Abstracts

High Efficiency Power HFETS for Low Power Wireless Applications

V. Nair, S. Tehrani, D. Halchin, E. Glass, E. Fisk and M. Majerus. "High Efficiency Power HFETS for Low Power Wireless Applications." 1996 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 98. (1996 [MCS]): 17-20.

This paper discusses the development of depletion mode Heterojunction FETs (HFETs) for high efficiency power amplifiers. At 850 MHz, a 12 mm HFET achieved power added efficiency of 72 % and an output power of +31.5 dBm at Vds = 3.0V. An optimized HFET achieved 73% pwer added efficiency and 30 dBm output power at Vds = 2.0V. These devices also exhibited a 12 dB improvement in out-of-band noise performance compared to ion implanted MESFETs.

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