Abstracts

Single-Stage GaAs Monolithic Feedback Amplifiers (Short Papers)

C.E. Weitzel and D. Scheitlin. "Single-Stage GaAs Monolithic Feedback Amplifiers (Short Papers)." 1985 Transactions on Microwave Theory and Techniques 33.11 (Nov. 1985 [T-MTT]): 1244-1249.

A theoretical and experimental comparison is made of the performance of GaAs MESFET's with and without negative feedback. The devices are fabricated using a six-step MMIC process, which utilizes polyimide for low-capacitance crossovers and silicon nitride for MIM capacitors. Typical RF performance is 9-dB gain with noise figure less than 4 dB from 100 MHz to 3 GHz. The greatest bandwidth is achieved by incorporating a 3 1/2 turn, low Q inductor, which is connected in series with the feedback resistor and is wrapped around the perimeter of the chip to conserve die area.

❑ Return to main document.