

Abstracts

Generalized Analysis of Parallel Two-Post Mounting Structures in Waveguide

O.L. El-Sayed. "Generalized Analysis of Parallel Two-Post Mounting Structures in Waveguide." 1977 *Transactions on Microwave Theory and Techniques* 25.1 (Jan. 1977 [T-MTT]): 24-33.

An analytical expression is obtained for the reactance of parallel two-post mounting structures having unsymmetrical strip and gap positions and different strip and gap widths. An equivalent circuit is derived and analytical expressions for its components established giving a physical insight into the problem of coupling between the two gaps. The analysis is based on deriving a variational expression for the structure reactance from the boundary conditions at the structure position. The theoretical results are experimentally verified for a wide range of coupling conditions. Exploitation of this model for the design of wide-band varactor-tuned negative resistance oscillators and multidiode parallel mounts in general is discussed.

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