Abstracts

Computer-Aided Design of Broad-Band and Low-Noise Microwave Amplifiers

T.W. Houston and L.W. Read. "Computer-Aided Design of Broad-Band and Low-Noise Microwave Amplifiers." 1969 Transactions on Microwave Theory and Techniques 17.8 (Aug. 1969 [T-MTT] (Special Issue on Computer-Oriented Microwave Practices)): 612-614.

We have found iterative optimization techniques to be very effective in the design of broad-band low-noise integrated amplifiers. This paper presents an objective function to maximize gain while minimizing ripple and noise figure. An optimization routine using this objective function is applied to the design of an L-band amplifier. The results of several runs using different objectives applied to the same circuit topology are presented to demonstrate both the flexibility of this technique and the tradeoffs involved. One of the designs was fabricated, and the measured and predicted performance agree closely over an octave bandwidth.

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