The LTC2440, 24-bit, No Latency Delta-Sigma™ ADC offers ten settings, ranging from ultralow noise to high speeds of up to 4kHz output rate. An ultralow noise 6.9Hz output rate offers simultaneous 50Hz/60Hz rejection, 25 million counts at ±2.5V input range and 500,000 counts at ±50mV input range, eliminating the need for complex programmable gain amplifiers (PGAs). The LTC2440 combines a programmable OSR digital filter with a high speed analog modulator to achieve high speed and accuracy, independent of output rate. The LTC2440's wide range of user-programmable speed and resolution combinations makes it flexible for a wide range of applications.

Features

- Up to 4kHz Output Rate (3.5kHz with Internal Oscillator)
- Selectable Speed/Resolution
- 2\(\mu\)VRMS Noise at 880Hz Output Rate
- 200nVRMS Noise at 6.9Hz Output Rate with Simultaneous 50Hz/60Hz Rejection
- 5ppm INL, No Missing Codes
- <5\(\mu\)V Offset (4.5V < VCC < 5.5V, –40°C to 85°C)
- No Latency, Each Conversion is Accurate Even After an Input Step
- Internal Oscillator—No External Components
- Narrow 16-Lead SSOP Package

LTC2440 Speed vs RMS Noise

- VCC = 5V
- VREF = 5V
- VIN+ = VIN– = 0V

2\(\mu\)V AT 880Hz
200nV at 6.9Hz (50Hz/60Hz Rejection)
Fast 24-Bit $\Delta\Sigma$ ADC Family

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LTC2448/LTC2449: 24-Bit High Speed 8-Channel/16-Channel $\Delta\Sigma$ ADC

- Up to 8 Differential or 16 Single-Ended Input Channels
- Up to 8kHz Output Rate (7kHz with Internal Oscillator)
- Selectable Speed/Resolution
- 2μV$_{RMS}$ Noise at 1.76kHz Output Rate
- 200nV$_{RMS}$ Noise at 13.8Hz Output Rate with Simultaneous 50Hz/60Hz Rejection
- Internal Oscillator—No External Components
- LTC2449 Includes MUXOUT/ADCIN for External Buffering or Gain
- 38-Pin QFN 5mm x 7mm Package

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