Abstracts

Intermodulation nulling in HEMT common source amplifiers

A.E. Parker and Guoli Qu. "Intermodulation nulling in HEMT common source amplifiers." 2001 Microwave and Wireless Components Letters 11.3 (Mar. 2001 [MWCL]): 109-111.

A new model of the second- and third-order intermodulation products from HEMT and MESFET small-signal amplifiers, resulting from nonlinear drain-source current has been proposed in our previous publications. Based on this model, intermodulation nulling conditions in terms of the Taylor series coefficients, hence in terms of bias, have been investigated. This paper now examines the load dependence of the second- and third-order intermodulation products in HEMT small-signal common source amplifiers. Intermodulation nulling conditions are proposed and validated. This is useful in designing a high performance amplifier by calculation of optimum load for minimum distortion and studying distortion generation as a function of circuit topology.

❑ Return to main document.