Abstracts

Versatility and Manufacturability Considerations for a New 3-Watt X-Band Power MMIC (1992 [MCS])

D. Raicu, B.M. Kraemer, D.S. Day, J.R. Basset, J. Wei, C. Hua, Y. Chung and C.S. Chang. "Versatility and Manufacturability Considerations for a New 3-Watt X-Band Power MMIC (1992 [MCS])." 1992 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 92.1 (1992 [MCS]): 181-184.

The paper presents a newly developed two-stage power amplifying MMIC capable of delivering 3 Watt at X-band with high efficiency. This MMIC is designed for operation with external matching circuits on separate ceramic substrates. By customizing these circuits, the same MMIC can cover an entire array of different applications. The versatility of this approach is demonstrated by the implementation of this MMIC in four power modules specified for different bandwidths, power levels and bias voltages. The small chip size and the tunability allowed by the external circuits lead to increased manufacturing yields and make possible significant cost reductions.

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