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Ultra-Low-Noise RF Low-Dropout Regulators Reduce Phase Noise in Wideband Communication Systems

Reduces LDO noise spectral density by a factor of two

Provides lowest phase noise for powering VCOs; lowest jitter performance for powering clock devices in microwave systems

NORWOOD, Mass.--(BUSINESS WIRE)-- [Analog Devices, Inc.](http://www.analog.com) (NASDAQ: ADI), a global leader in high-performance semiconductors for signal processing applications, announced today the release of [ultra-low-noise LDO \(low-dropout\) regulators](#) for RF (radio frequency) signal devices. The ADM7150/1 operate from 4.5 V to 16 V, provide up to 800-mA of output current and support output voltages from 1.5 to 5.0 V. The LDOs achieve an output-NSD (noise spectral density) of 1.4 nV/rtHz from 10 kHz to 1 MHz, which significantly reduces VCO (voltage-controlled oscillator) phase noise in point-to-point microwave radios, satellite communications, defense electronics and other wideband applications. Additionally, a user adjustable C_{BYP} can significantly reduce low frequency 1/f noise (8 nV/rtHz at 100 Hz) for precision analog front-end measurement systems.

- Order samples and download data sheets, reference designs and technical documents:
 - <http://www.analog.com/ADM7150>
 - <http://www.analog.com/ADM7151>
- Get questions answered by ADI engineers on EngineerZone™, ADI's online technical support community: <http://ez.analog.com/community/power>

In addition to ultra-low noise, the ADM7150/1 achieve line and load transient responses of 0.01%/V and 0.4%/A respectively with a 10-μF ceramic output capacitor. The new LDOs also feature high PSRR (power-supply rejection ratio) performance of greater than 90 dB from 1 kHz to 100 kHz, and greater than 60 dB at 1 MHz. This effectively filters DC-DC switching regulator ripple, saving space by minimizing the size of discrete filtering components normally needed.

Pricing, Availability and Complementary Products

Product	Availability	Price (1K units)	Package
ADM7150 (fixed V_{out})	Now	\$3.64	3-mm x 3-mm 8-lead LFCSP and SOIC
ADM7151 (adj V_{out})	Now	\$3.64	3-mm x 3-mm 8-lead LFCSP and SOIC
ADM7160	Now	\$0.96	2-mm x 2-mm LFCSP and TSOT-5

About Analog Devices

Innovation, performance, and excellence are the cultural pillars on which Analog Devices has built one of the longest standing, highest growth companies within the technology sector. Acknowledged industry-wide as the world leader in data conversion and signal conditioning technology, Analog Devices serves over 60,000 customers, representing virtually all types of electronic equipment. Analog Devices is headquartered in Norwood, Massachusetts, with design and manufacturing facilities throughout the world. Analog Devices is included in the S&P 500 Index. <http://www.analog.com>

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