Abstracts

A Unified Analysis of MMIC Power Amplifier Stability

R.G. Freitag. "A Unified Analysis of MMIC Power Amplifier Stability." 1992 MTT-S International Microwave Symposium Digest 92.1 (1992 Vol. I [MWSYM]): 297-300.

High power MMIC amplifiers require large periphery output devices in order to meet their output power goals. Bandwidth and impedance matching considerations typically require that this large output device be subdivided into smaller devices and power combined on-chip. This power combining introduces n possible modes of oscillation when n devices are combined. The usual K, B1-factor stability analysis only addresses one mode (the even mode). This paper presents an analytical approach for predicting and stabilizing oscillations for all n modes. Specific cases for n=2 and 4 are discussed. The approach can be implemented using standard small signal analysis software.

❑ Return to main document.