

Abstracts

High Efficiency Broadband Power Amplifier MMIC

K. Johnson, A. Lum, S. Nelson, E. Reese and K. Salzman. "High Efficiency Broadband Power Amplifier MMIC." 1992 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 92.1 (1992 [MCS]): 43-45.

A GaAs broadband, dual-channel high-efficiency power amplifier MMIC is presented in this paper. The average performance for a single channel of the power amplifier is 18.0 dB small-signal gain, 16% power-added efficiency, and 2 dB compressed output power of 29.4 dBm from 6 to 18 GHz at 25°C. The two channels combined off chip achieve 32 dBm average output power. This 0.5 μm ion-implanted MESFET amplifier MMIC has been demonstrated in volume production with 154 wafer starts over 3 months resulting in a 30% total yield through fixtured RF test.

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