Abstracts

35 GHz Pulsed HBT MMIC Amplifiers (1994 [MCS])

R.M. Wohlert, G. Jackson and M.G. Adlerstein. "35 GHz Pulsed HBT MMIC Amplifiers (1994 [MCS])." 1994 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 94.1 (1994 [MCS]): 187-190.

A three-stage MMIC preamplifier and a two-stage power amplifler using GaAs/AIGaAs Heterojunction Bipolar Transistors (HBTs) have been developed for pulsed-power applications at 35 GHz. Both amplifiers have been fully characterized at 35 GHz with RF input power and base bias pulse wave forms having 33% duty cycles and 300 nS pulse lengths. The preamplifier delivers a peak output power of 19.6 dBm at 11% PAE and 12.6 dB associated gain at a bias of VCE = 6 V and IC=128 mA. The power amplifier delivers a peak output power of 29 dBm at 15% PAE and 5 dB associated gain after minimal external tuning at a bias of VCE = 6 V and IC = 600 mA. The monolithic amplifiers reported here are based upon 35 GHz power HBTs and represent the first such amplifiers yet reported.

❑ Return to main document.