Abstracts

Stable Broad-Band Microwave Amplifier Design

W.-L. Jung and J. Wu. "Stable Broad-Band Microwave Amplifier Design." 1990 Transactions on Microwave Theory and Techniques 38.8 (Aug. 1990 [T-MTT]): 1079-1085.

A modified real-frequency technique for designing a broad-band microwave amplifier with guaranteed stability is presented. This method generates the two sets of resistive excursions necessary for synthesizing the source and load admittances of the amplifier concurrently, rather than sequentially, while both the stability and realizabltity requirements are satisfied simultaneously. Regardless of its constrained nature, the method has been formulated as an unconstrained optimization problem. An 8-12 GHz band amplifier design example is presented to demonstrate its application. The transducer power gain obtained in the example by this method is 11.3 ±0.4 dB, which is 2.6 dB higher than that obtained by using the real-frequency technique.

❑ Return to main document.