Abstracts

6 to 18 GHz Single-Ended and Push-Pull MMIC Amplifiers for High-Gain Modules

R. Ramachandran, S. Moghe, J. Girimaji and A. Podell. "6 to 18 GHz Single-Ended and Push-Pull MMIC Amplifiers for High-Gain Modules." 1988 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 88.1 (1988 [MCS]): 15-18.

Broadband single-ended and push-pull MMIC amplifiers are presented which achieve high gain per mA and demonstrate excellent cascadability. The single-ended 6 to 18 GHz amplifier shows 10±1 dB gain for 25 mA current, which is the highest gain per mA reported for an amplifier in this band. The push-pull amplifier shows 10 dB gain for 50 mA current with a higher output power of 12 dBm at 1 dB gain compression, P(-1 dB). It also has the added features of gain equalization and gain control. A module designed with four push-pull chips shows excellent gain flatness of 34±1 dB. Both of these MMICS are very compact (only 36 x 48 and 48 x 48 mils) and demonstrate high overall yield (>80%) due to the absence of via holes and other yield limiting process steps.

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