Abstracts

InGaAs/InAlAs/AlAs heterostructure barrier varactors for harmonic multiplication

X. Melique, J. Carbonell, R. Havart, P. Mounaix, O. Vanbesien and D. Lippens. "InGaAs/InAlAs/AlAs heterostructure barrier varactors for harmonic multiplication." 1998 Microwave and Guided Wave Letters 8.7 (Jul. 1998 [MGWL]): 254-256.

In this work, we report on the radio frequency (RF) characterization up to 110 GHz of probable high-performance heterostructure barrier varactors fabricated from InP-based strained epilayers. By making use of a dual step-like barrier scheme, the voltage handling is as high as 12 V whereas the capacitance ratio at 85 GHz achieves 5:1 for a zero-bias capacitance of 1 fF//spl mu/m/sup 2/ without deviation in the frequency band investigated. Good agreement between calculated and measured scattering parameters is found on the basis of electromagnetic simulation of diode embedding.

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