Abstracts

Quasi-Optical Waveguide Filters (Correspondence)

J.J. Taub, H.J. Hindin and G.P. Kurpis. "Quasi-Optical Waveguide Filters (Correspondence)." 1964 Transactions on Microwave Theory and Techniques 12.6 (Nov. 1964 [T-MTT]): 618-619.

Oversize rectangular waveguide operating in the TE/sub 10 mode is useful in constructing components operating at millimeter and submillimeter wavelengths. This communication describes preliminary results on quasi-optical oversize waveguide filters. It is easier to construct filters using this technique and they have lower attenuation loss than conventional-size waveguide filters. When the waveguide is appreciably over-size (10 or more times standard-size TE/sub 10/ waveguide), a good approximation to plane wave propagation exists. This enables gratings and dielectric slabs to be used in a way that is similar to their application in optical structures, which have previously been considered as filter-like elements at millimeter and submillimeter wavelengths.

❑ Return to main document.