Abstracts

5-mW and 5% efficiency 216-GHz InP-based heterostructure barrier varactor tripler

X. Melique, C. Mann, P. Mounaix, J. Thornton, O. Vanbesien, F. Mollot and D. Lippens. "5-mW and 5% efficiency 216-GHz InP-based heterostructure barrier varactor tripler." 1998 Microwave and Guided Wave Letters 8.11 (Nov. 1998 [MGWL]): 384-386.

We report on record performance in terms of efficiency and output power for an InP-based heterostructure barrier varactor (HBV) tripler. Owing to a step-like InGaAs/InAlAs/AlAs barrier scheme, the device exhibits excellent voltage handling with low leakage current (10 A/cm/sup 2/) up to at least 5 V. A 4/spl times/12 /spl mu/m/sup 2/ finger-shaped device in a dual configuration yielded a delivered output power of 5 mW (5.4% conversion efficiency) at 216 GHz.

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