Abstracts

Microwave Octave-Band GaAs FET Amplifiers

W.H. Ku, M.E. Mokari-Bolhassan, W.C. Petersen, A.F. Podell and B.R. Kendall. "Microwave Octave-Band GaAs FET Amplifiers." 1975 MTT-S International Microwave Symposium Digest of Technical Papers 75.1 (1975 [MWSYM]): 69-72.

The design of microwave broadband amplifiers using the 1µ-gate GaAs field-effect transistors covering the 4-8 GHz and 7-14 GHz octave bands is presented. The broadband matching networks of these amplifiers consist of lumped and/or distributed circuit elements. Using analytical and computer-aided optimization techniques, a typical octave-band amplifier has been designed with a nominal power gain of 8 dB with a maximum deviation of ±0.07dB covering the 7-14 GHz band based on the measured scattering parameters of a 1µ GaAs FET chip. For a packaged 1µ GaAs FET, a 4-8 GHz band amplifier has been designed with a gain of 7.2 dB ± 0.2 dB.

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