Abstracts

An Ion-Implanted 13 Watt C-Band MMIC with 60% Peak Power Added Efficiency

W.L. Pribble and E.L. Griffin. "An Ion-Implanted 13 Watt C-Band MMIC with 60% Peak Power Added Efficiency." 1996 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 98. (1996 [MCS]): 25-28.

A GaAs MMIC power amplifier that produces in excess of 13 watts of RF power at 60% peak power added efficiency operating in C-band has been developed. Output power over 12 watts at better than 52% PAE has been measured over a 23% fractional bandwidth. The nominal circuit has been designed using non-linear modeling techniques and optimized empirically through fabrication and analysis of an 18-element Taguchi orthogonal array of circuits. The array circuits have been fabricated using ITT-GTC's Multi-Function Self Aligned Gate process.

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