Abstracts

The Pospieszalski noise model and the imaginary part of the optimum noise source impedance of extrinsic or packaged FET's

L. Boglione, R.D. Pollard and V. Postoyalko. "The Pospieszalski noise model and the imaginary part of the optimum noise source impedance of extrinsic or packaged FET's." 1997 Microwave and Guided Wave Letters 7.9 (Sep. 1997 [MGWL]): 270-272.

The imaginary part X(S/sub opt/) of the optimum noise impedance for extrinsic or packaged devices is investigated. The analysis modifies the well-known Pospieszalski noise model by applying a series feedback to the source port. A simple expression for X(S/sub opt/) is developed and is verified for extrinsic and packaged devices with a decreasing level of accuracy. The results give further insights into the way the parasitic inductors L/sub g/ and L/sub s/ affect the noise performance of the transistor and can help to design low-noise amplifier with simultaneous signal and noise power match at the input port.

❑ Return to main document.