

Abstracts

A 0.5 to 4 GHz True Logarithmic Amplifier Utilizing Monolithic GaAs MESFET Technology

M.A. Smith. "A 0.5 to 4 GHz True Logarithmic Amplifier Utilizing Monolithic GaAs MESFET Technology." 1988 Transactions on Microwave Theory and Techniques 36.12 (Dec. 1988 [T-MTT] (1988 Symposium Issue)): 1986-1990.

The design of the true logarithmic amplifier is reviewed, and the sensitivity of the circuit's performance to design or process errors is investigated. Following this is a description of a GaAs monolithic dual-gain amplifier stage which has been developed for 0.5 to 4 GHz true logarithmic amplifier applications. This bandwidth is significantly greater than that of previously reported true logarithmic amplifier stages. A cascade of six of these stages has resulted in a logarithmic amplifier with a 70 dB dynamic range.

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