Abstracts

Extracted-Pole Filter Manifold Multiplexing

R.J. Cameron, H. Gregg, C.J. Radcliffe and J.D. Rhodes. "Extracted-Pole Filter Manifold Multiplexing." 1982 Transactions on Microwave Theory and Techniques 30.7 (Jul. 1982 [T-MTT] (Joint Special Issue on GaAs IC's)): 1041-1050.

A transformation method is introduced for enabling filters of the extracted-pole variety to be match-multiplexed onto a manifold using standard waveguide multiplexer computer programs. Thus the advantages that accrue from the extracted-pole realization for filters may now be extended to multiplexers, which will be particularly useful in narrow-band high-power low-loss multiplexing applications. The measured performance of a 12-GHz contiguous-channel quadraplexer comprising TE/sub 011/ cavity extracted-pole elliptic filters is presented, demonstrating the very low insertion losses attainable with this form of realization. Since the majority of applications envisaged for this type of multiplexer is in high-power output circuitry, a discussion on thermal aspects is included.

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