Abstracts

A Proposed Circuit Model for Microstripline TRAPATT Oscillators (Correspondence)

R.J. Chaffin. "A Proposed Circuit Model for Microstripline TRAPATT Oscillators (Correspondence)." 1970 Transactions on Microwave Theory and Techniques 18.11 (Nov. 1970 [T-MTT] (Special Issue on Microwave Circuit Aspects of Avalanche-Diode and Transferred Electron Devices)): 983-985.

Described in this paper is a simple microstripline circuit suitable for supporting TRAPATT oscillations with the Fairchild FD-300 diode. The best result obtained was a pulsed output of 42 watts at 520 MHz with an efficiency of 9 percent. Also presented is a circuit model for predicting the frequency of operation. The resulting theory is shown to be in good agreement with the observed experimental data and provides a useful tool for designing low-frequency TRAPATT oscillators with small dimensions.

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