Abstracts

A Technique for the Design of Multiplexers Having Contiguous Channels

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A general procedure for the design of multiplexer having contiguous channel frequency bands is presented. Using this procedure, the individual channel band-pass filters are designed from low-pass prototype filters having a resistive termination at one end only. The use of parallel-connected band-pass filters designed in this fashion, along with a susceptance-annulling network, is shown to be capable of giving a nearly constant input conductance across the operating band of a multiplexer. A three-channel design example using comb-line band-pass filters was worked out and its input admittance and attenuation characteristics were computed. This design was also constructed and tested. The computer and experimental results demonstrated the validity of the theory.

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