Abstracts

Circular TE/sub 011/-Mode,Trapped-Mode Bandpass Filters (1965 [MWSYM])

G.L. Matthaei and D.B. Weller. "Circular TE/sub 011/-Mode,Trapped-Mode Bandpass Filters (1965 [MWSYM])." 1965 G-MTT Symposium Program and Digest 65.1 (1965 [MWSYM]): 45-48.

The filters to be described are called "trapped-mode filters" because for their desired resonator mode the energy is trapped within the resonator structure to give a high-Q resonance. However, the side walls of the resonator are partially open so unwanted modes will radiate out the side walls of the structure so as to completely kill or at least greatly dampen unwanted resonances. Thus one of the main objectives in using this type of resonator is to obtain bandpass filters which will give a low-loss pass band, with no other pass bands. Though the principles to be described can also be used with other forms of resonators, in this paper, the resonators described employ the circular TE/sub 011/-mode which has the advantage of providing a higher unloaded Q than would rectangular TE/sub 101/-mode resonators.

❑ Return to main document.