, W-CDMA, WiBro and WiMAX, Repeaters, BTS Transceivers, and RFID.

### **Availability & Pricing**

Please contact your local sales at 408-577-6200 or e-mail [sales@wj.com](mailto:sales@wj.com) for more information on pricing and availability.

### **About WJ Communications**

WJ Communications, Inc. is a leading provider of radio frequency (RF) solutions serving multiple markets targeting wireless communications, RF identification (RFID), WiMAX, and RF power solutions. WJ addresses the RF challenges in these multiple markets with its highly reliable amplifiers, mixers, RF integrated circuits (RFICs), RFID reader modules, chipsets, and multi-chip (MCM) modules. For more information visit [www.wj.com](http://www.wj.com) or call 408-577-6200.

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