

Abstracts

A Nondegenerate Millimeter Wave Parametric Amplifier with a Solid-State Pump Source

J. Whelehan, E. Kraemer, H. Paczkowski, F. Bourne, J. Taub, E.J. Wendt and A. Larsen. "A Nondegenerate Millimeter Wave Parametric Amplifier with a Solid-State Pump Source." 1973 G-MTT International Microwave Symposium Digest of Technical Papers 73.1 (1973 [MWSYM]): 75-77.

A state-of-the-art nondegenerate millimeter wave parametric amplifier that utilized a reliable solid-state pump source at 105 GHz has been successfully developed and tested in the 55 to 65 GHz frequency band. A gain of 14 dB with a 1 -dB bandwidth of 670 MHz has been obtained. The measured single-sideband noise factor of the paramp averaged 5.9 dB across the operating passband.

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