Abstracts

Effects of source and load impedance on the intermodulation products of GaAs FETs

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Linearity of the GaAs field effect transistor (FET) power amplifier is greatly influenced by source and load impedances for the FETs. The third order intermodulation products (IMD/sub 3/) of the GaAs FET are investigated in relation to source and load impedances. From heuristic as well as analytic point of view, the Volterra-series technique is employed to show that the least IMD/sub 3/ are found at the minimum source resistance (R/sub S/) and maximum load resistance (R/sub L/). The simulated results are compared with the load and source pull data with good agreements. The simulation also shows that source impedance has a greater effect on the IMD/sub 3/ than the load impedance.

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