Abstracts

Analysis of a Buried Layer Millimeter-Wave Phase Shifter (Short Papers)

M.W. Scott, T.F. Wu and J.K. Butler. "Analysis of a Buried Layer Millimeter-Wave Phase Shifter (Short Papers)." 1987 Transactions on Microwave Theory and Techniques 35.8 (Aug. 1987 [T-MTT]): 783-784.

The results of an analysis of an optically controlled millimeter-wave phase shifter are presented. The phase shift is obtained when electron-hole pairs are created in a thin region in the interior of a semiconductor waveguide. The device exhibits maximum phase shifts for the transverse electric mode. This behavior is different from phase shifters using surface excitation, which give maximum phase shifts for the transverse magnetic mode. The new configuration gives higher phase shifts per decibel attenuation than devices employing surface excitation.

❑ Return to main document.