Abstracts

Generation of High-Speed Pseudorandom Sequences Using Multiplex-Techniques (Dec. 1996, Part II [T-MTT])

F. Sinnesbichler, A. Ebberg, A. Felder and R. Weigel. "Generation of High-Speed Pseudorandom Sequences Using Multiplex-Techniques (Dec. 1996, Part II [T-MTT])." 1996 Transactions on Microwave Theory and Techniques 44.12 (Dec. 1996, Part II [T-MTT] (1996 Symposium Issue)): 2738-2742.

We report on the design and performance of high-speed pseudorandom sequence generators for nonreturn-to-zero (NRZ)-signals. The hardware is based on multiplexer circuits that multiply the data rate of a 5 Gb/s pseudorandom sequence to, respectively, 10 and 20 Gb/s. We employ multiplex-techniques based on the"cycle-and-add property" of pseudorandom sequences. The circuitry incorporates special high-speed silicon chips and is fabricated in both microstrip and coplanar waveguide technology. The experimental results demonstrate the feasibility of our approach.

❑ Return to main document.