

Abstracts

A General Equivalent Circuit for Coupled-Cavity Slow-Wave Structures

H.J. Curnow. "A General Equivalent Circuit for Coupled-Cavity Slow-Wave Structures." 1965 Transactions on Microwave Theory and Techniques 13.5 (Sep. 1965 [T-MTT]): 671-675.

A number of structures of the slot-coupled cavity chain type are used in high-power traveling-wave tubes. In these, different relationships between the structure pass bands and the cavity and slot resonances are found to exist. By the construction of equivalent circuits which have patterns of current flow similar to those in the real structures, this behavior is calculated and the importance of the partial nature of the coupling and the relative alignment of the slots is illustrated. It is possible to obtain from the circuits presented a qualitative understanding of the general behavior of structures of this type.

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