Abstracts

4GHz Multi-Stage Transistor Amplifier

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Early microwave transistor amplifiers were single-transistor-cascaded types. They needed numerous tuning adjustments in order to obtain wide-band flat gain characteristics. To overcome the difficulty, a balanced transistor amplifler was developed. However, it requires a second transistor at every stage and its circuit is complicated. This fact gives rise to high cost. In this paper the design principle and experimental results of a multistage transistor amplifier of simple construction are described. In this amplifier, n unit amplifiers of the same design are connected in cascade. Short transmission lines are inserted between each amplifiers. The n-stage amplifler gives a gain n times that of the unit amplifier, and it has 900~1,000 MHz of flat bandwidth in 4 GHz band.

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