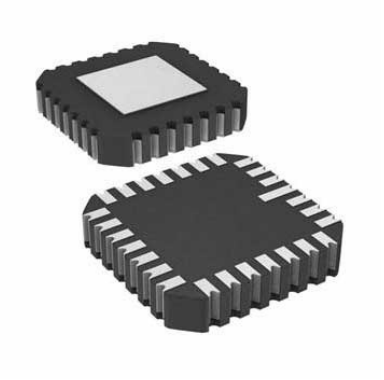
HMC8193LC4

Up/Down Conv Mixer 8.5GHz 24-Pin CLLCC EP Cut Tape

Manufacturer:	Analog Devices, Inc
Package/Case:	24-CLCC
Product Type:	RF Integrated Circuits
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active



Images are for reference only

Inquiry

General Description

The HMC8193 is a passive, in phase/quadrature (I/Q), monolithicmicrowave integrated circuit (MMIC) mixer that can be used either as an image rejection mixer for receiver operations, or as a single-sideband upconverter for transmitter operations from 2.5 GHz to 8.5 GHz. The inherent I/Q architecture of theHMC8193 offers excellent image rejection and thereby eliminates the need for expensive filtering of unwanted sidebands. Themixer also provides excellent local oscillator (LO) to radiofrequency (RF) and LO to intermediate frequency (IF) isolationand reduces the effect of LO leakage to ensure signal integrity. Being the HMC8913 is a passive mixer, it does not require anydc power sources. The device offers a lower noise figure than an active mixer, ensuring superior dynamic range for high performance and precision applications.

The HMC8193 is fabricated on a gallium arsenide (GaAs), metal semiconductor field effect transistor (MESFET) processand uses Analog Devices, Inc., mixer cells and a 90° hybrid. It isavailable in a compact, 4 mm × 4 mm, 24-lead LCC packageand operates over the −40°C to +85°C temperature range. Anevaluation board for this device is also available.

Key Features

Passive I/Q mixer

RF and LO range: 2.5 GHz to 8.5 GHz

Wide IF range: dc to 4 GHz

Single-ended RF, LO, and IF

Conversion loss (downconverter): 9 dB (typical)

Image rejection: 25 dBc (typical)

SSB noise figure: 15 dB (typical)

Input IP3 (downconverter): 20 dBm (typical)

Input P1dB compression point (downconverter): 13 dBm (typical)

Input IP2: 58 dBm (typical)

RF to IF: isolation: 22 dB (typical)

LO to RF isolation: 48 dB (typical)

LO to IF isolation: 38 dB (typical)

Amplitude balance: ± 0.5 dB (typical)

Phase balance (downconverter): ± 5° (typical)

RF return loss: 13 dB (typical)

LO return loss 13 dB (typical)

IF return loss: 18 dB (typical)

Exposed pad, 4 mm × 4 mm, 24-terminal, ceramic LCC package

Application

Test and measurement instrumentation

Military, aerospace, and radar

Direct conversion receivers

Recommended For You

HMC624ALP4E

Analog Devices, Inc

QFN24

HMC952ALP5GE

Analog Devices, Inc

QFN

HMC361S8GE

Analog Devices, Inc

SOP-8

HMC253AQS24E

Analog Devices, Inc

QFN

HMC346MS8G

Analog Devices, Inc

MSOP8

HMC1119LP4ME

Analog Devices, Inc

QFN

HMC659LC5

Analog Devices, Inc

QFN

HMC909LP4E

Analog Devices, Inc

QFN

HMC564LC4

Analog Devices, Inc

QFN

HMC1021LP4E

Analog Devices, Inc

QFN

HMC241AQS16E

Analog Devices, Inc

SSOP16

HMC424LP3E

Analog Devices, Inc

QFN

HMC662LP3E

Analog Devices, Inc

QFN

HMC8038LP4CE

Analog Devices, Inc

QFN16

HMC363S8G

Analog Devices, Inc

SOP8