

DAC 1-CH Segment 12-bit 28-Pin SOIC W Tube

Manufacturer:	Analog Devices, Inc
Package/Case:	SOP28
Product Type:	Data Conversion ICs
Lifecycle:	Active



Images are for reference only

[Inquiry](#)

General Description

The AD9762 is the 12-bit resolution member of the TxDAC series of high performance, low power CMOS digital-to-analog converters (DACs). The TxDAC family which consists of pin compatible 8-, 10-, 12-, and 14-bit DACs is specifically optimized for the transmit signal path of communication systems. All of the devices share the same interface options, small outline package and pinout, thus providing an upward or downward component selection path based on performance, resolution and cost. The AD9762 offers exceptional ac and dc performance while supporting update rates up to 125 MS/PS.

The AD9762's flexible single-supply operating range of 2.7 V to 5.5 V and low power dissipation are well suited for portable and low power applications. Its power dissipation can be further reduced to a mere 45 mW without a significant degradation in performance by lowering the full-scale current output. Also, a powerdown mode reduces the standby power dissipation to approximately 25 mW.

The AD9762 is manufactured on an advanced CMOS process. A segmented current source architecture is combined with a proprietary switching technique to reduce spurious components and enhance dynamic performance. Edge-triggered input latches and a 1.2 V temperature compensated bandgap reference have been integrated to provide a complete monolithic DAC solution. Flexible supply options support +3 V and +5 V CMOS logic families.

The AD9762 is a current-output DAC with a nominal full-scale output current of 20 mA and > 100 k(ohm) output impedance.

Differential current outputs are provided to support single-ended or differential applications. Matching between the two current outputs ensures enhanced dynamic performance in a differential output configuration. The current outputs may tied directly to an output resistor to provide two complementary, single-ended voltage outputs or fed directly into a transformer. The output voltage compliance range is 1.25 V.

The on-chip reference and control amplifier are configured for maximum accuracy and flexibility. The AD9762 can be driven by the on-chip reference or by a variety of external reference voltages. The internal control amplifier which provides a wide (>10:1) adjustment span allows the AD9762 full-scale current to be adjusted over a 2 mA to 20 mA range while maintaining excellent dynamic performance. Thus, the AD9762 may operate at reduced power levels or be adjusted over a 20 dB range to provide additional gain ranging capabilities.

The AD9762 is available in a 28-pin SOIC package. It is specified for operation over the industrial temperature range.

Key Features

Member of Pin-Compatible TxDAC Product Family

125 MSPS Update Rate

12-Bit Resolution

Excellent Spurious Free Dynamic Range Performance

SFDR to Nyquist @ 5 MHz Output: 70 dBc

Differential Current Outputs: 2 mA to 20 mA

Power Dissipation: 175 mW @ 5 V to 45 mW @ 3 V

Power-Down Mode: 25 mW @ 5 V

On-Chip 1.20 V Reference

Single +5 V or +3 V Supply Operation

Package: 28-Lead SOIC and TSSOP

Edge-Triggered Latches

Recommended For You

AD7305BRZ

Analog Devices, Inc

SOP20

AD9910BSVZ

Analog Devices, Inc

TQFP100

AD9831ASTZ

Analog Devices, Inc

QFP

AD5447YRUZ

Analog Devices, Inc

TSSOP

AD5302BRMZ

Analog Devices, Inc

MSOP10

AD5531BRUZ

Analog Devices, Inc

TSSOP16

AD537JH

Analog Devices, Inc

CAN10

AD652AQ

Analog Devices, Inc

DIP

AD654JN

Analog Devices, Inc

DIP8

AD7740YRMZ

Analog Devices, Inc

MSOP8

AD9914BCPZ

Analog Devices, Inc

LFCSP

AD73311ARSZ

Analog Devices, Inc

SSOP20

AD7291BCPZ

Analog Devices, Inc

LFCSP20

AD9954YSVZ

Analog Devices, Inc

QFP

AD2S1205YSTZ

Analog Devices, Inc

LQFP44