# Abstracts

## Circuit Analysis of Waveguide-Cavity Gunn-Effect Oscillator

*W.-C. Tsai, F.J. Rosenbaum and L.A. MacKenzie. "Circuit Analysis of Waveguide-Cavity Gunn-Effect Oscillator." 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)): 808-817.*

A simple equivalent circuit using lumped constant elements is developed for the post-coupled-waveguide-cavity Gunn effect oscillator. The circuit is used to predict with high accuracy the tuning characteristics, loaded Q, and mode-switching frequencies for the oscillator. Characteristic capacitance and negative-resistance values for low-n/sub 0/L-product CW devices are also presented.

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