Abstracts

A Quasioptically Stabilized Resonant-Tunneling-Diode Oscillator for the Millimeter- and Submillimeter-Wave Regions

E.R. Brown, C.D. Parker, K.M. Molvar and K.D. Stephan. "A Quasioptically Stabilized Resonant-Tunneling-Diode Oscillator for the Millimeter- and Submillimeter-Wave Regions." 1992 Transactions on Microwave Theory and Techniques 40.5 (May 1992 [T-MTT]): 846-850.

A semiconfocal open-cavity resonator has been used to stabilize a resonant-tunneling-diode waveguide oscillator at frequencies near 100 GHz. The high quality factor of the open cavity resulted in a linewidth of approximately 10 kHz at 10 dB below the peak, which is about 100 times narrower than the linewidth of an unstabilized waveguide oscillator. This technique is well suited for resonant-tunneling-diode oscillators in the submillimeter-wave region.

❑ Return to main document.