Abstracts

Direct Extraction of GaAs MESFET Intrinsic Element and Parasitic Inductance Values

E. Arnold, M. Golio, M. Miller and B. Beckwith. "Direct Extraction of GaAs MESFET Intrinsic Element and Parasitic Inductance Values." 1990 MTT-S International Microwave Symposium Digest 90.1 (1990 Vol. I [MWSYM]): 359-362.

A simple method is described for extracting the intrinsic element and parasitic inductance values for the GaAs MESFET equivalent circuit. The intrinsic element values are extracted from low frequency y-parameter data de-embedded through previously determined parasitic resistances. Parasitic inductance values are then evaluated by comparing the resulting modeled z-parameters with the extrinsic measured z-parameters. All elements are extracted from the same set of hot FET S-parameter measurements. The method is very fast and the resulting equivalent circuit provides an excellent match to measured s-parameters through 18 GHz.

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