Abstracts

A Novel MMIC Active Filter with Lumped and Transversal Elements (Dec. 1989 [T-MTT])

M.J. Schindler and Y. Tajima. "A Novel MMIC Active Filter with Lumped and Transversal Elements (Dec. 1989 [T-MTT])." 1989 Transactions on Microwave Theory and Techniques 37.12 (Dec. 1989 [T-MTT] (1989 Symposium Issue)): 2148-2153.

A novel active filter structure has been developed and demonstrated as an MMIC. This filter structure makes use of both lumped elements and active transversal elements. The combination of lumped and transversal elements provides performance superior to that of a filter made of lumped elements alone and is much smaller than a filter made of transversal elements alone. This miniature MMIC filter has a passband of 9.8-11.1 GHz with 2 dB loss, and better than 30 dB rejection 1.1 GHz from either passband edge. This level of performance could not have been achieved on a conventional 4-mil-thick GaAs MMIC with only passive lumped elements.

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