Abstracts

Advances in HEMT Technology and Applications

P.M. Smith, P.C. Chao, K.H.G. Duh, L.F. Lester, B.R. Lee and J.M. Ballingall. "Advances in HEMT Technology and Applications." 1987 MTT-S International Microwave Symposium Digest 87.2 (1987 Vol. II [MWSYM]): 749-752.

High electron mobility transistors (HEMTs) have demonstrated unsurpassed transistor performance in the millimeter-wave range--at 60 GHz, results include a minimum noise figure of 2.3 dB with 4.0 dB associated gain, maximum small-signal gain of 11.7 dB, output power of 50 mW, power density of 0.43 W/mm and maximum power-added efficiency of 28%. The principles of HEMT operation and design are described, followed by a summary of the current state-of-the-art in noise and power performance, and discussion of several applications.

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