

# Abstracts

## A High Efficiency V-Band Monolithic HEMT Power Amplifier

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R.E. Kasody, G.S. Dow, A.K. Sharma, M.V. Aust, D. Yamauchi, R. Lai, M. Biedenbender, K.L. Tan and B.R. Allen. "A High Efficiency V-Band Monolithic HEMT Power Amplifier." 1994 *Microwave and Guided Wave Letters* 4.9 (Sep. 1994 [MGWL]): 303-304.

We report the performance of a monolithic V-band power amplifier using 0.15- $\mu\text{m}$  double heterostructure pseudomorphic InGaAs/AlGaAs/GaAs HEMT's. The amplifier using a 400- $\mu\text{m}$  device driving a 2 x 400- $\mu\text{m}$  device. It has demonstrated output power of 313 mW (0.39 W/mm) with 8.95 dB power gain and 19.9% PAE at 59.5 GHz. These data represent the highest reported combination of output power, power gain, and power-added efficiency reported for a V-band monolithic power amplifier.

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