Abstracts

A 10-bit, 500 MS/s analog-to-digital converter

N.H. Sheng, R. Yu, C. Chang, K. Cheng, G. Gutierrez, P. van der Wagt, M.F. Chang, J. Rode, K. Nary and R. Nubling. "A 10-bit, 500 MS/s analog-to-digital converter." 1999 MTT-S International Microwave Symposium Digest 99.1 (1999 Vol. I [MWSYM]): 197-200 vol.1.

High-speed, high-resolution analog-to-digital converters (ADCs) are key components for advanced digital receivers and high-speed instruments. A 10-bit ADC was designed and fabricated with a production AlGaAs-GaAs Heterojunction Bipolar Transistor (HBT) technology. Sampling at 500 MS/s, the fabricated ADCs showed 8 effective-number-of-bits (ENOBs) and >65 dB spur-free-dynamic-range (SFDR) for a 49 MHz input signal.

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