

Abstracts

Mode Filters for Oversized Rectangular Waveguides

*H.-J. Butterweck. "Mode Filters for Oversized Rectangular Waveguides." 1968 *Transactions on Microwave Theory and Techniques* 16.5 (May 1968 [T-MTT]): 274-281.*

In order to suppress trapped-mode resonances and other disturbing phenomena related to the existence of higher-order modes in oversized waveguides, suitable mode filters are required. In this paper such filters are described for rectangular waveguides in which only the dominant H_{10} mode is wanted. The unwanted modes to be suppressed by the mode filters are classified as 1) E_{mn} and H_{mn} modes with $n \neq 0$, and 2) H_{m0} modes with $m \neq 1$. These two types of modes must be treated separately and require different approaches to the mode-filtering problem. For both classes several constructions of mode filters are described and analyzed.

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