Abstracts

A Low Cost P-I-N Diode Phase Shifter for Airborne Phased-Array Antennas

F.G. Terrio, R.J. Stockton and W.D. Sato. "A Low Cost P-I-N Diode Phase Shifter for Airborne Phased-Array Antennas." 1974 Transactions on Microwave Theory and Techniques 22.6 (Jun. 1974 [T-MTT] (Special Issue on Microwave Control Devices for Array Antenna Systems)): 688-692.

This paper presents a description of a p-i-n diode phase shifter that was designed for low cost production for use in X-band phased-array systems. The phase shifter is designed to make maximum use of photoetched circuit components and low cost materials, and is well suited for assembly on a fully automated assembly line. The salient features of this phase shifter are a printed-circuit transmission structure and inexpensive RF connectors that are integrated into the circuit package. The microwave performance characteristics are generally superior to those of equivalent devices; a useful bandwidth of 40 percent with an average insertion loss of 1.6 dB has been demonstrated with 3-bit units.

❑ Return to main document.