Abstracts

High-gain 150-215-GHz MMIC amplifier with integral waveguide transitions

S. Weinreb, T. Gaier, M. Barsky, Y.C. Leong and L. Samoska. "High-gain 150-215-GHz MMIC amplifier with integral waveguide transitions." 1999 Microwave and Guided Wave Letters 9.7 (Jul. 1999 [MGWL]): 282-284.

The design and measured results of a six-stage InP monolithic microwave integrated circuit (MMIC) amplifier with 20/spl plusmn/6 dB gain from 150 to 215 GHz is reported. The MMIC has integral probes for direct coupling to 140-220 GHz WR5 waveguide without bond wires or external transitions. This is the first amplifier operating above 140 GHz with sufficient gain to be useful as a single-chip amplifier and demonstrates the practicality of MMIC-based systems in this frequency range for use in radiometry, compact radars, and communication systems.

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