

734

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Author

Starikov E. Shiktorov P. Gruzinskis V. Marinchio H. Nouvel P. Torres J. Palermo C. Chusseau L. Varani L. Ziade P.

Author Unabbreviated

Starikov E.; Shiktorov P.; Gruzinskis V.; Marinchio H.; Nouvel P.; Torres J.; Palermo C.; Chusseau L.; Varani L.; Ziade P.

Author/Editor Affiliation

Starikov E. Shiktorov P. Gruzinskis V. : Center for Physical Sciences and Technology, Semiconductor Physics Institute, A. Gostauto 11, Vilnius LT-01108, Lithuania

Marinchio H. Nouvel P. Torres J. Palermo C. Chusseau L. Varani L. : Institut d'Electronique du Sud, University Montpellier 2, CNRS UMR 5214, Place Eugene Bataillon, Montpellier 34095, France

Ziade P. : Laboratoire De Physique Appliquee, Universite Libanaise, Fanar, Lebanon

Title

Small-signal Characterization of FET/HEMT for Terahertz Applications

Source

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Abstract

Calculations of the small-signal response of InGaAs HEMTs by using the hydrodynamic approach coupled with a pseudo-2D Poisson equation are performed. The spectra of small-signal admittance and impedance are found to demonstrate series of the resonant peaks corresponding to excitation of plasma waves. Possibilities and conditions of instability onset and THz signal detection are discussed. (4 References).