Abstracts

Sensitivity Analysis of the Millimeter-Wave HEMT Performance Parameters f/sub T/ and f/sub max/ to Errors in the Equivalent Circuit Elements

U. Lott. "Sensitivity Analysis of the Millimeter-Wave HEMT Performance Parameters f/sub T/ and f/sub max/ to Errors in the Equivalent Circuit Elements." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 857-860.

For mm-wave FETs, the performance parameters f/sub T/ (transition frequency) and f/sub max/ (max. oscillation frequency) are usually calculated from inexactly known equivalent circuit models. The consequences of errors in the model on f/sub T/ and f/sub max/ are evaluated through a sensitivity analysis of the complete equivalent circuit. This analysis shows quantitatively how f/sub T/ and f/sub max/ depend differently on element errors in the model, and that f/sub max/ is especially susceptible to errors in R/sub G/, R/sub i/ and R/sub D/.

❑ Return to main document.