

40-Channel 12-Bit 3 V/5 V Single-Supply Voltage-Output DAC; Package: LQFP; No of Pins: 100; Temperature Range: Industrial

Manufacturers	Analog Devices, Inc
Package/Case	LQFP-100
Product Type	Data Conversion ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for AD5381BSTZ-5 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The AD5381 is a complete, single-supply, 40-channel, 12-Bit DAC available in a 100-lead LQFP package. All 40 channels have an on-chip output amplifier with rail-to-rail operation. The AD5381 includes a programmable internal 1.25 V/2.5 V, 10 ppm/°C reference, an on-chip channel monitor function that multiplexes the analog outputs to a common MON_OUT pin for external monitoring, and an output amplifier boost mode, which allows optimization of the amplifier slew rate. The AD5381 contains a double-buffered parallel interface featuring 20 ns WR pulse width, an SPI-/QSPI-/MICROWIRE-/DSP-compatible serial interface with interface speeds in excess of 30 MHz, and an I2C-compatible interface that supports a 400 kHz data transfer rate.

An input register followed by a DAC register provides double buffering, allowing the DAC outputs to be updated independently or simultaneously using the LDAC input.

Each channel has a programmable gain and offset adjust register that allows the user to fully calibrate any DAC channel. Power consumption is typically 0.25 mA/channel with boost mode disabled.

Features

Guaranteed Monotonic

INL error: ± 1 LSB max

On-Chip 1.25 V/2.5 V Reference With 10 ppm $^{\circ}$ C TempCo

Temperature range: -40° C to $+85^{\circ}$ C

Rail-to-rail output amplifier

Power-down

Package type: 100-lead LQFP (14 mm \times 14 mm)

User interfaces: Parallel Serial (SPI $^{\circ}$ -/QSPI $^{\text{TM}}$ -/MICROWIRE $^{\text{TM}}$ -/DSP-compatible, featuring data readback)

I2C $^{\circ}$ -compatible

Robust 6.5 kV HBM and 2 kV FICDM ESD rating

INTEGRATED FUNCTIONS

Channel monitor

Simultaneous output update via LDAC

Clear function to user-programmable code

Amplifier boost mode to optimize slew rate

User-programmable offset and gain adjust

Toggle mode enables square wave generation

Thermal monitors

Application

Variable optical attenuators (VOAs)

Level setting (ATE)

Optical micro-electro-mechanical systems (MEMS)

Control systems

Instrumentation

Related Products



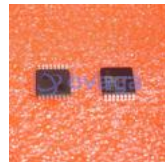
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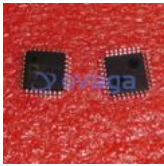
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