Abstracts

Stable Broadband Microwave Amplifier Design Using the Simplified Real Frequency Technique (Short Papers)

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Yarman's simplified real frequency technique is modified to design a stability-guaranteed broadband microwave amplifier consisting of a potentially unstable transistor. The source and load terminations can be complex impedances. The stability is maintained by the conductance resulted from transforming the source and load terminations through the input and output matching circuits. The input and output matching circuits are derived concurrently, instead of sequentially. Repeating the design of an example from a previous paper shows that the transducer gain obtained by using this method is higher, with fewer matching circuit elements, than that by using Supercompact optimizers. And, with the same number of matching circuit elements, the transducer gain is slightly higher than that by using the dynamic CAD technique.

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