Abstracts

A 4-GHz Multistage Transistor Amplifier

K. Ayaki, E. Igarashi and Y. Kajiwara. "A 4-GHz Multistage Transistor Amplifier." 1969 Transactions on Microwave Theory and Techniques 17.12 (Dec. 1969 [T-MTT]): 1072-1077.

Multistage microwave transistor amplifiers of simple construction have been developed. In these amplifiers, unit amplifiers of the same design are connected in cascade with short transmission lines inserted between each amplifier. The n-stage (three-, four-, five-, six-, and seven-stage) amplifiers designed for the 4-GHz band gave power gains n times that of the unit amplifier (4 dB) and flat bandwidths of about 1000 MHz. The stripline circuit of the amplifier is fabricated on alumina substrates in the usual way. The amplifier has the disadvantage of poor input and output impedance matching. However, this problem was solved by integrating isolators in the input and output ports of the multistage amplifier. Noise performance of the amplifier is also described.

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