

Abstracts

Traveling-Wave IMPATT Amplifiers and Oscillators

R.K. Mains and G.I. Haddad. "Traveling-Wave IMPATT Amplifiers and Oscillators." 1986 Transactions on Microwave Theory and Techniques 34.9 (Sep. 1986 [T-MTT]): 965-971.

Traveling-wave IMPATT oscillators and amplifiers are analyzed using a large-signal transmission-line model. A specific case for a GaAs structure at 33.7 GHz is examined in detail. General equations relating to the design and expected power output from these devices are also developed. It is concluded that more RF power can be generated by traveling-wave structures than is obtainable from discrete IMPATT devices.

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