Abstracts

High-speed generalized distributed-amplifier-based transversal-filter topology for optical communication systems

A. Borjak, P.P. Monteiro, J.J. O'Reilly and I. Darwazeh. "High-speed generalized distributed-amplifier-based transversal-filter topology for optical communication systems." 1997 Transactions on Microwave Theory and Techniques 45.8 (Aug. 1997, Part II [T-MTT]): 1453-1457.

The use of a distributed-amplifier-based transversal filter as a signal processor for high-rate pulse shaping/filtering is discussed. By showing the analogy between transversal filters and distributed-amplifier topologies, schemes demonstrating practical approaches for the design of such filters are explored. The practicability of one of the different schemes is illustrated via an implemented design. A four-stage 10-Gb/s distributed-amplifier monolithic microwave integrated circuit (MMIC) is constructed using one of the developed schemes and its behavior is discussed.

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