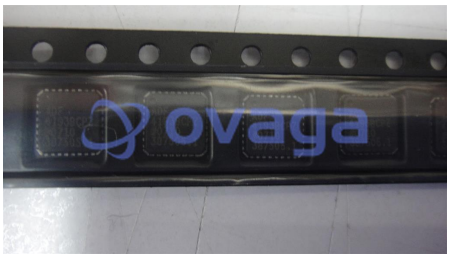
ADF4193BCPZ

Data Sheet

Clock Generator 300MHz to 3.5GHz Input 470MHz Output 32Pin LFCSP EP Tray



Images are for reference only

Manufacturers	Analog Devices, Inc
Package/Case	LFCSP-32
Product Type	Clock/Timing - Clock Generators, PLLs, Frequency Synthesizers
RoHS	Green
Lifecycle	

Please submit RFQ for ADF4193BCPZ or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The ADF4193 frequency synthesizer can be used to implement local oscillators in the upconversion and downconversion sections of wireless receivers and transmitters. Its architecture is specifically designed to meet the GSM/EDGE lock time requirements for base stations. It consists of a low noise, digital phase frequency detector (PFD), and a precision differential charge pump. There is also a differential amplifier to convert the differential charge pump output to a single-ended voltage for the external voltage-controlled oscillator (VCO).

The Σ-Δ-based fractional interpolator, working with the N divider, allows programmable modulus fractional-N division. Additionally, the 4-bit reference (R) counter and on-chip frequency doubler allow selectable reference signal (REFIN) frequencies at the PFD input. A complete phase-locked loop (PLL) can be implemented if the synthesizer is used with an external loop filter and a VCO. The switching architecture ensures that the PLL settles inside the GSM time slot guard period, removing the need for a second PLL and associated isolation switches. This decreases cost, complexity, PCB area, shielding, and characterization on previous ping-pong GSM PLL architectures.

Features

New, fast settling, fractional-N PLL architecture

Single PLL replaces ping-pong synthesizers

Frequency hop across GSM band in 5 µs with phase settled by 20 µs

0.5° rms phase error at 2 GHz RF output

Digitally programmable output phase

RF input range up to 3.5 GHz

3-wire serial interface

On-chip, low noise differential amplifier

Phase noise figure of merit: –216 dBc/Hz

Loop filter design possible using ADIsimPLL™

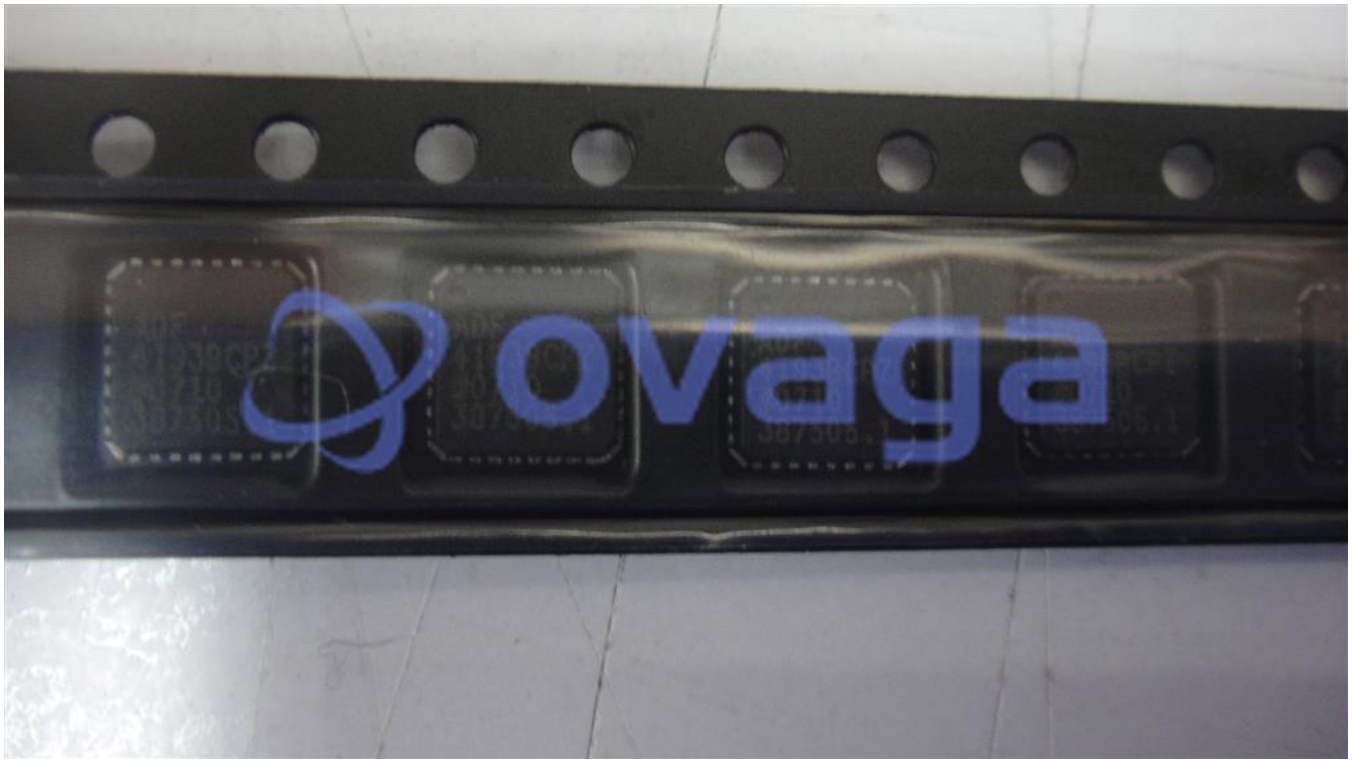
Qualified for automotive applications

Application

GSM/EDGE base stations

PHS base stations

Instrumentation and test equipment



Related Products

[ADF4350BCPZ]

Analog Devices, Inc

LFCSP-32

[AD9516-4BCPZ]

Analog Devices, Inc

LFCSP64

[ADF4111BRUZ]

Analog Devices, Inc

TSSOP-16

[ADF4113BRUZ]

Analog Devices, Inc

TSSOP-16

[ADF4116BRUZ]

Analog Devices, Inc

TSSOP-16

[ADF4110BRUZ]

Analog Devices, Inc

TSSOP-16

[AD2S99BPZ]

Analog Devices, Inc

PLCC-20

[AD9528BCPZ]

Analog Devices, Inc

72-VFQFN, CSP