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Ultra-Wideband 3GHz to 20GHz Mixer Supports DC to 6GHz IF & 0dBm LO Drive in a Tiny 3mm x 2mm Package

MILPITAS, CA & NORWOOD, MA – August 14, 2017 – Analog Devices, Inc., which recently acquired Linear Technology Corporation, announces the [LTC5552](#), a double balanced mixer that features best-in-class wideband matching from 3GHz to 20GHz. The mixer can be used as an up- or downconverter. The LTC5552 is especially useful in upconversion applications with its DC capable differential IF port that enables the LO to be close in frequency to the RF. Its low LO to RF leakage of less than -25dBm greatly eases the burden on the external filter. Additionally, the mixer delivers excellent linearity of 20.1dBm IIP3 at 14GHz, and 18.3dBm at 17GHz. The device integrates a broadband LO buffer, requiring only 0dBm drive and effectively eliminating an external high power LO amplifier circuit. Moreover, the LTC5552 integrates a wideband balun transformer in its RF port, allowing single-ended 50Ω matched operation over its specified frequency range. All these features result in minimum external components, simplified design and a very small solution size.

The LTC5552's exceptionally wide bandwidth and performance is ideal for a broad range of applications, including 5G broadband wireless access, microwave backhaul, satellite broadband radios, radar systems, active antenna arrays, X, Ku and Ka band transceivers, RF test equipment, spectrum analysis and satellite communications.

The LTC5552 is offered in a tiny 12-lead, 3mm x 2mm plastic QFN package. The device is rated from -40°C to 105°C case temperature to support extended environmental operating temperatures. The mixer is powered from a single 3.3V supply and typically consumes 132mA supply current. Additionally, the LTC5552 can be shut down via an enable pin. When deactivated, the device draws only $100\mu\text{A}$ maximum standby current. The enable pin can also be driven directly to turn the device on and off rapidly in less than $0.2\mu\text{s}$, supporting time-division duplex (TDD) or burst mode type transmitters and receivers. The LTC5552 is priced starting at \$22.00 each in 1,000-piece quantities. Samples and production quantities are available immediately. For more information, visit: www.linear.com/product/LTC5552.

Photo Caption: Ultra-Wideband 3GHz to 20GHz High Linearity Mixer Has 0dBm LO Drive

Summary of Features: LTC5552

- Matched RF Frequency 3GHz to 20GHz
- Matched LO Frequency 1GHz to 20GHz
- Differential IF Frequency DC to 6GHz
- Up- or Downconversion
- High Input IP3 20.1dBm at 14GHz
18.3dBm at 17GHz
- Low LO Drive Level 0dBm
- Low LO-RF Leakage -25dBm at 17GHz
- Low Conversion Loss 10.8dB at 17GHz

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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