AD5668ARUZ-2

Data Sheet

Octal, 16-Bit D/A Converter with 5 ppm/°C On-Chip Reference in 14-Lead TSSOP; Package: TSSOP; No of Pins: 16; Temperature Range: Industrial

Manufacturers	Analog Devices, Inc
Package/Case	TSSOP-16
Product Type	Data Conversion ICs
RoHS	Rohs
Lifecycle	

Images are for reference only

Please submit RFQ for AD5668ARUZ-2 or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The AD5668 device is a low power, octal, 16-bit, buffered voltage-output DAC. All devicesoperate from a single 2.7 V to 5.5 V supply and are guaranteedmonotonic by design. The AD5668 and AD5628 are available inboth a 4 mm × 4 mm LFCSP and a 16-lead TSSOP, while theAD5648 is available in both a 14-lead and 16-lead TSSOP.

The AD5628/AD5648/AD5668 have an on-chip reference withan internal gain of 2. The AD5628-1/AD5648-1/AD5668-1 havea 1.25 V 5 ppm/°C reference, giving a full-scale output rangeof 2.5 V; the AD5628-2/AD5648-2/AD5668-2 and AD5668-3 havea 2.5 V 5 ppm/°C reference, giving a full-scale output range of5 V. The on-board reference is off at power-up, allowing the useof an external reference. The internal reference is enabled via asoftware write.

The part incorporates a power-on reset circuit that ensures that theDAC output powers up to 0 V (AD5628-1/AD5648-1/AD5668-1,AD5628-2/AD5648-2/AD5668-2) or midscale (AD5668-3) andremains powered up at this level until a valid write takes place.The part contains a power-down feature that reduces the currentconsumption of the device to 400 nA at 5 V and provides software-selectable output loads while in power-down mode for any or allDAC channels. The outputs of all DACs can be updated simultaneouslyusing the LDAC function, with the added functionalityof user-selectable DAC channels to simultaneously update. Thereis also an asynchronous CLR that updates all DACs to a userprogrammablecode—zero scale, midscale, or full scale.

The AD5628/AD5648/AD5668 utilize a versatile 3-wire serialinterface that operates at clock rates of up to 50 MHz and iscompatible with standard SPI®, QSPI™, MICROWIRE™, andDSP interface standards. The on-chip precision output amplifierenables rail-to-rail output swing.

Product Highlights

Octal, 12-/14-/16-bit DAC.

On-chip 1.25 V/2.5 V, 5 ppm/°C reference.

Available in 14-lead/16-lead TSSOP, 16-lead LFCSP, and16-ball WLCSP.

Power-on reset to 0 V or midscale.

Power-down capability. When powered down, the DACtypically consumes 200 nA at 3 V and 400 nA at 5 V.

Features

Low power, small footprint, pin-compatible octal DACs: 16 bits

14-lead/16-lead TSSOP, 16-lead LFCSP, and 16-ball WLCSP

On-chip 1.25 V/2.5 V, 5 ppm/°C reference

Power down to 400 nA at 5 V, 200 nA at 3 V

2.7 V to 5.5 V power supply

Guaranteed monotonic by design

Power-on reset to zero scale or midscale

3 power-down functions

Hardware LDAC and LDAC override function

CLR function to programmable code

Rail-to-rail operation

AD5668-EP supports defense and aerospace applications (AQEC standard)

Download(pdf)

Military temperature range (−55°C to +125°C)

Controlled manufacturing baseline

One assembly/test site

One fabrication site

Enhanced product change notification

Qualification data available on request

V62/12643

Application

Process control

Data acquisition systems

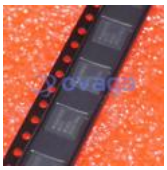
Portable battery-powered instruments

Digital gain and offset adjustment

Programmable voltage and current sources

Programmable attenuators

Related Products



[ADAS3022BCPZ]

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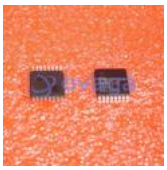
LFCSP-40



[AD7266BSUZ]

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TQPF-32

[AD574AJNZ]

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PDIP-28

[AD7401YRWZ]

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SOIC-16

[AD7938BSUZ]

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TQFP-32

[AD7192BRUZ-REEL]

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TSSOP-24

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LFCSP-64