Abstracts

A Quasi-Planar FET Amplifier in Integrated Finline and Microstrip Technique (Short Papers)

J. Ruxton and W.J.R. Hoefer. "A Quasi-Planar FET Amplifier in Integrated Finline and Microstrip Technique (Short Papers)." 1989 Transactions on Microwave Theory and Techniques 37.2 (Feb. 1989 [T-MTT] (Special Issue on Quasi-Planar Millimeter-Wave Components and Subsystems)): 429-432.

The design and performance of a single-stage 20 GHz GaAs FET amplifier in quasi-planar technology are described. The component includes a compact, wide-band transition between the finline input and output ports and the microstrip impedance-matching networks for the transistor. By virtue of a novel bias network which includes a microstrip bandstop filter and a 50 Omega resistor, this transition provides unconditional stability even at frequencies below cutoff of the finline ports. The overall amplifier has a gain of 6 dB at 20 GHz, and a 3 dB bandwidth of 17 percent.

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