



Fully Differential IF 15dB RF/IF Amplifier Achieves 50dBm OIP3

MILPITAS, CA – January 28, 2013 – Linear Technology announces the [LTC6430-15](#), a 15dB amplifier, which achieves high dynamic range in a 100Ohm differential environment from 20MHz to 1GHz and beyond. Two performance grades are available: at 240MHz, the A-grade OIP3 is typically 50dBm and is fully tested and guaranteed to be a minimum of 47dBm. Noise Figure is 3dB, which corresponds to an input-referred amplifier noise of $1\text{nV}/\sqrt{\text{Hz}}$. DC power consumption is 800mW. This combination of low noise and low distortion provides wide dynamic range needed for high performance intermediate frequency communications and CATV applications.

The LTC6430-15 is easy to use, it is unconditionally stable, and the input and output are internally matched to 100Ohm differential. With greater than $2.75\text{V}_{\text{P-P}}$ linear output swing, it is well suited for driving high speed, high performance ADCs. Two 1:2 baluns, DC blocking capacitors, and RF bias chokes are all that is needed externally to achieve a wideband 50Ohm balanced amplifier in communications applications. With two 1:1.33 baluns, the LTC6430-15 can be used as a high fidelity 75Ohm CATV amplifier. P1dB is typically 24dBm.

The LTC6430-15 is available in a 4mm x 4mm QFN-24 package with exposed pad for best thermal performance and low inductance. It is specified for operation from -40°C to 85°C case temperature. Pricing starts at \$6.44 each for the A-grade version and \$3.69 each for the B-grade in 1,000-piece quantities. For more information, visit www.linear.com/product/LTC6430-15.

Photo Caption: 50dBm OIP3 at 240MHz into a 100Ohm Differential Load

Summary of Features: LTC6430-15

- 20MHz to 2000MHz Bandwidth
- 15.2dB Power Gain
- OIP3 at 240MHz:
 - 50dBm typ, 47dBm min A-Grade
 - 47dBm typ B-Grade
- 3.0dB NF at 240MHz
- >2.75V_{P-P} Linear Output Swing
- 24dBm P1dB
- 100Ohm Differential Gain-Block Operation
- Single 5V Supply, 160mA
- Unconditionally Stable
- 4mm x 4mm 24-Lead QFN Package

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 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, μ Module[®] subsystems, and wireless sensor network products. For more information, visit www.linear.com

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