AD7714YRUZ

Data Sheet

CMOS, 3V/5V, 500 µA, 24-Bit Sigma-Delta, Signal Conditioning ADC; Temperature Range: Industrial

Manufacturers	Analog Devices, Inc
Package/Case	TSSOP-24
Product Type	Data Conversion ICs
RoHS	Pb-free Halide free
Lifecycle	

Images are for reference only

Please submit RFQ for AD7714YRUZ or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The part features three differential analog inputs (which can also be configured as five pseudo-differential analog inputs) as well as a differential reference input. The AD7714 thus performs all signal conditioning and conversion for a system consisting of up to five channels. A new Y grade has recently been added to the existing range. Compared to the A grades this new grade has an extended operating temperature range, schmitt trigger inputs on SCLK and DIN, tighter linearity specifications, lower power consumption and is available in a smaller package.

The AD7714 is ideal for use in smart microcontroller- or DSP-based systems. It features a serial interface that can be configured for three-wire operation. Gain settings, signal polarity and channel selection can be configured in software using the serial port. The AD7714 provides self-calibration, system calibration and background calibration options and also allows the user to read and write the on-chip calibration registers.

CMOS construction ensures very low power dissipation, and the power-down mode reduces the standby power consumption to 15 µW typical at 3 V. Minimum operating voltage for the A grades is 3 V and 2.7 V for the Y grades. The A grades are available in a 24-pin, 0.3 inch-wide, plastic dual-in-line package (DIP); a 24 lead small outline (SOIC) package and a 28-lead shrink small outline package (SSOP). The new Y grade is available in a 24-pin, 0.3 inch-wide, plastic dual-in-line package (DIP); a 24 lead small outline (SOIC) package and a 24-lead Thin Shrink Small Outline Package (TSSOP).

Features

Charge Balancing ADC24 Bits No Missing Codes0.0015% Nonlinearity

Five-Channel Programmable Gain Front EndGains from 1 to 128Can Be Configured as Three Fully DifferentialInputs or Five Pseudo-Differential Inputs

Three-Wire Serial InterfaceSPI®, QSPI™, MICROWIRE™ and DSP Compatible

3 V (AD7714-3) or 5 V (AD7714-5) Operation

Low Current (350 µA typ) with Power-Down (5 µA typ)

Low Noise (<150 nV rms)

Low-Pass Filter with Programmable Filter Cutoffs

Please see data sheet for additional features

Related Products

ADAS3022BCPZ

Analog Devices, Inc

LFCSP-40

AD574AJNZ

Analog Devices, Inc

PDIP-28

AD7938BSUZ

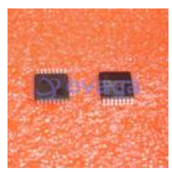
Analog Devices, Inc

TQFP-32

AD7124-8BCPZ-RL7

Analog Devices, Inc

LFCSP-32



AD7266BSUZ

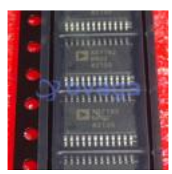
Analog Devices, Inc

TQPF-32

AD7401YRWZ

Analog Devices, Inc

SOIC-16



AD7192BRUZ-REEL

Analog Devices, Inc

TSSOP-24

AD9680BCPZ-500

Analog Devices, Inc

LFCSP-64