Abstracts

Miniature Monolithic Microwave Frequency Diplexers

K.M. Simon, M.J. Schindler, Y. Tajima and A.M. Bertrand. "Miniature Monolithic Microwave Frequency Diplexers." 1990 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 90.1 (1990 [MCS]): 55-58.

Two novel diplexers composed of active, lumped and transversal element filters have been developed as MMICs. One diplexer produces a low pass cut-off band edge at 7.5 GHz and a high pass turn-on band edge at 9 GHz while the second diplexer produces two passbands, one from 12.5-13.5 GHz and the second from 15.5-16.5 GHz. These are the first reported active MMIC diplexers. Both diplexers have 30 dB of signal rejection 1.5 GHz from their band edges. The use of active, transversal filters produces the high rejection characteristic and also yields compact diplexers that can be used as building blocks in miniature microwave frequency multiplexing applications.

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