# Abstracts

## Low Voltage X-Band InGaP/GaAs Power Heterojunction Bipolar Transistor

*S.T. Fu, L.W. Yang, F. Ren, C.R. Abernathy, S.J. Pearton and J.R. Lothian. "Low Voltage X-Band InGaP/GaAs Power Heterojunction Bipolar Transistor." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 675-678.*

We report on the X-band power performance of InGaP/GaAs heterojunction bipolar transistor. At a low collector bias voltage of 5 V, a C.W. output power of 0.445W is obtained from a InGaP/GaAs HBT consisting of twelve 2x15μm² emitter fingers, corresponding to a power density of 1.24mW/μm². The associated power gain is 7.5dB and the linear gain and power-added efficiency are 9.2dB and 42.6%, respectively. The device delivered 0.5W C. W. output power, i.e. 1.39mW/μm², with 40% PAE and 6dB power gain when the V/sup CE/ was increased to 6V.

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