

Abstracts

A Wide Scan Quasi-Optical Frequency Diplexer

J.J. Fratamico, Jr., M.J. Gans and G.J. Owens. "A Wide Scan Quasi-Optical Frequency Diplexer." 1982 Transactions on Microwave Theory and Techniques 30.1 (Jan. 1982 [T-MTT]): 20-27.

A wide scan quasi-optical frequency diplexer is required for certain antenna applications. A waveguide array is a structure which can fill this requirement and also discriminate proximal frequencies. The wide scan characteristics are enhanced by tilting the waveguide axes with respect to the waveguide-free-space interface. A variational analysis of this structure is presented, as well as experimental verification using a Ku-band model.

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