

Analogue to Digital Converter, 16 bit, 500 kSPS, Single Ended, Parallel, Serial, Single, 4.75 V



Images are for reference only

Manufacturers	Analog Devices, Inc
Package/Case	LQFP-48
Product Type	Data Conversion ICs
RoHS	Pb-free Halide free
Lifecycle	

Please submit RFQ for AD7654ASTZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The AD7654 is a low cost, simultaneous sampling, dual-channel, 16-bit, charge redistribution SAR, analog-to-digital converter that operates from a single 5 V power supply. It contains two low noise, wide bandwidth, track-and-hold amplifiers that allow simultaneous sampling, a high speed 16-bit sampling ADC, an internal conversion clock, error correction circuits, and both serial and parallel system interface ports. Each track-and-hold has a multiplexer in front to provide a 4-channel input ADC. The A0 multiplexer control input allows the choice of simultaneously sampling input pairs INA1/INB1 = high). The device features a very high sampling rate mode (normal) and, for low power applications, a reduced power mode (impulse) where the power is scaled with the throughput. Operation is specified from -40°C to $+85^{\circ}\text{C}$.

Features

Dual, 16-bit, 2-channel simultaneous sampling ADC

16-bit resolution with no missing codes

Throughput: 500 kSPS (normal mode) 444 kSPS (impulse mode)

INL: ± 3.5 LSB max ($\pm 0.0053\%$ of full scale)

SNR: 89 dB typ at 100 kHz

THD: -100 dB at $+100$ kHz

Analog input voltage range: 0 V to 5 V

No pipeline delay

Parallel and serial 5 V/3 V interface

SPI®/QSPI™/MICROWIRE™/
DSP compatible

Single 5 V supply operation

See data sheet for additional features

Application

AC motor control

3-phase power control

4-channel data acquisition

Uninterrupted power supplies

Product Highlights

Simultaneous Sampling. The AD7654 features two sample-and-hold circuits that allow simultaneous sampling. It provides inputs for four channels.

Fast Throughput. The AD7654 is a 500 kSPS, charge redistribution, 16-bit SAR ADC with internal error correction circuitry.

Superior INL and No Missing Codes. The AD7654 has a maximum integral nonlinearity of 3.5 LSB with no missing 16-bit codes.

Single-Supply Operation. The AD7654 operates from a single 5 V supply. In impulse mode, its power dissipation decreases with throughput.

Serial or Parallel Interface. Versatile parallel or 2-wire serial interface arrangement is compatible with both 3 V and 5 V logic.

Related Products



[ADAS3022BCPZ](#)

Analog Devices, Inc
LFCSP-40



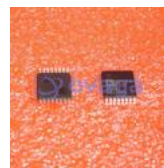
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LFCSP-64