Digital Potentiometer 25kOhm 1024POS Non-Volatile Linear/Log 16-Pin TSSOP T/R

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|---|---|
| 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 AD5235BRUZ25-RL7 or Email to us: sales@ovaga.com We will contact you in 12 hours.          RFQ

## General Description

The AD5235 is a dual-channel, nonvolatile memory, digitallycontrolled potentiometer with 1024-step resolution, offeringguaranteed maximum low resistor tolerance error of ±8%.The device performs the same electronic adjustment functionas a mechanical potentiometer with enhanced resolution, solidstate reliability, and superior low temperature coefficient performance.The versatile programming of the AD5235 via anSPI®-compatible serial interface allows 16 modes of operationand adjustment including scratchpad programming, memorystoring and restoring, increment/decrement, ±6 dB/step log taperadjustment, wiper setting readback, and extra EEMEM for user-definedinformation such as memory data for other components,look-up table, or system identification information.

In the scratchpad programming mode, a specific setting canbe programmed directly to the RDAC register, which sets theresistance between Terminal W and Terminal A and Terminal Wand Terminal B. This setting can be stored into the EEMEMand is restored automatically to the RDAC register duringsystem power-on.

The EEMEM content can be restored dynamically or throughexternal PR strobing, and a WP function protects EEMEMcontents. To simplify the programming, the independent orsimultaneous linear-step increment or decrement commandscan be used to move the RDAC wiper up or down, one step ata time. For logarithmic ±6 dB changes in the wiper setting, theleft or right bit shift command can be used to double or halve theRDAC wiper setting.

The AD5235 patterned resistance tolerance is stored in theEEMEM. The actual end-to-end resistance can, therefore, beknown by the host processor in readback mode. The host canexecute the appropriate resistance step through a softwareroutine that simplifies open-loop applications as well asprecision calibration and tolerance matching applications.The AD5235 is available in a thin, 16-lead TSSOP package.The part is guaranteed to operate over the extended industrialtemperature range of −40°C to +85°C.

# Features

Dual-channel, 1024-position resolution

25 kΩ, 250 kΩ nominal resistance

Maximum ±8% nominal resistor tolerance error

Low temperature coefficient: 35 ppm/°C

2.7 V to 5 V single supply or ±2.5 V dual supply

SPI-compatible serial interface

Nonvolatile memory stores wiper settings

Power-on refreshed with EEMEM settings

Permanent memory write protection

Resistance tolerance stored in EEMEM

See data sheet for additional features

AD5235-EP supports defense and aerospace applications (AQEC standard)

Download(pdf)

Temperature range: −40°C to +125°C

Controlled manufacturing baseline

1 assembly/test site

1 fabrication site

Enhanced product change notification

Qualification data available on request

V62/11605 DSCC Drawing Number

# Application

DWDM laser diode driver, optical supervisory systems

Mechanical potentiometer replacement

Instrumentation: gain, offset adjustment
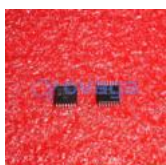
Programmable voltage-to-current conversion

Programmable filters, delays, time constants

Programmable power supply

Low resolution DAC replacement

Sensor calibration

## Related Products

**AD5292BRUZ-20**

Analog Devices, Inc

14TSSOP

**AD5293BRUZ-20**

Analog Devices, Inc

TSSOP-14

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**AD5242BRZ10**

Analog Devices, Inc

SOIC-16

**AD8403ARZ10**

Analog Devices, Inc

SOIC-24

**AD5142ABCPZ10-RL7**
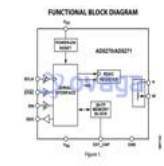
Analog Devices, Inc

LFCSP-16

**AD5254BRUZ10**

Analog Devices, Inc

TSSOP20

**AD8400ARZ10**

Analog Devices, Inc

SOIC-8

**AD5270BRMZ-20**

Analog Devices, Inc

MSOP-10