

Abstracts

Synthesis of Interstage Networks of Prescribed Gain Versus Frequency Slopes

D.J. Mellor and J.G. Linvill. "Synthesis of Interstage Networks of Prescribed Gain Versus Frequency Slopes." 1975 Transactions on Microwave Theory and Techniques 23.12 (Dec. 1975 [T-MTT] (1975 Symposium Issue)): 1013-1020.

Since the achievable gain of transistors typically falls off with increasing frequency, it is necessary to design interstage networks of microwave amplifiers with a complementary characteristic. A method is developed for the direct synthesis of interstage networks of prescribed gain versus frequency slopes. The bandwidth and ripple of these networks can also be precisely specified, and parasitic elements can be incorporated into synthesized networks. Design examples are presented, a complete computer program for the synthesis of interstage matching networks is described, and an octave band microwave amplifier illustrates an application of the interstage design techniques.

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