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15dB Gain Differential Amplifier Delivers up to +50dBm OIP3 Linearity and Low Noise from 100kHz to 1.4GHz

MILPITAS, CA & NORWOOD, MA – May 10, 2017 – Analog Devices, Inc., which recently acquired Linear Technology Corporation, announces the [LTC6432-15](#), a wideband fully differential amplifier with 15dB gain, offering linearity of up to +50.3dBm OIP3 (output third-order intercept), very high OP1dB (output 1dB compression point) of +22.7dBm, and 3.2dB noise figure at 150MHz. In addition to its outstanding signal-to-noise at high frequencies, it maintains its dynamic range performance even at lower frequencies. That is because the LTC6432-15's advanced SiGe bipolar design exhibits significantly lower 1/f noise frequency corner than that of GaAs or pHEMT FET based amplifiers. Hence its noise figure rises to only 6.6dB at 100kHz, compared to more than 20dB for other amplifiers. The LTC6432-15 effectively extends the useful bandwidth and dynamic range performance for many applications that process low frequency signals. Moreover, the LTC6432-15 achieves superior stability over temperature, power supply ranges and from device to device compared to GaAs and pHEMT amplifiers.

The LTC6432-15's high dynamic range and extended bandwidth to low frequencies broaden its usefulness and improve performance in a wide range of amplifier applications including high sample rate A/D converter drivers, cable network amplifiers, broadband signal source conditioning, radar receiver IF amplifiers, software defined radio, VHF/UHF broadcast radios and RF test instruments.

The LTC6432-15 differential inputs and outputs are internally 100Ω terminated. Its inputs are matched from 100kHz to 1.4GHz, with better than 10dB return loss over the full bandwidth. The output is also matched from 100kHz to 1GHz. The amplifier needs only DC blocking capacitors at its inputs and outputs, two chokes for proper biasing, plus one feedback capacitor per output to extend its excellent gain flatness to low frequencies.

The LTC6432-15 operates from a single 5V supply. It draws a nominal 166mA supply current. The device is specified for operation over a case temperature range from –40°C to 85°C. The LTC6432-15 is available in a 4mm x 4mm plastic QFN package in two grades: a

B-grade with all typical parametric performance at \$3.69 each in 1,000-piece quantities, and a higher performance A-grade with tested and guaranteed specifications at \$6.44 each. Both are available immediately from stock. For more information, visit

www.linear.com/product/LTC6432-15.

Photo Caption: An Ultralow Distortion 15dB Gain Wideband Differential Amplifier Extends Outstanding Dynamic Range to Low Frequencies

Summary of Features: LTC6432-15

	LTC6432-15
Operating Frequency	100kHz to 1.4GHz
Output IP3 (150MHz) A-Grade B-Grade	+50.3dBm +47dBm
Output P1dB	+22.7dBm
Differential Power Gain	15.9dB
Noise Figure (150MHz)	3.2dB

Pricing shown is for budgetary use only and may differ due to local duties, taxes, fees and exchange rates.

Analog Devices just got more Powerful. On March 10, Analog Devices acquired Linear Technology, creating the premier high-performance analog company. More info at <http://lt.linear.com/07c>

About Analog Devices

Analog Devices (NASDAQ: ADI) is the leading global high-performance analog technology company dedicated to solving the toughest engineering challenges. We enable our customers to interpret the world around us by intelligently bridging the physical and digital with unmatched technologies that sense, measure, power, connect and interpret. Visit <http://www.analog.com>

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