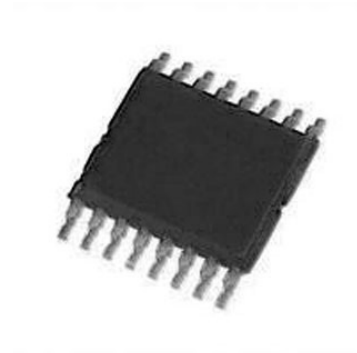Nonvolatile Memory, 1024-Position Digital Potentiometer; Package: TSSOP; No of Pins: 16; Temperature Range: Industrial

Manufacturers	Analog Devices, Inc
Package/Case	TSSOP-16
Product Type	D/A Converters (DAC) ; Digital Potentiometers (DigiPOT)
RoHS	Rohs
Lifecycle	

Images are for reference only

Please submit RFQ for AD5231BRUZ10 or Email to us: sales@ovaga.com We will contact you in 12 hours.   RFQ

General Description

The AD5231 is a nonvolatile memory*, digitally controlled potentiometer** with 1024-step resolution. The device performs the same electronic adjustment function as a mechanical potentiometer with enhanced resolution, solid state reliability, and remote controllability. The AD5231 has versatile programming that uses a standard 3-wire serial interface for 16 modes of operation and adjustment, including scratchpad programming, memory storing and restoring, increment/decrement, ±6 dB/step log taper adjustment, wiper setting readback, and extra EEMEM for user-defined information, such as memory data for other components, look-up table, or system identification information.

In scratchpad programming mode, a specific setting can be programmed directly to the RDAC register that sets the resistance between Terminals W–A and Terminals W–B. This setting can be stored into the EEMEM and is transferred automatically to the RDAC register during system power-on.

The EEMEM content can be restored dynamically or through externalPR strobing, and aWP function protects EEMEM contents. To simplify the programming, the linear-step increment or decrement commands can be used to move the RDAC wiper up or down, one step at a time. The ±6 dB step commands can be used to double or half the RDAC wiper setting.

The AD5231 is available in a 16-lead TSSOP. The part is guaranteed to operate over the extended industrial temperature range of −40°C to +85°C.

Features

1024-position resolution

Nonvolatile memory maintains wiper setting

Power-on refresh with EEMEM setting

EEMEM restore time: 140 µs typ

Full monotonic operation

10 kΩ, 50 kΩ, and 100 kΩ terminal resistance

Permanent memory write protection

Wiper setting readback

Predefined linear increment/decrement instructions

Predefined ±6 dB/step log taper increment/decrement instructions

SPI®-compatible serial interface

3 V to 5 V single-supply or ±2.5 V dual-supply operation

Application

Mechanical potentiometer replacement

Instrumentation: gain, offset adjustment

Programmable voltage to current conversion
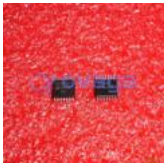
Programmable filters, delays, time constants

Programmable power supply

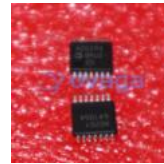Low resolution DAC replacement

Sensor calibration

Data Sheet, Rev. C, 1/07

Related Products

AD5292BRUZ-20

Analog Devices, Inc

14TSSOP

AD5293BRUZ-20

Analog Devices, Inc

TSSOP-14

AD5242BRZ10

Analog Devices, Inc

SOIC-16

AD8403ARZ10

Analog Devices, Inc

SOIC-24

AD5142ABCPZ10-RL7

Analog Devices, Inc

LFCSP-16

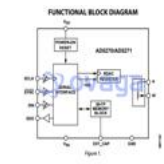**AD5254BRUZ10**

Analog Devices, Inc

TSSOP20

AD8400ARZ10

Analog Devices, Inc

SOIC-8

AD5270BRMZ-20

Analog Devices, Inc

MSOP-10