Abstracts

Analytical Modeling and Design Criteria for Traveling-Wave FET Amplifiers

S. D'Agostino, G. D'Inzeo and L. Tudini. "Analytical Modeling and Design Criteria for Traveling-Wave FET Amplifiers." 1992 Transactions on Microwave Theory and Techniques 40.2 (Feb. 1992 [T-MTT]): 202-208.

This paper describes the theoretical modeling and design of a traveling-wave FET. The device shows the capability of wide-bandwidth performance, high gain, and could be useful in power applications. The proposed analytical model considers the full modal effects of the three-coupled transmission lines and an accurate analysis of the FET model in the traveling-wave amplifier. Starting from electrode dimensions and active zone doping, such a model allows one to calculate the scattering parameters. Thus, it is possible to analyze the device as a six port network in a circuit analysis program.

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