Abstracts

Novel technique for determining bias, temperature and frequency dependence of FET characteristics

A.E. Parker and J.G. Rathmell. "Novel technique for determining bias, temperature and frequency dependence of FET characteristics." 2002 MTT-S International Microwave Symposium Digest 02.2 (2002 Vol. II [MWSYM]): 993-996 vol.2.

A novel measurement of the dynamics of HEMT and MESFET behavior permits classification of dispersion effects and identifies operating regions that they affect. This reveals a simple structure to the otherwise complicated dynamic behavior that has concerned circuit designers. With this insight, it is possible to predict biases, temperatures and frequencies that dispersion will or will not affect. It is interesting to note that, for some devices, dispersion effects can be seen to exist at microwave frequencies and may therefore contribute to intermodulation distortion.

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