

IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES

A PUBLICATION OF THE IEEE MICROWAVE THEORY AND TECHNIQUES SOCIETY



FEBRUARY 2003

VOLUME 51

NUMBER 2

IETMAB

(ISSN 0018-9480)

PART II OF TWO PARTS

SPECIAL ISSUE ON WIDE BANDGAP SEMICONDUCTOR DEVICES AND CIRCUITS

Guest Editorial *P. A. Parikh, T. E. Kazior, and U. K. Mishra* 605

PAPERS

Comprehensive Analysis of Small-Signal Parameters of Fully Strained and Partially Relaxed High Al-Content Lattice Mismatched $\text{Al}_m\text{Ga}_{1-m}\text{N}/\text{GaN}$ HEMTs	<i>Rashmi, A. Kranti, S. Haldar, M. Gupta, and R. S. Gupta</i>	607
Microwave Power Limits of AlGaIn/GaN HEMTs Under Pulsed-Bias Conditions.	 <i>B. M. Green, V. Tilak, V. S. Kaper, J. A. Smart, J. R. Shealy, and L. F. Eastman</i>	618
Insulating Gate III-N Heterostructure Field-Effect Transistors for High-Power Microwave and Switching Applications	 <i>M. A. Khan, G. Simin, J. Yang, J. Zhang, A. Koudymov, M. S. Shur, R. Gaska, X. Hu, and A. Tarakji</i>	624
Transient Characteristics of GaN-Based Heterostructure Field-Effect Transistors	 <i>E. Kohn, I. Daumiller, M. Kunze, M. Neuburger, M. Seyboth, T. J. Jenkins, J. S. Sewell, J. Van Norstand, Y. Smorchkova, and U. Mishra</i>	634
High Linearity and High Efficiency of Class-B Power Amplifiers in GaN HEMT Technology	 <i>V. Paidi, S. Xie, R. Coffie, B. Moran, S. Heikman, S. Keller, A. Chini, S. P. DenBaars, U. K. Mishra, S. Long, and M. J. W. Rodwell</i>	643
AlGaIn/GaN HFET Power Amplifier Integrated With Microstrip Antenna for RF Front-End Applications	 <i>Y. Chung, C. Y. Hang, S. Cai, Y. Qian, C. P. Wen, K. L. Wang, and T. Itoh</i>	653
Linearity Characteristics of Microwave-Power GaN HEMTs.	 <i>W. Nagy, J. Brown, R. Borges, and S. Singhal</i>	660
AlGaIn/GaN HEMTs—Operation in the <i>K</i> -Band and Above	 <i>I. P. Smorchkova, M. Wojtowicz, R. Sandhu, R. Tsai, M. Barsky, C. Namba, P.-S. Liu, R. Dia, M. Truong, D. Ko, J. Wang, H. Wang, and A. Khan</i>	665
Intermodulation-Distortion Performance of Silicon-Carbide Schottky-Barrier RF Mixer Diodes	 <i>R. N. Simons and P. G. Neudeck</i>	669

Information for Authors 673

CALLS FOR PAPERS

Microwave Photonics 674

