9-bit 30MS/s SAR-ADC

Product Brief:

IC4X's **ADC09_30MS_UMC55** is a 9-bit, 30 MS/s SAR ADC that operates using an asynchronous, PVT-controlled FSM. As a result, only the sampling clock is required—unlike classical SAR ADC architectures that demand an input clock running N times faster. This is a significant advantage for highly parallel or time-interleaved applications, as it greatly simplifies global clock distribution. The IP includes a reference voltage buffer.

Key Features:

- Async. operating finite state machine – PVT controlled
- Only Sampling Clock required; FSM creates internally higher clock rate
- Voltage Reference buffer included
- Top-Plate Sampling Operation

Technology Requirements:

- Fully Silicon verified
- UMC 55nm

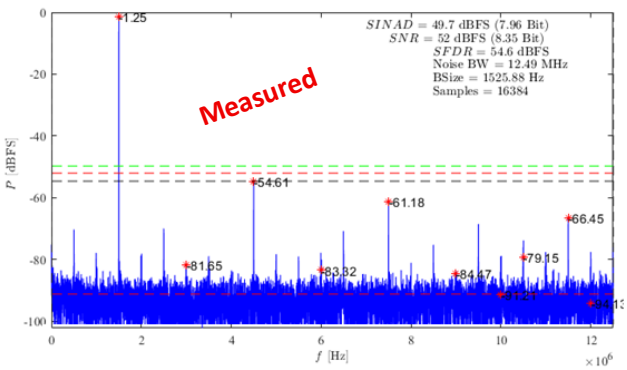
Applications:

- Time-interleaved Systems
- Sensor Readout Applications
- Housekeeping ADC

Specifications and Characteristics:

Parameter	Value
Input clock	30MS/s (no multiple f_s)
Bandwidth	>15MS/s
Resolution	9 bit
SNDR	>48.7 dB
ENOB	>7.8 bit (single tone; -1dBS)
Supply	1.3V
Process	UMC 55nm

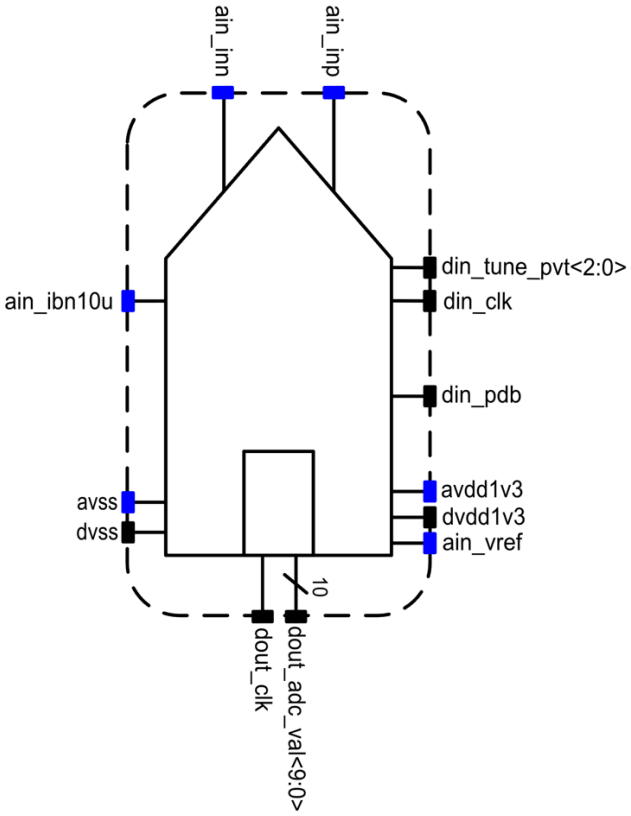
Measurement Results:



Contact us!

contact@ic4x.com
IP #: ADC09_30MS_UMC55

System Block Diagram:



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