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标题: Fundamental Oscillation up to 1.31 THz in Resonant Tunneling Diodes with Thin Well and Barriers
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摘要: We report the dependence of oscillation frequency on the well and barrier thicknesses in a resonant tunneling diode (RTD) terahertz oscillator integrated with a planar slot antenna. The oscillation frequency increased with decreasing well and barrier thicknesses because of the reduction in dwell time in the resonance region. Room-temperature fundamental oscillation of up to 1.31 THz with an output power of about 10 mu W was achieved in the RTD with a 3.9-nm-thick well and 1.0-nm-thick barriers. (C) 2012 The Japan Society of Applied Physics
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