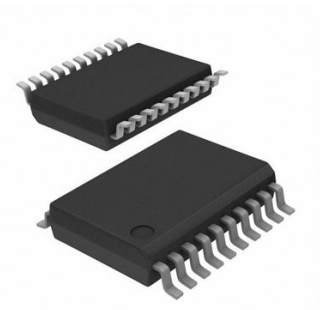


Direct Digital Synthesizer 180MHz 1-DAC 10bit Parallel/Serial 28-Pin SSOP Tube



Images are for reference only

Manufacturer: [Analog Devices, Inc](#)

Package/Case: SSOP

Product Type: Clock & Timer ICs

Lifecycle: Active

[Inquiry](#)

General Description

The AD9851 is a highly integrated device that uses advanced DDS technology, coupled with an internal high-speed, highperformance D/A converter, and comparator, to form a digitally-programmable frequency synthesizer and clock generator function. When referenced to an accurate clock source, the AD9851 generates a stable frequency and phase-programmable digitized analog output sine wave. This sine wave can be used directly as a frequency source, or internally converted to a square wave for agile-clock generator applications.

The AD9851's innovative high-speed DDS core provides a 32-bit frequency tuning word, which results in an output tuning resolution of 40 milli-Hertz, for a 180 MHz reference clock. The AD9851 contains a unique X6 reference clock multiplier circuit that obviates the need for a high-speed reference oscillator. The 6X PLL multiplier has minimal impact on SFDR and phase noise characteristics. The device provides 5-bits of digitally-controlled phase modulation which enables phase shifting of its output in increments of 180°, 90°, 45°, 22.5°, 11.25°, and any combination thereof.

Key Features

180 MHz Clock Rate with Selectable 6x Reference Clock Multiplier

On-Chip High Performance 10-Bit DAC and High Speed Comparator with Hysteresis

SFDR >43 dB @ 70 MHz AOUT

32-Bit Frequency Tuning Word

Simplified Control Interface: Parallel or Serial Asynchronous Loading Format

5-Bit Phase Modulation and Offset Capability

Comparator Jitter <80 ps p-p @ 20 MHz

2.7 V to 5.25 V Single-Supply Operation

Low Power: 555 mW @ 180 MHz

Power-Down Function, 4 mW @ 2.7V

Ultrasmall 28-Lead SSOP Packaging

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