DAC 1-CH R-2R/Current Steering 16-bit 24-Pin CDIP Tube

Manufacturers	Analog Devices, Inc
Package/Case	CDIP-24
Product Type	Data Conversion ICs
RoHS	
Lifecycle	
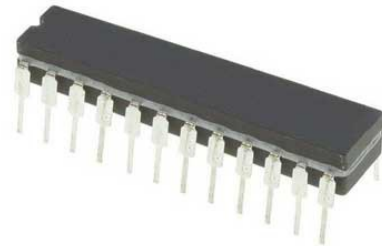
Images are for reference only

Please submit RFQ for AD660SQ or Email to us: sales@ovaga.com We will contact you in 12 hours.

RFQ

General Description

The AD660 DACPORT® is a complete 16-bit monolithic digital-to-analog converter with an on-board voltage reference, double-buffered latches, and an output amplifier. It is manufactured on the Analog Devices, Inc., BiMOS II process. This process allows the fabrication of low power CMOS logic functions on the same chip as high precision bipolar linear circuitry.

The AD660 architecture ensures 15-bit monotonicity over time and temperature. Integral and differential nonlinearity is maintained at ±0.003% maximum. The on-chip output amplifier provides a voltage output settling time of 10 µs to within ½ LSB for a full-scale step.

The AD660 has an extremely flexible digital interface. Data can be loaded into the AD660 in serial mode or as two 8-bit bytes. This is made possible by two digital input pins that have dual functions. The serial mode input format is pin selectable to be MSB or LSB first. The serial output pin allows the user to daisy-chain several AD660 devices by shifting the data through the input latch into the next DAC, thus minimizing the number of control lines required to SIN, CS and LDAC. The byte mode input format is also flexible in that the high byte or low byte data can be loaded first. The double buffered latch structure eliminates data skew errors and provides for simultaneous updating of DACs in a multiDAC system.

The AD660 is available in five grades. AN and BN versions are specified from −40°C to +85°C and are packaged in a 24-lead 300 mil plastic DIP. AR and BR versions are also specified from −40°C to +85°C and are packaged in a 24-lead SOIC. The SQ version is packaged in a 24-lead 300 mil CERDIP package and is also available compliant to MIL-STD-883. Refer to the AD660SQ/883B military data sheet for specifications and test conditions.

Product Highlights

The AD660 is a complete 16-bit DAC, with a voltage reference, double-buffered latches, and an output amplifier on a single chip.

The internal buried Zener reference is laser trimmed to 10.000 V with a ±0.1% maximum error and a temperature drift performance of ±15 ppm/°C. The reference is available for external applications.

The output range of the AD660 is pin programmable and can be set to provide a unipolar output range of 0 V to 10 V or a bipolar output range of −10 V to +10 V. No external components are required.

The AD660 is both dc and ac specified. DC specifications include ±1 LSB INL and ±1 LSB DNL errors. AC specifications include 0.009% THD

+ N and 83 dB SNR.

The double-buffered latches on the AD660 eliminate data skew errors and allow simultaneous updating of DACs in multiDAC applications.

The clear function can asynchronously set the output to 0 V regardless of whether the DAC is in unipolar or bipolar mode.

The output amplifier settles within 10 μs to ±½ LSB for a full-scale step and within 2.5 μs for a 1 LSB step over temperature. The output glitch is typically 15 nV-s when a full-scale step is loaded.

Data Sheet, Rev. B, 6/08

Features

Complete 16-Bit D/A FunctionOn-Chip Output AmplifierOn-Chip Buried Zener Voltage Reference

15-Bit Monotonic over Temperature

Microprocessor CompatibleSerial or Byte InputDouble Buffered LatchesFast (40 ns) Write Pulse

Asynchronous Clear (to 0 V) Function

Serial Output Pin Facilitates Daisy Chaining

Unipolar or Bipolar Output

Low Glitch: 15 nV-s
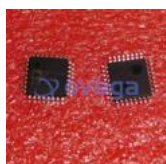
Low THD+N: 0.009%

Related Products

ADAS3022BCPZ

Analog Devices, Inc

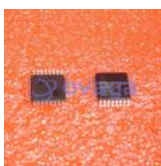LFCSP-40

AD7266BSUZ

Analog Devices, Inc

TQPF-32

AD574AJNZ

Analog Devices, Inc

PDIP-28

AD7401YRWZ

Analog Devices, Inc

SOIC-16

AD7938BSUZ

Analog Devices, Inc

TQFP-32
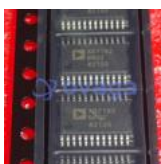
AD7192BRUZ-REEL

Analog Devices, Inc

TSSOP-24

AD7124-8BCPZ-RL7

Analog Devices, Inc

LFCSP-32

AD9680BCPZ-500

Analog Devices, Inc

LFCSP-64