Data Sheet

ADMV7415

Low-Noise, Downconverter SiP, 71GHz to 86GHz

FEATURES

- **Conversion gain: 13dB**
- **Noise figure: 6dB**
- **Input IP3: 0dBm**
- **Input IP2: 26dBm**
- **Input P1dB: -9dBm**
- **I/Q amplitude imbalance: 0.5dB**
- **I/Q phase imbalance: 5°**
- **Three-wire SPI control for power-up/power-down and bias adjust**
- **Built-in temperature sensor**
- **Surface-mount, 10mm × 10mm, LGA_CAV package**

APPLICATIONS

- **E-band communication systems**
- **High-capacity wireless backhauls**
- **Satellite feeder link**

GENERAL DESCRIPTION

The ADMV7415 is a fully-integrated, system-in-package (SiP), in-phase/quadrature (I/Q) downconverter that operates with an intermediate frequency (IF) output range from DC to 5 GHz and a radio frequency (RF) input range from 71 GHz to 86 GHz. The device provides a minimum small signal conversion gain of 13dB with 30dBc of image rejection. The ADMV7415 uses a low-noise amplifier followed by an image rejection mixer driven by a 6× local oscillator (LO) multiplier. Differential I and Q mixer outputs are provided for direct conversion applications. Alternatively, the outputs can be combined using an external 90° hybrid and two external 180° hybrids for single-ended applications.

The ADMV7415 comes in a fully-integrated, surface-mount, 32-terminal, 10mm × 10mm, land-grid array (LGA) package. The ADMV7415 operates over the -40°C to +85°C case temperature range.

SIMPLIFIED APPLICATION DIAGRAM

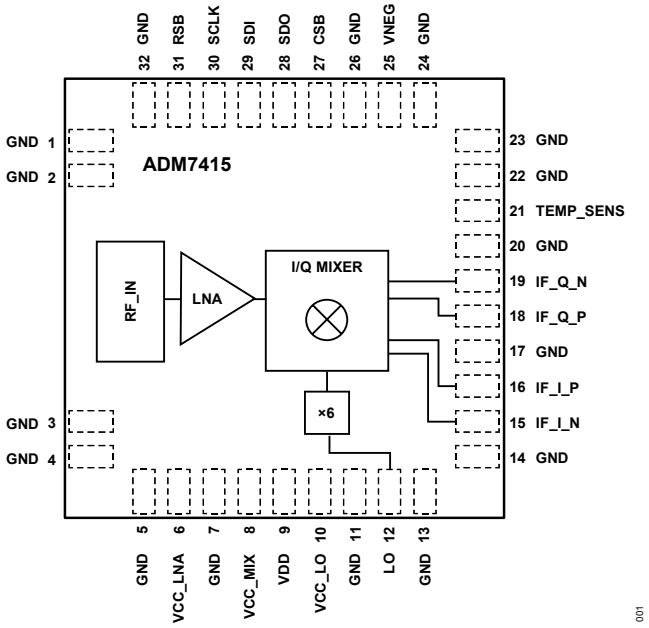


Figure 1. Simplified Application Diagram

For more information on the ADMV7415, contact eband@analog.com.

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