Abstracts

Minimization of Intermodulation Distortion in GaAs MESFET Small-Signal Amplifiers

A.M. Crosmun and S.A. Maas. "Minimization of Intermodulation Distortion in GaAs MESFET Small-Signal Amplifiers." 1989 Transactions on Microwave Theory and Techniques 37.9 (Sep. 1989 [T-MTT] (Special Issue on FET Structures Modeling and Circuit Applications)): 1411-1417.

This paper examines the dependence of third-order intermodulation distortion on the source-reflection coefficient, Gamma/sub s/, as a function of frequency in an amplifier designed according to available-gain criteria. By means of a numerical formulation of the Volterra series, a complete equivalent circuit of the FET can be used, and intermodulation calculations include all feedback effects. We show that the sensitivity of IP/sub 3/ to Gamma/sub s/ decreases with increasing frequency and can be related to the MESFET's stability.

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