Abstracts

The Use of Matched Four-Port Filters to Realize Switched Multiplexer Having Low Amplitude and Group Delay Ripple

C.I. Mobbs. "The Use of Matched Four-Port Filters to Realize Switched Multiplexer Having Low Amplitude and Group Delay Ripple." 1987 Transactions on Microwave Theory and Techniques 35.12 (Dec. 1987 [T-MTT] (1987 Symposium Issue)): 1183-1191.

A design method for channelizers and multiplexers is presented with particular emphasis on simplicity of design and alignment. By using two recombining multiplexers, one for the odd-numbered channels and one for the even-numbered channels, a high-performance switched multiplexer may be realized. The key to this performance is a multiplexer based on channel filters with integral hybrids which is designed to be matched in both passband and stopband. The design criteria for such devices are presented for filters having finite Q structures. An eight-channel switched multiplexer in S-band is described, with experimental results in close agreement with theory.

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