

Abstracts

A Low Noise Broadband GaAs MESFET Monolithic Distributed Preamplifier

A.P. Freundorfer and P. Lionais. "A Low Noise Broadband GaAs MESFET Monolithic Distributed Preamplifier." 1995 MTT-S International Microwave Symposium Digest 95.1 (1995 Vol. 1 [MWSYM]): 57-60.

It is shown that the equivalent input noise current density of a distributed preamplifier of an optical receiver can be improved by using large gate line matching impedance. A monolithic GaAs MESFET distributed preamplifier utilizing this design consideration was fabricated. Using a 35 μm InGaAs p-i-n photodiode, it was shown to have an equivalent input noise current density of 8 pA/radic Hz and an 8 GHz bandwidth. To date, this is the best known result for a 0.8 μm GaAs MESFET process.

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