Abstract

This work describes a 12-bit pipeline ADC (Analog-to-Digital Converter) for CMOS (Complementary Metal Oxide Semiconductor) that is implemented in a TSMC 0.18μm CMOS process. The proposed ADC utilizes the Threshold Inverter Quantization (TIQ) technique that uses two cascaded CMOS inverters as a comparator. The TIQ flash ADC achieves high speed, small size, low power consumption, and low voltage operation compared to other ADCs. The sample and hold circuit have high sampling rate. This design is implemented and fabricated in TSMC 0.18μm CMOS verified on the LT SPICE in 0.18μm Technology.

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Index Terms
Computer Science
Circuits and Systems

Keywords
Pipe line ADC, CMOS transistor