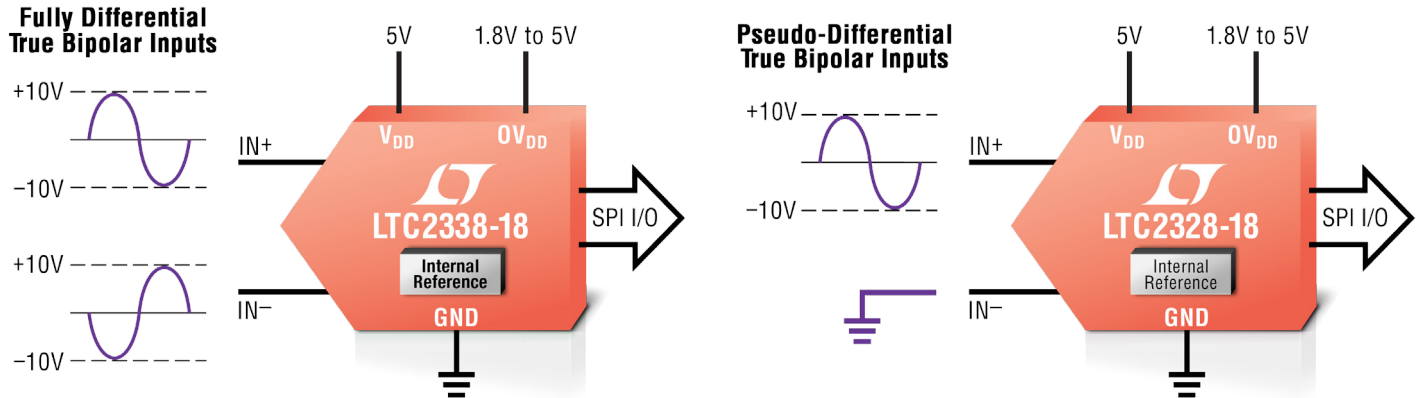


±10V True Bipolar SAR ADCs



18-Bit Precision with 100dB SNR in Small MSOP Packages

The LTC[®]2338 fully differential and pseudo-differential 1Msps SAR ADC family offers a wide ±10.24V true bipolar input range for high voltage, industrial applications. The proprietary internal reference buffer maintains less than 1LSB error during sudden bursts of conversions, enabling true one-shot operation after lengthy idle periods. The internal reference can be overdriven to interface to a range of signal levels that swing above and below ground. The LTC2338 family eliminates complicated circuitry required to interface true bipolar signals to ADCs, and provides a compact solution for easy interfacing to 1.8V to 5V serial logic.

Features

- Up to 1Msps Throughput Rate
- ±4LSB INL Max
- True Bipolar Input Ranges ±6.25V, ±10.24V, ±12.5V
- Up to 100dB SNR, -110dB THD at $f_{IN} = 2\text{kHz}$
- Single 5V Supply Operation
- Low Drift (20ppm/°C Max) 2.048V Internal Reference
- Onboard Single-Shot Capable Reference Buffer
- No Pipeline Delay, No Cycle Latency
- 1.8V to 5V SPI Interface with Daisy-Chain Mode
- Power Dissipation 50mW (Typ) at 1Msps
- Internal Conversion Clock
- Guaranteed Operation to 125°C
- Small 16-Lead MSOP Packages

