Abstracts

Schottky-Diode Realization for Low-Noise Mixing at Millimeter Wavelengths

G.T. Wrixon. "Schottky-Diode Realization for Low-Noise Mixing at Millimeter Wavelengths." 1976 Transactions on Microwave Theory and Techniques 24.11 (Nov. 1976 [T-MTT] (Special Issue on Millimeter Waves: Circuits, Components, and Systems)): 702-706.

A short review of the current theory and technology of low-noise Schottky-barrier diodes for use at millimeter wavelengths is presented. Recent advances in fabrication technology are discussed which have yielded photolithographically produced GaAs diodes with a cutoff frequency in excess of 3000 GHz together with improved noise performance due to reduced contamination of the contact. Noise producing mechanisms in diodes are outlined and the limitations of noise reduction by cooling are considered. Finally, methods for overcoming the high-frequency limitations of conventional GaAs Schottky diodes are assessed.

❑ Return to main document.