



## **50 $\Omega$ 20dB Gain Block Delivers 46dBm OIP3 & 2.6dB NF with Bandwidth from 20MHz to 2GHz**

MILPITAS, CA – April 14, 2014 – Linear Technology announces the [LTC6431-20](http://www.linear.com/product/LTC6431-20), a 20MHz to 2GHz single-ended input and output fixed gain amplifier offering outstanding 46.2dBm OIP3 (Output Third Order Intercept) and 2.6dB noise figure. Its OP1dB (Output 1dB Compression Point) is a best-in-class 22dBm. Two grades are offered, including the A-grade version that is 100% tested and guaranteed to have a minimum of 42.2dBm OIP3 at 240MHz, and the B-grade version offering a typical OIP3 of 45.7dBm at the same frequency. Both input and output are internally 50 $\Omega$  matched from 20MHz to 1.4GHz, with a frequency response of 20dB power gain and a flatness of better than 0.5dB. Internal 50 $\Omega$  matching simplifies design and enables easy cascading, using minimum external components. Each amplifier needs only an input and output DC blocking capacitor, plus a choke to bias its open collector output.

Fabricated using an advanced SiGe BiCMOS process, the LTC6431-20 offers exceptionally stable performance, while tolerating power supply voltage variations and temperature changes. The device is specified for operation over a case temperature range from –40°C to 85°C.

The LTC6431-20 is ideal for amplifying IF and RF signals in low distortion transmitters or receivers at frequencies up to 1.5GHz. It is also suitable for digital predistortion receivers whose performance depends on maintaining low distortion in the signal path. In addition, the amplifier is excellent for a wide range of broadband and narrowband radios that operate in the VHF/UHF bands such as broadcast radios, cable networks, white space data services, low-band LTE base station infrastructure and public safety radios.

The LTC6431-20 comes in a 4mm x 4mm QFN package. Powered from a single 5V supply at 93mA supply current, the LTC6431-20 consumes low power. The A-grade version is priced starting at \$4.89 each, and the B-grade version starts at \$1.89 each in 1,000-piece quantities. Both devices are available from stock. For more information, visit

[www.linear.com/product/LTC6431-20](http://www.linear.com/product/LTC6431-20)


**Photo Caption:** High Linearity 20dB Gain Block

**Summary of Features: LTC6431-20**

Operating Frequency	20MHz to 2GHz
Output IP3	46.2dBm @ 240MHz
Power Gain	20.8dB
Noise Figure (NF)	2.6dB
Output P1dB	22dBm
Low Power	5V / 93mA

**About Linear Technology**

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for over three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs, µModule® subsystems, and wireless sensor network products. For more information, visit [www.linear.com](http://www.linear.com)

 , LT, LTC, LTM, Linear Technology, the Linear logo and µModule are registered trademarks of Linear Technology Corp. All other trademarks are the property of their respective owners.

**Press Contacts:**

**North America / Worldwide**

John Hamburger, Director Marketing  
Communications  
[jhamburger@linear.com](mailto:jhamburger@linear.com)  
Tel: 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager  
[ddickinson@linear.com](mailto:ddickinson@linear.com)  
Tel: 408-432-1900 ext 2233

**UK & Nordic**

Alan Timmins  
[alan@ezwire.com](mailto:alan@ezwire.com)  
Tel: +44-1-252-629937