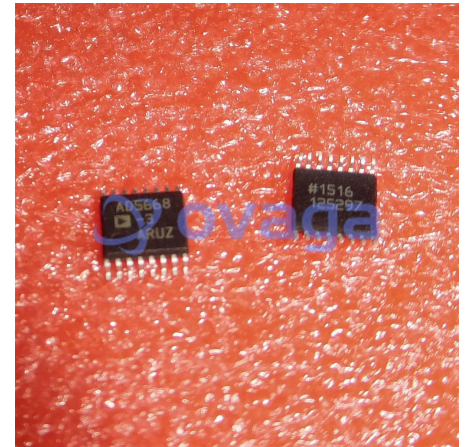Octal, 16-Bit D/A Converter with 5 ppm/°C On-Chip Reference in 14-Lead TSSOP;
Package: TSSOP; No of Pins: 16; Temperature Range: Industrial

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-3 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 devices operate from a single 2.7 V to 5.5 V supply and are guaranteed monotonic by design. The AD5668 and AD5628 are available in both a 4 mm × 4 mm LFCSP and a 16-lead TSSOP, while the AD5648 is available in both a 14-lead and 16-lead TSSOP.

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

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

The AD5628/AD5648/AD5668 utilize a versatile 3-wire serial interface that operates at clock rates of up to 50 MHz and is compatible with standard SPI®, QSPI™, MICROWIRE™, and DSP interface standards. The on-chip precision output amplifier enables 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, and 16-ball WLCSP.

Power-on reset to 0 V or midscale.

Power-down capability. When powered down, the DAC typically 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
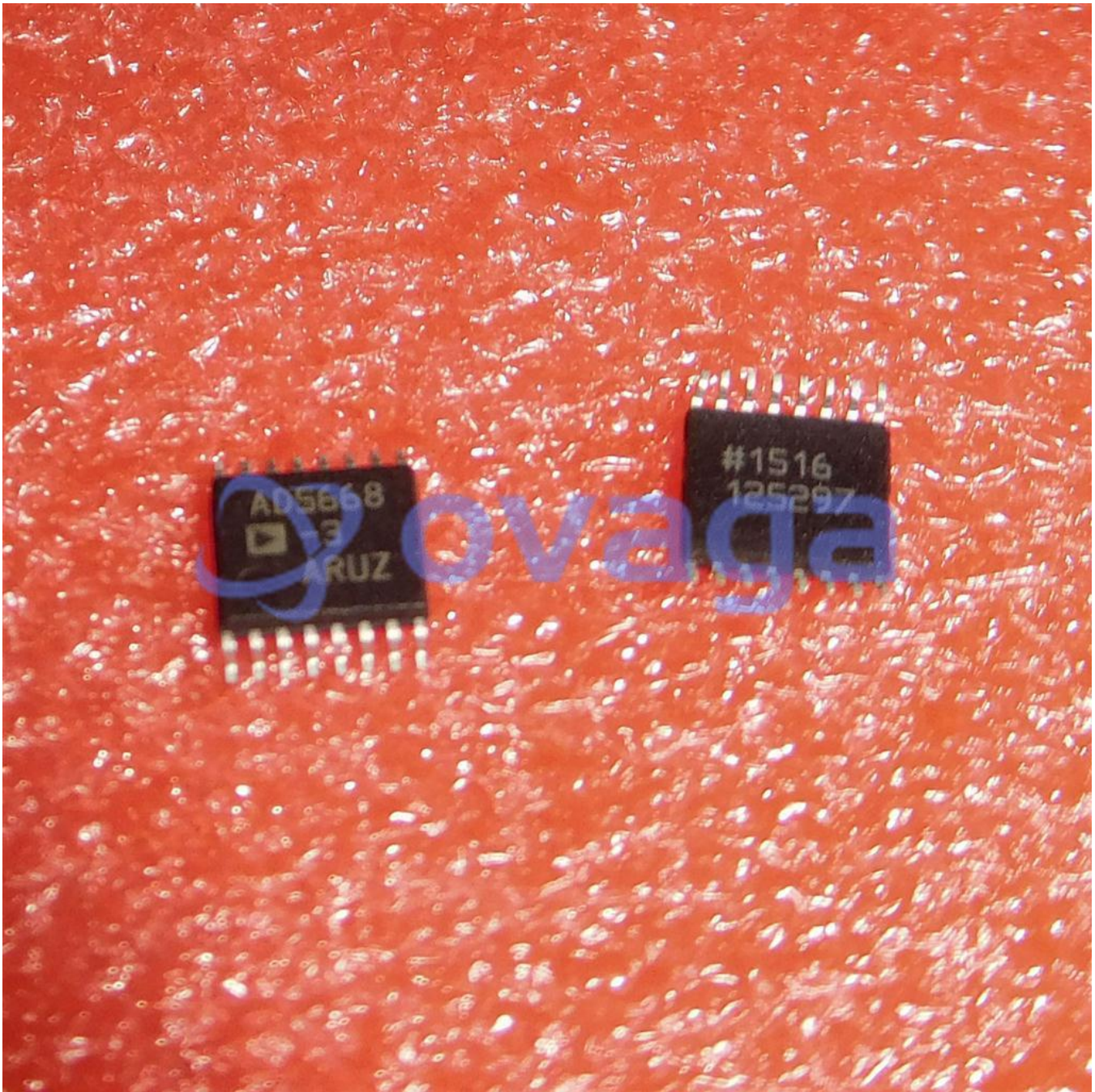
V62/12643

Application

Process control

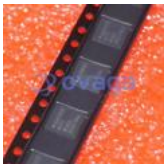Data acquisition systems

Portable battery-powered instruments

Digital gain and offset adjustment

Programmable voltage and current sources
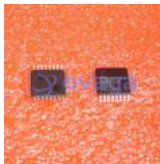
Programmable attenuators

Related Products

ADAS3022BCPZ

Analog Devices, Inc

LFCSP-40

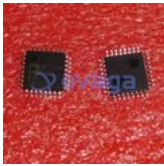AD7266BSUZ

Analog Devices, Inc

TQPF-32

AD574AJNZ

Analog Devices, Inc
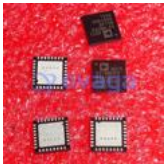
PDIP-28

AD7401YRWZ

Analog Devices, Inc

SOIC-16

AD7938BSUZ

Analog Devices, Inc

TQFP-32

AD7192BRUZ-REEL

Analog Devices, Inc

TSSOP-24

AD7124-8BCPZ-RL7

Analog Devices, Inc

LFCSP-32

AD9680BCPZ-500

Analog Devices, Inc

LFCSP-64