Abstracts

A Graphical Method for the Design of Feedback Networks for Microwave Transistor Amplifiers: Theory and Applications

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A new theory is presented that is very useful for the design of feedback transistor amplifiers, including considerations on stability, gain equalization, and matching. The theory is based on graphical feedback diagrams whose construction rides and practical circuit design techniques are described. The method provides insight into the effects of the feedback network elements and saves computer time and money. Three applications are presented: a tuned neutralized bipolar transistor amplifier; a broad-band medium power MESFET amplifier in the 3.7-4.2-GHz range; and a ultrawide-band matched MESFET amplifier covering the 0.1-12-GHz frequency range.

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