# Abstracts

## Physical Equivalent Circuit Model for Planar Schottky Varactor Diode

*P. Philippe, W. El-Kamali and V. Pauker. "Physical Equivalent Circuit Model for Planar Schottky Varactor Diode." 1988 Transactions on Microwave Theory and Techniques 36.2 (Feb. 1988 [T-MTT] (Special Issue on Computer-Aided Design)): 250-255.*

A physical equivalent circuit model for the planar GaAs Schottky varactor diode is presented. The model takes into account the distributed resistance and capacitance of the active layer, the side-wall capacitance, and the parasitic resistances and accurately accounts for the high series resistance observed near the pinch-off voltage. The dependence of the maximum series resistance on varactor size, frequency, and doping profile has been theoretically investigated and the results agree well with experimental data. The proposed model can be easily used for optimization of planar Schottky varactor diodes with regard to broad-band monolithic VCO constraints.

❑ Return to main document.