Abstracts

p-i-n Diode Control Devices in E-Plane Technique

H. Callsen, H.H. Meinel and W.J.R. Hoefer. "p-i-n Diode Control Devices in E-Plane Technique." 1989 Transactions on Microwave Theory and Techniques 37.2 (Feb. 1989 [T-MTT] (Special Issue on Quasi-Planar Millimeter-Wave Components and Subsystems)): 307-316.

The status of p-i-n diode control devices in E-plane technique, especially in integrated finline configurations, is reviewed. The circuit topologies, operating principles, and design considerations for state-of-the-art switches, attenuators, and digital modulators are discussed, and typical performance characteristics are presented. The superior performance of these components confirms that finline is the appropriate transmission medium for the realization of millimeter-wave p-i-n diode switches and attenuators in the low-power regime (up to some 10 W of CW power), where beam-lead p-i-n diodes can be used. By properly matching these devices to their finline embedding network, excellent broad-band characteristics can be achieved.

❑ Return to main document.