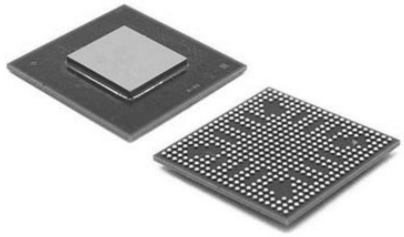
AD9254BCPZ-150

Data Sheet

14-Bit, 150 MSPS, 1.8 V Analog-to-Digital Converter; Package: LFCSP (7x7x.85mm w/4.1mm Pad); No of Pins: 48; Temperature Range: Industrial

Manufacturers	Analog Devices, Inc
Package/Case	LFCSP-48
Product Type	Data Conversion ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for AD9254BCPZ-150 or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The AD9254 is a monolithic, single 1.8 V supply, 14-bit, 150 MSPS analog-to-digital converter (ADC), featuring a high performance sample-and-hold amplifier (SHA) and on-chip voltage reference. The product uses a multistage differential pipeline architecture with output error correction logic to provide 14-bit accuracy at 150 MSPS data rates and guarantees no missing codes over the full operating temperature range.

The wide bandwidth, truly differential SHA allows a variety of user-selectable input ranges and offsets, including single-ended applications. It is suitable for multiplexed systems that switch full-scale voltage levels in successive channels and for sampling single-channel inputs at frequencies well beyond the Nyquist rate. Combined with power and cost savings over previously available ADCs, the AD9254 is suitable for applications in communications, imaging, and medical ultrasound.

A differential clock input controls all internal conversion cycles. A duty cycle stabilizer (DCS) compensates for wide variations in the clock duty cycle while maintaining excellent overall ADC performance.

The digital output data is presented in offset binary, Gray code, or twos complement formats. A data output clock (DCO) is provided to ensure proper latch timing with receiving logic.

The AD9254 is available in a 48-lead LFCSP_VQ and is specified over the industrial temperature range (−40°C to +85°C).

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Product Highlights

The AD9254 operates from a single 1.8 V power supply and features a separate digital output driver supply to accommodate 1.8 V to 3.3 V logic families.

The patented SHA input maintains excellent performance for input frequencies up to 225 MHz.

The clock DCS maintains overall ADC performance over a wide range of clock pulse widths.

A standard serial port interface supports various product features and functions, such as data formatting (offset binary, twos complement, or Gray coding), enabling the clock DCS, power-down, and voltage reference mode.

The AD9254 is pin-compatible with the AD9233, allowing a simple migration from 12 bits to 14 bits.

Features

1.8 V analog supply operation

1.8 V to 3.3 V output>

Low power: 430 mW @ 150 MSPS

Differential input with 650 MHz bandwidth

On-chip voltage reference and sample-and-hold>

Flexible analog input: 1 V p-p to 2 V p-p range

Offset binary, Gray code, or twos complement data format

Clock duty cycle stabilizer

Data output clock

Application

Ultrasound equipment

IF sampling in communications receivers

CDMA2000, WCDMA, TD-SCDMA, and WiMax

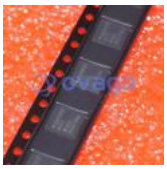
Battery-powered instruments

Hand-held scopemeters

Low cost digital oscilloscopes

Macro, micro, and pico cell infrastructure

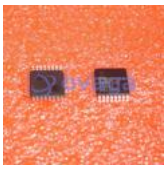
Related Products



ADAS3022BCPZ

Analog Devices, Inc

LFCSP-40



AD7266BSUZ

Analog Devices, Inc

TQPF-32

AD574AJNZ

Analog Devices, Inc

PDIP-28

AD7401YRWZ

Analog Devices, Inc

SOIC-16

AD7938BSUZ

Analog Devices, Inc

TQFP-32

AD7192BRUZ-REEL

Analog Devices, Inc

TSSOP-24

AD7124-8BCPZ-RL7

Analog Devices, Inc

LFCSP-32

AD9680BCPZ-500

Analog Devices, Inc

LFCSP-64