Abstracts

A 100-GHz Monolithic Cascode InAlAs/InGaAs HEMT Oscillator

Y. Kwon, D. Pavlidis, P. Marsh, T. Brock and D.C. Streit. "A 100-GHz Monolithic Cascode InAlAs/InGaAs HEMT Oscillator." 1994 Microwave and Guided Wave Letters 4.5 (May 1994 [MGWL]): 135-137.

The design, fabrication, and experimental characteristics of a 100-GHz monolithic cascode HEMT oscillator are presented. A cascode pair of InAlAs/InGaAs HEMT's has been used as the active cell to enhance the negative resistance so that more process tolerance can be achieved. The monolithic circuit oscillates around 100 GHz with an output power of 2 dBm at a drain bias voltage as small as 0.9 V. This is the first demonstration of cascode HEMT oscillators at W-band.

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