Pin-Compatible ±10V SAR ADC Family

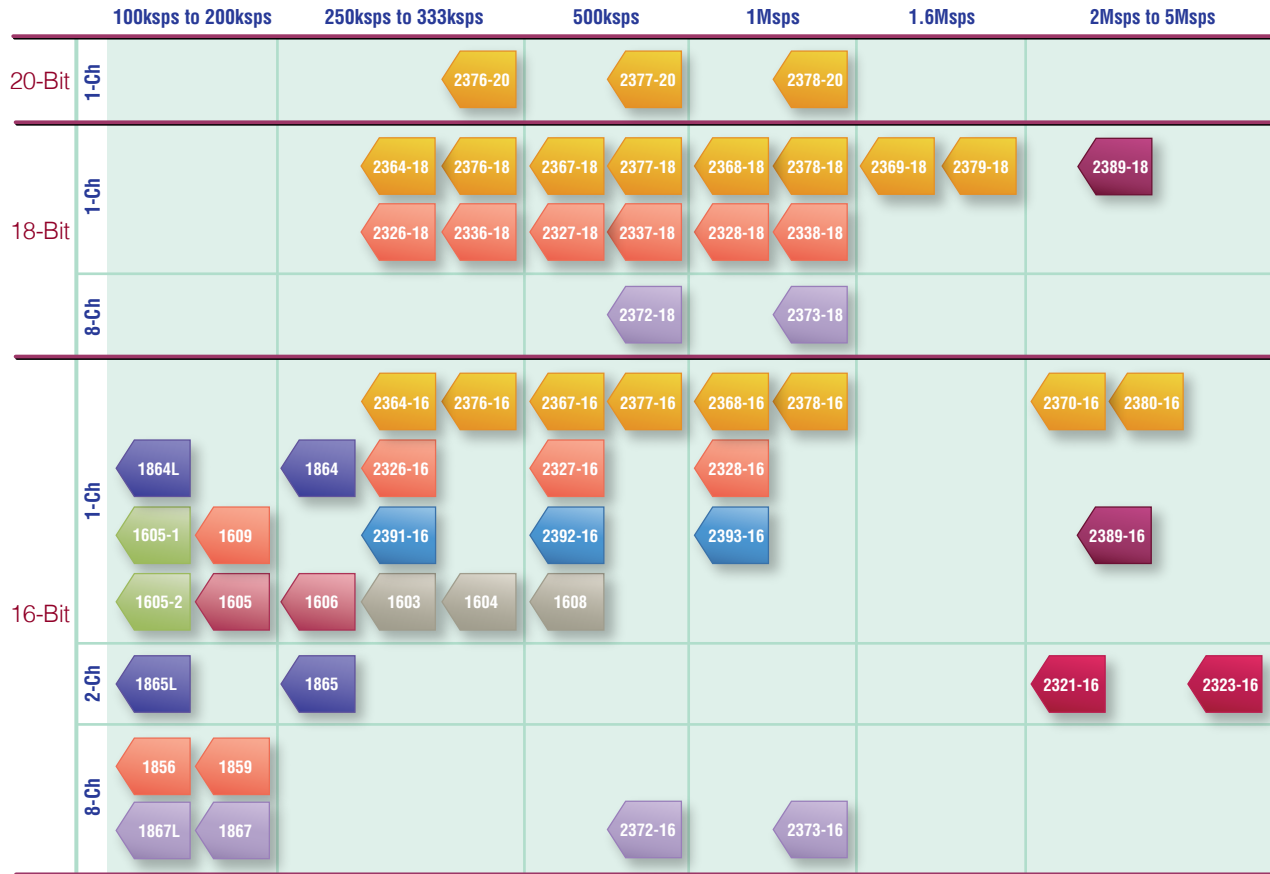
	250ksps	500ksps	1Msps
18-Bit Fully Differential 100dB SNR	2336-18	2337-18	2338-18
18-Bit Pseudo-Differential 95dB SNR	2326-18	2327-18	2328-18
16-Bit Pseudo-Differential 94dB SNR	2326-16	2327-16	2328-16








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High Precision SAR ADCs



16-Bit to 20-Bit Resolution, 100ksps Up to 5Msps






Serial

-  Pseudo- or Fully Differential Pin-Compatible ADCs
-  ±10V True Bipolar Inputs
-  8-Channel MUX'd Input ADCs
-  3V/5V Supply µPower ADCs
-  3.3V/5V Supply Simultaneous Sampling ADCs

Serial/Parallel

-  Pseudo- or Fully Differential Pin-Compatible ADCs
-  Fully Differential Pin-Compatible ADCs

Parallel

-  ±10V True Bipolar Inputs
-  0V to 4V, ±4V Unipolar/True Bipolar Inputs
-  ±2.5V True Bipolar Inputs