Abstracts

Modes and Instabilities of Modes of the Flat-Roof Open Resonator

P.F. Checcacci, A. Consortini and A. Scheggi. "Modes and Instabilities of Modes of the Flat-Roof Open Resonator." 1968 Transactions on Microwave Theory and Techniques 19.2 (Feb. 1968 [T-MTT]): 103-109.

The problem of modes and losses of a resonator terminated by "flat-roof" reflectors is approached with the Fox and Li method of iteration. Field distributions, phaseshifts, and losses for some of the low-order modes are derived as functions of the roof angle and mirror aperture. A good agreement is found with the approximate theory previously developed by Toraldo di Francia. High loss regions are also observed. The behavior of different modes in such regions is investigated in detail. Design guidelines are given too. Experimental texts carried out on an X-band model confirm the theoretical predictions.

❑ Return to main document.