AD790SQ

Fast, Precision Comparator

Manufacturers	Analog Devices, Inc
Package/Case	CDIP-8
Product Type	Comparators ; High Speed Comparators (<100ns Propagation Delay)
RoHS	
Lifecycle	

Images are for reference only

Please submit RFQ for AD790SQ or Email to us: sales@ovaga.com We will contact you in 12 hours.   RFQ

General Description

The AD7902 is a dual 16-bit, successive approximation, analog-to-digital converter (ADC) that operates from a single power supply, VDDx, per ADC. It contains two low power, high speed, 16-bit sampling ADCs and a versatile serial port interface (SPI). On the CNVx rising edge, the AD7902 samples an analog input, IN+ in the range of 0 V to VREF with respect to a ground sense, IN−. The externally applied reference voltage of the REFx pins (VREF) can be set independently from the supply voltage pins, VDDx. The power of the device scales linearly with throughput.

Using the SDIx inputs, the SPI-compatible serial interface can also daisy-chain multiple ADCs on a single 3-wire bus and provide an optional busy indicator. It is compatible with 1.8 V, 2.5 V, 3 V, or 5 V logic, using the separate VIOx supplies.

The AD7902 is available in a 20-lead QSOP package with operation specified from −40°C to +125°C.

Features

16-bit resolution with no missing codes

Throughput: 1 MSPS

Lowpower dissipation7.0 mW at 1 MSPS (VDD1 and VDD2 only) 12.0 mW at 1 MSPS (total)140 µW at 10 kSPS

INL: ±1.0 LSB typical, ±2.5 LSB maximum

Pseudodifferential analog input range0 V to VREF with VREF between 2.4 V to 5.1 VAllows use of any input rangeEasy to drive with the ADA4841-1/ADA4841-2

SINAD: 91 dB at 1 kHz

THD: −105 dB at 1 kHz

No pipeline delay

Single-supply 2.5 V operation with 1.8 V/2.5 V/3 V/5 V logic interface

Serial port interface (SPI) QSPI/MICROWIRE/DSP compatible

20-lead QSOP package

Wide operating temperature range: −40°C to +125°C

Application

Battery-powered equipment

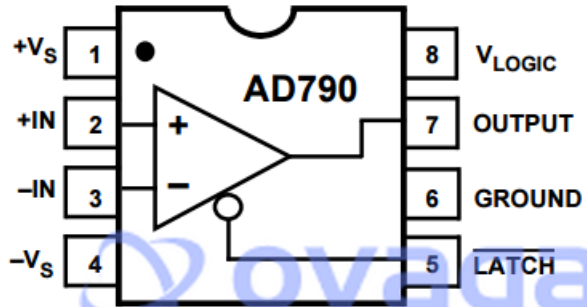Communications

Automated test equipment (ATE)

Data acquisition

Medical instrumentation

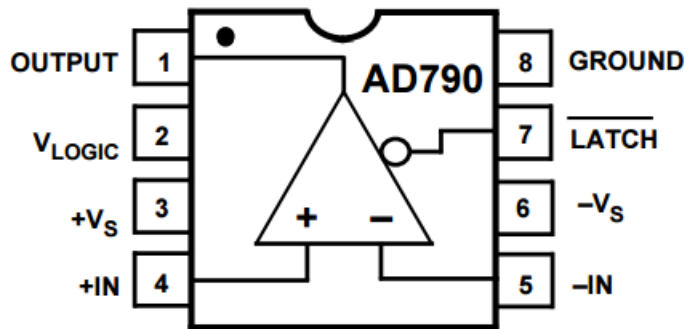Redundant measurement

Simultaneous sampling

CONNECTION DIAGRAMS
8-Pin Plastic Mini-DIP (N) and Cerdip (Q) Packages

AD790

Pin		Pin	
1	+V$_S$	8	V$_{LOGIC}$
2	+IN	7	OUTPUT
3	–IN	6	GROUND
4	–V$_S$	5	LATCH

8-Pin SOIC (R) Package

AD790

Pin		Pin	
1	OUTPUT	8	GROUND
2	V$_{LOGIC}$	7	LATCH
3	+V$_S$	6	–V$_S$
4	+IN	5	–IN

Related Products

ADCMP573BCPZ Analog Devices, Inc QFN	**AD96687BQ** Analog Devices, Inc CDIP-16
AD790JRZ Analog Devices, Inc SOIC-8	**AD9696KR** Analog Devices, Inc SOP-8
AD790JN Analog Devices, Inc PDIP-8	**AD9687BD** Analog Devices, Inc DIP16
AD9696TQ Analog Devices, Inc CDIP-8	**AD8561AR** Analog Devices, Inc SOP-8