

Abstracts

Front-end CMOS chipset for 10 Gb/s communication

A.K. Petersen, K. Kiziloglu, Ty Yoon, F. Williams, Jr. and M.R. Sandor. "Front-end CMOS chipset for 10 Gb/s communication." 2002 Radio Frequency Integrated Circuits (RFIC) Symposium 02. (2002 [RFIC]): 93-96.

A 10 Gb/s communication chipset is realized for the first time in 0.18 μm generic CMOS. It comprises (all fully differential): (i) a transimpedance amplifier: gain=1300 Ω , bandwidth 9 GHz; optical. (ii) a limiting amplifier: t_{rise} , $t_{\text{fall}} < 23$ ps; sensitivity=5 mV at BER=10⁻¹². (iii) a laser driver: adjustable I_{bias} (up to 40 mA) and I_{mod} (up to 35 mA), driving a laser module with $Z_{\text{in}} = 50 \Omega$.

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