Abstracts

Design and Fabrication of 5 Gb/s Fully Integrated OEIC Receivers Using Direct Ion Implanted GaAs MESFET-MSM

C.-G. Shih, D. Barlage, J.-S. Wang and M. Feng. "Design and Fabrication of 5 Gb/s Fully Integrated OEIC Receivers Using Direct Ion Implanted GaAs MESFET-MSM." 1994 MTT-S International Microwave Symposium Digest 94.3 (1994 Vol. III [MWSYM]): 1379-1382.

We report a high performance blanket ion implanted 0.6 µm GaAs-MESFET/MSM receiver circuit. The receiver is fabricated without the use of a grown layer which opens the door for low cost applications.The significance of this work is that the full receiver exhibits an electrical dynamic range of 36 dB, and produces a minimum 700 mV electrical output signals at -15 dBm optical input. Data rates in excess of 5Gb/s have been achieved utilizing a 75x75µm MSM detector.

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