

Abstracts

Active Matching with Common-Gate MESFET's

K.B. Niclas. "Active Matching with Common-Gate MESFET's." 1985 Transactions on Microwave Theory and Techniques 33.6 (Jun. 1985 [T-MTT]): 492-499.

The electrical performance of the common-gate MESFET input stage across multi-octave frequency bands has been analyzed. Based on the device's common-source parameters, formulas for the circuit's admittance and noise parameters have been derived that allow one to calculate its gain, reflection coefficients, and noise figure. The influence of the circuit elements on the input stage's performance, especially on the noise figure, are studied. Finally, the electrical behavior of a two-stage unit consisting of a common-gate input stage followed by a common-source amplifier stage is discussed.

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