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Title:High-frequency, 6.2 Å pN heterojunction diodes
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Abstract:Sb-based pN heterojunction diodes at 6.2 , consisting of narrow bandgap p-type In0.27Ga0.73Sb and wide bandgap n-type In 0.69Al0.41As0.41Sb0.59, have been fabricated and measured. These diodes show excellent electrical characteristics with an ideality factor of 1.2 and high current density. S-parameter measurements and subsequent analysis show that these diodes have RC-cutoff frequencies over 1 THz, making these diodes excellent choices for high-frequency applications, such as sub-harmonic mixers for frequency conversion.
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