



16-Bit, 2.7Gsps DAC Delivers 80dB Spurious Free Dynamic Range

MILPITAS, CA – May 11, 2015 – Linear Technology Corporation announces the [LTC2000A](#), a 16-bit, 2.7Gsps digital-to-analog converter (DAC) optimized for high end broadband wired-and-wireless communications and radar applications. The LTC2000A offers exceptional spectral purity of 80dBc SFDR at 50MHz output and 72dBc SFDR at 1080MHz output to meet the most stringent requirements of high end applications. The device features better than 78dBc 2-tone intermodulation distortion (IMD) from DC to 1080MHz output, low phase noise and a wide 2.1GHz -3dB output bandwidth. As a result, the LTC2000A enables broadband or high frequency direct RF synthesis in applications such as instrumentation, broadband communications, test equipment and cable TV DOCSIS CMTS.

The $\pm 1V$ compliant outputs feature a 40mA full scale current which can be adjusted as low as 10mA or as high as 60mA to suit the application. Data is transferred to the LTC2000A over a parallel LVDS interface port with transfer rates of up to 1.35Gsps using a 675MHz double data rate (DDR) data clock. Dual DDR ports are required to achieve the 2.7Gsps update rate while a single port can be used to operate at a lower 1.35Gsps update rate. At 2.7Gsps, the LTC2000A consumes 2.4W from dual 1.86V and 3.3V supplies, while at 1.35Gsps the device consumes just 1.4W. Designed for ease of use, the LTC2000A offers an internal pattern generator, LVDS loop out MUX, and junction temperature sensing to simplify system development and debug.

The LTC2000A is offered in 16-bit, 14-bit and 11-bit versions in a RoHS compliant 9mm x 15mm BGA package. The LTC2000A is available in production today in commercial and industrial temperature grades, competitively priced, starting at \$79.00 each for the LTC2000A-16 in 1,000-piece quantities. Demo boards and samples are available via the Linear Technology website www.linear.com/product/LTC2000A


Photo Caption: 16-Bit, 2.7Gsp/s DAC with Exceptional Spectral Purity**Summary of Features: LTC2000A**

- 80dBc SFDR at 50MHz f_{OUT}
- >68dBc SFDR from DC to 1080MHz f_{OUT}
- 40mA Nominal Full-Scale, $\pm 1V$ Output Compliant
- 10mA to 60mA Adjustable Full-Scale Current Range
- Single or Dual Port DDR LVDS & DHSTL Interface
- Low Latency (7.5 Cycles for Single Port, 11 Cycles for Dual Port)
- >78dBc 2-Tone IMD from DC to 1000MHz f_{OUT}
- -156dBc/Hz Additive Phase Noise at 1MHz Offset from 65MHz f_{OUT}
- 170-Lead 9mm x 15mm BGA Package

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

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