

Equivalent-Circuit Parameter Extraction for Cold GaAs MESFET's (Short Papers)

R. Anholt and S. Swirhun. "Equivalent-Circuit Parameter Extraction for Cold GaAs MESFET's (Short Papers)." 1991 Transactions on Microwave Theory and Techniques 39.7 (Jul. 1991 [T-MTT]): 1243-1247.

The physical basis of the cold-FET method for extracting parasitic resistances and inductances is examined. A method to obtain the source resistance from the gate-current dependence of the FET Z parameters is used to analyze FET's with different gate lengths. Inductance results for FET's with different gate widths suggest that inductance extrinsic to the gate fingers is dominant, and models of the gate inductance support this. The effects that possible dependence of the parasitic-FET equivalent-circuit parameters on the gate and drain bias can have on the extracted intrinsic-FET parameters are discussed.

 [Return to main document.](#)