Abstracts

A 5 mW-290 GHz heterostructure barrier tripler in a waveguide configuration

T. David, M. Guillon, S. Arscott, A. Maestrini, T. Akalin, B. Lecomte, J. Carbonell, M. Chaubet, P. Mounaix, G. Beaudin and D. Lippens. "A 5 mW-290 GHz heterostructure barrier tripler in a waveguide configuration." 2001 MTT-S International Microwave Symposium Digest 01.3 (2001 Vol. III [MWSYM]): 1661-1664 vol.3.

An output power of 5 mW has been demonstrated at 290 GHz by tripling a primary signal in the W band. The nonlinear devices are high performance InP-based heterostructure barrier varactors mounted in mechanically tuned waveguide harmonic multiplier. The flange-to-flange maximum efficiency was 5% whereas the bandwidth is around 30 GHz. These results are the highest to date for an HBV multiplier operating at these frequencies.

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