Abstracts

A novel high-Q optical microwave processor using hybrid delay-line filters

N. You and R.A. Minasian. "A novel high-Q optical microwave processor using hybrid delay-line filters." 1999 Transactions on Microwave Theory and Techniques 47.7 (Jul. 1999, Part II [T-MTT] (Special Issue on Microwave and Millimeter-Wave Photonics)): 1304-1308.

A new hybrid active-passive photonic signal processor, which achieves high-Q microwave bandpass filtering, is presented. It overcomes the problem of achieving very high-Q values, while still operating the active stage with a large gain margin. This enables a significant increase in Q to be obtained, higher filter frequencies, and robust operation. The general synthesis procedure for the hybrid filter is described. The filter response demonstrates very high-resolution microwave signal filtering with a measured Q of 801.

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