

Intermodulation Distortion in Microwave MESFET Amplifiers

R.K. Gupta, C.G. Englefield and P.A. Goud. "Intermodulation Distortion in Microwave MESFET Amplifiers." 1979 MTT-S International Microwave Symposium Digest 79.1 (1979 [MWSYM]): 405-407.

The third-order intermodulation distortion (IM/sub 3/) of a MESFET amplifier has been analysed using Volterra series representation. A model is described that takes into account the MESFET nonlinearities and their interaction with the surrounding microwave circuit. A theoretical and experimental study of the amplifier intermodulation products has been conducted. Their dependence on the input frequency and power-level of a two-tone test signal is investigated. For power inputs less than -10 dBm, the agreement obtained between measured and predicted IM/sub 3/ is within 3-dB over an amplifier bandwidth of 400 MHz.

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