Abstracts

Design and Applications of Optically Controllable Finline Structures (Short Papers)

K. Uhde and R. Eimertenbrink. "Design and Applications of Optically Controllable Finline Structures (Short Papers)." 1990 Transactions on Microwave Theory and Techniques 38.5 (May 1990 [T-MTT] (Special Issue on Applications of Lightwave Technology to Microwave Devices, Circuits, and Systems)): 679-683.

This paper describes the design of finline structures on a semiconducting substrate. Using high-resistivity silicon and gallium arsenide substrates, insertion Iosses between 1dB and 2 dB have been achieved. By illuminating the slot region with a laser diode, attenuators and/or switches with on-off ratios up to -40 dB have been realized in the 26.5-40 GHz region. The attenuation, phase shift, and switching times are given. Further application are also dicussed.

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