Abstracts

Quantum-Well Diode Frequency Multipliers: Varistor Case

P.D. Batelaan, T.J. Tolmunen and M.A. Frerking. "Quantum-Well Diode Frequency Multipliers: Varistor Case." 1992 Microwave and Guided Wave Letters 2.7 (Jul. 1992 [MGWL]): 289-291.

Local oscillators for heterodyne receivers at submillimeter wavelengths are typically made using a fundamental source followed by a harmonic frequency multiplier. An investigation of the reqnired circuit embedding conditions for a possible new harmonic generator, the quantum-well resonant-tunneling diode, is summarized. A low-frequency multiplier has been tested that employs the resistive nonlinearity of the device as opposed to the reactive nonlinearity. The results show good agreement between practice and theory.

❑ Return to main document.