Abstracts

Circuit Characterization of V-Band IMPATT Oscillators and Amplifiers

T.T. Fong, K.P. Weller and D.L. English. "Circuit Characterization of V-Band IMPATT Oscillators and Amplifiers." 1976 Transactions on Microwave Theory and Techniques 24.11 (Nov. 1976 [T-MTT] (Special Issue on Millimeter Waves: Circuits, Components, and Systems)): 752-758.

A circuit model has been developed to describe a class of commonly used waveguide cavities for V-band IMPATT oscillators and amplifiers. Calculated results based on this model used in conjunction with theoretical small-signal IMPATT characteristics have shown good qualitative agreement with experimental data. Detailed characterization of a small-signal V-band IMPATT amplifier and a mechanical tuned oscillator are presented, and the predicted performance is compared with measurements.

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