
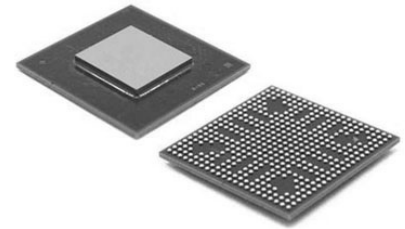


Up/Down Conv Mixer 5V 6GHz 24-Pin LFCSP EP T/R

Manufacturer:	Analog Devices, Inc
Package/Case:	LFCSP24
Product Type:	RF Integrated Circuits
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active



Images are for reference only

[Inquiry](#)

General Description

The ADL5801 uses a high linearity, doubly balanced, active mixer core with integrated LO buffer amplifier to provide high dynamic range frequency conversion from 10 MHz to 6 GHz. The mixer benefits from a proprietary linearization architecture that provides enhanced input IP3 performance when subject to high input levels. A bias adjust feature allows the input linearity, SSB noise figure, and dc current to be optimized using a single control pin. An optional input power detector is provided for adaptive bias control. The high input linearity allows the device to be used in demanding cellular applications where in-band blocking signals may otherwise result in degradation in dynamic performance. The adaptive bias feature allows the part to provide high input IP3 performance when presented with large blocking signals. When blockers are removed, the ADL5801 can automatically bias down to provide low noise figure and low power consumption.

The balanced active mixer arrangement provides superb LO-to-RF and LO-to-IF leakage, typically better than -40 dBm. The IF outputs are designed to provide a typical voltage conversion gain of 7.8 dB when loaded into a 200 Ω load. The broad frequency range of the open-collector IF outputs allows the ADL5801 to be applied as an upconverter for various transmit applications.

The ADL5801 is fabricated using a SiGe high performance IC process. The device is available in a compact 4 mm × 4 mm, 24-lead LFCSP package and operates over a -40°C to +85°C temperature range. An evaluation board is also available.

Key Features

Broadband upconverter/downconverter

Power conversion gain of 1.8 dB

Broadband RF, LO, and IF ports

SSB noise figure (NF) of 9.75 dB

Input IP3: 28.5 dBm

Input P1dB: 13.3 dBm

Typical LO drive: 0 dBm

Single-supply operation: 5 V at 130 mA

Adjustable bias for low power operation

Exposed paddle, 4 mm × 4 mm, 24-lead LFCSP package

Application

Cellular base station receivers

Radio link downconverters

Broadband block conversion

Instrumentation

Recommended For You

ADF4153BCPZ

Analog Devices, Inc

QFN

ADF5355BCPZ

Analog Devices, Inc

LFCSP32

AD8318ACPZ

Analog Devices, Inc

LFCSP

AD6620ASZ

Analog Devices, Inc

QFP

ADF4107BCPZ

Analog Devices, Inc

QFN

ADL5513ACPZ-R7

Analog Devices, Inc

LFCSP-16

AD8319ACPZ

Analog Devices, Inc

LFCSP

ADRF6755ACPZ

Analog Devices, Inc

QFN

ADL5535ARKZ-R7

Analog Devices, Inc

SOT89

AD608AR

Analog Devices, Inc

SOP16

ADF4107BRUZ-REEL7

Analog Devices, Inc

TSSOP16

ADRF6780ACPZN

Analog Devices, Inc

QFN

AD8317ACPZ

Analog Devices, Inc

LFCSP

AD608ARZ

Analog Devices, Inc

SOP16

AD8318ACPZ-REEL7

Analog Devices, Inc

LFCSP