

A 12-bit Mismatch-Shaped Pipeline A/D Converter

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This paper presents a pipeline A/D converter with improved linearity. The linearity improvement is achieved through a combination of oversampling and mismatch shaping, which modulates the distortion energy out-of-band. A 77dB SFDR is achieved at an oversampling ratio of 4 and a sampling rate of 51Msample/s, which is a 12dB improvement compared to a converter with no mismatch shaping. These results were obtained from a test chip fabricated in a 0.35 μ m CMOS process.

