



News Release | www.linear.com

Wideband 2GHz to 14GHz Mixer with Integrated LO Frequency Doubler Offers Outstanding IIP3 of 24.4dBm

MILPITAS, CA – August 10, 2015 – Linear Technology announces the [LTC5549](#), a double-balanced mixer that can operate either as an upconverter or downconverter, with a very wide RF frequency range from 2GHz to 14GHz. The LTC5549 offers exceptionally high linearity of 24.4 dBm IIP3 at 9GHz. The LTC5549 enables efficient microwave transmitter and receiver designs with an integrated LO buffer that needs only a 0dBm drive level, effectively eliminating an external high power LO amplifier circuit. Moreover, the LTC5549 has an integrated on-chip, switchable frequency doubler for LO signal, providing an option to use lower cost, commonly available low frequency synthesizers. The LTC5549 employs wideband integrated balun transformer optimized to extend RF frequency bandwidth from 2GHz to 14GHz while enabling single-ended operation. Its IF port also has wide bandwidth up to 6GHz. All three ports are 50Ω matched. The mixer offers high port-to-port isolation, minimizing undesirable LO leakage, and easing external filtering requirements.

The LTC5549's performance enhances a wide range of microwave applications including microwave backhaul, high unlicensed band LTE-Advanced base stations, satellite broadband radios, radar systems, X-band and Ku band transceivers, test equipment and satellite modems.

The LTC5549 offers improved ESD protection with its 2,000V ESD human body model (HBM) rating on all pins. The device is available in a tiny 12-lead, 3mm x 2mm plastic QFN package. With its minimal external component design, the LTC5549 results in a compact solution footprint. The device is rated for operation from –40°C to 105°C case temperature to support extended environmental operating temperature. The mixer is optimized for single 3.3V supply operation, drawing a nominal supply current of 115mA. Additionally, the LTC5549 has an enable pin to disable the IC. When deactivated, the device draws only 100µA maximum standby current. The enable pin can be driven directly to turn the device on and off rapidly in less than 0.2µs, supporting time-division duplex (TDD) or burst mode type radios. The LTC5549 is priced starting at \$9.50 each in 1,000-piece quantities. Samples and production quantities are available immediately. For more information, visit www.linear.com/product/LTC5549.

Photo Caption: Very Wideband Mixer That Operates from 2GHz to 14GHz


Summary of Features: LTC5549

Operating RF Frequency	2GHz to 14GHz
U Upconversion or Downconversion	
IF Frequency Range	0.5GHz to 6GHz
High Input IIP3	24.4dBm
Low Conversion Loss	8.0dB
Low LO Drive Level	0dBm
Integrate Bypassable LO Frequency Doubler	

The USA list pricing shown is for budgetary use only. International prices may differ due to local duties, taxes, fees and exchange rates.

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

 , LT, LTC, LTM, Linear Technology, the Linear logo and μ Module 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
Tel: 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager
ddickinson@linear.com
Tel: 408-432-1900 ext 2233

UK & Nordic

Alan Timmins
alan@ezwire.com
Tel: +44-1-252-629937