

Abstracts

General TE₀₁₁-Mode Waveguide Bandpass Filters

A.E. Atia and A.E. Williams. "General TE₀₁₁-Mode Waveguide Bandpass Filters." 1976 *Transactions on Microwave Theory and Techniques* 24.10 (Oct. 1976 [T-MTT]): 640-648.

A new structure for high-Q TE₀₁₁-mode circular waveguide cavities is introduced and shown to realize the most general bandpass-filter transfer functions. Methods of improving the mode purity and suppressing the degenerate TE₁₁₁ mode are presented. Several experimental narrow-bandpass filters having finite attenuation poles have been constructed; their measured responses show excellent agreement with theory. Average realizable unloaded Q's of 20000 and 16000 have been achieved at 8 and 12 GHz, respectively.

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