Abstracts

Heterojunction Bipolar Transistors for Microwave and Millimeter-Wave Integrated Circuits (Dec. 1987 [T-MTT])

P.M. Asbeck, M.F. Chang, K.-C. Wang, D.L. Miller, G.J. Sullivan, N.H. Sheng, E. Sovero and J.A. Higgins. "Heterojunction Bipolar Transistors for Microwave and Millimeter-Wave Integrated Circuits (Dec. 1987 [T-MTT])." 1987 Transactions on Microwave Theory and Techniques 35.12 (Dec. 1987 [T-MTT] (1987 Symposium Issue)): 1462-1470.

This paper reviews the present status of GaAIAs/GaAs HBT technology and projects the impact of these devices on microwave and millimeter-wave integrated circuits. Devices with F/sub max/ above 120 GHz are described. Differential amplifiers are shown to have offset voltages with standard deviation below 2 mV and voltage gain as high as 200 per stage. Breakdown voltiages (BV/sub CB0/) above 20 V are demonstrated. Frequency dividers operating above 20 GHz are described.

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