

# Abstracts

## A Low Noise Broadband GaAs MESFET Monolithic Distributed Preamplifier

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*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  $\mu$ m InGaAs p-i-n photodiode, it was shown to have an equivalent input noise current density of 8 pA/ $\sqrt{\text{Hz}}$  and an 8 GHz bandwidth. To date, this is the best known result for a 0.8  $\mu$ m GaAs MESFET process.

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