Abstracts

High-Efficiency InP-Based HEMT MMIC Power Amplifier for Q-Band Applications

W. Lam, M. Matloubian, A. Kurdoghlian, L. Larson, A. Igawa, C. Chou, L. Jelloian, A. Brown, M. Thompson and C. Ngo. "High-Efficiency InP-Based HEMT MMIC Power Amplifier for Q-Band Applications." 1993 Microwave and Guided Wave Letters 3.11 (Nov. 1993 [MGWL]): 420-422.

Advanced millimeter-wave systems require high-efficiency MMIC power amplifiers to reduce physical size, weight, and prime power consumption. A high-efficiency MMIC power amplifier was developed using 0.15 um InP-based (AI/sub 0.48/In/sub 0.52/As/Ga/sub 0.47/ In/sub 0.53/ As) HEMT MMIC technology. The amplifier demonstrated state-of-the-art power performance, including 33% power-added efficiency and 24 dBm output power at 44 GHz. Potential applications include communication terminals and phased array antennas.

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