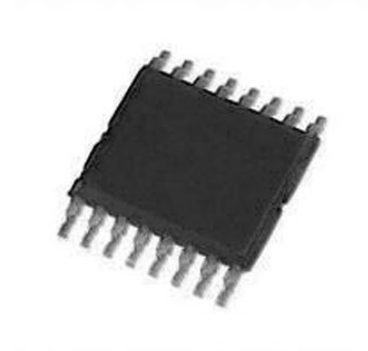


Digital to Analogue Converter, Dual, 16 bit, SPI, 2.7V to 5.5V, TSSOP, 16 Pins

Manufacturers	Analog Devices, Inc
Package/Case	16-TSSOP (0.173, 4.40mm Width)
Product Type	Data Conversion ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for AD5689RARUZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The AD5689R/AD5687R members of the nanoDAC+™ family are low power, dual, 16-/12-bit buffered voltage output digital-to-analog converters (DACs). The devices include a 2.5 V, 2 ppm/°C internal reference (enabled by default) and a gain select pin giving a full-scale output of 2.5 = 2). The devices operate from a single 2.7 V to 5.5 V supply, are guaranteed monotonic by design, and exhibit less than 0.1% FSR gain error and 1.5 mV offset error performance. Both devices are available in a 3 mm × 3 mm LFCSP and a TSSOP package.

The AD5689R/AD5687R also incorporate a power-on reset circuit and a RSTSEL pin that ensure that the DAC outputs power up to zero scale or midscale and remain there until a valid write takes place. Each part contains a per channel power-down feature that reduces the current consumption of the device to 4 μA at 3 V while in power-down mode.

The AD5689R/AD5687R use a versatile serial peripheral interface (SPI) that operates at clock rates up to 50 MHz. Both devices contain a VLOGIC pin that is intended for 1.8 V/3 V/5 V logic.

Product Highlights

High Relative Accuracy (INL).AD5689R (16-bit): ±2 LSB maximumAD5687R (12-bit): ±1 LSB maximum

Low Drift 2.5 V On-Chip Reference. 2 ppm/°C typical temperature coefficient 5 ppm/°C maximum temperature coefficient

Two Package Options. 3 mm × 3 mm, 16-lead LFCSP16-lead TSSOP

Features

High relative accuracy (INL): ± 2 LSB maximum at 16 bits

Low drift 2.5 V reference: 2 ppm/°C typical

Tiny package: 3 mm \times 3 mm, 16-lead LFCSP

TUE: $\pm 0.1\%$ of FSR maximum

Offset error: ± 1.5 mV maximum

Gain error: $\pm 0.1\%$ of FSR maximum

High drive capability: 20 mA, 0.5 V from supply rails

User-selectable gain of 1 or 2 (GAIN pin)

Reset to zero scale or midscale (RSTSEL pin)

1.8 V logic compatibility

50 MHz SPI with readback or daisy chain

Low glitch: 0.5 nV-sec

Low power: 3.3 mW at 3 V

2.7 V to 5.5 V power supply

AEC-Q100 qualified for automotive applications

AD5689R-EP supports defense and aerospace applications (AQEC standard)

Download (pdf)

Temperature range: -55°C to $+125^{\circ}\text{C}$

Controlled manufacturing baseline

1 assembly/test site

1 fabrication site

Enhanced product change notification

Qualification data available on request

V62/14634 DSCC Drawing Number

Application

Optical transceivers

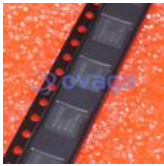
Base station power amplifiers

Process control (PLC I/O cards)

Industrial automation

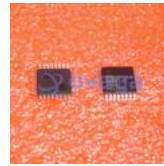
Data acquisition systems

Related Products



[ADAS3022BCPZ](#)

Analog Devices, Inc
LFCSP-40



[AD7266BSUZ](#)

Analog Devices, Inc
TQPF-32



[AD574AJNZ](#)

Analog Devices, Inc
PDIP-28



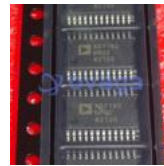
[AD7401YRWZ](#)

Analog Devices, Inc
SOIC-16



[AD7938BSUZ](#)

Analog Devices, Inc
TQFP-32



[AD7192BRUZ-REEL](#)

Analog Devices, Inc
TSSOP-24



[AD7124-8BCPZ-RL7](#)

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LFCSP-32



[AD9680BCPZ-500](#)

Analog Devices, Inc
LFCSP-64