Abstracts

Admittance Measurement of IMPATT Diode at X-band (Correspondence)

T. Isobe and T. Nakamura. "Admittance Measurement of IMPATT Diode at X-band (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)): 993-995.

Investigation has been made on the small- and large-signal admittances of a Si IMPATT diode in the frequency range of 8-12 GHz over high current densities. In order to separate the diodewafer elements from the parasitic elements of the package, the bias-sweeping method proposed by Gewartowski and Morris is employed. Representative plots are given for wafer conductance and susceptance as functions of frequency with current density as a parameter. In addition, the variation of the large-signal admittance with a function of RF voltage is presented. The data obtained are compared with analytical small-signal theory.

❑ Return to main document.