

FEATURES

Transmit VGA for RF DAC, transceiver, and SoC to power amplifier interface
RF output frequency range: 1500 MHz to 3000 MHz
Internal balun with bias-tee to supply RF DAC outputs
Integrated VVA attenuation range with on-chip DAC: 20.5 dB
2-stage high linearity amplifiers
RF DSA attenuation range: 15.5 dB with 0.5 dB step resolution
50 Ω differential inputs and 50 Ω single-ended output
Fully programmable via a 4-wire SPI
Single 5 V supply
38-terminal, 10.5 mm \times 5.5 mm LGA

APPLICATIONS

2G/3G/4G/long-term evolution (LTE) in FDD/TDD broadband communication systems

GENERAL DESCRIPTION

The ADL6317 is a transmit variable gain amplifier (VGA) that provides an interface from radio frequency digital-to-analog converters (RF DACs), transceivers, and systems on a chip (SoC) to power amplifiers. Integrated balun and hybrid couplers allow high performance RF capability in the frequency range of 1500 MHz to 3000 MHz.

To optimize performance vs. power level, the ADL6317 includes a voltage variable attenuator (VVA), high linearity amplifiers, and a digital step attenuator (DSA). All of the devices integrated into the ADL6317 are programmable via a 4-wire serial port interface (SPI).

The ADL6317 is manufactured on an advanced silicon germanium (SiGe), bipolar complementary metal oxide semiconductor (BiCMOS) process.

Table 1. Related Devices in Transmit VGA Family

Parameter	Frequency Range (MHz)
ADL6316	500 to 1000
ADL6317	1500 to 3000

For additional information on the ADL6317, contact Analog Devices, Inc., at MxFEsupport@analog.com.

FUNCTIONAL BLOCK DIAGRAM

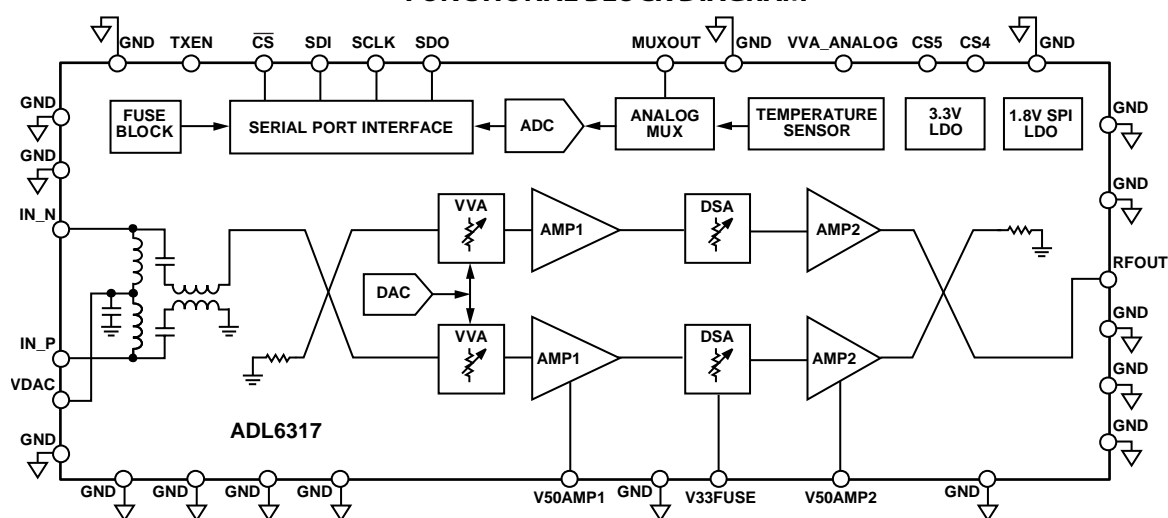


Figure 1.

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One Technology Way, P.O. Box 9106, Norwood, MA 02062-9106, U.S.A.
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