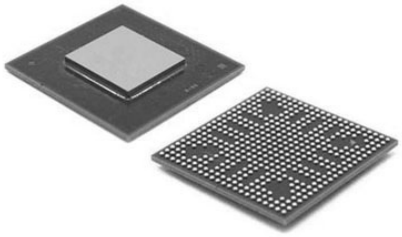
AD7949BCPZRL7

Data Sheet

14-Bit, 8-Channel, 250 kSPS PulSAR® ADC; Package: LFCSP 4x4mm (2.5EP; No of Pins: 20; Temperature Range: Industrial

Manufacturers	Analog Devices, Inc
Package/Case	LFCSP-20
Product Type	Data Conversion ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for AD7949BCPZRL7 or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The AD7949 is an 8-channel, 14-bit, charge redistribution successive approximation register (SAR) analog-to-digital converter (ADC) that operates from a single power supply, VDD.

The AD7949 contains all components for use in a multichannel, low power data acquisition system, including a true 14-bit SAR ADC with no missing codes; an 8-channel, low crosstalk multiplexer that is useful for configuring the inputs as single-ended (with or without ground sense), differential, or bipolar; an internal low drift reference (selectable 2.5 V or 4.096 V) and buffer; a temperature sensor; a selectable one-pole filter; and a sequencer that is useful when channels are continuously scanned in order.

The AD7949 uses a simple SPI interface for writing to the configuration register and receiving conversion results. The SPI interface uses a separate supply, VIO, which is set to the host logic level. Power dissipation scales with throughput.

The AD7949 is housed in a tiny 20-lead LFCSP with operation specified from −40°C to +85°C.

Features

14-bit resolution with no missing codes

8-channel multiplexer with choice of inputs

Unipolar single-ended

Differential (GND sense)

Pseudobipolar

Throughput: 250 kSPS

INL/DNL: ±0.5/±0.25 LSB typical

Application

Multichannel system monitoring

Battery-powered equipment

Medical instruments: ECG/EKG

Mobile communications: GPS

Personal digital assistants

Power line monitoring

Data acquisition

SINAD: 85 dB @ 20 kHz

THD: −100 dB @ 20 kHz

Analog input range: 0 V to VREF with VREF up to VDD

Multiple reference types

Internal selectable 2.5 V or 4.096 V

External buffered (up to 4.096 V)

External (up to VDD)

Internal temperature sensor (TEMP)

Channel sequencer, selectable 1-pole filter, busy indicator

No pipeline delay, SAR architecture

Single-supply 2.3 V to 5.5 V operation with 1.8 V to 5.5 V logic interface

Serial interface compatible with SPI, MICROWIRE,QSPI, and DSP

Power dissipation

2.9 mW at 2.5 V/200 kSPS

10.8 mW at 5 V/250 kSPS

Standby current: 50 nA

20-lead 4 mm × 4 mm LFCSP package

AD7949-EP supports defense and aerospace applications (AQEC standard)

Download

Military temperature range (−55°C to +125°C)

Controlled manufacturing baseline

Enhanced product change notification

Qualification data available on request

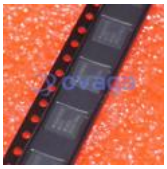
V62/12645 DSCC Drawing Number

Seismic data acquisition systems

Instrumentation

Process control

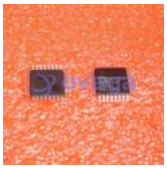
Related Products



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