

Wide-Band Low-Noise Distributed Front-End for Multi-Gigabit CPFSK Receivers

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In this paper a distributed optical front-end amplifier for a coherent optical CPFSK receiver is presented. The measured average input noise current density is 20 pA/spl radic/ Hz in a 3-13 GHz bandwidth. This is the lowest value reported for a distributed optical front-end in this frequency range. The front-end is tested in a system set-up at a bit rate of 2.5 Gbit/s and a receiver sensitivity of -41.5 dBm is achieved at a 10^{-9} bit error rate.

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