

1-Channel Single ADC Pipelined 105MSPs 14-bit Parallel 48-Pin LFCSP EP Tray

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 AD9246BCPZ-105 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The AD9246S is a monolithic, single 1.8 V supply, 14-bit, 125 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 125 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 AD9246S 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 AD9246S is available in a 48-lead Quad flat pack and is specified over temperature range of -55°C to $+125^{\circ}\text{C}$.

Product Highlights

Applications

The AD9246S 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 AD9246S 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 supply

Low power: 395 mW @ 125 MSPS

Differential input with 650 MHz bandwidth

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

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

Offset binary, Gray code, or twos complement data format

Data output clock and clock duty cycle stabilizer

Serial port control

Built-in selectable digital test pattern generation

Programmable clock and data alignment

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Application

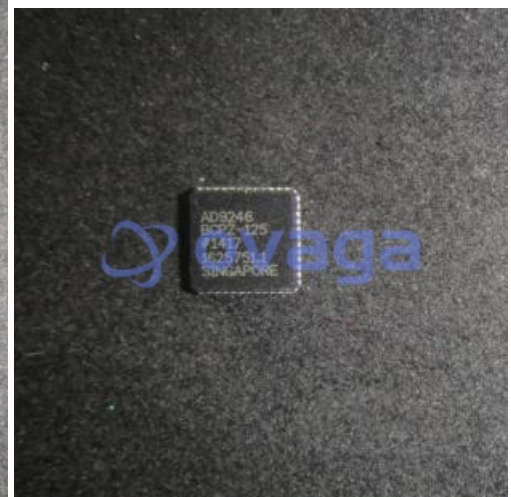
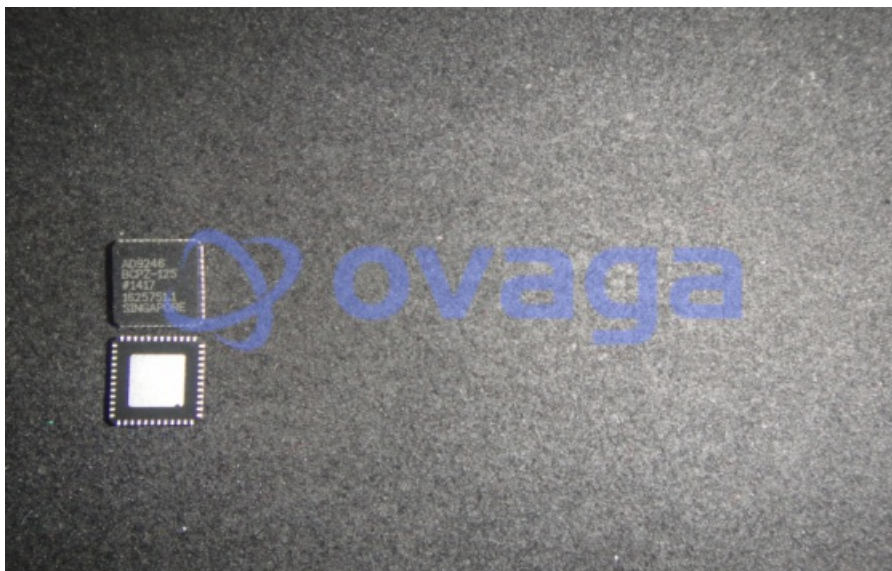
Ultrasound equipment

IF sampling in communications receivers IS-95, CDMA-One, IMT-2000

Battery-powered instruments

Hand-held scopemeters

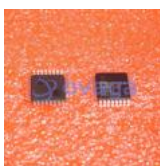
Low cost digital oscilloscopes



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TQPF-32



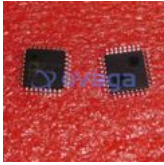
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