

Abstracts

A Channel-Dropping Filter in the Millimeter Region Using Circular Electric Modes

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A. channel-dropping filter in the millimeter region that transfers TE_{01} to TE_{10} square is described and analyzed. The important features are the use of TE_{10} mode in the resonant cavities combined with a mode-selective coupling between circular symmetric and rectangular waveguides which make both heat loss and mode conversion low. Design formulas and experimental results on a model filter centered at 56 kMc are included. Finally, several possible mode transducers and filters based on the idea of mode-selective coupling are described.

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