

Volatile Digital Potentiometer, 10 kohm, Quad, 3 Wire, Serial, Linear,  $\pm 30\%$ , 2.7 V

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	SOIC-24
Product Type	Data Acquisition - Digital Potentiometers
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for AD5204BRZ10 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The AD5204 provides a 4-channel, 256-position digitally controlled variable resistor (VR) devices. This device performs the same electronic adjustment function as a potentiometer or variable resistor. Each channel of the AD5204 contains a fixed resistor with a wiper contact that taps the fixed resistor value at a point determined by a digital code loaded into the SPI-compatible serial-input register. The resistance between the wiper and either endpoint of the fixed resistor varies linearly with respect to the digital code transferred into the VR latch. The variable resistor offers a completely programmable value of resistance between the A terminal and the wiper or the B terminal and the wiper. The fixed A-to-B terminal resistance of 10 k $\Omega$ , 50 k $\Omega$ , or 100 k $\Omega$  has a nominal temperature coefficient of 700 ppm/ $^{\circ}\text{C}$ .

Each VR has its own VR latch that holds its programmed resistance value. These VR latches are updated from an internal serial-to-parallel shift register that is loaded from a standard 3-wire serial-input digital interface. Eleven data bits make up the data-word clocked into the serial input register. The first three bits are decoded to determine which VR latch is loaded with the last eight bits of the data-word when the CS strobe is returned to logic high. A serial data output pin at the opposite end of the serial register (AD5204 only) allows simple daisy chaining in multiple VR applications without requiring additional external decoding logic.

An optional reset (PR) pin forces all the AD5204 wipers to the midscale position by loading 0x80 into the VR latch.

The AD5204 is available in the 24-lead surface-mount SOIC, TSSOP,PDIP packages and in a 32-lead, 5 mm  $\times$  5 mm LFCSP package. All parts are guaranteed to operate over the extended industrial temperature range of  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ . For additional single-, dual-, and quad-channel devices, see the AD8400/AD8402/AD8403 data sheets.

## Features

256 positions

Multiple independently programmable channels AD5204—4-channel AD5206—6-channel

Potentiometer replacement

10 k $\Omega$ , 50 k $\Omega$ , 100 k $\Omega$  terminal resistance

3-wire SPI-compatible serial data input

Power-on midscale preset

## Application

Mechanical potentiometer replacement

Instrumentation: gain, offset adjustment

Programmable voltage-to-current conversion

Programmable filters, delays, time constants

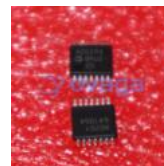
Line impedance matching

## Related Products



### [AD5292BRUZ-20](#)

Analog Devices, Inc  
14TSSOP



### [AD5293BRUZ-20](#)

Analog Devices, Inc  
TSSOP-14



### [AD5242BRZ10](#)

Analog Devices, Inc  
SOIC-16



### [AD8403ARZ10](#)

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SOIC-24



### [AD5142ABCPZ10-RL7](#)

Analog Devices, Inc  
LFCSP-16



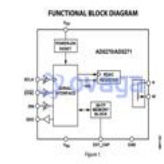
### [AD5254BRUZ10](#)

Analog Devices, Inc  
TSSOP20



### [AD8400ARZ10](#)

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SOIC-8



### [AD5270BRMZ-20](#)

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MSOP-10