

Development of a 20 GS/s Sampler Chip in 130 nm CMOS Technology.

In the scope of time of flight measurements at a scale of few pico-seconds, a CMOS fast sampler chip is being developed in 130nm CMOS technology. It includes a 10-20GS/s timing generator lockable on a 40-80 MHz clock and four channels of 256 sampling cells able to record up to of 25ns of analog information. The sampling process is continuously running and is stopped upon an external trigger. Each sampling cell is integrated with a comparator allowing a 12-bit analog-to-digital conversion. Measurements results are presented in terms of sampling rate, analog bandwidth, dynamic range, signal-to-noise ratio, linearity, analog-to-digital conversion and power performance.

Summary (Additional text describing your work. Can be pasted here or give an URL to a PDF document):

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