Abstracts

Transferred-substrate InP-based heterostructure barrier varactor diodes on quartz

S. Arscott, T. David, X. Melique, P. Mounaix, O. Vanbesien and D. Lippens. "Transferred-substrate InP-based heterostructure barrier varactor diodes on quartz." 2000 Microwave and Guided Wave Letters 10.11 (Nov. 2000 [MGWL]): 472-474.

InP-based heterostructure barrier varactor (HBV) devices employing air-bridge technology have been fabricated on a quartz host substrate following a transfer-substrate technique. Electrical characterization demonstrates highly symmetrical I(V) and C(V) characteristics due to the preservation of the high quality MBE epitaxial layers during the transfer process. Small signal RF measurements have been performed up to 110 GHz and display a marked reduction in the values of parasitic resistance and capacitance, thus confirming the ability of the devices to operate in the upper-part of the MM-wave spectrum.

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