Abstracts

Schottky Diodes for Analogue Phase Shifters in GaAs MMIC's (Short Papers)

P.R. Shepherd and M.J. Cryan. "Schottky Diodes for Analogue Phase Shifters in GaAs MMIC's (Short Papers)." 1996 Transactions on Microwave Theory and Techniques 44.11 (Nov. 1996 [T-MTT]): 2112-2116.

A simple Schottky diode structure, which is easily implemented in a foundry gallium arsenide (GaAs) process, is described. This structure occupies very much less area than the usual technique of realising Schottky diodes, using standard FET structures. Two variations of the diode have been characterized and modeled using a standard equivalent circuit. This has been used to design a simple analogue phase shifter based on a loaded-line configuration. The phase shifter was manufactured using a standard foundry process and has shown excellent results in terms of phase shift linearity with tuning voltage, combined with low insertion loss, over the range 2-8 GHz.

❑ Return to main document.