Abstracts

Cryogenic Performance of a Monolithic W-Band Amplifier Using Picosecond Optoelectronic Technique

F. Oshita, M. Martin, M. Matloubian, H. Fetterman, H. Wang, K. Tan and D. Streit. "Cryogenic Performance of a Monolithic W-Band Amplifier Using Picosecond Optoelectronic Technique." 1992 Microwave and Guided Wave Letters 2.8 (Aug. 1992 [MGWL]): 340-342.

Cryogenic characterization of a monolithic W-band pseudomorphic InGaAs HEMT amplifier has been demonstrated for the first time using the picosecond optoelectronic technique. Low temperature, millimeter-wave measurements have been performed without the use of conventional millimeter-wave sources, components, and transitions. At 94 GHz, the single-stage amplifier exhibits gain of 4.5 dB at 300 K, which increases to 7 dB at 70 K.

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