

Heterostructure equivalence of step-recovery diodes for ballistic and diffusive electron resonance - a new concept for THz signal generation

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Abstract

A heterostructure equivalent to the well-known step recovery diode principle, arranged as a double structure gives a new nonlinear device for highly efficient harmonic THz signal generation. Like in the case of step recovery diodes, these devices exhibit promising performance especially for the generation of higher order harmonics. Theoretical and experimental results will be presented.