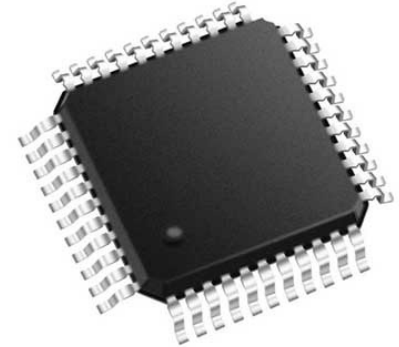Analogue to Digital Converter, 14 bit, 1.25 MSPS, Differential, Single Ended, Parallel, Single

Manufacturers	Analog Devices, Inc
Package/Case	QFP-44
Product Type	Data Conversion ICs
RoHS	Pb-free Halide free
Lifecycle	

Images are for reference only

Please submit RFQ for AD9241ASZ or Email to us: sales@ovaga.com We will contact you in 12 hours.　　　　RFQ

General Description

The AD9241 is a 1.25 MSPS, single supply, 14-bit analog-to-digital converter (ADC). It combines a low cost, high speedCMOS process and a novel architecture to achieve the resolutionand speed of existing hybrid implementations at a fraction of thepower consumption and cost. It is a complete, monolithic ADCwith an on-chip, high performance, low noise sample-and-holdamplifier and programmable voltage reference. An external referencecan also be chosen to suit the dc accuracy and temperaturedrift requirements of the application. The device uses a multistage differential pipelined architecture with digital output error correction logic to guarantee no missing codes over the full operating temperature range.

The input of the AD9241 is highly flexible, allowing for easyinterfacing to imaging, communications, medical, and data-acquisition systems. A truly differential input structure allowsfor both single-ended and differential input interfaces of varyinginput spans. The sample-and-hold amplifier (SHA) is equallysuited for both multiplexed systems that switch full-scale voltagelevels in successive channels as well as sampling single-channelinputs at frequencies up to and beyond the Nyquist rate. Also,the AD9241 performs well in communication systems employingDirect-IF Down Conversion since the SHA in the differentialinput mode can achieve excellent dynamic performance wellbeyond its specified Nyquist frequency of 0.625 MHz.

A single clock input is used to control all internal conversioncycles. The digital output data is presented in straight binaryoutput format. An out-of-range (OTR) signal indicates an overflowcondition which can be used with the most significant bitto determine low or high overflow.

Features

Low Power Dissipation: 60 mW

Single +5 V Supply

Integral Nonlinearity Error: 2.5 LSB

Differential Nonlinearity Error: 0.6 LSB

Input Referred Noise: 0.36 LSB

On-Chip Sample-and-Hold Amplifier and Voltage Reference

Signal-to-Noise and Distortion Ratio: 78.0 dB

Spurious-Free DynamicRange: 88.0 dB

Out-of-Range Indicator

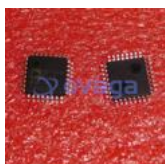Straight Binary Output Data

44-Pin MQFP

Related Products

[ADAS3022BCPZ](#)
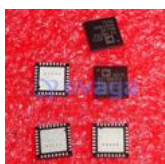
Analog Devices, Inc
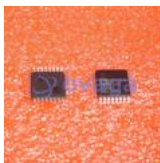
LFCSP-40

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[AD7401YRWZ](#)

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TSSOP-24

[AD7124-8BCPZ-RL7](#)

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LFCSP-32

[AD9680BCPZ-500](#)

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LFCSP-64