

# Abstracts

## Simplified Theory for Post Coupling Gunn Diodes to Waveguide

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*J.F. White. "Simplified Theory for Post Coupling Gunn Diodes to Waveguide." 1972  
Transactions on Microwave Theory and Techniques 20.6 (Jun. 1972 [T-MTT]): 372-378.*

There is a constant need for diode circuits employing rectangular waveguide. Coupling of the diode to the guide by using an inductive post is a popular method. The microwave circuit analysis of the equivalent circuit has been explored by complete theoretical analyses in the literature, but the results have been sufficiently difficult to apply that, in practice, recourse is often made to empiric characterization. This paper derives a simplified equivalent circuit based on a small perturbation approximation. The method is verified by experiment and is then used to evaluate a practical Gunn oscillator cavity.

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