

Abstracts

An Ultra Broadband GaAs MESFET Preamplifier IC for a 10Gb/s Optical Communication System (1992 Vol. I [MWSYM])

M. Miyashita, K. Maemura, K. Yamamoto, T. Shimura, M. Nogami, K. Motoshima, T. Kitayama and Y. Mitsui. "An Ultra Broadband GaAs MESFET Preamplifier IC for a 10Gb/s Optical Communication System (1992 Vol. I [MWSYM])." 1992 MTT-S International Microwave Symposium Digest 92.1 (1992 Vol. I [MWSYM]): 89-92.

An ultra broadband GaAs MESFET preamplifier IC is developed for a 10 Gb/s optical communication system. High transimpedance of 44 dBΩ has been obtained for DC to 12 GHz. A receiver has also been fabricated by using this preamplifier IC and a photodiode. The receiver operates with extremely low equivalent input noise current of 12.6 pA/sqrt(Hz) for DC to 7.8 GHz. This paper describes circuit design, high frequency characteristics of the preamplifier IC and the receiver.

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