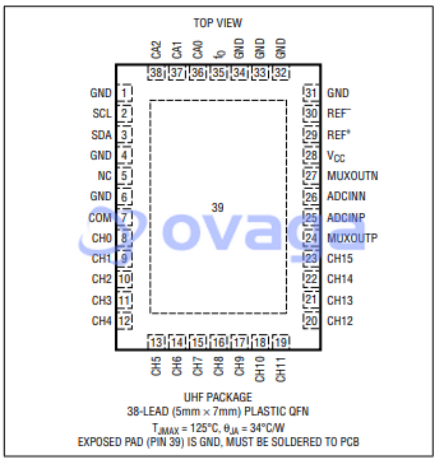
LTC2497CUHF#PBF

Data Sheet

16-Bit 8-/16-Channel Delta Sigma ADC with Easy Drive Input Current Cancellation and I2C Interface; Package: QFN; No of Pins: 38; Temperature Range: 0°C to +70°C

Manufacturers	Analog Devices, Inc
Package/Case	QFN-38
Product Type	Data Conversion ICs
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for LTC2497CUHF#PBF or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The LTC2497 is a 16-channel (eight differential), 16-bit, No Latency ΔΣ™ ADC with Easy Drive technology and a 2-wire, I2C interface. The patented sampling scheme eliminates dynamic input current errors and the shortcomings of on-chip buffering through automatic cancellation of differential input current. This allows large external source impedances and rail-to-rail input signals to be directly digitized while maintaining exceptional DC accuracy.

The LTC2497 includes an integrated oscillator. This device can be configured to measure an external signal from combinations of 16 analog input channels operating in single-ended or differential modes. It automatically rejects line frequencies of 50Hz and 60Hz simultaneously.

The LTC2497 allows a wide, common mode input range (0V to VCC), independent of the reference voltage. Any combination of single-ended or differential inputs can be selected and the first conversion, after a new channel is selected, is valid. Access to the multiplexer output enables optional external amplifiers to be shared between all analog inputs and auto calibration continuously removes their associated offset and drift.

Features

Up to Eight Differential or 16 Single-Ended Inputs

Easy Drive™ Technology Enables Rail-to-Rail Inputs with Zero Differential Input Current

Directly Digitizes High Impedance Sensors with Full Accuracy

2-Wire I2C Interface with 27 Addresses Plus One Global Address for Synchronization

600nVRMS Noise (0.02LSB Transition Noise)

GND to VCC Input/Reference Common Mode Range

Simultaneous 50Hz/60Hz Rejection

2ppm INL, No Missing Codes

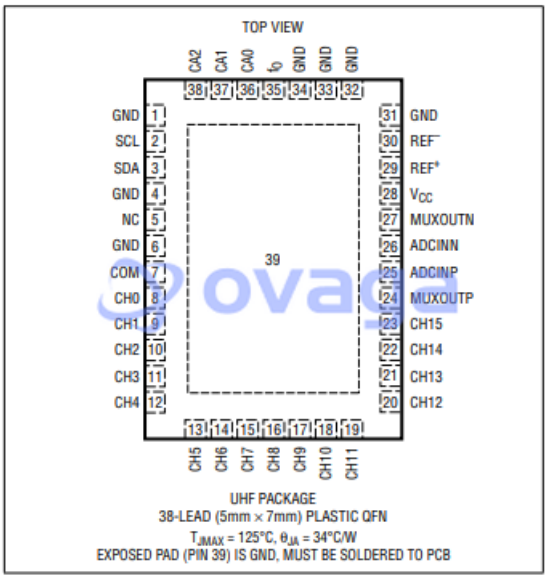
1ppm Offset and 15ppm Full-Scale Error

No Latency: Digital Filter Settles in a Single Cycle, Even After a New Channel is Selected

Single Supply, 2.7V to 5.5V Operation (0.8mW)

Internal Oscillator

Tiny 5mm × 7mm QFN Package



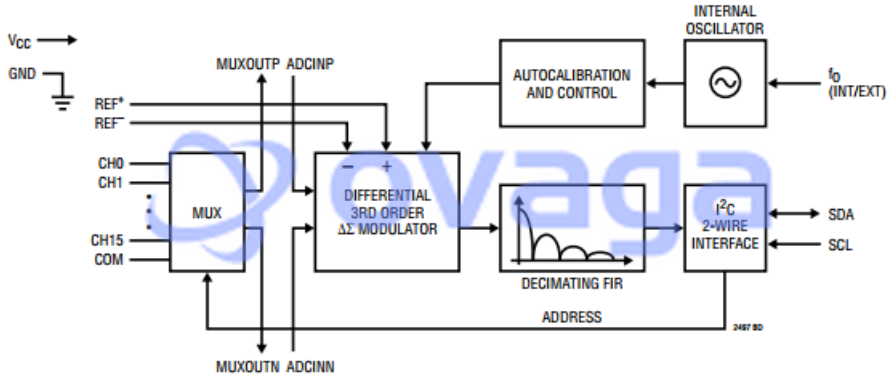
Application

Direct Sensor Digitizer

Direct Temperature Measurement

Instrumentation

Industrial Process Control



Related Products

[LTC1860IMS8#PBF](#)

Analog Devices, Inc

MSOP-8

[LTC2351IUH-14#PBF](#)

Analog Devices, Inc

QFN-32

[LT1171CQ](#)

Analog Devices, Inc

TO-263

[LTC2600CGN#PBF](#)

Analog Devices, Inc

SSOP16

[LTC2485IDD#PBF](#)

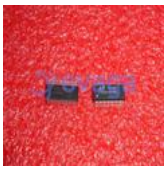
Analog Devices, Inc

DFN-10

[LTC2642CMS-16#PBF](#)

Analog Devices, Inc

10MSOP



[LTC2418IGN#PBF](#)

Analog Devices, Inc

SSOP28

[LTC1865AIMS#PBF](#)

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MSOP-1